

RBS Configurations

Description

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1 Introduction

This document describes the supported hardware configurations in RBS 6000 (not including RBS 6401 and RBS 6402) for GSM, WCDMA, LTE, CDMA, NR, and Massive IoT regarding Radio Frequency (RF) capabilities. Information about supported hardware configurations for RBS 6401 and RBS 6402 can be found in the respective RBS Description in the corresponding CPI library.

This document is intended for use by engineering and Operation and Maintenance (O&M) personnel as reference material when an RBS site is engineered.

Note: Some hardware configurations are not supported in all software releases or approved for all markets.

Refer to [Radio Software Support](#) for information on which software release or combination of software releases for GSM, WCDMA, LTE, CDMA, NR, or Massive IoT that introduce support for each of the available multistandard radio units.

More information on unit positions and cabling can be found in [Non-RF Connections](#) and [Radio Connections](#).

CPRI capacity must be considered when calculating maximum number of carriers for a single radio or a number of cascaded radios. For more information, refer to document [CPRI and eCPRI Capacity](#).

1.1 Software Versions

This document covers the software versions according to [Table 1](#).

Mixed mode combines different RAN software. Unless explicitly stated, the mixed mode software represents the RAN software in the same column. For example, SW 19.Q1 for mixed mode LTE + GSM is RAN software L19.Q1 and G19.Q1.

Table 1 Software Versions

RAN	Software Version									
GSM	G18.Q 2	G18.Q 3	G18.Q 4	G19.Q 1	G19.Q 2	G19.Q 3	G19.Q 4	G20.Q 1	G20.Q 2	G20.Q 3
CDMA	C18.08									
WCDMA	W18.Q 2	W18.Q 3	W18.Q 4	W19.Q 1	W19.Q 2	W19.Q 3	W19.Q 4	W20.Q 1	W20.Q 2	W20.Q 3
LTE	L18.Q2	L18.Q3	L18.Q4	L19.Q1	L19.Q2	L19.Q3	L19.Q4	L20.Q1	L20.Q2	L20.Q3
Massive IoT	MI18. Q2	MI18. Q3	MI18. Q4	MI19. Q1	MI19. Q2	MI19. Q3	MI19. Q4	MI20. Q1	MI20. Q2	MI20. Q3
NR	-	-	N18.Q 4	N19.Q 1	N19.Q 2	N19.Q 3	N19.Q 4	N20.Q 1	N20.Q 2	N20.Q 3



RAN	Software Version										
ESS	-	-	-	-	-	-	-	-	20.Q1	20.Q2	20.Q3
Mixed Mode	18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3	

1.2 Radio Configurations

Radio configurations are ways of connecting units in the RBS to get desired RF properties.

The following are examples of RF capabilities:

- Frequency band
- RF output power
- Diversity characteristics

[Figure 1](#) shows an overview of the concept used to define and describe the radio configurations. Although the figure only shows internal radios (RUG, RUL, RUS, RUW), the principle is the same for configurations with external radios (Radio, RRU, RRUL, RRUS, RRUW); Antenna Integrated Radio (AIR) units; combinations of Radio Dot units (RDs) and Indoor Radio Units (IRUs).

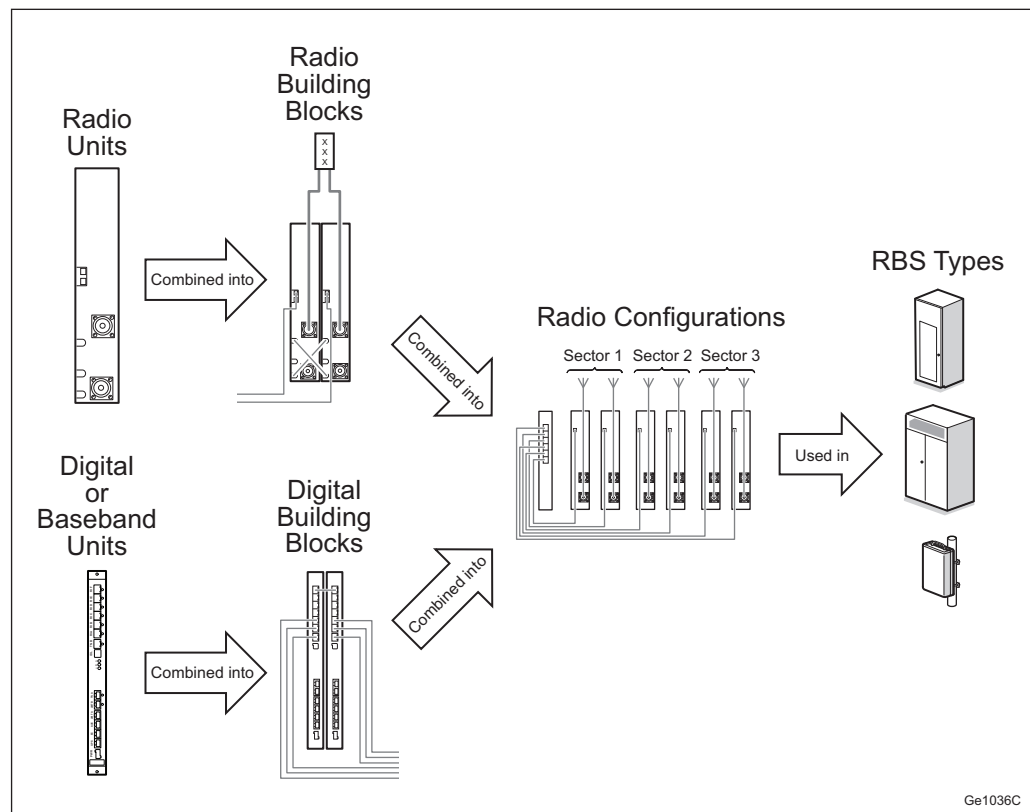


Figure 1 Radio Configuration Concept

The following is a description of the parts that constitute radio configurations:

Radio configuration

Radio configurations are built by combining ABBs, DBBs, and RBBs. The radio configuration defines the capacity of the RBS in terms of number of sectors, diversity characteristics, and output power. Supported radio configurations are described in [Radio Configurations for GSM](#) on page 105 for GSM, [Radio Configurations for WCDMA](#) on page 182 for WCDMA, [Radio Configurations for LTE](#) on page 271 for LTE, [Radio Configurations for CDMA](#) on page 172 for CDMA, [Radio Configurations for NR](#) on page 479 for NR, [Radio Configurations for Massive IoT](#) on page 455 for Massive IoT, and [Radio Configurations for Multistandard and Single Standard Mixed Mode](#) on page 505 for multistandard RBS.

RBS

Radio configurations are used in various RBS types. Different RBS types support different configurations.

DBB

Digital Building Blocks (DBBs) are one or more DUs or Baseband units with either defined or flexible



connections to the RBBs in each sector. DBBs are described in [DBBs](#) on page 1099.

RBB	A Radio Building Block (RBB) is a unique way of combining radios in one sector. The RBB defines the sector capacity and the connections to the antenna system and DUs or Baseband units. A description of RBBs can be found in RBBs on page 1133. A description of RBBs for AAS can be found in RBBs for AAS on page 1235.
ABB	An Antenna Building Block (ABB) is a unique way of combining one or more antennas and optional Tower Mounted Amplifiers (TMAs) in one sector with connections to RBBs. ABBs are described in ABBs on page 1238.
Baseband	Baseband units provides switching, traffic management, timing, baseband processing, and a radio interface. More information on Baseband units and their variants can be found in Baseband Description .
DU	Digital Units (DUs) provides switching, traffic management, timing, baseband processing, and a radio interface. More information on DUs and their variants can be found in Digital Unit Description .
IDU	The Indoor Digital Unit (IDU) is an optimized baseband unit for Radio Dot System (RDS), dedicated to the Indoor Radio Unit (IRU) and Radio Dot (RD). IDU provides switching, traffic management, timing, baseband processing, and a radio interface. More information on IDUs and their variants can be found in IDU Description .
Radio	The frequency band of a configuration depends on the radio used. The figures in this document show an internal radio. The port connections depicted in the figures are the same for an internal radio, an external radio, and an AIR unit, unless stated otherwise. An RD unit is part of a Radio Dot System (RDS) and is used together with an Indoor Radio Unit (IRU). Information on the RD unit and the IRU can be found in Radio Dot Description and Indoor Radio Unit Description respectively. Information on internal and external radios and their variants, can be found in Radio Description , Radio Unit Description , Remote Radio Unit Description , and Technical Product Description , RRU for RRU 22 (an RBS 3000 legacy product, see RBS 3000 CPI). The AIR unit contains one or two radios integrated with an antenna. Information on the AIR units and the available variants can be found in Antenna Integrated Radio Unit Description .



2 Radio Capabilities

This section gives an overview of the radio configuration capabilities for GSM, WCDMA, LTE FDD, LTE TDD, LTE LAA (License Assisted Access), CDMA, NR, and MI (Massive IoT), both in single standard and in multistandard mixed mode.

The choice of radios determines the radio frequencies of a configuration. Refer to Radio Description, Radio Unit Description, Remote Radio Unit Description, Antenna Integrated Radio Unit Description, Indoor Radio Unit Description, Radio Dot Description, and Technical Product Description, RRU for RRU 22 (an RBS 3000 legacy product, see RBS 3000 CPI) when selecting radios that correspond to required frequencies.

[Supported Radio Frequencies](#) on page 8 and [Supported Radio Frequencies for RBS 6131 AC and RBS 6131 DC](#) on page 94 list the supported frequency bands and radios for:

- Single standard GSM (G)
- Single standard CDMA (C)
- Single standard WCDMA (W)
- Single standard LTE FDD/TDD/LAA (L)
- Massive IoT (MI) including:
 - Category M1 access
 - Narrowband IoT (NB-IoT) access in-band mode
 - Narrowband IoT (NB-IoT) access guard band mode
 - Narrowband IoT (NB-IoT) access standalone mode
 - Extended Coverage GSM IoT (EC-GSM-IoT) access
- Single standard NR
- Ericsson Shared Spectrum (ESS)
- Multistandard mixed mode WCDMA + GSM (W+G)
- Multistandard mixed mode LTE FDD + GSM (L+G)
- Multistandard mixed mode NR + GSM (NR+G)
- Multistandard mixed mode ESS + GSM (ESS+GSM)
- Multistandard mixed mode LTE FDD + CDMA (L+C)



- Multistandard mixed mode WCDMA + LTE FDD (W+L)
- Multistandard mixed mode WCDMA + NR (W+NR)
- Multistandard mixed mode WCDMA + ESS (W+ESS)
- Multistandard mixed mode LTE + NR (L+NR)
- Multistandard mixed mode LTE + ESS (L+ESS)
- Multistandard mixed mode NR + ESS (NR+ESS)
- Multistandard mixed mode WCDMA + GSM + LTE FDD (W+G+L)
- Multistandard mixed mode WCDMA + GSM + NR (W+G+NR)
- Multistandard mixed mode WCDMA + GSM + ESS (W+G+ESS)
- Multistandard mixed mode GSM + LTE + NR (G+L+NR)
- Multistandard mixed mode GSM + LTE + ESS (G+L+ESS)
- Multistandard mixed mode GSM + NR + ESS (G+NR+ESS)
- Multistandard mixed mode WCDMA + LTE + NR (W+L+NR)
- Multistandard mixed mode WCDMA + LTE + ESS (W+L+ESS)
- Multistandard mixed mode WCDMA + NR + ESS (W+NR+ESS)
- Multistandard mixed mode LTE + NR + ESS (L+NR+ESS)
- Multistandard mixed mode WCDMA + GSM + LTE + NR (W+G+L+NR)
- Multistandard mixed mode WCDMA + GSM + LTE + ESS (W+G+L+ESS)
- Multistandard mixed mode WCDMA + GSM + NR + ESS (W+G+NR+ESS)
- Multistandard mixed mode GSM + LTE + NR + ESS (G+L+NR+ESS)
- Multistandard mixed mode WCDMA + LTE + NR + ESS (W+L+NR+ESS)
- Multistandard mixed mode GSM + WCDMA + LTE + NR + ESS (G+W+L+NR+ESS)
- Multi-Operator RAN LTE FDD + LTE FDD (L+L)
- Multi-Operator RAN LTE TDD + LTE TDD (L+L)
- Multi-Operator RAN NR FDD + NR FDD (NR+NR)



- Multi-Operator RAN NR TDD + NR TDD (NR+NR)
- Multi-Operator RAN ESS + ESS (ESS+ESS)
- Single Standard Mixed Mode GSM + GSM (G+G)
- Single Standard Mixed Mode WCDMA + WCDMA (W+W)

The tables also list the maximum output power for each radio, Instantaneous Bandwidth (IBW), operational bandwidth and Virtual IBW (see [Virtual IBW](#) on page 99 for more information).

[Non-Frequency Specific Radio Data](#) on page 96 lists the non-frequency specific data including number of antenna branches and data port line rates.

Radios supporting single mode GSM are also supported for GSM + GSM with Dual DUG Sharing.

Massive IoT support multiple technologies. For more information, see [Radio Configurations for Massive IoT](#) on page 455.

Note: [Supported Radio Frequencies](#) on page 8 and [Supported Radio Frequencies for RBS 6131 AC and RBS 6131 DC](#) on page 94 list the regulatory approved configurations. The stated standards and mixed moded configurations on a specific frequency band may not be generally available on all markets or supported in all software releases. Contact the local Ericsson representative for details.

Note: IBW for RUS 01 and RRUS 01 is dependent on GSM modulation technique. [IBW for RUS 01 and RRUS 01 Depending on GSM Modulation Technique](#) on page 95 lists the IBW according to the modulation technique.

Output power above a certain level, WCDMA cell carriers, and GSM cell carriers require Hardware Activation Codes (HWACs). Information about HWACs can be found in the following documents:

GSM: User Description, RAN handling of software licenses and hardware activation codes and MCPA Guideline in the GSM RAN CPI library.

WCDMA: Licenses and Hardware Activation Codes in the WCDMA RAN CPI library.

LTE or NR: [Manage Licenses and Hardware Activation Codes](#) in the LTE RAN CPI library or NR RAN CPI library. Information on HWACs for carrier bandwidths can also be found in this document.

Hardware-related capabilities: [Hardware-Related Capabilities](#) in the LTE RAN CPI library or NR RAN CPI library.



Note: IRU 2242 can be installed in RBS 6202, RBS 6601, or Remote IRU Enclosure and connected to DUs or Baseband units in all RBS 6000 RBSs.

2.1 Supported Radio Frequencies



Table 2 Supported Radio Frequencies

Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)		
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320					6501	6601
Band 0	RRUS01	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	L	G, W, L, NR, G +L, MI	EC, CM, IB, GB, SA	60	20 ⁽⁷⁾	20	
	RRUS02	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	L	G, W, L, NR, G +L, MI	EC, CM, IB, GB, SA	100	25	25 ⁽⁸⁾	
	RUG	G	G	-	-	G	G	-	-	-	-	-	-	-	70	-	-
	RUS01	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	-	-	-	-	-	-	EC, CM, IB, GB, SA	60	20 ⁽⁷⁾	20
	RUS02	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	G, W, L, NR, G +L, MI	-	-	-	-	-	-	EC, CM, IB, GB, SA	100	25	25 ⁽⁸⁾
Band 0A ⁽⁹⁾	Radio 2219	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, G +W+L, G+L +NR, G +W +NR, W +L+NR, L+L, L +NR, NR +NR, G +W+L	EC, CM, IB, GB, SA	2×60	25 ⁽¹⁰⁾	25	



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Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
Band 1		NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI				NR +NR, MI		
	AIR 21 B1A B3P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×30 ⁽⁴⁾	2×20 ⁽¹⁵⁾
	AIR 21 B1A B12P B8P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×30	2×20 ⁽¹⁵⁾
	AIR 2488 B1A B3P B7P	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	-	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	2×60	60
	AIR 2488 B1A B7P	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	-	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	2×60	60
	AIR 2488 B3A B1A B7P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	2×60	60
	AIR 4455 B1 B3	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, NR, L +NR, W	4×30 ⁽¹⁸⁾	60



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)	
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320					6501
		+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI				
	Dot 2272 B1B3 + IRU 8844 or IRU 8884	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	-	L, L+L MI	-	L, L+L MI	L, L+L MI	2×125 mW	40	40
	Dot 2282 B1B3 + IRU 8844 or IRU 8884	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	-	L, L+L MI	-	L, L+L MI	L, L+L MI	2×125 mW	40	40
	mRRUS 12	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	2×5	25	20
	Radio 0208	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	n/a ⁽¹⁹⁾	60	60 ⁽²⁰⁾
	Radio 2203	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	2×5	45 ⁽²¹⁾	45
	Radio 2212	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, W +NR, W +NR, W +L+NR, L+L, NR +NR, MI	2×80	60 ⁽²³⁾	60

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[illegible]

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Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS										MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501				
	Radio 4480 44B1 44B3 C	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	-	W, L, W +L, L +L, MI	4×60 ⁽³⁴⁾ (12)	60	60	
	Radio 4499 44B1 44B3 C	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	-	W, L, W +L, L +L, MI	4×60 ⁽³⁴⁾ (35)	60	60	
	RBS 6501 radio part	W, L	-	-	-	-	-	-	-	-	W, L	-	2×5	25	20	
	RD 2242 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	L	W, L, W +L, L +L, MI	2×50 mW	40	40
	RD 2243 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	L	W, L, W +L, L +L, MI	2×50 mW	40	40
	RD 4442 B1 B3 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	L	W, L, W +L, L +L, MI	2×50 mW	40	40
	RD 4442 B1 B7 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	L	W, L, W +L, L +L, MI	2×50 mW	40	40
	RD 4453 B1 B3 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	L	W, L, W +L, L +L, MI	2×50 mW	40	40
	RRU 22 ⁽³⁷⁾	W	-	-	-	-	-	W	-	-	-	W	40	10	10	
	RRUS 01	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	80	20 ⁽⁷⁾	20
	RRUS 11	W, L, W +L, MI	W, L, W +L, MI	W, L, W +L, MI	W, L, W +L, MI	W, L, W +L, MI	W, L, W +L, MI	W, L, W +L, MI	W, L, W +L, MI	W, L, W +L, MI	L	W, L, W +L, MI	2×40	20	20	



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320				
	RRUS 12	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×60	40	20
	RRUS 13	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×60	45	40
	RRUS A2	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	-	W, L, W +L, L +L, MI	n/a ⁽¹⁹⁾	40	20
	RRUS A3	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	n/a ⁽¹⁹⁾	40	40
	RRUW 01	W	W	W	-	W	-	-	W	-	-	-	W	60	20
	RRUW 03	W	-	-	-	W	-	W	-	W	-	W	20	20	20
	RUS 01	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	-	80	20 ⁽⁷⁾	20
	RUS 02	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	-	100	40	20
	RUW 01	W	W	W	-	W	-	W	-	W	-	-	60	20	20
	Vault Radio System 2268	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L	W, L, W +L, L +L, MI	2×5	45 ⁽²¹⁾	45
Band 1A	RRU 22F3 ⁽³⁹⁾	L, MI	-	-	-	-	-	-	-	-	-	L, MI	2×6	20	20
Band 1B	Radio 2242 B1B B3A	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×80 ⁽⁴⁰⁾	55	55



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
Band 2	AIR 1641 B2/25A B66A	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	-	L, L+, L-, MI	-	L, L+, L-, MI	60
	AIR 21 B2A B4P	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	W, L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	L	G, W, L, G +W, G +L, W +L, L +L, MI	2×20 ⁽¹⁵⁾ (42)
	AIR 21 B2A B12P B8P	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	-	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	W, L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	L	G, W, L, G +W, G +L, W +L, L +L, MI	2×20 ⁽¹⁵⁾ (42)
	AIR 32 B2A B66AA ⁽⁴³⁾ (44)	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	-	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	40
	AIR 32 B2A B66AP	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	-	W, L, NR, G +W, G +L, G +NR, L +NR, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	40 ⁽⁴⁵⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)	
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320					6501
		+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	+L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI				
	AIR 32 B2A B7P LBP	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, W +L, L +L, MI	-	-	W, L, G +L, W +L, G +W+L, L+L, MI	EC, CM	4×30	40	40 ⁽⁴⁵⁾
	AIR 3246 B2 B25	L, MI	L, MI	-	-	L, MI	L, MI	L, MI	-	L, MI	-	L	CM	160	75	60
	AIR 4455 B2/B25 B66A	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	G, W, L, G+W, G +L, W +L, L +L, G +W+L, MI	EC, CM, IB, GB, SA	4×30 ⁽¹⁸⁾	60	60
	mRRUS 12	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L +L, L +L, MI	W, L, W +L, L +L, MI	CM	2×5	25	20
	Radio 0208	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	CM, IB, GB, SA	n/a ⁽¹⁹⁾	60	60 ⁽²⁰⁾

[illegible]



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)	
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320					6501
		+NR, MI														
	Radio 2219	W, L, G +L, G +W, W +L, G +W+L, MI	W, L, G +L, G +W, W +L, G +W+L, MI	W, L, G +L, G +W, W +L, G +W+L, MI	W, L, G +L, G +W, W +L, G +W+L, MI	W, L, G +L, G +W, W +L, G +W+L, MI	W, L, G +L, G +W, W +L, G +W+L, MI	W, L, G +L, G +W, W +L, G +W+L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, G +L, G +W, W +L, G +W+L, MI	40 ⁽⁵¹⁾ (52)	40		
	Radio 4402 B2/B25	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×5	60 ⁽⁵³⁾	60	
	Radio 4415 B2 B25 ⁽⁵⁴⁾	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	L	G, W, L, NR, G +L, G +NR, G +W, W +L, W +NR, L +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR[] MI	60 ⁽⁵⁶⁾ (57)	60		
	Radio 4455 B2/B25 B66A ⁽⁵⁸⁾	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L	3×40 ⁽⁵⁹⁾	60 ⁽⁶⁰⁾	60	



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽⁵⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
		NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI	NR +NR, MI			
	Radio 4499 44B2/B25 44B66A	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	-	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, W +L, L +L, MI	-		W, L, G +L, G +W, W +L, L +L, G +W+L, MI	60
	Radio 8843 B2 B66A	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, L+L, MI	L, NR, L +L, L +NR, NR +NR, MI	-	L, NR, L +L, L +NR, NR +NR, MI	60
	RBS 6501 radio part	W, L	-	-	-	-	-	-	-	-	-	W, L	-	20
	RD 2242 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	L	W, L, W +L, L +L, MI	40
	RRU 22 ⁽³⁷⁾	W	-	-	-	-	-	-	W	-	-	-	W	10
	RRUS 01	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	W, L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	L	G, W, L, G +W, G +L, W +L, L +L, MI	20 ⁽⁷⁾ (64)
	RRUS 11	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	20
	RRUS 12	G, W, L, G +W, G +L, W	G, W, L, G +W, G +L, W	G, W, L, G +W, G +L, W	G, W, L, G +W, G +L, W	G, W, L, G +W, G +L, W	G, W, L, G +W, G +L, W	G, W, L, G +W, G +L, W	G, W, L, G +W, G +L, W	W, L, W +L, L +L, MI	G, W, L, G +W, G +L, W +L, L +L, MI	L	G, W, L, G +W, G +L, W +L, L +L, MI	40 ⁽⁸⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS										MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501				
		+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI	+L, G +W, L, L+L, MI		+L, G +W, L, L+L, MI				
	RRUS 32 ⁽⁴⁴⁾	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI	W, L, G +W, G +L, W +L, G +W+L, L+L, MI		W, L, G +W, G +L, W +L, G +W+L, L+L, MI		40	40 ⁽⁴⁵⁾	
	RRUS A2	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI		40	20	
	RRUW 02	W	W	-	-	W	-	-	-	-	-	W		20	20	
	RUG	G	G	-	-	G	G	-	-	-	-	-		-		
	RUS 01	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI		-		20 ⁽⁷⁾ (64)	20	
	RUS 02	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI		-		40	25 ⁽⁸⁾	
	Vault Radio System 2268 B2 B25	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	W, L, L NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR	45 ⁽²¹⁾	45 ⁽⁴⁶⁾	



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS										MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501				
Band 3		+NR, MI	+NR, MI	+NR, MI	+NR, MI	+NR, MI	+NR, MI	+NR, MI	+NR, MI	+NR, MI	+NR, MI		+NR, MI			
	AIR 21 B3A B1P	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	W, L, L +L, MI	G, W, L, G+L, L +L, MI	L	G, W, L, G+L, L +L, MI	2×30	2×20 ⁽¹⁵⁾ ⁽⁴²⁾	2×20	
	AIR 21 B3A B12P B8P	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	W, L, L +L, MI	G, W, L, G+L, L +L, MI	L	G, W, L, G+L, L +L, MI	2×30	2×20 ⁽¹⁵⁾ ⁽⁴²⁾	2×20	
	AIR 2488 B3A B1A B7P ⁽⁶⁵⁾	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	L, L+L, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	-	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	2×60	70 ⁽⁶⁶⁾	70	
	AIR 2488 B3A B1P B7P ⁽⁶⁷⁾	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	-	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	L, L+L, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	-	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	2×60	70 ⁽⁶⁶⁾	70	
	AIR 2488 B3A B7P ⁽⁶⁹⁾	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	L, L+L, MI	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	-	G, L, NR, G +L, G +NR, L +L+NR, L+L, NR +NR, MI	2×60	70 ⁽⁶⁶⁾	70		



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (4) (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
		L, L, NR, +NR, MI	L, L, NR, +NR, MI	L, L, NR, +NR, MI	L, L, NR, +NR, MI	L, L, NR, +NR, MI	L, L, NR, +NR, MI	L, L, NR, +NR, MI	L, L, NR, +NR, MI		L, L, NR, +NR, MI			
	AIR 32 B3A B7P LBP	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, L+L, MI	-	-	L, G+L, L+L, MI	40 ⁽⁴⁵⁾
	AIR 32 B7A B3A LBP ⁽⁴³⁾ ⁽⁴⁴⁾	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, L+L, MI	-	-	L, G+L, L+L, MI	40 ⁽⁴⁵⁾
	AIR 3246	L, MI	L, MI	-	-	L, MI	L, MI	L, MI	L, MI	-	L, MI	-	L, MI	45 ⁽⁷²⁾
	AIR 4455 B1 B3	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	L, L+L, MI	-	-	G, L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR, +NR, MI	75 ⁽⁷³⁾
	Dot 2272 B1B3 + IRU 8844 or IRU 8884	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	-	L, L+L, MI	40
	Dot 2282 B1B3 + IRU 8844 or IRU 8884	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	-	L, L+L, MI	40
	mRRUS 12	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	W, L, W+L, L+L, +L, MI	-	W, L	W, L, W+L, L+L, +L, MI	20

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Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS								MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)		
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾					6320	6501
		L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI		L, NR, G+L, L +NR, L +NR, L +NR, MI		L, NR, G+L, L +NR, L +NR, L +NR, MI				
		L, NR, G+L, L +NR, G +NR, L +NR, MI	L, NR, G+L, L +NR, G +NR, L +NR, MI	L, NR, G+L, L +NR, G +NR, L +NR, MI	L, NR, G+L, L +NR, G +NR, L +NR, MI	L, NR, G+L, L +NR, G +NR, L +NR, MI	L, NR, G+L, L +NR, G +NR, L +NR, MI	L, NR, G+L, L +NR, G +NR, L +NR, MI		L, NR, G+L, L +NR, G +NR, L +NR, MI		L, NR, G+L, L +NR, G +NR, L +NR, MI				
	Radio 2242 B1 B3	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, L+L, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L	L, NR, G+L, L +NR, L +NR, L +NR, MI	CM, IB, GB, SA ⁽⁸²⁾	2×80	75 ⁽⁸³⁾	75
	Radio 2260 22B1 22B3 C	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	L, L+L, MI	L, NR, G+L, L +NR, L +NR, L +NR, MI	-	L, NR, G+L, L +NR, L +NR, L +NR, MI	CM, IB, GB, SA ⁽²⁷⁾	2×80 ⁽⁸⁴⁾	75	75



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
	Radio 2279 22B1 22B3 C	L, NR, G+L, L +NR, L +L, NR MI	L, NR, G+L, L +NR, L +L, NR MI	L, NR, G+L, L +NR, L +L, NR MI	L, NR, G+L, L +NR, L +L, NR MI	L, NR, G+L, L +NR, L +L, NR MI	L, NR, G+L, L +NR, L +L, NR MI	L, NR, G+L, L +NR, L +L, NR MI	L, NR, G+L, L +NR, L +L, NR MI	L, L+L, MI	L, NR, G+L, L +NR, L +L, NR MI	-	L, NR, G+L, L +NR, L +L, NR MI	75
	Radio 4407	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	-	L, L+L, MI	60
	Radio 4415 ⁽⁸⁶⁾	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	L, L+L, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	L	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	75 ⁽⁸⁸⁾ (89) (90)
	Radio 4417	G, L, G +L, L +L, MI	G, L, G +L, L +L, MI	G, L, G +L, L +L, MI	G, L, G +L, L +L, MI	G, L, G +L, L +L, MI	G, L, G +L, L +L, MI	G, L, G +L, L +L, MI	G, L, G +L, L +L, MI	L, L+L, MI	G, L, G +L, L +L, MI	L	G, L, G +L, L +L, MI	75
	Radio 4428	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	L, L+L, MI	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	L	G, L, NR, G +NR, G +L, L +NR, G +L+NR, L+L, NR +NR, MI	75 ⁽¹¹¹⁾ (91)
	Radio 4429	G, L, NR, G +NR, G +L, L +NR, G	G, L, NR, G +NR, G +L, L +NR, G	G, L, NR, G +NR, G +L, L +NR, G	G, L, NR, G +NR, G +L, L +NR, G	G, L, NR, G +NR, G +L, L +NR, G	G, L, NR, G +NR, G +L, L +NR, G	G, L, NR, G +NR, G +L, L +NR, G	G, L, NR, G +NR, G +L, L +NR, G	L, L+L, MI	G, L, NR, G +NR, G +L, L +NR, G	L	G, L, NR, G +NR, G +L, L +NR, G	75 ⁽⁹²⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320				
		+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI	+L+NR, L+L, NR+NR, MI		+L+NR, L+L, NR+NR, MI			
	Radio 4442 B1 B3	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI		L, NR, ESS, L+ESS, L+L, L+NR, NR+ESS, L+NR+ESS, NR+NR, MI	-	75 ⁽⁹³⁾	75
	Radio 4443 B1 B3	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI		L, NR, G+L, G+NR, G+L+NR, L+L, L+NR, NR+NR, NR+NR, MI	-	EC, CM, IB, GB, SA	75 ⁽⁹⁴⁾
	Radio 4480 44B1 44B3 C	L, G+L, L+L, MI	L, G+L, L+L, MI	-	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, L+L, MI	-			75	
	Radio 4499 44B1 44B3 C	L, G+L, L+L, MI	L, G+L, L+L, MI	-	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, G+L, L+L, MI	L, L+L, MI	-				75	
	RBS 6501 radio part	W, L	-	-	-	-	-	-	-	-	W, L	-	-	2×5	20



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS										MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601			
	RD 2242 + IRU 2242 ⁽³⁶⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L	L, L+, L- MI	2×50 mW	40	40
	RD 2243 + IRU 2242 ⁽³⁶⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L	L, L+, L- MI	2×50 mW	40	40
	RD 4442 B1 B3 + IRU 2242 ⁽³⁶⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L	L, L+, L- MI	2×50 mW	40	40
	RD 4442 B3 B7 + IRU 2242 ⁽³⁶⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L	L, L+, L- MI	2×50 mW	40	40
	RD 4442 B40A B3 + IRU 2242 ⁽³⁶⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L	L, L+, L- MI	2×50 mW	40	40
	RD 4453 B1 B3 + IRU 2242 ⁽³⁶⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L	L, L+, L- MI	2×50 mW	40	40
	RRUS 01	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	-	L	G, W, L, G+L, L- +L, MI	80	20 ⁽⁷⁾ (97)	20
	RRUS 12 ⁽⁷⁹⁾	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	L	G, W, L, G+L, L- +L, MI	2×60	40	25 ⁽⁸⁾
	RRUS 13 ⁽⁷⁹⁾	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	G, W, L, G+L, L- +L, MI	L	G, W, L, G+L, L- +L, MI	2×60	45 ⁽¹⁰⁰⁾	40
	RRUS 14 ⁽⁷⁹⁾	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	L	G, L, G+L, L- +L, MI	2×80	75 ⁽¹⁰¹⁾	60.4 ⁽¹⁰²⁾
	RRUS 14s ⁽⁷⁹⁾	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	G, L, G+L, L- +L, MI	L	G, L, G+L, L- +L, MI	2×80	75 ⁽¹⁰¹⁾	60.4 ⁽¹⁰²⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
	RRUS 32	G ⁽⁴⁴⁾ L, G+L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	L, L+L, MI	G ⁽⁴⁴⁾ L, G+L, L+L, MI	L	G ⁽⁴⁴⁾ L, G+L, L+L, MI	40 ⁽⁴⁵⁾
	RRUS A2	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	-	-	W, L, L +L, MI	20
	RRUS A3	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	W, L, L +L, MI	-	W, L, L +L, MI	40
	RUG	G	G	G	-	-	G	G	-	-	-	-	-	-
	RUS 01	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	-	-	-	-	-	20 ⁽⁷⁾ (97)
	RUS 02 ⁽⁷⁹⁾	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	-	-	-	-	-	40 ⁽⁸⁾
	RUS 03 ⁽⁷⁹⁾	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	G, W, L, G+L, L +L, MI	-	-	-	-	-	40
	Vault Radio System 2268	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	45 ⁽⁴⁶⁾
	Radio 2217	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	L	L	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	45 ⁽²⁴⁾
	Band 3A													45



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)	
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320					6501
	Radio 2219	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	L, L+L, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	L	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	2×80	45 ⁽¹⁰⁴⁾	45	
	Radio 2242 B1B B3A	W, L, G +L, W +L, L +L, MI	W, L, G +L, W +L, L +L, MI	W, L, G +L, W +L, L +L, MI	W, L, G +L, W +L, L +L, MI	W, L, G +L, W +L, L +L, MI	W, L, G +L, W +L, L +L, MI	W, L, G +L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, G +L, W +L, L +L, MI	L	W, L, G +L, W +L, L +L, MI	2×80 ⁽⁴⁰⁾	50 ⁽¹⁰⁵⁾	50	
	RRUS 12	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	W, L, L +L, MI	-	-	G, W, L, NR, G +L, W +L, L +L, MI	2×60	40	25 ⁽⁸⁾
	RRUS 13	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	W, L, L +L, MI	G, W, L, NR, G +L, W +L, L +L, MI	-	G, W, L, NR, G +L, W +L, L +L, MI	2×60	40	40
Band 3B	Radio 2219	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	L, L+L, MI	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	L	G, L, NR, G +L, G +NR, G +L+NR, L+L, L +NR, NR +NR, MI	2×80	40 ⁽¹⁰⁶⁾	40	



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320				
	Radio 4415 ⁽¹⁰⁷⁾	G _L , NR, G _L , G _L													



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
Band 3C	Radio 2203	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L	W, L, W +L, L +L, MI	40	40 ⁽⁴⁶⁾
	Vault Radio System 2268	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L	W, L, W +L, L +L, MI	40	40 ⁽⁴⁶⁾
Band 3D	RRU 22F1	L, MI	-	-	-	-	-	-	-	L, MI	-	-	L, MI	60	20
Band 3E	Dot 2272 B3E B40A + IRU 8844 or IRU 8884	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	-	L, L+L MI	-	L, L+L MI	25	25
	Dot 2282 B3E B40A + IRU 8844 or IRU 8884	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	L, L+L MI	-	L, L+L MI	-	L, L+L MI	25	25
Band 4	AIR 21 B4A B2P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×20 ⁽¹⁵⁾	2×20
	AIR 21 B4A B12P B5P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×20 ⁽¹⁵⁾	2×20
	AIR 21 B4A B12P B8P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×20 ⁽¹⁵⁾	2×20
	AIR 32 B4A B2P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	45	40 ⁽¹¹²⁾
	mRRUS 12	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L	W, L, W +L, L +L, MI	25	20



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
	RBS 6501 radio part	W, L	-	-	-	-	-	-	-	-	-	W, L	-	25	20
	RD 2242 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	L	W, L, W +L, L +L, MI	2×50 mW	40
	RRU 22 ⁽³⁷⁾	W	-	-	-	-	-	-	W	-	-	-	W	20/40	10
	RRUL 11	L, MI	L	L	-	-	L	-	-	-	-	-	L, MI	2×30	10
	RRUS 11	W, L, C W+L, L +C, L +L, MI	W, L, C W+L, L +C, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, C W+L, L +C, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, C W+L, L +C, L +L, MI	2×40	20
	RRUS 12	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	2×60	20
	RRUS 32	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	4×40 ⁽¹¹³⁾	40
	RRUS A2	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	n/a ⁽¹⁹⁾	20
	RUS 01	W, L, C W+L, L +C, L +L, MI	W, L, C W+L, L +C, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, C W+L, L +C, L +L, MI	W, L, C W+L, L +C, L +L, MI	-	-	-	-	-	80	20
	Radio 0208	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	n/a ⁽¹⁹⁾	25
Band 5	Radio 2203	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, NR, L +NR, W	W, L, W +L, L +L, MI	W, L, NR, L +NR, W	W, L	W, L, NR, L +NR, W	2×5	25



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS								MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾				
		+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI	+L, W +NR, W +L+NR, L+L, NR +NR, MI		+L, W +NR, W +L+NR, L+L, NR +NR, MI		+L, W +NR, W +L+NR, L+L, NR +NR, MI		
		G, W, L, NR, ESS, G +ESS, G+L, G +NR, G +W, L +ESS, L +NR, NR +ESS, W +ESS, W+L, W+NR, G+L +ESS, G+L +NR, G +NR +ESS, G+W +ESS, G+W +L, G +W +NR, L +NR +ESS, W+L +NR, W +L +ESS,	G, W, L, NR, ESS, G +ESS, G+L, G +NR, G +W, L +ESS, L +NR, NR +ESS, W +ESS, W+L, W+NR, G+L +ESS, G+L +NR, G +NR +ESS, G+W +ESS, G+W +L, G +W +NR, L +NR +ESS, W+L +NR, W +L +ESS,	G, W, L, NR, ESS, G +ESS, G+L, G +NR, G +W, L +ESS, L +NR, NR +ESS, W +ESS, W+L, W+NR, G+L +ESS, G+L +NR, G +NR +ESS, G+W +ESS, G+W +L, G +W +NR, L +NR +ESS, W+L +NR, W +L +ESS,	G, W, L, NR, ESS, G +ESS, G+L, G +NR, G +W, L +ESS, L +NR, NR +ESS, W +ESS, W+L, W+NR, G+L +ESS, G+L +NR, G +NR +ESS, G+W +ESS, G+W +L, G +W +NR, L +NR +ESS, W+L +NR, W +L +ESS,	G, W, L, NR, ESS, G +ESS, G+L, G +NR, G +W, L +ESS, L +NR, NR +ESS, W +ESS, W+L, W+NR, G+L +ESS, G+L +NR, G +NR +ESS, G+W +ESS, G+W +L, G +W +NR, L +NR +ESS, W+L +NR, W +L +ESS,	G, W, L, NR, ESS, G +ESS, G+L, G +NR, G +W, L +ESS, L +NR, NR +ESS, W +ESS, W+L, W+NR, G+L +ESS, G+L +NR, G +NR +ESS, G+W +ESS, G+W +L, G +W +NR, L +NR +ESS, W+L +NR, W +L +ESS,	G, W, L, NR, ESS, G +ESS, G+L, G +NR, G +W, L +ESS, L +NR, NR +ESS, W +ESS, W+L, W+NR, G+L +ESS, G+L +NR, G +NR +ESS, G+W +ESS, G+W +L, G +W +NR, L +NR +ESS, W+L +NR, W +L +ESS,						
	Radio 2212													

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40



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
	RRUW 02	W	W	W	-	-	W	-	W	-	-	-	W	20
	RUG	G	G	G	-	-	G	G	-	-	-	-	-	-
	RUS 01 ⁽¹²⁰⁾	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	-	-	-	-	-	20
	RUS 02	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, C, G +W, G +L, W +L, L +C, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	-	-	-	-	-	25 ⁽¹²⁴⁾
	Vault Radio System 2268	W, L, NR, L +NR, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +L+NR, L+L, NR +NR, MI	25
Band 5A	Radio 2237	L, L+L, MI	-	-	-	-	-	-	-	-	-	-	L, L+L, MI	19.4
Band 5B	Radio 2219	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	11
	Radio 2468	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	11



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
Band 7	AIR 21 B7A B2P	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L, L+, L- MI	L	L, L+, L- MI	2×30 ⁽¹⁵⁾	2×20
	AIR 32 B7A B3A LBP ⁽⁴³⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	-	L, L+, L- MI	4×30	40
	AIR 32 B7A B66AA LBP ⁽⁴³⁾	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L, L+, L- MI	4×30	40
	AIR 32 B7A B7A HBP LBP	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L, L+, L- MI	4×30	40
	mRRUS 12	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L	L, L+, L- MI	2×5	20
	Radio 0208	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	-	L, L+, L- MI	n/a ⁽¹⁹⁾	50 ⁽²⁰⁾
	Radio 2203	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L, L+, L- MI	L	L, L+, L- MI	2×5	40
	Radio 2212	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, L+, L- MI	L, NR, L +NR, L +NR, MI	L	L, NR, L +NR, L +NR, MI	2×80	40 ⁽¹²⁵⁾
	Radio 2217	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, L+, L- MI	L, NR, L +NR, L +NR, MI	L	L, NR, L +NR, L +NR, MI	2×40	50 ⁽¹²⁶⁾
	Radio 4415	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, NR, L +NR, L +NR, MI	L, L+, L- MI	L, NR, L +NR, L +NR, MI	L	L, NR, L +NR, L +NR, MI	4×40	70



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS	MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth (MHz)
		Support ed Radio Standards	6101 6102 6110 6120 6201 6202 6301 6302 ⁽⁶⁾ 6320 6501 6601				
	RBS 6501 Radio part	+NR, MI	-	-	2x5	25	20
	RD 2242 + IRU 2242 ⁽³⁶⁾	L, L+, MI	L, L+, MI	L, L+, MI	2x50 mW	40	40
	RD 2243 + IRU 2242 ⁽³⁶⁾	L, L+, MI	L, L+, MI	L, L+, MI	2x50 mW	40	40
	RD 4442 B1 B7 + IRU 2242 ⁽³⁶⁾	L, L+, MI	L, L+, MI	L, L+, MI	2x50 mW	40	40
	RD 4442 B3 B7 + IRU 2242 ⁽³⁶⁾	L, L+, MI	L, L+, MI	L, L+, MI	2x50 mW	40	40
	RRUS 11	L, L+, MI	L, L+, MI	L, L+, MI	2x30	20	20
	RRUS 12	L, L+, MI	L, L+, MI	L, L+, MI	2x40	40	20
	RRUS 13	L, L+, MI	L, L+, MI	L, L+, MI	2x40	40	40
	RRUS 32	L, L+, MI	L, L+, MI	L, L+, MI	4x40	40	40
	RRUS A2	L, L+, MI	L, L+, MI	L, L+, MI	n/a ⁽¹⁹⁾	40	20
	RRUS A3	L, L+, MI	L, L+, MI	L, L+, MI	n/a ⁽¹⁹⁾	40	40
	RUS 01	L, L+, MI	L, L+, MI	L, L+, MI	40	20	20



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)		
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320					6501	6601
Band 7A	Vault Radio System 2268	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L	L, L+, L-, MI	CM	2×5	40	40	
	AIR 32 B7AA HBP LBP	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	-	L, L+, L-, MI	CM, IB, GB	4×30	40	40	
	Radio 2217	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L, NR, L +L, L +NR, NR +NR, NR MI	L	L, NR, L +L, L +NR, NR +NR, NR MI	CM, IB, GB	2×40	50	50
	Radio 4415	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L, NR, L +L, NR +NR, NR MI	L	L, NR, L +L, NR +NR, NR MI	CM, IB	4×40	60	60
	RRUS 13	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	-	L	L, L+, L-, MI	CM, IB, GB	2×40	40	40
	RRUS 32	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L, L+, L-, MI	L	L, L+, L-, MI	CM, IB, GB	4×40	40	40
Band 8	AIR 11 B8A B20P	G, W	G, W	G, W	G, W	G, W	G, W	G, W	G, W	W	-	G, W	EC	2×30	2×20 ⁽⁴²⁾	2×20	
	Radio 2203	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L	W, L, W +L, L +L, MI	CM	2×5	35	35 ⁽⁴⁶⁾	
	Radio 2212 ⁽¹²⁸⁾ (129)	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	L	G, W, L, NR, G +L, G +NR, G +NR, W +NR, W +L, W +NR, G	EC, CM, IB, GB, SA ⁽¹⁵⁰⁾	2×80	35 ⁽¹³¹⁾	35

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Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS								Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601
		G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI	G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI		G+W, L, G +L, G +W +NR, W +L+NR, G+W+L +NR, L +L, NR +NR, MI		
	Radio 2238 B8 B20 B28B	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	W, L, W +L, L +L, MI	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI	-	G, W, L, G +L, G +W, W +L, G +W+L, L+L, MI
	Radio 2460 24B8 24B20 24B28B M01	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, W +L, L +L, MI	W, L, G +L, G +W, W +L, G +W+L, MI	-	W, L, G +L, G +W, W +L, L +L, G +W+L, MI
	Radio 2468 ⁽¹³⁷⁾	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	W, L, W +L, L +L, MI	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L	-	G, W, L, G +L, G +NR, G +W, L +NR, W +L, W +NR, G +L+NR, G+W +L, G +W +NR, W +L+NR, G+W+L



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽⁵⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
		+NR, L +L, NR +NR, MI	+NR, L +L, NR +NR, MI	+NR, L +L, NR +NR, MI	+NR, L +L, NR +NR, MI	+NR, L +L, NR +NR, MI	+NR, L +L, NR +NR, MI	+NR, L +L, NR +NR, MI	+NR, L +L, NR +NR, MI		+NR, L +L, NR +NR, MI			
	Radio 2479 24B8 24B20 24B28B M01	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	W, L, W +L, L +L, MI	W, L, G +L, G +W+L, MI	-	W, L, G +L, G +W, W +L, L +L, G +W+L, MI	35
	Radio 4480 44B8 44B28 C	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	-	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	W, L, W +L, L +L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	-	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	35
	Radio 4499 44B8 44B28 C	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	-	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	W, L, W +L, L +L, MI	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	-	G, W, L G+L, G +W, W +L, L +L, G +W+L, MI	35
	RD 2243 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	35
	RRU 22 ⁽³⁷⁾	W	-	-	-	-	-	-	W	-	-	-	W	10
	RRUS 01	G, W, L G+W, G +L, MI	G, W, L G+W, G +L, MI	G, W, L G+W, G +L, MI	G, W, L G+W, G +L, MI	G, W, L G+W, G +L, MI	G, W, L G+W, G +L, MI	G, W, L G+W, G +L, MI	G, W, L G+W, G +L, MI	W, L +L, MI	G, W, L G+W, G +L, MI	L	G, W, L G+W, G +L, MI	20 ⁽⁷⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320				
	RRUS 12	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	L	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	2×60	35	25 ⁽⁸⁾
	RUG	G	G	-	-	G	G	-	-	-	-	-	70	-	-
	RUS01	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, W +L, MI	G, W, L, G+W, G +L, W +L, W +L, MI	G, W, L, G+W, G +L, W +L, W +L, MI	G, W, L, G+W, G +L, W +L, W +L, MI	-	-	-	-	-	80	20 ⁽⁷⁾	20
	RUS02	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, W +L, MI	G, W, L, G+W, G +L, W +L, W +L, MI	G, W, L, G+W, G +L, W +L, L +L, MI	G, W, L, G+W, G +L, W +L, W +L, MI	-	-	-	-	-	100	35	25 ⁽⁸⁾
	Vault Radio System 2268	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L	W, L, W +L, L +L, MI	2×5	35
Band 8A	Radio 2219	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	L	G, W, L, G+W, G +L, W +L, G +W+L, L+L, MI	2×60	20 ⁽¹⁴¹⁾	20
	Radio 2468 ⁽¹⁴²⁾	G, W, L, G+W, W +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, G +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, W +L, G +W+L, L+L, MI	G, W, L, G+W, W +L, W +L, G +W+L, L+L, MI	-	G, W, L, G+W, W +L, W +L, G +W+L, L+L, MI	2×80	20	20



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS										MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)	
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501					6601
	RRUS 12	G, W, L, G+L, G+W, W+L, G+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	L	G, W, L, G+L, G+W, W+L, MI	EC, CM, IB, GB, SA	2×60	26	25 ⁽⁸⁾	
	RRUS 13	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	L	G, W, L, G+L, G+W, W+L, MI	EC, CM, IB, GB, SA	2×60	26	26	
	RUS 01	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	G, W, L, G+L, G+W, W+L, MI	-	-	EC, CM, IB, GB, SA	80	20	20	
	RUS 02	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	G, L, G+L, L+L, MI	-	-	EC, CM, IB, GB, SA	80	26	20.8	
Band 9	RRU 22 ⁽³⁷⁾	W	-	-	-	-	-	-	W	-	-	-	W	-	40	10	10
	RRUS 01	W, L, W+L, L+L	W, L, W+L, L+L	-	-	W, L, W+L, L+L	W, L, W+L, L+L	W, L	W, L	-	-	-	W, L, W+L, L+L	CM, IB	60	20	20
Band 11	Radio 2217	W, L, W+L, L+L, MI	W, L, W+L, L+L, MI	-	-	-	W, L, W+L, L+L, MI	-	W, L, W+L, L+L, MI	-	-	W, L, W+L, L+L, MI	CM, IB	2×60	20	20	20
	RRUW 02	W, L, W+L, L+L, MI	W, L, W+L, L+L, MI	-	-	W, L, W+L, L+L, MI	W, L, W+L, L+L, MI	-	W, L, W+L, L+L, MI	-	-	W, L, W+L, L+L, MI	CM, IB	60	10	10	
	RUW 02	W, L, W+L, L+L, MI	W, L, W+L, L+L, MI	-	-	W, L, W+L, L+L, MI	W, L, W+L, L+L, MI	-	W, L, W+L, L+L, MI	-	-	-	CM, IB	60	10	10	



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
Band 12	mRRUS 12	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L	L, L+, MI	15
	RBS 6501 radio part	L	-	-	-	-	-	-	-	-	-	L	-	15
	RRUS 11 ⁽¹⁴⁵⁾	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L	L, MI	16.4
	RRUL 11	L, MI	-	-	-	-	-	-	-	-	-	-	L, MI	10
Band 12A	RUS 01	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	-	-	-	-	-	15
	Radio 4449 B5 B12A	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	-	L, L+, MI	15
Band 13	mRRUS 12	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L	L, L+, MI	10
	Radio 0208	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	-	L, L+, MI	10
	Radio 2212	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L	L, L+, MI	10
	Radio 4449 B5 B13 ⁽¹⁴⁷⁾	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	-	L, L+, MI	10
	RBS 6501 radio part	L	-	-	-	-	-	-	-	-	-	L	-	10
Band 13	RD 2242 + IRU 2242 ⁽³⁶⁾	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L, L+, MI	L	L, L+, MI	10

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Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320				
Band 25		+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI		+NR, NR, +NR, MI			
	Radio 2238 B8 B20 B28B ⁽¹⁴⁹⁾	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	120	30	30 ⁽⁴⁶⁾
	Radio 2460 24B8 24B20 24B28B M01	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	2×40 ⁽¹³⁵⁾	30 ⁽¹⁵¹⁾	30
	Radio 2479 24B8 24B20 24B28B M01	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	2×40 ⁽¹³⁵⁾	30 ⁽¹⁵¹⁾	30
	RRUS 11	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L	L, MI	2×40 ⁽¹⁵²⁾	20	20
	RUS 01	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	-	-	-	-	CM, IB, GB	20	20
	AIR 1641 B2/25A B66A	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	-	CM, IB, GB	65	60
	AIR 3246 B2 B25	L, MI	L, MI	-	-	L, MI	L, MI	L, MI	L, MI	-	L, MI	-	CM	160	60
	AIR 4455 B2/B25 B66A	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	CM, IB, GB, SA	65	65
	Radio 2203 B2 B25	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, L+L, MI	L, NR, L +NR, L +L, NR +NR, MI	L	L, NR, L +NR, L +L, NR +NR, MI	CM, IB, GB	45 ⁽²¹⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)	
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320					6501
Radio 2212 B2 B25	Radio 2212 B2 B25	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	65 ⁽¹⁵³⁾	65	
		L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	L, L+L, MI	65 ⁽⁵³⁾	65	
		W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, L +NR, NR +NR, MI	65 ⁽¹⁵⁵⁾	65
Radio 4455 B2/B25 B66A	Radio 4455 B2/B25 B66A	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	L, NR, L +L, L +NR, NR +NR, MI	65 ⁽⁶⁰⁾	65	
		W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	-	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	W, L, W +L, L +NR, NR +NR, MI	4×30 ⁽⁵⁹⁾	65	
		L	-	-	-	-	-	-	-	-	-	-	-	4×60 ⁽¹⁵⁶⁾	65	65
	RBS 6501 radio part	L	-	-	-	-	-	-	-	-	-	L	-	2×5	25	20



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽⁴⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
	RD 2243 + IRU 2242 ⁽³⁶⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	40
	RD 4442 B25 B66A + IRU 2242 ⁽³⁶⁾	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	40
	RRUS 11	L, C, L +C, MI	L, C, L +C, MI	-	-	-	L, MI	L, MI	L, C, L +C, MI	L, MI	-	-	L, C, L +C, MI	20
	RRUS 31	L, C, MI	L, C, MI	L, MI	L, MI	-	-	-	-	-	-	-	L, C, MI	65 ⁽⁴⁶⁾
	RRUS A2	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	40
	Vault Radio System 2268	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, NR, L +NR, L +L, NR +NR, MI	L, L+L, MI	L, NR, L +NR, L +L, NR +NR, MI	L	L, NR, L +NR, L +L, NR +NR, MI	45 ⁽²¹⁾ 45 ⁽⁴⁶⁾
	RRUS 11	L, C, L +C, MI	L, C, L +C, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, C, L +C, MI	L, MI	L, MI	L	L, C, L +C, MI	7
	RRUS 11	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	10
Band 26C	RRUS 11	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L	L, L+L, MI	14
Band 26D	Radio 0208	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	21 ⁽²⁰⁾
	Radio 2217	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	21 ⁽¹¹²⁾
Band 28	Radio 2219	L, NR, L +L, L	L, NR, L +L, L	L, NR, L +L, L	L, NR, L +L, L	L, NR, L +L, L	L, NR, L +L, L	L, NR, L +L, L	L, NR, L +L, L	L, L+L, MI	L, NR, L +L, L	L	L, NR, L +L, L	45 ⁽¹⁵⁸⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards	Supported Radio Standards	Supported Radio Standards	Supported Radio Standards	Supported Radio Standards	Supported Radio Standards	Supported Radio Standards	MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601
			+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI	+NR, NR, +NR, MI		+NR, NR, +NR, MI		
			L, L+L, MI	L, L+L, MI	-	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI
			L, L+L, MI	L, L+L, MI	-	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI
			L, L+L, MI	L, L+L, MI	-	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI
			L, L+L, MI	L, L+L, MI	-	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI
			L, L+L, MI	L, L+L, MI	-	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI
			L, L+L, MI	L, L+L, MI	-	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI
			L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	CM, IB, GB, SA	4×40 ⁽¹¹⁾ (12)	45	45
			L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	CM, IB, GB, SA	4×40 ⁽¹¹⁾ (12)	45	45
			L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	CM, IB, GB, SA	4×40 ⁽¹¹⁾ (13)	45	45
			L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	CM, IB, GB, SA	4×40 ⁽¹¹⁾ (13)	45	45
Band 28A	Radio 2217		L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	CM, IB, GB	2×40	30	30 ⁽¹⁵⁹⁾
	RRUS 12		L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	CM, IB, GB	2×40	20	20
	RUS 02		L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	CM, IB, GB	60	20	20
Band 28B	Radio 2217		L, NR, W+L, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	L, NR, L, +L, L, +NR, NR, +NR, MI	CM, IB, GB	2×40	30	30 ⁽¹⁵⁹⁾



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
	Radio 2238 B8 B20 B28B ⁽¹⁴⁹⁾	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	30
	Radio 2460 24B8 24B20 24B28B M01	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	30
	Radio 2479 24B8 24B20 24B28B M01	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	30
	RRUS 12	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	-	L	L, MI	20
	RUS 02	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	-	-	-	-	-	20
Band 28D	RRU 22F2 ⁽¹⁴⁸⁾	L, MI	-	-	-	-	-	-	-	L, MI	-	-	L, MI	10
	RRU 22F3 ⁽³⁹⁾	L, MI	-	-	-	-	-	-	-	L, MI	-	-	L, MI	10
Band 28E	Radio 2217	L, NR, L+L, NR+NR, NR+NR, MI	L, NR, L+L, NR+NR, NR+NR, MI	L, NR, L+L, NR+NR, NR+NR, MI	L, NR, L+L, NR+NR, NR+NR, MI	L, NR, L+L, NR+NR, NR+NR, MI	L, NR, L+L, NR+NR, NR+NR, MI	L, NR, L+L, NR+NR, NR+NR, MI	L, NR, L+L, NR+NR, NR+NR, MI	L, L+L, MI	L, NR, L+L, NR+NR, NR+NR, MI	L	L, NR, L+L, NR+NR, NR+NR, MI	30
	RRUS E2	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	10
Band 30	Radio 4415	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	10
	RD 4442 + IRU 2242 ⁽³⁶⁾	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	10



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS										MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601			
Band 31	RRUS 32	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	CM	4×25	10
	RRUS 13 ⁽¹⁶¹⁾	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L	L, L+L, MI	CM, IB	2×40	5
	Radio 2012	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L	L, L+L	-	2×80	40
Band 34	Radio 8842 B34 B39A ⁽¹⁶²⁾	L	L	L	L	L	L	L	L	L	-	-	L	-	8×10 ⁽¹⁶⁾ ₃	15
Band 38	mRRUS 61	L	L	L	L	L	L	L	L	L	L	-	L	-	2×5	20
	RRUL 62	L	L	L	L	L	L	L	L	L	-	-	L	-	2×40	40
	RRUL 81	L	L	L	L	L	L	L	L	L	-	-	L	-	8×10	40
	RRUS 61	L	L	L	L	L	L	L	L	L	-	-	L	-	2×40	20
Band 38A	AIR 6468	L	L	L	-	-	L	L	L	-	L	-	L	-	80	40
	Dot 2272 PPD1B38A + IRU 8844 or IRU 8884	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	-	L, L+L	-	2×125 mW	40
	Dot 2282 PPD1B38A + IRU 8844 or IRU 8884	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	-	L, L+L	-	2×125 mW	40
	Radio 4418 ⁽¹⁶⁴⁾	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, L+L	L, NR, L +NR, L +L, NR +NR	-	L, NR, L +NR, L +L, NR +NR	-	4×40	40
	Radio 8808 ⁽¹⁶⁵⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	-	8×15	40



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
Band 39	RD 2243 + IRU 2242 ⁽³⁶⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	40
	RRUS 72	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	40
	RRUL 81	L	L	L	L	L	L	L	L	L	-	-	L	35
Band 39A	RRUS 61	L	L	L	L	L	L	L	L	L	-	-	L	20
	Radio 2218	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	30
	Radio 8808 ⁽¹⁶⁵⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	30
Band 40	Radio 8842 B34 B39A ⁽¹⁶⁶⁾	L	L	L	L	L	L	L	L	L	-	-	L	30
	RRUL 81	L	L	L	L	L	L	L	L	L	-	-	L	30
	AIR 3239	L, NR	L, NR	L, NR	L, NR	L, NR	L, NR	L, NR	-	-	-	-	L, NR	100
Band 40A	AIR 6468 ⁽¹⁶⁷⁾	L	L	-	L	L	L	L	L	-	L	-	L	60
	Radio 4412	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	-	L, L+L	60
	RD 2242 + IRU 2242 ⁽³⁶⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	-	L, L+L	40
Band 40A	RRUS 61	L	L	L	L	L	L	L	L	L	-	-	L	20
	Dot 2272 B3E B40A + IRU 8844 or IRU 8884	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	-	L, L+L	50
	Dot 2282 B3E B40A + IRU	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	-	L, L+L	50



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
	8844 or IRU 8884														
	RD 2243 + IRU 2242 ⁽³⁶⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	2×125 mW	40
	RD 2253 + IRU 2242 ⁽³⁶⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	2×125 mW	40
	RD 4442 B40A B3 + IRU 2242 ⁽³⁶⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	2×125 mW	40
	RRU 2216	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	2×50	50
	RRUL 62	L	L	-	-	L	L	L	L	L	-	-	L	2×20	40
	RRUS 62	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	-	L, L+L	2×50	50
	RRUS 61	L	L	L	L	L	L	L	L	L	-	-	L	2×30	20
	Band 40B Band 40C Band 40D														
	Radio 4418	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, L+L	L, NR, L +NR, L +L, NR +NR	-	L, NR, L +NR, L +L, NR +NR	4×40	95
Band 40T	Radio 4418	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	2×50	50
	Radio 4412	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	-	L, L+L	4×20	60
	Radio 4418(164)	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, L+L	L, NR, L +NR, L +L, NR +NR	-	L, NR, L +NR, L +L, NR +NR	4×40	95
	RRUS 72	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	4×40	60



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
Band 40U	RD 2243 + IRU 2242	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	21
	Radio 2218	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	60
	Radio 4408	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, L+L	L, NR, L+L	-	L, NR, L+L	90
Band 40Y	Radio 8808	L	L	L	L	L	L	L	L	L	-	-	L	40
Band 41	AIR 6449	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	-	L, NR, L+NR	-	L, NR, L+NR	160
	AIR 6468 ⁽¹⁶⁷⁾	L	L	L	L	L	L	L	L	-	L	-	L	60
	AIR 6488 ⁽¹⁶⁸⁾	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	L, NR, L+NR	-	-	-	L, NR, L+NR	-	L, NR, L+NR	120 ⁽¹⁷⁰⁾
	Radio 4412 ⁽¹⁷²⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	60
	Radio 4418	L, NR, L+NR, L+L, NR+NR	L, NR, L+NR, L+L, NR+NR	L, NR, L+NR, L+L, NR+NR	L, NR, L+NR, L+L, NR+NR	L, NR, L+NR, L+L, NR+NR	L, NR, L+NR, L+L, NR+NR	L, NR, L+NR, L+L, NR+NR	L, NR, L+NR, L+L, NR+NR	L, L+L	L, NR, L+NR, L+L, NR+NR	-	L, NR, L+NR, L+L, NR+NR	120
	Radio 8863	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	L, NR, L+L	-	L, NR, L+L	-	L, NR, L+L	120
	RD 2243 + IRU 2242 ⁽³⁶⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	40
Band 41A	RRUS 72	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	60
	RRUS 82 ⁽¹⁷³⁾	L	L	L	L	L	L	L	L	L	L	-	L	60 ⁽¹⁷⁴⁾
	RRUS 61	L	L	L	L	L	L	L	L	L	L	-	L	20



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS	MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
Band 41B	RRUS 72	-	6101	-	-	L, L+L	50
	AIR 6468	L	6102	-	-	L	50
	RRUS 61	L	6110	-	-	L	40
Band 41C	RRUS 61	L	6120	-	-	L	20
	RRUL 81	L	6201	-	-	L	20
	RRUS 62	L, L+L	6202	-	-	L	40
Band 41D	RRUS 62	L, L+L	6301	-	-	L, L+L	40
	AIR 6468 ⁽¹⁶⁷⁾	L	6320	-	-	L	60
	Radio 8808 ⁽¹⁶⁵⁾	L, L+L	6501	-	-	L, L+L	60
Band 41E	Radio 8818 ⁽¹⁶⁵⁾	L, L+L	6601	-	-	L, L+L	60
	RRU 2208	L, L+L	6701	-	-	L, L+L	40
	RRUL 63	L, L+L	6801	-	-	L, L+L	60
Band 41F	RRUL 82	L	6901	-	-	L	60
	RRUL 81	L	7001	-	-	L	40
	RRUS 62	L, L+L	7101	-	-	L, L+L	40
Band 41M	AIR 6488	NR, L +NR	7201	-	-	NR, L +NR	100
	AIR 6488	L	7301	-	-	L	30 ⁽¹⁷⁶⁾
	Radio 8836	L, L+L	7401	-	-	L, L+L	50
Band 41K	AIR 6449 ⁽¹⁷⁷⁾	NR, L +NR	7501	-	-	NR, L +NR	160



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
	AIR 6454	NR, L +NR	NR, L +NR	NR, L +NR	NR, L +NR	NR, L +NR	NR, L +NR	-	-	-	NR, L +NR	-	NR, L +NR	160 ⁽¹⁷⁾ ₉	100
	AIR 6488	NR	NR	NR	NR	NR	NR	-	-	-	NR	-	NR	200 ⁽¹⁸⁰⁾	100 ⁽¹⁸⁾ ₁
	Radio 2228 ⁽¹⁸²⁾	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, NR, L +NR, L +L, NR +NR	L, L+L	L, NR, L +NR, L +L, NR +NR	-	L, NR, L +NR, L +L, NR +NR	2×100	120
	Dot 4479 + IRU 8846	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	4×250 mW	100
	Dot 4489 + IRU 8846	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	4×250 mW	100
Band 42	AIR 6468	L	L	L	-	L	L	L	L	-	L	-	L	120	60
	AIR 6488 ⁽¹⁸³⁾	L	L	L	L	L	L	-	-	-	L	-	L	128	100 ⁽¹⁸⁾ ₄
	AIR 6488 ⁽¹⁸⁵⁾	NR	NR	NR	NR	NR	NR	-	-	-	NR	-	NR	200 ⁽¹⁸⁶⁾	100 ⁽¹⁸⁾ ₇
	Radio 2218	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	2×40	60
	Radio 8823	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	8×20	100
Band 42B	Radio 8836	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	8×20	100
	Radio 2218	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	-	L, L+L	2×38 ⁽¹⁸⁾ ₈	40
Band 42F	AIR 6488	NR	NR	NR	NR	NR	NR	-	-	-	NR	-	NR	200 ⁽¹⁸⁰⁾	100 ⁽¹⁸⁾ ₁



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
Band 42G	Radio 4422	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, L+L	L, NR, L +L, NR +NR	-	L, NR, L +L, NR +NR	100	100 ⁽¹⁸⁾ ₉
	AIR 6488	NR	NR	NR	NR	NR	NR	-	-	-	NR	-	NR	100	100 ⁽¹⁸⁾ ₁
	Radio 8823	NR, NR +NR	NR, NR +NR	NR, NR +NR	NR, NR +NR	NR, NR +NR	NR, NR +NR	NR, NR +NR	NR, NR +NR	-	NR, NR +NR	-	NR, NR +NR	190	100
Band 43	AIR 6488	NR	NR	NR	NR	NR	NR	-	-	-	NR	-	NR	100	100 ⁽¹⁸⁾ ₁
	Radio 4422	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, NR, L +L, NR +NR	L, L+L	L, NR, L +L, NR +NR	-	L, NR, L +L, NR +NR	100	100 ⁽¹⁹⁾ ₀
	Radio 8823	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	200	100
Band 46A	Radio 2205 B46 ⁽¹⁹¹⁾ ₍₁₉₂₎	L	L	L	L	L	L	L	L	-	L	-	L	2×316 mW	60 ⁽¹⁹³⁾
Band 46B	Radio 2205 B46 ⁽¹⁹¹⁾	L	L	L	L	L	L	L	L	-	L	-	L	2×316 mW	60 ⁽¹⁹³⁾
Band 46C	Radio 2205 B46 ⁽¹⁹¹⁾	L	L	L	L	L	L	L	L	-	L	-	L	2×316 mW	60 ⁽¹⁹³⁾
Band 46D	Radio 2205 B46 ⁽¹⁹¹⁾ ₍₁₉₂₎	L	L	L	L	L	L	L	L	-	L	-	L	2×316 mW	60 ⁽¹⁹³⁾
Band 48	AIR 6488	L	L	L	L	L	L	L	L	-	L	-	L	16	60
	Radio 2208	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	2×10	60
	Radio 4408	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	4×5	120



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽⁴⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
Band 66 ⁽¹⁹⁷⁾	RD 4442 + IRU 2242 ⁽³⁶⁾	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	L, L+L	-	L, L+L	40 ⁽²⁴⁾
	AIR 1641 B2/25A B66A	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	-	L, L+L, MI	90
	AIR 3246	L, MI	L, MI	-	-	-	L, MI	L, MI	L, MI	-	L, MI	-	L, MI	60 ⁽¹⁹⁶⁾
	Radio 0208	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	70 ⁽¹⁹⁷⁾
Band 66A ⁽²⁰⁰⁾	Radio 4426	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, NR, W +L, W +L+NR, L+L, L +NR, NR +NR, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	90 ⁽¹⁹⁷⁾ (199)
	AIR 32 B2A B66AA ⁽⁴³⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	65
	AIR 32 B66AA B2P	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	65
	AIR 32 B66AA B7P LBP	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	65
Band 66A ⁽²⁰⁰⁾	AIR 32 B7A B66AA LBP ⁽⁴³⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	65
	AIR 32 B7A B66AA LBP ⁽⁴³⁾	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	65



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									Max. Output Power ⁽⁵⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601	
	AIR 4455 B2/B25 B66A	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	-	W, L, W +L, L +L, MI	70
	Radio 2203	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	45
	Radio 2212 ⁽²⁰¹⁾	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	L	W, L, NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	70 ⁽²⁰⁰⁾
	Radio 2217	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	L	W, L, NR, L +NR, W +L, W +NR, W +L+NR, L+L, NR +NR, MI	45
	Radio 4402 B66A	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	W, L, W +L, L +L, MI	L	W, L, W +L, L +L, MI	70 ⁽²⁰⁰⁾

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Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS									MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601		
Band 78A	Dot 4479 + IRU 8846	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	100	100
	Dot 4489 + IRU 8846	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	100	100
Band 78C	AIR 3239	NR	NR	NR	NR	NR	NR	NR	-	-	-	-	NR	100 ⁽²⁰⁴⁾	100 ⁽²⁰⁵⁾
	Radio 4422	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	4×40	100 ⁽²⁰⁶⁾
Band 78F	AIR 3239	NR	NR	NR	NR	NR	NR	NR	-	-	-	-	NR	100	100
Band 78G	AIR 3239	NR	NR	NR	NR	NR	NR	NR	-	-	NR	-	NR	100	100
	Radio 4422	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	4×40	100 ⁽²⁰⁷⁾
Band 78H	AIR 6488	NR	NR	NR	NR	NR	NR	-	-	-	NR	-	NR	200 ⁽¹⁸⁰⁾	100 ⁽¹⁸¹⁾
Band 78L	Dot 4479 + IRU 8846	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	4×250 mW	100
	Dot 4489 + IRU 8846	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	4×250 mW	100
Band 78Q	AIR 3239	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	100	100
Band 85A	Radio 4449 B71 B85A	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	L, L+L, MI	-	L, L+L, MI	4×40	1536 ⁽²⁰⁸⁾
Band 111	Radio 0208 BH	MI	MI	MI	MI	MI	MI	MI	MI	-	MI	-	MI	n/a ⁽¹⁹⁾	5
	RRUS E2 B29	MI	MI	MI	MI	MI	MI	MI	MI	-	MI	-	MI	2×40	10
Band 222	Radio 0208 BH	MI	MI	MI	MI	MI	MI	MI	MI	-	MI	-	MI	n/a ⁽¹⁹⁾	5



Band ⁽¹⁾	Radio	Supported Radio Standards	Supported Radio Standards per RBS										MI Support ⁽²⁾	Max. Output Power ⁽³⁾ (W)	IBW (MHz)	Operational Bandwidth ⁽⁵⁾ (MHz)
			6101	6102	6110	6120	6201	6202	6301	6302 ⁽⁶⁾	6320	6501	6601			
	Radio 4415 B70	MI	MI	MI	MI	MI	MI	MI	MI	-	MI	-	MI	SA	4×40	25
Band 257	AIR 1281	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	-	400 ⁽²¹²⁾	3000 ⁽²¹³⁾
Band 257A	AIR 5121 ⁽²⁰⁹⁾	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	-	400	400
Band 260	AIR 1281 ⁽²¹⁰⁾	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	-	400	400
	AIR 5331 ⁽²¹¹⁾	NR	NR	NR	NR	NR	NR	NR	NR	-	NR	-	NR	-	200	800
Band 261	Streetmacro 6701	NR	-	-	-	-	-	-	-	-	-	-	-	-	400 ⁽²¹²⁾	800 ⁽²¹³⁾
PPDR1	Dot 2272 PPDR1B38A + IRU 8844 or IRU 8884	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	-	L, MI	-	L, MI	CM, IB	2×125 mW	3
	Dot 2282 PPDR1B38A + IRU 8844 or IRU 8884	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	L, MI	-	L, MI	-	L, MI	CM, IB	2×125 mW	3

(1) For information on radio bands, see [Table 6](#)

(2) Lists support for the following standards: MI EC-GSM-IoT (EC), MI Cat-M1 (CM), MI NB-IoT in-band (IB), MI NB-IoT guard band (GB), and MI NB-IoT standalone (SA).

(3) Requires HWACs (not valid for RUG).

(4) For information on possible power back off or band edge loss, contact Ericsson Technical Sales Support.

(5) Operational bandwidth is the actual bandwidth allocated for carriers.

(6) For mixed mode, two RBS 6302 main units are required.

(7) For GSM: The IBW is dependent on modulation techniques for RUS 01 and RRUS 01. See [IBW for RUS 01](#) and [RRUS 01](#) Depending on [GSM Modulation Technique](#) on page 95

(8) Up to four CDMA or GSM carriers. Maximum 20 MHz available for LTE and WCDMA carriers.

- (9) B0 and B0A have the same uplink and downlink frequency range. B0A has more out of band attenuation than B0, providing extra protection towards other frequency bands.
- (10) 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE carriers. Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 25 MHz IBW for maximum 13 W on all GSM carriers and up to 20 MHz IBW for 20 W on one or more GSM carriers. Up to 12.5 MHz IBW for GSM single mode. Maximum one LTE carrier in single mode if 1.4 MHz or 3 MHz. See [Virtual IBW](#) on page 99 for more information.
- (11) Maximum 20 W per 1.4 MHz and 3 MHz LTE, GSM and NB-IoT standalone carrier.
Maximum 40 W per WCDMA and 4.6–5 MHz LTE carrier.
Maximum 60 W per carrier > 5 MHz.
- (12) For Radio 4480 band 0A + band 28,
band 1 + band 3,
band 8 + band 28:
Maximum 100 W per carrier for both bands with fan.
Maximum 80 W per carrier for both bands without fan.
- (13) For Radio 4499 B0A + B28 and band 8 + band 28:
Maximum 80 W per carrier for both bands.
- (14) RRUS 02 B0A is a full band radio, providing extra protection from CDMA interference below 888.4 MHz.
- (15) Radio supports Virtual IBW up to 40 MHz. See [Virtual IBW](#) on page 99 for more information.
- (16) AIR 2488 supports MI NB-IoT in-band, MI NB-IoT guard band, and NB-IoT standalone from SW 19.Q1.
- (17) AIR 4455 B1 B3 with R-state < R1C does not support MI NB-IoT in-band, MI NB-IoT guard band, and NB-IoT standalone.
- (18) Up to 30 W per port for each band. (Band 2 and Band 25 are considered as one band.)
Maximum 40 W per port for both bands.
- (19) Radio 0208, RRUS A2 and RRUS A3 are not TX-capable. When used in an RBB together with a TX-capable radio, the output power of the RBB is that of the TX-capable radio.
- (20) Operational bandwidth as supported by radio. Actual operational bandwidth is limited to that of the TX-capable radio.
- (21) Radio supports Virtual IBW up to 50 MHz See Operational bandwidth as supported by radio. Actual operational bandwidth is limited to that of the TX-capable radio. [Virtual IBW](#) on page 99 for more information.
- (22) Operational bandwidth as supported by radio. Actual Radio 2212 B1 with R-state < R5 does not support MI NB-IoT standalone.
Radio 2212 B1 with R-state < R5G does not support MI NB-IoT guard band.
- (23) 50 MHz IBW and operational bandwidth for Radio 2212 B1 with R-state less than R5.



- (24) Radio supports Virtual IBW up to full band. See [Virtual IBW](#) on page 99 for more information.
- (25) Radio 2217 B1, KRC 161 490/1 R1A and KRC 161 490/2 up to R1B, supports 40 MHz IBW and operational bandwidth.
- (26) Radio 2242 B1 B3 on band 1 with R-state < R2A does not support MI NB-IoT in-band.
Radio 2242 B1 B3 on band 1 with R-state < R2B does not support MI NB-IoT guard band and MI NB-IoT standalone.
- (27) For mixed mode.
- (28) Maximum 20 W per NB-IoT standalone carrier.
Maximum 80 W per carrier ≥ 5 MHz.
- (29) Radio 4415 B1 with R-state < R5 does not support MI NB-IoT standalone.
Radio 4415 B1 with R-state < R5C does not support MI NB-IoT guard band.
- (30) Radio 4428 B1 with R-state < R5C does not support MI NB-IoT guard band.
- (31) NB-IoT standalone: 20 MHz IBW per RF port with maximum 20 W per carrier.
Mixed Mode: 20 MHz IBW for NB-IoT standalone carriers.
- (32) 20 W per port for each band. 40 W per port for both bands.
- (33) For Radio 4443 B1 B3:
Maximum 320 W for both bands together.
NB-IoT standalone: 20 MHz IBW
- (34) Maximum 40 W per WCDMA and 5 MHz LTE carriers.
Maximum 60 W per carrier > 5 MHz.
- (35) For Radio 4499 band 1 + band 3:
Maximum 80 W per carrier for both bands together.
Maximum 20 W per 1.4 MHz and 3 MHz LTE, GSM and NB-IoT standalone carrier.
Maximum 40 W per WCDMA and 4.6–5 MHz LTE carrier.
Maximum 60 W per carrier > 5 MHz.
- (36) See [Radio Dot System](#) on page 100 for information on RDS configurations.
- (37) RRU 22 is an RBS 3000 legacy product.
- (38) RRUS 12 B1 KRC 161 297/1 does not support MI NB-IoT guard band.
- (39) RRU 22F3 is a triple band radio for band 1A, 18 and 28D.
- (40) 80 W per port per band. 80 W per port for two bands together.

- (41) For band 2 + band 25:
Maximum 160 W output power.
For band 2 + band 66, band 25 + band 66 and band 2 + band 25 + band 66:
Maximum 320 W output power.
- (42) For GSM: The instantaneous bandwidth is limited to 15 MHz.
- (43) Radio is of type AIR 32 MB with dual active bands.
- (44) GSM for AIR 32, AIR 32 MB and RRUS 32 is available in mixed mode only.
- (45) 1.4 MHz LTE, 3 MHz LTE and GSM carriers within 20 MHz.
- (46) 1.4 or 3 MHz LTE carriers within 25 MHz. All other carriers within 40 MHz IBW when using 1.4 or 3 MHz LTE carriers.
- (47) Radio 2212 B2 B25 with R-state < R5 does not support GSM.
- (48) Radio 2212 B2 B25 with R-state < R5 does not support MI EC-GSM-IoT and MI NB-IoT.
- (49) For Radio 2212 B2 B25 with R-state < R5:
LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. 40 MHz IBW with LTE carriers > 3 MHz. Maximum 40 W per 1.4 and 3 MHz carriers.
Mixed Mode: 40 MHz IBW if one or more 1.4 or 3 MHz LTE carriers.
- (50) GSM single mode: 40 MHz IBW per RF port. Maximum 20 W per carrier for up to 40 MHz IBW.
LTE single mode: 40 MHz IBW for 1.4 and 3 MHz carriers per RF port. Maximum 20 W per 1.4 and 3 MHz carriers.
NB-IoT standalone: 40 MHz IBW.
Mixed Mode: 40 MHz IBW for GSM with maximum 20 W per carrier. 60 MHz IBW with maximum 13.3 W per GSM carrier and GSM carriers in both edges of the band. 40 MHz IBW for 1.4 and 3 MHz LTE carriers per RF port. Maximum 40 W per 1.4 and 3 MHz LTE carrier.
- (51) LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. Max 20 W per carrier for 1.4 and 3 MHz carriers. Maximum one carrier in single mode if the carrier bandwidth is 1.4 or 3 MHz.
Mixed Mode: 20 MHz IBW for GSM with max 20 W per GSM, 1.4 MHz and 3 MHz LTE carriers. 40 MHz IBW with 13 W per GSM carrier, WCDMA and LTE carriers 5 MHz or higher.
- (52) Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. See [Virtual IBW](#) on page 99 for more information.
- (53) 20 MHz IBW per RF port for 1.4 MHz and 3 MHz LTE carriers and NB-IoT standalone.
- (54) Radio 4415 B2 B25 does not support GSM with KRC 161 636/1 R-state < R2 and KRC 161 636/3 R-state < R5.
- (55) Radio 4415 B2 B25 KRC 161 636/1 with R-state < R2 and Radio 4415 B2 B25 KRC 161 636/3 with R-state < R5 does not support MI EC-GSM-IoT.
Radio 4415 B2 B25 KRC 161 636/1 with R-state ≥ R5 and < R5F does not support MI NB-IoT guard band.



- (56) For Radio 4415 B2 B25 on band 2 with R-state R1:
 Does not support GSM.
 LTE single mode: 20 MHz IBW and maximum 20 W for 1.4 and 3 MHz carriers.
 NB-IoT standalone: 20 MHz IBW per RF port.
 Mixed mode: 40 MHz IBW per RF port. 20 MHz IBW and maximum 20 W for 1.4 and 3 MHz LTE carriers.
- (57) For Radio 4415 B2 B25 on band 2 with R-state > R1:
 GSM single mode: 20 MHz IBW per RF port.
 LTE single mode: 20 MHz IBW and maximum 20 W for 1.4 and 3 MHz carriers.
 NB-IoT standalone: 20 MHz IBW per RF port.
 Mixed mode: 20 MHz IBW for GSM with maximum 20 W per GSM carrier and 1.4 and 3 MHz LTE carriers. 40 MHz IBW with 6.6W per GSM carrier and 5 MHz LTE carriers or higher. 20 MHz IBW for 1.4 and 3 MHz LTE carriers.
- (58) Radio 4455 B2/B25 B66A with R-state < R1C does not support WCDMA.
- (59) Up to 30 W per port for each band. Maximum 40 W per port for multiband.
- (60) 20 MHz IBW per RF port for NB-IoT standalone.
- (61) For mixed mode band 2 + band 25:
 Maximum 60 W per carrier for both bands.
 For mixed mode band 2 + band 66A, band 5 + band 66A and band 2 + band 25 + band 66A:
 Maximum 100 W per carrier for both bands.
- (62) Maximum 320 W in total together with band 66A.
 High output power mode 2×60 W supported on RF ports A and D.
- (63) For GSM: The maximum power of radios with two carriers is 60 W per radio (30 W per carrier).
- (64) For GSM: Instantaneous Bandwidth is limited to 10 MHz at output power larger than 60 W.
- (65) AIR 2488 B3A B1P B7P does not support G+ NR and G+L+NR with R-sate < R1C.
- (66) 1.4 MHz LTE, 3 MHz LTE and GSM carriers within 20 MHz IBW. All other carriers within 40 MHz IBW when using 1.4 MHz, 3 MHz LTE, or GSM carriers.
- (67) AIR 2488 B3A B1P B7P does not support GSM with R-sate < R1C.
- (68) AIR 2488 B3A B1P B7P with R-state < R1C does not support M1 EC-GSM-IoT.
- (69) AIR 2488 B3A B7P does not support GSM with R-sate < R1B.
- (70) AIR 2488 B3A B7P with R-state < R1B does not support M1 EC-GSM-IoT.

- (71) AIR 3246 with R-state<R1D does not support MI NB-IoT in-band and MI NB-IoT guard band.
- (72) For AIR 3246 B3,
 KR01 191/2 with R-state< R1D, 20 MHz.
 KR01 191/2 with R-state≥ R1D, 45 MHz.
- (73) For AIR 4455 B1 B3 on band 3:
 GSM single mode: 20 MHz IBW per RF port
 LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. 70 MHz IBW with 5 MHz LTE carriers or higher.
 Mixed Mode: 20 MHz IBW for GSM with maximum 20 W per GSM, 1.4 MHz and 3 MHz LTE carrier. 6.6 W per GSM carrier with IBW above 20 MHz.
- (74) In addition to standard LTE carrier bandwidths, Radio 2212 B3 with KRC 161 496/1 all R-states and KRC 161 496/2 from R5, supports 4.6, 4.8, and 9 MHz LTE carriers.
- (75) Radio 2212 B3 with R-state < R5 does not support MI NB-IoT standalone.
 Radio 2212 B3 with R-state < R5F does not support MI NB-IoT guard band.
- (76) For Radio 2212 B3 up to R5:
 GSM single mode: 20 MHz IBW per RF port. Maximum 20 W per carrier. Supports Virtual IBW.
 LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. Maximum 40 W per carrier for 1.4 and 3 MHz carriers.
 Mixed Mode: 20 MHz IBW for GSM with maximum 20 W per GSM carrier. 75 MHz IBW with 6.6 W per GSM carrier. 20 MHz IBW for LTE 1.4 MHz and 3 MHz LTE carriers with maximum 40 W per carrier.
- (77) For Radio 2212 B3 from R5:
 GSM single mode: 40 MHz IBW per RF port. Maximum 20 W per carrier. Supports Virtual IBW.
 LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. Maximum 40 W per carrier for 1.4 and 3 MHz carriers.
 Mixed Mode: 40 MHz IBW for GSM with maximum 20 W per GSM carrier. 75 MHz IBW with 6.6 W per GSM carrier. 20 MHz IBW for LTE 1.4 MHz and 3 MHz LTE carriers with maximum 40 W per carrier.
- (78) 1.4 and 3 MHz LTE carriers within 20 MHz IBW.
- (79) In addition to standard LTE carrier bandwidths, radio unit supports 4.6, 4.8, and 9 MHz LTE carriers.
- (80) The following applies to Radio 2219 B3 with KRC 161 619/1, up to, but not including, R2:
 Radio supports 40 MHz IBW and operational bandwidth.
 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE carriers. Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 40 MHz IBW for maximum 13 W on all GSM carriers and up to 20 MHz IBW for 20 W on one or more GSM carriers. Up to 12.8 MHz IBW for GSM single mode.



- (81) The following applies to Radio 2219 B3 with KRC 161 619/1, R2 and higher:
- Radio supports 55 MHz IBW and operational bandwidth.
 - 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE carriers. Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 55 MHz IBW for maximum 13 W on all GSM carriers and up to 28 MHz IBW for 20 W on one or more GSM carriers. Up to 12.8 MHz IBW for GSM single mode. See [Virtual IBW](#) on page 99 for more information.
- (82) Radio 2242 B1 B3 on band 3 with R-state < R2A does not support MI NB-IoT in-band and MI NB-IoT standalone.
- (83) Radio 2242 B1 B3 on band 3 with R-state < R2B does not support MI NB-IoT guard band.
- (84) 40 MHz IBW per RF port for GSM, 1.4 MHz LTE, and 3 MHz LTE carriers. Virtual IBW up to full band.
- (85) Maximum 20 W per GSM and NB-IoT standalone carrier.
- (86) Maximum 30 W per carrier 1.4 MHz or 3 MHz LTE carrier.
- (87) Maximum 80 W per carrier ≥ 5 MHz.
- (88) Radio 4407 B3 with R-state < R1E does not support MI NB-IoT in-band.
- (89) Radio 4415 B3 with R-state < R5 does not support NB-IoT in-band or NB-IoT standalone.
- (90) Radio 4415 B3 with R-state R < R5K does not support MI NB-IoT guard band.
- (91) For Radio 4415 B3 KRC 161 637/1 and KRC 161 637/2 with R-state $\geq$ R5:
- GSM single mode: 20 MHz IBW per RF port.
 - LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. 75 MHz IBW for 5 MHz carrier bandwidths and higher.
 - Mixed Mode: 20 MHz IBW for GSM with maximum 20 W per GSM, 1.4 MHz and 3 MHz LTE carriers. IBW above 20 MHz with maximum 6.6 W per GSM carrier, 75 MHz IBW for 5 MHz LTE carriers and higher.
 - Virtual IBW within the existing IBW.
- (92) For Radio 4415 B3 KRC 161 637/1 with R-state < R5:
- 70 MHz IBW and 70 MHz operational bandwidth.
 - GSM single mode: 20 MHz IBW per RF port.
 - LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. 70 MHz IBW for 5 MHz carrier bandwidths and higher.
 - Mixed Mode: 20 MHz IBW for GSM with maximum 20 W per GSM, 1.4 MHz and 3 MHz LTE carriers. 40 MHz IBW with maximum 6.6 W per GSM and 5 MHz LTE carriers or higher.
 - Virtual IBW within the existing IBW.
- (93) For Radio 4415 B3, KRC 161 637/2 with R-state < R5:

- 70 MHz IBW and 70 MHz operational bandwidth.
- GSM single mode: 20 MHz IBW per RF port.
- LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. 70 MHz IBW for 5 MHz carrier bandwidths and higher.
- Mixed Mode: 20 MHz IBW for GSM with maximum 20 W per GSM, 1.4 MHz and 3 MHz LTE carriers. 40 MHz IBW with maximum 6.6 W per GSM and 5 MHz LTE carriers or higher. 50 MHz IBW with 20 W per GSM and 15 MHz LTE carriers, valid only with 15 MHz LTE carriers and one GSM carrier per RF port.
- Virtual IBW within the existing IBW.
- (91) Radio 4428 B3 with R-state < R5C does not support MI NB-IoT guard band.
- (92) GSM single mode: 20 MHz IBW per RF port. Maximum 20 W per carrier.
- LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. Maximum 30 W per carrier.
- NB-IoT standalone: 20 MHz IBW per RF port. Maximum 20 W per carrier.
- Mixed Mode: 20 MHz IBW for GSM, NB-IoT standalone, 1.4 MHz and 3 MHz LTE. Maximum 20 W per GSM and NB-IoT standalone carrier. Maximum 30 W per 1.4 MHz and 3 MHz LTE carrier.
- (93) LTE single mode: 40 MHz IBW for 1.4 and 3 MHz carriers per RF port.
- (94) For Radio 4443 B1 B3 on band 3:
Maximum 320 W for both bands together.
- GSM: 20 MHz per port. Supports Virtual IBW.
- LTE: Maximum 32 W for 1.4 and 3 MHz carriers.
- (95) For NB-IoT standalone: Mixed mode only. 20 MHz IBW per RF port.
- (96) Maximum 20 W per 1.4 MHz and 3 MHz LTE, GSM and NB-IoT standalone carrier.
Maximum 40 W per WCDMA and 4.6–5 MHz LTE carrier.
Maximum 60 W per carrier > 5 MHz.
- (97) For GSM: The instantaneous bandwidth is limited to 15 MHz when the output power is larger than 60 W.
- (98) RRUS 12 B3 KRC 161 282/3 does not support MI EC-GSM-IoT.
- (99) RRUS 13 B3 KRC 161 469/4 does not support MI EC-GSM-IoT, MI NB-IoT guard band, and MI NB-IoT standalone.
- (100) 45 MHz IBW for LTE single mode only. 40 MHz IBW applies to all other configurations.
- (101) 5 MHz contiguous IBW for single mode GSM
- (102) Maximum 60 MHz for LTE plus two GSM carriers.
- (103) For RUS 01 band 3,



- KRC 118 65/1, maximum output power 60 W.
- KRC 118 65/2, maximum output power 80 W.
- (104) 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE carriers. Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 45 MHz IBW for maximum 13 W on all GSM carriers and up to 20 MHz IBW for 20 W on one or more GSM carriers. Up to 12.8 MHz IBW for GSM single mode. Maximum 20 W per carrier for 1.4 and 3 MHz LTE. See [Virtual IBW](#) on page 99 for more information.
- (105) For Radio 2242 B1B B3A:
- Does not support 1.4 MHz LTE carriers.
- Mixed Mode: 40 MHz IBW for GSM and 3 MHz LTE carriers.
- (106) 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE carriers. Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 40 MHz IBW for maximum 13 W on all GSM carriers and up to 20 MHz IBW for 20 W on one or more GSM carriers. Up to 12.8 MHz IBW for GSM single mode. Maximum 20 W per carrier for 1.4 and 3 MHz LTE. See [Virtual IBW](#) on page 99 for more information.
- (107) Radio 4415 B3B with R-state < R5B does not support GSM.
- (108) Radio 4415 B3B with R-state < R5B does not support Massive IoT.
- (109) LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. Maximum 20W per carrier.
- (110) Radio 4428 B3B with R-state < R5F does not support MI NB-IoT guard band.
- (111) GSM single mode: 20 MHz IBW per RF port. Maximum 20 W per carrier.
- LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port. Maximum 20W per carrier.
- NB-IoT standalone: 20 MHz IBW per RF port. Maximum 20 W per carrier.
- Mixed Mode: 20 MHz IBW for GSM, NB-IoT standalone, 1.4 MHz and 3 MHz LTE. Maximum 20 W per GSM, NB-IoT standalone, 1.4 MHz and 3 MHz LTE carrier.
- (112) 1.4 and 3 MHz LTE carriers within 20 MHz IBW.
- (113) 45 MHz IBW with one 20 MHz LTE carrier combined with one WCDMA carrier. 20 MHz IBW with 1.4 and 3 MHz LTE carriers. 40 MHz IBW apply to all other configurations.
- (114) 20 MHz IBW per RF port for 1.4 MHz and 3 MHz LTE, GSM carriers and NB-IoT standalone.
- Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 25 MHz IBW for maximum 13 W on all GSM carriers and up to 20 MHz IBW for 20 W on one or more GSM carriers. Up to 12.8 MHz IBW for GSM single mode. Maximum 20 W per carrier for 1.4 and 3 MHz LTE. Maximum one LTE carrier in single mode if 1.4 or 3 MHz carrier. See [Virtual IBW](#) on page 99 for more information.
- (115) 5 MHz LTE carrier of upper edge of band 5 (889-894 MHz) and lower edge of band 12A (729-734 MHz) is restricted to 40 W.

- (116) High output power mode 2×60 W supported on RF A and RF C on both bands.
 Power mode 4×40 W or 2×60 W supported per band.
 Mixed power mode supported in all possible combinations of output power, with 4×40 W or 2×60 W on band 5 and 4×40 W or 2×60 W on band 12A.
- (117) High output power mode 2×60 W supported on RF A and RF D on both bands.
 Power mode 4×40 W or 2×60 W supported per band.
 Mixed power mode only supported with 4×40 W on band 5 in combination with 2×60 W on band 13.
- (118) Maximum 20 W per carrier and 20 MHz IBW for 1.4 and 3 MHz LTE carriers.
- (119) Radio 4478 B5 with R-state < R2 does not support WCDMA.
- (120) RUS 01 B5 with KRC 118 64/1 has a maximum output power of 60 W and does not support GSM in single or mixed mode.
- (121) RUS 01 B5 KRC 118 64/1 does not support MIEC-GSM-IoT, MI NB-IoT guard band, and MI NB-IoT standalone.
- (122) Maximum 60 W per GSM, 1.4 MHz, or 3 MHz LTE carrier.
- (123) RUS 01 B5 with KRC 118 64/2 supports 15 MHz IBW for single mode or mixed mode with GSM.
- (124) Up to three CDMA carriers supported if LTE is configured with 20 MHz bandwidth in total.
- (125) Radio 2212 B7 supports up to two 10, 15, and 20 MHz LTE carriers.
- (126) 50 MHz IBW/operational bandwidth supported on Radio 2217 B7 KRC 161 428/1 and KRC 161 428/2, R2A and higher, otherwise IBW/operational bandwidth is 40 MHz.
- (127) Radio 4415 B7 with R-state < R5 does not support MI NB-IoT guard band and MI NB-IoT standalone.
- (128) Radio 2212 B8 supports 1.4, 3, 5, 10, and 15 MHz LTE carrier bandwidths.
- (129) For Radio 2212 B8, KRC 161 650/1 with R-state < R2C, KRC 161 650/4, and KRC 161 650/5:
 GSM only available in mixed mode.
 For Radio 2212 B8 KRC 161 650/2 with R-state < R2C:
 GSM is not supported.
- (130) Radio 2212 B8 with R-state < R5E does not support MIB NB-IoT guard band and MI NB-IoT standalone.
 Radio 2212 B8 KRC 161 650/2 with R-state < R2C does not support MIEC-GSM-IoT.
- (131) GSM single mode: 20 MHz IBW per port.
- (132) Maximum 20 W per carrier, for 1.4 and 3 MHz LTE carriers.
- (133) GSM single mode: 20 MHz IBW per RF port. Maximum 20 W per carrier.
 LTE single mode: 20 MHz IBW for 1.4 and 3 MHz carriers per RF port.



- Mixed Mode: 20 MHz IBW for GSM carriers with maximum 20 W per GSM carrier. 45 MHz IBW with 6.6 W per GSM carrier. 20 MHz IBW for 1.4 and 3 MHz LTE carriers.
- (134) 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE carriers. Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 35 MHz IBW for maximum 10 W on all GSM carriers and up to 20 MHz IBW for 20 W on one or more GSM carriers. Up to 12.5 MHz IBW for GSM single mode in downlink on one RF port. Maximum 20 W per carrier for 1.4 and 3 MHz LTE. Maximum one LTE carrier in single mode if 1.4 or 3 MHz carrier. See [Virtual IBW](#) on page 99 for more information.
- (135) For mixed mode band 8 + band 20, maximum 2×120 W.
 For mixed mode band 8 + band 28B, maximum 2×40 W for band 28B, maximum 2×80 W for band 8.
 For mixed mode band 20 + band 28B, maximum 4×40 W.
 For mixed mode band 8 + band 20 + band 28B, maximum 2×40 W for band 28B, maximum 2×120 W for band 8 and band 20.
- (136) 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE, and NB-IoT standalone.
- (137) Radio 2468 B8 with R-state < R1B does not support single mode WCDMA.
- (138) Radio 2468 supports MI NB-IoT guard band from SW 19.Q1.
- (139) GSM single mode: 23 MHz IBW per RF port.
 NB-IoT standalone: 20 MHz IBW per RF port.
- Mixed mode: 23 MHz IBW per RF port for GSM with maximum 20 W per carrier. 35 MHz IBW per RF port for GSM with maximum 6.6 W per carrier. 20 MHz IBW per RF port for NB-IoT standalone. 20 MHz IBW per RF port for LTE with maximum 40 W per 1.4 and 3 MHz carrier.
- (140) RRUS 12 B8 KRC 161 262/3 does not support MI EC-GSM-IoT.
- (141) 20 MHz IBW per RF port for GSM, 1.4 MHz and 3 MHz LTE carriers. Virtual IBW for GSM, 1.4 MHz and 3 MHz LTE carriers within the existing IBW. Up to 12.8 MHz IBW for GSM single mode. Maximum 20 W per carrier for 1.4 and 3 MHz LTE. Maximum one LTE carrier in single mode if 1.4 or 3 MHz carrier. See [Virtual IBW](#) on page 99 for more information.
- (142) Radio 2468 B8A with R-state < R1G does not support WCDMA in single mode or WCDMA in mixed mode.
- (143) Radio 2468 B8A with R-state < R1G does not support MI NB-IoT in-band (IB).
- (144) Radio 2468 B8A with R-state < R1G does not support MI NB-IoT in-band and MI NB-IoT standalone.
- (145) RRUS 11 for band 12 supports 1.4, 3, 5, 10, and 15 MHz LTE carriers.
- (146) For Radio 4449 B5 B12A, when using the bottom channel of band 12A for NB-IoT guard band, performance might be degraded on this channel.
- (147) For information on how to set up virtual RF ports refer to [Manage Hardware Equipment](#).
- (148) RRU 22F2 is a dual band radio for band 18 and 28D.
- (149) For Radio 2238 mixed mode dual band, Band 20 or Band 28B can only be mixed together with Band 8.
- (150) Supported only in mixed mode.

- (151) 20 MHz IBW per RF port for NB-IoT standalone.
- (152) The given output power is for RRUS 11 B20 with product number KRC 118 91/2. For RRUS 11 B20 with product number KRC 118 91/1, the output power is limited to 2×30 W.
- (153) LTE single mode: 40 MHz IBW for 1.4 and 3 MHz carriers per RF port. Maximum 40 W per carrier for 1.4 and 3 MHz carriers.
NB-IoT standalone: 20 MHz IBW.
- Mixed Mode: 20 MHz IBW for 1.4 and 3 MHz LTE carriers per RF port. Maximum 40 W per 1.4 and 3 MHz LTE carrier.
- (154) Radio 4415 B2 B25 KRC 161 636/1 with R-state ≥ R5 and < R5F does not support NB-IoT guard band.
- (155) For Radio 4415 B2 B25 on band 25:
For KRC 161 636/1 R-state ≥ R2 and KRC 161 636/3 R-state ≥ R5: 20 MHz IBW for GSM.
For KRC 161 636/1 R-state < R2 and KRC 161 636/3 R-state < R5: 20 MHz IBW for LTE single mode and maximum 20 W for 1.4 and 3 MHz carriers.
NB-IoT standalone: 20 MHz IBW per RF port.
- Mixed mode: 40 MHz IBW per RF port. 20 MHz IBW and maximum 20 W for 1.4 and 3 MHz LTE carriers.
- (156) Maximum 20 W per 1.4 MHz and 3 MHz LTE and NB-IoT standalone carrier.
Maximum 40 W per WCDMA and 4.6–5 MHz LTE carrier.
Maximum 60 W per carrier > 5 MHz.
- (157) The given output power is for RRUS 11 B26A with product number KRC 161 287/2. For RRUS 11 B26A with product number KRC 161 287/1, the output power is limited to 2×30 W.
- (158) 3 MHz LTE carriers within 20 MHz IBW. Maximum 20 W per RF branch for 3 MHz LTE carriers.
- (159) 3 MHz LTE carriers within 20 MHz IBW.
- (160) 20 MHz IBW per RF port for 1.4 MHz and 3 MHz LTE and NB-IoT standalone.
- (161) In addition to standard LTE carrier bandwidths, RRUS 13 B31 supports 4.2 and 4.4 MHz LTE carriers.
- (162) Radio 8842 B34 B39A on band 34 only supports 10 and 15 MHz LTE carriers.
- (163) Maximum 30 W per RF branch in total for both bands. Maximum 3 carriers per RF branch in total for both bands. In multi-sector per radio 2×4TX/4RX and 4×2TX/2RX, all sectors must have the same carrier configuration.
- (164) Radio 4418 with R-state < R1C does not support LTE+NR, Multi-Operator RAN LTE + LTE and NR+NR.
- (165) Radio 8808 and Radio 8818 does not support 5 MHz LTE carriers.
- (166) Radio 8842 B34 B39A on band 39A only supports 10 and 20 MHz LTE carriers.
- (167) AIR 6468 on band 41E supports 20 MHz LTE carriers.
- (168) LTE + NR is for split mode.



- (169) Up to SW 19.Q1, maximum output power 80 W for 20 MHz carrier.
 From SW 19.Q2, maximum output power 160 W for 40 MHz carrier and maximum output power 200 W for 100 MHz carrier.
- (170) 20 MHz operational bandwidth, up to SW 19.Q1.
 100 MHz operational bandwidth in SW 19.Q2.
 120 MHz operational bandwidth from SW 19.Q3.
 (171) 20 MHz carrier is supported.
 From SW 19.Q2, for NR, 20 MHz, 40 MHz, and 100 MHz carriers are supported.
 From SW 19.Q2, for NR + LTE split mode, NR 40 MHz + LTE 60 MHz carriers are supported.
- (172) Radio 4412 B41 supports 10, 15, and 20 MHz LTE carriers.
- (173) RRUS 82 for band 41 does not support 5 MHz LTE carriers.
- (174) Radio supports Virtual IBW up to 60 MHz. See [Virtual IBW](#) on page 99 for more information.
- (175) Minimum output power is 20 W per carrier.
- (176) Only carrier combination 10 MHz + 20 MHz is supported.
- (177) LTE is for mixed mode.
- (178) Maximum 200 W, up to SW 19.Q3.
 Maximum 240 W from SW 19.Q4.
- (179) 100 MHz, up to SW 19.Q3.
 160 MHz, from SW 19.Q4.
- (180) Maximum 80 W for 20 MHz carrier, up to SW 19.Q1.
 Maximum 200 W for 100 MHz carrier, from SW 19.Q2.
- (181) 20 MHz operational bandwidth, up to SW 19.Q1.
 100 MHz operational bandwidth, from SW 19.Q2.
- (182) Radio 2228 with R-state < R1D does not support LTE.
- (183) With KR D 901 159/11.
- (184) 40 MHz operational bandwidth, up to SW 19.Q4.
- (185) With KR D 901 097/11.
- (186) Maximum output power 80 W, up to SW 19.Q1.
- (187) 20 MHz operational bandwidth, up to SW 19.Q1.

- (188) Radio 2218 B42B with KRC 161 647/1 supports output power of maximum 2×30 W.
- (189) Up to SW 19.Q3, 20 MHz operational bandwidth with R-state < R1C.
 From SW 19.Q4, 100 MHz operational bandwidth with R-state $\geq$ R1C.
- (190) Up to SW 19.Q3, 20 MHz operational bandwidth with R-state < R1D.
 From SW 19.Q4, 100 MHz operational bandwidth with R-state $\geq$ R1D.
- (191) Radio 2205 B46 with KRC 161 609/2 support band 46A (5160–5250 MHz), band 46B (5250–5340 MHz), band 46C (5480–5710 MHz), and band 46D (5735–5875 MHz).
- (192) Radio 2205 B46 with KRC 161 609/1 support band 46A (5155.75–5250 MHz) and band 46D (5725–5875 MHz).
- (193) Radio 2205 B46 supports 10 and 20 MHz LTE carriers.
- (194) Radios on band 66 and 66A does not support 1.4 MHz and 3 MHz LTE carriers.
- (195) AIR 3246 supports MI NB-IoT in-band and MI NB-IoT guard band from SW 19.Q1.
- (196) 20 MHz, up to SW 19.Q1.
 60 MHz, from SW 19.Q1.
- (197) Upper 45 MHz of band 66 is for LTE only.
- (198) Radio 4426 B66 does not support MI NB-IoT in frequency range 2180–2200 MHz.
 Radio 4426 B66 with R-state < R2A does not support MI NB-IoT guard band.
- (199) For Radio 4426 B66 with R-state < R2A: 70 MHz IBW and 70 MHz operational bandwidth.
- (200) Upper 25 MHz of band 66A is for LTE only.
- (201) Radio 2212 B66A with R-state < R2 does not support WCDMA.
- (202) Maximum 20 W per NB-IoT standalone carrier.
 Maximum 40 W per WCDMA and 4.6–5 MHz LTE carrier.
 Maximum 60 W per carrier > 5 MHz.
- (203) Maximum 320 W in total together with band 2.
 High output power mode 2×80 W supported on RF ports E and H.
- (204) For AIR 3239 B78C,
 KRD 901 104/11 with R-state $\leq$ R1D, maximum output power 80 W for 20 MHz carrier.
 KRD 901 104/11 with R-state $\geq$ R1D, maximum output power 100 W for 100 MHz carrier.
- (205) For AIR 3239 B78C,



- KRD 901 104/11 with R-state $\leq$ R1D, 20 MHz IBW.
- KRD 901 104/11 with R-state $\geq$ R1D, 100 Hz IBW.
- (206) 20 MHz, up to SW 19.Q2.
- 100 MHz, from SW 19.Q3.
- (207) 20 MHz operational bandwidth, up to SW 19.Q2.
- 100 MHz operational bandwidth, from SW 19.Q3.
- (208) Including two NB-IoT standalone carriers.
- (209) R-state $\geq$ R2B.
- (210) Only supports configuration mode 2.
- (211) R-state $\geq$ R1D/1.
- (212) 200 W EIRP for configuration mode 1.
- 400 W EIRP for configuration mode 2.
- (213) 800 MHz operational bandwidth for configuration mode 1.
- 400 MHz operational bandwidth for configuration mode 2.



2.2 Supported Carrier Bandwidths



Table 3 Supported Carrier Bandwidths for AAS

Radio	Product Number	From Software	Supported Carrier Bandwidths													Number of Carrier in DL		
			LTE				NR									LTE	NR	LTE +NR
			10	15	20	20	30	40	50	60	80	90	100					
AIR 3239 B40	KRD 901 153/11	any	-	-	-	X	-	-	-	-	-	-	X	-	-	-	1	-
		20Q1	-	-	-	X	-	X	X	X	-	-	X	-	-	-	1	-
		20Q2	X	-	X	X	-	X	X	X	-	-	X	3	-	-	1	-
AIR 3239 B77B	KRD 901 154/11	any	-	-	-	X	-	-	-	-	-	-	X	-	-	-	1	-
AIR 3239 B78C	KRD 901 104/11	any	-	-	-	X	-	-	-	-	-	-	-	-	-	-	1	-
		19Q3	-	-	-	X	-	-	-	-	X	-	X	-	-	-	1	-
		19Q4	-	-	-	X	-	-	X	-	X	-	X	-	-	-	1	-
		20Q1	-	-	-	X	X	X	X	X	X	X	X	-	-	-	1	-
AIR 3239 B78F	KRD 901 152/11	any	-	-	-	X	-	-	-	-	-	-	X	-	-	-	1	-
		19Q4	-	-	-	X	-	-	-	-	X	-	X	-	-	-	1	-
		20Q1	-	-	-	X	X	X	X	X	X	X	X	-	-	-	1	-
AIR 3239 B78G	KRD 901 149/11	any	-	-	-	X	-	-	-	-	-	-	X	-	-	-	1	-
		20Q1	-	-	-	X	X	X	X	X	X	X	X	-	-	-	1	-
AIR 3239 B78Q	KRD 901 187/11	any	-	-	-	X	X	X	X	X	X	X	X	-	-	-	1	-
AIR 6449 B41K	KRD 901 084/11	any	-	-	X	-	-	-	-	-	-	-	X	3 ⁽¹⁾	-	-	1	4
AIR 6454 B41K	KRD 901 148/11	any	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
		19Q4	-	-	X	-	-	-	-	-	X	-	-	-	-	3 ⁽¹⁾	1	4
AIR 6468 B38A	KRD 901 072/11	any	X	X	X	-	-	-	-	-	-	-	-	-	-	3	-	-



Radio	Product Number	From Software	Supported Carrier Bandwidths											Number of Carrier in DL		
			LTE				NR									
			10	15	20	20	30	40	50	60	80	90	100	LTE	NR	LTE +NR
AIR 6468 B40	KRD 901 076/11	any	X	X	X	-	-	-	-	-	-	-	3	-	-	
AIR 6468 B41	KRD 901 075/11	any	X	X	X	-	-	-	-	-	-	-	3	-	-	
AIR 6468 B41C	KRD 901 121/11	any	X	-	X	-	-	-	-	-	-	-	2	-	-	
AIR 6468 B41E	KRD 901 055/11	any	-	-	X	-	-	-	-	-	-	-	3	-	-	
AIR 6468 B42	KRD 901 074/11	any	X	X	X	-	-	-	-	-	-	-	3	-	-	
AIR 6488 B41	KRD 901 108/11	any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q2	-	-	X	X	-	X	-	-	-	-	X	3 ⁽¹⁾	1	4 ⁽²⁾
		19Q3	-	-	X	X	-	X	X	X	X	X	X	3 ⁽¹⁾	1	4 ⁽²⁾
		19Q4	-	-	X	X	X	X	X	X	X	X	X	3 ⁽¹⁾	1	4 ⁽²⁾
		20Q1	X	-	X	X	X	X	X	X	X	X	X	3	1	4 ⁽²⁾
AIR 6488 B41K	KRD 901 123/11	any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q2	-	-	-	X	-	-	-	-	-	-	X	-	1	-
		19Q3	-	-	-	X	-	X	-	X	X	X	-	-	1	-
AIR 6488 B41M	KRD 901 155/11	any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q3	-	-	X	X	-	X	-	-	-	-	X	3 ⁽¹⁾	1	4 ⁽²⁾
		19Q4	-	-	X	X	X	X	X	X	X	X	X	3 ⁽¹⁾	1	4 ⁽²⁾
AIR 6488 B41N	KRD 901 158/11	any	X	-	X	-	-	-	-	-	-	-	-	2	-	-
AIR 6488 B42	KRD 901 097/11	any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q2	-	-	-	X	-	-	-	-	-	-	X	-	1	-



Radio	Product Number	From Software	Supported Carrier Bandwidths											Number of Carrier in DL		
			LTE				NR							LTE	NR	LTE +NR
			10	15	20	20	30	40	50	60	80	90	100			
		19Q3	-	-	-	-	X	X	X	X	X	-	X	-	1	-
		19Q4	-	-	-	-	X	X	X	X	X	X	X	-	1	-
		20Q1	X	-	X	X	X	X	X	X	X	X	X	3	1	-
		any	-	-	X	-	-	-	-	-	-	-	-	2	-	-
	KRD 901 159/11	20Q1	-	-	X	-	-	-	-	-	X	-	X	2	1	-
		any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q2	-	-	-	-	-	X	X	X	X	-	X	-	1	-
		19Q3	-	-	-	X	X	X	X	X	X	X	X	-	1	-
	KRD 901 087/11	19Q4	X	-	X	X	X	X	X	X	X	X	X	3	1	-
		any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q2	-	-	-	X	-	X	X	X	X	-	X	-	1	-
		19Q3	-	-	-	X	X	X	X	X	X	X	X	-	1	-
	KRD 901 124/11	any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q2	-	-	-	X	-	X	X	X	X	-	X	-	1	-
		19Q3	-	-	-	X	X	X	X	X	X	X	X	-	1	-
		any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
	KRD 901 096/11	19Q2	-	-	-	X	-	-	-	-	-	-	X	-	1	-
		19Q3	-	-	-	X	-	X	X	X	X	-	X	-	1	-
		19Q4	-	-	-	X	X	X	X	X	X	X	X	-	1	-
		20Q1	X	-	X	X	X	X	X	X	X	X	X	3	1	-
AIR 6488 B48	KRD 901 160/11	any	X	-	X	-	-	-	-	-	-	-	-	3	-	-
AIR 6488 B78H	KRD 901 105/11	any	-	-	-	X	-	-	-	-	-	-	-	-	1	-
		19Q2	-	-	-	X	-	-	-	-	-	-	X	-	1	-



- (1) For mixed mode only.
- (2) For split mode.



2.3 Naming Convention for Multiband Radios

There are two types of naming conventions for the multiband radios.

2.3.1 Naming Convention 1 for Multiband Radios

Some multiband radios are named as follows:

Radio <Radio TX/RX> <Unique ID> <1st 3GPP Band> <2nd 3GPP Band> <3rd 3GP Band> .

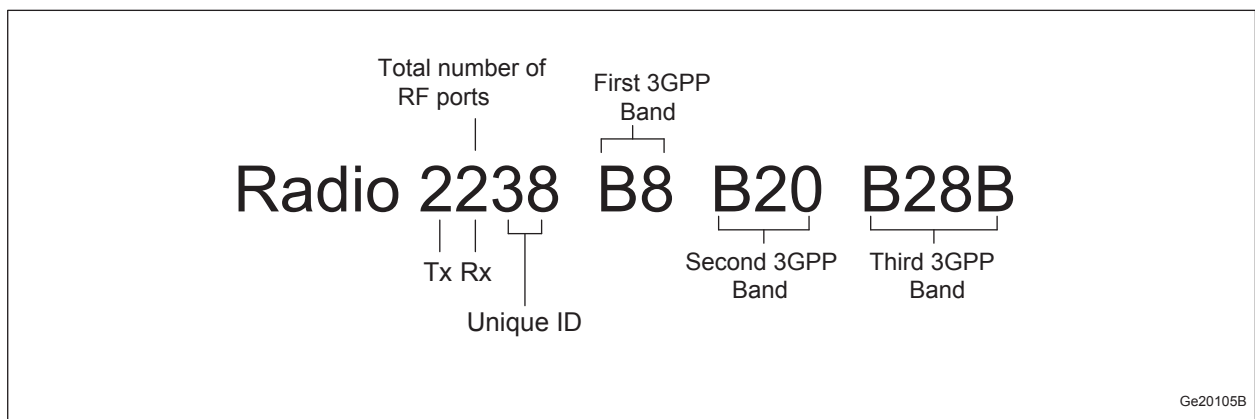


Figure 2 Naming Convention Example One

2.3.2 Naming Convention 2 for Multiband Radios

Some multiband radios are named as follows:

Radio <Radio TX/RX> <Unique ID> <<TX/RX>< 1st 3GPP Band>> <<TX/RX><2nd 3GPP Band>> <<TX/RX>< 3rd 3GPP Band>> <Port Configuration>.

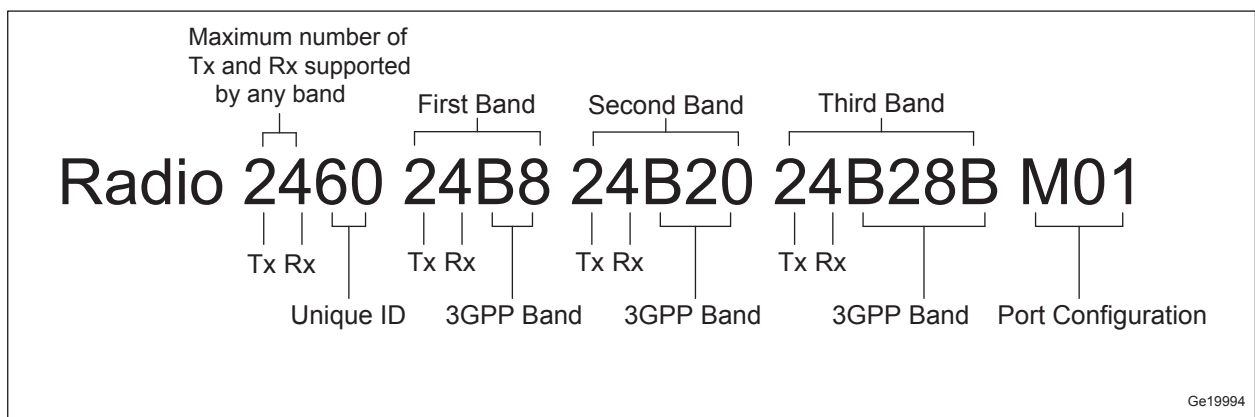


Figure 3 Naming Convention Example Two



Port Configuration

S - Separate ports for all bands

C - Combined for all bands

Mxx - Mix of combined and separated ports. Different combinations are distinguished by a two-digit number. For information on multiband radio variant naming, see [Table 4](#)

Table 4 Variant Naming for Multiband Radios

Variant	Band 1	Band 2	Band 3	Supported Radios
M01	RF A: TX/RX RF B: TX/RX RF C: RX RF D: RX	RF A: TX/RX RF B: TX/RX RF C: RX RF D: RX	RF A: RX RF B: RX RF C: TX/RX RF D: TX/RX	Radio 2460 Radio 2479

2.4 Supported DUs and Baseband Units

Table 5 Supported DUs and Baseband Units

DU / Baseband	Supported RATs	Mixed Mode Baseband Configurations	Comments
Baseband 5212 (6 ports) Baseband 6303 (3 ports) Baseband 6620 (15 ports)	G, W, L, NB-IoT	G+W	-
Baseband 5216 (6 ports) Baseband 6318 (6 ports) Baseband 6630 (15 ports)	G, W, L, NR, NB-IoT	G+W G+L+NB-IoT W+L+NB-IoT W+G+L+NB-IoT NR+L+NB-IoT	
Baseband 6502 (3 ports)	W, L	-	Micro radios only
Baseband 6648	NR	-	-
DUG 20	G	-	-
DUL 20	L	-	
DUS 31	L, NB-IoT	-	-
DUS 41	L, NB-IoT	-	-
DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41	W	-	Multi-band radio not supported if W on more than one band.
IDU 5205	W, L	-	Radio Dot system only.
IDU 5209	W, L	W+L	Radio Dot system only.
RBS 6302	W, L, NB-IoT	-	See DUW for W. See DUS 41 for L, NB-IoT.
RBS 6501	W, L	-	Single standard (W or L only). Cannot be used in mixed mode configurations. For W:



DU / Baseband	Supported RATs	Mixed Mode Baseband Configurations	Comments
			— 2TX/2RX micro radios For L: — LTE FDD only — 2TX/2RX non-AAS radios — 4TX/4RX non-AAS radios configured with 2TX/2RX RBB
Streetmacro 6701	NR	-	-

2.5 Radio Bands

Table 6 Radio Bands

3GPP Bands	Sub-Bands ⁽¹⁾	Uplink (MHz)	Downlink (MHz)
0 ⁽¹⁾		890 - 915	935 - 960
	0A	890 - 915	935 - 960
	0B	890 - 915	935 - 960
1		1920 - 1980	2110 - 2170
	1A	1920 - 1980	
	1B	1920 - 1975	2110 - 2165
2		1850 - 1910	1930 - 1990
3		1710 - 1785	1805 - 1880
	3A	1735 - 1785	1830 - 1880
	3B	1710 - 1765	1805 - 1860
	3C	1744 - 1784	1839 - 1879
	3D	1744 - 1784	1839 - 1879
	3E	1710 - 1735	1805 - 1830
4		1710 - 1755	2110 - 2155
5		824 - 849	869 - 894
	5A	824 - 843.4	869 - 888.4
	5B	824 - 835	869 - 880
7		2500 - 2570	2620 - 2690
	7A	2500-2560	2620-2680
8		880 - 915	925 - 960
	8A	889 - 915	934 - 960
9		1749.9 - 1784.9	1844.9 - 1879.9
11		1427.9 - 1447.9	1475.9 - 1495.9
12		699 - 716	729 - 746
	12A	699 - 715	729-745
13		777 - 787	746 - 756
14		788 - 798	758 - 768
17		704 - 716	734 - 746



3GPP Bands	Sub-Bands ⁽¹⁾	Uplink (MHz)	Downlink (MHz)
18		815 - 830	860 - 875
20		832 - 862	791 - 821
25		1850 - 1915	1930 - 1995
	26A	817 - 824	862 - 869
	26B	814 - 824	859 - 869
	26C	821 - 835	866 - 880
	26D	814 - 835	859 - 880
28		703 - 748	758 - 803
	28A	718 - 748	773 - 803
	28C	713 - 743	768 - 798
	28D	718 - 728	773 - 783
	28E	706 - 736	761 - 791
29		-	716-728
30		2305 - 2315	2350 - 2360
31		452.5 - 457.5	462.5 - 467.5
	32A	-	1452-1492
34		2010 - 2025	2010 - 2025
38		2570 - 2620	2570 - 2620
	38A	2575 - 2615	2575 - 2615
39		1880 - 1920	1880 - 1920
	39A	1885 - 1915	1885 - 1915
40		2300 - 2400	2300 - 2400
	40A	2320 - 2370	2320 - 2370
	40B	2302.5 - 2322.5	2302.5 - 2322.5
	40C	2305 - 2325	2305 - 2325
	40D	2320 - 2340	2320 - 2340
	40N	2300 - 2395	2300 - 2395
	40S	2300 - 2386	2300 - 2386
	40T	2300 - 2395	2300 - 2395
	40U	2300 - 2390	2300 - 2390
	40Y	2350 - 2390	2350 - 2390
41		2496 - 2690	2496 - 2690
	41A	2496 - 2658	2496 - 2658
	41B	2595 - 2645	2595 - 2645
	41C	2535 - 2655	2535 - 2655
	41D	2535 - 2575	2535 - 2575
	41E	2575 - 2635	2575 - 2635
	41F	2635 - 2675	2635 - 2675
	41K	2515 - 2675	2515 - 2675
	41M	2496 - 2690	2496 - 2690
	41N	2545 - 2595	2545 - 2595
42		3400 - 3600	3400 - 3600
	42B ⁽²⁾	2480 - 3520	2480 - 3520
	42B ⁽³⁾	3520 - 3560	3520 - 3560



3GPP Bands	Sub-Bands ⁽¹⁾	Uplink (MHz)	Downlink (MHz)
	42F	3420 - 3600	3420 - 3600
	42G	3410 - 3600	3410 - 3600
43		3600 - 3800	3600 - 3800
	46A	5160 - 5250	5160 - 5250
	46B	5250 - 5340	5250 - 5340
	46C	5480 - 5710	5480 - 5710
	46D	5725 - 5875	5725 - 5875
48		3550 - 3700	3550 - 3700
66 ⁽⁴⁾		1710 - 1780	2110 - 2200
	66A ⁽⁵⁾	1710 - 1780	2110 - 2180
70		1695 - 1710	1995 - 2020
71		663 - 698	617 - 652
	77A	3900 - 4000	3900 - 4000
	77B	3800 - 4000	3800 - 4000
	78A	3300 - 3600	3300 - 3600
	78B	3500 - 3600	3500 - 3600
	78C	3500 - 3700	3500 - 3700
	78F	3420 - 3600	3420 - 3600
	78G	3600 - 3800	3600 - 3800
	78H	3542 - 3700	3542 - 3700
	78L	3500 - 3800	3500 - 3800
	78Q	3300 - 3500	3300 - 3500
	85A	698 - 715	728 - 745
111 ⁽¹⁾		1915 - 1920	716-728
222 ⁽¹⁾		1915 - 1920	1995 - 2020
257		26500 - 29500	26500 - 29500
	257A	27500 - 28350	27500 - 28350
260		37000 - 40000	37000 - 40000
261		27500 - 28350	27500 - 28350
PPDR1		788-791	733-736

(1) Not defined by 3GPP.

(2) For Radio 2218 with KRC 161 616/1.

(3) For Radio 2218 with KRC 161 647/1.

(4) Upper 45 MHz of band 66 is for LTE only.

(5) Upper 25 MHz of band 66A is for LTE only.



2.6 Supported Radio Frequencies for RBS 6131 AC and RBS 6131 DC

Table 7 Supported Radio Frequencies for RBS 6131 AC and RBS 6131 DC

Frequency Band (MHz)	Radio	Supported Radio Standard		Maximum Output Power (W) ^{(1) (2)}	IBW (MHz)	Operational bandwidth (MHz)
		6131				
		AC	DC			
Band 1 (2100)	RUS 01	-	W, L, W+L	80	20 ⁽³⁾	20
	RRUS 11	-	W, L	2×40	20	20
	mRRUS 12	-	W, L	2×5	25	20
Band 2 (1900)	RUS 01	G ⁽⁴⁾ , W, L, G +W, W+L	-	80 ⁽⁵⁾	20 ^{(3) (6)}	20
	RUS 02	G ⁽⁴⁾ , W, L, G +W, G+L, W+L	-	80	40	25 ⁽⁷⁾
	RRUS 01	G ⁽⁴⁾ , W, L, G +W, W+L	-	80 ⁽⁵⁾	20 ^{(3) (6)}	20
	RRUS 11	W, L, W+L	-	2×40	20	20
	RRUS 12	G ⁽⁴⁾ , W, L, G +W, G+L, W+L	-	2×60	40	25 ⁽⁷⁾
	RRUS A2	W, L	-	n/a ⁽⁸⁾	40	20
	AIR 21 B2A B4P	G ⁽⁴⁾ , W, L, G +W, G+L, W+L	-	2×30	2×20 ⁽⁹⁾	2×20
	AIR 3246 B2 B25	L	L	160	75	60
Band 4 (1700/ 2100)	RUS 01	W, L, W+L	-	80	20	20
	RRUS 11	W, L, W+L, L+L	-	2×40	20	20
	RRUS A2	W, L	-	n/a ⁽⁸⁾	40	20
	RU22 ⁽¹⁰⁾	W	-	40	20	20
	AIR 21 B4A B2P	W, L, W+L	-	2×30	2×20	2×20
	AIR 32 B4A B2P	W, L, W+L, L+L	-	4×30	45	40
Band 8 (900)	RUS 01	-	W, L, W+L	80	20	20
	RRUS 12	-	W, L, W+L	2×60	35	20
Band 11 (1500)	Radio 2217	-	W, L, W+L, L +L	2×60	20	20
	RUW 02	-	W, L, W+L, L +L	60	10	10
	RRUW 02	-	W, L, W+L, L +L	60	10	10
Band 12 (700)	RUS 01	L	L	60	15	15
	RRUS 11	L	-	2×30	15	15
Band 25 (1900)	AIR 3246 B2 B25	L	L	160	75	60



Frequency Band (MHz)	Radio	Supported Radio Standard		Maximum Output Power (W) ^{(1) (2)}	IBW (MHz)	Operational bandwidth (MHz)
		6131				
		AC	DC			
Band 66A (1700/ 2100)	RRUS 32	W, L, W+L, L+L	W, L, W+L, L +L	4×40	70	65 ⁽¹¹⁾

(1) Requires HWACs.

(2) For information on possible power back off or band edge loss, contact Ericsson Product Management.

(3) For GSM: Instantaneous Bandwidth is dependent on modulation techniques for RUS 01 and RRUS 01. See [IBW for RUS 01 and RRUS 01 Depending on GSM Modulation Technique](#) on page 95.

(4) GSM is supported only as secondary node.

(5) For GSM: The maximum output power of radios with two carriers is 60 W per radio (30 W per carrier).

(6) For GSM: Instantaneous Bandwidth is limited to 10 MHz at output power larger than 60 W.

(7) Up to four CDMA or GSM carriers. Maximum 20 MHz available for LTE and WCDMA carriers.

(8) The RRUS A2 is not TX-capable. When used in an RBB together with a TX-capable radio, the output power of the RBB is that of the TX-capable radio

(9) For GSM: The instantaneous bandwidth is limited to 15 MHz.

(10) RU22 is an RBS 3000 legacy product.

(11) 65 MHz operational bandwidth in mixed mode WCDMA + LTE. 60 MHz operational bandwidth in single mode LTE with two CPRI. 50 MHz operational bandwidth for LTE in both single mode with one CPRI and in mixed mode.

2.7 IBW for RUS 01 and RRUS 01 Depending on GSM Modulation Technique

Table 8 IBW for RUS 01 and RRUS 01 Depending on GSM Modulation Technique

GSM Modulation Technique	IBW (MHz) at 60 W ⁽¹⁾
GMSK	20
8PSK	20 or 18 ⁽²⁾
16 QAM and 32 QAM	15

(1) Radios for frequency bands smaller than IBW support the full frequency band.

(2) 18 MHz IBW only applies to configurations in frequency band 3 with two carriers, each with more than 15 W output power. 20 MHz IBW applies to all other configurations.



2.8 Non-Frequency Specific Radio Data

Table 9 Non-Frequency Specific Radio Data

Radio	Number of Antenna Branches or Beams ⁽¹⁾		Number of Data Ports ⁽²⁾	Cascading Support	Different Line Rates on Different Ports	Supported Line Rates (Gbps)					
						CPRI					eCPRI
	TX	RX				1.2	2.5	4.9	9.8	10.1	10.3
AIR 11	2	2	2	-	-	-	X	-	-	-	-
AIR 1281	8	8	4	-	-	-	-	-	-	X	-
AIR 1641	16	16	4	-	-	-	X	X	X	X	-
AIR 21	2	4	2	X	-	-	X	-	-	-	-
AIR 2488	2	4	2	X	X	-	X	X	X	X	-
AIR 2488 MB	2 ⁽³⁾	4 ⁽³⁾	2 ⁽³⁾	X	X	-	X	X	X	X	-
AIR 32	4	4	2	X	X	-	X	X	X	-	-
AIR 32 MB	4 ⁽³⁾	4 ⁽³⁾	2 ⁽³⁾	X	X	-	X	X	X	-	-
AIR 3239	n/a	n/a	3	-	-	-	-	-	-	-	X
AIR 3246	4 ⁽⁴⁾	4 ⁽⁴⁾	4 ⁽⁵⁾	-	-	-	X	-	X	X ⁽⁶⁾	-
AIR 4455 ⁽¹⁵⁾	4	4	2	X	X	-	X	X	X	X	-
AIR 5121	4	4	2	-	-	-	-	-	-	X	-
AIR 5331	8	8	4	-	-	-	-	-	-	X	-
AIR 6449	n/a	n/a	4	-	-	-	-	-	-	-	X
AIR 6454	n/a	n/a	5	-	-	-	-	-	-	-	X
AIR 6468	n/a	n/a	2	-	-	-	-	-	-	-	X
AIR 6488	n/a	n/a	3	-	-	-	-	-	-	-	X
Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884	2 ⁽³⁾	2 ⁽³⁾	2	X	X	-	X	X	X	X	-
Dot 4479 or Dot 4489 + IRU 8846	4	4	2	X	X	-	X	X	X	X	-
mRRUS 12	2	2	2	X	X	-	X	X	-	-	-
mRRUS 61	2	2	2	-	-	-	X	-	-	-	-
Radio 0208	-	2	2	X	X	-	X	X	X	-	-
Radio 2012	2	-	2	X	X	-	X	X	X	X	-
Radio 2203	2	2	2	X	X	-	X	X	X	-	-
Radio 2205	2	2	2 ⁽⁷⁾	X	-	-	X	X	X	-	-
Radio 2208	2	2	2 ⁽⁷⁾	X	-	-	X	X	X	-	-
Radio 2212	2	2	2	X	X	-	X	X	X	X	-
Radio 2217	2	2	2	X	X	-	X	X	X	-	-
Radio 2218	2	2	2 ⁽⁸⁾	X	-	-	X	X	X	-	-
Radio 2219	2	2	2	X	X	-	X	X	X	-	-
Radio 2228	2	2	2	X	X	-	X	X	X	X	-
Radio 2237	2	2	2	X	X	-	X	X	X	-	-
Radio 2238	2	2	2	X	X	-	X	X	X	X	-
Radio 2242 ⁽¹³⁾	2	2	2	X	X	-	X	X	X	X	-



Radio	Number of Antenna Branches or Beams ⁽¹⁾		Number of Data Ports ⁽²⁾	Cascading Support	Different Line Rates on Different Ports	Supported Line Rates (Gbps)					
						CPRI					eCPRI
	TX	RX				1.2	2.5	4.9	9.8	10.1	10.3
Radio 2260 ⁽¹³⁾	2	2	2	X	X	-	X	X	X	X	-
Radio 2279 ⁽¹³⁾	2	2	2	X	X	-	X	X	X	X	-
Radio 2460 ⁽¹⁵⁾	2	4	2	X	X	-	X	X	X	X	-
Radio 2468	2	4	2	X	X	-	X	X	X	X	-
Radio 2479	2	4	2	X	X	-	X	X	X	X	-
Radio 4402	4	4	2	X	X	-	X	X	X	X	-
Radio 4407	4	4	2	X	-	-	X	X	X	-	-
Radio 4408	4	4	2	X	X	-	X	X	X	X	-
Radio 4412	4	4	2 ⁽⁸⁾	X	-	-	X	X	X	-	-
Radio 4415	4	4	2	X	X	-	X	X	X	X	-
Radio 4417	4	4	2	X	X	-	X	X	X	X	-
Radio 4418	4	4	2	X	X	-	X	X	X	X	-
Radio 4422	4	4	2	X	X	-	X	X	X	X	-
Radio 4426	4	4	2	X	X	-	X	X	X	X	-
Radio 4428	4	4	2	X	X	-	X	X	X	X	-
Radio 4429	4	4	2	X	X	-	X	X	X	X	-
Radio 4442 ⁽¹³⁾	4	4	2	X	X	-	X	X	X	X	-
Radio 4443 ⁽¹³⁾	4	4	2	X	X	-	X	X	X	X	-
Radio 4449 ⁽¹³⁾	4	4	2	X	X	-	X	X	X	X	-
Radio 4455 ⁽¹³⁾	4	4	2	X	X	-	X	X	X	X	-
Radio 4478	4	4	2	X	X	-	X	X	X	X	-
Radio 4480 ⁽¹³⁾	4	4	2	X	X	-	X	X	X	X	-
Radio 4499 ⁽¹³⁾	4	4	2	X	X	-	X	X	X	X	-
Radio 8808	8	8	2 ⁽⁸⁾	X	-	-	X	X	X	-	-
Radio 8818	8	8	2 ⁽⁸⁾	X	-	-	X	X	X	X	-
Radio 8823	8	8	2 ⁽⁸⁾	-	-	-	-	-	X	X	-
Radio 8836	8	8	2 ⁽⁸⁾	-	-	-	-	-	X	X	-
Radio 8842 ⁽¹³⁾	8	8	2 ⁽⁸⁾	-	-	-	X	X	X	X	-
Radio 8843 ⁽¹³⁾	8 ⁽⁹⁾	8 ⁽⁹⁾	2	X	X	-	X	X	X	X	-
Radio 8863	8	8	2 ⁽⁸⁾	-	-	-	-	-	-	X	-
RBS 6501 radio part	2	2	2 ⁽¹⁰⁾	-	-	-	X	-	-	-	-
RD 2242 + IRU 2242	2	2	2	X	X	-	X	X	X ⁽¹¹⁾	-	-
RD 2243 + IRU 2242	2	2	2	X	X	-	X	X	X ⁽¹¹⁾	-	-
RD 2253 + IRU 2242	2	2	2	X	X	-	X	X	X ⁽¹¹⁾	-	-
RD 4442 + IRU 2242	2 ⁽³⁾	2 ⁽³⁾	2 ⁽³⁾	X	X	-	X	X	X ⁽¹¹⁾	-	-
RD 4453 + IRU 2242	2 ⁽³⁾	2 ⁽³⁾	2 ⁽³⁾	X	X	-	X	X	X ⁽¹¹⁾	-	-
RRU 22	1	2	1	-	-	X	-	-	-	-	-



Radio	Number of Antenna Branches or Beams ⁽¹⁾		Number of Data Ports ⁽²⁾	Cascading Support	Different Line Rates on Different Ports	Supported Line Rates (Gbps)					
						CPRI					eCPRI
	TX	RX				1.2	2.5	4.9	9.8	10.1	10.3
RRU 2208	2	2	2 ⁽⁸⁾	X	-	-	X	X	X	-	-
RRU 2216	2	2	2 ⁽⁸⁾	X	-	-	X	X	X	-	-
RRU 22F1	2	2	2 ⁽¹²⁾	X	X	-	X	X	-	-	-
RRU 22F2 ⁽¹³⁾	2 ⁽³⁾	2	2 ⁽¹⁴⁾	-	-	-	X	X	-	-	-
RRU 22F3 ⁽¹⁵⁾	2 ⁽³⁾	2	2 ⁽¹⁴⁾	-	X	-	X	-	X	-	-
RRUL 11	2	2	1	-	-	-	X	-	-	-	-
RRUL 62	2	2	2 ⁽⁸⁾	X	-	-	X	X	X	-	-
RRUL 63	2	2	2	X	X	-	X	X	X	-	-
RRUL 81	8	8	2	-	-	-	-	-	X	-	-
RRUL 82	8	8	2 ⁽⁸⁾	-	-	-	X	-	X	-	-
RRUS 01	1	2	2	X	X	X	X	-	-	-	-
RRUS 02	1	2	2	X	X	X	X	-	-	-	-
RRUS 11	2	2	2	X	X	X	X	-	-	-	-
RRUS 12	2	2	2	X	X ⁽¹⁶⁾	X	X	-	-	-	-
RRUS 13	2	2	2	X	X	X	X	X	X	-	-
RRUS 14	2	2	2	X	X	-	X	X	X	-	-
RRUS 14s	2	2	2	X	X	-	X	X	X	-	-
RRUS 31	4	4	2	-	-	-	X	X	-	-	-
RRUS 32	4	4	2	X	X	-	X	X	X	-	-
RRUS 61	2	2	2	-	-	-	X	-	-	-	-
RRUS 62	2	2	2	X	X	-	X	X	X	-	-
RRUS 72	4	4	2	X	X	-	X	X	X	-	-
RRUS 82	8	8	2 ⁽⁸⁾	-	-	-	X	-	X	-	-
RRUS A2	-	2	2	X	-	-	X	-	-	-	-
RRUS A3	-	2	2	X	X	-	X	X	X	-	-
RRUS E2	2	-	2	X	-	-	X	-	-	-	-
RRUW 01	1	2	2	X	X	X	X	-	-	-	-
RRUW 02	1	2	2	X	X	X	X	-	-	-	-
RRUW 03	1	2	2	X	X	X	X	-	-	-	-
RUL 01	1	2	2	X	-	-	X	-	-	-	-
RUS 01	1	2	2	X	-	-	X	-	-	-	-
RUS 02	1	2	2	X	-	-	X	-	-	-	-
RUS 03	1	2	2	X	X	-	X	X	X	-	-
RUW 01	1	2	2	X	-	-	X	-	-	-	-
RUW 02	1	2	2	X	-	-	X	-	-	-	-
Streetmacro 6701	8	8	4 ⁽¹⁰⁾	-	-	-	-	-	-	X	-
Vault Radio System 2268	2	2	2	X	X	-	X	X	X	-	-

(1) Beams for AAS.

(2) Radios with two data ports normally support cascading.



- (3) For each band.
- (4) Use 32TX and 32RX when calculating CPRI capacity.
- (5) 2 data ports, up to SW 18.Q4.
4 data ports, from SW 19.Q1.
- (6) Support CPRI 10.1 Gbps from L19.Q1 on Band 2, Band 25 and Band 66.
- (7) Two CPRI ports towards DU or Baseband can operate at different line rates. When cascading, both ports must operate at the same line rate.
- (8) CPRI line rate must be the same on both data ports.
- (9) Four branches per band.
- (10) Data ports are internally connected.
- (11) 9.8 Gbps CPRI is supported by IRU 2242, KRC 161 444/3.
- (12) Data 1 only as primary.
- (13) Dual band radio.
- (14) Data port is used for all bands.
- (15) Triple band radio.
- (16) RRUS 12 B7 does not support different line rates on different ports.

2.9 Virtual IBW

Virtual IBW can extend the IBW of a radio beyond the IBW of each individual RF port. [Supported Radio Frequencies](#) on page 8 provides IBW per RF port for each radio and which radios that support Virtual IBW.

See [Figure 4](#) for an example of Virtual IBW maximizing carrier bandwidth with WCDMA, GSM, and 4-way diversity for LTE.

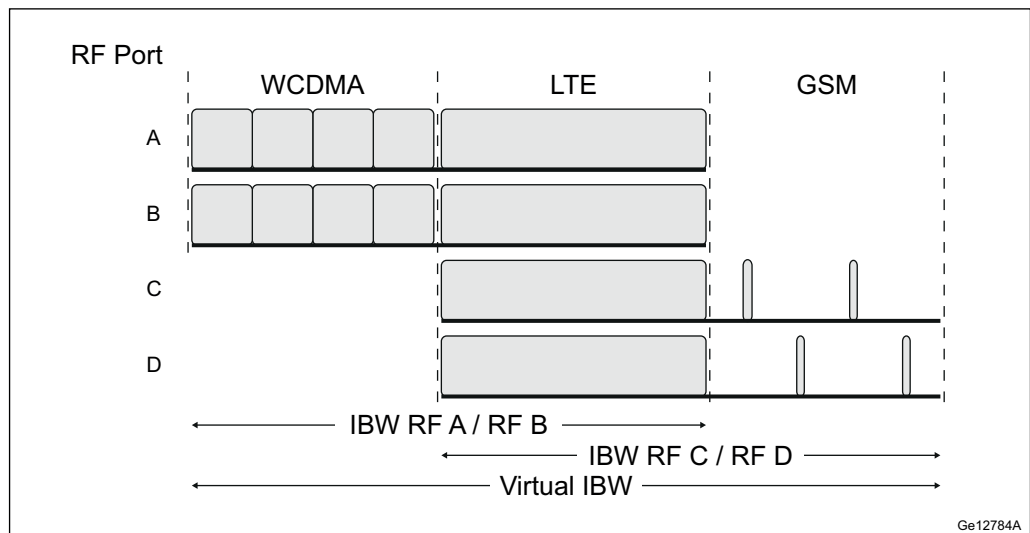


Figure 4 Virtual IBW Example



2.10 Radio Dot System

In the Radio Dot System (RDS), one radio is divided into an Indoor Radio Unit (IRU) and up to eight Radio Dots (RDs) or Dots. Refer to the document [Radio Dot System Description](#) for more information.

The following rules apply to RDS configurations:

- IRU 2242 can be installed in RBS 6202, RBS 6601, or Remote IRU Enclosure, and connected to DUs or Baseband units in all RBS 6000 RBSs.
- In configurations with DUW, the following DUW variants are supported: DUW 11, DUW 31, and DUW 41.
- The carriers from the IRU are transferred to all connected RDs or Dots.
- RD 2242, RD 2243, and RD 2253 supports one band.
- RD 4442 and RD 4453 both have two parts. Each part supports one band.
- RD 2253, RD 4453, Dot 2282 and Dot 4489 support external antennas only.
- Dot 2272 and Dot 2282 can only be connected with IRU 8844 (eight Dot interface) or IRU 8884 (16 Dot interface) on the same band(s), as shown in [Table 11](#).
- Dot 4479 and Dot 4489 can only be connected with IRU 8846.

[Table 10](#) lists supported combinations of RDs using one IRU 2242.

Table 10 RD Compatibility Using One IRU 2242

Standard	RD ⁽¹⁾	LTE FDD				LTE TDD			
		RD 2242	RD 2243	RD 4442 ⁽²⁾	RD 4453 ⁽²⁾	RD 2242	RD 2243	RD 2253	RD 4442 ⁽²⁾
LTE FDD	RD 2242	X	-	-	-	-	-	-	-
	RD 2243	-	X	X	X	-	-	-	-
	RD 4442 ⁽²⁾	-	X	X	X	-	-	-	-
	RD 4453 ⁽²⁾	-	X	X	X	-	-	-	-
LTE TDD	RD 2242	-	-	-	-	X	-	-	-
	RD 2243	-	-	-	-	-	X	X	X
	RD 2253	-	-	-	-	-	X	X	X
	RD 4442 ⁽²⁾	-	-	-	-	-	X	X	X

(1) RDs sharing one IRU must support the same band.

(2) RD 4442 and RD 4453 both have two parts. The two parts cannot be connected to the same IRU.



Table 11 Dot and IRU Compatibility

IRU	Supported Standards			
	Dot 2272	Dot 2282	Dot 4479	Dot 4489
IRU 8844	W, L	W, L	-	-
IRU 8846	-	-	NR	NR
IRU 8884	W, L	W, L	-	-

Dual band Dot products support different RBBs for respective band defined by the product name, as shown in [Table 12](#).

The dual band Dot is named as follows:

Dot XXXX [Band A][Band B] For example *Dot 2272 B1B3*.

Table 12 RBB Support for Dual Band Dots

Dot Product	RBBs for Band A	RBBs for Band B
Dot 2272 Dot 2282	RBB22_1F	RBB22_1G
	RBB22_2K	RBB22_2L
	RBB44_1N	RBB44_1P
	RBB44_2S	RBB44_2T

2.11 Radio Groups

Every LTE capable radio belongs to a radio group. A radio group is defined by how efficiently data can be sent over CPRI and eCPRI interfaces and processed by DU and Baseband. This definition is based on the following:

- Sample rate capability
- CPRI Compression support
- Radio group compatibility
- Data interface type
- Total antenna bandwidth for a DU or Baseband

Radio groups are organized according to sample rate capabilities in three categories: S1, S2, and S3.

Radio groups are organized according to CPRI Compression support in two categories: C1 and C2.



Table 13 Radio Groups and Radio Capabilities

Radio Group	Type	Radios	Sample Rate Capabilities	CPRI Compression Support	Compatible Radio Groups ⁽¹⁾	Data Interface
1	-	AIR 11 AIR 21 mRRUS 61 RRUS 01 RRUS 11 RRUS 61 RRUW 02 RUL 01 RUS 01 RUW 02	S1	-	3 6	CPRI
2	-	RRUL 11 RRU 22F2 RRUS 31	S1	-	-	CPRI
3	a	AIR 32 AIR 32 MB RBS 6501 radio part RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242 mRRUS 12 RRUS 02 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RRUS 32 RRUS A2 RRUS A3 RRUS E2 RUS 02 RUS 03	S2	-	1 6	CPRI
	b	Radio 0208 Radio 2203 Radio 2217 Radio 2219 Radio 2237 Vault Radio System 2268	S2	C1	1 6	CPRI
	c	-	S2	C2	-	CPRI
4	-	RRU 22F1 RRU 22F3 RRUL 63 RRUS 62 RRUS 72	S2	-	-	CPRI



Radio Group	Type	Radios	Sample Rate Capabilities	CPRI Compression Support	Compatible Radio Groups ⁽¹⁾	Data Interface
5	a	Radio 2205 ⁽²⁾ Radio 2218 Radio 4407 ⁽²⁾ Radio 4412 ⁽²⁾ Radio 8808 (B38A, B39A, and B41E) Radio 8818 RRU 2208 RRU 2216 RRUL 62 RRUL 82 RRUS 82	S3	-	-	CPRI
	b	Radio 4407 ⁽³⁾ Radio 4412 ⁽³⁾ Radio 8808 (B40Y) RRUL 81	S3	C1	-	CPRI
	c	Radio 2205 ⁽⁴⁾ Radio 2208 Radio 8823 Radio 8836 Radio 8842	S3	C2	-	CPRI
6	-	AIR 1641 AIR 2488 AIR 2488 MB AIR 3246 AIR 4455 Dot 2272 + IRU 8844 or IRU 8884 Dot 2282 + IRU 8844 or IRU 8884 Dot 4479 + IRU 8846 Dot 4489 + IRU 8846 Radio 2012 Radio 2212 Radio 2228 Radio 2238 Radio 2242 Radio 2260 Radio 2279 Radio 2460 Radio 2479 Radio 2468 Radio 4402 Radio 4408 Radio 4415 Radio 4417 Radio 4418 Radio 4422 Radio 4426 Radio 4428 Radio 4442 Radio 4443 Radio 4449 Radio 4455 Radio 4478 Radio 4480 Radio 4499 Radio 8843 Radio 8863	S3	C2	1 3	CPRI
7	-	AIR 1281 AIR 5121 AIR 5331	S3	C2	-	CPRI



Radio Group	Type	Radios	Sample Rate Capabilities	CPRI Compression Support	Compatible Radio Groups ⁽¹⁾	Data Interface
8	-	AIR 3239 AIR 6449 AIR 6454 AIR 6468 AIR 6488	-	-	-	eCPRI

(1) Combinations with radios from these groups are supported in the same RBB.

(2) Up to SW L18.Q3 radio belongs to group 5a.

(3) From SW L18.Q3 radio belongs to group 5b.

(4) From SW L18.Q4 radio belongs to group 5c.



3 Radio Configurations for GSM

This section describes the radio configurations for GSM as single standard. Multistandard configurations are described in [Radio Configurations for Multistandard and Single Standard Mixed Mode](#) on page 505.

3.1 Sector Configuration for GSM

See [GSM RBB Summary for External and Internal Radios](#) on page 106 when selecting an RBB according to the required sector capabilities. The maximum output power per radio is found in [Radio Capabilities](#) on page 5 and more information on the available levels of output power is found in the description document for each radio type.

Note: There may be limitations to the combinations of RBBs that are supported in a specific software version or RBS type. See [Supported Radio Configurations for GSM](#) on page 118 for information on supported configurations.

3.1.1 Output Power per Carrier for GSM

Output power per carrier, in symmetric cases where all radios in the RBB have the same output power, can be calculated as follows:

- A = Output power (W) per carrier
- B = Total output power of all radios used in RBB, see [Radio Capabilities](#) on page 5, subject to license handling
- C = Numbers of carriers used in RBB
- $A = B / C$
- $A \leq 60$ (GSM limitation)

Note: Output power per carrier is limited to 60 W.

Carriers on radios not carrying BCCH are limited to 40 W (46 dBm), if the radio unit has multiple carriers or is in a single frequency hopping mode.

For sectors where all carriers do not need to have the same output power, the radios in the RBB can be configured with different power levels.



3.1.2 GSM RBB Summary for External and Internal Radios

Table 14 GSM RBB Summary for External and Internal Radios

Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
AIR 11	4	4	8	4	1	2	RBB11_1A	-
				8	2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B	-
AIR 21	4	4	8	4	1	2	RBB12_1A	-
				8	2	2	RBB22_1C RBB22_2A	-
						2 or 4	RBB24_1A RBB24_2A	-
AIR 2488	4	6	8	8	2	2 or 4	RBB24_1C RBB24_2D ⁽⁸⁾	-
AIR 2488 MB	4	6	8	8	2	2 or 4	RBB24_1C RBB24_2D ⁽⁸⁾	-
AIR 32 ⁽⁵⁾	2	4	8	8	4	2 or 4 ⁽¹⁰⁾	RBB44_1D	-
AIR 32 MB ⁽⁵⁾	2	6	8	8	4	2 or 4 ⁽¹⁰⁾	RBB44_1D	-
AIR 4455	4	6	12	8	4	2 or 4	RBB44_1D	-
Radio 2212	4	8	8	4	1	1	RBB11_1C RBB11_1D	-
				8	2	2	RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				12	4	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
Radio 2217	4	8	8	4	1	1	RBB11_1C RBB11_1D	-
				8	2	2	RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				12	4	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ RRUS 12 RRUS 13 RRUS 14 RRUS 14s
Radio 2219	4	8	8	4	1	1	RBB11_1C RBB11_1D	-
				8	2	2	RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				12	4	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
Radio 2238 ⁽⁶⁾	4	6	8	4	1	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				8	2	2	RBB22_2C RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
				16	4	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
Radio 2242 ⁽⁵⁾	4	5	5	4	1	1	RBB11_1C ⁽⁸⁾ RBB11_1D ⁽⁸⁾ RBB11_2A ⁽⁸⁾ RBB11_2B ⁽⁸⁾	-
				8	2	2	RBB22_1B ⁽⁸⁾ RBB22_2C ⁽⁸⁾	-
							RBB22_2E ⁽⁸⁾	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				16	4	2 or 4	RBB44_1B ⁽⁸⁾ RBB44_2C ⁽⁸⁾	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
Radio 2260 ⁽⁵⁾	4	6	6	4	1	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				4	1	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				8	2	2	RBB22_1B	-
							RBB22_2E	Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				8	2	2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				16	4	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
Radio 2279 ⁽⁵⁾	4	6	6	4	1	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				4	1	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				8	2	2	RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				8	2	2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				16	4	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
Radio 2460 ⁽⁵⁾	4	6	8	4	1	2	RBB12_1E RBB12_1F	-
				6	2	2	RBB22_1B ⁽⁷⁾ RBB22_1F ⁽⁷⁾ RBB22_1P RBB22_1Q RBB22_2K RBB22_2T RBB22_2U	-
				8	2	2 or 4	RBB24_1C RBB24_2D	-
				8	4	2 or 4	RBB44_1D	-
Radio 2468	4	6	8	4	1	2	RBB12_1E RBB12_1F RBB12_2D ⁽⁸⁾ RBB12_2E ⁽⁸⁾	-
				6	2	2	RBB22_1B ⁽⁷⁾ RBB22_1F ⁽⁷⁾	-
				8	2	2 or 4	RBB24_1C RBB24_2D ⁽⁸⁾	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
Radio 2479 ⁽⁵⁾	4	6	8	4	1	2	RBB12_1E RBB12_1F	-
				6	2	2	RBB22_1B ⁽⁷⁾ RBB22_1F ⁽⁷⁾ RBB22_1P RBB22_1Q RBB22_2K RBB22_2T RBB22_2U	-
				8	2	2 or 4	RBB24_1C RBB24_2D	-
				8	4	2 or 4	RBB44_1D	-
Radio 4415	4	6	12	8	2	2	RBB22_1F RBB22_1G	-
				12	4	2 or 4	RBB44_1D	-
Radio 4417	4	6	12	8	2	2	RBB22_1F RBB22_1G	-
				12	4	2 or 4	RBB44_1D	-
Radio 4428	4	6	12	8	2	2	RBB22_1F RBB22_1G RBB22_2K ⁽⁸⁾ RBB22_2L ⁽⁸⁾	-
				12	4	2 or 4	RBB44_1D RBB44_2F ⁽⁸⁾	-
Radio 4429	4	6	12	8	2	2	RBB22_1F RBB22_1G RBB22_2K ⁽⁸⁾ RBB22_2L ⁽⁸⁾	-
				12	4	2 or 4	RBB44_1D RBB44_2F ⁽⁸⁾	-
Radio 4480 ⁽⁵⁾	4	6	12	8	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				12	4	2 or 4	RBB44_1D RBB44_2F	-
Radio 4499 ⁽⁵⁾	4	6	12	8	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				12	4	2 or 4	RBB44_1D RBB44_2F	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
RRUS 01	4	4	4	4	1	1	RBB11_1C	-
						2	RBB10_1A RBB11_1A RBB12_1A RBB12_2A	-
				8	2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B RBB22_2D	RRUS 01 RRUS 02
						4	RBB24_1A	RRUS 01 RRUS 02
				4	2	4	RBB20_2A RBB24_2A	RRUS 01 RRUS 02
				24	3	2	RBB32_1A RBB32_3A RBB32_3B	Two radios with any combination of RRUS 01 and RRUS 02
				36	4	2	RBB43_4A	Three radios with any combination of RRUS 01 and RRUS 02
RRUS 02	8	8	8	8	1	1	RBB11_1C	-
						2	RBB10_1A RBB11_1A RBB12_1A RBB12_2A	-
				12	2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B RBB22_2D	RRUS 01 RRUS 02
						2 or 4	RBB24_1A	RRUS 01 RRUS 02
				6	2	4	RBB20_2A RBB24_2A	RRUS 01 RRUS 02
				24	3	2	RBB32_1A RBB32_3A RBB32_3B	Two radios with any combination of RRUS 01 and RRUS 02
				36	4	2	RBB43_4A	Three radios with any combination of RRUS 01 and RRUS 02



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
RRUS 12	8	8	8	8	1	1	RBB11_1C RBB11_1D	-
					2	2	RBB20_1A RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				12	4	2	RBB42_1B RBB42_2D RBB42_2E	RRUS 12 RRUS 13 RRUS 14 RRUS 14s
						2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
RRUS 13	8	8	8	8	1	1	RBB11_1C RBB11_1D	-
					2	2	RBB20_1A RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				12	4	2	RBB42_1B RBB42_2D RBB42_2E	RRUS 12 RRUS 13 RRUS 14 RRUS 14s
						2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
RRUS 14	8	8	8	8	1	1	RBB11_1C RBB11_1D	-
					2	2	RBB20_1A RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				12	4	2	RBB42_1B RBB42_2D RBB42_2E	RRUS 12 RRUS 13 RRUS 14 RRUS 14s
						2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
RRUS 14s ⁽⁹⁾	8	8	8	8	1	1	RBB11_1C RBB11_1D	-
					2	2	RBB20_1A RBB22_1B RBB22_2C	-
							RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
				12	4	2	RBB42_1B RBB42_2D RBB42_2E	RRUS 12 RRUS 13 RRUS 14 RRUS 14s
						2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 ⁽⁵⁾ Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
RRUS 32 ⁽⁵⁾	2	4	8	8	4	2 or 4 ⁽¹⁰⁾	RBB44_1D	-
RUS 01	4	4	4	4	1	2	RBB10_1A RBB11_1A RBB12_1A	-
				8	2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B	RUS 01 RUS 02 RUS 03
						4	RBB24_1A	RUS 01 RUS 02 RUS 03
				4	2	4	RBB20_2A RBB24_2A	RUS 01 RUS 02 RUS 03
				24	3	2	RBB32_1A RBB32_3A RBB32_3B	Two radios with any combination of RUS 01, RUS 02 and RUS 03
				36	4	2	RBB43_4A	Three radios with any combination of RUS 01, RUS 02 and RUS 03



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	Maximum Carriers per RBB ⁽¹⁾ (2)	Number of TX Branches in RBB	Number of RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
RUS 02	8	8	8	8	1	2	RBB10_1A RBB11_1A RBB12_1A	-
				12	2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B	RUS 01 RUS 02 RUS 03
					2	2 or 4	RBB24_1A	RUS 01 RUS 02 RUS 03
				6	2	4	RBB20_2A RBB24_2A	RUS 01 RUS 02 RUS 03
				24	3	2	RBB32_1A RBB32_3A RBB32_3B	Two radios with any combination of RUS 01, RUS 02 and RUS 03
				36	4	2	RBB43_4A	Three radios with any combination of RUS 01, RUS 02 and RUS 03
RUS 03	8	8	8	8	1	2	RBB10_1A RBB11_1A RBB12_1A	-
				12	2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B	RUS 01 RUS 02 RUS 03
					2	2 or 4	RBB24_1A	RUS 01 RUS 02 RUS 03
				6	2	4	RBB20_2A RBB24_2A	RUS 01 RUS 02 RUS 03
				24	3	2	RBB32_1A RBB32_3A RBB32_3B	Two radios with any combination of RUS 01, RUS 02 and RUS 03
				36	4	2	RBB43_4A	Three radios with any combination of RUS 01, RUS 02 and RUS 03

(1) Number of carriers in RBB may be limited by DU or Baseband capacity.

(2) Number of carriers in RBB requires Baseband HWAC and HWAC GSM Cell Carrier (TRX) ERS.

(3) AIR has two radios integrated in the same unit and typically use RBBs for two radios.

(4) Number of carriers in RBB depends on the additional radios.

(5) GSM is only available in mixed mode.

(6) Only available in mixed mode on Band 8.

(7) With DUG 20, RBB22_1B has to be selected instead of RBB22_1F in OMT.

(8) GSM for RBB is only available in mixed mode. Total number of carriers include both GSM and LTE carriers.

(9) RRUS 14s is a 2TX/2RX radio with four, separate TX and RX, antenna ports, but use the same RBBs as RRUS 14, which has two antenna ports.



(10) 4-WRXD not supported with Baseband.

3.2 Supported Radio Configurations for GSM

This section describes the supported single node radio configurations by listing valid combinations of DBBs and RBBs.

The tables are used as follows:

Number of Sectors

The configurable number of sectors

RBB

The required RBB selected in [Sector Configuration for GSM](#) on page 105.

DBB

The DBB to use for the required configuration.

The tables list symmetrical configurations. Different RBBs and different number of carriers can be chosen for each sector to create asymmetric configurations.

The following rules apply to GSM configurations with Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6620, and Baseband 6630:

- Star and cascade configurations are supported.
- Internal and external radios cannot be mixed in a cascade chain.
- Up to six radios can be cascaded.
- For cascading rules with Baseband R503, see [Cascade Configurations with Baseband R503](#) on page 1303.
- Ring configurations are not supported.

The following rules apply to GSM configurations with DUG:

- Star, cascade, and ring configurations are supported.
- Internal and external radios cannot be mixed in a cascade chain.

In a DC-powered RBS 6102 with external radios powered by the RBS, the maximum number of supported radios by GSM SW is 0-6 external radios with 0-3 internal radios, or no external radios with more than 3 internal radios. If the DC RBS 6102 is configured in SW as an AC-powered RBS, the full number of radios are supported, refer to [RBS Description](#).

Combined cell configurations are listed in [GSM Combined Cell Configurations](#) on page 134.



Note: Due to power and space limitations, not all RBS types support all configurations. Information on configurable number of DUs or Baseband units and radios can be found in [RBS Description](#). Information about power configurations is found in the document [Power Configurations](#).

Maximum supported received bandwidth in each sector is limited to 20 MHz.

3.2.1 GSM Configurations for Baseband and DUG

Table 15 GSM Configurations with Baseband

RBB ⁽¹⁾	From SW Release
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630
RBB10_1A	G18.Q2
RBB11_1A	G18.Q2
RBB11_1A for AIR 11	G18.Q2
RBB11_1C	G18.Q2
RBB11_1D	G18.Q2
RBB12_1A	G18.Q2
RBB12_1A for AIR 21	G18.Q2
RBB12_1E	G18.Q2
RBB12_1F	G18.Q2
RBB20_1A	G18.Q2
RBB20_2A	G18.Q2
RBB22_1A	G18.Q2
RBB22_1A for AIR 11	G18.Q2
RBB22_1B	G18.Q2
RBB22_1C	G18.Q2
RBB22_1C for AIR 11	G18.Q2
RBB22_1C for AIR 21	G18.Q2
RBB22_1F	G18.Q2
RBB22_1G	G18.Q2
RBB22_2A	G18.Q2
RBB22_2A for AIR 11	G18.Q2
RBB22_2A for AIR 21	G18.Q2
RBB22_2B	G18.Q2
RBB22_2B for AIR 11	G18.Q2
RBB22_2E	G18.Q2
RBB24_1A	G18.Q2
RBB24_1A for AIR 21	G18.Q2
RBB24_1C	G18.Q2



RBB ⁽¹⁾	From SW Release
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630
RBB24_2A	G18.Q2
RBB24_2A for AIR 21	G18.Q2
RBB32_1A	G18.Q2
RBB32_1B	G18.Q2
RBB32_3A	G18.Q2
RBB32_3B	G18.Q2
RBB42_1B	G18.Q2
RBB42_2D	G18.Q2
RBB43_1A	G18.Q2
RBB43_4A	G18.Q2
RBB44_1B	G18.Q2
RBB44_1D	G18.Q2
RBB44_2C	G18.Q2

(1) With DBB10_81.

Table 16 GSM Star Configurations with One DUG 20

RBB	From SW Release					
	DUG 20					
	DBB10_01 DBB11_02 DBB12_02 DBB12_05	DBB10_02 DBB11_01 DBB12_01	DBB12_04	DBB10_44 DBB11_03 DBB12_03	DBB10_45 DBB11_04	DBB10_99 DBB11_99 DBB12_99
RBB11_1A	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB11_1A for AIR 11	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB12_1A	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB12_1A for AIR 21	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB12_1E	G18.Q2	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2
RBB12_1F	G18.Q2	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2
RBB22_1A ⁽¹⁾	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB22_1A for AIR 11 ⁽¹⁾	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB22_1B	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB22_1F	G18.Q2	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2
RBB22_1G	G18.Q2	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2
RBB22_2B ⁽¹⁾	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB22_2B for AIR 11	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB24_1A ⁽¹⁾	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2



RBB	From SW Release					
	DUG 20					
	DBB10_01 DBB11_02 DBB12_02 DBB12_05	DBB10_02 DBB11_01 DBB12_01	DBB12_04	DBB10_44 DBB11_03 DBB12_03	DBB10_45 DBB11_04	DBB10_99 DBB11_99 DBB12_99
RBB24_1A for AIR 21 ⁽¹⁾	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB24_1C	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB24_2A ⁽¹⁾	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB24_2A for AIR 21 ⁽¹⁾	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB32_3A ⁽¹⁾	-	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB32_3B ⁽¹⁾	-	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB42_1B ⁽¹⁾	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB42_2D ⁽¹⁾	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB43_4A ⁽¹⁾	-	-	G18.Q2	-	G18.Q2	G18.Q2
RBB44_1D	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2	G18.Q2
RBB44_2C ⁽¹⁾	G18.Q2	-	G18.Q2	G18.Q2	G18.Q2	G18.Q2

(1) If more than three sectors are configured, only one radio can be supported per sector.

The following rules apply to GSM cascade configurations:

- Cascading of single mode sectors to a mixed mode sector is not supported.
- RBBs with two radio units supported only in up to 3 sectors configurations.

Table 17 GSM Cascade Configuration with One DUG 20

RBB	From SW Release	
	DUG 20	
	DBB10_21, DBB10_22, DBB10_23, DBB11_21, DBB11_22, DBB11_23, DBB12_21, DBB12_22, DBB12_23	DBB10_99 DBB11_99 DBB12_99
RBB12_1A	G18.Q2	G18.Q2
RBB22_1A ⁽¹⁾	G18.Q2	G18.Q2
RBB22_1B	G18.Q2	G18.Q2
RBB24_1C	G18.Q2	G18.Q2
RBB42_1B ⁽¹⁾	G18.Q2	G18.Q2

(1) If more than three sectors are configured, only one radio can be supported per sector.

The following rules apply to GSM ring configurations:

- External radios only can be used in ring configurations.
- Up to six radios can be used in one ring chain.



- Ring configuration with only one radio is not supported.
- Up to three sectors are supported by RBBs with two radio units.

Table 18 GSM Ring Configurations with One DUG

RBB	From SW Release		
	DUG 20		
	DBB 10 01	DBB 10 50 DBB 11 24 DBB 12 24	DBB 10 51 DBB 10 52 DBB 11 25 DBB 11 26 DBB 12 25 DBB 12 26
RBB12_2A ⁽¹⁾	-	G18.Q2	G18.Q2
RBB22_2C	-	G18.Q2	G18.Q2
RBB22_2D ⁽¹⁾	G18.Q2	G18.Q2	-
RBB42_2E ⁽¹⁾	G18.Q2	G18.Q2	-

(1) If more than three sectors are configured, only one radio can be supported per sector.

3.2.2 GSM Configurations with RUG

This section lists the supported RUG radio configurations.

3.2.2.1 RUG Single Node Configurations

[Table 19](#), [Table 20](#), [Table 21](#), [Table 22](#), [Table 23](#), [Table 24](#), and [Table 25](#) list the supported single node, single band radio configurations.

[Table 26](#), [Table 27](#), [Table 28](#), [Table 29](#), and [Table 30](#) list the supported single node, dual band radio configurations.

Table 19 Single Node, One Sector, Single Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
1×2 UC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	2×TX/RX	-	1	Yes	Yes
1×2 HC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	1×TX/RX+1×RX	Optional	1	Yes	Yes
1×2 HC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	1×TX/RX+1×RXExt	Optional	1	Yes	Yes
1×4 UC	Cell 1	0..3	2×TX/RX+2×TX	-	2	Yes	Yes
1×4 HC	Cell 1	0..3	2×TX/RX	Optional	2	Yes	Yes
1×2 4WRD HC	Cell 1	0..3	2×TX/RX+2×RX	Yes	2	Yes	Yes
1×6 UC	Cell 1	0..5	3×TX/RX+3×TX	-	3	Yes	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
1×6 HC	Cell 1	0..5	3×TX/RX	Optional	3	Yes	Yes
1×8 UC (2×1×4 UC)	Cell 1	0..7	4×TX/RX+4×TX	-	4	Yes	Yes
1×8 HC (2×1×4 HC)	Cell 1	0..7	4×TX/RX	Optional	4	Yes	Yes
1×12 UC (2×1×6 UC)	Cell 1	0..11	6×TX/RX+6×TX	-	6	Yes	Yes
1×12 HC (2×1×6 HC)	Cell 1	0..11	6×TX/RX	Optional	6	Yes	Yes

(1) Left adjusted

(2) Right adjusted

Table 20 Single Node, Two Sector, Single Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2×2 UC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	2×TX/RX	-	2	Yes	Yes
	Cell 2	6..7 ⁽¹⁾ 8..9 ⁽²⁾	2×TX/RX	-			
2×2 HC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	1×TX/RX+1×RX	Optional	2	Yes	Yes
	Cell 2	6..7 ⁽¹⁾ 8..9 ⁽²⁾	1×TX/RX+1×RX	Optional			
2×2 HC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	1×TX/RX+1×RXExt	Optional	2	Yes	Yes
	Cell 2	6..7 ⁽¹⁾ 8..9 ⁽²⁾	1×TX/RX+1×RXExt	Optional	2	Yes	Yes
2+4 UC	Cell 1	0..1	2×TX/RX	-	3	Yes	Yes
	Cell 2	6..9	2×TX/RX+2×TX	-			
2+4 HC	Cell 1	0..1	1×TX/RX+1×RX	Optional	3	Yes	Yes
	Cell 2	6..9	2×TX/RX	Optional			
4+2 UC	Cell 1	0..3	2×TX/RX+2×TX	-	3	Yes	Yes
	Cell 2	6..7	2×TX/RX	-			
4+2 HC	Cell 1	0..3	2×TX/RX	Optional	3	Yes	Yes
	Cell 2	6..7	1×TX/RX+1×RX	Optional			
2×3 UC	Cell 1	0..2	2×TX/RX+1×TX	-	3	Yes	Yes
	Cell 2	3..5	2×TX/RX+1×TX	-			
2×3 HC	Cell 1	0..2	2×TX/RX	Optional	3	Yes	Yes
	Cell 2	3..5	2×TX/RX	Optional			
2×4 UC	Cell 1	0..3	2×TX/RX+2×TX	-	4	Yes	Yes
	Cell 2	6..9	2×TX/RX+2×TX	-			
2×4 HC	Cell 1	0..3	2×TX/RX	Optional	4	Yes	Yes
	Cell 2	6..9	2×TX/RX	Optional			
2×2 4WRD HC	Cell 1	0..3	2×TX/RX+2×RX	Yes	4	Yes	Yes
	Cell 2	6..9	2×TX/RX+2×RX	Yes			
4+6 UC	Cell 1	0..3	2×TX/RX+2×TX	-	5	Yes	Yes
	Cell 2	6..11	3×TX/RX+3×TX	-			



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
4+6 HC	Cell 1 Cell 2	0..3 6..11	2×TX/RX 3×TX/RX	Optional Optional	5	Yes	Yes
6+4 UC	Cell 1 Cell 2	0..5 6..9	3×TX/RX+3×TX 2×TX/RX+2×TX	- -	5	Yes	Yes
6+4 HC	Cell 1 Cell 2	0..5 6..9	3×TX/RX 2×TX/RX	Optional Optional	5	Yes	Yes
4+8 UC	Cell 1 Cell 2	0..3 4..11	2×TX/RX+2×TX 4×TX/RX+4×TX	- -	6	Yes	Yes
4+8 HC	Cell 1 Cell 2	0..3 4..11	2×TX/RX 4×TX/RX	Optional Optional	6	Yes	Yes
8+4 UC	Cell 1 Cell 2	0..7 8..11	4×TX/RX+4×TX 2×TX/RX+2×TX	- -	6	Yes	Yes
8+4 HC	Cell 1 Cell 2	0..7 8..11	4×TX/RX 2×TX/RX	Optional Optional	6	Yes	Yes
2×6 UC	Cell 1 Cell 2	0..5 6..11	3×TX/RX+3×TX 3×TX/RX+3×TX	- -	6	Yes	Yes
2×6 HC	Cell 1 Cell 2	0..5 6..11	3×TX/RX 3×TX/RX	Optional Optional	6	Yes	Yes

(1) Left adjusted

(2) Right adjusted

Table 21 Single Node, Two Sector, Single Band with Combined and Uncombined Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6201	6102 6201
2 UC+4 HC	Cell 1 Cell 2	0..1 6..9	2×TX/RX 2×TX/RX	- Optional	3	Yes	Yes
4 HC+2 UC	Cell 1 Cell 2	0..3 6..7	2×TX/RX 2×TX/RX	Optional -	3	Yes	Yes

Table 22 Single Node, Three Sector, Single Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
3×2 UC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	2×TX/RX	-	3	Yes	Yes
	Cell 2	4..5 ⁽¹⁾ 6..7 ⁽²⁾	2×TX/RX	-			
	Cell 3	8..9 ⁽¹⁾ 10..11 ⁽²⁾	2×TX/RX	-			



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
3×2 HC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	1×TX/RX+1×RX	Optional	3	Yes	Yes
	Cell 2	4..5 ⁽¹⁾ 6..7 ⁽²⁾	1×TX/RX+1×RX	Optional			
	Cell 3	8..9 ⁽¹⁾ 10..11 ⁽²⁾	1×TX/RX+1×RX	Optional			
3×2 HC	Cell 1	0..1 ⁽¹⁾ 2..3 ⁽²⁾	1×TX/RX+1×RXExt	Optional	3	Yes	Yes
	Cell 2	4..5 ⁽¹⁾ 6..7 ⁽²⁾	1×TX/RX+1×RXExt	Optional			
	Cell 3	8..9 ⁽¹⁾ 10..11 ⁽²⁾	1×TX/RX+1×RXExt	Optional			
2+2+4 UC	Cell 1 Cell 2 Cell 3	0..1 4..5 8..11	2×TX/RX 2×TX/RX 2×TX/RX+2×TX	- - -	4	Yes	Yes
2+2+4 HC	Cell 1 Cell 2 Cell 3	0..1 4..5 8..11	1×TX/RX+1×RX 1×TX/RX+1×RX 2×TX/RX	Optional Optional Optional	4	Yes	Yes
2+4+2 UC	Cell 1 Cell 2 Cell 3	0..1 4..7 8..9	2×TX/RX 2×TX/RX+2×TX 2×TX/RX	- - -	4	Yes	Yes
2+4+2 HC	Cell 1 Cell 2 Cell 3	0..1 4..7 8..9	1×TX/RX+1×RX 2×TX/RX 1×TX/RX+1×RX	Optional Optional Optional	4	Yes	Yes
2+4+4 UC	Cell 1 Cell 2 Cell 3	0..1 4..7 8..11	2×TX/RX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - -	5	Yes	Yes
2+4+4 HC	Cell 1 Cell 2 Cell 3	0..1 4..7 8..11	1×TX/RX+1×RX 2×TX/RX 2×TX/RX	Optional Optional Optional	5	Yes	Yes
3+3+2 UC	Cell 1 Cell 2 Cell 3	0..2 3..5 8..9	2×TX/RX+1×TX 2×TX/RX+1×TX 2×TX/RX	- - -	4	Yes	Yes
3+3+2 HC	Cell 1 Cell 2 Cell 3	0..2 3..5 8..9	2×TX/RX 2×TX/RX 1×TX/RX+1×RX	Optional Optional Optional	4	Yes	Yes
3+3+4 UC	Cell 1 Cell 2 Cell 3	0..2 3..5 8..11	2×TX/RX+1×TX 2×TX/RX+1×TX 2×TX/RX+2×TX	- - -	5	Yes	Yes
3+3+4 HC	Cell 1 Cell 2 Cell 3	0..2 3..5 8..11	2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional	5	Yes	Yes
4+2+2 UC	Cell 1 Cell 2 Cell 3	0..3 4..5 8..9	2×TX/RX+2×TX 2×TX/RX 2×TX/RX	- - -	4	Yes	Yes
4+2+2 HC	Cell 1 Cell 2 Cell 3	0..3 4..5 8..9	2×TX/RX 1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional Optional	4	Yes	Yes
4+4+2 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..9	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX	- - -	5	Yes	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
4+4+2 HC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..9	2×TX/RX 2×TX/RX 1×TX/RX+1×RX	Optional Optional Optional	5	Yes	Yes
4+2+4 UC	Cell 1 Cell 2 Cell 3	0..3 4..5 8..11	2×TX/RX+2×TX 2×TX/RX 2×TX/RX+2×TX	- - -	5	Yes	Yes
4+2+4 HC	Cell 1 Cell 2 Cell 3	0..3 4..5 8..11	2×TX/RX 1×TX/RX+1×RX 2×TX/RX	Optional Optional Optional	5	Yes	Yes
3×4 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - -	6	Yes	Yes
3×4 HC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional	6	Yes	Yes
3×2 4WRD HC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX+2×RX 2×TX/RX+2×RX 2×TX/RX+2×RX	Yes Yes Yes	6	Yes	Yes

(1) Left adjusted

(2) Right adjusted

Table 23 Single Node, Three Sector, Single Band Mixed Combined and Uncombined Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2 UC+2 UC+4 HC	Cell 1 Cell 2 Cell 3	0..1 4..5 8..11	2×TX/RX 2×TX/RX 2×TX/RX	- - Optional	4	Yes	Yes
2 UC+4 HC+2 UC	Cell 1 Cell 2 Cell 3	0..1 4..7 8..9	2×TX/RX 2×TX/RX 2×TX/RX	- Optional -	4	Yes	Yes
2 UC+4 HC+4 HC	Cell 1 Cell 2 Cell 3	0..1 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX	- Optional Optional	5	Yes	Yes
4 HC+2 UC+2 UC	Cell 1 Cell 2 Cell 3	0..3 4..5 8..9	2×TX/RX 2×TX/RX 2×TX/RX	Optional - -	4	Yes	Yes
4 HC+2 UC+4 HC	Cell 1 Cell 2 Cell 3	0..3 4..5 8..11	2×TX/RX 2×TX/RX 2×TX/RX	Optional - Optional	5	Yes	Yes
4 HC+2 UC+4 UC	Cell 1 Cell 2 Cell 3	0..3 4..5 8..11	2×TX/RX 2×TX/RX 2×TX/RX+2×TX	Optional - -	5	Yes	Yes
4 HC+4 HC+2 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..9	2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional -	5	Yes	Yes
4 HC+4 UC+2 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..9	2×TX/RX 2×TX/RX+2×TX 2×TX/RX	Optional - -	5	Yes	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
4 HC+4 HC+4 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX+2×TX	Optional Optional -	6	Yes	Yes
4 HC+4 UC+4 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX 2×TX/RX+2×TX 2×TX/RX+2×TX	Optional - -	6	Yes	Yes

Table 24 Single Node, Four Sector, Single Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
4×2 UC	Cell 1 Cell 2 Cell 3 Cell 4	0..1 4..5 6..7 10..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	- - - -	4	Yes	Yes
4×2 HC	Cell 1 Cell 2 Cell 3 Cell 4	0..1 4..5 6..7 10..11	1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional Optional Optional	4	Yes	Yes
4+2+2+2 UC	Cell 1 Cell 2 Cell 3 Cell 4	0..3 4..5 6..7 8..9	2×TX/RX+2×TX 2×TX/RX 2×TX/RX 2×TX/RX	- - - -	5	Yes	Yes
4+2+2+2 HC	Cell 1 Cell 2 Cell 3 Cell 4	0..3 4..5 6..7 8..9	2×TX/RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional Optional Optional	5	Yes	Yes
4+4+2+2 UC	Cell 1 Cell 2 Cell 3 Cell 4	0..3 4..7 8..9 10..11	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX 2×TX/RX	- - - -	6	Yes	Yes
4+4+2+2 HC	Cell 1 Cell 2 Cell 3 Cell 4	0..3 4..7 8..9 10..11	2×TX/RX 2×TX/RX 1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional Optional Optional	6	Yes	Yes

Table 25 Single Node, Four Sector, Single Band with Combined and Uncombined Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2 UC+4 HC+2 UC+4 UC	Cell 1 Cell 2 Cell 3 Cell 4	0..1 2..5 6..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX+2×TX	- Optional - -	6	Yes	Yes
2 UC+4 HC+2 UC+4 HC	Cell 1 Cell 2 Cell 3 Cell 4	0..1 2..5 6..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	- Optional - Optional	6	Yes	Yes



Table 26 Single Node, One Sector, Dual Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2 2 UC	Cell 1a Cell 1b	0..1 6..7	2×TX/RX 2×TX/RX	- -	2	Yes	Yes
2 2 HC	Cell 1a Cell 1b	0..1 6..7	1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional	2	Yes	Yes
2 4 UC	Cell 1a Cell 1b	0..1 6..9	2×TX/RX 2×TX/RX+2×TX	- -	3	Yes	Yes
2 4 HC	Cell 1a Cell 1b	0..1 6..9	1×TX/RX+1×RX 2×TX/RX	Optional Optional	3	Yes	Yes
4 4 UC	Cell 1a Cell 1b	0..3 6..9	2×TX/RX+2×TX 2×TX/RX+2×TX	- -	4	Yes	Yes
4 4 HC	Cell 1a Cell 1b	0..3 6..9	2×TX/RX 2×TX/RX	Optional Optional	4	Yes	Yes
4 6 UC	Cell 1a Cell 1b	0..3 6..11	2×TX/RX+2×TX 3×TX/RX+3×TX	- -	5	Yes	Yes
4 6 HC	Cell 1a Cell 1b	0..3 6..11	2×TX/RX 3×TX/RX	Optional Optional	5	Yes	Yes
6 6 UC	Cell 1a Cell 1b	0..5 6..11	3×TX/RX+3×TX 3×TX/RX+3×TX	- -	6	Yes	Yes
6 6 HC	Cell 1a Cell 1b	0..5 6..11	3×TX/RX 3×TX/RX	Optional Optional	6	Yes	Yes

Table 27 Single Node, Two Sector, Dual Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2×2 2×2 UC	Cell 1a Cell 1b Cell 2a Cell 2b	0..1 4..5 6..7 10..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	- - - -	4	Yes	Yes
2×2 2×2 HC	Cell 1a Cell 1b Cell 2a Cell 2b	0..1 4..5 6..7 10..11	1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional Optional Optional	4	Yes	Yes
2×4 2×2 UC	Cell 1a Cell 1b Cell 2a Cell 2b	0..3 4..5 6..9 10..11	2×TX/RX+2×TX 2×TX/RX 2×TX/RX+2×TX 2×TX/RX	- - - -	6	Yes	Yes
2×4 2×2 HC	Cell 1a Cell 1b Cell 2a Cell 2b	0..3 4..5 6..9 10..11	2×TX/RX 1×TX/RX+1×RX 2×TX/RX 1×TX/RX+1×RX	Optional Optional Optional Optional	6	Yes	Yes
2×2 2×4 UC	Cell 1a Cell 1b Cell 2a Cell 2b	0..1 2..5 6..7 8..11	2×TX/RX 2×TX/RX+2×TX 2×TX/RX 2×TX/RX+2×TX	- - - -	6	Yes	Yes
2×2 2×4 HC	Cell 1a Cell 1b Cell 2a Cell 2b	0..1 2..5 6..7 8..11	1×TX/RX+1×RX 2×TX/RX 1×TX/RX+1×RX 2×TX/RX	Optional Optional Optional Optional	6	Yes	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2×2 2+4 UC	Cell 1a Cell 1b Cell 2a Cell 2b	0..1 2..3 6..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX+2×TX	- - - -	5	Yes	Yes
2×2 2+4 HC	Cell 1a Cell 1b Cell 2a Cell 2b	0..1 2..3 6..7 8..11	1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 2×TX/RX	Optional Optional Optional Optional	5	Yes	Yes

Table 28 Single Node, Two Sector, Dual Band with Combined and Uncombined Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2×2 UC 2 UC+4 HC	Cell 1a Cell 1b Cell 2a Cell 2b	0..1 2..3 6..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	- - - Optional	5	Yes	Yes
2×4 HC 0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b	0..3 ----- 6..9 10..11	2×TX/RX ----- 2×TX/RX 2×TX/RX	Optional -- Optional -	5	Yes	Yes
2×4 HC 2×2 UC	Cell 1a Cell 1b Cell 2a Cell 2b	0..3 4..5 6..9 10..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	Optional - Optional -	6	Yes	Yes

Table 29 Single Node, Three Sector, Dual Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
3×2 3×2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 2..3 4..5 6..7 8..9 10..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	- - - - - -	6	Yes	Yes
3×2 3×2 HC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 2..3 4..5 6..7 8..9 10..11	1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional Optional Optional Optional Optional	6	Yes	Yes
2+2+2 2+2+0 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 2..3 4..5 6..7 8..9 -----	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX -----	- - - - - -----	5	Yes	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2+2+2 2+2+0 HC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 2..3 4..5 6..7 8..9 -----	1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX -----	Optional Optional Optional Optional Optional -----	5	Yes	Yes
2+2+4 0+0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 ----- 4..5 ----- 6..9 10..11	2×TX/RX ----- 2×TX/RX ----- 2×TX/RX+2×TX 2×TX/RX	- ----- - ----- - -	5	Yes	Yes
2+2+4 0+0+2 HC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 ----- 4..5 ----- 6..9 10..11	1×TX/RX+1×RX ----- 1×TX/RX+1×RX ----- 2×TX/RX 1×TX/RX+1×RX	Optional ----- Optional ----- Optional Optional	5	Yes	Yes
4+2+4 0+0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..3 ----- 4..5 ----- 6..9 10..11	2×TX/RX+2×TX ----- 2×TX/RX ----- 2×TX/RX+2×TX 2×TX/RX	- ----- - ----- - -	6	Yes	Yes
4+2+4 0+0+2 HC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..3 ----- 4..5 ----- 6..9 10..11	2×TX/RX ----- 1×TX/RX+1×RX ----- 2×TX/RX 1×TX/RX+1×RX	Optional ----- Optional ----- Optional Optional	6	Yes	Yes
3×4 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - -	6	Yes	Yes
3×4 HC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional	6	Yes	Yes

Table 30 Single Node, Three Sector, Dual Band with Combined and Uncombined Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2 HC+2 HC+4 UC 0+0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 ----- 4..5 ----- 6..9 10..11	1×TX/RX+1×RX ----- 1×TX/RX+1×RX ----- 2×TX/RX+2×TX 2×TX/RX	Optional ----- Optional ----- - -	5	Yes	Yes
2 UC+2 UC+4 HC 0+0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 ----- 4..5 ----- 6..9 10..11	2×TX/RX ----- 2×TX/RX ----- 2×TX/RX 2×TX/RX	- ----- - ----- Optional -	5	Yes	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2 UC+4 HC+2 UC 0+4 HC+0	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 ----- 2..5 6..9 10..11 -----	2×TX/RX ----- 2×TX/RX 2×TX/RX 2×TX/RX -----	- ----- Optional Optional - -----	6	Yes	Yes
2 UC+4 HC+4 HC 0+0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..1 ----- 2..5 ----- 6..9 10..11	2×TX/RX ----- 2×TX/RX ----- 2×TX/RX 2×TX/RX	- ----- Optional ----- Optional -	6	Yes	Yes
4 HC+2 UC+4 HC 0+0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..3 ----- 4..5 ----- 6..9 10..11	2×TX/RX ----- 2×TX/RX ----- 2×TX/RX 2×TX/RX	Optional ----- - ----- Optional -	6	Yes	Yes
4 HC+2 HC+4 UC 0+0+2 UC	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..3 ----- 4..5 ----- 6..9 10..11	2×TX/RX ----- 2×TX/RX ----- 2×TX/RX 2×TX/RX	Optional ----- - ----- Optional -	6	Yes	Yes
4 HC+4 HC+2 UC 2 UC +0+0	Cell 1a Cell 1b Cell 2a Cell 2b Cell 3a Cell 3b	0..3 4..5 6..9 ----- 10..11 -----	2×TX/RX 2×TX/RX 2×TX/RX ----- 2×TX/RX -----	Optional - Optional ----- - -----	6	Yes	Yes
4 HC+4 HC+4 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX+2×TX	Optional Optional -	6	Yes	Yes
4 HC+4 UC+4 UC	Cell 1 Cell 2 Cell 3	0..3 4..7 8..11	2×TX/RX 2×TX/RX+2×TX 2×TX/RX+2×TX	Optional - -	6	Yes	Yes

3.2.2.2 RUG Dual Node Configurations

Table 31 and Table 32 list the supported dual node, single band radio configurations.

Table 33, Table 34, and Table 35 list the supported dual node, dual band radio configurations.

Table 31 Dual Node, Two Sector, Single Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2×8 UC DU 1: 1×8 UC DU 2: 1×8 UC	DU 1: Cell 1 DU 2: Cell 1	0..7 0..7	4×TX/RX+4×TX 4×TX/RX+4×TX	- -	8	-	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2×8 HC DU 1: 1×8 HC DU 2: 1×8 HC	DU 1: Cell 1 DU 2: Cell 1	0..7 0..7	4×TX/RX 4×TX/RX	Optional Optional	8	-	Yes

Table 32 Dual Node, Three Sector, Single Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
3×6 UC DU 1: 3×4 UC DU 2: 3×2 UC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..3 4..7 8..11 0..1 4..5 8..9	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX 2×TX/RX 2×TX/RX	- - - - - -	9	-	Yes
3×6 HC DU 1: 3×4 HC DU 2: 3×2 HC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..3 4..7 8..11 0..1 4..5 8..9	2×TX/RX 2×TX/RX 2×TX/RX 1×TX/RX+1×RX 1×TX/RX+1×RX 1×TX/RX+1×RX	Optional Optional Optional Optional Optional Optional	9	-	Yes
3×8 UC DU 1: 3×4 UC DU 2: 3×4 UC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..3 4..7 8..11 0..3 4..7 8..11	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - - - - -	12	-	Yes
3×8 HC DU 1: 3×4 HC DU 2: 3×4 HC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..3 4..7 8..11 0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional Optional Optional Optional	12	-	Yes

Table 33 Dual Node, One Sector, Dual Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
8 8 UC DU 1: 8 UC DU 2: 8 UC	DU 1: Cell 1 DU 2: Cell 2	0..7 0..7	4×TX/RX+4×TX 4×TX/RX+4×TX	- -	8	-	Yes
8 8 HC DU 1: 8 HC DU 2: 8 HC	DU 1: Cell 1 DU 2: Cell 2	0..7 0..7	4×TX/RX 4×TX/RX	Optional Optional	8	-	Yes



Table 34 Dual Node, Two Sector, Dual Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
2×4 2×4 UC DU 1: 2×4 UC DU 2: 2×4 UC	DU 1: Cell 1 DU 1: Cell 2 DU 2: Cell 1 DU 2: Cell 2	0..3 6..9 0..3 6..9	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - - -	8	-	Yes
2×4 2×4 HC DU 1: 2×4 HC DU 2: 2×4 HC	DU 1: Cell 1 DU 1: Cell 2 DU 2: Cell 1 DU 2: Cell 2	0..3 6..9 0..3 6..9	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional Optional	8	-	Yes
2×4 2×6 UC DU 1: 2×4 UC DU 2: 2×6 UC	DU 1: Cell 1 DU 1: Cell 2 DU 2: Cell 1 DU 2: Cell 2	0..3 6..9 0..5 6..11	2×TX/RX+2×TX 2×TX/RX+2×TX 3×TX/RX+3×TX 3×TX/RX+3×TX	- - - -	10	-	Yes
2×4 2×6 HC DU 1: 2×4 HC DU 2: 2×6 HC	DU 1: Cell 1 DU 1: Cell 2 DU 2: Cell 1 DU 2: Cell 2	0..3 6..9 0..5 6..11	2×TX/RX 2×TX/RX 3×TX/RX 3×TX/RX	Optional Optional Optional Optional	10	-	Yes
2×6 2×6 UC DU 1: 2×6 UC DU 2: 2×6 UC	DU 1: Cell 1 DU 1: Cell 2 DU 2: Cell 1 DU 2: Cell 2	0..5 6..11 0..5 6..11	3×TX/RX+3×TX 3×TX/RX+3×TX 3×TX/RX+3×TX 3×TX/RX+3×TX	- - - -	12	-	Yes
2×6 2×6 HC DU 1: 2×6 HC DU 2: 2×6 HC	DU 1: Cell 1 DU 1: Cell 2 DU 2: Cell 1 DU 2: Cell 2	0..5 6..11 0..5 6..11	3×TX/RX 3×TX/RX 3×TX/RX 3×TX/RX	Optional Optional Optional Optional	12	-	Yes

Table 35 Dual Node, Three Sector, Dual Band Configurations

Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
3×2 3×4 UC DU 1: 3×2 UC DU 2: 3×4 UC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..1 4..5 8..9 0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - - - - -	9	-	Yes
3×2 3×4 HC DU 1: 3×2 HC DU 2: 3×4 HC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..1 4..5 8..9 0..3 4..7 8..11	1×TX/RX+1×TX 1×TX/RX+1×TX 1×TX/RX+1×TX 2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional Optional Optional Optional	9	-	Yes
3×2 3×6 UC DU 1: 3×2 3×2 UC DU 2: 3×4 UC	DU 1: Cell 1a DU 1: Cell 1b DU 1: Cell 2a DU 1: Cell 2b DU 1: Cell 3a DU 1: Cell 3b DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..1 2..3 4..5 6..7 8..9 10..11 0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - - - - - - - -	12	-	Yes



Configuration	Cell	TRX Numbering	Antenna	TCC	Total Number of Radios	RBS Type	
						6101 6202	6102 6201
3×2 3×6 HC DU 1: 3×2 3×2 HC DU 2: 3×4 HC	DU 1: Cell 1a DU 1: Cell 1b DU 1: Cell 2a DU 1: Cell 2b DU 1: Cell 3a DU 1: Cell 3b DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..1 2..3 4..5 6..7 8..9 10..11 0..3 4..7 8..11	1×TX/RX+1×TX 1×TX/RX+1×TX 1×TX/RX+1×TX 1×TX/RX+1×TX 1×TX/RX+1×TX 1×TX/RX+1×TX 2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional Optional Optional Optional Optional Optional Optional	12	-	Yes
3×4 3×4 UC DU 1: 3×4 UC DU 2: 3×4 UC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..3 4..7 8..11 0..3 4..7 8..11	2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX 2×TX/RX+2×TX	- - - - - -	12	-	Yes
3×4 3×4 HC DU 1: 3×4 HC DU 2: 3×4 HC	DU 1: Cell 1 DU 1: Cell 2 DU 1: Cell 3 DU 2: Cell 1 DU 2: Cell 2 DU 2: Cell 3	0..3 4..7 8..11 0..3 4..7 8..11	2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX 2×TX/RX	Optional Optional Optional Optional Optional Optional	12	-	Yes

3.2.3 GSM Combined Cell Configurations

A combined cell consists of multiple antenna sites that together act as one cell. For more information, refer to [User Description, Combined Cell](#) in the GSM RAN CPI library.

The following rules apply to combined cell configurations for GSM:

- Combined Cell Type 1 and Type 2 are supported. For one combined cell, one main antenna site is defined and the other antenna sites are defined as extension antenna sites.
- Supported with Baseband only.
- Single mode and mixed mode radio configurations are supported.
- Only 1TX/2RX antenna configurations are supported.
- Maximum 255 carrier branches supported per Baseband Radio Node.
- One TRX block supports:
 - Up to five combined cell TRXs over maximum eight antenna sites.
 - Up to eight combined cell TRXs over maximum five antenna sites.
 - 40 TRXs in total per TRX block. See [Table 36](#) for maximum number of TRXs per Baseband unit.
 - 12 main TRXs and normal TRXs per TRX block.



Supported from SW G18.Q3:

- Combined Cell Type 3 and Type 4. For one combined cell, no main antenna site is defined.

Supported from SW G19.Q2:

- 1TX/1RX per TRX block with up to 40 TRXs.

Supported from SW G19.Q4:

- 2TX/2RX per TRX block with up to 20 TRXs.

Table 36 Supported Antenna Configurations and Number of Sectors for GSM Combined Cell

Baseband	Configuration	Number of TRX Blocks per Baseband Unit	From Software Release	Maximum Number of Sectors per Combined Cell	Maximum Number of TRXs per Baseband Unit
Baseband 5212 Baseband 6620 Baseband 6303	GSM	2	18.Q2	8 (1TX/2RX)	80
			19.Q2	8 (1TX/1RX)	80
			19.Q4	8 (2TX/2RX)	40
	GSM + WCDMA	1	18.Q2	8 (1TX/2RX)	40
			19.Q2	8 (1TX/1RX)	40
			19.Q4	8 (2TX/2RX)	20
Baseband 5216 Baseband 6630	GSM	4	18.Q2	8 (1TX/2RX)	84
			19.Q2	8 (1TX/1RX)	127
			19.Q4	8 (2TX/2RX)	63
	GSM + WCDMA	2	18.Q2	8 (1TX/2RX)	80
			19.Q2	8 (1TX/1RX)	80
			19.Q4	8 (2TX/2RX)	40
	GSM + LTE	2	18.Q2	8 (1TX/2RX)	80
			19.Q2	8 (1TX/1RX)	80
			19.Q4	8 (2TX/2RX)	40
	GSM + WCDMA + LTE	1	18.Q2	8 (1TX/2RX)	40
			19.Q2	8 (1TX/1RX)	40
			19.Q4	8 (2TX/2RX)	20
Baseband 6318	GSM	4	18.Q2	8 (1TX/2RX)	84
			19.Q2	8 (1TX/1RX)	127
			19.Q4	8 (2TX/2RX)	63
	GSM + WCDMA	2	18.Q2	8 (1TX/2RX)	80
			19.Q2	8 (1TX/1RX)	80
			19.Q4	8 (2TX/2RX)	40
	GSM + LTE	2	18.Q2	8 (1TX/2RX)	80
			19.Q2	8 (1TX/1RX)	80
			19.Q4	8 (2TX/2RX)	40
	GSM + WCDMA + LTE	1	18.Q2	8 (1TX/2RX)	40



Baseband	Configuration	Number of TRX Blocks per Baseband Unit	From Software Release	Maximum Number of Sectors per Combined Cell	Maximum Number of TRXs per Baseband Unit
			19.Q2	8 (1TX/1RX)	40
			19.Q4	8 (2TX/2RX)	20

3.3 Carrier Allocation for GSM

This section describes carrier allocation for single mode GSM configurations.

In an RBB with multiple radios, the first listed radio is connected towards DU or Baseband.

Maximum number of carriers in an RBB depends on DU or Baseband capacity and CPRI limitations. For example, DUG 20 supports up to 12 carriers.

3.3.1 GSM Carrier Allocation for RBB10_1A

Table 37 GSM Carrier Allocation for RBB10_1A

Radio Type	From SW Release	RBB10_1A	
		Downlink	Uplink
		TX A	
RRUS 01 RUS 01	G18.Q2	A = number of carriers, $A \leq 4$	2-WRXD with Ext RX A and Ext RX B
RRUS 02 RUS 02 RUS 03		A = number of carriers, $A \leq 8$	2-WRXD with Ext RX A and Ext RX B

3.3.2 GSM Carrier Allocation for RBB11_1A

Table 38 GSM Carrier Allocation for RBB11_1A

Radio Type	From SW Release	RBB11_1A	
		Downlink	Uplink
		TX A/RX A	
AIR 11 RRUS 01 RUS 01	G18.Q2	A = number of carriers, $A \leq 4$	2-WRXD
RRUS 02 RUS 02 RUS 03		A = number of carriers, $A \leq 8$	2-WRXD



3.3.3 GSM Carrier Allocation for RBB11_1C

Table 39 GSM Carrier Allocation for RBB11_1C

Radio Type	From SW Release	RBB11_1C	
		Downlink	Uplink
		TX A/RX A	
Radio 2212 Radio 2217 Radio 2219 RRUS 01 RRUS 02 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RUS 01 RUS 02 RUS 03	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Radio 2238	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity
Radio 2242	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity
Radio 2260 Radio 2279	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity

3.3.4 GSM Carrier Allocation for RBB11_1D

Table 40 GSM Carrier Allocation for RBB11_1D

Radio Type	From SW Release	RBB11_1D	
		Downlink	Uplink
		TX A/RX A	
Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Radio 2238	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity
Radio 2242	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity
Radio 2260 Radio 2279	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity



3.3.5 GSM Carrier Allocation for RBB11_2A

Table 41 GSM Carrier Allocation for RBB11_2A

Radio Type	From SW Release	RBB11_2A	
		Downlink	Uplink
		TX A/RX A	
Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with LTE FDD.	No diversity
Radio 2238	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity
Radio 2260 Radio 2279	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with LTE FDD.	No diversity

3.3.6 GSM Carrier Allocation for RBB11_2B

Table 42 GSM Carrier Allocation for RBB11_2B

Radio Type	From SW Release	RBB11_2B	
		Downlink	Uplink
		TX A/RX A	
Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with LTE FDD.	No diversity
Radio 2238	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.	No diversity
Radio 2260 Radio 2279	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with LTE FDD.	No diversity



3.3.7 GSM Carrier Allocation for RBB12_1A

Table 43 GSM Carrier Allocation for RBB12_1A

Radio Type	From SW Release	RBB12_1A	
		Downlink	Uplink
		TX A/RX A	
AIR 11 RRUS 01 RUS 01	G18.Q2	A = number of carriers, $A \leq 4$	2-WRXD
RRUS 02 RUS 02 RUS 03		A = number of carriers, $A \leq 8$	2-WRXD

3.3.8 GSM Carrier Allocation for RBB12_1C

Table 44 GSM Carrier Allocation for RBB12_1C

Radio Type	From SW Release	RBB12_1C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G18.Q2	Supported only in MSMM.	2-WRXD
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G20.Q1	Supported only in MSMM.	2-WRXD



3.3.9 GSM Carrier Allocation for RBB12_1D

Table 45 GSM Carrier Allocation for RBB12_1D

Radio Type	From SW Release	RBB12_1D	
		Downlink	Uplink
		TX A/RX A	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G18.Q2	Supported only in MSMM.	2-WRXD
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G20.Q1	Supported only in MSMM.	2-WRXD

3.3.10 GSM Carrier Allocation for RBB12_1E

Table 46 GSM Carrier Allocation for RBB12_1E

Radio Type	From SW Release	RBB12_1E	
		Downlink	Uplink
		TX A/RX A	
Radio 2460 Radio 2479	G19.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Supported only with DUG 20.	2-WRXD
Radio 2468	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD



3.3.11 GSM Carrier Allocation for RBB12_1F

Table 47 GSM Carrier Allocation for RBB12_1F

Radio Type	From SW Release	RBB12_1F	
		Downlink	Uplink
		TX A/RX A	
Radio 2460 Radio 2479	G19.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Supported only with DUG 20.	2-WRXD
Radio 2468	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD

3.3.12 GSM Carrier Allocation for RBB12_2A

Table 48 GSM Carrier Allocation for RBB12_2A

Radio Type	From SW Release	RBB12_2A	
		Downlink	Uplink
		TX A/RX A	
RRUS 01	G18.Q2	A = number of carriers, $A \leq 4$	2-WRXD
RRUS 02		A = number of carriers, $A \leq 8$	2-WRXD

3.3.13 GSM Carrier Allocation for RBB12_2B

Table 49 GSM Carrier Allocation for RBB12_2B

Radio Type	From SW Release	RBB12_2B	
		Downlink	Uplink
		TX A/RX A	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G18.Q2	Supported only in MSMM.	2-WRXD
Any combination of one radio unit with TX/RX capability:	G20.Q1	Supported only in MSMM.	2-WRXD



Radio Type	From SW Release	RBB12_2B	
		Downlink	Uplink
		TX A/RX A	
Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3			

3.3.14 GSM Carrier Allocation for RBB12_2C

Table 50 GSM Carrier Allocation for RBB12_2C

Radio Type	From SW Release	RBB12_2C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G18.Q2	Supported only in MSMM.	2-WRXD
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G20.Q1	Supported only in MSMM.	2-WRXD



3.3.15 GSM Carrier Allocation for RBB20_1A

Table 51 GSM Carrier Allocation for RBB20_1A

Radio Type	From SW Release	RBB20_1A		
		Downlink ⁽¹⁾		Uplink
		TX A	TX B	
RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	A = number of carriers, $A \leq 8$		2-WRXD
RRUS 12 RRUS 13 RRUS 14 RRUS 14s		Each carrier can be configured with one or two TX branches. Supported with Baseband.		

(1) Same limitations for 1TX and 2TX carriers.



3.3.16 GSM Carrier Allocation for RBB20_2A

Table 52 GSM Carrier Allocation for RBB20_2A

Radio Type	From SW Release	RBB20_2A		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 01 RUS 01 + RUS 01	G18.Q2	A = number of 1TX/2RX carriers, $A \leq 4$ B = number of 1TX/4RX carriers, $B \leq 0$	C = number of 1TX/2RX carriers, $C \leq 4$ D = number of 1TX/4RX carriers, $D \leq 0$	2-WRXD
		A+B+D ≤ 4 (radio 1 limitation) B+C+D ≤ 4 (radio 1 limitation)		
RRUS 01 + RRUS 02 RUS 01 + RUS 02 RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$ B = number of 1TX/4RX carriers, $B \leq 0$	C = number of 1TX/2RX carriers, $C \leq 8$ D = number of 1TX/4RX carriers, $D \leq 0$	2-WRXD
		A+B+D ≤ 4 (radio 1 limitation) B+C+D ≤ 8 (radio 1 limitation)		
RRUS 02 + RRUS 01 RUS 02 + RUS 01 RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$ B = number of 1TX/4RX carriers, $B \leq 0$	C = number of 1TX/2RX carriers, $C \leq 4$ D = number of 1TX/4RX carriers, $D \leq 0$	2-WRXD
		A+B+D ≤ 8 (radio 1 limitation) B+C+D ≤ 8 (radio 1 limitation)		
RRUS 02 + RRUS 02 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 02 RUS 03 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$ B = number of 1TX/4RX carriers, $B \leq 0$	C = number of 1TX/2RX carriers, $C \leq 8$ D = number of 1TX/4RX carriers, $D \leq 0$	2-WRXD
		A+B+D ≤ 8 (radio 1 limitation) B+C+D ≤ 8 (radio 1 limitation)		
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03		For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD



3.3.17

GSM Carrier Allocation for RBB22_1A

Table 53 GSM Carrier Allocation for RBB22_1A

Radio Type	From SW Release	RBB22_1A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 RRUS 01 + RRUS 01 RUS 01 + RUS 01	G18.Q2	A = number of carriers, $A \leq 4$	B = number of carriers, $B \leq 4$	2-WRXD
		$A+B \leq 8$ (radio 1 and radio 2 limitation)		
RRUS 01 + RRUS 02 RUS 01 + RUS 02 RUS 01 + RUS 03		A = number of carriers, $A \leq 4$	B = number of carriers, $B \leq 8$	2-WRXD
		$A+B \leq 12$ (radio 1 and radio 2 limitation)		
RRUS 02 + RRUS 01 RUS 02 + RUS 01 RUS 03 + RUS 01		A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 4$	2-WRXD
		$A+B \leq 12$ (radio 1 and radio 2 limitation)		
RRUS 02 + RRUS 02 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 02 RUS 03 + RUS 03		A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 8$	2-WRXD
		$A+B \leq 12$ (DUG limitation)		

3.3.18

GSM Carrier Allocation for RBB22_1B

Table 54 GSM Carrier Allocation for RBB22_1B

Radio Type	From SW Release	RBB22_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2212 Radio 2217 Radio 2219 Radio 2468 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
Radio 2238	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
Radio 2242	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
Radio 2260 Radio 2279	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Each GSM carrier can be configured with 1 or 2 TX branches.		2-WRXD



Radio Type	From SW Release	RBB22_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
		Supported only with Baseband.		
Radio 2460 Radio 2479	G19.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Supported only with DUG 20.		2-WRXD
Radio 2468	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only with DUG 20.		2-WRXD

3.3.19 GSM Carrier Allocation for RBB22_1C

Table 55 GSM Carrier Allocation for RBB22_1C

Radio Type	From SW Release	RBB22_1C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD

3.3.20 GSM Carrier Allocation for RBB22_1F

Table 56 GSM Carrier Allocation for RBB22_1F

Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2468 Radio 4415 Radio 4428	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG. Each carrier can be configured with one or two TX branches.		2-WRXD
Radio 2460 Radio 2479	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Each carrier can be configured with one or two TX branches.		2-WRXD
Radio 4428 Radio 4429	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD



Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
		Each carrier can be configured with one or two TX branches. Supported with Baseband only.		
Radio 4417	G18.Q3	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD

3.3.21 GSM Carrier Allocation for RBB22_1G

Table 57 GSM Carrier Allocation for RBB22_1G

Radio Type	From SW Release	RBB22_1G		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4415 Radio 4428 Radio 4429	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
Radio 4417	G18.Q3	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD

3.3.22 GSM Carrier Allocation for RBB22_1P

Table 58 GSM Carrier Allocation for RBB22_1P

Radio Type	From SW Release	RBB22_1P		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.		2-WRXD

3.3.23 GSM Carrier Allocation for RBB22_1Q

Table 59 GSM Carrier Allocation for RBB22_1Q

Radio Type	From SW Release	RBB22_1Q		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD



Radio Type	From SW Release	RBB22_1Q		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
		Supported only in MSMM.		

3.3.24 GSM Carrier Allocation for RBB22_2A

Table 60 GSM Carrier Allocation for RBB22_2A

Radio Type	From SW Release	RBB22_2A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD



3.3.25 GSM Carrier Allocation for RBB22_2B

Table 61 GSM Carrier Allocation for RBB22_2B

Radio Type	From SW Release	RBB22_2B		
		Downlink		Uplink
		TX A/RX A	> TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01	G18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 8 (radio 1 and radio 2 limitation)		
RRUS 01 + RRUS 02 RUS 01 + RUS 02 RUS 01 + RUS 03		A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 8	2-WRXD
		A+B ≤ 12 (radio 1 and radio 2 limitation)		
RRUS 02 + RRUS 01 RUS 02 + RUS 01 RUS 03 + RUS 01		A = number of carriers, A ≤ 8	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 12 (radio 1 and radio 2 limitation)		
RRUS 02 + RRUS 02 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 02 RUS 03 + RUS 03		A = number of carriers, A ≤ 8	B = number of carriers, B ≤ 8	2-WRXD
		A+B ≤ 12 (DUG limitation)		
RRUS 02 + RRUS 02 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 02 RUS 03 + RUS 03		A = number of carriers, A ≤ 8	B = number of carriers, B ≤ 8	2-WRXD
		A+B ≤ 16 (radio 1 and radio 2 limitation) DU or Baseband capacity applies CPRI capacity applies.		

3.3.26 GSM Carrier Allocation for RBB22_2C

Table 62 GSM Carrier Allocation for RBB22_2C

Radio Type	From SW Release	RBB22_2C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD



3.3.27 GSM Carrier Allocation for RBB22_2D

Table 63 GSM Carrier Allocation for RBB22_2D

Radio Type	From SW Release	RBB22_2D		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01	G18.Q2	A = number of carriers, $A \leq 4$	B = number of carriers, $B \leq 4$	2-WRXD
		A+B ≤ 8 (radio 1 and radio 2 limitation)		
RRUS 01 + RRUS 02		A = number of carriers, $A \leq 4$	B = number of carriers, $B \leq 8$	2-WRXD
		A+B ≤ 12 (radio 1 and radio 2 limitation)		
RRUS 02 + RRUS 01		A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 4$	2-WRXD
		A+B ≤ 12 (radio 1 and radio 2 limitation)		
RRUS 02 + RRUS 02		A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 8$	2-WRXD
		A+B ≤ 12 (DUG limitation)		

3.3.28 GSM Carrier Allocation for RBB22_2E

Table 64 GSM Carrier Allocation for RBB22_2E

Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2239 RRUS 12	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM for Radio 2238.		2-WRXD
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM for Radio 2242.		2-WRXD



Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM for Radio 2242, Radio 2260 and Radio 2279.		2-WRXD

3.3.29 GSM Carrier Allocation for RBB22_2K

Table 65 GSM Carrier Allocation for RBB22_2K

Radio Type	From SW Release	RBB22_2K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479 Radio 4480 Radio 4499 RRUS 14 RRUS 14s	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported only with Baseband and only in mixed mode configurations.		2-WRXD
Radio 2468 Radio 4415 Radio 4428 Radio 4429 Radio 4443 RRUS 32	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported only with Baseband and only in mixed mode configurations.		2-WRXD
Radio 4417	G18.Q3	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported only with Baseband and only in mixed mode configurations.		2-WRXD

3.3.30 GSM Carrier Allocation for RBB22_2L

Table 66 GSM Carrier Allocation for RBB22_2L

Radio Type	From SW Release	RBB22_2L		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4415 Radio 4428 Radio 4429 Radio 4443	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches.		2-WRXD



Radio Type	From SW Release	RBB22_2L		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RRUS 32		Supported only with Baseband and only in mixed mode configurations.		
Radio 4417	G18.Q3	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported only with Baseband and only in mixed mode configurations.		2-WRXD
Radio 4480 Radio 4499	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported only with Baseband and only in mixed mode configurations.		2-WRXD

3.3.31 GSM Carrier Allocation for RBB22_2T

Table 67 GSM Carrier Allocation for RBB22_2T

Radio Type	From SW Release	RBB22_2T		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.		2-WRXD

3.3.32 GSM Carrier Allocation for RBB22_2U

Table 68 GSM Carrier Allocation for RBB22_2U

Radio Type	From SW Release	RBB22_2U		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM.		2-WRXD



3.3.33 GSM Carrier Allocation for RBB24_1A

Table 69 GSM Carrier Allocation for RBB24_1A

Radio Type	From SW Release	RBB24_1A		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD

3.3.34 GSM Carrier Allocation for RBB24_1B

Table 70 GSM Carrier Allocation for RBB24_1B

Radio Type	From SW Release	RBB24_1B		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with baseband. Each GSM carrier can be configured with one or two TX branches.		2-WRXD



Radio Type	From SW Release	RBB24_1B		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with baseband. Each GSM carrier can be configured with one or two TX branches.		2-WRXD

3.3.35 GSM Carrier Allocation for RBB24_1C

Table 71 GSM Carrier Allocation for RBB24_1C

Radio Type	From SW Release	RBB24_1C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 2488 AIR 2488 MB Radio 2468	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband.		2- or 4-WRXD
Radio 2460 Radio 2479	G19.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only with DUG 20.		2- or 4-WRXD



3.3.36 GSM Carrier Allocation for RBB24_2A

Table 72 GSM Carrier Allocation for RBB24_2A

Radio Type	From SW Release	RBB24_2A		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD

3.3.37 GSM Carrier Allocation for RBB24_2B

Table 73 GSM Carrier Allocation for RBB24_2B

Radio Type	From SW Release	RBB24_2B		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with baseband. Each GSM carrier can be configured with one or two TX branches.		2-WRXD



Radio Type	From SW Release	RBB24_2B		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM with baseband. Each GSM carrier can be configured with one or two TX branches.		2-WRXD

3.3.38 GSM Carrier Allocation for RBB24_2D

Table 74 GSM Carrier Allocation for RBB24_2D

Radio Type	From SW Release	RBB24_2D		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
AIR 2488 AIR 2488 MB Radio 2468	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD



3.3.39

GSM Carrier Allocation for RBB32_1A

Table 75 GSM Carrier Allocation for RBB32_1A

Radio Type	From SW Release	RBB32_1A			
		Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C	
RRUS 01 + RRUS 01 + RRUS 01 RUS 01 + RUS 01 + RUS 01	G18.Q2	A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 12 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 01 + RRUS 02 RUS 01 + RUS 01 + RUS 02 RUS 01 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 01 RUS 01 + RUS 02 + RUS 01 RUS 01 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 02 RUS 01 + RUS 02 + RUS 02 RUS 01 + RUS 02 + RUS 03 RUS 01 + RUS 03 + RUS 02 RUS 01 + RUS 03 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 01 RUS 02 + RUS 01 + RUS 01 RUS 03 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 02 RUS 02 + RUS 01 + RUS 02 RUS 02 + RUS 01 + RUS 03 RUS 03 + RUS 01 + RUS 02 RUS 03 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 01 RUS 02 + RUS 02 + RUS 01 RUS 02 + RUS 03 + RUS 01 RUS 03 + RUS 02 + RUS 01 RUS 03 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 02 Three radios with any combination of RUS 02 and RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 24 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			157



3.3.40

GSM Carrier Allocation for RBB32_1B

Table 76 GSM Carrier Allocation for RBB32_1B

Radio Type	From SW Release	RBB32_1B			
		Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C	
RRUS 01 + RRUS 01 + RRUS 01 RUS 01 + RUS 01 + RUS 01	G18.Q2	A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 12 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 01 + RRUS 02 RUS 01 + RUS 01 + RUS 02 RUS 01 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 01 RUS 01 + RUS 02 + RUS 01 RUS 01 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 02 RUS 01 + RUS 02 + RUS 02 RUS 01 + RUS 02 + RUS 03 RUS 01 + RUS 03 + RUS 02 RUS 01 + RUS 03 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 01 RUS 02 + RUS 01 + RUS 01 RUS 03 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 02 RUS 02 + RUS 01 + RUS 02 RUS 02 + RUS 01 + RUS 03 RUS 03 + RUS 01 + RUS 02 RUS 03 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 01 RUS 02 + RUS 02 + RUS 01 RUS 02 + RUS 03 + RUS 01 RUS 03 + RUS 02 + RUS 01 RUS 03 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 02 Three radios with any combination of RUS 02 and RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 24 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			



3.3.41

GSM Carrier Allocation for RBB32_3A

Table 77 GSM Carrier Allocation for RBB32_3A

Radio Type	From SW Release	RBB32_3A			
		Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C	
RRUS 01 + RRUS 01 + RRUS 01 RUS 01 + RUS 01 + RUS 01	G18.Q2	A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 12 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 01 + RRUS 02 RUS 01 + RUS 01 + RUS 02 RUS 01 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 01 RUS 01 + RUS 02 + RUS 01 RUS 01 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 02 RUS 01 + RUS 02 + RUS 02 RUS 01 + RUS 02 + RUS 03 RUS 01 + RUS 03 + RUS 02 RUS 01 + RUS 03 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 01 RUS 02 + RUS 01 + RUS 01 RUS 03 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 02 RUS 02 + RUS 01 + RUS 02 RUS 02 + RUS 01 + RUS 03 RUS 03 + RUS 01 + RUS 02 RUS 03 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 01 RUS 02 + RUS 02 + RUS 01 RUS 02 + RUS 03 + RUS 01 RUS 03 + RUS 02 + RUS 01 RUS 03 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 02 Three radios with any combination of RUS 02 and RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 24 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			



3.3.42

GSM Carrier Allocation for RBB32_3B

Table 78 GSM Carrier Allocation for RBB32_3B

Radio Type	From SW Release	RBB32_3B			
		Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C	
RRUS 01 + RRUS 01 + RRUS 01 RUS 01 + RUS 01 + RUS 01	G18.Q2	A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 12 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 01 + RRUS 02 RUS 01 + RUS 01 + RUS 02 RUS 01 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 01 RUS 01 + RUS 02 + RUS 01 RUS 01 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS 02 + RRUS 02 RUS 01 + RUS 02 + RUS 02 RUS 01 + RUS 02 + RUS 03 RUS 01 + RUS 03 + RUS 02 RUS 01 + RUS 03 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 01 RUS 02 + RUS 01 + RUS 01 RUS 03 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 16 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 01 + RRUS 02 RUS 02 + RUS 01 + RUS 02 RUS 02 + RUS 01 + RUS 03 RUS 03 + RUS 01 + RUS 02 RUS 03 + RUS 01 + RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 01 RUS 02 + RUS 02 + RUS 01 RUS 02 + RUS 03 + RUS 01 RUS 03 + RUS 02 + RUS 01 RUS 03 + RUS 03 + RUS 01		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 4$	2-WRXD
		A+B+C ≤ 20 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 02 + RRUS 02 + RRUS 02 Three radios with any combination of RUS 02 and RUS 03		A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	C = number of 1TX/2RX carriers, $C \leq 8$	2-WRXD
		A+B+C ≤ 24 (radio limitation) DU or Baseband capacity applies. CPRI capacity applies.			



3.3.43 GSM Carrier Allocation for RBB42_1B

Table 79 GSM Carrier Allocation for RBB42_1B

Radio Type	From SW Release	RBB42_1B				
		Downlink				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband.				2-WRXD

3.3.44 GSM Carrier Allocation for RBB42_2D

Table 80 GSM Carrier Allocation for RBB42_2D

Radio Type	From SW Release	RBB42_2D				
		Downlink				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband.				2-WRXD

3.3.45 GSM Carrier Allocation for RBB42_2E

Table 81 GSM Carrier Allocation for RBB42_2E

Radio Type	From SW Release	RBB42_2E				
		Downlink				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD



3.3.46 GSM Carrier Allocation for RBB43_1A

Table 82 GSM Carrier Allocation for RBB43_1A

Radio Type	From SW Release	RBB43_1A				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C	TX D/RX D	
Four radios with any combination of RRUS 01 and RRUS 02 Four radios with any combination of RUS 01, RUS 02 and RUS 03	G18.Q2	A = number of 1TX/2RX carriers on radio 1	B = number of 1TX/2RX carriers on radio 2	C = number of 1TX/2RX carriers on radio 3	D = number of 1TX/2RX carriers on radio 4	2-WRXD
Total number of GSM carriers = A+B+C+D Baseband capacity applies. CPRI capacity applies.						

3.3.47 GSM Carrier Allocation for RBB43_4A

Table 83 GSM Carrier Allocation for RBB43_4A

Radio Type	From SW Release	RBB43_4A				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C	TX D/RX D	
RRUS 01 + RRUS 01 + RRUS 01 + RRUS 01 RUS 01 + RUS 01 + RUS 01 + RUS 01	G18.Q2	A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
A+B+C+D ≤ 12 (DUG limitation)						
RRUS 01 + RRUS 01 + RRUS 01 + RRUS 02 RUS 01 + RUS 01 + RUS 01 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
A+B+C+D ≤ 12 (DUG limitation)						
RRUS 01 + RRUS 01 + RRUS 02 + RRUS 01 RUS 01 + RUS 01 + RUS 02 + RUS 01		A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
A+B+C+D ≤ 12 (DUG limitation)						
RRUS 01 + RRUS 01 + RRUS 02 + RRUS 02 RUS 01 + RUS 01 + RUS 02 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
A+B+C+D ≤ 12 (DUG limitation)						
RRUS 01 + RRUS 02 + RRUS 01 + RRUS 01 RUS 01 + RUS 02 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
A+B+C+D ≤ 12 (DUG limitation)						
RRUS 01 + RRUS 02 + RRUS 01 + RRUS 02 RUS 01 + RUS 02 + RUS 01 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
A+B+C+D ≤ 12 (DUG limitation)						



Radio Type	From SW Release	RBB43_4A				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C	TX D/RX D	
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 01 + RRUS 02 + RRUS 02 + RRUS 01 RUS 01 + RUS 02 + RUS 02 + RUS 01		A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 01 + RRUS 02 + RRUS 02 + RRUS 02 RUS 01 + RUS 02 + RUS 02 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 4	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 01 + RRUS 01 + RRUS 01 RUS 02 + RUS 01 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 01 + RRUS 01 + RRUS 02 RUS 02 + RUS 01 + RUS 01 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 02+ RRUS 01 + RRUS 01 RUS 02 + RUS 02 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 01 + RRUS 02 + RRUS 02 RUS 02 + RUS 01 + RUS 02 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 4	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 02 + RRUS 01 + RRUS 01 RUS 02 + RUS 02 + RUS 01 + RUS 01		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 02 + RRUS 01 + RRUS 02 RUS 02 + RUS 02 + RUS 01 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 4	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 02 + RRUS 02 + RRUS 01 RUS 02 + RUS 02 + RUS 02 + RUS 01		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 4	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
RRUS 02 + RRUS 02 + RRUS 02 + RRUS 02 RUS 02 + RUS 02 + RUS 02 + RUS 02		A = number of 1TX/2RX carriers, A ≤ 8	B = number of 1TX/2RX carriers, B ≤ 8	C = number of 1TX/2RX carriers, C ≤ 8	D = number of 1TX/2RX carriers, D ≤ 8	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				



Radio Type	From SW Release	RBB43_4A				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C	TX D/RX D	
Four radios with any combination of RUS 01, RUS 02, and RUS 03		A = number of 1TX/2RX carriers on radio 1	B = number of 1TX/2RX carriers on radio 2	C = number of 1TX/2RX carriers on radio 3	D = number of 1TX/2RX carriers on radio 4	2-WRXD
		A+B+C+D ≤ 12 (DUG limitation)				
Four radios with any combination of RRUS 01 and RRUS 02 Four radios with any combination of RUS 01, RUS 02, and RUS 03		A = number of 1TX/2RX carriers on radio 1	B = number of 1TX/2RX carriers on radio 2	C = number of 1TX/2RX carriers on radio 3	D = number of 1TX/2RX carriers on radio 4	2-WRXD
Total number of GSM carriers = A+B+C+D DU or Baseband capacity applies. CPRI capacity applies.						

3.3.48 GSM Carrier Allocation for RBB44_1B

Table 84 GSM Carrier Allocation for RBB44_1B

Radio Type	From SW Release	RBB44_1B				Uplink
		Downlink				
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2238 RRUS 12	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband. Supported only in MSMM for Radio 2238.				2- or 4-WRXD
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband. Supported only in MSMM for Radio 2242.				2- or 4-WRXD
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM for Radio 2242, Radio 2260, Radio 2279. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD



3.3.49 GSM Carrier Allocation for RBB44_1D

Table 85 GSM Carrier Allocation for RBB44_1D

Radio Type	From SW Release	RBB44_1D				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 4455	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
Radio 2460 Radio 2479	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
Radio 4415 Radio 4428 Radio 4429	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
Radio 4417	G18.Q3	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD

3.3.50 GSM Carrier Allocation for RBB44_2C

Table 86 GSM Carrier Allocation for RBB44_2C

Radio Type	From SW Release	RBB44_2C				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	G18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only. Supported only in MSMM for Radio 2238.				2- or 4-WRXD
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD



Radio Type	From SW Release	RBB44_2C				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G18.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD
Any combination of one radio unit with TX/RX capability: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	G20.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only in MSMM for Radio 2242, Radio 2260, Radio 2279. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD

3.4 Baseband Support and Configuration for GSM

This section contains information on the GSM DU and Baseband support for the configurations listed in [Supported Radio Configurations for GSM](#) on page 118.

Table 87 DU and Baseband Support for GSM

DU or Baseband	Software Version									
	G1 8.Q 2	G1 8.Q 3	G1 8.Q 4	G1 9.Q 1	G1 9.Q 2	G1 9.Q 3	G1 9.Q 4	G2 0.Q 1	G2 0.Q 2	G2 0.Q 3
Baseband 5212	X	X	X	X	X	X	X	X	X	X
Baseband 5216	X	X	X	X	X	X	X	X	X	X
Baseband 6303	X	X	X	X	X	X	X	X	X	X
Baseband 6318	X	X	X	X	X	X	X	X	X	X
Baseband 6620	X	X	X	X	X	X	X	X	X	X
Baseband 6630	X	X	X	X	X	X	X	X	X	X
DUG 20	X	X	X	X	X	X	X	X	X	X

3.4.1 GSM Baseband Support and Configuration with Baseband 5212

The following applies to Baseband 5212 from SW G18.Q2:

- One Baseband only per node.
- Digital cross-connect is supported.
- 4-WRXD is supported.



- Combined Cell is supported.

Table 88 GSM Configuration Support with One Baseband 5212

		Software Version									
		G18. Q2	G18. Q3	G18. Q4	G19. Q1	G19. Q2	G19. Q3	G19. Q4	G20. Q1	G20. Q2	G20. Q3
Maximum number of GSM TRXs	1TX/1RX	24	24	24	24	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾
	1TX/2RX	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾
	1TX/4RX	24	24	24	24	24	24	24	24	24	24
	2TX/2RX	24	24	24	24	24	24	24– 40 ⁽¹⁾	24– 40 ⁽¹⁾	24– 40 ⁽¹⁾	24– 40 ⁽¹⁾
	2TX/4RX	24	24	24	24	24	24	24	24	24	24
Maximum number of sectors		24	24	24	24	24	24	24	24	24	24
Maximum number of radios		24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽²⁾		5	5	5	5	5	5	5	5	5	5
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 24 TRXs are only available with Combined Cell.

(2) Including band 0.

3.4.2 GSM Baseband Support and Configuration with Baseband 5216

The following applies to Baseband 5216 from SW G18.Q2:

- One Baseband only per node.
- Digital cross-connect is supported.
- 4-WRXD is supported.
- Combined Cell is supported.

Table 89 GSM Configuration Support with One Baseband 5216

		Software Version									
		G18. Q2	G18. Q3	G18. Q4	G19. Q1	G19. Q2	G19. Q3	G19. Q4	G20. Q1	G20. Q2	G20. Q3
Maximum number of GSM TRXs	1TX/1RX	48	48	48	48	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾
	1TX/2RX	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾
	1TX/4RX	48	48	48	48	48	48	48	48	48	48
	2TX/2RX	48	48	48	48	48	48	48– 63 ⁽¹⁾	48– 63 ⁽¹⁾	48– 63 ⁽¹⁾	48– 63 ⁽¹⁾
	2TX/4RX	42	42	42	42	42	42	42	42	42	42



	Software Version									
	G18. Q2	G18. Q3	G18. Q4	G19. Q1	G19. Q2	G19. Q3	G19. Q4	G20. Q1	G20. Q2	G20. Q3
Maximum number of sectors	36	36	36	36	36	36	36	36	36	36
Maximum number of radios	36	36	36	36	36	36	36	36	36	36
Maximum number of 3GPP bands ⁽²⁾	5	5	5	5	5	5	5	5	5	5
Maximum number of radios per cascade chain	6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 48 TRXs are only available with Combined Cell.

(2) Including band 0.

3.4.3 GSM Baseband Support and Configuration with Baseband 6303

The following applies to Baseband 6303 from SW G18.Q2:

- One Baseband only per node.
- Digital cross-connect is supported.
- 4-WRXD is supported.
- Combined Cell is supported.

Table 90 GSM Configuration Support with One Baseband 6303

		Software Version									
		G18. Q2	G18. Q3	G18. Q4	G19. Q1	G19. Q2	G19. Q3	G19. Q4	G20. Q1	G20. Q2	G20. Q3
Maximum number of GSM TRXs	1TX/1RX	24	24	24	24	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/2RX	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/4RX	24	24	24	24	24	24	24	24	24	24
	2TX/2RX	24	24	24	24	24	24	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾
	2TX/4RX	24	24	24	24	24	24	24	24	24	24
Maximum number of sectors		24	24	24	24	24	24	24	24	24	24
Maximum number of radios		24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽²⁾		5	5	5	5	5	5	5	5	5	5
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 24 TRXs are only available with Combined Cell.

(2) Including band 0.

3.4.4 GSM Baseband Support and Configuration with Baseband 6318

The following applies to Baseband 6318 from SW G18.Q2:



- One Baseband only per node.
- Digital cross-connect is supported.
- 4-WRXD is supported.
- Combined Cell is supported.

Table 91 GSM Configuration Support with One Baseband 6318

		Software Version									
		G18.Q 2	G18.Q 3	G18.Q 4	G19.Q 1	G19.Q 2	G19.Q 3	G19.Q 4	G20.Q 1	G20.Q 2	G20.Q 3
Maximum number of GSM TRXs	1TX/1RX	48	48	48	48	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾	48– 127 ⁽¹⁾
	1TX/2RX	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾	48– 84 ⁽¹⁾
	1TX/4RX	48	48	48	48	48	48	48	48	48	48
	2TX/2RX	48	48	48	48	48	48	48– 63 ⁽¹⁾	48– 63 ⁽¹⁾	48– 63 ⁽¹⁾	48– 63 ⁽¹⁾
	2TX/4RX	42	42	42	42	42	42	42	42	42	42
Maximum number of sectors		36	36	36	36	36	36	36	36	36	36
Maximum number of radios		36	36	36	36	36	36	36	36	36	36
Maximum number of 3GPP bands ⁽²⁾		5	5	5	5	5	5	5	5	5	5
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 48 TRXs are only available with Combined Cell.

(2) Including band 0.

3.4.5 GSM Baseband Support and Configuration with Baseband 6620

The following applies to Baseband 6620 from SW G18.Q2:

- One Baseband only per node.
- Digital cross-connect is supported.
- 4-WRXD is supported.
- Combined Cell is supported.



Table 92 GSM Configuration Support with One Baseband 6620

		Software Version									
		G18.Q2	G18.Q3	G18.Q4	G19.Q1	G19.Q2	G19.Q3	G19.Q4	G20.Q1	G20.Q2	G20.Q3
Maximum number of GSM TRXs	1TX/1RX	24	24	24	24	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/2RX	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/4RX	24	24	24	24	24	24	24	24	24	24
	2TX/2RX	24	24	24	24	24	24	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾
	2TX/4RX	24	24	24	24	24	24	24	24	24	24
Maximum number of sectors		24	24	24	24	24	24	24	24	24	24
Maximum number of radios		24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽²⁾		5	5	5	5	5	5	5	5	5	5
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 24 TRXs are only available with Combined Cell.

(2) Including band 0.

3.4.6 GSM Baseband Support and Configuration with Baseband 6630

The following applies to Baseband 6630 from SW G18.Q2:

- One Baseband only per node.
- Digital cross-connect is supported.
- 4-WRXD is supported.
- Combined Cell is supported.

Table 93 GSM Configuration Support with One Baseband 6630

		Software Version									
		G18.Q2	G18.Q3	G18.Q4	G19.Q1	G19.Q2	G19.Q3	G19.Q4	G20.Q1	G20.Q2	G20.Q3
Maximum number of GSM TRXs	1TX/1RX	48	48	48	48	48–127 ⁽¹⁾	48–127 ⁽¹⁾	48–127 ⁽¹⁾	48–127 ⁽¹⁾	48–127 ⁽¹⁾	48–127 ⁽¹⁾
	1TX/2RX	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾	48–84 ⁽¹⁾
	1TX/4RX	48	48	48	48	48	48	48	48	48	48
	2TX/2RX	48	48	48	48	48	48	48–63 ⁽¹⁾	48–63 ⁽¹⁾	48–63 ⁽¹⁾	48–63 ⁽¹⁾
	2TX/4RX	42	42	42	42	42	42	42	42	42	42
Maximum number of sectors		36	36	36	36	36	36	36	36	36	36



	Software Version									
	G18. Q2	G18. Q3	G18. Q4	G19. Q1	G19. Q2	G19. Q3	G19. Q4	G20. Q1	G20. Q2	G20. Q3
Maximum number of radios	36	36	36	36	36	36	36	36	36	36
Maximum number of 3GPP bands ⁽²⁾	5	5	5	5	5	5	5	5	5	5
Maximum number of radios per cascade chain	6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 48 TRXs are only available with Combined Cell.

(2) Including band 0.

3.4.7 GSM Baseband Support and Configuration with DUG 20

The following applies to DUG 20:

- 6 CPRI I/Q links
- 2.5 Gbps CPRI
- IDL2 is used between DUG and DUG CPRI connection
- Radio configurations with more than 12 carriers (the capacity of one DUG 20) are built up as 2–4 DUG nodes; that is, 2–4 DBBs respectively. If the TRXs of the same sector (or more precisely, the same GSM cell seen from the BSC) are controlled by a different DUG, these DUGs must be TG-synchronized.

Table 94 GSM Configuration Support with DUG 20

Number of		18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
1TX/1RX		12	12	12	12	12	12	12	12	12	12
1TX/2RX		12	12	12	12	12	12	12	12	12	12
1TX/4RX ⁽¹⁾		6	6	6	6	6	6	6	6	6	6
Sectors	1TX and 2TX radios only	6	6	6	6	6	6	6	6	6	6
	1TX, 2TX and 4TX radios	6	6	6	6	6	6	6	6	6	6
Radios		6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾	6 ⁽²⁾
Bands ⁽³⁾		5	5	5	5	5	5	5	5	5	5
Radio units' level in one cascade chain		6	6	6	6	6	6	6	6	6	6
TX capable ports in all radios in the node		24	24	24	24	24	24	24	24	24	24

(1) Numbers of carriers with four RX. Two TRX must be configured to support one carrier with four RX.

(2) If more than three sectors are configured, only one radio can be supported per sector.

Maximum 12 TX capable RF ports can be used by DUG 20.

(3) Only two bands at the same time: band 0 + band 3, band 8 + band 3 or band 5 + band 2.



4 Radio Configurations for CDMA

This section describes the radio configurations for CDMA as a single standard. Multistandard configurations are described in [Radio Configurations for Multistandard and Single Standard Mixed Mode](#) on page 505.

4.1 Sector Configuration for CDMA

See [CDMA RBB Summary for External Radios and Internal Radios](#) on page 172 when selecting an RBB according to the required sector capabilities.

Note: There may be limitations to the combinations of RBBs supported in a specific software version. See [Supported Radio Configurations for CDMA](#) on page 175 for information on supported configurations.

4.1.1 CDMA RBB Summary for External Radios and Internal Radios

Table 95 CDMA RBB Summary for Internal Radios

Radio	Number of Carriers ⁽¹⁾	Output Power (W) per Carrier ⁽²⁾	RBB
RUS 01	1	80	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A RBB20_2A RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
			RBB20_2A RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
	2	40	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A
		40	RBB20_2A RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
	3	20	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A
		40	RBB20_2A
	4	40	RBB20_2A



Radio	Number of Carriers ⁽¹⁾	Output Power (W) per Carrier ⁽²⁾	RBB
			RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
		20	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A
	5	26.7	RBB20_2A RBB22_2J RBB24_1A RBB24_2A
	6	26.7	RBB20_2A RBB22_2J RBB24_1A RBB24_2A
RUS 02	1	100	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A RBB20_2A RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
	2	100	RBB20_2A RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
		50	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A
	3	50	RBB20_2A RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
		25	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A
	4	50	RBB20_2A RBB22_1C RBB22_2A RBB22_2E RBB22_2J RBB24_1A RBB24_2A
		25	RBB10_1A RBB11_1C ⁽³⁾ RBB12_1A
	5	20	RBB20_2A RBB22_2J RBB24_1A



Radio	Number of Carriers ⁽¹⁾	Output Power (W) per Carrier ⁽²⁾	RBB
			RBB24_2A

(1) More than three carriers require two High Speed Serial Links (HSSL) from the DBU or DBA to the XMU. For limitations on carriers and sectors, see [XMU Configuration](#) on page 181.

(2) The maximum output power depends on the radio type. See [Radio Capabilities](#) on page 5 for more information.

(3) Only RBB for Distributed Antenna System (DAS).

Table 96 CDMA RBB Summary for External Radios

Radio	Number of Carriers ⁽¹⁾	Output Power (W) per Carrier ⁽²⁾			RBB
		Based on 80 W per Radio	Based on 120 W per Radio	Based on 160 W per Radio	
RRUS 11	1	40	n/a	n/a	RBB11_1C RBB20_1A RBB22_1B RBB22_2E RBB44_1B RBB44_2C
	2	20	n/a	n/a	RBB11_1C
		40	n/a	n/a	RBB20_1A RBB22_1B RBB22_2E RBB44_1B RBB44_2C
	3	16.7	n/a	n/a	RBB11_1C
		One carrier at 40 Two carriers at 20	n/a	n/a	RBB20_1A RBB22_1B RBB22_2E
		40	n/a	n/a	RBB44_1B RBB44_2C
	4	10	n/a	n/a	RBB11_1C
		20	n/a	n/a	RBB20_1A RBB22_1B RBB22_2E
		40	n/a	n/a	RBB44_1B RBB44_2C
	5	Three carriers at 40 Two carriers at 20	n/a	n/a	RBB44_1B RBB44_2C
	6	Two carriers at 40 Four carriers at 20	n/a	n/a	RBB44_1B RBB44_2C
RRUS 31	1	20	30	40	RBB44_1D RBB44_2F
	2	20	30	40	
	3	20	30	40	
	4	20	30	40	
	5	Two carriers at 10 Three carriers at 20	Two carriers at 30 Three carriers at 20	Two carriers at 20 Three carriers at 40	



Radio	Number of Carriers ⁽¹⁾	Output Power (W) per Carrier ⁽²⁾			RBB
		Based on 80 W per Radio	Based on 120 W per Radio	Based on 160 W per Radio	
	6	Two carriers at 20 Four carriers at 10	20	Two carriers at 40 Four carriers at 20	

(1) More than three carriers require two HSSLs from the DBU or DBA to the XMU. For limitations on carriers and sectors, see [XMU Configuration](#) on page 181.

(2) The maximum output power depends on the radio. More information can be found in [Radio Capabilities](#) on page 5.

4.2 Supported Radio Configurations for CDMA

This section describes the supported CDMA radio configurations.

One RBB is selected for each sector. Different RBBs can be chosen for different sectors to create asymmetric configurations.

Up to two level radios cascading is supported.

4.2.1 CDMA Configurations with One DU Radio Node and XMU

Table 97 CDMA Configurations with One DU Radio Node and XMU

RBB ⁽¹⁾⁽²⁾	From Software Release
	DUL 20 + XMU-02 DUS 31 + XMU-02 DUS 41 + XMU-02
RBB10_1A	18.Q2
RBB11_1C	18.Q2
RBB11_1D	18.Q2
RBB12_1A	18.Q2
RBB20_1A	18.Q2
RBB20_1B	18.Q2
RBB20_2A	18.Q2
RBB22_1B	18.Q2
RBB22_1F	18.Q2
RBB22_1G	18.Q2
RBB22_2A	18.Q2
RBB22_2E	18.Q2
RBB24_1C	18.Q2
RBB24_2A	18.Q2
RBB24_2B	18.Q2
RBB44_1D	18.Q2
RBB44_2C	18.Q2



RBB ⁽¹⁾⁽²⁾	From Software Release
	DUL 20 + XMU-02 DUS 31 + XMU-02 DUS 41 + XMU-02
RBB44_2F	18.Q2

(1) Full band radios cannot be combined with sub band radios in the same node.

(2) CSASR configurations supported for 2, 3 or 6 sectors.

4.3 Carrier Allocation for CDMA

This section describes carrier allocation for single mode CDMA configurations.

In an RBB with multiple radios, the first listed radio is connected towards DU or Baseband.

4.3.1 CDMA Carrier Allocation for RBB10_1A

Table 98 CDMA Carrier Allocation for RBB10_1A

Radio Type	From SW Release	RBB10_1A	
		Downlink ⁽¹⁾	Uplink
		TX A	
RUS 01	18.Q2	A = number of carriers, $A \leq 4$	2-WRXD
RUS 02	18.Q2	A = number of carriers, $A \leq 5$	2-WRXD

(1) Maximum three carriers with four to six sectors

4.3.2 CDMA Carrier Allocation for RBB11_1C

Table 99 CDMA Carrier Allocation for RBB11_1C

Radio Type	From SW Release	RBB11_1C	
		Downlink	Uplink
		TX A/RX A	
RRUS 11 RUS 01	18.Q2	A = number of carriers, $A \leq 4$	No diversity
RUS 02	18.Q2	A = number of carriers, $A \leq 5$	No diversity



4.3.3 CDMA Carrier Allocation for RBB12_1A

Table 100 CDMA Carrier Allocation for RBB12_1A

Radio Type	From SW Release	RBB12_1A	
		Downlink	Uplink
		TX A/RX A	
RUS 01	18.Q2	A = number of carriers, $A \leq 4$	2-WRXD
RUS 02	18.Q2	A = number of carriers, $A \leq 5$	2-WRXD

4.3.4 CDMA Carrier Allocation for RBB20_1A

Table 101 CDMA Carrier Allocation for RBB20_1A

Radio Type	From SW Release	RBB20_1A		
		Downlink		Uplink
		TX A	TX B	
RRUS 11	18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 4 (radio limitation)		

4.3.5 CDMA Carrier Allocation for RBB20_2A

Table 102 CDMA Carrier Allocation for RBB20_2A

Radio Type	From SW Release	RBB20_2A		
		Downlink		Uplink
		TX A	TX C	
RUS 01 + RUS 01 RUS 02 + RUS 02	18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 6 (RAT limitation)		



4.3.6 CDMA Carrier Allocation for RBB22_1B

Table 103 CDMA Carrier Allocation for RBB22_1B

Radio Type	From SW Release	RBB22_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RRUS 11	18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 4 (radio limitation)		

4.3.7 CDMA Carrier Allocation for RBB22_1C

Table 104 CDMA Carrier Allocation for RBB22_1C

Radio Type	From SW Release	RBB22_1C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 4 (Radio 1 and radio 2 limitation)		
RUS 02 + RUS 02	18.Q2	A = number of carriers, A ≤ 5	B = number of carriers, B ≤ 5	2-WRXD
		A+B ≤ 6 (RAT limitation)		

4.3.8 CDMA Carrier Allocation for RBB22_2A

Table 105 CDMA Carrier Allocation for RBB22_2A

Radio Type	From SW Release	RBB22_2A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 4 (Radio 1 and radio 2 limitation)		
RUS 02 + RUS 02	18.Q2	A = number of carriers, A ≤ 5	B = number of carriers, B ≤ 5	2-WRXD
		A+B ≤ 6 (RAT limitation)		



4.3.9 CDMA Carrier Allocation for RBB22_2E

Table 106 CDMA Carrier Allocation for RBB22_2E

Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RRUS 11 + RRUS 11	18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 4 (Radio 1 and radio 2 limitation)		

4.3.10 CDMA Carrier Allocation for RBB22_2J

Table 107 CDMA Carrier Allocation for RBB22_2J

Radio Type	From SW Release	RBB22_2J		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	18.Q2	A = number of carriers, A ≤ 4	B = number of carriers, B ≤ 4	2-WRXD
		A+B ≤ 6 (RAT limitation)		
RUS 02 + RUS 02	18.Q2	A = number of carriers, A ≤ 5	B = number of carriers, B ≤ 5	2-WRXD
		A+B ≤ 6 (RAT limitation)		

4.3.11 CDMA Carrier Allocation for RBB24_1A

Table 108 CDMA Carrier Allocation for RBB24_1A

Radio Type	From SW Release	RBB24_1A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01 RUS 02 + RUS 02	18.Q2	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾ (2)		2-WRXD

(1) Maximum three carriers are supported for 4–6 sector configurations.

(2) Maximum six carriers are supported in total.



4.3.12 CDMA Carrier Allocation for RBB24_2A

Table 109 CDMA Carrier Allocation for RBB24_2A

Radio Type	From SW Release	RBB24_2A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01 RUS 02 + RUS 02	18.Q2	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾ (2)		2-WRXD

(1) Maximum three carriers are supported for 4–6 sector configurations.

(2) Maximum six carriers are supported in total.

4.3.13 CDMA Carrier Allocation for RBB44_1B

Table 110 CDMA Carrier Allocation for RBB44_1B

Radio Type	From SW Release	RBB44_1B			
		Downlink			
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D
RRUS 11 + RRUS 11	18.Q2	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾ (2)			
					2-WRXD

(1) Maximum six carriers are supported in total.

(2) The uplink takes the same branch as the downlink and the next branch, which could be in another radio.

4.3.14 CDMA Carrier Allocation for RBB44_1D

Table 111 CDMA Carrier Allocation for RBB44_1D

Radio Type	From SW Release	RBB44_1D			
		Downlink			
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D
RRUS 31	18.Q2	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾ (2)			
					2- or 4-WRXD

(1) Maximum six carriers are supported in total.

(2) The uplink takes the same branch as the downlink and the next branch, which could be in another radio.



4.3.15 CDMA Carrier Allocation for RBB44_2C

Table 112 CDMA Carrier Allocation for RBB44_2C

Radio Type	From SW Release	RBB44_2C				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11 + RRUS 11	18.Q2	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾ (2)				2-WRXD

(1) Maximum six carriers are supported in total.

(2) The uplink takes the same branch as the downlink and the next branch, which could be in another radio.

4.3.16 CDMA Carrier Allocation for RBB44_2F

Table 113 CDMA Carrier Allocation for RBB44_2F

Radio Type	From SW Release	RBB44_2F				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 31	18.Q2	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾ (2)				2- or 4-WRXD ⁽³⁾

(1) Maximum six carriers are supported in total.

(2) The uplink takes the same branch as the downlink and the next branch, which could be in another radio.

(3) It is possible to mix 2-WRXD carriers and 4-WRXD carriers.

4.4 XMU Configuration

The XMU converts HSSL data into Ericsson CPRI data format. More information on the XMU unit and XMU connections can be found in [XMU Description](#), [Radio Connections](#), and [Non-RF Connections](#).

Refer to [Table 114](#) when selecting an XMU port configuration according to the chosen sector capabilities.

Table 114 XMU Port Configuration

Number of Sectors	Carriers per Sector	HSSL Ports
3	1–3	B1
	4–6	B1, B2
6	1–3	B1, B2

5 Radio Configurations for WCDMA

This section describes the radio configurations for WCDMA as a single standard. Multistandard configurations are described in [Radio Configurations for Multistandard and Single Standard Mixed Mode](#) on page 505.

5.1 Sector Configuration for WCDMA

This section describes the selection of an RBB according to the required sector capabilities.

Configurations with more than one TX branch per carrier support the following features and feature combinations:

- Pre-Coder for Power Balancing
- Pre-Coder for Power Balancing and MIMO
- Non equal TX power per branch (over 5 dB) when Pre-Coder for Power Balancing is used
 - Supported by DUW for 2TX and 4TX radios from SW W18.Q2
 - Supported by Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6502, Baseband 6620, and Baseband 6630 for 2TX and 4TX radios from SW W18.Q2

If flexible carrier allocation in RBB is supported for an RBB, the carriers can be allocated freely between the RF-branches. This is not to be confused with flexible carrier allocation mode.

For sectors where all carriers do not need to have the same output power, the radios in the RBB can be configured with different power levels. The maximum output power per carrier depends on the radio type and the RBB. The maximum output power per radio is listed in [Radio Capabilities](#) on page 5 and the number of radio units and TX branches in each RBB is described in [RBBs](#) on page 1133.

Note: Each radio in an RBB must have at least one carrier allocated to it.

Refer to [WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501](#) on page 183 when selecting an RBB according to the required sector capabilities such as number of carriers and diversity characteristics.



5.1.1 WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501

Table 115 WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501

Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
AIR 11	4	4	7 ⁽⁵⁾	Yes	1-4	2	2	RBB22_1A ⁽⁶⁾ RBB22_1C ⁽⁷⁾ RBB22_2B	-
					5-7	1	2	RBB22_1A ⁽⁶⁾ RBB22_2B	-
AIR 21	4	4	8	Yes	1-4	2	2	RBB22_1C ⁽⁷⁾	-
							2 or 4	RBB24_1A RBB24_2A	-
					5-8	1	2	RBB24_1A RBB24_2A	-
AIR 2488	6	6	8	Yes	1-8	2	4	RBB24_1C RBB24_2D	-
AIR 2488 MB	6	6	8	Yes	1-8	2	4	RBB24_1C RBB24_2D	-
AIR 32	2	4	8	Yes	1-4	2	2 or 4	RBB44_1D	-
					5-8	1	2	RBB44_1D	-
AIR 32 MB	2	4	8 ⁽⁸⁾ 16 ⁽⁹⁾	Yes	1-4	2	2 or 4	RBB44_1D	-
					5-8	1	2	RBB44_1D	-
AIR 4455	6	6 ⁽⁸⁾ 12 ⁽⁹⁾	8 ⁽⁸⁾ 16 ⁽⁹⁾	Yes	1-4	2	2 or 4	RBB44_1D	-
					5-8	1	2	RBB44_1D	-
					1-8	2	4	RBB44_2F	-
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884	6	6	6	No	1-6	2	2	RBB22_1F for RDS RBB22_2K for RDS	-
				Yes	1-6	2	2 or 4	RBB44_1N for RDS RBB44_2S for RDS	Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884
mRRUS 12	4	4	4	No	1-4	1	1	RBB11_1C RBB11_1D	-
							2	RBB12_1A	-
						2	2	RBB22_2E	mRRUS 12 Radio 2203 Vault Radio System 2268
				Yes	1-4	2	2	RBB22_1B	-
					1-8	2	2 or 4	RBB44_1B RBB44_2C	mRRUS 12 Radio 2203 Vault Radio System 2268
Radio 0208	-	8 ⁽¹⁰⁾	8 ⁽¹⁰⁾	No	1-4 ⁽¹¹⁾	1 ⁽¹¹⁾	2 or 4	RBB14_1A	RRUS 01 RRUW 01



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
								RBB14_2A	RRUW 02
					1-8 ⁽¹¹⁾	_(11)	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-8 ⁽¹¹⁾	_(11)	2 or 4	RBB24_1B RBB24_2B	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				No	1-4	1	1	RBB11_1C RBB11_1D	-
Radio 2203	4	4	4			2	2	RBB22_2E	mRRUS 12 Radio 2203 Vault Radio System 2268
					1-4	2	2	RBB22_1B	-
				Yes	1-8	2	2 or 4	RBB44_1B RBB44_2C	mRRUS 12 Radio 2203 Vault Radio System 2268
					1-4	2	2	RBB22_1B	-
Radio 2212	6 ⁽¹²⁾	8 ⁽¹²⁾	8 ⁽¹²⁾	No	1-6	1	1	RBB11_1C RBB11_1D	-
							2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
					1-8	2	2	RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-8	2	2	RBB22_1B RBB22_2C ⁽¹⁶⁾	-
							2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
								RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
									RRUS 11 RRUS 12 RRUS 13
Radio 2217	8 ⁽¹³⁾	8 ⁽¹³⁾	8 ⁽¹³⁾	No	1-8	1	1	RBB11_1C RBB11_1D	-
							2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
						2	2	RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-8	2	2	RBB22_1B RBB22_2C ⁽¹⁶⁾	-
							2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
								RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
Radio 2219	4	8 ⁽¹⁴⁾	8 ⁽¹⁴⁾	No	1-8	1	1	RBB11_1C RBB11_1D	-
							2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
						2	2	RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-8	2	2	RBB22_1B RBB22_2C ⁽¹⁶⁾	-
							2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
								RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
									Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
Radio 2238	6	6	6	No	1-4	1	1	RBB11_1C RBB11_1D	-
				Yes	1-4	2	2	RBB22_1B ⁽¹⁵⁾ RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
					1-8	2	2 or 4	RBB44_1B RBB44_2C ⁽¹⁵⁾	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
Radio 2242	6	6	6	No	1-8	1	1	RBB11_1C RBB11_1D RBB11_2A ⁽¹⁶⁾ RBB11_2B ⁽¹⁶⁾	-
							2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
						2	2	RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-8	2	2	RBB22_1B RBB22_2C ⁽¹⁶⁾	-
							2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
								RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
Radio 2260	6	6	6	No	1-8	1	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
						1	2	RBB12_1C RBB12_1D RBB12_2B	Radio 0208 RRUS A2 RRUS A3



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
								RBB12_2C	
						2	2	RBB22_1B RBB22_2C	-
								RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-8	2	2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
								RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
Radio 2279	6	6	6	No	1-8	1	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
						1	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
						2	2	RBB22_1B RBB22_2C	-
				RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13				
				Yes	1-8	2	2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
								RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
Radio 2460	3	6	3	No	1-8	1	2	RBB12_1E	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
						2	2	RBB12_1F	-
								RBB22_1F RBB22_1P RBB22_1Q RBB22_2K RBB22_2T RBB22_2U	
				Yes	1-8	2	2 or 4	RBB24_1C RBB44_1D RBB44_2F	-
Radio 2468	6 ⁽¹⁷⁾	6 ⁽¹⁷⁾	7 ⁽¹⁷⁾	No	1-8	1	2	RBB12_1E RBB12_1F	-
						2	2	RBB22_1F	-
							4	RBB24_1C RBB24_2D	-
Radio 2479	3	6	3	No	1-8	1	2	RBB12_1E RBB12_1F	-
						2	2	RBB22_1F RBB22_1P RBB22_1Q RBB22_2K RBB22_2T RBB22_2U	-
				Yes	1-8	2	2 or 4	RBB24_1C RBB44_1D RBB44_2F	-
Radio 4402	6	6	6	Yes	1-4	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
					1-8	2	4	RBB44_1D RBB44_2F	-
Radio 4415	6	6	8	Yes	1-4	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
					1-8	2	4	RBB44_1D RBB44_2F	-
Radio 4426	6	6	8	Yes	1-4	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
					1-8	2	4	RBB44_1D RBB44_2F	-
Radio 4428	6	6	8	Yes	1-4	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
					1-8	2	4	RBB44_1D RBB44_2F	-
Radio 4442	6	6	8	Yes	1-6	2	2	RBB22_1F RBB22_1G	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
					1-8	2	2	RBB22_2K RBB22_2L	-
					1-8	2	2-4	RBB44_1D RBB44_2F	-
Radio 4443	6	6	8	Yes	1-6	2	2	RBB22_1F RBB22_1G	-
					1-8	2	2	RBB22_2K RBB22_2L	-
					1-8	2	2-4	RBB44_1D RBB44_2F	-
Radio 4455 ⁽¹⁸⁾	6	6 ⁽⁸⁾ 12 ⁽⁹⁾	8 ⁽⁸⁾ 16 ⁽⁹⁾	Yes	1-6	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
						2	4	RBB44_1D RBB44_2F	-
Radio 4478	5	5	5	Yes	1-6	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
						2	4	RBB44_1D RBB44_2F	-
Radio 4480	6	6 ⁽⁸⁾ 6 ⁽⁹⁾	8 ⁽⁸⁾ 8 ⁽⁹⁾	Yes	1-6	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
						2	4	RBB44_1D RBB44_2F	-
Radio 4499	6	6 ⁽⁸⁾ 6 ⁽⁹⁾	8 ⁽⁸⁾ 8 ⁽⁹⁾	Yes	1-6	2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
						2	4	RBB44_1D RBB44_2F	-
RBS 6501 radio part	4	4	4	No	1-4	1	2	RBB12_1A	-
				Yes	1-4	2	2	RBB22_1B	-
RD 2242 + IRU 2242 ⁽¹⁹⁾	4	4	4	Yes	1-4	1-2	2	RBB22_1B for RDS	-
					1-8	1-2	2 or 4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242
RD 2243 + IRU 2242 ⁽¹⁹⁾	4	4	4	Yes	1-4	1-2	2	RBB22_1B for RDS	-
					1-8	1-2	2 or 4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
									RD 4442 + IRU 2242 RD 4453 + IRU 2242
RD 4442 + IRU 2242	4	4	4	Yes	1-4	1-2	2	RBB22_1B for RDS	-
					1-8	1-2	2 or 4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242
RD 4453 + IRU 2242	4	4	4	Yes	1-4	1-2	2	RBB22_1B for RDS	-
					1-8	1-2	2 or 4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242
RRU 22	2	2	2	No	1-2	1	2	RBB12_1A	-
				Yes	1-2	2	2	RBB22_1C RBB22_2A	RRUS 01 RRUW 01 RRUW 02 RRUW 03
								RBB22_2A	RRU 22 RRUS 01 RRUW 01 RRUW 02 RRUW 03
RRUS 01	4	4	4	No	1-4	1	1	RBB11_1C	-
							2	RBB10_1A RBB11_1A RBB12_1A	-
							2 or 4	RBB14_1A RBB14_2A	Radio 0208 RRUS A2 RRUS A3
						1-2 ⁽²⁰⁾	2	RBB32_1A RBB32_1B	RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 01 + RRUW 01 RRUS 01 + RRUW 02 RRUS 02 + RRUS 02 RRUW 01 + RRUW 01 RRUW 02 + RRUW 02
				Yes	1-4	1-2	2	RBB22_1A RBB22_1C RBB22_2B	RRUS 01 RRUS 02 RRUW 01



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
									RRUW 02
								RBB22_2A	RRU 22 RRUS 01 RRUS 02 RRUW 01 RRUW 02
							2 or 4	RBB22_2B RBB24_1A	RRUS 01 RRUS 02 RRUW 01 RRUW 02
					5-8	1		RBB24_2A	RRUS 01 RRUS 02
							2	RBB22_1A RBB24_1A	RRUS 01 RRUS 02 RRUW 01 RRUW 02
								RBB24_2A	RRUS 01 RRUS 02
RRUS 02	4	4	4	No	1-4	1	1	RBB11_1C	-
							2	RBB10_1A RBB11_1A RBB12_1A	-
						1-2 ⁽²⁰⁾	2	RBB32_1A RBB32_1B	RRUS 01 + RRUS 01 RRUS 02 RRUS 02 + RRUS 02
				Yes	1-4	1-2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B	RRUS 01 RRUS 02
							2 or 4	RBB24_1A RBB24_2A	RRUS 01 RRUS 02
					5-8	1	2	RBB22_1A RBB22_2B RBB24_1A RBB24_2A	RRUS 01 RRUS 02
RRUS 11	4	4	4	No	1-4	1	1	RBB11_1C RBB11_1D	-
							2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
						1-2	2	RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-4	1-2	2	RBB20_1A	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
								RBB22_1B	
							2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
					1-4	1-2	2	RBB42_1B RBB42_2D	RRUS 11 RRUS 12 RRUS 13
					5-8	1	2	RBB42_1B RBB42_2D	RRUS 11 RRUS 12 RRUS 13
					1-8	2	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
RRUS 12	4	4	4	No	1-4	1	1	RBB11_1C RBB11_1D	-
							2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
							1-2	RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-4	1-2	2	RBB20_1A RBB22_1B	-
							2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
					1-4	1-2	2	RBB42_1B RBB42_2D	RRUS 11 RRUS 12 RRUS 13
					5-8	1	2	RBB42_1B RBB42_2D	RRUS 11 RRUS 12 RRUS 13
					1-8	2	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
RRUS 13	8 ⁽²¹⁾	8 ⁽²¹⁾	8 ⁽²¹⁾	No	1-4	1	1	RBB11_1C	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾				
								RBB11_1D					
						2		RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3				
						1-2	2	RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13				
				Yes	1-4	1-2	2	RBB20_1A RBB22_1B	-				
							2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3				
					1-4	1-2	2	RBB42_1B RBB42_2D	RRUS 11 RRUS 12 RRUS 13				
					5-8	1	2	RBB22_1B RBB22_2C ⁽¹⁶⁾	-				
								RBB42_1B RBB42_2D	RRUS 11 RRUS 12 RRUS 13				
						1-2	2 or 4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3				
					1-8	2	2 or 4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13				
				RRUS 32	2	4	8	Yes	1-4	2	2	RBB22_1F RBB22_1G	-
									1-8	2	2 or 4	RBB44_1D	-
RRUS A2	-	4	4	No	1-4 ⁽¹¹⁾	-(11)	2 or 4	RBB14_1A RBB14_2A	RRUS 01 RRUW 01 RRUW 02				
					1-4 ⁽¹¹⁾	-(11)	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13				



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
				Yes	1-4 ⁽¹¹⁾	_(11)	2 or 4	RBB24_1B RBB24_2B	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
RRUS A3	-	8	8	No	1-4 ⁽¹¹⁾	_(11)	2 or 4	RBB14_1A RBB14_2A	RRUS 01 RRUW 01
					1-8 ⁽¹¹⁾	_(11)	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
				Yes	1-8 ⁽¹¹⁾	_(11)	2 or 4	RBB24_1B RBB24_2B	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
RRUW 01	4	4	4	No	1-4	1	2	RBB10_1A RBB11_1A RBB12_1A	-
							2 or 4	RBB14_1A RBB14_2A	Radio 0208 RRUS A2 RRUS A3
							1-2	RBB22_2B	RRUS 01 RRUW 01
					3-4	1-2 ⁽²⁰⁾	2	RBB32_1A RBB32_1B	RRUS 01 + RRUS 01 RRUS 01 + RRUW 01 RRUW 01 + RRUW 01
				Yes	1-4	1-2	2	RBB22_1A RBB22_1C RBB22_2A RBB22_2B	RRUS 01 RRUW 01
						1-2	2 or 4	RBB24_1A	RRUS 01 RRUW 01
					5-8	1	2	RBB22_2B	RRUS 01 RRUW 01
RRUW 02	4 ⁽²²⁾	4 ⁽²²⁾	4 ⁽²²⁾	No	1-4	1	1	RBB11_1C	-
							2	RBB10_1A RBB11_1A RBB12_1A	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
							2 or 4	RBB14_1A RBB14_2A	Radio 0208 RRUS A2
						1-2	2	RBB22_2B	RRUS 01 RRUS 02
					3-4	1-2 ⁽²⁰⁾	2	RBB32_1A RBB32_1B	RRUS 01 + RRUS 01 RRUS 01 + RRUW 02 RRUW 02 + RRUW 02
				Yes	1-4	1-2	2	RBB22_1A RBB22_1C RBB22_2B	RRUS 01 RRUS 02
								RBB22_2A	RRU 22 RRUS 01 RRUS 02
						1-2	2 or 4	RBB24_1A	RRUS 01
					5-8	1	2	RBB22_2B	RRUS 01 RRUS 02
RRUW 03	4	4	4	No	1-4	1	2	RBB10_1A RBB11_1A RBB12_1A	-
						1-2	2	RBB22_2B	RRUW 03
					3-4	1-2 ⁽²⁰⁾	2	RBB32_1A RBB32_1B	RRUW 03 + RRUW 03
				Yes	1-4	1-2	2	RBB22_1A RBB22_1C RBB22_2B	RRUW 03
								RBB22_2A	RRU 22 RRUW 03
						1-2	2 or 4	RBB24_1A	RRUW 03
					5-8	1	2	RBB22_2B	RRUW 03
RUS 01	4	4	4	No	1-4	1	1	RBB11_1C	-
							2	RBB10_1A RBB11_1A RBB12_1A	-
					3-4	1-2 ⁽²³⁾	2	RBB32_1A RBB32_1B	Two radios with any combination of RUS 01, RUS 02 and RUS 03 Two radios with any combination of RUS 01, RUS 02 and RUW 01
				Yes	1-4	1-2	2	RBB22_1A RBB22_2B	RUS 01 RUS 02 RUS 03 RUW 01
							2 or 4	RBB24_1A	RUS 01 RUS 02



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
					5-8	1	2		RUS 03 RUW 01
								RBB24_2A	RUS 01 RUS 02 RUS 03
								RBB22_1A RBB22_2B RBB24_1A	RUS 01 RUS 02 RUS 03 RUW 01
								RBB24_2A	RUS 01 RUS 02 RUS 03
RUS 02	4	4	4	No	1-4	1	1	RBB11_1C	-
							2	RBB10_1A RBB11_1A RBB12_1A	-
						1-2 ⁽²³⁾	2	RBB32_1A RBB32_1B	Two radios with any combination of RUS 01, RUS 02 and RUS 03 Two radios with any combination of RUS 01, RUS 02 and RUW 01
				Yes	1-4	1-2	2	RBB22_1A RBB22_2B	RUS 01 RUS 02 RUW 01
							2 or 4	RBB24_1A	RUS 01 RUS 02 RUS 03 RUW 01
								RBB24_2A	RUS 01 RUS 02
RUS 03	8	8	8 ⁽²⁴⁾	No	1-4	1	1	RBB11_1C	-
							2	RBB10_1A RBB11_1A RBB12_1A	-
						1-2 ⁽²³⁾	2	RBB32_1A RBB32_1B	Two radios with any combination of RUS 01, RUS 02 and RUS 03
						5-8	1	RBB11_1A RBB12_1A	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
				Yes	1-4	1-2	2	RBB22_1A RBB22_2B	RUS 01 RUS 02 RUS 03
							2 or 4	RBB24_1A	RUS 01 RUS 02 RUS 03
								RBB24_2A	RUS 01 RUS 02 RUS 03
					5-8	1	2	RBB22_1A RBB22_2B RBB24_1A	RUS 01 RUS 02 RUS 03
								RBB24_2A	RUS 01 RUS 02 RUS 03
RUW 01	4	4	4	No	1-4	1	2	RBB10_1A RBB11_1A RBB12_1A	-
						1-2 ⁽²³⁾	2	RBB32_1A RBB32_1B	RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUW 01 RUS 02 + RUS 02 RUS 02 + RUW 01 RUW 01 + RUW 01
				Yes	1-4	1-2	2	RBB22_1A RBB22_2B	RUS 01 RUS 02 RUW 01
							2 or 4	RBB24_1A	RUS 01 RUS 02 RUW 01
					5-8	1	2	RBB24_1A	RUS 01 RUS 02 RUW 01
RUW 02	2	2	2	No	1-2	1	1	RBB11_1C	-
							2	RBB10_1A RBB11_1A RBB12_1A	-
				Yes	1-4	1-2	1-2	RBB22_1A RBB22_2B	RUW 02
					5-8	1	2	RBB24_1A	RUW 02
Vault Radio System 2268	4	4	4	No	1-4	1	1	RBB11_1C RBB11_1D	-
						2	2	RBB22_2E	mRRUS 12 Radio 2203 Vault Radio System 2268
				Yes	1-4	2	2	RBB22_1B	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio ⁽¹⁾	Supports Flexible Carrier Allocation	Carriers per RBB ⁽²⁾	TX Branches per Carrier	RX Branches per Carrier (x-way RX Diversity)	RBB ⁽³⁾	Additional Radios in RBB ⁽⁴⁾
					1-8	2	2 or 4	RBB44_1B RBB44_2C	mRRUS 12 Radio 2203 Vault Radio System 2268

- (1) Number of carriers may be limited due to carrier bandwidth.
- (2) Number of carriers in RBB requires Baseband HWAC and WCDMA Number of Cell Carriers HWAC.
- (3) AIR has two radios integrated in the same unit and typically uses RBBs for two radios.
- (4) Number of carriers in RBB depends on the additional radios.
- (5) AIR 11 supports eight carriers within stated IBW using flexible carrier bandwidth.
- (6) Multiple non-MIMO cells.
- (7) TX diversity or MIMO 2x2.
- (8) Number of carriers per band.
- (9) Number of carriers in total for all bands.
- (10) Radio 0208 B5 supports six carriers per RF port and six carriers per radio.
- (11) Radio 0208, RRUS A2, and RRUS A3 are not TX-capable and are used in combination with a TX-capable radio to increase the total RX-capability of the configuration. For more information, see *Remote Radio Unit Description*.
- (12) Radio 2212 B5 supports five carriers per RF port and five carriers per radio.
Radio 2212 B8 supports seven carriers per RF port in uplink and seven carriers per radio.
- (13) Radio 2217 B5 supports five carriers per RF port and five carriers per radio.
Radio 2217 B8 supports seven carriers per RF port and seven carriers per radio.
Radio 2217 B11 supports four carriers per RF port and four carriers per radio.
- (14) Radio 2219 B0A, Radio 2219 B0B, and Radio 2219 B8A support five carriers per RF port in uplink and five carriers per radio.
Radio 2219 B8 supports seven carriers per RF port in uplink and seven carriers per radio.
- (15) Baseband supports flexible carrier allocation.
- (16) RBB is only available in mixed mode.
- (17) Radio 2468 B8A supports four carriers per RF port and four carriers per radio.
- (18) Radio 4455 B2/B25 B66A supports WCDMA with R-state $\geq$ R1C.
- (19) RDs cannot be mixed on the same IRU.
- (20) Maximum two carriers on the TX A branch and one carrier each on the TX B and TX C branches.
- (21) RRUS 13 B8A supports five carriers per RF port and five carriers per radio.
- (22) RRUW 02 B11 supports two carriers per RF port and two carriers per radio.
- (23) Maximum two carriers on the TX A branch and one carrier each on the TX B and TX C branches.
- (24) RUS 03 supports eight WCDMA carriers in radio with RBB11_1A and RBB12_1A. With all other RBBs, RUS 03 supports four WCDMA carriers in radio.

5.2 Supported Radio Configurations for WCDMA

This section describes the supported WCDMA radio configurations by listing valid combinations of DBBs and RBBs.

The rules and information in [Baseband Support and Configuration for WCDMA](#) on page 248 must be considered when choosing a configuration.



DUW configurations with more than four carriers in one or more sectors require that the carrier allocation mode is set to flexible. See [Baseband Support and Configuration for WCDMA](#) on page 248 for more information.

For more information on the optional features available for WCDMA radio configurations, see the WCDMA RAN CPI library.

For recommendations important to consider when setting up a WCDMA system during site configuration, or when modifying an existing configuration, see the document *WCDMA RBS Configuration Guidelines* in the WCDMA RAN library.

WCDMA configurations from are listed in [WCDMA Configurations for Baseband, DU, and RBS 6501](#) on page 199.

Cross-Sector Antenna Sharing Redundancy configurations are listed in [WCDMA Cross-Sector Antenna Sharing Redundancy](#) on page 204.

Combined cell configurations are listed in [WCDMA Combined Cell](#) on page 205.

Note: Due to space and power limitations, not all RBS types support all configurations. Information on configurable number of DUs or Baseband units and radios is found in *RBS Description*. Refer to *Power Configurations* for information on power configurations.

In configurations where DUW 30 is used, the ODW 30 digital unit can also be used.

The following rules apply to WCDMA cascade configurations:

- Cascading between RBBs only supported with remote radio units on DUW.
- Remote radio units cannot cascade with IRU 2242 on DUW.
- RBBs with radios connected to separate RI ports cannot be used in cascade chains on DUW.

5.2.1 WCDMA Configurations for Baseband, DU, and RBS 6501

Table 116 WCDMA Configurations with Baseband

RBB ⁽¹⁾	From SW Release		
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209
RBB10_1A	W18.Q2	-	-
RBB11_1A	W18.Q2	-	-
RBB11_1A for AIR 11	W18.Q2	-	-
RBB11_1C	W18.Q2	W18.Q2	-



RBB ⁽¹⁾	From SW Release		
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209
RBB11_1D	W18.Q2	W18.Q2	-
RBB12_1A	W18.Q2	-	-
RBB12_1A for AIR 21	W18.Q2	-	-
RBB12_1C	W18.Q2	-	-
RBB12_1D	W18.Q2	-	-
RBB12_1E	W18.Q2	-	-
RBB12_1F	W18.Q2	-	-
RBB12_2B	W18.Q2	-	-
RBB12_2C	W18.Q2	-	-
RBB12_2D	W18.Q2	-	-
RBB12_2E	W18.Q2	-	-
RBB14_1A	W18.Q2	-	-
RBB14_2A	W18.Q2	-	-
RBB20_1A	W18.Q2	-	-
RBB20_2A	W18.Q2	-	-
RBB22_1A	W18.Q2	-	-
RBB22_1A for AIR 11	W18.Q2	-	-
RBB22_1B	W18.Q2	W18.Q2	-
RBB22_1B for RDS	W18.Q2	W18.Q2	W18.Q2
RBB22_1C	W18.Q2	-	-
RBB22_1C for AIR 11	W18.Q2	-	-
RBB22_1C for AIR 21	W18.Q2	-	-
RBB22_1F	W18.Q2	W19.Q3	-
RBB22_1F for RDS	W19.Q2	W19.Q2	W19.Q2
RBB22_1G	W18.Q2	W19.Q3	-
RBB22_1P	W18.Q4	-	-
RBB22_1Q	W18.Q4	-	-
RBB22_2A	W18.Q2	-	-
RBB22_2A for AIR 11	W18.Q2	-	-
RBB22_2A for AIR 21	W18.Q2	-	-
RBB22_2B	W18.Q2	-	-
RBB22_2B for AIR 11	W18.Q2	-	-
RBB22_2E	W18.Q2	W18.Q2	-
RBB22_2K	W18.Q2	W19.Q3	-
RBB22_2K for RDS	W19.Q2	W19.Q2	W19.Q2
RBB22_2L	W18.Q2	W19.Q3	-
RBB22_2T	W18.Q4	-	-
RBB22_2U	W18.Q4	-	-
RBB24_1A	W18.Q2	-	-
RBB24_1A for AIR 21	W18.Q2	-	-



RBB ⁽¹⁾	From SW Release		
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209
RBB24_1B	W18.Q2	-	-
RBB24_1C	W18.Q2	-	-
RBB24_2A	W18.Q2	-	-
RBB24_2A for AIR 21	W18.Q2	-	-
RBB24_2B	W18.Q2	-	-
RBB24_2D	W18.Q2	-	-
RBB32_1A	W18.Q2	-	-
RBB32_1B	W18.Q2	-	-
RBB42_1B	W18.Q2	-	-
RBB42_2D	W18.Q2	-	-
RBB44_1B	W18.Q2	-	-
RBB44_1B for RDS	W18.Q3	W18.Q2	W18.Q3
RBB44_1D	W18.Q2	W19.Q3	-
RBB44_1N for RDS	W19.Q2	W19.Q2	W19.Q2
RBB44_2C	W18.Q2	-	-
RBB44_2C for RDS	W18.Q3	W18.Q3	W18.Q3
RBB44_2F	W18.Q2	W19.Q3	-
RBB44_2S for RDS	W19.Q2	W19.Q2	W19.Q2

(1) DBB10_81 for one Baseband or one IDU.

Table 117 WCDMA Configurations with One DUW

RBB	From SW Release		
	DUW		
	DBB10_01	DBB10_02	DBB10_99
RBB10_1A	W18.Q2	W18.Q2	W18.Q2
RBB11_1A	W18.Q2	W18.Q2	W18.Q2
RBB11_1A for AIR 11	W18.Q2	W18.Q2	W18.Q2
RBB12_1A	W18.Q2	W18.Q2	W18.Q2
RBB12_1A for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB12_1C	-	-	W18.Q2
RBB12_1D	-	-	W18.Q2
RBB12_1E	W18.Q2	W18.Q2	W18.Q2
RBB12_1F	W18.Q2	W18.Q2	W18.Q2
RBB12_2B	-	-	W18.Q2
RBB12_2C	-	-	W18.Q2
RBB14_1A	W18.Q2	W18.Q2	W18.Q2
RBB14_2A	W18.Q2	-	W18.Q2
RBB22_1A	W18.Q2	W18.Q2	W18.Q2



RBB	From SW Release		
	DUW		
	DBB10_01	DBB10_02	DBB10_99
RBB22_1A for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB22_1B	W18.Q2	W18.Q2	W18.Q2
RBB22_1B for RDS ⁽¹⁾	W18.Q2	W18.Q2	W18.Q2
RBB22_1C	W18.Q2	W18.Q2	W18.Q2
RBB22_1C for AIR 11	W18.Q2	W18.Q2	W18.Q2
RBB22_1C for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB22_1F	-	-	W18.Q2
RBB22_1G	-	-	W18.Q2
RBB22_2A	W18.Q2	-	W18.Q2
RBB22_2A for AIR 11	W18.Q2	-	W18.Q2
RBB22_2A for AIR 21	W18.Q2	-	W18.Q2
RBB22_2B	W18.Q2	-	W18.Q2
RBB22_2B for AIR 11	W18.Q2	-	W18.Q2
RBB22_2E	-	-	W18.Q2
RBB24_1A	W18.Q2	W18.Q2	W18.Q2
RBB24_1A for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB24_1B	W18.Q2	W18.Q2	W18.Q2
RBB24_1C	W18.Q2	W18.Q2	W18.Q2
RBB24_2B	W18.Q2	-	W18.Q2
RBB32_1A	W18.Q2	W18.Q2	W18.Q2
RBB42_1B	W18.Q2	W18.Q2	W18.Q2
RBB42_2D	W18.Q2	-	W18.Q2
RBB44_1B	W18.Q2	W18.Q2	W18.Q2
RBB44_1D	W18.Q2	W18.Q2	W18.Q2
RBB44_2C	W18.Q2	-	W18.Q2

(1) IRU 2242 can be connected only to DUW 11, DUW 31 or DUW 41.

Table 118 WCDMA Configurations with Two DUWs

RBB	From SW Release		
	2 × DUW		
	DBB21_01 ⁽¹⁾ DBB22_01 ⁽¹⁾	DBB21_02 ⁽²⁾ DBB22_02 ⁽²⁾	DBB21_99 ⁽³⁾ DBB22_99 ⁽³⁾
RBB10_1A	W18.Q2	W18.Q2	W18.Q2
RBB11_1A	W18.Q2	W18.Q2	W18.Q2
RBB11_1A for AIR 11	W18.Q2	W18.Q2	W18.Q2
RBB12_1A	W18.Q2	W18.Q2	W18.Q2
RBB12_1A for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB12_1C	-	-	W18.Q2
RBB12_1D	-	-	W18.Q2
RBB12_1E	-	-	W18.Q2



RBB	From SW Release		
	2 × DUW		
	DBB21_01 ⁽¹⁾ DBB22_01 ⁽¹⁾	DBB21_02 ⁽²⁾ DBB22_02 ⁽²⁾	DBB21_99 ⁽³⁾ DBB22_99 ⁽³⁾
RBB12_1F	-	-	W18.Q2
RBB12_2B	-	-	W18.Q2
RBB12_2C	-	-	W18.Q2
RBB14_1A	W18.Q2	W18.Q2	W18.Q2
RBB14_2A	-	W18.Q2	W18.Q2
RBB22_1A	W18.Q2	W18.Q2	W18.Q2
RBB22_1A for AIR 11	W18.Q2	W18.Q2	W18.Q2
RBB22_1B	W18.Q2	W18.Q2	W18.Q2
RBB22_1B for RDS ⁽⁴⁾	W18.Q2	W18.Q2	W18.Q2
RBB22_1C	W18.Q2	W18.Q2	W18.Q2
RBB22_1C for AIR 11	W18.Q2	W18.Q2	W18.Q2
RBB22_1C for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB22_1F	-	-	W18.Q2
RBB22_1G	-	-	W18.Q2
RBB22_2A	-	W18.Q2	W18.Q2
RBB22_2A for AIR 11	-	W18.Q2	W18.Q2
RBB22_2A for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB22_2B	-	W18.Q2	W18.Q2
RBB22_2B for AIR 11	-	W18.Q2	W18.Q2
RBB22_2E	-	-	W18.Q2
RBB24_1A	W18.Q2	W18.Q2	W18.Q2
RBB24_1A for AIR 21	W18.Q2	W18.Q2	W18.Q2
RBB24_1B	W18.Q2	W18.Q2	W18.Q2
RBB24_1C	W18.Q2	W18.Q2	W18.Q2
RBB24_2B	-	W18.Q2	W18.Q2
RBB32_1A	W18.Q2	W18.Q2	W18.Q2
RBB42_1B	W18.Q2	W18.Q2	W18.Q2
RBB42_2D	-	W18.Q2	W18.Q2
RBB44_1B	W18.Q2	W18.Q2	W18.Q2
RBB44_1D	W18.Q2	W18.Q2	W18.Q2
RBB44_2C	-	W18.Q2	W18.Q2

(1) DBB21_01 and DBB22_01 support up to six sectors.

(2) DBB21_02 and DBB22_02 support up to six sectors.

(3) DBB21_02 and DBB22_02 support up to six sectors.

(4) IRU 2242 can be connected only to DUW 11, DUW 31 or DUW 41.

Table 119 WCDMA Configurations with RBS 6501

RBB ⁽¹⁾	From SW Release
	RBS 6501
RBB12_1A	W18.Q2



RBB ⁽¹⁾	From SW Release
	RBS 6501
RBB22_1B	W18.Q2

(1) with DBB10_99.

5.2.2 WCDMA Cross-Sector Antenna Sharing Redundancy

This section describes the supported WCDMA configurations for cross-sector antenna sharing redundancy.

The rules and information in [Baseband Support and Configuration for WCDMA](#) on page 248 must be considered when choosing a configuration.

Each carrier requires two IQ streams for 2-way RX diversity and four IQ streams for 4-way RX diversity. See section [WCDMA Downlink and Uplink IQ Streams](#) on page 262 for more information on the maximum number of IQ streams per node and DU.

Cross-Sector Antenna Sharing Redundancy is not supported for RBS 6131 AC and RBS 6131 DC.

- [Table 120](#) lists configurations with one Baseband or one DUW.
- [Table 121](#) lists configurations with two DUWs.

Table 120 WCDMA Cross-Sector Antenna Sharing Redundancy Configurations with One Baseband or One DUW

Number of Sectors ⁽¹⁾	DBB	RBB
2	DBB10_99	RBB22_2E
3		
4		
5		
6		

(1) Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6502, Baseband 6620, and Baseband 6630 supports up to three sectors and up to two carriers, or dual band 3x1 + 3x1.



Table 121 WCDMA Cross-Sector Antenna Sharing Redundancy Configurations with Two DUWs

Number of Sectors	DBB	RBB
2	DBB21_99 DBB22_99	RBB22_2E
3		
4		
5		
6		

5.2.3

WCDMA Combined Cell

With the Combined Cell feature for WCDMA, cell carriers from multiple radios can be combined in one cell. For more information, refer to [Combined Cell](#) in the WCDMA RAN CPI library.

WCDMA Combined Cell is supported by:

- DUW, Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6502, Baseband 6620, and Baseband 6630 from SW W18.Q2

Combined Cell is supported with the following conditions:

- Single or dual DU or Baseband configuration.
- Single mode and mixed mode radio configurations.
- HS-MC is not supported together with Combined Cell.
- Within one combined cell:
 - Up to six cell carriers are supported.
 - The cell carriers do not support 4-WRXD.
 - All cell carriers in one combined cell must have the same carrier frequency.
 - Sectors for one combined cell must be configured within the same frequency band.
 - All sectors for a cell must have the same antenna configuration in terms of TX and RX branches.
 - Supported antenna configurations:
 - 1TX/1RX
 - 1TX/2RX

- Within one baseband pool:
 - Up to three combined cells and up to six cell carriers in total is supported on the same carrier frequency.
 - Combined cells can be combined with legacy cells on the same carrier frequency.

From SW W18.Q3, Combined Cell is supported with the following additional conditions:

- HS-MC is supported together with Combined Cell for symmetric configurations, where the cell carriers are identical on both carrier frequencies.
- Up to three cell carriers are supported.
- Within one baseband pool:
 - Combined cells can be combined with one legacy cell per carrier frequency. The combined cell has two cell carriers.

5.2.4 WCDMA Configurable Carrier Bandwidth

This section lists the supported configurations for configurable carrier bandwidth. This feature allows WCDMA carrier bandwidths, both in uplink and in downlink, from 3.8 MHz up to 5.0 MHz in increments of 100 kHz.

The following DUs and Baseband units are supported:

- DUW from SW W18.Q2
- Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6502, Baseband 6620, and Baseband 6630 from SW W18.Q2

The following rule applies:

- All WCDMA enabled radio units are supported

5.2.5 Psi-Coverage Configurations for WCDMA

This section describes the radio configurations that support Y- and ψ -Coverage (Psi-Coverage).

The use of ψ -Coverage requires a license. For more information on licenses, refer to *Licenses and Hardware Activation Codes* in the *WCDMA RAN CPI* library.

The ψ -Coverage solution is supported for the frequency bands listed below.

- Band 0 (900 MHz), only for Triple Tower Mounted Amplifier with frequency shifting (TTMF)



- Band 1 (2100 MHz)
- Band 2 (1900 MHz), only for TTMF
- Band 3 (1800 MHz), only for TTMF
- Band 5 (850 MHz)
- Band 8 (900 MHz)

Y- and ψ -Coverage for WCDMA is supported by:

- DUW 10, DUW 11, DUW 20, DUW 30, DUW 31, DUW 41, Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6620, and Baseband 6630 from SW W18.Q2

Carrier allocation for Y- and ψ -Coverage configurations:

- One UL carrier in ψ -Coverage configurations require three carrier resources on the RF port
- One UL carrier in Y-Coverage configurations require two carrier resources on the RF port

For radio configurations that support Y- and ψ -Coverage with DUW, see [Supported Radio Configurations for WCDMA Y- and Psi-Coverage with DUW](#) on page 207.

For radio configurations that support Y- and ψ -Coverage with Baseband 5212 and Baseband 5216, see [Supported Radio Configurations for WCDMA Y- and Psi-Coverage with Baseband 5212 and Baseband 5216](#) on page 209.

For radio configurations that support Y- and ψ -Coverage with Baseband 6303, Baseband 6620, and Baseband 6630, see [Supported Radio Configurations for WCDMA Y- and Psi-Coverage with Baseband 6303, Baseband 6620, and Baseband 6630](#) on page 212.

For radio configurations that support Y- and ψ -Coverage with Baseband 6318, see [Supported Radio Configurations for WCDMA Y- and Psi-Coverage with Baseband 6318](#) on page 215.

Refer to [Installing Psi-Coverage Hardware and Psi-Coverage Hardware Description](#) for more detailed information on Psi configuration.

5.2.5.1

Supported Radio Configurations for WCDMA Y- and Psi-Coverage with DUW

[Table 122](#) describes the WCDMA radio configurations that support Y- and ψ -Coverage.

Supported TMF and TTMF configurations:

- 1 x ψ



- 1 x ψ + 1DL only
- 2 x ψ
- 2 x ψ + 1DL only
- 2 x ψ + 2DL only

Table 122 WCDMA Radio Configurations Supporting Y- and ψ -Coverage with DUW

From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	ψ
W18.Q2	RBB12_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01
		2 (1 DL/UL + 1 DL)	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01
	RBB22_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01
		3 (2 DL/UL + 1 DL)	RRUS 01 RRUS 02 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01	RRUS 01 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01
		4 (2 DL/UL + 2 DL)	RRUS 01 RRUW 01 RRUW 02 RUS 01 RUS 02 RUS 03 RUW 01	



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
	RBB22_1B	1 (1 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (1 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (2 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		3 (2 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		4 (2 DL/UL + 2 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13

5.2.5.2

Supported Radio Configurations for WCDMA Y- and Psi-Coverage with Baseband 5212 and Baseband 5216

Table 123 describes the WCDMA radio configurations that support Y- and ψ -Coverage.

Supported TMF and TTMF configurations:

- 1 x ψ
- 1 x ψ + 1 DL only
- 2 x ψ
- 2 x ψ + 1 DL only
- 2 x ψ + 2 DL only

Table 123 WCDMA Radio Configurations Supporting Y- and ψ -Coverage with Baseband 5212 and Baseband 5216

From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
W18.Q2	RBB12_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
		2 (1 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RUS 03	RUS 03
		4 (2 DL/UL + 2 DL)	RUS 03	RUS 03
	RBB22_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
		4 (2 DL/UL + 2 DL)	RRUS 01 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
	RBB22_1B	1 (1 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (1 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (2 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		3 (2 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		4 (2 DL/UL + 2 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
W19.Q1	RBB12_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL)	RRUS 01 RRUS 02	RRUS 01 RRUS 02



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
			RUS 01 RUS 02 RUS 03	RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RUS 03	RUS 03
		4 (2 DL/UL + 2 DL)	RUS 03	RUS 03
	RBB12_1E RBB12_1F	1 (1 DL/UL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
		3 (2 DL/UL + 1 DL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
		4 (2 DL/UL + 2 DL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
	RBB22_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
		4 (2 DL/UL + 2 DL)	RRUS 01 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
	RBB22_1B	1 (1 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (1 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (2 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		3 (2 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		4 (2 DL/UL + 2 DL)	Radio 2212 Radio 2217 Radio 2219	Radio 2212 Radio 2217 Radio 2219 RRUS 13



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	ψ
	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	1 (1 DL/UL)	RRUS 13 Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		3 (2 DL/UL + 1 DL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		4 (2 DL/UL + 2 DL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾

(1) One RBB is configured for Y- or ψ-Coverage and the other RBB is configured as a normal sector with one or several RATs.

(2) Each RBB can independently be configured for any supported Y- or ψ-Coverage or normal sector with one or several RATs.

5.2.5.3

Supported Radio Configurations for WCDMA Y- and Psi-Coverage with Baseband 6303, Baseband 6620, and Baseband 6630

Table 124 describes the WCDMA radio configurations that support Y and ψ-Coverage.

Supported TMF and TTMF configurations:

- 1 x ψ
- 1 x ψ + 1DL only
- 2 x ψ
- 2 x ψ + 1DL only
- 2 x ψ + 2DL only

Table 124 WCDMA Radio Configurations Supporting Y- and ψ-Coverage with Baseband 6303, Baseband 6620, and Baseband 6630

From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	ψ
W18.Q2	RBB12_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3	RUS 03	RUS 03



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
		(2 DL/UL + 1 DL)		
		4 (2 DL/UL + 2 DL)	RUS 03	RUS 03
	RBB22_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1DL) or (2 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
		4 (2 DL/UL + 2 DL)	RRUS 01 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
	RBB22_1B	1 (1 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (1 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (2 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		3 (2 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		4 (2 DL/UL + 2 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
W19.Q1	RBB12_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RUS 03	RUS 03
		4	RUS 03	RUS 03



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	ψ
		(2 DL/UL + 2 DL)		
	RBB12_1E RBB12_1F	1 (1 DL/UL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
		3 (2 DL/UL + 1 DL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
		4 (2 DL/UL + 2 DL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
	RBB22_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
		4 (2 DL/UL + 2 DL)	RRUS 01 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
	RBB22_1B	1 (1 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (1 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (2 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		3 (2 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		4 (2 DL/UL + 2 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	1 (1 DL/UL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		3	Radio 4415 ⁽²⁾	Radio 4415 ⁽²⁾



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
		(2 DL/UL + 1 DL)	Radio 4428 ⁽¹⁾	Radio 4428 ⁽¹⁾
		4 (2 DL/UL + 2 DL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾

- (1) One RBB is configured for Y- or Ψ-Coverage and the other RBB is configured as a normal sector with one or several RATs.
- (2) Each RBB can independently be configured for any supported Y- or Ψ-Coverage or normal sector with one or several RATs.

5.2.5.4 Supported Radio Configurations for WCDMA Y- and Psi-Coverage with Baseband 6318

Table 125 describes the WCDMA radio configurations that support Y- and Ψ-Coverage.

Supported TMF and TTMF configurations:

- 1 x Ψ
- 1 x Ψ + 1 DL only
- 2 x Ψ
- 2 x Ψ + 1 DL only
- 2 x Ψ + 2 DL only

Table 125 WCDMA Radio Configurations Supporting Y- and Ψ-Coverage with Baseband 6318

From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
W18.Q2	RBB12_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RUS 03	RUS 03
		4 (2 DL/UL + 2 DL)	RUS 03	RUS 03
	RBB22_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
		4 (2 DL/UL + 2 DL)	RRUS 01 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
	RBB22_1B	1 (1 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (1 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (2 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		3 (2 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		4 (2 DL/UL + 2 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
	W19.Q1	RBB12_1A	1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
			2 (1 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
			3 (2 DL/UL + 1 DL)	RUS 03
			4 (2 DL/UL + 2 DL)	RUS 03
		RBB12_1E RBB12_1F	1 (1 DL/UL)	Radio 2468 ⁽¹⁾
			2 (1 DL/UL + 1 DL)	Radio 2468 ⁽¹⁾
			3 (2 DL/UL + 1 DL)	Radio 2468 ⁽¹⁾



From SW Release	RBB	Number of Carriers	Radio Unit Support	
			Y	Ψ
	RBB22_1A	4 (2 DL/UL + 2 DL)	Radio 2468 ⁽¹⁾	Radio 2468 ⁽¹⁾
		1 (1 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		2 (1 DL/UL + 1 DL) or (2 DL/UL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03
		3 (2 DL/UL + 1 DL)	RRUS 01 RRUS 02 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
	RBB22_1B	4 (2 DL/UL + 2 DL)	RRUS 01 RUS 01 RUS 02 RUS 03	RRUS 01 RUS 01 RUS 02 RUS 03
		1 (1 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (1 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13
		2 (2 DL/UL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		3 (2 DL/UL + 1 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	4 (2 DL/UL + 2 DL)	Radio 2212 Radio 2217 Radio 2219 RRUS 13	Radio 2212 Radio 2217 Radio 2219 RRUS 13
		1 (1 DL/UL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		2 (1 DL/UL + 1 DL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		2 (2 DL/UL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		3 (2 DL/UL + 1 DL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾
		4 (2 DL/UL + 2 DL)	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾	Radio 4415 ⁽²⁾ Radio 4428 ⁽¹⁾



- (1) One RBB is configured for Y- or ψ -Coverage and the other RBB is configured as a normal sector with one or several RATs.
- (2) Each RBB can independently be configured for any supported Y- or ψ -Coverage or normal sector with one or several RATs.

5.3 Carrier Allocation for WCDMA

This section describes carrier allocation for single mode WCDMA configurations.

In an RBB with multiple radios, the first listed radio is connected towards DU or Baseband.

5.3.1 WCDMA Carrier Allocation for RBB10_1A

Table 126 WCDMA Carrier Allocation for RBB10_1A

Radio Type	From SW Release	RBB10_1A	
		Downlink	Uplink
		TX A	
RRUS 01 RRUS 02 RRUW 01 RRUW 02 RRUW 03 RUS 01 RUS 02 RUS 03 RUW 01	W18.Q2	A = number of carriers, $A \leq 4$	2-WRXD
RUW 02	W18.Q2	A = number of carriers, $A \leq 2$	2-WRXD

5.3.2 WCDMA Carrier Allocation for RBB11_1A

Table 127 WCDMA Carrier Allocation for RBB11_1A

Radio Type	From SW Release	RBB11_1A	
		Downlink	Uplink
		TX A/RX A	
AIR 11 RRUS 01 RRUS 02 RRUW 01 RRUW 02 RRUW 03 RUS 01 RUS 02 RUW 01	W18.Q2	A = number of carriers, $A \leq 4$	2-WRXD
RUS 03	W18.Q2	A = number of carriers, $A \leq 8$	2-WRXD
RUW 02	W18.Q2	A = number of carriers, $A \leq 2$	2-WRXD



5.3.3

WCDMA Carrier Allocation for RBB11_1C

Table 128 WCDMA Carrier Allocation for RBB11_1C

Radio Type	From SW Release	RBB11_1C	
		Downlink	Uplink
		TX A/RX A	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 01 RRUS 02 RRUS 11 RRUS 12 RRUS 13 RRUS 13 RUW 02 RUS 01 RUS 02 RUS 03 RUW 02 Vault Radio System 2268	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2238	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2260 Radio 2279	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity

5.3.4

WCDMA Carrier Allocation for RBB11_1D

Table 129 WCDMA Carrier Allocation for RBB11_1D

Radio Type	From SW Release	RBB11_1D	
		Downlink	Uplink
		TX A/RX A	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Vault Radio System 2268	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2238	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2260 Radio 2279	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity



5.3.5 WCDMA Carrier Allocation for RBB11_2A

Table 130 WCDMA Carrier Allocation for RBB11_2A

Radio Type	From SW Release	RBB11_2A	
		Downlink	Uplink
		TX A/RX A	
Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 13 Vault Radio System 2268	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2238	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2260 Radio 2279	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity

5.3.6 WCDMA Carrier Allocation for RBB11_2B

Table 131 WCDMA Carrier Allocation for RBB11_2B

Radio Type	From SW Release	RBB11_2B	
		Downlink	Uplink
		TX A/RX A	
Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 13 Vault Radio System 2268	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2238	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity
Radio 2260 Radio 2279	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity



5.3.7

WCDMA Carrier Allocation for RBB12_1A

Table 132 WCDMA Carrier Allocation for RBB12_1A

Radio Type	From SW Release	RBB12_1A	
		Downlink	Uplink
		TX A/RX A	
AIR 21 RBS 6501 radio part RRU 22 RRUS 01 RRUS 02 RRUW 01 RRUW 02 RRUW 03 RUS 01 RUS 02 RUS 03 RUW 01 RUW 02 mRRUS 12	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD

5.3.8

WCDMA Carrier Allocation for RBB12_1C

Table 133 WCDMA Carrier Allocation for RBB12_1C

Radio Type	From SW Release	RBB12_1C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD



Radio Type	From SW Release	RBB12_1C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD

5.3.9

WCDMA Carrier Allocation for RBB12_1D

Table 134 WCDMA Carrier Allocation for RBB12_1D

Radio Type	From SW Release	RBB12_1D	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD



Radio Type	From SW Release	RBB12_1D	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD

5.3.10 WCDMA Carrier Allocation for RBB12_1E

Table 135 WCDMA Carrier Allocation for RBB12_1E

Radio Type	From SW Release	RBB12_1E	
		Downlink	Uplink
		TX A/RX A	
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with DUW.	2-WRXD
Radio 2468	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD

5.3.11 WCDMA Carrier Allocation for RBB12_1F

Table 136 WCDMA Carrier Allocation for RBB12_1F

Radio Type	From SW Release	RBB12_1F	
		Downlink	Uplink
		TX A/RX A	
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with DUW.	2-WRXD
Radio 2468	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD



5.3.12 WCDMA Carrier Allocation for RBB12_2B

Table 137 WCDMA Carrier Allocation for RBB12_2B

Radio Type	From SW Release	RBB12_2B	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD

5.3.13 WCDMA Carrier Allocation for RBB12_2C

Table 138 WCDMA Carrier Allocation for RBB12_2C

Radio Type	From SW Release	RBB12_2C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD



Radio Type	From SW Release	RBB12_2C	
		Downlink	Uplink
		TX A/RX A	
RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD

5.3.14

WCDMA Carrier Allocation for RBB14_1A

Table 139 WCDMA Carrier Allocation for RBB14_1A

Radio Type	From SW Release	RBB14_1A	
		Downlink	Uplink
		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3 RRUW 01 + Radio 0208 RRUW 01 + RRUS A2 RRUW 01 + RRUS A3 RRUW 02 + Radio 0208 RRUW 02 + RRUS A2	W18.Q2	A = number of carriers, $A \leq 4$	2- or 4-WRXD



5.3.15 WCDMA Carrier Allocation for RBB14_2A

Table 140 WCDMA Carrier Allocation for RBB14_2A

Radio Type	From SW Release	RBB14_2A	
		Downlink	Uplink
		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3 RRUW 01 + Radio 0208 RRUW 01 + RRUS A2 RRUW 01 + RRUS A3 RRUW 02 + Radio 0208 RRUW 02 + RRUS A2	W18.Q2	A = number of carriers, $A \leq 4$	2- or 4-WRXD

5.3.16 WCDMA Carrier Allocation for RBB20_1A

Table 141 WCDMA Carrier Allocation for RBB20_1A

Radio Type	From SW Release	RBB20_1A	
		Downlink	
		TX A	TX B
RRUS 11 RRUS 12	W18.Q2	A = number of carriers, $A \leq 4$	
RRUS 13	W18.Q2	A = number of carriers, $A \leq 8$	

5.3.17 WCDMA Carrier Allocation for RBB20_2A

Table 142 WCDMA Carrier Allocation for RBB20_2A

Radio Type	From SW Release	RBB20_2A	
		Downlink	
		TX A	TX B
RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	



5.3.18

WCDMA Carrier Allocation for RBB22_1A

Table 143 WCDMA Carrier Allocation for RBB22_1A

Radio Type	From SW Release	RBB22_1A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 01 + RRUW 01 RRUS 01 + RRUW 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RRUW 01 + RRUS 01 RRUW 01 + RRUW 01 RRUW 02 + RRUS 01 RRUW 02 + RRUW 02 RRUW 03 + RRUW 03 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 01 + RUW 01 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUW 01 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02 RUS 03 + RUS 03 RUW 01 + RUS 01 RUW 01 + RUS 02 RUW 01 + RUW 01	W18.Q2	A = number of 1TX carriers, $A \leq 4$	B = number of 1TX carriers, $B \leq 4$	2-WRXD
		C = number of 2TX carriers, $C \leq 4$		
		A+C ≤ 4 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) A+B+C ≤ 8 (RAT limitation) ⁽¹⁾		
RUW 02 + RUW 02	W18.Q2	A = number of 1TX carriers, $A \leq 2$	B = number of 1TX carriers, $B \leq 2$	2-WRXD
		C = number of 2TX carriers, $C \leq 2$		
		A+C ≤ 2 (radio 1 limitation) B+C ≤ 2 (radio 2 limitation) A+B+C ≤ 2 (RAT limitation) ⁽¹⁾		

(1) Flexible carrier allocation is supported.



5.3.19 WCDMA Carrier Allocation for RBB22_1B

Table 144 WCDMA Carrier Allocation for RBB22_1B

Radio Type	From SW Release	RBB22_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Vault Radio System 2268	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 2238	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
RBS 6501 radio part	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Flexible carrier allocation is not supported.		2-WRXD
Radio 2260 Radio 2279	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

Table 145 WCDMA Carrier Allocation for RBB22_1B for RDS

Radio Type	From SW Release	RBB22_1B for RDS		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Flexible carrier allocation is not supported with DUW.		2-WRXD



5.3.20

WCDMA Carrier Allocation for RBB22_1C

Table 146 WCDMA Carrier Allocation for RBB22_1C

Radio Type	From SW Release	RBB22_1C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 AIR 21 RRUW 02 + RRUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
RRUW 03 + RRUW 03 Any combination of two radios on the same band: RRUS 01 RRUW 01 Any combination of two radios on the same band: RRUS 01 RRUW 02	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with DUW only.		2- or 4-WRXD
RRUS 01 + RRU 22 RRUW 01 + RRU 22 RRUW 02 + RRU 22 RRUW 03 + RRU 22	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with DUW only. Flexible carrier allocation is not supported.		2- or 4-WRXD
RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2- or 4-WRXD

5.3.21

WCDMA Carrier Allocation for RBB22_1F

Table 147 WCDMA Carrier Allocation for RBB22_1F

Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479 Radio 4480 Radio 4499	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4402	W19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD



Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2468 Radio 4415 Radio 4426 Radio 4428 Radio 4442 Radio 4443 Radio 4478 RRUS 32	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4455	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

Table 148 WCDMA Carrier Allocation for RBB22_1F for RDS

Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

(1) RBB used for the first band in the Dot product name.

5.3.22

WCDMA Carrier Allocation for RBB22_1G

Table 149 WCDMA Carrier Allocation for RBB22_1G

Radio Type	From SW Release	RBB22_1G		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4402	W19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4415 Radio 4426 Radio 4428 Radio 4442 Radio 4443 Radio 4478 RRUS 32	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4455	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4480 Radio 4499	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD



5.3.23 WCDMA Carrier Allocation for RBB22_1P

Table 150 WCDMA Carrier Allocation for RBB22_1P

Radio Type	From SW Release	RBB22_1P		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

5.3.24 WCDMA Carrier Allocation for RBB22_1Q

Table 151 WCDMA Carrier Allocation for RBB22_1Q

Radio Type	From SW Release	RBB22_1Q		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

5.3.25 WCDMA Carrier Allocation for RBB22_2A

Table 152 WCDMA Carrier Allocation for RBB22_2A

Radio Type	From SW Release	RBB22_2A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 AIR 21 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband.		2-WRXD
RRU 22 + RRU 22 RRUS 01 + RRU 22 RRUW 01 + RRU 22 RRUW 02 + RRU 22 RRUW 03 + RRU 22	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Flexible carrier allocation is not supported. Supported with DUW.		2-WRXD
RRUW 02 + RRUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD



Radio Type	From SW Release	RBB22_2A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RRUW 02 + RRUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RRUS 01 RRUW 02	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with DUW.		2-WRXD

5.3.26 WCDMA Carrier Allocation for RBB22_2B

Table 153 WCDMA Carrier Allocation for RBB22_2B

Radio Type	From SW Release	RBB22_2B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 01 + RRUW 01 RRUS 01 + RRUW 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RRUW 01 + RRUS 01 RRUW 01 + RRUW 01 RRUW 02 + RRUS 01 RRUW 02 + RRUW 02 RRUW 03 + RRUW 03 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 01 + RUW 01 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUW 01 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02 RUS 03 + RUS 03 RUW 01 + RUS 01 RUW 01 + RUS 02 RUW 01 + RUW 01	W18.Q2	A = number of 1TX carriers, $A \leq 4$	B = number of 1TX carriers, $B \leq 4$	2-WRXD
		C = number of 2TX carriers, $C \leq 4$		
		A+C ≤ 4 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) A+B+C ≤ 8 (RAT limitation) ⁽¹⁾		
RUW 02 + RUW 02	W18.Q2	A = number of 1TX carriers, $A \leq 2$	B = number of 1TX carriers, $B \leq 2$	2-WRXD
		C = number of 2TX carriers, $C \leq 2$		
		A+C ≤ 2 (radio 1 limitation) B+C ≤ 2 (radio 2 limitation) A+B+C ≤ 2 (RAT limitation) ⁽¹⁾		

(1) Flexible carrier allocation is supported.



5.3.27 WCDMA Carrier Allocation for RBB22_2C

Table 154 WCDMA Carrier Allocation for RBB22_2C

Radio Type	From SW Release	RBB22_2C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 13	W18.Q2	Supported only in MSMM.		
Radio 2238	W18.Q3	Supported only in MSMM.		
Radio 2260 Radio 2279	W20.Q1	Supported only in MSMM.		

5.3.28 WCDMA Carrier Allocation for RBB22_2E

Table 155 WCDMA Carrier Allocation for RBB22_2E

Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Flexible carrier allocation is not supported with DUW.		2-WRXD



Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Flexible carrier allocation is not supported with DUW.		2-WRXD
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

5.3.29

WCDMA Carrier Allocation for RBB22_2K

Table 156 WCDMA Carrier Allocation for RBB22_2K

Radio Type	From SW Release	RBB22_2K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479 Radio 4480 Radio 4499	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD



Radio Type	From SW Release	RBB22_2K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4402	W19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4415 Radio 4426 Radio 4428 Radio 4442 Radio 4443 Radio 4478	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4455	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

Table 157 WCDMA Carrier Allocation for RBB22_2K for RDS

Radio Type	From SW Release	RBB22_2K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

(1) RBB used for the first band in the Dot product name.

5.3.30

WCDMA Carrier Allocation for RBB22_2L

Table 158 WCDMA Carrier Allocation for RBB22_2L

Radio Type	From SW Release	RBB22_2L		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4402	W19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4415 Radio 4426 Radio 4428 Radio 4442 Radio 4443 Radio 4478	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4455	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD
Radio 4480 Radio 4499	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD



5.3.31 WCDMA Carrier Allocation for RBB22_2T

Table 159 WCDMA Carrier Allocation for RBB22_2T

Radio Type	From SW Release	RBB22_2T		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD

5.3.32 WCDMA Carrier Allocation for RBB22_2U

Table 160 WCDMA Carrier Allocation for RBB22_2U

Radio Type	From SW Release	RBB22_2U		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD



5.3.33

WCDMA Carrier Allocation for RBB24_1A

Table 161 WCDMA Carrier Allocation for RBB24_1A

Radio Type	From SW Release	RBB24_1A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 21 RRUW 03 + RRUW 03 RUW 02 + RUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RRUS 01 RRUW 01 Any combination of two radios on the same band: RRUS 01 RRUW 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03 Any combination of two radios on the same band: RUS 01 RUS 02 RUW 01	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. ⁽¹⁾ 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.		2- or 4-WRXD
AIR 21 RRUW 03 + RRUW 03 RUW 02 + RUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RRUS 01 RRUW 01 Any combination of two radios on the same band: RRUS 01 RRUW 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03 Any combination of two radios on the same band: RUS 01 RUS 02 RUW 01	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. ⁽¹⁾		2- or 4-WRXD

(1) Maximum four carriers per radio with DUW.



5.3.34 WCDMA Carrier Allocation for RBB24_1B

Table 162 WCDMA Carrier Allocation for RBB24_1B

Radio Type	From SW Release	RBB24_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD

5.3.35 WCDMA Carrier Allocation for RBB24_1C

Table 163 WCDMA Carrier Allocation for RBB24_1C

Radio Type	From SW Release	RBB24_1C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 2488 AIR 2488 MB Radio 2468	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with DUW.		2 or 4-WRXD



5.3.36

WCDMA Carrier Allocation for RBB24_2A

Table 164 WCDMA Carrier Allocation for RBB24_2A

Radio Type	From SW Release	RBB24_2A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 21 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband.		2- or 4-WRXD
AIR 21 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2- or 4-WRXD supported with Baseband.		2- or 4-WRXD

5.3.37

WCDMA Carrier Allocation for RBB24_2B

Table 165 WCDMA Carrier Allocation for RBB24_2B

Radio Type	From SW Release	RBB24_2B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD



Radio Type	From SW Release	RBB24_2B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD

5.3.38 WCDMA Carrier Allocation for RBB24_2D

Table 166 WCDMA Carrier Allocation for RBB24_2D

Radio Type	From SW Release	RBB24_2D		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 2488 AIR 2488 MB Radio 2468	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD



5.3.39

WCDMA Carrier Allocation for RBB32_1A

Table 167 WCDMA Carrier Allocation for RBB32_1A

Radio Type	From SW Release	RBB32_1A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RR UW 03 + RR UW 03 + RR UW 03 Any combination of three radios on the same band: RR US 01 RR US 02 Any combination of three radios on the same band: RR US 01 RR UW 01 Any combination of three radios on the same band: RR US 01 RR UW 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03 Any combination of three radios on the same band: RUS 01 RUS 02 RUW 01	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Maximum of one carrier per radio and three carriers in total. Supported with DUW only.		2-WRXD
Any combination of three radios on the same band: RR US 01 RR US 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2-WRXD

5.3.40

WCDMA Carrier Allocation for RBB32_1B

Table 168 WCDMA Carrier Allocation for RBB32_1B

Radio Type	From SW Release	RBB32_1B		
		Downlink		
		TX A/RX A	TX B/RX B	TX C
Three radios with any combination of: RR US 01, RR US 02 Three radios with any combination of: RR US 01, RR UW 01 Three radios with any combination of: RR US 01, RR UW 02 RR UW 03 + RR UW 03 + RR UW 03	W18.Q2	A = number of 1TX/2RX carriers, $A \leq 1$	B = number of 1TX/2RX carriers, $B \leq 1$	C = number of 1TX/2RX carriers, $C \leq 1$
A+B+C ≤ 3 (RAN limitation)				



Radio Type	From SW Release	RBB32_1B			
		Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C	
Three radios with any combination of: RUS 01, RUS 02, RUS 03 Three radios with any combination of: RUS 01, RUS 02, RUW 01					

5.3.41

WCDMA Carrier Allocation for RBB42_1B

Table 169 WCDMA Carrier Allocation for RBB42_1B

Radio Type	From SW Release	RBB42_1B				Uplink
		Downlink				
		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 11 RRUS 12 RRUS 13	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Maximum four carriers per radio with DUW. For configurations with DUW, the following equations have to be fulfilled for calculating the maximum number of 1TX and 2TX carriers configured on ports A and B on radio 1 and C and D on radio 2: For radio 1: $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 8 \text{ (for RRUS 11 or RRUS 12)}$ $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 16 \text{ (for RRUS 13)}$ For radio 2: $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 8 \text{ (for RRUS 11 or RRUS 12)}$ $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 16 \text{ (for RRUS 13)}$				2-WRXD



5.3.42

WCDMA Carrier Allocation for RBB42_2D

Table 170 WCDMA Carrier Allocation for RBB42_2D

Radio Type	From SW Release	RBB42_2D				
		Downlink				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 11 RRUS 12 RRUS 13	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Maximum four carriers per radio with DUW. For configurations with DUW, the following equations have to be fulfilled for calculating the maximum number of 1TX and 2TX carriers configured on ports A and B on radio 1 and C and D on radio 2: For radio 1: $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 8 \text{ (for RRUS 11 or RRUS 12)}$ $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 16 \text{ (for RRUS 13)}$ For radio 2: $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 8 \text{ (for RRUS 11 or RRUS 12)}$ $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 16 \text{ (for RRUS 13)}$				2-WRXD

5.3.43

WCDMA Carrier Allocation for RBB44_1B

Table 171 WCDMA Carrier Allocation for RBB44_1B

Radio Type	From SW Release	RBB44_1B				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW. Up to eight WCDMA carriers.				2- or 4-WRXD



Radio Type	From SW Release	RBB44_1B				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Up to eight WCDMA carriers.				2- or 4-WRXD
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Up to eight WCDMA carriers.				2- or 4-WRXD

Table 172 WCDMA Carrier Allocation for RBB44_1B for RDS

Radio Type	From SW Release	RBB44_1B for RDS		
		Downlink		Uplink
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	W18.Q3	Up to 8 carriers. For number of carriers per radio, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2- or 4-WRXD



5.3.44

WCDMA Carrier Allocation for RBB44_1D

Table 173 WCDMA Carrier Allocation for RBB44_1D

Radio Type	From SW Release	RBB44_1D				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB Radio 4415 Radio 4426 Radio 4428 Radio 4442 Radio 4443 Radio 4478 RRUS 32	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
Radio 2460 Radio 2479	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with Baseband.				2- or 4-WRXD
Radio 4402	W19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
Radio 4455	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
AIR 4455 Radio 4480 Radio 4499	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD

5.3.45

WCDMA Carrier Allocation for RBB44_1N

Table 174 WCDMA Carrier Allocation for RBB44_1N for RDS

Radio Type	From SW Release	RBB44_1N				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD

(1) RBB used for the first band in the Dot product name.



5.3.46

WCDMA Carrier Allocation for RBB44_2C

Table 175 WCDMA Carrier Allocation for RBB44_2C

Radio Type	From SW Release	RBB44_2C				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Up to eight WCDMA carriers.				2- or 4-WRXD
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Up to eight WCDMA carriers.				2- or 4-WRXD
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13	W20.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Up to eight WCDMA carriers.				2- or 4-WRXD



Table 176 WCDMA Carrier Allocation for RBB44_2C for RDS

Radio Type	From SW Release	RBB44_2C for RDS	
		Downlink	Uplink
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	W18.Q3	Up to 8 carriers. For number of carriers per radio, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.	2- or 4-WRXD

5.3.47

WCDMA Carrier Allocation for RBB44_2F

Table 177 WCDMA Carrier Allocation for RBB44_2F

Radio Type	From SW Release	RBB44_2F				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 4455	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2- or 4-WRXD supported with Baseband. Not supported with DUW.				2- or 4-WRXD
Radio 2460 Radio 2479 Radio 4480 Radio 4499	W18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
Radio 4402	W19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2- or 4-WRXD supported with Baseband.				2- or 4-WRXD
Radio 4415 Radio 4426 Radio 4428 Radio 4442 Radio 4443 Radio 4478	W18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2- or 4-WRXD supported with Baseband.				2- or 4-WRXD
Radio 4455	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2- or 4-WRXD supported with Baseband.				2- or 4-WRXD



5.3.48 WCDMA Carrier Allocation for RBB44_2S

Table 178 WCDMA Carrier Allocation for RBB44_2S for RDS

Radio Type	From SW Release	RBB44_2S				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	W19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD

(1) RBB used for the first band in the Dot product name.

5.4 Baseband Support and Configuration for WCDMA

This section contains information on the WCDMA DU and Baseband support for the configurations listed in [Supported Radio Configurations for WCDMA](#) on page 198.

Table 179 DU and Baseband Support for WCDMA

DU or Baseband	Software Version									
	W1 8.Q 2	W1 8.Q 3	W1 8.Q 4	W1 9.Q 1	W1 9.Q 2	W1 9.Q 3	W1 9.Q 4	W2 0.Q 1	W2 0.Q 2	W2 0.Q 3
Baseband 5212	X	X	X	X	X	X	X	X	X	X
Baseband 5216	X	X	X	X	X	X	X	X	X	X
Baseband 6303	X	X	X	X	X	X	X	X	X	X
Baseband 6318	X	X	X	X	X	X	X	X	X	X
Baseband 6502	X	X	X	X	X	X	X	X	X	X
Baseband 6620	X	X	X	X	X	X	X	X	X	X
Baseband 6630	X	X	X	X	X	X	X	X	X	X
DUW	X	X	X	X	X	X	X	X	X	X
IDU 5205	X	X	X	X	X	X	X	X	X	X
IDU 5209	X	X	X	X	X	X	X	X	X	X

5.4.1 WCDMA DU and Baseband Radio Support

Note: Software versions are valid for the first release of the radio. For supported software versions for frequency variants, see [Radio Software Support](#).

If a radio is only supported for Baseband 5216, Baseband 6318, and Baseband 6630, it is not supported for Mixed Mode Baseband.



Table 180 WCDMA DU and Baseband Support per Radio

Radio	Baseband 5212	Baseband 5216	Baseband 6303	Baseband 6318	Baseband 6502	Baseband 6620	Baseband 6630	DUW 10 DUW 20 DUW 30	DUW 11 DUW 31 DUW 41	RBS 6501 DU Part	IDU 5205 IDU 5209
AIR 11	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
AIR 21	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
AIR 2488	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
AIR 2488 MB	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
AIR 32	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
AIR 32 MB	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
AIR 4455 ⁽¹⁾	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	18.Q4	18.Q4	-	-
Any combination of: Dot 2272 + IRU 8844 or IRU 8884	19.Q2	19.Q2	19.Q2	19.Q2	19.Q2	19.Q2	19.Q2	-	-	-	19.Q2
Any combination of: Dot 2282 + IRU 8844 or IRU 8884	19.Q2	19.Q2	19.Q2	19.Q2	19.Q2	19.Q2	19.Q2	-	-	-	19.Q2
IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	-	18.Q2
mRRUS 12	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-
Radio 0208	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2203	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-
Radio 2212	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2217	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2219	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2238	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	18.Q4	18.Q4	-	-
Radio 2242	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2260	20.Q1	20.Q1	20.Q1	20.Q1	-	20.Q1	20.Q1	20.Q1	20.Q1	-	-
Radio 2279	20.Q1	20.Q1	20.Q1	20.Q1	-	20.Q1	20.Q1	20.Q1	20.Q1	-	-
Radio 2460	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	18.Q4	18.Q4	-	-
Radio 2468	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2479	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	18.Q4	18.Q4	-	-
Radio 4402	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	-	-
Radio 4415	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 4426	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 4428	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 4443	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 4455	19.Q2	19.Q2	19.Q2	19.Q2	-	19.Q2	19.Q2	-	-	-	-
Radio 4478	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 4480	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	18.Q4	18.Q4	-	-
Radio 4499	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	18.Q4	18.Q4	-	-
RD 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	-	18.Q2
RD 2243	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	-	18.Q2



Radio	Baseband 5212	Baseband 5216	Baseband 6303	Baseband 6318	Baseband 6502	Baseband 6620	Baseband 6630	DUW 10 DUW 20 DUW 30	DUW 11 DUW 31 DUW 41	RBS 6501 DU Part	IDU 5205 IDU 5209
RD 4442	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	-	18.Q2
RD 4453	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	-	18.Q2
RRU 22	-	-	-	-	-	-	-	18.Q2	18.Q2	-	-
RRU 22F1	-	18.Q2	-	18.Q2	-	-	-	-	-	-	-
RRUL 11	-	18.Q2	-	18.Q2	-	-	-	-	-	-	-
RRUS 01	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 02	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 11	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 12	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 13	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 32	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS A2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS A3	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUW 01	-	-	-	-	-	-	-	18.Q2	18.Q2	-	-
RRUW 02	-	-	-	-	-	-	-	18.Q2	18.Q2	-	-
RRUW 03	-	-	-	-	-	-	-	18.Q2	18.Q2	-	-
RUS 01	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RUS 02	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RUS 03	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RUS 12m RBS 6501 radio part	-	-	-	-	-	-	-	-	-	18.Q2	-
RUW 01	-	-	-	-	-	-	-	18.Q2	18.Q2	-	-
RUW 02	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Vault Radio System 2268	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-

(1) AIR 4455 B2/B5 B66A does not support DUW.

5.4.2 WCDMA Baseband Support and Configuration with Baseband 5212

The following applies to Baseband 5212:

- One Baseband only per node.
- Support for both symmetric and asymmetric configurations.
- Maximum four carriers per sector on one frequency band.
- Flexible carrier allocation is supported.
- Support for Multi-Carrier.



- Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers.
- Support for Combined Cell.

Table 181 WCDMA Configuration Support with One Baseband 5212

		Software Version									
		W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. Q4 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of carriers	1TX/1RX	12	12	12	12	12	12	12	12	12	12
	1TX/2RX 2TX/2RX	12	12	12	12	12	12	12	12	12	12
	1TX/4RX 2TX/4RX	6	6	6	6	6	6	6	6	6	6
Maximum number of sectors		6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾
Maximum number of cells per sector		6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁴⁾ (HSPA)		4	4	4	4	4	4	4	4	4	4
Maximum number of radios		24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽⁵⁾		2	2	2	2	2	2	2	2	2	2
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) It is possible to mix configurations with different antenna configurations. Two cells with maximum 2TX and 2RX can be replaced with one cell with maximum 2TX and 4RX and vice versa.

(2) For single band.

(3) For dual band.

(4) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(5) Including band 0.

5.4.3 WCDMA Baseband Support and Configuration with Baseband 5216

The following applies to Baseband 5216:

- One Baseband only per node.
- Support for both symmetric and asymmetric configurations.
 - Symmetric and Asymmetric if maximum 12 cells.
 - Symmetric only if more than 12 cells.
- Maximum six carriers per sector on one frequency band or in total six carriers shared between two bands.

- Flexible carrier allocation is supported.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers.
- Support for Combined Cell.

The following applies to Baseband 5216 from SW W18.Q4:

- Support for both symmetric and asymmetric configurations.
 - Symmetric and Asymmetric if maximum 12 cells.
 - Symmetric only if more than 12 cells.
- Maximum six carriers per sector on one frequency band or in total six carriers shared between two bands.
- Flexible carrier allocation is supported.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers.
- Support for Combined Cell.

The following tables list general configuration support and configuration support that are specific to a number of Baseband 5216 in one NodeB.

Table 182 WCDMA Configuration Support with One Baseband 5216

		Software Version									
		W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. Q4 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of carriers	1TX/1RX	18	18	18	18	18	18	18	18	18	18
	1TX/2RX 2TX/2RX	18	18	18	18	18	18	18	18	18	18
	1TX/4RX 2TX/4RX	9	9	9	9	9	9	9	9	9	9
Maximum number of sectors		6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾
Maximum number of cells per sector		6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁴⁾ (HSPA)		4	4	4	4	4	4	4	4	4	4



	Software Version									
	W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. Q4 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of radios	24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽⁵⁾	2	2	2	2	2	2	2	2	2	2
Maximum number of radios per cascade chain	6	6	6	6	6	6	6	6	6	6

(1) It is possible to mix configurations with different antenna configurations. Two cells with maximum 2TX and 2RX can be replaced with one cell with maximum 2TX and 4RX and vice versa.

(2) For single band.

(3) For dual band.

(4) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(5) Including band 0.

5.4.4 WCDMA Baseband Support and Configuration with Baseband 6303

The following applies to Baseband 6303:

- One Baseband only per node.
- Support for both symmetric and asymmetric configurations.
- Maximum four carriers per sector on one frequency band.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers
- Support for Combined Cell.
- Flexible carrier allocation is supported.

Table 183 WCDMA Configuration Support with One Baseband 6303

		Software Version									
		W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. Q4 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of carriers	1TX/1RX	12	12	12	12	12	12	12	12	12	12
	1TX/2RX 2TX/2RX	12	12	12	12	12	12	12	12	12	12
	1TX/4RX 2TX/4RX	6	6	6	6	6	6	6	6	6	6
Maximum number of sectors		6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾
Maximum number of cells per sector		6	6	6	6	6	6	6	6	6	6



	Software Version									
	W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. Q4 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of cells per sector with the same tCell ⁽⁴⁾ (HSPA)	4	4	4	4	4	4	4	4	4	4
Maximum number of radios	24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽⁵⁾	2	2	2	2	2	2	2	2	2	2
Maximum number of radios per cascade chain	6	6	6	6	6	6	6	6	6	6

- (1) It is possible to mix configurations with different antenna configurations. Two cells with maximum 2TX and 2RX can be replaced with one cell with maximum 2TX and 4RX and vice versa.
- (2) For single band.
- (3) For dual band.
- (4) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.
- (5) Including band 0.

5.4.5 WCDMA Baseband Support and Configuration with Baseband 6318

The following applies to Baseband 6318:

- One Baseband only per node.
- Support for both symmetric and asymmetric configurations.
 - Symmetric and Asymmetric if maximum 12 cells.
 - Symmetric only if more than 12 cells.
- Maximum six carriers per sector on one frequency band or in total six carriers shared between two bands.
- Flexible carrier allocation is supported.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers.
- Support for Combined Cell.

The following applies to Baseband 6318 from SW W18.Q4:

- Support for both symmetric and asymmetric configurations.
 - Symmetric and Asymmetric if maximum 12 cells.
 - Symmetric only if more than 12 cells.



- Maximum six carriers per sector on one frequency band or in total six carriers shared between two bands.
- Flexible carrier allocation is supported.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers.
- Support for Combined Cell.

The following tables list general configuration support and configuration support that are specific to a number of Baseband 6318 in one NodeB.

Table 184 WCDMA Configuration Support with One Baseband 6318

		Software Version									
		W18.Q 2 ⁽¹⁾	W18.Q 3 ⁽¹⁾	W18.Q 4 ⁽¹⁾	W19.Q 1 ⁽¹⁾	W19.Q 2 ⁽¹⁾	W19.Q 3 ⁽¹⁾	W19.Q 4 ⁽¹⁾	W20.Q 1 ⁽¹⁾	W20.Q 2 ⁽¹⁾	W20.Q 3 ⁽¹⁾
Maximum number of carriers	1TX/1RX	18	18	18	18	18	18	18	18	18	18
	1TX/2RX	18	18	18	18	18	18	18	18	18	18
	2TX/2RX										
	1TX/4RX	9	9	9	9	9	9	9	9	9	9
	2TX/4RX										
Maximum number of sectors		6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾
Maximum number of cells per sector		6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁴⁾ (HSPA)		4	4	4	4	4	4	4	4	4	4
Maximum number of radios		24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽⁵⁾		2	2	2	2	2	2	2	2	2	2
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) It is possible to mix configurations with different antenna configurations. Two cells with maximum 2TX and 2RX can be replaced with one cell with maximum 2TX and 4RX and vice versa.

(2) For single band.

(3) For dual band.

(4) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(5) Including band 0.

5.4.6 WCDMA Baseband Support and Configuration with Baseband 6502

The following applies to Baseband 6502:

- One Baseband only per node.
- Support for both symmetric and asymmetric configurations.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers
- Support for Combined Cell.
- Flexible carrier allocation is supported.

Table 185 WCDMA Configuration Support with One Baseband 6502

		Software Version									
		W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. 41 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of carriers	1TX/1RX	6	6	6	6	6	6	6	6	6	6
	1TX/2RX 2TX/2RX	6	6	6	6	6	6	6	6	6	6
	1TX/4RX 2TX/4RX	6	6	6	6	6	6	6	6	6	6
Maximum number of sectors		6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾	6 ⁽²⁾ 6 ⁽³⁾
Maximum number of cells per sector		6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁴⁾ (HSPA)		4	4	4	4	4	4	4	4	4	4
Maximum number of radios		12	12	12	12	12	12	12	12	12	12
Maximum number of 3GPP bands ⁽⁵⁾		2	2	2	2	2	2	2	2	2	2
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) It is possible to mix configurations with different antenna configurations. Two cells with maximum 2TX and 2RX can be replaced with one cell with maximum 2TX and 4RX and vice versa.

(2) For single band.

(3) For dual band.

(4) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(5) Including band 0.

5.4.7 WCDMA Baseband Support and Configuration with Baseband 6620

The following applies to Baseband 6620:



- One Baseband only per node.
- Support for both symmetric and asymmetric configurations.
- Maximum four carriers per sector on one frequency band.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers
- Support for Combined Cell.
- Flexible carrier allocation is supported.

Table 186 WCDMA Configuration Support with One Baseband 6620

		Software Version									
		W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. Q4 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of carriers	1TX/1RX	12	12	12	12	12	12	12	12	12	12
	1TX/2RX 2TX/2RX	12	12	12	12	12	12	12	12	12	12
	1TX/4RX 2TX/4RX	6	6	6	6	6	6	6	6	6	6
Maximum number of sectors		6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾
Maximum number of cells per sector		6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁴⁾ (HSPA)		4	4	4	4	4	4	4	4	4	4
Maximum number of radios		24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽⁵⁾		2	2	2	2	2	2	2	2	2	2
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) It is possible to mix configurations with different antenna configurations. Two cells with maximum 2TX and 2RX can be replaced with one cell with maximum 2TX and 4RX and vice versa.

(2) For single band.

(3) For dual band.

(4) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(5) Including band 0.

5.4.8 WCDMA Baseband Support and Configuration with Baseband 6630

The following applies to Baseband 6630:

- One Baseband only per node.

- Support for both symmetric and asymmetric configurations.
 - Symmetric and Asymmetric if maximum 12 cells.
 - Symmetric only if more than 12 cells.
- Maximum six carriers per sector on one frequency band or in total six carriers shared between two bands.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers.
- Support for Combined Cell.
- Flexible carrier allocation is supported.

The following applies to Baseband 6630 from SW W18.Q4:

- Support for both symmetric and asymmetric configurations.
 - Symmetric and Asymmetric if maximum 12 cells.
 - Symmetric only if more than 12 cells.
- Maximum six carriers per sector on one frequency band or in total six carriers shared between two bands.
- Support for Multi-Carrier.
 - Each carrier can run single band and dual band multi-carrier configurations with other carriers simultaneously.
- Support for HSDPA Multi-Carrier 3 Carriers.
- Support for Combined Cell.
- Flexible carrier allocation is supported.

The following tables list general configuration support and configuration support that are specific to a number of Baseband 6318 in one NodeB.



Table 187 WCDMA Configuration Support with One Baseband 6630

		Software Version									
		W18. Q2 ⁽¹⁾	W18. Q3 ⁽¹⁾	W18. Q4 ⁽¹⁾	W19. Q1 ⁽¹⁾	W19. Q2 ⁽¹⁾	W19. Q3 ⁽¹⁾	W19. Q4 ⁽¹⁾	W20. Q1 ⁽¹⁾	W20. Q2 ⁽¹⁾	W20. Q3 ⁽¹⁾
Maximum number of carriers	1TX/1RX	18	18	18	18	18	18	18	18	18	18
	1TX/2RX 2TX/2RX	18	18	18	18	18	18	18	18	18	18
	1TX/4RX 2TX/4RX	9	9	9	9	9	9	9	9	9	9
Maximum number of sectors		6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾	6 ⁽²⁾ 12 ⁽³⁾
Maximum number of cells per sector		6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁴⁾ (HSPA)		4	4	4	4	4	4	4	4	4	4
Maximum number of radios		24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽⁵⁾		2	2	2	2	2	2	2	2	2	2
Maximum number of radios per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) It is possible to mix configurations with different antenna configurations. Two cells with maximum 2TX and 2RX can be replaced with one cell with maximum 2TX and 4RX and vice versa.

(2) For single band.

(3) For dual band.

(4) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(5) Including band 0.

5.4.9 WCDMA Baseband Support and Configuration with IDU 5205

Table 188 General Configuration Support with IDU 5205 for WCDMA

	Software Version									
	W18. Q2	W18. Q3	W18. Q4	W19. Q1	W19. Q2	W19. Q3	W19. Q4	W20. Q1	W20. Q2	W20. Q3
Supported CPRI line rates (Gbps)	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8

Table 189 WCDMA Configuration Support with IDU 5205

		Software Version									
		W18. Q2	W18. Q3	W18. Q4	W19. Q1	W19. Q2	W19. Q3	W19. Q4	W20. Q1	W20. Q2	W20. Q3
Maximum number of carriers	1TX/1RX 1TX/2RX 2TX/2RX	6	6	6	6	6	6	6	6	6	6
	1TX/4RX 2TX/4RX	-	3	3	3	3	3	3	3	3	3



	Software Version									
	W18. Q2	W18. Q3	W18. Q4	W19. Q1	W19. Q2	W19. Q3	W19. Q4	W20. Q1	W20. Q2	W20. Q3
Maximum number of sectors	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾	3 ⁽¹⁾ 6 ⁽²⁾
Maximum number of cells per sector	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽³⁾ (HSPA)	4	4	4	4	4	4	4	4	4	4
Maximum number of IRUs ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
Maximum number of 3GPP bands ⁽⁵⁾	2	2	2	2	2	2	2	2	2	2
Maximum number of IRUs per cascade chain	6	6	6	6	6	6	6	6	6	6

(1) For single band.

(2) For dual band.

(3) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(4) With up to eight RDs per IRU.

(5) Including band 0.

5.4.10 WCDMA Baseband Support and Configuration with IDU 5209

Table 190 General Configuration Support with IDU 5209 for WCDMA

	Software Version									
	W18. Q2	W18. Q3	W18. Q4	W19. Q1	W19. Q2	W19. Q3	W19. Q4	W20. Q1	W20. Q2	W20. Q3
Supported CPRI line rates (Gbps)	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8

Table 191 WCDMA Configuration Support with IDU 5209

		Software Version									
		W18. Q2	W18. Q3	W18. Q4	W19. Q1	W19. Q2	W19. Q3	W19. Q4	W20. Q1	W20. Q2	W20. Q3
Maximum number of carriers	1TX/1RX 1TX/2RX 2TX/2RX	12	12	X	X	X	X	X	X	X	X
	1TX/4RX 2TX/4RX	-	6	X	X	X	X	X	X	X	X
Maximum number of sectors		6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾	6 ⁽¹⁾ 12 ⁽²⁾
Maximum number of cells per sector		6	6	X	X	X	X	X	X	X	X
Maximum number of cells per sector with the same tCell ⁽³⁾ (HSPA)		4	4	X	X	X	X	X	X	X	X
Maximum number of IRUs ⁽⁴⁾		12	12	X	X	X	X	X	X	X	X
Maximum number of 3GPP bands		2	2	X	X	X	X	X	X	X	X
Maximum number of IRUs per cascade chain		6	6	X	X	X	X	X	X	X	X

(1) For single band.



- (2) For dual band.
- (3) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.
- (4) With up to eight RDs per IRU.

5.4.11 WCDMA Baseband Support and Configuration with DUW

This section lists the baseband support and configuration with DUW for WCDMA with regard to carriers, IQ streams, baseband pools and carrier allocation mode.

Configuration rules for symmetric and asymmetric configuration are valid for both small configurations using one DUW and large configurations using two DUWs. An asymmetric configuration is a configuration where different RBBs, different number of carriers and different antenna configurations (TX/RX) are allowed in any sector. A symmetric configuration is a configuration where the same RBB, the same number of carriers, and the same antenna configuration is used in all sectors. More information can be found in *WCDMA RBS Configuration Guidelines* in the WCDMA RAN CPI library.

The user data for one carrier consists of IQ streams. One IQ stream uses one carrier branch. The number of carrier branches, or IQ streams, used per carrier depends on the carrier diversity. One carrier with the antenna configuration 2TX/2RX uses two carrier branches (two IQ streams, in both uplink (UL) and downlink (DL)). See [WCDMA Downlink and Uplink IQ Streams](#) on page 262 for more information on baseband pools and the number of IQ streams required in downlink and uplink for different configurations.

A specific frequency in the UMTS frequency bands can be identified by the UTRA Absolute Radio Frequency Number (UARFCN). A specific UARFCN can be used for one and only one carrier in each sector. Up to W18.Q4, carriers in different sectors that use the same carrier frequency (the same UARFCN) must belong to the same baseband pool. From W19.Q1 sector carriers that use the same frequency plane and the same frequency band can be allocated to any DUW.

The following rules apply to all WCDMA baseband configurations:

- The maximum number of DUWs per node is two.
- The maximum number of baseband pools per node is two or three. See [WCDMA Downlink and Uplink IQ Streams](#) on page 262 for more information.
- The maximum number of carrier branches in UL and DL per CPRI link x2 (1.2 Gbps) is eight.
- The maximum number of carrier branches in UL and DL per CPRI link x4 (2.5 Gbps) is 16.
- The maximum number of carriers per sector is eight.
- More than four carriers in one or more sectors requires that the carrier allocation mode is set to flexible.

Maximum two carrier frequencies can be used for Multi Carrier, both for Single Band (SB) Multi Carrier and for Dual Band (DB) Multi Carrier. With the feature HSDPA-MC Inter-DU Joint Scheduling enabled, up to three carrier frequencies in total can be used for Multi Carrier on one DUW or two DUWs. The carriers used for Multi Carrier must be allocated to the same baseband pool. The related feature HSDPA Multi-Carrier 3 Carriers is also supported.

Baseband units, sectors, and carriers can only be added to a node within the set of rules that apply to a carrier allocation mode. The same carrier allocation mode must be used for all nodes within an RBS.

The following carrier allocation modes are available:

- Flexible carrier allocation mode. Flexible configurations are described in [WCDMA Flexible Configurations](#) on page 266.
- Basic carrier allocation mode. Basic configurations are described in [WCDMA Basic and Advanced Configurations](#) on page 266.
- Advanced carrier allocation mode. Advanced configurations are described in [WCDMA Basic and Advanced Configurations](#) on page 266.

5.4.12 WCDMA Downlink and Uplink IQ Streams

The user data for one antenna carrier consists of an IQ pair defined as an IQ stream. The total amount of supported IQ streams for a radio configuration is set by the DUW capacity. In the case of cascade configurations, the CPRI interface capacity also has to be considered.

- One DUW baseband pool can handle up to 12 IQ streams in both UL and DL.
- One DUW 41, one DUW 31 or one DUW 30 have the capacity of two baseband pools. Two baseband pools can handle up to 24 IQ streams in both UL and DL. The use of more than one baseband pool requires that the feature *Increased Cell Carrier Support* is enabled. For more information, see the WCDMA RAN CPI library.
- One DUW 20, one DUW 11 or one DUW 10 has the capacity of one baseband pool.
- For configurations with two DUWs, only the core DUW can use two baseband pools. The extension DUW uses one baseband pool.

For more information on of symmetric and asymmetric configurations and information on basic, advanced or flexible carrier allocation mode, refer to *WCDMA RBS Configuration Guidelines* in the WCDMA RAN CPI library.

For more information on the optional features available for WCDMA radio configurations, see the WCDMA RAN CPI library.

The total number of used DL and UL IQ streams in a symmetric configuration is calculated according to these formulas:



UL IQ streams = Number of sectors x number of carriers per sector x RX diversity

DL IQ streams = Number of sectors x number of carriers per sector x TX diversity

Example: For a three-sector configuration with two carriers per sector, 2TX branches and 4RX branches, the number of UL and DL IQ streams is:

UL IQ stream = $3 \times 2 \times 4 = 24$

DL IQ stream = $3 \times 2 \times 2 = 12$

The total number of used DL and UL IQ streams in an asymmetric configuration is calculated according to these formulas:

UL IQ streams = $\Sigma(\# \text{ carrier} \times \text{RXD})$ in sector(j) where j = 1 to 6

DL IQ streams = $\Sigma(\# \text{ carrier} \times \text{TXD})$ in sector(j) where j = 1 to 6

Example: For a 3+2+1 asymmetric configuration with 2TX and 2RX in sector 1 and 2, 0TX and 4RX in sector 3, the number of UL and DL IQ streams is:

UL IQ stream = $3 \times 2 + 2 \times 2 + 1 \times 4 = 14$

DL IQ stream = $3 \times 2 + 2 \times 2 + 1 \times 1 = 11$

5.4.12.1 WCDMA Single DUW Configurations

[Table 192](#) and [Table 193](#) summarize the supported total number of used UL and DL IQ streams for symmetric single band configurations with one DUW and the same frequency band in all sectors.

Note: The supported number of IQ streams and carriers depends on the software release and any optional features that are enabled. See the User Description of the relevant feature in the WCDMA RAN CPI library for further information.

Table 192 1-6 Sector Symmetric UL Configurations with One DUW

Number of Sectors	Number of IQ Streams													
	Number of carriers (c) with 2RX Branches								Number of carriers (c) with 4RX Branches					
	1 c	2 c	3 c	4 c	5 c	6 c	7 c	8 c	1 c	2 c	3 c	4 c	5 c	6 c
1	2	4	6	8	10	12	14 ⁽¹⁾	16 ⁽¹⁾	4	8	12	16 ⁽¹⁾	20 ⁽¹⁾	24 ⁽¹⁾
2	4	8	12	16 ⁽¹⁾	20 ⁽¹⁾	24 ⁽¹⁾	-	-	8	16 ⁽¹⁾	-	-	-	-
3	6	12	18 ⁽¹⁾	24 ⁽¹⁾	-	-	-	-	12	24 ⁽¹⁾	-	-	-	-
4	8	16 ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-
5	10	20 ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-



Number of Sectors	Number of IQ Streams													
	Number of carriers (c) with 2RX Branches								Number of carriers (c) with 4RX Branches					
	1 c	2 c	3 c	4 c	5 c	6 c	7 c	8 c	1 c	2 c	3 c	4 c	5 c	6 c
6	12	24 ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-

(1) Requires the optional feature *Increased Cell Carrier Support for DUW*.

Table 193 1-6 Sector Symmetric DL Configurations with One DUW

Number of Sectors	Number of IQ Streams															
	Number of carriers (c) with 1TX Branch								Number of carriers with 2TX Branches							
	1 c	2 c	3 c	4 c	5 c	6 c	7 c	8 c	1 c	2 c	3 c	4 c	5 c	6 c	7 c	8 c
1	1	2	3	4	5	6	7 ⁽¹⁾	8 ⁽¹⁾	2	4	6	8	10	12	14 ⁽¹⁾	16 ⁽¹⁾
2	2	4	6	8 ⁽¹⁾	10 ⁽¹⁾	12 ⁽¹⁾	14 ⁽¹⁾	16 ⁽¹⁾	4	8	12	16 ⁽¹⁾	20 ⁽¹⁾	24 ⁽¹⁾	-	-
3	3	6	9 ⁽¹⁾	12 ⁽¹⁾	15 ⁽¹⁾	18 ⁽¹⁾	21 ⁽¹⁾	24 ⁽¹⁾	6	12	18 ⁽¹⁾	24 ⁽¹⁾	-	-	-	-
4	4	8 ⁽¹⁾	-	-	-	-	-	-	8	16 ⁽¹⁾	-	-	-	-	-	-
5	5	10 ⁽¹⁾	-	-	-	-	-	-	10	20 ⁽¹⁾	-	-	-	-	-	-
6	6	12 ⁽¹⁾	-	-	-	-	-	-	12	24 ⁽¹⁾	-	-	-	-	-	-

(1) Requires the optional feature *Increased Cell Carrier Support for DUW*.

5.4.12.2 WCDMA Dual DUW Configurations

Table 194 and Table 195 summarize the supported total number of used UL and DL IQ streams for symmetric single band configurations with two DUWs and the same frequency band in all sectors.

Note: The supported number of IQ streams and carriers depends on the software release and any optional features that are enabled. See the User Description of the relevant feature in the WCDMA RAN CPI library for further information.



Table 194 1-6 Sector Symmetric UL Configurations with Two DUWs

Number of Sectors	Number of IQ Streams															
	Number of carriers (c) with 2RX Branches								Number of carriers with 4RX Branches							
	1 _{c(1)}	2 c	3 c	4 c	5 c	6 c	7 c	8 c	1 _{c(1)}	2 c	3 c	4 c	5 c	6 c	7 c	8 c
1	2	4	6	8	10	12	14	16	4	8	12	16	20	24	28 ⁽²⁾	32 ⁽²⁾
2	4	8	12	16	20	24	28 ⁽²⁾	32 ⁽²⁾	8	16	24 ⁽²⁾	-	-	-	-	-
3	6	12	18	24	30 ⁽²⁾	36 ⁽²⁾	-	-	12	24	36 ⁽²⁾	-	-	-	-	-
4	8	16	24 ⁽²⁾	-	-	-	-	-	16	-	-	-	-	-	-	-
5	10	20	30 ⁽²⁾	-	-	-	-	-	20	-	-	-	-	-	-	-
6	12	24	36 ⁽²⁾	-	-	-	-	-	24	-	-	-	-	-	-	-

(1) Only one baseband pool is used for configurations with two DUWs and one carrier per sector.

(2) Requires the optional feature *Increased Cell Carrier Support for DUW*. The core DUW supports up to 24 IQ streams. The extension DUW supports up to 12 IQ streams.

Table 195 1-6 Sector Symmetric DL Configurations with Two DUWs

Number of Sectors	Number of IQ Streams															
	Number of carriers (c) with 1TX Branch								Number of carriers (c) with 2TX Branches							
	1 _{c(1)}	2 c	3 c	4 c	5 c	6 c	7 c	8 c	1 _{c(1)}	2 c	3 c	4 c	5 c	6 c	7 c	8 c
1	1	2	3	4	5	6	7	8	2	4	6	8	10	12	14	16
2	2	4	6	8	10	12	14 ⁽²⁾	16 ⁽²⁾	4	8	12	16	20	24	28 ⁽²⁾	32 ⁽²⁾
3	3	6	9	12	15 ⁽²⁾	18 ⁽²⁾	-	-	6	12	18	24	30 ⁽²⁾	36 ⁽²⁾	-	-
4	4	8	12 ⁽²⁾	-	-	-	-	-	8	16	24 ⁽²⁾	-	-	-	-	-
5	5	10	15 ⁽²⁾	-	-	-	-	-	10	20	30 ⁽²⁾	-	-	-	-	-
6	6	12	18 ⁽²⁾	-	-	-	-	-	12	24	36 ⁽²⁾	-	-	-	-	-

(1) Only one baseband pool is used for configurations with two DUWs and one carrier per sector.

(2) Requires the optional feature *Increased Cell Carrier Support for DUW*. The core DUW supports up to 24 IQ streams. The extension DUW supports up to 12 IQ streams.

5.4.13 WCDMA Flexible Configurations

When flexible carrier mapping is used, carriers can be allocated freely between baseband pools and carrier frequencies. In addition to the rules listed in [Baseband Support and Configuration for WCDMA](#) on page 248, the following rules apply to configurations with flexible carrier allocation mode:

- The maximum number of carrier frequencies in one sector is four or eight depending on RBB.
- Frequency bands can be allocated to a sector independently of other sectors and holes in the configuration are allowed. For example, a carrier frequency can be used in some sectors and left unused in others.
- From SW W18.Q2, the following sector configuration rules apply:
 - The maximum number of sectors in one node is 12 for both internal and external radios.
 - DBB configuration 01 or 02 can be used for sectors 1-6 with internal radios.
 - DBB configuration 99 can be used for both internal and external radios.
- Sectors served by external radios and IRUs can be cascaded if there are no free DU or Baseband ports available.
- All sector carriers that use the same frequency must be allocated to the same baseband pool to support softer hand-over.
- Asymmetric configurations with different number of carriers or cell carrier branches per sector are allowed to use the full IQ stream capacity of the DU or Baseband and the CPRI, in which case it is not possible to expand to the nearest symmetric configuration.

5.4.14 WCDMA Basic and Advanced Configurations

In addition to the rules listed in [Baseband Support and Configuration for WCDMA](#) on page 248, the following rules apply to configurations with basic or advanced carrier allocation mode:

- The use of more than two carriers in any sector requires two baseband pools and limits the number of sectors to maximum three.
- Each carrier is handled by one baseband pool and cannot be split between baseband pools.
- Dual Band configurations are considered to be six sector configurations; at least one of the sectors 4, 5 or 6 must be used and maximum two carriers per sector are allowed.
- The maximum number of sectors in a macro node is six.



[Table 196](#) lists the available maximum configurations for configurations with basic or advanced carrier allocation mode. The allowed sub-configurations and how the carrier frequencies are allocated to the DUW(s) are shown for basic configurations in [Basic WCDMA Configurations](#) on page 267 and for advanced configurations in [Advanced WCDMA Configurations](#) on page 269.

Table 196 Maximum Configurations with Basic or Advanced Carrier Allocation Mode

Maximum Configuration, ⁽¹⁾ Number of Sectors × Number of Carrier Frequencies	Number of Frequency Bands	Basic Carrier Allocation Mode			Advanced Carrier Allocation Mode		
		Number of DUWs	Multi Carrier Support	Comment	Number of DUWs	Multi Carrier Support	Comment
3×1	1	1	-	See Table 197 . Configuration with 4-way RX diversity.	-	-	-
3×2	1	1	SB	See Table 197	2	-	See Table 203 . Configuration with 4-way RX diversity.
3×4	1	2	SB	See Table 198 . SB Multi Carrier is supported with f1 + f3 and f2 + f4.	-	-	-
6×1	1	1	-	See Table 199	-	-	-
3×1 + 3×1	2	1	DB	See Table 200	2	-	See Table 204
6×2	2	2	-	See Table 201	-	-	-
3×2 + 3×2	2	2	DB	See Table 202	2	SB	See Table 205
	1	-	-	-	2	SB	See Table 206 . For high or medium power configurations. SB Multi Carrier is supported with f1 + f3 and f2 + f4.
3×3 + 3×1	2	-	-	-	2	DB	See Table 207

(1) Sub-configurations of the maximum configuration is supported.

5.4.14.1 Basic WCDMA Configurations

This section describes the supported sub-configurations and carrier frequency allocations for configurations with basic carrier allocation mode.

[Table 197](#) shows a basic 3×2 configuration. Possible sub-configurations are (1–3)×(1–2).

Table 197 3×2 Basic Configuration

	Sectors		
	1	2	3
Carrier frequency 1	Core DUW		
Carrier frequency 2			

Table 198 shows a basic 3×4 configuration. Possible sub-configurations are (1–3)×(1–4), at least one sector must have three or four carriers.

Table 198 3×4 Basic Configuration

	Sectors		
	1	2	3
Carrier frequency 1 (f1)	Core DUW		
Carrier frequency 2 (f2)	Extension DUW		
Carrier frequency 3 (f3)	Core DUW		
Carrier frequency 4 (f4)	Extension DUW		

Table 199 shows a basic 6×1 configuration. Possible sub-configurations are (4–6)×1.

Table 199 6×1 Basic Configuration

	Sectors					
	1	2	3	4	5	6
Carrier frequency 1	Core DUW					

Table 200 shows a basic 3×1 + 3×1 dual band configuration. Possible sub-configurations are (1–3)×1 + (1–3)×1 with at least one sector per band.

Table 200 3×1 + 3×1 Dual Band Basic Configuration

	Sectors					
	1	2	3	4	5	6
	Band X			Band Y		
Carrier frequency 1	Core DUW					

Table 201 shows a basic 6×2 dual band configuration. Possible sub-configurations are (4–6)×(1–2). At least one sector must have two carriers.

Table 201 6×2 Dual Band Basic Configuration

	Sectors					
	1	2	3	4	5	6
Carrier frequency 1	Core DUW					
Carrier frequency 2	Extension DUW					

Table 202 shows a basic 3×2 + 3×2 dual band configuration. Possible sub-configurations are (1–3)×(1–2) + (1–3)×(1–2) with at least one sector per band. At least one sector must have two carriers.



Table 202 3×2 + 3×2 Dual Band Basic Configuration

	Sectors					
	1	2	3	4	5	6
	Band X			Band Y		
Carrier frequency 1	Core DUW					
Carrier frequency 2	Extension DUW					

5.4.14.2 Advanced WCDMA Configurations

This section describes the supported sub-configurations and carrier frequency allocations for configurations with advanced carrier allocation mode.

Table 203 shows an advanced 3×2 configuration. Possible sub-configurations are $(1-3) \times (1-2)$, at least one sector must have two carriers.

Table 203 3×2 Advanced Configuration

	Sectors		
	1	2	3
Carrier frequency 1	Core DUW		
Carrier frequency 2	Extension DUW		

Table 204 shows an advanced 3×1 + 3×1 dual band configuration. Possible sub-configurations are $(1-3) \times 1 + (1-3) \times 1$ with at least one sector per band.

Table 204 3×1 + 3×1 Dual Band Advanced Configuration

	Sectors					
	1	2	3	4	5	6
	Band X			Band Y		
Carrier frequency 1	Core DUW			Extension DUW		

Table 205 shows an advanced 3×2 + 3×2 dual band configuration. Possible sub-configurations are $(1-3) \times (1-2) + (1-3) \times (1-2)$ with at least one sector per band. At least one sector must have two carriers.

Table 205 3×2 + 3×2 Dual Band Advanced Configuration

	Sectors					
	1	2	3	4	5	6
	Band X			Band Y		
Carrier frequency 1	Core DUW			Extension DUW		
Carrier frequency 2						



Table 206 shows an advanced $3 \times 2 + 3 \times 2$ Single Band configuration. Possible sub-configurations are $(1-3) \times (1-2) + (1-3) \times (1-2)$ with at least one sector per band. At least one sector must have two carriers.

This configuration is recommended in high and medium power configurations with Multi Carrier support using two sectors (two radios or more) per serving area.

Table 206 $3 \times 2 + 3 \times 2$ Single Band Advanced Configuration

	Sectors					
	1	2	3	4	5	6
	Band X			Band X		
Carrier frequency 1 (f1)	Core DUW			Extension DUW		
Carrier frequency 2 (f2)						

Table 207 shows an advanced $3 \times 3 + 3 \times 1$ dual band configuration, with three carriers on one band and one carrier on the other band. Possible sub-configurations are $(1-3) \times 3$ single band.

Table 207 $3 \times 3 + 3 \times 1$ Dual Band Advanced Configuration

	Sectors					
	1	2	3	4	5	6
	Band X			Band Y		
Carrier frequency 1	Core DUW			Extension DUW		
Carrier frequency 2	Core DUW			-		
Carrier frequency 3	Extension DUW			-		



6 Radio Configurations for LTE

This section describes the radio configurations for LTE as a single standard. Multistandard configurations are described in [Radio Configurations for Multistandard and Single Standard Mixed Mode](#) on page 505.

6.1 Sector Configuration for LTE

See [LTE RBB Summary for External Radios, Internal Radios, and RBS 6501](#) on page 271 when selecting an RBB according to the required sector capabilities. The maximum output power per radio is found in [Radio Capabilities](#) on page 5 and more information on the available levels of output power is found in the description document for each radio type. For configurations with bandwidth (BW) less than 3 MHz, the maximum extended output power is 60 W per radio.

Only radios from the same radio group can be combined within one RBB. The exception is radios from group 1, 3, and 6, which can be combined within the same RBB. See [Radio Groups](#) on page 101 for information on what group a radio belongs to.

Note: There may be limitations to the combinations of RBBs that are supported in a specific software version or RBS type. See [Supported Radio Configurations for LTE](#) on page 300 for information on supported configurations.

Note: There is a limitation when using radios with different maximum output power in the same RBB. In such a case, both radios are limited to the lower output power. For example, 60 W + 80 W becomes 60 W + 60 W.

6.1.1 LTE RBB Summary for External Radios, Internal Radios, and RBS 6501

Table 208 LTE RBB Summary for External Radios, Internal Radios, and RBS 6501

Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
AIR 11	2	2	2	Yes	2	RBB22_1C RBB22_2A	-
AIR 1641	-	-	2 ⁽⁵⁾ 4 ⁽⁶⁾	4 layers	16	RBBAIR_1A RBBAIR_2A RBBAIR_3A RBBAIR_4A	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
AIR 21	2	2	2	No	2	RBB12_1A	-
				Yes	2	RBB22_1C RBB22_2A	-
					4	RBB24_1A ⁽³⁾ RBB24_2A ⁽⁴⁾	-
AIR 2488	6	6	6	Yes	4	RBB24_1C RBB24_2D	-
AIR 2488 MB	6	6	6 ⁽⁵⁾ 12 ⁽⁶⁾	Yes	4	RBB24_1C RBB24_2D	-
AIR 32	3	3	3	Yes	4	RBB44_1D RBB44_2F	-
AIR 32 MB	3	3	3 ⁽⁵⁾ 6 ⁽⁶⁾	Yes	4	RBB44_1D RBB44_2F	-
AIR 3239	-	-	3	4 layers	32	RBBAIR_1A RBBAIR_2A RBBAIR_3A	-
AIR 3246	-	-	3	4 layers	32	RBBAIR_1A RBBAIR_2A RBBAIR_3A RBBAIR_4A	-
AIR 4455	6	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-
AIR 6449	-	-	3	16 layers	64	RBBAIR_1A RBBAIR_2A RBBAIR_3A	-
AIR 6454	-	-	3	16 layers	64	RBBAIR_1A RBBAIR_2A RBBAIR_3A	-
AIR 6468	-	-	3	16 layers	64	RBBAIR_1A RBBAIR_2A	-
AIR 6488	-	-	3	16 layers	64	RBBAIR_1A RBBAIR_2A RBBAIR_3A	-
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽⁷⁾	6	6	6	2×2	2	RBB22_1F for RDS ⁽⁸⁾ RBB22_1G for RDS ⁽⁹⁾ RBB22_2K for RDS ⁽⁸⁾ RBB22_2L for RDS ⁽⁹⁾	-
				2×2 4×2 4×4	4	RBB44_1N for RDS ⁽⁸⁾ RBB44_1P for RDS ⁽⁹⁾ RBB44_2S for RDS ⁽¹⁰⁾ RBB44_2T for RDS ⁽⁹⁾	Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
mRRUS 12	2	2	2	No	1	RBB11_1C RBB11_1D	-
				2×2	2	RBB22_1B	-
						RBB22_2E	mRRUS 12 Radio 2203 Vault Radio System 2268
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	mRRUS 12 Radio 2203 Vault Radio System 2268
mRRUS 61	1	1	1	No	1	RBB11_1C RBB11_1D	-
				2×2	2	RBB22_1B	-
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	mRRUS 61
Radio 0208	-	3 ⁽¹¹⁾	3 ⁽¹¹⁾	No	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4 ⁽¹²⁾	RBB14_1A RBB14_2A	RRUS 01
					2×2 ⁽¹³⁾	4 ⁽¹³⁾ RBB24_1B RBB24_2B	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
Radio 2012	6	-	6	2×2	n/a ⁽¹⁴⁾	RBB20_1B ⁽¹⁴⁾ RBB20_2B ⁽¹⁴⁾	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2203	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2×2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	mRRUS 12 Radio 2203 Vault Radio System 2268
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	mRRUS 12 Radio 2203 Vault Radio System 2268
Radio 2205	3	3	3	2×2	2	RBB22_1B RBB22_2C	-
Radio 2208	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2×2	2	RBB22_1B RBB22_2C	-
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	Radio 2208



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2212	6 ⁽¹⁵⁾	6 ⁽¹⁵⁾	6 ⁽¹⁵⁾	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2217	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
Radio 2218	3 ⁽¹⁶⁾	3 ⁽¹⁶⁾	3 ⁽¹⁶⁾	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2x2	2	RBB22_1B RBB22_2C	-
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2218



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2219	4 ⁽¹⁷⁾	4 ⁽¹⁷⁾	4 ⁽¹⁷⁾	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
Radio 2228	6	6	6	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2x2	2	RBB22_1B RBB22_2C	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2C	-
Radio 2237	3	3	3	No	1	RBB11_1C RBB11_1D	-
				2x2	2	RBB22_1B	-
						RBB22_2E	Radio 2237
				cc	4	RBB44_1B RBB44_2C	Radio 2237



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2238	6	12	12	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2×2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
Radio 2242	6	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2×2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2260	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2279	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
					4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
Radio 2460	6	6	6	2x2	2	RBB22_1F RBB22_1G RBB22_1P RBB22_1Q RBB22_2K RBB22_2L RBB22_2T RBB22_2U	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 2468	6	6	6	No	2	RBB12_1E RBB12_1F RBB12_2D RBB12_2E	-
				2x2	2	RBB22_1F	-
				2x2	4	RBB24_1C RBB24_2D	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 2479	6	6	6	2x2	2	RBB22_1F RBB22_1G RBB22_1P RBB22_1Q RBB22_2K RBB22_2L RBB22_2T RBB22_2U	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4402	6	6	6	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4407	3	3	3	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4408	6	6	6	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4412	3	3	3	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4415	6 ⁽¹⁸⁾	6 ⁽¹⁸⁾	6 ⁽¹⁸⁾	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4418	6	6	6	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 4422	6	6	6	2×2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-
Radio 4426	6	6	6	2×2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-
Radio 4428	6	6	6	2×2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-
Radio 4429	6	6	6	2×2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-
Radio 4442	6	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	2×2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-
Radio 4443	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	2×2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 4449	4 ⁽¹⁹⁾ 7 ⁽²⁰⁾	4 ⁽¹⁹⁾ 7 ⁽²⁰⁾	4 ⁽¹⁹⁾ 7 ⁽²⁰⁾	2x2	2	RBB22_1F RBB22_1G RBB22_1K ⁽²¹⁾ RBB22_1N ⁽²²⁾ RBB22_2K RBB22_2L RBB22_2P ⁽²¹⁾ RBB22_2S ⁽²²⁾	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
						RBB44_1H ⁽²¹⁾ RBB44_1M ⁽²²⁾ RBB44_2M ⁽²¹⁾ RBB44_2R ⁽²²⁾	Radio 4449
Radio 4455	6 ⁽⁵⁾ 6 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4478	6 ⁽²³⁾	6 ⁽²³⁾	6 ⁽²³⁾	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4480	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4499	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	6 ⁽⁵⁾ 12 ⁽⁶⁾	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 8808 ⁽²⁴⁾	3 ⁽²⁵⁾	3 ⁽²⁵⁾	3 ⁽²⁵⁾	2×2	2	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_2K RBB22_2L RBB22_2M RBB22_2N	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
				8×2	8	RBB88_1A RBB88_2A	-
Radio 8818 ⁽²⁴⁾	3	3	3 ⁽²⁶⁾	2×2	2	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_2K RBB22_2L RBB22_2M RBB22_2N	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
				8×2	8	RBB88_1A RBB88_2A	-
Radio 8823	5	5	5	2×2	2	RBB22_1F ⁽²⁷⁾ RBB22_1G ⁽²⁷⁾ RBB22_1H ⁽²⁷⁾ RBB22_1J ⁽²⁷⁾ RBB22_2K ⁽²⁷⁾ RBB22_2L ⁽²⁷⁾ RBB22_2M ⁽²⁷⁾ RBB22_2N ⁽²⁷⁾	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
				8×2	8	RBB88_1A RBB88_2A	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 8836	5	5	5	2×2	2	RBB22_1F ⁽²⁷⁾ RBB22_1G ⁽²⁷⁾ RBB22_1H ⁽²⁷⁾ RBB22_1J ⁽²⁷⁾ RBB22_2K ⁽²⁷⁾ RBB22_2L ⁽²⁷⁾ RBB22_2M ⁽²⁷⁾ RBB22_2N ⁽²⁷⁾	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
				8×2	8	RBB88_1A RBB88_2A	-
Radio 8842	2 ⁽²⁸⁾ 3 ⁽⁶⁾	2 ⁽²⁸⁾ 3 ⁽⁶⁾	2 ⁽²⁸⁾ 3 ⁽⁶⁾	2×2	2	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_2K RBB22_2L RBB22_2M RBB22_2N	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
				8×2	8	RBB88_1A RBB88_2A	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
Radio 8843	3	3	3 ⁽⁵⁾ 6 ⁽⁶⁾	2×2	2	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_1L ^(2 9) RBB22_1M ^(2 9) RBB22_2K RBB22_2L RBB22_2M RBB22_2N RBB22_2Q ^(2 9) RBB22_2R ^(2 9)	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
						RBB44_1J ^(2 9) RBB44_1K ^(2 9) RBB44_2N ^(2 9) RBB44_2P ^(2 9)	Radio 8843
Radio 8863	6	6	6	2×2	2	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_2K RBB22_2L RBB22_2M RBB22_2N	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
				8×2	8	RBB88_1A RBB88_2A	-
RBS 6501 radio part	2	2	2	2×2	2	RBB22_1B	-
RD 2242 + IRU 2242 ⁽³⁰⁾⁽³¹⁾	2	2	2 ⁽³²⁾	2×2	2	RBB22_1B for RDS	-
				2×2 4×2 4×4	4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RD 2243 + IRU 2242 ⁽³⁰⁾⁽³¹⁾	2	2	2	2x2	2	RBB22_1B for RDS	-
				2x2 4x2 4x4	4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242
RD 2253 + IRU 2242 ⁽³⁰⁾⁽³¹⁾	2	2	2	2x2	2	RBB22_1B for RDS	-
				2x2 4x2 4x4	4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242
RD 4442 + IRU 2242 ⁽³⁰⁾⁽³¹⁾	2	2	2 ⁽⁵⁾ 4 ⁽⁶⁾	2x2	2	RBB22_1B for RDS	-
				2x2 4x2 4x4	4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242
RD 4453 + IRU 2242 ⁽³⁰⁾⁽³¹⁾	2	2	2 ⁽⁵⁾ 4 ⁽⁶⁾	2x2	2	RBB22_1B for RDS	-
				2x2 4x2 4x4	4	RBB44_1B for RDS RBB44_2C for RDS	RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242
RRU 2208	2	2	2	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2x2	2	RBB22_1B RBB22_2C	-
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	RRU 2208



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRU 2216	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2×2	2	RBB22_1B RBB22_2C	-
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	RRU 2216
RRU 22F1	1	1	1	No	1	RBB11_1C RBB11_1D	-
				2×2	2	RBB22_1B RBB22_2E	-
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	RRU 22F1
RRU 22F2	1	1	1 ⁽⁵⁾ 2 ⁽⁶⁾	2×2	2	RBB22_1F	-
						RBB22_1G	-
RRU 22F3	1	1	1 ⁽⁵⁾ 2 ⁽³³⁾ 3 ⁽⁶⁾	2×2	2	RBB22_1H RBB22_2M	-
						RBB22_1F RBB22_2K	-
						RBB22_1G RBB22_2L	-
RRUL 11	1	1	1	2×2	2	RBB22_1B	-
RRUL 62	2	2	2	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2×2	2	RBB22_1B RBB22_2C	-
RRUL 63	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2×2	2	RBB22_1B RBB22_2C	-
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	RRUS 62 RRUL 63
RRUL 81	2	2	2	8×2	8	RBB88_1A RBB88_2A	-
RRUL 82 ⁽³⁴⁾	3	3	3	2×2	2	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_2K RBB22_2L RBB22_2M RBB22_2N	-
				8×2	8	RBB88_1A RBB88_2A	-



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS 01	2	2	2	No	1	RBB11_1A RBB11_1C	-
					2	RBB10_1A RBB12_1A	-
					4	RBB14_1A RBB14_2A	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB22_1C RBB22_2A	RRUS 01 RRUS 02
						RBB32_1A ^(3 5)	Two radios with any combination of RRUS 01 and RRUS 02
					3	RBB43_4A ^(3 5)	Three radios with any combination of RRUS 01 and RRUS 02
					4	RBB20_2A RBB24_1A RBB24_2A	RRUS 01 RRUS 02
RRUS 02	2	2	2	No	1	RBB11_1A RBB11_1C	-
					2	RBB10_1A RBB12_1A	-
				2x2	2	RBB22_1C RBB22_2A	RRUS 01 RRUS 02
						RBB32_1A ^(3 5)	Two radios with any combination of RRUS 01 and RRUS 02
					3	RBB43_4A ^(3 5)	Three radios with any combination of RRUS 01 and RRUS 02
					4	RBB20_2A RBB24_1A RBB24_2A	RRUS 01 RRUS 02



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS 11	2	2	2	No	1	RBB11_1C RBB11_1D	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB20_1A RBB22_1B	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13
						RBB44_2K RBB44_2L RBB44_3A RBB44_3B	2 x RUL 01 2 x RUS 01 2 x RUS 02



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS 12	2	2	2 ⁽³⁶⁾	No	1	RBB11_1C RBB11_1D	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2×2	2	RBB20_1A RBB22_1B	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
						RBB44_2K RBB44_2L RBB44_3A RBB44_3B	2 × RUS 01 2 × RUS 02



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS 13	3 ⁽³⁷⁾	3 ⁽³⁷⁾	3 ⁽³⁷⁾	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB20_1A ⁽³⁸⁾ RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS 14 ⁽³⁹⁾	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB20_1A RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS 14s ⁽³⁹⁾⁽⁴⁰⁾	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 0208 RRUS A2 RRUS A3
				2x2	2	RBB20_1A RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
RRUS 31	3	3	3	2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
RRUS 32	3 ⁽⁴¹⁾	3 ⁽⁴¹⁾	3 ⁽⁴¹⁾	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				2x2 4x2 4x4	4	RBB44_1D RBB44_2F	-
RRUS 61	1	1	1	No	1	RBB11_1C RBB11_1D	-
				2x2	2	RBB22_1B	-
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	RRUS 61



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS 62	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
				2×2	2	RBB22_1B RBB22_2C	-
				2×2 4×2 4×4	4	RBB44_1B RBB44_2C	RRUS 62 RRUL 63
RRUS 72	3	3	3	2×2	2	RBB22_1F RBB22_1G ^(4 2) RBB22_2K RBB22_2L ^(4 3)	-
				2×2 4×2 4×4	4	RBB44_1D RBB44_2F	-
RRUS 82 ⁽²⁴⁾	3	3	3	2×2	2	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_2K RBB22_2L RBB22_2M RBB22_2N	-
				2×2 4×2 4×4	4	RBB44_1E RBB44_1F RBB44_2G RBB44_2H	-
				4×2 4×4 8×2	4 or 8	RBB88_1A ^(4 4) RBB88_2A ^(4 4)	-
RRUS A2	2	2	2	No	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4 ⁽¹²⁾	RBB14_1A RBB14_2A	RRUS 01
				2×2 ⁽¹³⁾	4 ⁽¹³⁾	RBB24_1B RBB24_2B	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RRUS A3	-	3	3	No	2	RBB12_1C RBB12_1D RBB12_2B RBB12_2C	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
					4 ⁽¹²⁾	RBB14_1A RBB14_2A	RRUS 01
					2x2 ⁽¹³⁾	4 ⁽¹³⁾ RBB24_1B RBB24_2B	Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s
RRUS E2 ⁽⁴⁵⁾	2	-	2	2x2	n/a ⁽¹⁴⁾	RBB20_1B ⁽¹⁴⁾	-
RRUW 02	2	2	2	No	1	RBB11_1A RBB11_1C	-
					2	RBB10_1A RBB12_1A	-
				2x2	2	RBB22_1C RBB22_2A	RRUW 02
					4	RBB20_2A RBB24_1A RBB24_2A	RRUW 02
RUL 01	2	1	2 ⁽⁴⁶⁾	No	1	RBB11_1C	-
					2	RBB10_1A RBB12_1A	-
				Yes	2	RBB22_1C RBB22_2A	RUL 01
					4	RBB20_2A RBB24_1A RBB24_2A	RUL 01
				2x2 4x2 4x4	4	RBB44_1G RBB44_2J RBB44_4A	3 x RUL 01
						RBB44_2K RBB44_2L RBB44_3A RBB44_3B	RUL 01 + RRUS 11



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RUS 01	2	2	2	No	1	RBB11_1A RBB11_1C	-
					2	RBB10_1A RBB12_1A	-
				Yes	2	RBB22_1C RBB22_2A	RUS 01 RUS 02 RUS 03
						RBB32_1A ^(3 5)	Two radios with any combination of RUS 01, RUS 02, and RUS 03
					3	RBB43_4A ^(3 5)	Three radios with any combination of RUS 01, RUS 02, and RUS 03
					4	RBB20_2A RBB24_1A RBB24_2A	RUS 01 RUS 02 RUS 03
						RBB44_2K RBB44_2L RBB44_3A RBB44_3B	RUS 01 + RRUS 11 RUS 01 + RRUS 12
						RBB44_1G RBB44_2J RBB44_4A	3 × RUS 01
RUS 02 ⁽⁴⁷⁾	2	3 ⁽⁴⁸⁾	3 ⁽⁴⁸⁾	No	1	RBB11_1A RBB11_1C	-
					2	RBB10_1A RBB12_1A	-
				Yes	2	RBB22_1C RBB22_2A	RUS 01 RUS 02 RUS 03
						RBB32_1A ^(3 5)	Two radios with any combination of RUS 01, RUS 02, and RUS 03
					3	RBB43_4A ^(3 5)	Three radios with any combination of RUS 01, RUS 02, and RUS 03
					4	RBB20_2A RBB24_1A RBB24_2A	RUS 01 RUS 02 RUS 03
						RBB44_1G RBB44_2J RBB44_4A	3 × RUS 02
						RBB44_2K RBB44_2L RBB44_3A RBB44_3B	RUS 02 + RRUS 11 RUS 02 + RRUS 12



Radio	Maximum Carriers per RF Port in Downlink	Maximum Carriers per RF Port in Uplink	Maximum Carriers per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB ⁽¹⁾	Additional Radios in RBB ⁽²⁾
RUS 03	3	3	3	No	1	RBB11_1A RBB11_1C	-
					2	RBB10_1A RBB12_1A RBB12_2A	-
				Yes	2	RBB22_1C RBB22_2A	RUS 01 RUS 02 RUS 03
						RBB32_1A ^(3 5)	Two radios with any combination of RUS 01, RUS 02, and RUS 03
					3	RBB43_4A ^(3 5)	Three radios with any combination of RUS 01, RUS 02, and RUS 03
					4	RBB20_2A RBB24_1A RBB24_2A	RUS 01 RUS 02 RUS 03
RUW 02	2	2	2	No	1	RBB11_1A RBB11_1C	-
					2	RBB10_1A RBB12_1A	-
				Yes	2	RBB22_1C RBB22_2A	RUW 02
					4	RBB20_2A RBB24_1A RBB24_2A	RUW 02
Vault Radio System 2268	3	3	3	No	1	RBB11_1C RBB11_1D RBB11_2A RBB11_2B	-
					2	RBB22_1B RBB22_2C	-
						RBB22_2E	mRRUS 12 Radio 2203 Vault Radio System 2268
				2x2 4x2 4x4	4	RBB44_1B RBB44_2C	mRRUS 12 Radio 2203 Vault Radio System 2268

(1) AIR has two radios integrated in the same unit and typically use RBBs for two radios.

(2) Number of carriers in RBB depends on the additional radios and carrier configuration. See carrier allocation tables.

(3) Maximum bandwidth of 10 MHz due to CPRI limitations.

(4) Bandwidth limitations according to [Baseband Support and Configuration for LTE](#) on page 386.

(5) Carriers per band.

(6) Carriers in total for all bands.

(7) Dot 2272 and Dot 2282 can only be connected with IRU 8844 or IRU 8884 on the same band(s).

(8) For FDD band 3E only.

(9) For FDD band 3 only.

For TDD band 40A only.

(10) For FDD band 1 and band 3E only.



- (11) Radio 0208 B13 supports two carriers per RF port and two carriers per radio.
- (12) When configured together with a 1TX-radio (for example, RRUS 01).
- (13) When configured together with a 2TX-radio (for example, RRUS 13).
- (14) In configuration together with at least one other RBB (but not with RBB10_1A, RBB20_1A, or RBB44_1D), having RX capability and being connected to the same DU or Baseband.
- (15) Radio 2212 B7 and Radio 2212 B13 supports two carriers per RF port and two carriers per radio.
- (16) Radio 2218 B42B supports two carriers per RF port and two carriers per radio, each 20 MHz only.
- (17) Radio 2219 B3B and Radio 2219 B5B support three carriers per RF port and three carriers per radio.
- (18) Radio 4415 B30 supports two carriers per RF port and two carriers per radio.
Radio 4415 B70 supports five carriers per RF port in downlink, five carriers per radio in downlink, three carriers per RF port in uplink, and three carriers per radio in uplink.
- (19) Radio 4449 B5 B12A on band 5 supports three carriers per RF port and three carriers per radio.
Radio 4449 B5 B12A on band 12A supports two carriers per RF port and two carriers per radio.
Radio 4449 B5 B13 on band 5 supports three carriers per RF port and three carriers per radio.
Radio 4449 B5 B13 on band 13 supports one carrier per RF port and one carrier per radio.
Radio 4449 B71 B85A on band 71 supports four carriers per RF port and four carriers per radio.
Radio 4449 B71 B85A on band 85A supports three carriers per RF port and three carriers per radio.
- (20) Radio 4449 B5 B12A supports five carriers in total for all bands per RF port and five carriers in total for all bands per radio.
Radio 4449 B5 B13 supports four carriers in total for all bands per RF port and four carriers in total for all bands per radio.
Radio 4449 B71 B85A supports seven carriers in total for all bands per RF port and seven carriers in total for all bands per radio.
- (21) High output power mode. Only supported by Radio 4449 B5 B13.
- (22) High output power mode. Only supported by Radio 4449 B5 B12A.
- (23) Radio 4478 B14 supports two carriers per RF port and two carriers per radio.
- (24) Radio supports virtual sectors for RBB88_1A and RBB88_2A. See [Virtual Sectors for LTE](#) on page 329.
- (25) Radio 8808 does not support 5 MHz carriers.
Radio 8808 B40Y supports two carriers per RF port and two carriers per radio.
- (26) Radio 8818 does not support 5 MHz carriers.
- (27) For Radio 8823 and Radio 8836, when using 4× 2TX/2RX sectors, symmetrical configurations are required on RF ports A-D and E-H respectively.
- (28) Radio 8842 B34 B39A on band 34 supports one carrier per RF port and one carrier per radio.
Radio 8842 B34 B39A on band 39A supports two carriers per RF port and two carriers per radio.
- (29) High output power mode. Only supported by Radio 8843.
- (30) RDs cannot be mixed on the same IRU.
- (31) IRU 2242 is not supported with DUL 20.
- (32) RD 2242 + IRU 2242 for band 7 does not support 5 MHz carriers.
- (33) Carriers in total for two bands.
- (34) Radio supports virtual sectors for RBB88_2A. See [Virtual Sectors for LTE](#) on page 329.
- (35) LTE for RBB is only available in mixed mode.
- (36) For RRUS 12 band 28A and carriers with bandwidth 3 MHz, the maximum output power is 1 x 30 W without MIMO, and 2 x 30 with MIMO.
- (37) RRUS 13 B31 supports two carriers per RF port and two carriers per radio.
- (38) RRUS 13 for band 31 does not support RBB20_1A.
- (39) In addition to standard carrier bandwidths, RRUS 14 and RRUS 14s support 4.6 MHz LTE carriers.
- (40) RRUS 14s has two TX and two RX ports but supports the same RBBs as RRUS 14, which has two combined TX and RX ports.



- (41) RRUS 32 B30 supports two carriers per RF port and two carriers per radio.
- (42) RBB22_1G is configured on the same radio unit as RBB22_1F.
- (43) RBB22_1L is configured on the same radio unit as RBB22_1K.
- (44) Supports Virtual IBW
- (45) RRUS E2 is not supported with DUL 20.
- (46) RUL 01 supports one carrier in uplink per radio.
- (47) For RUS 02 B28A and carriers with bandwidth 3 MHz, the maximum output power is 1×30 W without MIMO and 2×30 with MIMO.
- (48) RUS 02 supports two carriers per radio in downlink.
RUS 02 B28A and RUS 02 28B support two carriers per RF port in uplink and two carriers per radio in uplink.

6.2 Supported Radio Configurations for LTE

This section describes the supported LTE radio configurations by listing the valid combinations of DBBs and RBBs.

For RBS 6302, only configurations with DUS 41 are supported. The number of DUS 41 that is required for a configuration equals the number of RBS 6302 that is required.

In configurations where DUS 41 is used, the ODS 41 digital unit can also be used.

Configurations for LTE FDD and TDD are listed in [LTE FDD and TDD Configurations](#) on page 300.

Carrier Aggregation information is given in [LTE Carrier Aggregation](#) on page 309.

Combined cell configurations are listed in [LTE Combined Cell Configurations](#) on page 320.

Note: The configurations in this section are dependent on DU or Baseband capacity listed in [Baseband Support and Configuration for LTE](#) on page 386.

6.2.1 LTE FDD and TDD Configurations

This section describes the supported LTE FDD and TDD radio configurations.

The following rules apply to LTE radio configurations:

- RRUL 63 and RRUS 62 can be mixed within the same sector.
- RRUS 61 and mRRUS 61 cannot be mixed within the same sector due to the difference in output power.
- RRUL 63 and RRUS 62 cannot be mixed with RRUS 61 or mRRUS 61 within the same sector.
- Radios supporting FDD and radios supporting TDD can be mixed in the same cascade chain for specific DUs and Baseband units, see [Baseband Support](#)



and [Configuration for LTE](#) on page 386. All group 5 radios must be placed in the last part of the cascade chain, see [Radio Groups](#) on page 101.

- AIR 11, AIR 21, RRU 22F2, RRU 22F3, RRUL 11, RRUS 31, RRUL 81, RRUL 82, and RRUS 82 do not support cascading.
- For cascading rules with Baseband R503, see [Cascade Configurations with Baseband R503](#) on page 1303.
- Up to three TDD radios can be powered from an RBS. The exemption is RRUL 62 B40A where six TDD radios can be powered from an RBS.

The following sections and tables list valid configurations, marked with "X".

6.2.1.1 LTE FDD Configurations for Baseband, DU and RBS 6501

Table 209 LTE FDD Configurations with Baseband

RBB ⁽¹⁾	From SW Release			
	LTE only Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 5212 Baseband 6303 Baseband 6620 or with Mixed Mode Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209
RBB10_1A	L18.Q2	L18.Q2	-	-
RBB11_1A	L18.Q2	L18.Q2	-	-
RBB11_1C	L18.Q2	L18.Q2	L18.Q2	-
RBB11_1D	L18.Q2	L18.Q2	L18.Q2	-
RBB11_2A	L18.Q2	L18.Q2	L18.Q2	-
RBB11_2B	L18.Q2	L18.Q2	L18.Q2	-
RBB12_1A	L18.Q2	L18.Q2	-	-
RBB12_1A for AIR 21	L18.Q2	L18.Q2	-	-
RBB12_1C	L18.Q2	L18.Q2	-	-
RBB12_1D	L18.Q2	L18.Q2	-	-
RBB12_1E	L18.Q2	L18.Q2	-	-
RBB12_1F	L18.Q2	L18.Q2	-	-
RBB12_2A	L18.Q2	L18.Q2	-	-
RBB12_2B	L18.Q2	L18.Q2	-	-
RBB12_2C	L18.Q2	L18.Q2	-	-
RBB12_2D	L18.Q2	L18.Q2	-	-
RBB12_2E	L18.Q2	L18.Q2	-	-
RBB14_1A	L18.Q2	L18.Q2	-	-
RBB14_2A	L18.Q2	L18.Q2	-	-
RBB20_1A	L18.Q2	L18.Q2	-	-
RBB20_1B ⁽²⁾	L18.Q2	L18.Q2	-	-
RBB20_2A	L18.Q2	L18.Q2	-	-



RBB ⁽¹⁾	From SW Release			
	LTE only Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 5212 Baseband 6303 Baseband 6620 or with Mixed Mode Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209
RBB20_2B ⁽²⁾	L18.Q2	L18.Q2	-	-
RBB22_1B	L18.Q2	L18.Q2	L18.Q2	-
RBB22_1B for RDS	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1C	L18.Q2	L18.Q2	-	-
RBB22_1C for AIR 11	L18.Q2	L18.Q2	-	-
RBB22_1C for AIR 21	L18.Q2	L18.Q2	-	-
RBB22_1F	L18.Q2	L18.Q2	L19.Q3	-
RBB22_1F for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB22_1G	L18.Q2	L18.Q2	L19.Q3	-
RBB22_1G for RDS	L19.Q2	L19.Q2	L19.Q2	L19.Q2
RBB22_1H	L18.Q2	L18.Q2	-	-
RBB22_1J	L18.Q2	L18.Q2	-	-
RBB22_1K	L18.Q2	-	-	-
RBB22_1L	L18.Q2	L18.Q2	-	-
RBB22_1M	L18.Q2	L18.Q2	-	-
RBB22_1N	L18.Q3	-	-	-
RBB22_1P	L18.Q4	L18.Q4	-	-
RBB22_1Q	L18.Q4	L18.Q4	-	-
RBB22_2A	L18.Q2	L18.Q2	-	-
RBB22_2A for AIR 11	L18.Q2	L18.Q2	-	-
RBB22_2A for AIR 21	L18.Q2	L18.Q2	-	-
RBB22_2C	L18.Q2	L18.Q2	L18.Q2	-
RBB22_2E	L18.Q2	L18.Q2	L18.Q2	-
RBB22_2K	L18.Q2	L18.Q2	L19.Q3	-
RBB22_2K for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB22_2L	L18.Q2	L18.Q2	L19.Q3	-
RBB22_2L for RDS	L19.Q2	L19.Q2	L19.Q2	L19.Q2
RBB22_2M	L18.Q2	L18.Q2	-	-
RBB22_2N	L18.Q2	L18.Q2	-	-
RBB22_2P	L18.Q2	-	-	-
RBB22_2Q	L18.Q2	L18.Q2	-	-
RBB22_2R	L18.Q2	L18.Q2	-	-
RBB22_2S	L18.Q3	-	-	-
RBB22_2T	L18.Q4	L18.Q4	-	-
RBB22_2U	L18.Q4	L18.Q4	-	-
RBB24_1A	L18.Q2	L18.Q2	-	-
RBB24_1A for AIR 21	L18.Q2	L18.Q2	-	-
RBB24_1B	L18.Q2	L18.Q2	-	-
RBB24_1C	L18.Q2	L18.Q2	-	-



RBB ⁽¹⁾	From SW Release			
	LTE only Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 5212 Baseband 6303 Baseband 6620 or with Mixed Mode Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209
RBB24_2A	L18.Q2	L18.Q2	-	-
RBB24_2A for AIR 21	L18.Q2	L18.Q2	-	-
RBB24_2B	L18.Q2	L18.Q2	-	-
RBB24_2D	L18.Q2	L18.Q2	-	-
RBB44_1B	L18.Q2	L18.Q2	L18.Q2	-
RBB44_1B for RDS	L18.Q3	L18.Q3	L18.Q3	L18.Q3
RBB44_1D	L18.Q2	L18.Q2	L19.Q3	-
RBB44_1E	L18.Q2	L18.Q2	-	-
RBB44_1F	L18.Q2	L18.Q2	-	-
RBB44_1G	L18.Q2	L18.Q2	-	-
RBB44_1H	L18.Q2	-	-	-
RBB44_1J	L18.Q2	L18.Q2	-	-
RBB44_1K	L18.Q2	L18.Q2	-	-
RBB44_1M	L18.Q3	-	-	-
RBB44_1N for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB44_1P for RDS	L19.Q2	L19.Q2	L19.Q2	L19.Q2
RBB44_2C	L18.Q2	L18.Q2	L18.Q2	-
RBB44_2C for RDS	L18.Q3	L18.Q3	L18.Q3	L18.Q3
RBB44_2F	L18.Q2	L18.Q2	-	-
RBB44_2G	L18.Q2	L18.Q2	-	-
RBB44_2H	L18.Q2	L18.Q2	L19.Q3	-
RBB44_2J	L18.Q2	L18.Q2	-	-
RBB44_2K	L18.Q2	L18.Q2	-	-
RBB44_2L	L18.Q2	L18.Q2	-	-
RBB44_2M	L18.Q2	-	-	-
RBB44_2N	L18.Q2	L18.Q2	-	-
RBB44_2P	L18.Q2	L18.Q2	-	-
RBB44_2R	L18.Q3	-	-	-
RBB44_2S for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB44_2T for RDS	L19.Q2	L19.Q2	L19.Q2	L19.Q2
RBB44_3A	L18.Q2	L18.Q2	-	-
RBB44_3B	L18.Q2	L18.Q2	-	-
RBB44_4A	L18.Q2	L18.Q2	-	-
RBB88_1A	L18.Q2	L18.Q2	-	-
RBB88_2A	L18.Q2	L18.Q2	-	-
RBBAIR_1A with CPRI ⁽³⁾	L18.Q3	-	-	-
RBBAIR_2A with CPRI ⁽³⁾	L18.Q3	-	-	-



RBB ⁽¹⁾	From SW Release			
	LTE only Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 5212 Baseband 6303 Baseband 6620 or with Mixed Mode Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209
RBB10_3A with CPRI	L19.Q1	-	-	-
RBB10_4A with CPRI	L19.Q1	-	-	-

(1) With DBB10_81.

(2) RBB20_1B and RBB20_2B are used in Carrier Aggregation as secondary cells and have to be used together with at least one other RBB, except RBB10_1A and RBB20_1A.

(3) Can only be configured with other AIR 3246 on the same Baseband before SW L18.Q4.

From SW L18.Q4 AIR 3246 can be mixed with other radios on the same Baseband.

Table 210 LTE FDD Configurations with DUS and RBS 6501

RBB ⁽¹⁾	From SW Release			
	DUS 41 2 × DUS 41 3 × DUS 41	DUS 31 2 × DUS 31 3 × DUS 31	DUL 20 2 × DUL 20	RBS 6501
RBB10_1A	L18.Q2	L18.Q2	L18.Q2	-
RBB11_1C	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB11_1D	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB11_2A	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB11_2B	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB12_1A	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB12_1A for AIR 21	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB12_1C	L18.Q2	L18.Q2	-	-
RBB12_1D	L18.Q2	L18.Q2	-	-
RBB12_1E	L18.Q2	L18.Q2	-	-
RBB12_1F	L18.Q2	L18.Q2	-	-
RBB12_2A	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB12_2B	L18.Q2	L18.Q2	-	-
RBB12_2C	L18.Q2	L18.Q2	-	-
RBB12_2D	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	-	-
RBB12_2E	L18.Q2	L18.Q2	-	-
RBB14_1A	L18.Q2	L18.Q2	L18.Q2	-
RBB14_2A	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB20_1A	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB20_1B ⁽³⁾	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB20_2A	L18.Q2	L18.Q2	L18.Q2	-
RBB20_2B ⁽³⁾	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB22_1B	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1B for RDS	L18.Q2	L18.Q2	-	L18.Q2



RBB ⁽¹⁾	From SW Release			
	DUS 41 2 × DUS 41 3 × DUS 41	DUS 31 2 × DUS 31 3 × DUS 31	DUL 20 2 × DUL 20	RBS 6501
RBB22_1C	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1C for AIR 11	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1C for AIR 21	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1F	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1G	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1H	L18.Q2	L18.Q2	-	-
RBB22_1J	L18.Q2	L18.Q2	-	-
RBB22_1K	L18.Q2	-	-	-
RBB22_1L	L18.Q2	L18.Q2	-	-
RBB22_1M	L18.Q2	L18.Q2	-	-
RBB22_1N	L18.Q3	-	-	-
RBB22_1P	L18.Q4	L18.Q4	-	-
RBB22_1Q	L18.Q4	L18.Q4	-	-
RBB22_2A	L18.Q2	L18.Q2	L18.Q2	-
RBB22_2A for AIR 11	L18.Q2	L18.Q2	L18.Q2	-
RBB22_2A for AIR 21	L18.Q2	L18.Q2	L18.Q2	-
RBB22_2C	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB22_2E	L18.Q2	L18.Q2	L18.Q2	-
RBB22_2K	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB22_2L	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB22_2M	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	-	-
RBB22_2N	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	-	-
RBB22_2P	L18.Q2 ⁽²⁾	-	-	-
RBB22_2Q	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	-	-
RBB22_2R	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	-	-
RBB22_2S	L18.Q3 ⁽²⁾	-	-	-
RBB22_2T	L18.Q4 ⁽²⁾	L18.Q4 ⁽²⁾	-	-
RBB22_2U	L18.Q4 ⁽²⁾	L18.Q4 ⁽²⁾	-	-
RBB24_1A	L18.Q2	L18.Q2	L18.Q2	-
RBB24_1A for AIR 21	L18.Q2	L18.Q2	L18.Q2	-
RBB24_1B	L18.Q2	L18.Q2	L18.Q2	-
RBB24_1C	L18.Q2	L18.Q2	L18.Q2	-
RBB24_2A	L18.Q2	L18.Q2	L18.Q2	-
RBB24_2A for AIR 21	L18.Q2	L18.Q2	L18.Q2	-
RBB24_2B	L18.Q2	L18.Q2	L18.Q2	-
RBB24_2D	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB44_1B	L18.Q2	L18.Q2	L18.Q2	-
RBB44_1D	L18.Q2	L18.Q2	L18.Q2	-
RBB44_1E	L18.Q2	L18.Q2	-	-
RBB44_1F	L18.Q2	L18.Q2	-	-



RBB ⁽¹⁾	From SW Release			
	DUS 41 2 × DUS 41 3 × DUS 41	DUS 31 2 × DUS 31 3 × DUS 31	DUL 20 2 × DUL 20	RBS 6501
RBB44_1G	L18.Q2	L18.Q2	-	-
RBB44_1H	L18.Q2	L18.Q2	-	-
RBB44_1J	L18.Q2	L18.Q2	-	-
RBB44_1K	L18.Q2	L18.Q2	-	-
RBB44_1M	L18.Q3	-	-	-
RBB44_2C	L18.Q2	L18.Q2	L18.Q2	-
RBB44_2F	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	L18.Q2	-
RBB44_2G	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	-	-
RBB44_2H	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾	-	-
RBB44_2J	L18.Q2	L18.Q2	-	-
RBB44_2K	L18.Q2	L18.Q2	-	-
RBB44_2L	L18.Q2	L18.Q2	-	-
RBB44_2M	L18.Q2	-	-	-
RBB44_2N	L18.Q2	L18.Q2	-	-
RBB44_2P	L18.Q2	L18.Q2	-	-
RBB44_2R	L18.Q3	-	-	-
RBB44_3A	L18.Q2	L18.Q2	-	-
RBB44_3B	L18.Q2	L18.Q2	-	-
RBB44_4A	L18.Q2	L18.Q2	-	-
RBB88_1A	L18.Q2	L18.Q2	-	-
RBB88_2A	L18.Q2	L18.Q2	-	-

(1) DBB10_81 for one DUS, DUL or RBS 6501.

DBB20_81 and DBB21_81 for 2 × DUS.

DBB20_81 for 2 × DUL 20.

DBB30_81 and DBB31_81 for 3 × DUS configurations.

(2) Each radio in the RBB can be shared between Core and extension DUS (for 2 × DUS 31, 3 × DUS 31, 2 × DUS 41 and 3 × DUS 41, where supported for the RBB). The following is supported:

RBB connected to one DUS only (Core or Extension for multi-DU nodes)

RBB connected to two of the DUSs, where one DUS must be the Core DU. UL-CoMP is not used for carriers using the RBB.

From SW 19.Q3: RBB connected to two DUSs, where one DUS must be the Core DU. UL-CoMP is used for carriers using the RBB.

(3) RBB20_1B and RBB20_2B are used in Carrier Aggregation as secondary cells and have to be used together with at least one other RBB, except RBB10_1A and RBB20_1A.



6.2.1.2 LTE TDD Configurations for Baseband and DU

Table 211 LTE TDD Configurations with Baseband

RBB ⁽¹⁾	From SW Release			
	LTE only Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 5212, Baseband 6303 Baseband 6620 and Mixed Mode Baseband with: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	IDU 5205, IDU 5209
RBB11_1C	L18.Q2	L18.Q2	L18.Q2	-
RBB11_1D	L18.Q2	L18.Q2	L18.Q2	-
RBB11_2A	L18.Q2	L18.Q2	L18.Q2	-
RBB11_2B	L18.Q2	L18.Q2	L18.Q2	-
RBB22_1B	L18.Q2	L18.Q2	L18.Q2	-
RBB22_1B for RDS	L18.Q2	L18.Q2	L18.Q2	L18.Q2
RBB22_1F	L18.Q2	L18.Q2	L19.Q3	-
RBB22_1G	L18.Q2	L18.Q2	L19.Q3	-
RBB22_1G for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB22_1H	L18.Q2	L18.Q2	-	-
RBB22_1J	L18.Q2	L18.Q2	-	-
RBB22_2C	L18.Q2	L18.Q2	L18.Q2	-
RBB22_2K	L18.Q2	L18.Q2	L19.Q3	-
RBB22_2L	L18.Q2	L18.Q2	L19.Q3	-
RBB22_2L for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB22_2M	L18.Q2	L18.Q2	-	-
RBB22_2N	L18.Q2	L18.Q2	-	-
RBB44_1B	L18.Q2	L18.Q2	L18.Q2	-
RBB44_1B for RDS	L18.Q3	L18.Q3	L18.Q3	L18.Q3
RBB44_1D	L18.Q2	L18.Q2	L19.Q3	-
RBB44_1E	L18.Q2	L18.Q2	-	-
RBB44_1F	L18.Q2	L18.Q2	-	-
RBB44_1P for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB44_2C	L18.Q2	L18.Q2	L18.Q2	-
RBB44_2C for RDS	L18.Q3	L18.Q3	L18.Q3	L18.Q3
RBB44_2F	L18.Q2	L18.Q2	L19.Q3	-
RBB44_2G	L18.Q2	L18.Q2	-	-
RBB44_2H	L18.Q2	L18.Q2	-	-
RBB44_2T for RDS	L19.Q1	L19.Q1	L19.Q1	L19.Q1
RBB88_1A	L18.Q2	L18.Q2	-	-
RBB88_2A	L18.Q2	L18.Q2	-	-
RBBAIR_1A with eCPRI ⁽²⁾	L18.Q2 ⁽³⁾	-	-	-
RBBAIR_2A with eCPRI ⁽²⁾	L18.Q2 ⁽³⁾	-	-	-



RBB ⁽¹⁾	From SW Release			
	LTE only Baseband: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 5212, Baseband 6303 Baseband 6620 and Mixed Mode Baseband with: Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	IDU 5205, IDU 5209
RBBAIR_3A with eCPRI ⁽²⁾	L19.Q3 ⁽³⁾	-	-	-
RBBAIR_4A with eCPRI ⁽²⁾	L20.Q2 ⁽³⁾	-	-	-

(1) With DBB10_81.

(2) Can only be configured together with other RBBAIR with eCPRI.

(3) RBB only supported with Baseband 6630.

Table 212 LTE TDD Configurations with DU

RBB ⁽¹⁾	From SW Release	
	DUS 41 2 × DUS 41 3 × DUS 41	DUS 31 2 × DUS 31 3 × DUS 31
RBB11_1C	L18.Q2	L18.Q2
RBB11_1D	L18.Q2	L18.Q2
RBB11_2A	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾
RBB11_2B	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾
RBB22_1B	L18.Q2	L18.Q2
RBB22_1B for RDS	L18.Q2	L18.Q2
RBB22_1F	L18.Q2	L18.Q2
RBB22_1G	L18.Q2	L18.Q2
RBB22_1H	L18.Q2	-
RBB22_1J	L18.Q2	-
RBB22_2C	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾
RBB22_2K	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾
RBB22_2L	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾
RBB22_2M	L18.Q2 ⁽²⁾	-
RBB22_2N	L18.Q2 ⁽²⁾	-
RBB44_1B	L18.Q2	L18.Q2
RBB44_1D	L18.Q2	L18.Q2
RBB44_1E	L18.Q2	-
RBB44_1F	L18.Q2	-
RBB44_2C	L18.Q2	L18.Q2
RBB44_2F	L18.Q2 ⁽²⁾	L18.Q2 ⁽²⁾
RBB44_2G	L18.Q2 ⁽²⁾	-
RBB44_2H	L18.Q2 ⁽²⁾	-



RBB ⁽¹⁾	From SW Release	
	DUS 41 2 × DUS 41 3 × DUS 41	DUS 31 2 × DUS 31 3 × DUS 31
RBB88_1A	L18.Q2	-
RBB88_2A ⁽³⁾	L18.Q2 ⁽²⁾	-

(1) DBB10_81 for one DUS.

DBB20_81 and DBB21_81 for 2 × DUS.

DBB30_81 and DBB31_81 for 3 × DUS.

(2) RBB supports one of the DUs.

RBB supports core and extension DUs.

From SW 19.Q3, each radio in the RBB is shared between core and extension DUS by using two CPRI.

(3) In RBB88_2A, RRUL 81 in multi-DU configurations with 2 × DUS 41, can be connected to one DU with two CPRI or two DUs with one CPRI each.

6.2.2 LTE Carrier Aggregation

This section describes the configuration support for LTE Carrier Aggregation.

Carrier Aggregation (CA) enables data to be transmitted over multiple carrier frequencies simultaneously, each of which has a maximum bandwidth of 20 MHz.

This feature is supported between cells using radios within one eNodeB. The radio units can be in the same or in different radio cascading chains, and also connected to different DUs in one multi-DU node. For more information on this licensed feature, see the LTE RBS CPI library.

Carrier Aggregation is also supported between eNodeBs using either Inter-eNodeB Carrier Aggregation or Elastic RAN.

Note: RBB20_1B and RBB20_2B are used in Carrier Aggregation as secondary cells and have to be used together with at least one other RBB (but not with RBB10_1A and RBB20_1A), which is configured as a primary cell with RX capability on the same eNodeB (DBB). The primary cell is not supported by mRRUS 12, Radio 2203, RBS 6501 Radio Part, or Vault Radio System 2268 due to the difference in output power.

6.2.2.1 Supported Antenna Configurations for LTE Carrier Aggregation

Table 213 Supported Antenna Configurations for LTE Carrier Aggregation

Antenna Configuration	FDD/TDD/LAA	Supported from SW Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
1TX/1RX 1TX/2RX 1TX/4RX	FDD	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O



Antenna Configuration	FDD/TDD/LAA	Supported from SW Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
	TDD	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O
	LAA	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O	SIM O
2TX/0RX 2TX/2RX 2TX/4RX	FDD	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO
	TDD	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO
	LAA	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO	2×2 MIMO
4TX/2RX 4TX/4RX	FDD	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾	4×2 MIMO 4×4 MIMO O ⁽¹⁾
	TDD	4×2 MIMO 4×4 MIMO O ⁽²⁾ (2)(3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)	4×2 MIMO 4×4 MIMO O ⁽²⁾ (3)
8TX/8RX	FDD	-	-	-	-	-	-	-	-	-	-
	TDD	8×2 MIMO	8×2 MIMO	8×2 MIMO	8×2 MIMO	8×2 MIMO	8×2 MIMO	8×2 MIMO	8×2 MIMO	8×2 MIMO	8×2 MIMO
32TX/32RX	FDD	-	-	32×2 MIMO 32×4 MIMO	32×2 MIMO 32×4 MIMO	32×2 MIMO 32×4 MIMO	32×2 MIMO 32×4 MIMO	32×2 MIMO 32×4 MIMO	32×2 MIMO 32×4 MIMO	32×2 MIMO 32×4 MIMO	32×2 MIMO 32×4 MIMO

(1) With Baseband, maximum 12 layers in total. For example three cells with each cell being 2×2 MIMO, 4×2 MIMO, or 4×4 MIMO, or four cells with two cells being 2×2 MIMO, 4×2 MIMO, or 4×4 MIMO and two cells being 2×2 MIMO or 4×2 MIMO, or five cells with one cell being 2×2 MIMO, 4×2 MIMO, or 4×4 MIMO and four cells being 2×2 MIMO or 4×2 MIMO.

(2) Maximum ten layers in total. For example three cells with two 4×4 MIMO cells, or four cells with one 4×4 MIMO cell and the other cells being 2×2 MIMO or 4×2 MIMO, or five cells, with each cell being 2×2 MIMO or 4×2 MIMO.

(3) With Baseband, maximum 12 layers in total. For example three cells with each cell being 2×2 MIMO, 4×2 MIMO, or 4×4 MIMO, or four cells with two cells being 2×2 MIMO, 4×2 MIMO, or 4×4 MIMO and two cells being 2×2 MIMO or 4×2 MIMO.

6.2.2.2 LTE Baseband Support for Carrier Aggregation in Downlink

LTE Carrier Aggregation in downlink support the following Carrier Aggregation modes:

- Inter-band
- Intra-band non-contiguous



- Intra-band contiguous
- Mix of inter-band and intra-band

The following DBBs are supported for Carrier Aggregation:

- DBB10_81.
- DBB21_81 with two DUS 31 or two DUS 41. It is possible to aggregate carriers allocated on either DU or Baseband in the DBB, provided that the licensed feature Cross-DU Carrier Aggregation Support is enabled. See the LTE RBS CPI library for more information.

Table 214 Supported DU and Baseband and Number of Component Carriers (CC) for LTE Carrier Aggregation in Downlink Within One eNodeB

DU or Baseband	FDD/TDD/LAA	Maximum Number of Component Carriers (CC) and Layers (L) Supported from SW Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Baseband 5212	FDD	5 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	TDD	4 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+LAA ⁽¹⁾	5 CC 12 L	5 CC 12 L	5 CC 12 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
Baseband 5216	FDD	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	TDD	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+LAA ⁽¹⁾	5 CC 12 L	5 CC 12 L	5 CC 12 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
Baseband 6303	FDD	5 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	TDD	4 CC 12 L	4 CC 12 L	7 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+LAA ⁽¹⁾	5 CC 12 L	5 CC 12 L	5 CC 12 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
Baseband 6318	FDD	5 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	TDD	4 CC	4 CC	5 CC	5 CC	5 CC	5 CC	6 CC	7 CC	7 CC	7 CC



DU or Baseband	FDD/TDD/LAA	Maximum Number of Component Carriers (CC) and Layers (L) Supported from SW Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
		12 L	12 L	20 L	20 L	20 L	20 L	20 L	20 L	20 L	20 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+LAA ⁽¹⁾	5 CC 12 L	5 CC 12 L	5 CC 12 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
Baseband 6502	FDD	5 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	TDD	4 CC 12 L	4 CC 12 L	6 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+LAA ⁽¹⁾	5 CC 12 L	5 CC 12 L	5 CC 12 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	6 CC 20 L	6 CC 20 L
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
Baseband 6620	FDD	5 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	TDD	4 CC 12 L	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+LAA ⁽¹⁾	5 CC 12 L	5 CC 12 L	5 CC 12 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
Baseband 6630	FDD	5 CC 12 L	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	TDD	4 CC 12 L	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+LAA ⁽¹⁾	5 CC 12 L	5 CC 12 L	5 CC 12 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
DUL 20	FDD ⁽²⁾	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz	2 CC, 20M Hz
DUS 31	FDD	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
	TDD	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
2 x DUS 31 ⁽³⁾	FDD	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
	TDD	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L	3 CC 12 L
	FDD+TDD ⁽¹⁾	4 CC	4 CC	4 CC	4 CC	4 CC	4 CC	4 CC	4 CC	4 CC	4 CC



DU or Baseband	FDD/TDD/LAA	Maximum Number of Component Carriers (CC) and Layers (L) Supported from SW Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
		12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L
DUS 41	FDD	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
	TDD	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
2 x DUS 41 ⁽³⁾	FDD	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
	TDD	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
	FDD+TDD ⁽¹⁾	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L	4 CC 12 L
IDU 5205 ⁽⁴⁾	FDD	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC
	TDD	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC
	FDD+TDD ⁽¹⁾	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC
IDU 5209 ⁽⁴⁾	FDD	5 CC	5 CC	5 CC	5 CC	5 CC	5 CC	5 CC	6 CC	6 CC	6 CC
	TDD	4 CC	4 CC	5 CC	5 CC	5 CC	5 CC	5 CC	6 CC	6 CC	6 CC
	FDD+TDD ⁽¹⁾	4 CC	4 CC	5 CC	5 CC	5 CC	5 CC	5 CC	6 CC	6 CC	6 CC
IDU 5209 Mixed Mode W+L ⁽⁴⁾	FDD	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC
	TDD	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC
	FDD+TDD ⁽¹⁾	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC
RBS 6501 DU part	FDD	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC	3 CC

(1) Primary cell must be FDD.

(2) Max 20 MHz for both carriers.

(3) IDL 2 must be used between core and extension DU.

(4) Up to L18.Q2, 2x2 MIMO is supported, from L18.Q3 4x4 MIMO is also supported.

6.2.2.3 LTE Baseband Support for Carrier Aggregation in Uplink

LTE Carrier Aggregation in uplink support the following Carrier Aggregation modes:

- Inter-band for FDD
- Intra-band contiguous for TDD

The following rule applies to Carrier Aggregation in uplink:

- Support for intra-DU only, but co-existence with Cross-DU Carrier Aggregation in downlink is possible

Table 215 Supported DU and Baseband and Number of Component Carriers (CC) for LTE Carrier Aggregation in Uplink Within One eNodeB

DU or Baseband	FDD/TDD	Number of Component Carriers Supported from Software Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Baseband 5212	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
Baseband 5216	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
Baseband 6303	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
Baseband 6318	FDD	-	2	2	2	2	2	2	2	2	2
	TDD	-	2	2	2	2	2	2	2	2	2
Baseband 6502	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
Baseband 6620	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
Baseband 6630	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
DUS 31	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
DUS 41	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
IDU 5205	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
IDU 5209	FDD	2	2	2	2	2	2	2	2	2	2
	TDD	2	2	2	2	2	2	2	2	2	2
RBS 6501 DU part	FDD	-	-	-	-	-	-	-	-	-	-

6.2.2.4 LTE Baseband Support for Inter-eNodeB Carrier Aggregation

Inter-eNodeB Carrier Aggregation support the following Carrier Aggregation modes:

- Inter-band
- Intra-band non-contiguous
- Inter-band contiguous
- Mix of Inter-band and Intra-band

The following rules apply to Inter-eNB Carrier Aggregation:

- Maximum three Inter-eNB secondary cells are supported



- Inter-eNB Carrier Aggregation and Elastic RAN cannot coexist in the same node
- Cat-M1 is not supported on ESCells in Inter-eNodeB Carrier Aggregation
- Support for 10 MHz bandwidths and higher on the secondary cell
- IDL2 is required between DUs in a multi-DU eNodeB

From SW L20.Q1:

- Inter-eNB Carrier Aggregation and Elastic RAN can coexist in the same node, where a primary cell can act both as Inter-eNB Carrier Aggregation and Elastic RAN cell at the same time
- Cat-M1 is supported on ESCells in Inter-eNodeB Carrier Aggregation

Table 216 LTE DU and Baseband Support for Inter-eNodeB Carrier Aggregation

DU or Baseband	Duplex Mode	Supported from SW Release									
		L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
Baseband 5212	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
	FDD+LAA	X	X	X	X	X	X	X	X	X	X
	FDD+TDD+LAA	-	-	-	-	-	-	X	X	X	X
Baseband 5216	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
	FDD+LAA	X	X	X	X	X	X	X	X	X	X
	FDD+TDD+LAA	-	-	-	-	-	-	X	X	X	X
Baseband 6303	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
	FDD+LAA	X	X	X	X	X	X	X	X	X	X
	FDD+TDD+LAA	-	-	-	-	-	-	X	X	X	X
Baseband 6318	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
	FDD+LAA	X	X	X	X	X	X	X	X	X	X
	FDD+TDD+LAA	-	-	-	-	-	-	X	X	X	X
Baseband 6502	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
	FDD+LAA	X	X	X	X	X	X	X	X	X	X
	FDD+TDD+LAA	-	-	-	-	-	-	X	X	X	X



DU or Baseband	Duplex Mode	Supported from SW Release									
		L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
Baseband 6620	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
	FDD+LAA	X	X	X	X	X	X	X	X	X	X
	FDD+TDD+LAA	-	-	-	-	-	-	X	X	X	X
Baseband 6630	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
	FDD+LAA	X	X	X	X	X	X	X	X	X	X
	FDD+TDD+LAA	-	-	-	-	-	-	X	X	X	X
DUS 31	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
DUS 41	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
IDU 5205	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
IDU 5209	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
RBS 6501 DU part ⁽¹⁾	FDD	X	X	X	X	X	X	X	X	X	X

(1) RBS 6501 DU part is only supported as external eNodeB.

Table 217 Maximum Number of Component Carriers (CC) for LTE Inter-eNodeB Carrier Aggregation

FDD/TDD ⁽¹⁾	Maximum Number of Component Carriers (CC) and Layers (L) Supported from SW Release									
	L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
FDD	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
TDD	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
FDD+TDD ⁽²⁾	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
FDD+TDD+LAA ⁽²⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L

(1) Only 10, 15, and 20 MHz carrier bandwidths are supported as external cells.

(2) Primary cell must be FDD.



6.2.2.5 LTE Baseband Support for Elastic RAN

The Elastic RAN feature enables carrier aggregation between cells on different nodes. For more information, refer to the feature description [Elastic RAN](#).

Elastic RAN support the following Carrier Aggregation modes:

- Inter-band
- Intra-band non-contiguous

Elastic RAN is supported using IDL ports.

Maximum cluster size of 7 eNBs (6 fast Baseband partners).

Additional support and limitations from SW L18.Q4:

- LAA is supported, but requires at least one FDD or TDD cell to be configured on the external eNB
- FDD only can be primary cell in the combination with LAA and/or TDD

Additional support and limitations from SW L19.Q4:

- FDD or TDD cells no longer have to coexist with LAA cells on the external eNB

Additional support and limitations from SW L20.Q1:

- Maximum cluster size of 13 eNB's (12 fast Baseband partners)
- Inter-eNB Carrier Aggregation and Elastic RAN can coexist in the same node, where a primary cell can act both as Inter-eNB Carrier Aggregation and Elastic RAN cell at the same time

Table 218 LTE DU and Baseband Support for Elastic RAN

DU or Baseband	FDD/TDD	Supported from SW Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Baseband 5212	FDD	-	X	X	X	X	X	X	X	X	X
	TDD	-	X	X	X	X	X	X	X	X	X
	FDD +TDD ⁽¹⁾	-	X	X	X	X	X	X	X	X	X
	FDD +LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X



DU or Baseband	FDD/TDD	Supported from SW Release									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Baseband 5216	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD +TDD ⁽¹⁾	X	X	X	X	X	X	X	X	X	X
	FDD +LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X
Mixed Mode Baseband 5216 L+G W+L W+G+L	FDD	-	X	X	X	X	X	X	X	X	X
	TDD	-	X	X	X	X	X	X	X	X	X
	FDD +TDD ⁽¹⁾	-	X	X	X	X	X	X	X	X	X
	FDD +LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X
Baseband 6303	FDD	-	-	-	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾
	TDD	-	-	-	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾
	FDD +TDD ⁽¹⁾	-	-	-	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾	X ⁽²⁾
	FDD +LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X
Baseband 6318	FDD	X ⁽³⁾	X ⁽³⁾	X ⁽³⁾	X	X	X	X	X	X	X
	TDD	X ⁽³⁾	X ⁽³⁾	X ⁽³⁾	X	X	X	X	X	X	X
	FDD +TDD ⁽¹⁾	X ⁽³⁾	X ⁽³⁾	X ⁽³⁾	X	X	X	X	X	X	X
	FDD +LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X
Mixed Mode Baseband 6318 L+G W+L W+G+L	FDD	-	X ⁽³⁾	X ⁽³⁾	X	X	X	X	X	X	X
	TDD	-	X ⁽³⁾	X ⁽³⁾	X	X	X	X	X	X	X
	FDD +TDD ⁽¹⁾	-	X ⁽³⁾	X ⁽³⁾	X	X	X	X	X	X	X
	FDD +LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD +LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X



DU or Baseband	FDD/TDD	Supported from SW Release									
		L18.Q2	L18.Q3	L18.Q4	L19.Q1	L19.Q2	L19.Q3	L19.Q4	L20.Q1	L20.Q2	L20.Q3
Baseband 6620	FDD	-	X	X	X	X	X	X	X	X	X
	TDD	-	X	X	X	X	X	X	X	X	X
	FDD+TDD ⁽¹⁾	-	X	X	X	X	X	X	X	X	X
	FDD+LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD+LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X
Baseband 6630	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD ⁽¹⁾	X	X	X	X	X	X	X	X	X	X
	FDD+LAA ⁽¹⁾	-	-	X	X	X		X	X	X	X
	FDD+TDD+LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X
Mixed Mode Baseband 6630 L+G W+L W+G+L	FDD	-	X	X	X	X	X	X	X	X	X
	TDD	-	X	X	X	X	X	X	X	X	X
	FDD+TDD ⁽¹⁾	-	X	X	X	X	X	X	X	X	X
	FDD+LAA ⁽¹⁾	-	-	X	X	X	X	X	X	X	X
	FDD+TDD+LAA ⁽¹⁾	-	-	-	-	-	-	X	X	X	X

(1) Primary cell must be FDD.

(2) Only supported using TN ports

(3) Only in configurations with Baseband 6318 due to IDL compatibility.

Table 219 Maximum Number of Component Carriers (CC) for LTE Elastic RAN

FDD/TDD	Maximum Number of Component Carriers (CC) and Layers (L) Supported from Software Release									
	L18.Q2	L18.Q3	L18.Q4	L19.Q1	L19.Q2	L19.Q3	L19.Q4	L20.Q1	L20.Q2	L20.Q3
FDD	5 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
TDD	3 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
FDD+TDD ⁽¹⁾	3 CC 12 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	5 CC 20 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
FDD+LAA ⁽¹⁾	-	-	5 CC 14 L	5 CC 14 L	5 CC 14 L	5 CC 14 L	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L
FDD+TDD+LAA ⁽¹⁾	-	-	-	-	-	-	6 CC 20 L	7 CC 20 L	7 CC 20 L	7 CC 20 L

(1) Primary cell must be FDD.



6.2.3 LTE Combined Cell Configurations

The following rules apply to combined cell configurations. For more information, see the feature description [Combined Cell](#).

- All carriers for a combined cell need to be placed on the same carrier frequency, with the same carrier bandwidth.
- All sectors for a cell need to have the same antenna configuration in terms of TX and RX branches. It is thus not possible to mix 1TX/1RX, 1TX/2RX, 2TX/2RX, or 4TX/4RX in a combined cell.
- For multi-DU configurations, all carriers within one combined cell must be processed by the same DU:
 - If carriers for a combined cell are allocated to radios connected to one DU only, all radios with carriers in this combined cell must be connected to the same DUs.
 - If carriers for a combined cell are allocated to radios connected to both core DU and extension DU, all radios with carriers in this combined cell must be connected to both DUs.
- The different sectors can have different RBBs and radio units in different sectors, as long as all RBBs support the same antenna configuration (1TX/1RX, 1TX/2RX, 2TX/2RX, or 4TX/4RX).
- Total number of carriers for all combined cells in the node is specified in [Baseband Support and Configuration for LTE](#) on page 386
- Combined cell is supported for both single mode LTE and in mixed mode, with WCDMA, GSM, or CDMA.
- From L19.Q2, one sector carrier in a NB-IoT cell can coexist with one combined LTE cell with two sectors.
 - Only NB-IoT guard band and NB IoT in-band are supported with combined cell.
 - The NB-IoT cell can use only one configured sector carrier (the first one in the list of sector carriers with SW < 19.Q2 and with any sector carrier from SW 19.Q2).
 - The LTE host cell should be configured with two sector carriers with 2TX/2RX. Otherwise NB-IoT cell can not be unlocked.

Note: 9 MHz LTE carriers are not supported with combined cell.

Table 220 DU and Baseband support for LTE Combined Cell

DU or Baseband	FDD/TDD	From Software Release
Baseband 5212	FDD	18.Q2



DU or Baseband	FDD/TDD	From Software Release
	TDD	18.Q2
Baseband 5216	FDD	18.Q2
	TDD	18.Q2
Baseband 6303	FDD	18.Q2
	TDD	18.Q2
Baseband 6318	FDD	18.Q2
	TDD	18.Q2
Baseband 6502	FDD	18.Q2
	TDD	18.Q2
Baseband 6620	FDD	18.Q2
	TDD	18.Q2
Baseband 6630	FDD	18.Q2
	TDD	18.Q2
DUL 20	FDD	18.Q2
DUS 31	FDD	18.Q2
	TDD	18.Q2
DUS 41	FDD	18.Q2
	TDD	18.Q2
IDU 5205	FDD	18.Q2
	TDD	18.Q2
IDU 5209	FDD	18.Q2
	TDD	18.Q2
RBS 6501 DU part	FDD	18.Q2

Table 221 Supported Antenna Configurations and Number of Sectors for LTE Combined Cell

DU or Baseband	FDD / TDD	From Software release	Number of Sectors / Cell
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6620 Baseband 6630	FDD	18.Q2	6 (1TX/1RX) 4 (1TX/2RX) 4 (2TX/2RX)
			6 (1TX/1RX) 8 (1TX/2RX) 8 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 8 (1TX/2RX) 8 (2TX/2RX) 4 (4TX/4RX)
		20.Q2	6 (1TX/1RX) 10 (1TX/2RX) 10 (2TX/2RX) 5 (4TX/4RX)
	TDD	18.Q2	6 (1TX/1RX) 4 (2TX/2RX)
			6 (1TX/1RX) 8 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 8 (2TX/2RX) 4 (4TX/4RX)



DU or Baseband	FDD / TDD	From Software release	Number of Sectors / Cell
		20.Q2	6 (1TX/1RX) 10 (2TX/2RX) 5 (4TX/4RX)
Baseband 6318	FDD	18.Q2	6 (1TX/1RX) 8 (1TX/2RX) 8 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 8 (1TX/2RX) 8 (2TX/2RX) 4 (4TX/4RX)
		20.Q2	6 (1TX/1RX) 10 (1TX/2RX) 10 (2TX/2RX) 5 (4TX/4RX)
	TDD	18.Q2	6 (1TX/1RX) 8 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 8 (2TX/2RX) 4 (4TX/4RX)
		20.Q2	6 (1TX/1RX) 10 (2TX/2RX) 5 (4TX/4RX)
Baseband 6502	FDD	18.Q2	6 (1TX/1RX) 4 (1TX/2RX) 4 (2TX/2RX)
			6 (1TX/1RX) 6 (1TX/2RX) 6 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 6 (1TX/2RX) 6 (2TX/2RX) 4 (4TX/4RX)
		20.Q2	6 (1TX/1RX) 6 (1TX/2RX) 6 (2TX/2RX) 5 (4TX/4RX)
	TDD	18.Q2	6 (1TX/1RX) 4 (2TX/2RX)
			6 (1TX/1RX) 6 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 6 (2TX/2RX) 4 (4TX/4RX)
		20.Q2	6 (1TX/1RX) 6 (2TX/2RX) 5 (4TX/4RX)
DUL 20	FDD	18.Q2	6 (1TX/1RX) 3 (1TX/2RX) 3 (2TX/2RX)
DUS 31 DUS 41	FDD	18.Q2	6 (1TX/1RX) 4 (1TX/2RX) 4 (2TX/2RX)
	TDD		6 (1TX/1RX) 4 (2TX/2RX)
IDU 5205 Mixed Mode IDU 5209	FDD	18.Q2	3 (1TX/1RX) 3 (1TX/2RX) 3 (2TX/2RX)



DU or Baseband	FDD / TDD	From Software release	Number of Sectors / Cell
	TDD	19.Q1	3 (1TX/1RX) 3 (1TX/2RX) 3 (2TX/2RX) 3 (4TX/4RX)
		18.Q2	3 (1TX/1RX) 3 (2TX/2RX)
		19.Q1	3 (1TX/1RX) 3 (2TX/2RX) 3 (4TX/4RX)
IDU 5209	FDD	18.Q2	6 (1TX/1RX) 4 (1TX/2RX) 4 (2TX/2RX)
			6 (1TX/1RX) 6 (1TX/2RX) 6 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 6 (1TX/2RX) 6 (2TX/2RX) 4 (4TX/4RX)
		20.Q2	6 (1TX/1RX) 6 (1TX/2RX) 6 (2TX/2RX) 5 (4TX/4RX)
	TDD	18.Q2	6 (1TX/1RX) 4 (2TX/2RX)
			6 (1TX/1RX) 6 (2TX/2RX)
		19.Q1	6 (1TX/1RX) 6 (2TX/2RX) 4 (4TX/4RX)
		20.Q2	6 (1TX/1RX) 6 (2TX/2RX) 5 (4TX/4RX)
RBS 6501 DU part	FDD	19.Q3	3 (1TX/1RX) 3 (2TX/2RX)
			6 (1TX/1RX) 4 (2TX/2RX)

6.2.3.1 Supported Radios within One Combined Cell for LTE

Radio support within one combined cell depend on the groups to which the radios belong to, see [Radio Groups](#) on page 101.

The following rules apply for supported radio combinations within one combined cell for LTE:

- All LTE compatible radios on the same FDD or TDD band can be combined within the same combined cell.
- Any radios from group 1, 3, and 6 can be combined within the same sector in a combined cell.

The following rules apply for radios within one combined cell for LTE:

- 15 MHz LTE carriers are not supported by radios in group 5 with combined cell.
- A radio that is capable of more than two TX-branches or more than two RX-branches can be used in a combined cell if it is configured as one or more RBBs with 2TX/2RX.
- To get 1TX/2RX on a 2TX/2RX radio, it must be specified that one RF branch is not used for TX transmission, by using the rfBranchTXRef attribute for each SectorCarrier on the branch.
- Configurations with different output power for different sectors in the same combined cell are supported, but performance is not optimized. Refer to Combined Cell.

6.2.4 Psi-Coverage Configurations for LTE

This section describes the radio configurations that support ψ -Coverage (Psi-Coverage).

The use of ψ -Coverage requires a license. For more information on licenses, refer to [Manage Licenses and Hardware Activation Codes](#).

ψ -coverage for LTE is supported by:

- DUS 31, DUS 41, Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6620, and Baseband 6630 from SW L18.Q2

Y-coverage is not supported.

Carrier allocation for ψ -Coverage configurations:

- One UL carrier in ψ -Coverage configurations require three carrier resources on the RF port

For radio configurations that support ψ -Coverage with DUS 31 and DUS 41, see [LTE Radio Configurations Supporting Psi-Coverage with DUS 31 and DUS 41](#) on page 325.

For radio configurations that support ψ -Coverage with Baseband 5212 and Baseband 5216, see [LTE Radio Configurations Supporting Psi-Coverage with Baseband 5212 and Baseband 5216](#) on page 326.

For radio configurations that support ψ -Coverage with Baseband 6303, Baseband 6620, and Baseband 6630, see [LTE Radio Configurations Supporting Psi-Coverage with Baseband 6303, Baseband 6620, and Baseband 6630](#) on page 327.

For radio configurations that support ψ -Coverage with Baseband 6318, see [LTE Radio Configurations Supporting Psi-Coverage with Baseband 6318](#) on page 328.



Refer to *Installing Psi-Coverage Hardware and Psi-Coverage Hardware Description* for more detailed information on Psi configuration.

6.2.4.1

LTE Radio Configurations Supporting Psi-Coverage with DUS 31 and DUS 41

Table 222 LTE Radio Configurations Supporting ψ -Coverage with DUS 31 and DUS 41

From SW Release	RBB	Number of Carriers and Total Bandwidth	Radio
L18.Q2 ⁽¹⁾ (2) (3)	RBB12_1A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RUS 02
		2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	RUS 03
	RBB22_1B	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RRUS 12
	RBB22_1B RBB22_2C	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2212 Radio 2217 Radio 2219 RRUS 13 RRUS 14 RRUS 14s

(1) 1.4, 3, 5, 10, 15, and 20 MHz carrier bandwidths are supported in downlink.

(2) Non-standard 4, 4.5, 7.5, and 8.8 MHz bandwidths are supported in uplink, but the TMF/TTMF will report the related standard bandwidths to the eNodeB. 4 and 4.5 MHz bandwidths will be reported as 5 MHz. 7.5 and 8.8 MHz bandwidths will be reported as 10 MHz.

(3) Inter-band and intra-band carrier aggregation is supported.



6.2.4.2

LTE Radio Configurations Supporting Psi-Coverage with Baseband 5212 and Baseband 5216

Table 223 LTE Radio Configurations Supporting ψ -Coverage with Baseband 5212 and Baseband 5216

From SW Release	RBB	Number of Carriers and Total Bandwidth	Radio
L18.Q2 ⁽¹⁾ (2) (3)	RBB12_1A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RUS 02
	RBB12_1A RBB12_2A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	RUS 03
	RBB22_1B	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RRUS 12
	RBB22_1B RBB22_2C	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2212 Radio 2217 Radio 2219 RRUS 13 RRUS 14 RRUS 14s
L19.Q1 ⁽¹⁾⁽²⁾⁽³⁾	RBB12_1A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RUS 02
	RBB12_1A RBB12_2A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	RUS 03
	RBB12_1E RBB12_1F RBB12_2D RBB12_2E	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2468 ⁽⁴⁾
	RBB22_1B	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RRUS 12
	RBB22_1B RBB22_2C	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2212 Radio 2217 Radio 2219 RRUS 13 RRUS 14 RRUS 14s
	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 4415 ⁽⁵⁾ Radio 4417 ⁽⁴⁾ Radio 4428 ⁽⁴⁾ Radio 4429 ⁽⁴⁾

(1) 1.4, 3, 5, 10, 15, and 20 MHz carrier bandwidths are supported in downlink.

(2) Non-standard 4, 4.5, 7.5, and 8.8 MHz bandwidths are supported in uplink, but the TMF/TTMF will report the related standard bandwidths to the eNodeB. 4 and 4.5 MHz bandwidths will be reported as 5 MHz. 7.5 and 8.8 MHz bandwidths will be reported as 10 MHz.

(3) Inter-band and intra-band carrier aggregation is supported.



- (4) One RBB is configured for ψ -Coverage and the other RBB is configured as a normal sector with one or several RATs.
- (5) Each RBB can independently be configured for any supported ψ -Coverage or normal sector with one or several RATs.

6.2.4.3

LTE Radio Configurations Supporting ψ -Coverage with Baseband 6303, Baseband 6620, and Baseband 6630

Table 224 LTE Radio Configurations Supporting ψ -Coverage with Baseband 6303, Baseband 6620, and Baseband 6630

From SW Release	RBB	Number of Carriers and Total Bandwidth	Radio
L18.Q2 ⁽¹⁾ (2) (3)	RBB12_1A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RUS 02
	RBB12_1A RBB12_2A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	RUS 03
	RBB22_1B	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RRUS 12
	RBB22_1B RBB22_2C	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2212 Radio 2217 Radio 2219 RRUS 13 RRUS 14 RRUS 14s
L19.Q1 ⁽¹⁾⁽²⁾⁽³⁾	RBB12_1A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RUS 02
	RBB12_1A RBB12_2A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	RUS 03
	RBB12_1E RBB12_1F RBB12_2D RBB12_2E	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2468 ⁽⁴⁾
	RBB22_1B	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RRUS 12
	RBB22_1B RBB22_2C	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2212 Radio 2217 Radio 2219 RRUS 13 RRUS 14 RRUS 14s
	RBB22_1F RBB22_1G RBB22_2K RBB22_1L	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 4415 ⁽⁵⁾ Radio 4417 ⁽⁴⁾ Radio 4428 ⁽⁴⁾ Radio 4429 ⁽⁴⁾



- (1) 1.4, 3, 5, 10, 15, and 20 MHz carrier bandwidths are supported in downlink.
- (2) Non-standard 4, 4.5, 7.5, and 8.8 MHz bandwidths are supported in uplink, but the TMF/TTMF will report the related standard bandwidths to the eNodeB. 4 and 4.5 MHz bandwidths will be reported as 5 MHz. 7.5 and 8.8 MHz bandwidths will be reported as 10 MHz.
- (3) Inter-band and intra-band carrier aggregation is supported.
- (4) One RBB is configured for ψ -Coverage and the other RBB is configured as a normal sector with one or several RATs.
- (5) Each RBB can independently be configured for any supported ψ -Coverage or normal sector with one or several RATs.

6.2.4.4 LTE Radio Configurations Supporting Psi-Coverage with Baseband 6318

Table 225 LTE Radio Configurations Supporting ψ -Coverage with Baseband 6318

From SW Release	RBB	Number of Carriers and Total Bandwidth	Radio
L18.Q2 ⁽¹⁾ (2) (3)	RBB12_1A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RUS 02
	RBB12_1A RBB12_2A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	RUS 03
	RBB22_1B	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RRUS 12
	RBB22_1B RBB22_2C	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2212 Radio 2217 Radio 2219 RRUS 13 RRUS 14 RRUS 14s



From SW Release	RBB	Number of Carriers and Total Bandwidth	Radio
L19.Q1 ⁽¹⁾⁽²⁾⁽³⁾	RBB12_1A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RUS 02
	RBB12_1A RBB12_2A RBB22_1C RBB22_2A	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	RUS 03
	RBB12_1E RBB12_1F RBB12_2D RBB12_2E	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2468 ⁽⁴⁾
	RBB22_1B	2 Up to 20 MHz in DL 1 Up to 5 MHz in UL	RRUS 12
	RBB22_1B RBB22_2C	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 2212 Radio 2217 Radio 2219 RRUS 13 RRUS 14 RRUS 14s
	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	2 Up to 20 MHz in DL 1 Up to 10 MHz in UL	Radio 4415 ⁽⁵⁾ Radio 4417 ⁽⁴⁾ Radio 4428 ⁽⁴⁾ Radio 4429 ⁽⁴⁾

(1) 1.4, 3, 5, 10, 15, and 20 MHz carrier bandwidths are supported in downlink.

(2) Non-standard 4, 4.5, 7.5, and 8.8 MHz bandwidths are supported in uplink, but the TMF/TTMF will report the related standard bandwidths to the eNodeB. 4 and 4.5 MHz bandwidths will be reported as 5 MHz. 7.5 and 8.8 MHz bandwidths will be reported as 10 MHz.

(3) Inter-band and intra-band carrier aggregation is supported.

(4) One RBB is configured for ψ -Coverage and the other RBB is configured as a normal sector with one or several RATs.

(5) Each RBB can independently be configured for any supported ψ -Coverage or normal sector with one or several RATs.

6.2.5 Virtual Sectors for LTE

The Virtual Sectors feature can provide up to six sectors using only three 8TX/8RX LTE TDD radios. For more information, see the feature description Virtual Sectors.

One radio can have two virtual sectors only, with one carrier per sector.

For supported DU and Baseband units, see [Table 226](#).

Table 226 DU and Baseband Support for Virtual Sectors

DU or Baseband	Two Virtual Sectors on One Radio	Supported RBBs
1 × DUS 41	L18.Q2	RBB88_1A RBB88_2A
2 × DUS 41	L18.Q2	

DU or Baseband	Two Virtual Sectors on One Radio	Supported RBBs
3 × DUS 41	L18.Q2	
Baseband 5212	L18.Q2	
Baseband 5216	L18.Q2	
Baseband 6303	L18.Q2	
Baseband 6318	L18.Q2	
Baseband 6620	L18.Q2	
Baseband 6630	L18.Q2	

For supported radios, see [LTE RBB Summary for External Radios, Internal Radios, and RBS 6501](#) on page 271.

6.2.6 Digital Sectorization with AAS FDD

The Digital Sectorization with AAS FDD feature provides multiple cells with the same antenna array using beamforming to improve network capacity. For more information, see feature description [Digital Sectorization with AAS FDD](#).

Digital sectors can be used in some or all central frequencies as shown in [Figure 5](#).

One cell in one digital sector uses the same baseband capacity as one normal cell, and the output power is shared among all digital sectors with the same central frequency. The main gain is in the CPRI capacity, as all cells for the different digital sectors on the same AIR unit sharing the same central frequency use the CPRI capacity of one single cell.

NB-IoT can be enabled or disabled on both cells within the paired digital sector. And they must use the same configurations. For example, same type, guard band or in-band.

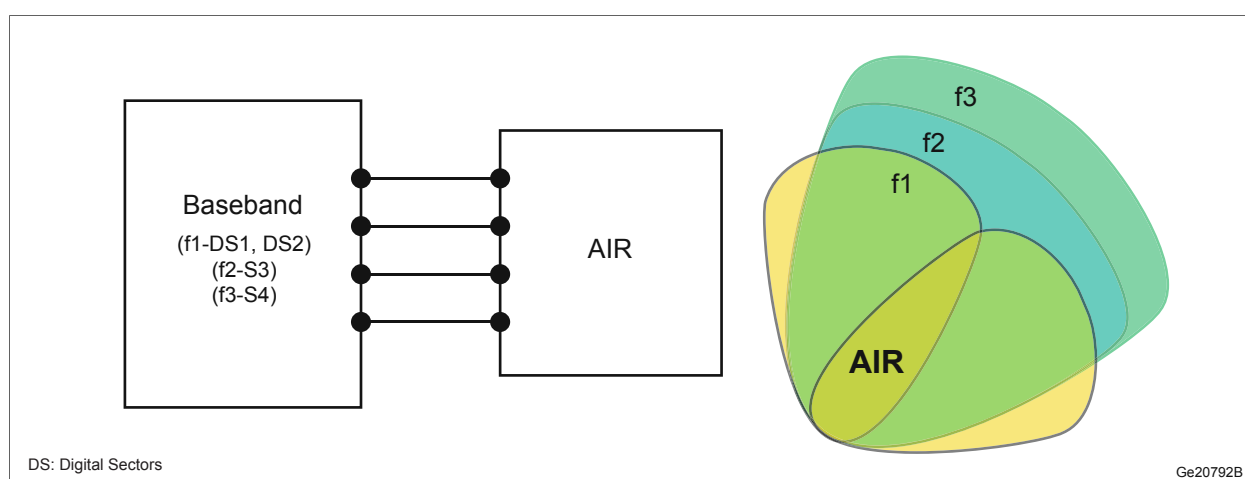


Figure 5 Digital Sectors Used on One Frequency



For supported baseband, see [Table 227](#).

Table 227 Baseband Support for Digital Sectorization with AAS FDD

Baseband	From Software Release	Supported RBBs
Baseband 5216 Baseband 6318 Baseband 6630	L19.Q4	RBBAIR_1A RBBAIR_2A RBBAIR_3A RBBAIR_4A

For supported radios, see [Table 228](#).

Table 228 Capacity per Radio for Digital Sectorization with AAS FDD

Radio	Number of Digital Sectors	From Software Release	Number of Carriers with Same Central Frequency
AIR 1641	2	L20.Q2	2
AIR 3246	2	L19.Q4	2

6.3 Carrier Allocation for LTE

This section describes carrier allocation for single mode LTE configurations.

In an RBB with multiple radios, the first listed radio is connected towards DU or Baseband.

For supported carrier configurations with RRUL 62 and RRUL 81, also see [Carrier Combinations for RRUL 62 and RRUL 81](#) on page 386.

6.3.1 LTE Carrier Allocation for RBB10_1A

Table 229 LTE Carrier Allocation for RBB10_1A

Radio Type	From SW Release	RBB10_1A	
		Downlink	Uplink
		TX A	
RRUS 01 ⁽¹⁾ RRUS 02 ⁽¹⁾ RUS 01 RUS 02	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$	2-WRXD
RRUW 02 ⁽¹⁾ RUL 01 RUW 02		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$	2-WRXD
RUS 03		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$	2-WRXD

(1) Only with Baseband



6.3.2 LTE Carrier Allocation for RBB11_1A

Table 230 LTE Carrier Allocation for RBB11_1A

Radio Type	From SW Release	RBB11_1A	
		Downlink	Uplink
		TX A/RX A	
RRUS 01 RRUS 02 RUS 01 RUS 02	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$	2-WRXD
RRUW 02 RUL 01 RUW 02		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$	2-WRXD
RUS 03		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$	2-WRXD

6.3.3 LTE Carrier Allocation for RBB11_1C

Table 231 LTE Carrier Allocation for RBB11_1C

Radio Type	From SW Release	RBB11_1C	
		Downlink	Uplink
		TX A/RX A	
mRRUS 12 RBS 6501 radio part Radio 2203 Radio 2208 ⁽¹⁾ Radio 2212 Radio 2217 Radio 2218 ⁽¹⁾ Radio 2219 Radio 2237 Radio 2242 RRU 2208 RRU 2216 ⁽¹⁾ RRU 22F1 RRUS 01 RRUS 02 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RRUW 02 RUL 01 RRUL 62 RRUL 63 RUS 01 RUS 02 RUS 03 RRUS 11 RRUS 61 RRUS 62 RUW 02 mRRUS 61	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity



Radio Type	From SW Release	RBB11_1C	
		Downlink	Uplink
		TX A/RX A	
Vault Radio System 2268			
Radio 2228	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies. In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31 or DUS 41.	No diversity
Radio 2238	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity
Radio 2260 Radio 2279	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity

(1) In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31, DUS 41.



6.3.4 LTE Carrier Allocation for RBB11_1D

Table 232 LTE Carrier Allocation for RBB11_1D

Radio Type	From SW Release	RBB11_1D	
		Downlink	Uplink
		TX A/RX A	
Radio 2203 Radio 2208 ⁽¹⁾ Radio 2212 Radio 2216 ⁽¹⁾ Radio 2217 Radio 2218 ⁽¹⁾ Radio 2219 Radio 2237 Radio 2242 RRU 2208 RRU 2216 RRU 22F1 RRUL 62 RRUL 63 ⁽¹⁾ RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RRUS 61 RRUS 62 ⁽¹⁾ mRRUS 12 mRRUS 61 Vault Radio System 2268	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity
Radio 2228 ⁽¹⁾	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity
Radio 2238	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity
Radio 2260 Radio 2279	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies. In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31, DUS 41.	No diversity

(1) In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31 or DUS 41.



6.3.5 LTE Carrier Allocation for RBB11_2A

Table 233 LTE Carrier Allocation for RBB11_2A

Radio Type	From SW Release	RBB11_2A	
		Downlink	Uplink
		TX A/RX A	
Radio 2203 Radio 2208 Radio 2212 RRU 2216 Radio 2217 Radio 2218 Radio 2219 Radio 2242 RRUL 63 RRUS 13 RRUS 14 RRUS 14s RRUS 62 Vault Radio System 2268	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity
Radio 2228	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity
Radio 2238	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity
Radio 2260 Radio 2279	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity

6.3.6 LTE Carrier Allocation for RBB11_2B

Table 234 LTE Carrier Allocation for RBB11_2B

Radio Type	From SW Release	RBB11_2B	
		Downlink	Uplink
		TX A/RX A	
Radio 2203 Radio 2208 Radio 2212 RRU 2216 Radio 2217 Radio 2218 Radio 2219 Radio 2242 RRUL 63 RRUS 62	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity



Radio Type	From SW Release	RBB11_2B	
		Downlink	Uplink
		TX A/RX A	
RRUS 13 RRUS 14 RRUS 14s Vault Radio System 2268			
Radio 2228	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
Radio 2238	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
Radio 2260 Radio 2279	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	No diversity

6.3.7 LTE Carrier Allocation for RBB12_1A

Table 235 LTE Carrier Allocation for RBB12_1A

Radio Type	From SW Release	RBB12_1A	
		Downlink	Uplink
		TX A/RX A	
AIR 21 RRUS 01 RRUS 02 RUS 01 RUS 02	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$	2-WRXD
RUS 03		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$	2-WRXD
RRUW 02 RUL 01 RUW 02		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$	2-WRXD



6.3.8 LTE Carrier Allocation for RBB12_1C

Table 236 LTE Carrier Allocation for RBB12_1C

Radio Type	From SW Release	RBB12_1C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD

6.3.9 LTE Carrier Allocation for RBB12_1D

Table 237 LTE Carrier Allocation for RBB12_1D

Radio Type	From SW Release	RBB12_1D	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD



Radio Type	From SW Release	RBB12_1D	
		Downlink	Uplink
		TX A/RX A	
Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD

6.3.10 LTE Carrier Allocation for RBB12_1E

Table 238 LTE Carrier Allocation for RBB12_1E

Radio Type	From SW Release	RBB12_1E	
		Downlink	Uplink
		TX A/RX A	
Radio 2468	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD



6.3.11 LTE Carrier Allocation for RBB12_1F

Table 239 LTE Carrier Allocation for RBB12_1F

Radio Type	From SW Release	RBB12_1F	
		Downlink	Uplink
		TX A/RX A	
Radio 2468	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD

6.3.12 LTE Carrier Allocation for RBB12_2A

Table 240 LTE Carrier Allocation for RBB12_2A

Radio Type	From SW Release	RBB12_2A	
		Downlink	Uplink
		TX A/RX A	
RUS 03	L18.Q2	A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$	2-WRXD

6.3.13 LTE Carrier Allocation for RBB12_2B

Table 241 LTE Carrier Allocation for RBB12_2B

Radio Type	From SW Release	RBB12_2B	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies. In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31, DUS 41.	2-WRXD



Radio Type	From SW Release	RBB12_2B	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD

6.3.14 LTE Carrier Allocation for RBB12_2C

Table 242 LTE Carrier Allocation for RBB12_2C

Radio Type	From SW Release	RBB12_2C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies. In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31, DUS 41.	2-WRXD



Radio Type	From SW Release	RBB12_2C	
		Downlink	Uplink
		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD

6.3.15 LTE Carrier Allocation for RBB12_2D

Table 243 LTE Carrier Allocation for RBB12_2D

Radio Type	From SW Release	RBB12_2D	
		Downlink	Uplink
		TX A/RX A	
Radio 2468	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD

6.3.16 LTE Carrier Allocation for RBB12_2E

Table 244 LTE Carrier Allocation for RBB12_2E

Radio Type	From SW Release	RBB12_2E	
		Downlink	Uplink
		TX A/RX A	
Radio 2468	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.	2-WRXD



6.3.17 LTE Carrier Allocation for RBB14_1A

Table 245 LTE Carrier Allocation for RBB14_1A

Radio Type	From SW Release	RBB14_1A	
		Downlink	Uplink
		TX A/RX A	
Radio 0208 + RRUS 01 RRUS A3 + RRUS 01	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$	4-WRXD
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3 RRUS A2 + RRUS 01		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$	4-WRXD

6.3.18 LTE Carrier Allocation for RBB14_2A

Table 246 LTE Carrier Allocation for RBB14_2A

Radio Type	From SW Release	RBB14_2A	
		Downlink	Uplink
		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$	4-WRXD

6.3.19 LTE Carrier Allocation for RBB20_1A

Table 247 LTE Carrier Allocation for RBB20_1A

Radio Type	From SW Release	RBB20_1A	
		Downlink	
		TX A	TX B
RRUS 11 RRUS 12	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$	
RRUS 13		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$	
RRUS 14 RRUS 14s		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 60$	



6.3.20 LTE Carrier Allocation for RBB20_1B

Table 248 LTE Carrier Allocation for RBB20_1B

Radio Type	From SW Release	RBB20_1B		
		Downlink		Uplink
		TX A	TX B	
Radio 2012	L18.Q2	A = number of carriers, $A \leq 6$ B = total bandwidth (MHz), $B \leq 40$		Not supported
RRUS E2 ⁽¹⁾		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$ ⁽²⁾		Not supported

(1) RRUS E2 is not supported with DUL 20.

(2) 10 MHz, 5 + 5 MHz, 5 + 3 MHz and 3 + 3 MHz carrier combinations supported.

6.3.21 LTE Carrier Allocation for RBB20_2A

Table 249 LTE Carrier Allocation for RBB20_2A

Radio Type	From SW Release	RBB20_2A		
		Downlink ⁽¹⁾		Uplink
		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$		4-WRXD
RUL 01 + RUL 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$		4-WRXD
RUS 03 + RUS 03		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$		4-WRXD

(1) Same limitations for 1TX and 2TX carriers.



6.3.22 LTE Carrier Allocation for RBB20_2B

Table 250 LTE Carrier Allocation for RBB20_2B

Radio Type	From SW Release	RBB20_2B		
		Downlink		Uplink
		TX A	TX B	
Radio 2012	L18.Q2	A = number of carriers, $A \leq 6$ B = total bandwidth (MHz), $B \leq 40$		Not supported

6.3.23 LTE Carrier Allocation for RBB22_1B

Table 251 LTE Carrier Allocation for RBB22_1B

Radio Type	From SW Release	RBB22_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
mRRUS 12 mRRUS 61 Radio 2203 Radio 2205 Radio 2208 Radio 2212 RRU 2216 Radio 2217 Radio 2218 Radio 2219 Radio 2237 RBS 6501 radio part RRU 22F1 B3D RRU 2208 RRUL 11 RRUL 62 RRUL 63 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RRUS 61 RRUS 62 Vault Radio System 2268	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 2228 ⁽¹⁾	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 2238	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 2260 Radio 2279	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD



Radio Type	From SW Release	RBB22_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
		For total bandwidth, see Supported Radio Frequencies on page 8.		

(1) In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31 or DUS 41.

Table 252 LTE Carrier Allocation for RBB22_1B for RDS

Radio Type	From SW Release	RBB22_1B for RDS		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

6.3.24

LTE Carrier Allocation for RBB22_1C

Table 253 LTE Carrier Allocation for RBB22_1C

Radio Type	From SW Release	RBB22_1C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 AIR 21 RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$		2-WRXD
RRUW 02 + RRUW 02 RUL 01 + RUL 01 RUW 02 + RUW 02		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$		2-WRXD
RUS 03 + RUS 03		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$		2-WRXD



6.3.25 LTE Carrier Allocation for RBB22_1F

Table 254 LTE Carrier Allocation for RBB22_1F

Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479 Radio 4480 Radio 4499 Radio 8836 ⁽¹⁾ Radio 8823 ⁽¹⁾	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4412 Radio 4415 Radio 4418 Radio 2468 Radio 4426 Radio 4428 Radio 4429 Radio 4442 Radio 4449 Radio 4478 Radio 8808 Radio 8818 Radio 8842 Radio 8843 RRUL 82 RRUS 32 RRUS 72	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4402 Radio 4408	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4417 Radio 4443	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4422	L19.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4455	L19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD



Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RRUS 82 ⁽²⁾	L18.Q2	A = number of carriers A ≤ 1 with DUS A ≤ 3 with Baseband For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

- (1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1F and RBB22_1G.
- (2) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.

Table 255 LTE Carrier Allocation for RBB22_1F for RDS

Radio Type	From SW Release	RBB22_1F		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

- (1) RBB used for the first band in the Dot product name.

6.3.26

LTE Carrier Allocation for RBB22_1G

Table 256 LTE Carrier Allocation for RBB22_1G

Radio Type	From SW Release	RBB22_1G		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4402 Radio 4408	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4422	L19.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD



Radio Type	From SW Release	RBB22_1G		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4426 Radio 4429 Radio 4442 Radio 4443 Radio 4449 Radio 8818 Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4417	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 4455	L19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8823 ⁽¹⁾ Radio 8836 ⁽¹⁾ Radio 4480 Radio 4490	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUS 82 ⁽²⁾	L18.Q2	A = number of carriers A ≤ 1 with DUS A ≤ 3 with Baseband For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1F and RBB22_1G.

(2) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.

Table 257 LTE Carrier Allocation for RBB22_1G for RDS

Radio Type	From SW Release	RBB22_1G		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD



(1) RBB used for the second band in the Dot product name.

6.3.27

LTE Carrier Allocation for RBB22_1H

Table 258 LTE Carrier Allocation for RBB22_1H

Radio Type	From SW Release	RBB22_1H		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
RRU 22F3 band 1A	L18.Q2	A = number of carriers, $A \leq 1$ B = total bandwidth (MHz), B = 5, 10, 15 or 15		2-WRXD
Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8808	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20^{(1)}$		2-WRXD
Radio 8818 ⁽²⁾		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20^{(1)}$		2-WRXD
Radio 8823 ⁽³⁾ Radio 8836 ⁽³⁾	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUL 82	L18.Q2	A = number of carriers, $A \leq 1$ For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUS 82 ⁽⁴⁾	L18.Q2	A = number of carriers $A \leq 1$ with DUS $A \leq 3$ with Baseband For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) 5 MHz LTE carriers are not supported.

(2) All sectors must have the same carrier configuration.

(3) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1H and RBB22_1J.

(4) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.



6.3.28 LTE Carrier Allocation for RBB22_1J

Table 259 LTE Carrier Allocation for RBB22_1J

Radio Type	From SW Release	RBB22_1J		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8808	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20^{(1)}$		2-WRXD
Radio 8818 ⁽²⁾		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20^{(1)}$		2-WRXD
Radio 8823 ⁽³⁾ Radio 8836 ⁽³⁾	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUL 82	L18.Q2	A = number of carriers, $A \leq 1$ For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUS 82 ⁽⁴⁾	L18.Q2	A = number of carriers $A \leq 1$ with DUS $A \leq 3$ with Baseband For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) 5 MHz LTE carriers are not supported.

(2) All sectors must have the same carrier configuration.

(3) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1H and RBB22_1J.

(4) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio..



6.3.29 LTE Carrier Allocation for RBB22_1K

Table 260 LTE Carrier Allocation for RBB22_1K

Radio Type	From SW Release	RBB22_1K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4449 B5 B13 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) High output power mode.

6.3.30 LTE Carrier Allocation for RBB22_1L

Table 261 LTE Carrier Allocation for RBB22_1L

Radio Type	From SW Release	RBB22_1L		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) High output power mode.

6.3.31 LTE Carrier Allocation for RBB22_1M

Table 262 LTE Carrier Allocation for RBB22_1M

Radio Type	From SW Release	RBB22_1M		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) High output power mode.



6.3.32 LTE Carrier Allocation for RBB22_1N

Table 263 LTE Carrier Allocation for RBB22_1N

Radio Type	From SW Release	RBB22_1N		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) High output power mode.

6.3.33 LTE Carrier Allocation for RBB22_1P

Table 264 LTE Carrier Allocation for RBB22_1P

Radio Type	From SW Release	RBB22_1P		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

6.3.34 LTE Carrier Allocation for RBB22_1Q

Table 265 LTE Carrier Allocation for RBB22_1Q

Radio Type	From SW Release	RBB22_1Q		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD



6.3.35 LTE Carrier Allocation for RBB22_2A

Table 266 LTE Carrier Allocation for RBB22_2A

Radio Type	From SW Release	RBB22_2A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 11 AIR 21 RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	L18.Q2	A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 20$		2-WRXD
RRUW 02 + RRUW 02 RUL 01 + RUL 01 RUW 02 + RUW 02		A = number of carriers, $A \leq 2$ B = total bandwidth (MHz), $B \leq 10$		2-WRXD
RUS 03 + RUS 03		A = number of carriers, $A \leq 3$ B = total bandwidth (MHz), $B \leq 40$		2-WRXD

6.3.36 LTE Carrier Allocation for RBB22_2C

Table 267 LTE Carrier Allocation for RBB22_2C

Radio Type	From SW Release	RBB22_2C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2203 Radio 2205 RRU 2208 Radio 2212 RRU 2216 Radio 2217 Radio 2218 Radio 2219 Radio 2242 RRUL 62 RRUL 63 RRUS 62 RRUS 13 RRUS 14 RRUS 14s Vault Radio System 2268	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 2228	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD



Radio Type	From SW Release	RBB22_2C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2238	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 2260 Radio 2279	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

6.3.37 LTE Carrier Allocation for RBB22_2E

Table 268 LTE Carrier Allocation for RBB22_2E

Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2237 + Radio 2237 RRU 22F1 B3D + RRU 22F1 B3D Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD



Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2238 RRUS 11	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD



Radio Type	From SW Release	RBB22_2E		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2238 RRUS 11	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

6.3.38 LTE Carrier Allocation for RBB22_2K

Table 269 LTE Carrier Allocation for RBB22_2K

Radio Type	From SW Release	RBB22_2K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479 Radio 8823 ⁽¹⁾ Radio 8836 ⁽¹⁾ Radio 4480 Radio 4490 Radio 8823 Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD



Radio Type	From SW Release	RBB22_2K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2468 Radio 4407 Radio 4412 Radio 4415 Radio 4418 Radio 4426 Radio 4428 Radio 4429 Radio 4442 Radio 4443 Radio 4449 Radio 4478 Radio 8808 Radio 8818 Radio 8842 Radio 8843 RRU 22F3 (band 18) RRUL 82 RRUS 32 RRUS 72 RRUS 82	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4408 Radio 4402	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4417	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4422	L19.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4445	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

(1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_2K and RBB22_2L.



Table 270 LTE Carrier Allocation for RBB22_2K for RDS

Radio Type	From SW Release	RBB22_2K		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) RBB used for the first band in the Dot product name.

6.3.39

LTE Carrier Allocation for RBB22_2L

Table 271 LTE Carrier Allocation for RBB22_2L

Radio Type	From SW Release	RBB22_2L		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479 Radio 8823 ⁽¹⁾ Radio 8836 ⁽¹⁾ Radio 4480 Radio 4499 Radio 8823 Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4402 Radio 4408	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4407 Radio 4412 Radio 4415 Radio 4418 Radio 4426 Radio 4428 Radio 4429 Radio 4442 Radio 4443 Radio 4449 Radio 4478 Radio 8808 Radio 8818 Radio 8842 Radio 8843 RRU 22F3 (band 28d) RRUL 82 ⁽²⁾ RRUS 32 RRUS 72 RRUS 82 ⁽²⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD



Radio Type	From SW Release	RBB22_2L		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4417	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4422	L19.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4455	L19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 8863	L20.Q2	Maximum one carrier with DUS 41. For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

- (1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_2K and RBB22_2L.
- (2) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.

Table 272 LTE Carrier Allocation for RBB22_2L for RDS

Radio Type	From SW Release	RBB22_2L		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

- (1) RBB used for the second band in the Dot product name.

6.3.40

LTE Carrier Allocation for RBB22_2M

Table 273 LTE Carrier Allocation for RBB22_2M

Radio Type	From SW Release	RBB22_2M		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8808 Radio 8818	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD



Radio Type	From SW Release	RBB22_2M		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8842		For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		
Radio 8823 ⁽¹⁾ Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUL 82	L18.Q2	A = number of carriers, $A \leq 1$ For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUS 82 ⁽²⁾	L18.Q2	A = number of carriers $A \leq 1$ with DUS $A \leq 3$ with Baseband For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

- (1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_2M and RBB22_2N.
- (2) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.

6.3.41 LTE Carrier Allocation for RBB22_2N

Table 274 LTE Carrier Allocation for RBB22_2N

Radio Type	From SW Release	RBB22_2N		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8808 Radio 8818 Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8823 ⁽¹⁾ Radio 8836 ⁽¹⁾	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD



Radio Type	From SW Release	RBB22_2N		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
		CPRI capacity applies.		
RRUL 82 ⁽²⁾	L18.Q2	Maximum one carrier. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD
RRUS 82 ⁽²⁾	L18.Q2	A = number of carriers, A ≤ 1 with DUS For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

- (1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_2M and RBB22_2N.
- (2) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.

6.3.42 LTE Carrier Allocation for RBB22_2P

Table 275 LTE Carrier Allocation for RBB22_2P

Radio Type	From SW Release	RBB22_2P		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4449 B5 B13 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		

- (1) High output power mode.

6.3.43 LTE Carrier Allocation for RBB22_2Q

Table 276 LTE Carrier Allocation for RBB22_2Q

Radio Type	From SW Release	RBB22_2Q		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

- (1) High output power mode.



6.3.44 LTE Carrier Allocation for RBB22_2R

Table 277 LTE Carrier Allocation for RBB22_2R

Radio Type	From SW Release	RBB22_2R		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) High output power mode.

6.3.45 LTE Carrier Allocation for RBB22_2S

Table 278 LTE Carrier Allocation for RBB22_2S

Radio Type	From SW Release	RBB22_2S		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) High output power mode.

6.3.46 LTE Carrier Allocation for RBB22_2T

Table 279 LTE Carrier Allocation for RBB22_2T

Radio Type	From SW Release	RBB22_2T		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD



6.3.47 LTE Carrier Allocation for RBB22_2U

Table 280 LTE Carrier Allocation for RBB22_2U

Radio Type	From SW Release	RBB22_2U		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2460 Radio 2479	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

6.3.48 LTE Carrier Allocation for RBB24_1A

Table 281 LTE Carrier Allocation for RBB24_1A

Radio Type	From SW Release	RBB24_1A		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 21 RR UW 02 + RR UW 02 RU L 01 + RU L 01 RU W 02 + RU W 02 Any combination of two radios on the same band: RR US 01 RR US 02 Any combination of two radios on the same band: RU S 01 RU S 02 RU S 03	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		



6.3.49 LTE Carrier Allocation for RBB24_1B

Table 282 LTE Carrier Allocation for RBB24_1B

Radio Type	From SW Release	RBB24_1B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		



6.3.50 LTE Carrier Allocation for RBB24_1C

Table 283 LTE Carrier Allocation for RBB24_1C

Radio Type	From SW Release	RBB24_1C		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 2488 AIR 2488 MB Radio 2468	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		

6.3.51 LTE Carrier Allocation for RBB24_2A

Table 284 LTE Carrier Allocation for RBB24_2A

Radio Type	From SW Release	RBB24_2A		
		Downlink		Uplink
		TX A/RX A	TX C/RX C	
AIR 21 RRUW 02 + RRUW 02 RUL 01 + RUL 01 RUW 02 + RUW 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		

6.3.52 LTE Carrier Allocation for RBB24_2B

Table 285 LTE Carrier Allocation for RBB24_2B

Radio Type	From SW Release	RBB24_2B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		



Radio Type	From SW Release	RBB24_2B		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3				
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		

6.3.53 LTE Carrier Allocation for RBB24_2D

Table 286 LTE Carrier Allocation for RBB24_2D

Radio Type	From SW Release	RBB24_2D		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
AIR 2488 AIR 2488 MB Radio 2468	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.		



6.3.54

LTE Carrier Allocation for RBB44_1B

Table 287 LTE Carrier Allocation for RBB44_1B

Radio Type	From SW Release	RBB44_1B				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2208 + Radio 2208 Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Radio 2218 + Radio 2218 RRU 2208 + RRU 2208 RRU 2216 + RRU 2216 RRUL 63 + RRUL 63 RRUS 62 + RRUS 62	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD



Radio Type	From SW Release	RBB44_1B				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRU 22F1 B3D + RRU 22F1 B3D	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with two TX configurations: - Four TX branches. - Transmit Data Cloning.				2- or 4-WRXD
Radio 2228 + Radio 2228	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31 or DUS 41.				2- or 4-WRXD
Any combination of two radios on the same band: - Radio 2212 - Radio 2217 - Radio 2219 - Radio 2242 - Radio 2260 - Radio 2279 - RRUS 11 - RRUS 12 - RRUS 13 Any combination of two radios on the same band: - Radio 2212 - Radio 2217 - Radio 2219 - Radio 2242 - Radio 2260 - Radio 2279 - RRUS 12 - RRUS 13 - RRUS 14 - RRUS 14s	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD



Table 288 LTE Carrier Allocation for RBB44_1B for RDS

Radio Type	From SW Release	RBB44_1B	
		Downlink	Uplink
Any combination of two radios on the same FDD band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242 Any combination of two radios on the same TDD band: RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 Two radios on the same TDD band: RD 2242 + IRU 2242	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD

6.3.55

LTE Carrier Allocation for RBB44_1D

Table 289 LTE Carrier Allocation for RBB44_1D

Radio Type	From SW Release	RBB44_1D				Uplink
		Downlink The total BW (MHz) for the carriers is shown in parentheses				
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB Radio 4407 Radio 4415 Radio 4426 Radio 4428 Radio 4429 Radio 4442 Radio 4443 Radio 4449 Radio 4478 RRUS 31 RRUS 32	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
AIR 4455 Radio 2460 Radio 2479 Radio 4480 Radio 4499	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4402 Radio 4408	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4422	L19.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD



Radio Type	From SW Release	RBB44_1D				Uplink
		Downlink The total BW (MHz) for the carriers is shown in parentheses				
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4417	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				2- or 4-WRXD
Radio 4455	L19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD

6.3.56 LTE Carrier Allocation for RBB44_1E

Table 290 LTE Carrier Allocation for RBB44_1E

Radio Type	From SW Release	RBB44_1E				
		Downlink The total BW (MHz) for the carriers is shown in parentheses				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8808 ⁽¹⁾ Radio 8818 ⁽¹⁾	L18.Q2	C1, C2, (20)	C1, C2, (20)	C1, C2, (20)	C1, C2, (20)	4-WRXD
Radio 8823 Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD
Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD
RRUS 82 ⁽²⁾	L18.Q2	Maximum one carrier with DUS 41. For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD

(1) 5 MHz carriers are not supported.

(2) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.



6.3.57 LTE Carrier Allocation for RBB44_1F

Table 291 LTE Carrier Allocation for RBB44_1F

Radio Type	From SW Release	RBB44_1F				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8808 ⁽¹⁾ Radio 8818 ⁽¹⁾⁽²⁾ Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD
Radio 8823 Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD
Radio 8863	L20.Q2	Maximum one carrier. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD
RRUS 82 ⁽³⁾	L18.Q2	Maximum one carrier with DUS 41. For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD

(1) 5 MHz carriers are not supported.

(2) All sectors must have the same number of carriers with the same carrier frequencies.

(3) All sectors must have the same number of carriers with the same carrier frequencies on all sectors from one radio.

6.3.58 LTE Carrier Allocation for RBB44_1G

Table 292 LTE Carrier Allocation for RBB44_1G

Radio Type	From SW Release	RBB44_1G				
		Downlink ⁽¹⁾⁽²⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Four radios of: RUL 01 Four radios of: RUS 01 Four radios of: RUS 02	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) RBB44_1G supports 10 MHz carrier bandwidths and higher.

(2) RBB44_1G supports band 2, 4, 5, and 13.



6.3.59 LTE Carrier Allocation for RBB44_1H

Table 293 LTE Carrier Allocation for RBB44_1H

Radio Type	From SW Release	RBB44_1H				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B13 + Radio 4449 B5 B13 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) High output power mode.

6.3.60 LTE Carrier Allocation for RBB44_1J

Table 294 LTE Carrier Allocation for RBB44_1J

Radio Type	From SW Release	RBB44_1J				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD

(1) High output power mode.

6.3.61 LTE Carrier Allocation for RBB44_1K

Table 295 LTE Carrier Allocation for RBB44_1K

Radio Type	From SW Release	RBB44_1K				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD

(1) High output power mode.



6.3.62 LTE Carrier Allocation for RBB44_1M

Table 296 LTE Carrier Allocation for RBB44_1M

Radio Type	From SW Release	RBB44_1M				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B12A + Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				4-WRXD

(1) High output power mode.

6.3.63 LTE Carrier Allocation for RBB44_1N

Table 297 LTE Carrier Allocation for RBB44_1N for RDS

Radio Type	From SW Release	RBB44_1N				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				2- or 4-WRXD

(1) RBB used for the first band in the Dot product name.

6.3.64 LTE Carrier Allocation for RBB44_1P

Table 298 LTE Carrier Allocation for RBB44_1P for RDS

Radio Type	From SW Release	RBB44_1P				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				2 - or 4-WRXD

(1) RBB used for the second band in the Dot product name.



6.3.65 LTE Carrier Allocation for RBB44_2C

Table 299 LTE Carrier Allocation for RBB44_2C

Radio Type	From SW Release	RBB44_2C				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2208 + Radio 2208 Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s mRRUS 61 + mRRUS 61 Radio 2218 + Radio 2218 RRU 2208 + RRU 2208 RRU 2216 + RRU 2216 RRUL 63 + RRUL 63 RRUS 61 + RRUS 61 RRUS 62 + RRUS 62	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supports setup as follows: — 4 TX configuration. — 2 TX configuration with master A on RF A of the first radio and master B on RF B of the first radio and with clone A on RF A of the second radio and clone B on RF B of the second radio.				2- or 4-WRXD



Radio Type	From SW Release	RBB44_2C				Uplink
		Downlink				
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRU 22F1 B3D + RRU 22F1 B3D	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with two TX configurations: — Four TX branches. — Transmit Data Cloning.				2- or 4-WRXD
Radio 2228 + Radio 2228	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. In SSMM, an equal number of radio resources is available for both nodes if both are configured with the same RBB and any of them uses DUS 31 or DUS 41.				2- or 4-WRXD
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	L20.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD



Table 300 LTE Carrier Allocation for RBB44_2C for RDS

Radio Type	From SW Release	RBB44_2C for RDS	
		Downlink	Uplink
Any combination of two radios on the same FDD band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242 Any combination of two radios on the same TDD band: RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 Two radios on the same TDD band: RD 2242 + IRU 2242	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD

6.3.66

LTE Carrier Allocation for RBB44_2F

Table 301 LTE Carrier Allocation for RBB44_2F

Radio Type	From SW Release	RBB44_2F				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB Radio 4407 Radio 4415 Radio 4426 Radio 4428 Radio 4429 Radio 4442 Radio 4443 Radio 4449 Radio 4478 RRUS 31 RRUS 32	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
AIR 4455 Radio 2460 Radio 2479 Radio 4480 Radio 4499	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4402 Radio 4408	L19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4422	L19.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD



Radio Type	From SW Release	RBB44_2F				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4417	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				2- or 4-WRXD
Radio 4455	L19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD

6.3.67

LTE Carrier Allocation for RBB44_2G

Table 302 LTE Carrier Allocation for RBB44_2G

Radio Type	From SW Release	RBB44_2G				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8808 Radio 8818 Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Radio 8823 Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
RRUS 82	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. Maximum one carrier with DUS 41. ⁽¹⁾ For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) All sectors must have the same number of carriers with the same carrier frequencies.



6.3.68 LTE Carrier Allocation for RBB44_2H

Table 303 LTE Carrier Allocation for RBB44_2H

Radio Type	From SW Release	RBB44_2H				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8808 Radio 8818 Radio 8842 Radio 8843	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Radio 8823 Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
RRUS 82	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. Maximum one carrier with DUS 41. ⁽¹⁾ For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) All sectors must have the same number of carriers with the same carrier frequencies.

6.3.69 LTE Carrier Allocation for RBB44_2J

Table 304 LTE Carrier Allocation for RBB44_2J

Radio Type	From SW Release	RBB44_2J ⁽¹⁾⁽²⁾				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Four radios of: RUL 01 Four radios of: RUS 01 Four radios of: RUS 02	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) RBB44_2J supports 10 MHz carrier bandwidths and higher.

(2) RBB44_2J supports band 2, 4, 5, and 13.



6.3.70 LTE Carrier Allocation for RBB44_2K

Table 305 LTE Carrier Allocation for RBB44_2K

Radio Type	From SW Release	RBB44_2K ⁽¹⁾⁽²⁾				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11 + RUS 02 + RUS 02 RRUS 11 + RUS 01 + RUS 01 RRUS 12 + RUS 01 + RUS 01 RRUS 11 + RUS 02 + RUS 02 RRUS 12 + RUS 02 + RUS 02 RRUS 11 + RUL 01 + RUL 01	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) RBB44_2K supports 10 MHz carrier bandwidths and higher.

(2) RBB44_2K supports band 2, 4, 5, and 13.

6.3.71 LTE Carrier Allocation for RBB44_2L

Table 306 LTE Carrier Allocation for RBB44_2L

Radio Type	From SW Release	RBB44_2L ⁽¹⁾⁽²⁾				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11 + RUS 02 + RUS 02 on band 2 RRUS 11 + RUS 01 + RUS 01 on band 4 RRUS 12 + RUS 01 + RUS 01 on band 4 RRUS 11 + RUS 02 + RUS 02 band 5 RRUS 12 + RUS 02 + RUS 02 band 5 RRUS 11 + RUL 01 + RUL 01 on band 13	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) RBB44_2L supports 10 MHz carrier bandwidths and higher.

(2) RBB44_2L supports band 2, 4, 5, and 13.



6.3.72 LTE Carrier Allocation for RBB44_2M

Table 307 LTE Carrier Allocation for RBB44_2M

Radio Type	From SW Release	RBB44_2M				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B13 + Radio 4449 B5 B13 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) High output power mode.

6.3.73 LTE Carrier Allocation for RBB44_2N

Table 308 LTE Carrier Allocation for RBB44_2N

Radio Type	From SW Release	RBB44_2N				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) High output power mode.

6.3.74 LTE Carrier Allocation for RBB44_2P

Table 309 LTE Carrier Allocation for RBB44_2P

Radio Type	From SW Release	RBB44_2P				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) High output power mode.



6.3.75 LTE Carrier Allocation for RBB44_2R

Table 310 LTE Carrier Allocation for RBB44_2R

Radio Type	From SW Release	RBB44_2R				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B12A + Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) High output power mode.

6.3.76 LTE Carrier Allocation for RBB44_2S

Table 311 LTE Carrier Allocation for RBB44_2S for RDS

Radio Type	From SW Release	RBB44_2S				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				2- or 4-WRXD

(1) RBB used for the first band in the Dot product name.

6.3.77 LTE Carrier Allocation for RBB44_2T

Table 312 LTE Carrier Allocation for RBB44_2T for RDS

Radio Type	From SW Release	RBB44_2T				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.				2- or 4-WRXD

(1) RBB used for the second band in the Dot product name.



6.3.78 LTE Carrier Allocation for RBB44_3A

Table 313 LTE Carrier Allocation for RBB44_3A

Radio Type	From SW Release	RBB44_3A ⁽¹⁾⁽²⁾				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RUL 01 + RUL 01 + RRUS 11 RUS 01 + RUS 01 + RRUS 11 RUS 02 + RUS 02 + RRUS 11 RUS 02 + RUS 02 + RRUS 12 RUS 01 + RUS 01 + RRUS 12	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) RBB44_3A supports 10 MHz carrier bandwidths and higher.

(2) RBB44_3A supports band 2, 4, 5, and 13.

6.3.79 LTE Carrier Allocation for RBB44_3B

Table 314 LTE Carrier Allocation for RBB44_3B

Radio Type	From SW Release	RBB44_3B ⁽¹⁾⁽²⁾				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11 + RUL 01 + RUL 01 RRUS 11 + RUS 01 + RUS 01 RRUS 11 + RUS 02 + RUS 02 RRUS 12 + RUS 02 + RUS 02 RRUS 12 + RUS 01 + RUS 01	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD

(1) RBB44_3B supports 10 MHz carrier bandwidths and higher.

(2) RBB44_3B supports band 2, 4, 5, and 13.

6.3.80 LTE Carrier Allocation for RBB44_4A

Table 315 LTE Carrier Allocation for RBB44_4A

Radio Type	From SW Release	RBB44_4A ⁽¹⁾⁽²⁾				
		Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Four radios of: RUL 01 Four radios of: RUS 01 Four radios of: RUS 02	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD



- (1) RBB44_4A supports 10 MHz carrier bandwidths and higher.
 (2) RBB44_4A supports band 2, 4, 5, and 13.

6.3.81 LTE Carrier Allocation for RBB88_1A

Table 316 LTE Carrier Allocation for RBB88_1A

Radio Type	From SW Release	RBB88_1A								Uplink
		Downlink The total BW (MHz) for the carriers is shown in parentheses								
		TX A/R XA	TX B/R XB	TX C/R XC	TX D/R XD	TX E/R XE	TX F/R XF	TX G/R XG	TX H/R XH	
Radio 8808 Radio 8818 RRUS 82	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Virtual sectors supported, see Virtual Sectors for LTE on page 329.								2, 4 or 8-WRXD
Radio 8823 Radio 8842	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.								
Radio 8836 RRUL 81 RRUL 82	L18.Q2									
Radio 8863	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.								

6.3.82 LTE Carrier Allocation for RBB88_2A

Table 317 LTE Carrier Allocation for RBB88_2A

Radio Type	From SW Release	RBB88_2A									
		Downlink The total BW (MHz) for the carriers is shown in parentheses								Uplink	
		TX A/R XA	TX B/R XB	TX C/R XC	TX D/R XD	TX E/R XE	TX F/R XF	TX G/R XG	TX H/R XH		
Radio 8808 Radio 8818 Radio 8842 RRUL 82 RRUS 82	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Virtual sectors supported, see Virtual Sectors for LTE on page 329.								8-WRXD	
Radio 8823	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.								8-WRXD	



Radio Type	From SW Release	RBB88_2A								Uplink
		Downlink The total BW (MHz) for the carriers is shown in parentheses								
		TX A/R X A	TX B/R X B	TX C/R X C	TX D/R X D	TX E/R X E	TX F/R X F	TX G/R X G	TX H/R X H	
Radio 8836	L18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.								8-WRXD
Radio 8863	L20.Q2	Maximum one carrier. For total bandwidth, see Supported Radio Frequencies on page 8.								8-WRXD
RRUL 81	L18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Up to 2×20 MHz on one CPRI supported with CPRI compression.								8-WRXD

6.3.83 LTE Carrier Allocation for RBBAIR_1A

Table 318 LTE Carrier Allocation for RBBAIR_1A

Radio Type	From SW Release	RBBAIR_1A
AIR 1641 ⁽¹⁾	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband 5216, Baseband 6318, and Baseband 6630 only.
AIR 3246 ⁽¹⁾	L18.Q3	
AIR 6449	L20.Q1	
AIR 6454	L19.Q4	
AIR 6468	L18.Q2	
AIR 6488	L19.Q3	

(1) Supports Digital Sectorization with AAS FDD, see [Digital Sectorization with AAS FDD](#) on page 330.



6.3.84 LTE Carrier Allocation for RBBAIR_2A

Table 319 LTE Carrier Allocation for RBBAIR_2A

Radio Type	From SW Release	RBBAIR_2A
AIR 1641 ⁽¹⁾	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband 5216, Baseband 6318, and Baseband 6630 only.
AIR 3246 ⁽¹⁾	L18.Q3	
AIR 6449	L20.Q1	
AIR 6454	L19.Q4	
AIR 6468	L18.Q2	
AIR 6488	L19.Q3	

(1) Supports Digital Sectorization with AAS FDD, see [Digital Sectorization with AAS FDD](#) on page 330.

6.3.85 LTE Carrier Allocation for RBBAIR_3A

Table 320 LTE Carrier Allocation for RBBAIR_3A

Radio Type	From SW Release	RBBAIR_3A
AIR 1641 ⁽¹⁾	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband 5216, Baseband 6318, and Baseband 6630 only.
AIR 3246 ⁽¹⁾	L19.Q1	
AIR 6449	L20.Q1	
AIR 6454	L19.Q4	
AIR 6488	L19.Q3	

(1) Supports Digital Sectorization with AAS FDD, see [Digital Sectorization with AAS FDD](#) on page 330.

6.3.86 LTE Carrier Allocation for RBBAIR_4A

Table 321 LTE Carrier Allocation for RBBAIR_4A

Radio Type	From SW Release	RBBAIR_4A
AIR 1641 ⁽¹⁾	L20.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband 5216, Baseband 6318, and Baseband 6630 only.
AIR 3246 ⁽¹⁾	L19.Q1	
AIR 6449	L20.Q2	

(1) Supports Digital Sectorization with AAS FDD, see [Digital Sectorization with AAS FDD](#) on page 330.



6.3.87 Carrier Combinations for RRUL 62 and RRUL 81

Table 322 Supported Carrier Combinations for RRUL 62 and RRUL 81

Supported Carriers (MHz) and Combinations for RRUL 62 and RRUL 81 ⁽¹⁾	
C1	C2
5	-
10	-
15	-
20	-
5	5
10	10
15	15
15	20
20	10
20	20

(1) Continuous Carrier Placement within IBW.

6.3.88 LTE Carrier Allocation for RBB22_1P

Table 323 LTE Carrier Allocation for RBB22_1N

Radio Type	From SW Release	RBB22_1N		
		Downlink		Uplink
		TX A/RX A	TX B/RX B	
Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. CPRI capacity applies.		2-WRXD

(1) High output power mode.

6.4 Baseband Support and Configuration for LTE

This section contains information on the DU and Baseband support for the configurations listed in [Supported Radio Configurations for LTE](#) on page 300. Note that there is both general and specific DU or Baseband information to be considered.



Table 324 DU and Baseband Support for LTE

DU or Baseband as One eNodeB	FDD / TDD	Software Version									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Baseband 5212	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
Baseband 5216	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
2 x Baseband 5126	FDD	-	-	X	X	X	X	X	X	X	X
	TDD	-	-	X	X	X	X	X	X	X	X
	FDD+TDD	-	-	X	X	X	X	X	X	X	X
Baseband 6303	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
Baseband 6318	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
2 x Baseband 6318	FDD	-	-	X	X	X	X	X	X	X	X
	TDD	-	-	X	X	X	X	X	X	X	X
	FDD+TDD	-	-	X	X	X	X	X	X	X	X
Baseband 6502	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
Baseband 6620	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
Baseband 6630	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
2 x Baseband 6630	FDD	-	-	X	X	X	X	X	X	X	X
	TDD	-	-	X	X	X	X	X	X	X	X
	FDD+TDD	-	-	X	X	X	X	X	X	X	X
DUL 20	FDD	X	X	X	X	X	X	X	X	X	X
2 x DUL 20	FDD	X	X	X	X	X	X	X	X	X	X
DUS 31	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
2 x DUS 31	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X



DU or Baseband as One eNodeB	FDD / TDD	Software Version									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
3 x DUS 31	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
DUS 41	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
2 x DUS 41	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
3 x DUS 41	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
IDU 5205	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
IDU 5209	FDD	X	X	X	X	X	X	X	X	X	X
	TDD	X	X	X	X	X	X	X	X	X	X
	FDD+TDD	X	X	X	X	X	X	X	X	X	X
RBS 6501 DU part	FDD	X	X	X	X	X	X	X	X	X	X

6.4.1 LTE DU and Baseband Radio Support

Note: Software versions are valid for the first release of the radio. For supported software versions for frequency variants, see [Radio Software Support](#).

If a radio is only supported for Baseband 5216, Baseband 6318, and Baseband 6630, it is not supported for Mixed Mode Baseband.

Table 325 LTE FDD DU and Baseband Support per Radio

Radio	DU and Baseband Support from SW Release												
	Baseb and 5212	Baseb and 5216	Baseb and 6303	Baseb and 6318	Baseb and 6502	Baseb and 6620	Baseb and 6630	DUL 20	DUS 31	DUS 41	IDU 5205	IDU 5209	RBS 6501 DU Part
AIR 11	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
AIR 1641	-	20.Q2	-	20.Q2	-	-	20.Q2	-	-	-	-	-	-
AIR 21	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
AIR 2488	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
AIR 2488 MB	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
AIR 32	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
AIR 32 MB	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
AIR 3239	-	20.Q1	-	20.Q1	-	-	20.Q1	-	-	-	-	-	-



Radio	DU and Baseband Support from SW Release												
	Baseband 5212	Baseband 5216	Baseband 6303	Baseband 6318	Baseband 6502	Baseband 6620	Baseband 6630	DUL 20	DUS 31	DUS 41	IDU 5205	IDU 5209	RBS 6501 DU Part
AIR 3246	-	18.Q3	-	18.Q3	-	-	18.Q3	-	-	-	-	-	-
AIR 4455	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	18.Q4	18.Q4	18.Q4	-	-	-
Dot 2272 + IRU 8844 or IRU 8884	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	-	-	-	19.Q1	19.Q1	-
Dot 2282 + IRU 8844 or IRU 8884	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	-	-	-	19.Q1	19.Q1	-
mRRUS 12	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 0208	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
Radio 2012	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 2203	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 2212	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 2217	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 2219	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 2237	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 2238	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	-	18.Q4	18.Q4	-	-	18.Q4
Radio 2242	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	18.Q2	-	-	-
Radio 2260	20.Q1	20.Q1	20.Q1	20.Q1	-	20.Q1	20.Q1	-	20.Q1	20.Q1	-	-	-
Radio 2279	20.Q1	20.Q1	20.Q1	20.Q1	-	20.Q1	20.Q1	-	20.Q1	20.Q1	-	-	-
Radio 2460	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	-	18.Q4	18.Q4	-	-	-
Radio 2468	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	18.Q2	-	-	-
Radio 2479	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	-	18.Q4	18.Q4	-	-	-
Radio 4402	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	-	19.Q3	19.Q3	-	-	19.Q3
Radio 4407	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
Radio 4415	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 4426	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
Radio 4428	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 4429	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 4442	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
Radio 4443	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	18.Q2	-	-	-
Radio 4449	-	18.Q2	-	18.Q2	-	-	18.Q2	-	-	18.Q2	-	-	-
Radio 4455	19.Q2	19.Q2	19.Q2	19.Q2	-	19.Q2	19.Q2	19.Q2	19.Q2	19.Q2	-	-	19.Q2
Radio 4478	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
Radio 4480	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	-	18.Q4	18.Q4	-	-	18.Q4
Radio 4499	18.Q4	18.Q4	18.Q4	18.Q4	-	18.Q4	18.Q4	-	18.Q4	18.Q4	-	-	18.Q4
Radio 8843	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	18.Q2	-	-	-
RD 2242 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RD 2243 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RD 4442 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RD 4453 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RRU 22F1	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-



Radio	DU and Baseband Support from SW Release												
	Baseband 5212	Baseband 5216	Baseband 6303	Baseband 6318	Baseband 6502	Baseband 6620	Baseband 6630	DUL 20	DUS 31	DUS 41	IDU 5205	IDU 5209	RBS 6501 DU Part
RRU 22F2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	-		-	-	-
RRU 22F3	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	-	18.Q2	-	-	-
RRUL 11	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RRUS 01	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
RRUS 02	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2		18.Q2	18.Q2	18.Q2	-	-	18.Q2
RRUS 11	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
RRUS 12	18.Q2	18.Q2	18.Q2	18.Q2	-		18.Q2	18.Q2	18.Q2	18.Q2		-	18.Q2
RRUS 13	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
RRUS 14	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
RRUS 14s	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
RRUS 31	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RRUS 32	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2
RRUS A2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RRUS A3	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RRUS E2	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	18.Q2	-	-	18.Q2
RRUW 02	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RUL 01	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RUS 01	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RUS 02	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RUS 03	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
RBS 6501 radio part	-	-	-	-	-	-	-	-	-	-	-	-	18.Q2
RUW 02	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-
Vault Radio System 2268	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	18.Q2

Table 326 LTE TDD DU and Baseband Support per Radio

Radio	DU and Baseband Support from SW Release										
	Baseband 5212	Baseband 5216	Baseband 6303	Baseband 6318	Baseband 6502	Baseband 6620	Baseband 6630	DUS 31	DUS 41	IDU 5205	IDU 5209
AIR 6449	-	20.Q1	-	20.Q1	-	-	20.Q1	-	-	-	-
AIR 6468	-	18.Q2	-	18.Q2	-	-	18.Q2	-	-	-	-
Dot 2272 + IRU 8844 or IRU 8884	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	-	-	19.Q1	19.Q1
Dot 2282 + IRU 8844 or IRU 8884	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	19.Q1	-	-	19.Q1	19.Q1
mRRUS 61	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2205 ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-	-	-
Radio 2208	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2218	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 2228	19.Q3	19.Q3	19.Q3	19.Q3	-	19.Q3	19.Q3	19.Q3	19.Q3	-	-
Radio 4408	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3	-	-



Radio	DU and Baseband Support from SW Release										
	Baseband 5212	Baseband 5216	Baseband 6303	Baseband 6318	Baseband 6502	Baseband 6620	Baseband 6630	DUS 31	DUS 41	IDU 5205	IDU 5209
Radio 4412	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 4418	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
Radio 4422	19.Q4	19.Q4	19.Q4	19.Q4	-	19.Q4	19.Q4	19.Q4	19.Q4	-	-
Radio 8808	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	-	-
Radio 8818	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	-	-
Radio 8823	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	-	-
Radio 8836	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	-	-
Radio 8842	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	-	-
RD 2242 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
Radio 8863	20.Q2	20.Q2	20.Q2	20.Q2	-	20.Q2	20.Q2	-	-	-	-
RD 2243 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RD 2243 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RD 2253 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RD 4442 + IRU 2242	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RRU 2208	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRU 2216	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUL 62	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUL 63	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUL 81	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	-	-
RRUL 82	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	-	18.Q2	-	-
RRUS 61	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 62	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 72	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-
RRUS 82	18.Q2	18.Q2	18.Q2	18.Q2	-	18.Q2	18.Q2	18.Q2	18.Q2	-	-

(1) Radio 2205 supports LTE LAA.

6.4.2 LTE Baseband Support and Configuration for Baseband 5212 in One eNodeB

The following tables list configuration support for Baseband 5212 in one eNodeB.



Table 327 Baseband 5212 General Configuration Support

	FDD / TDD	Software Version									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
	TDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
Maximum number of radios per cascade chain	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD and TDD	6	6	6	6	6	6	6	6	6	6

(1) In one or many 3GPP bands, including band 0.

Table 328 Configuration Support with One Baseband 5212 as One eNodeB with CPRI

		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Maximum number of LTE carriers	1TX/1RX	FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
		TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with	12	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			1-3 NB-IoT IB/GB cells ⁽²⁾										
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
		MI	NB-IoT in-band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
			FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
	1TX/2RX 2TX/0RX 2TX/2RX	TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with	12	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			1-3 NB-IoT IB/GB cells ⁽²⁾										
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
		MI	NB-IoT in-band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT standalone	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽²⁾	12	12	12	12	12	2	2	2	2	2
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
			FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
	1TX/4RX 2TX/4RX 4TX/4RX	FDD	FDD only ⁽¹⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾
			FDD with 4-6 NB-IoT IB/GB	6	6	6	6	6	6	6	6	6	6



		Standard	Software Version									
			L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			cells ⁽²⁾ (ABW ≤ 480 MHz)									
			FDD with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-
		TDD	TDD only ⁽¹⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾
		FDD + TDD	FDD + TDD only	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾	12 600- 960 MHz ⁽⁶⁾
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6-12 ⁽³⁾ 600- 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600- 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600- 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600- 960 MHz ⁽⁶⁾
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-
		MI	NB-IoT in-band ⁽⁴⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			NB-IoT in-band ⁽⁴⁾ (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽⁴⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			NB-IoT guard	3	3	3	3	3	3	3	3	3



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			band ⁽⁴⁾ (ABW > 480 MHz)										
			NB-IoT standalone	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB +SA) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB +SA) (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
			FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12-15 ⁽³⁾	12-15 ⁽³⁾	12-15 ⁽³⁾	12-15 ⁽³⁾	12-15 ⁽³⁾



		Standard		Software Version								
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
			FDD + TDD + NB-IoT (ABW > 480 MHz)	9 600-720 MHz ⁽⁶⁾	9 600-720 MHz ⁽⁶⁾	9 600-720 MHz ⁽⁶⁾	9 600-720 MHz ⁽⁶⁾	9 600-720 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600-960 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600-960 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600-960 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600-960 MHz ⁽⁶⁾
	8TX/8RX	FDD		-	-	-	-	-	-	-	-	-
		TDD		6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches
Maximum number of sectors in one eNodeB		FDD		12	12	12	12	12	12	12	12	12
		TDD		12	12	12	12	12	12	12	12	12
		FDD + TDD		12	12	12	12	12	12	12	12	12
Maximum number of radios in one eNodeB		FDD		48	48	48	48	48	48	48	48	48
		TDD		48	48	48	48	48	48	48	48	48
		FDD + TDD		48	48	48	48	48	48	48	48	48

- (1) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.
- (2) Minimum one NB-IoT in-band or guard band cell.
- (3) Not possible to configure Elastic RAN when exceeding the lower limit.
- (4) Each NB-IoT in-band or guard band cell requires one host LTE cell. For example, for three NB-IoT in-band cells there must be a minimum of three LTE cells.
- (5) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.
From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.
For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.
- (6) Within stated ABW range, maximum 600 MHz with radios from group 1-6, 800 MHz with radios from group 3-6, and 960 MHz with radios from group 5 and 6. See [Radio Groups](#) on page 101.

6.4.3 LTE Baseband Support and Configuration for Baseband 5216 in One eNodeB

The following tables list configuration support for Baseband 5216 in one eNodeB.

Table 329 Baseband 5216 General Configuration Support

	FDD / TDD	Software Version									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	8	8	8	8	8	8	8	8	8	8
	TDD	6	6	6	8	8	8	8	8	8	8



	FDD / TDD	Software Version									
		L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
	TDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
Supported eCPRI line rates (Gbps)	TDD	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Maximum number of radios per cascade chain ⁽²⁾	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD and TDD	6	6	6	6	6	6	6	6	6	6

(1) In one or many 3GPP bands, including band 0.

(2) Cascading is not supported for RRUS 61 and mRRUS 61.

Table 330 Configuration Support with One Baseband 5216 as One eNodeB with CPRI

		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Maximum number of LTE carriers	1TX/1RX	FDD	FDD only ⁽¹⁾	24	24	24	24	24	24	24	24	24	24
			FDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 1-3 NB-IoT IB/GB cells	18	18	18	18	21	21-24 ⁽²⁾	21-24 ⁽²⁾	21-24 ⁽²⁾	21-24 ⁽²⁾	21-24 ⁽²⁾
			FDD with 4-6 NB-IoT IB/GB cells	18	18	18	18	18	18-24 ⁽²⁾	18-24 ⁽²⁾	18-24 ⁽²⁾	18-24 ⁽²⁾	18-24 ⁽²⁾
			FDD with 7-12 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 13-15 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15	15	15	15	15
		TDD	TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24
			TDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	21	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾
			FDD + TDD with 7-12 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD with 13-15 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15	15	15	15	15
		MI	NB-IoT in-band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT guard band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT standalone	18	18	18	18	18	18	18	18	18	18
			NB-IoT (IB+GB +SA)	15	15	15	15	15	15	15	15	15	15
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	18	18	18	18	21	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells	18	18	18	18	21	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾
			FDD + TDD + NB-IoT SA with 7-12 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD + NB-IoT SA with 13-15 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15	18	18	18	18
			FDD + TDD + NB-IoT	30	30	30	30	30	30	30	30	30	30
	1TX/2RX 2TX/0RX 2TX/2RX	FDD	FDD only ⁽¹⁾	24	24	24	24	24	24	24	24	24	24
			FDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 1-3 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	21	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾
			FDD with 4-6 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾
			FDD with 7-12 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18	18	18	18	18



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			FDD with 13-15 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15	15	15	15	15
			TDD										
			TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24
			TDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	21	21	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾
			FDD + TDD with 7-12 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD with 13-15 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15	15	15	15	15
			MI										
			NB-IoT in-band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT guard band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT standalone	18	18	18	18	18	18	18	18	18	18
			NB-IoT (IB+GB +SA)	15	15	15	15	15	15	15	15	15	15
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	18	18	18	18	21	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	21	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾	21-2 4 ⁽²⁾
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾	18-2 4 ⁽²⁾
			FDD + TDD + NB-IoT SA with 7-12 NB-IoT IB/GB cells ⁽³⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD + NB-IoT SA with 13-15 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15	15	15	15	15
			FDD + TDD + NB-IoT	30	30	30	30	30	30	30	30	30	30
		1TX/4R X 2TX/4R X 4TX/4R X	FDD										
			FDD only ⁽¹⁾	24 1440 MHz	24 1440 MHz	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾



		Standard		Software Version										
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3	
			FDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18	
			FDD with 1-3 NB-IoT IB/GB cells	15	15	15	15	21	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	
			FDD with 4-6 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	
			FDD with 7-8 NB-IoT IB/GB cells ⁽³⁾	8	8	8	8	8	8	8	8	8	8	
		TDD	TDD only ⁽¹⁾	18	24 1440 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	
			TDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only	18	24 1440 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾	24 1440 -156 0 MHz ⁽⁶⁾
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	21	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	21-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾	15-2 4 ⁽²⁾ 1440 -156 0 MHz ⁽⁶⁾
			FDD + TDD with 7-8 NB-IoT IB/GB cells ⁽³⁾	8	8	8	8	8	8	8	8	8	8	8
			MI	NB-IoT in-band ⁽⁴⁾	8	8	8	8	8	8	8	8	8	8
		NB-IoT guard band ⁽⁴⁾		8	8	8	8	8	8	8	8	8	8	8
		NB-IoT standalone		9	9	9	9	9	9	9	9	9	9	9



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			NB-IoT (IB+GB +SA)	8	8	8	8	8	8	8	8	8	8
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	18	18	18	18	21	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells	15	15	15	15	21	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽³⁾	15	15	15	15	15	15	15	15	15	15
			FDD + TDD + NB-IoT SA with 7-8 NB-IoT IB/GB cells ⁽³⁾	8	8	8	8	8	8	8	8	8	8
			FDD + TDD + NB-IoT	21	21	21	21	24	30 1440 -156 0 MHz ⁽⁶⁾	30 1440 -156 0 MHz ⁽⁶⁾	30 1440 -156 0 MHz ⁽⁶⁾	30 1440 -156 0 MHz ⁽⁶⁾	30 1440 -156 0 MHz ⁽⁶⁾
	8TX/8RX	FDD		-	-	-	-	-	-	-	-	-	-
		TDD ⁽¹⁾		9 Maximum 72 carrier branches	12 1440 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches
	16TX/8RX ⁽⁷⁾	FDD		1	1	1	1	1	1	1	1	1	1
	16TX/16RX	FDD		-	-	-	-	-	-	-	-	6	6
		MI	NB-IoT in-band ⁽⁴⁾	-	-	-	-	-	-	-	-	6	6
			NB-IoT guard band ⁽⁴⁾	-	-	-	-	-	-	-	-	6	6
			NB-IoT (IB + GB)	-	-	-	-	-	-	-	-	6	6
		FDD+NB-IoT		-	-	-	-	-	-	-	-	12	12
	32TX/32RX	FDD		-	3 ⁽⁸⁾	3	3	3	3	3	3	3	3
		MI	NB-IoT in-band ⁽⁴⁾	-	-	-	-	3	3	3	3	3	3
			NB-IoT guard band ⁽⁴⁾	-	-	-	-	3	3	3	3	3	3
			NB-IoT (IB + GB)	-	-	-	-	3	3	3	3	3	3
Maximum number of MIMO layers in one	FDD	16TX/16RX		-	-	-	-	-	-	-	-	4	4
		32TX/32RX		-	4 ⁽⁸⁾	4	4	4	4	4	4	4	4



		Standard	Software Version									
			L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
eNode B												
Maximum number of sectors in one eNodeB		FDD	24	24	24	24	24	24	24	24	24	24
		TDD	18	24	24	24	24	24	24	24	24	24
		FDD + TDD	24	24	24	24	24	24	24	24	24	24
Maximum number of radios in one eNodeB		FDD	48	48	48	48	48	48	48	48	48	48
		TDD	36	48	48	48	48	48	48	48	48	48
		FDD + TDD	48	48	48	48	48	48	48	48	48	48

(1) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.

(2) Not possible to configure NB-IoT standalone when exceeding the lower limit.

(3) Minimum one NB-IoT in-band or guard band cell.

(4) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(5) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

(6) Maximum 1440 MHz with radios from group 1-6 and 1560 MHz with radios from group 3-6. See [Radio Groups](#) on page 101.

(7) Cannot be mixed with other antenna configurations.

(8) Cannot be combined with other antenna configurations.

Table 331 Configuration Support with One Baseband 5216 as One eNodeB with eCPRI

Number of		Standard	Software Version					
			L19.Q2 ⁽¹⁾	L19.Q3 ⁽¹⁾	L19.Q4 ⁽¹⁾	L20.Q1 ⁽¹⁾	L20.Q2 ⁽¹⁾	L20.Q3 ⁽¹⁾
Cells		TDD	3	3	3	3	3	3
Number of MIMO layers per carrier	MU-MIMO downlink	TDD	8–16 ⁽²⁾ (3)	8–16 ⁽²⁾⁽³⁾	8–16 ⁽²⁾⁽³⁾	8–16 ⁽²⁾⁽³⁾	8–16 ⁽²⁾⁽³⁾	8–16 ⁽²⁾⁽³⁾
	MU-MIMO uplink	TDD	8	8	8	8	8	8
	SU-MIMO downlink	TDD	2	2	2	2	2	2
	SU-MIMO uplink	TDD	1	1	1	1	1	1
Sectors		TDD	3	3	3	3	3	3
Radios		TDD	3	3	3	3	3	3
Bandwidths		TDD	3	3	3	3	3	3
Carrier frequencies in one		TDD	3	3	3	3	3	3



Number of	Standard	Software Version					
		L19.Q2 ⁽¹⁾	L19.Q3 ⁽¹⁾	L19.Q4 ⁽¹⁾	L20.Q1 ⁽¹⁾	L20.Q2 ⁽¹⁾	L20.Q3 ⁽¹⁾
or many 3GPP bands							
Radio cascading support	TDD	No	No	No	No	No	No
Supported RI ports on Baseband unit	TDD	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F

(1) CPRI and eCPRI cannot be combined on the same Baseband unit.

(2) Maximum 16 layer MU-MIMO downlink is supported for 15 MHz and 20 MHz carrier bandwidth.

Maximum ten layers MU-MIMO DL is supported for ten MHz carrier bandwidth.

(3) Maximum one carrier in the node can have more than eight MU-MIMO layers in downlink. Then the other carriers can only have four MU-MIMO layers in downlink.

6.4.4 LTE Baseband Support and Configuration for Baseband 6303 in One eNodeB

The following tables list configuration support for Baseband 6303 in one eNodeB.

Table 332 Baseband 6303 General Configuration Support

	FDD / TDD	Software Version									
		L18.Q2	L18.Q3	L18.Q4	L19.Q1	L19.Q2	L19.Q3	L19.Q4	L20.Q1	L20.Q2	L20.Q3
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
	TDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
Maximum number of radios per cascade chain ⁽²⁾	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD and TDD	6	6	6	6	6	6	6	6	6	6

(1) In one or many 3GPP bands, including band 0.



(2) Cascading is not supported for RRUS 61 and mRRUS 61.

Table 333 Configuration Support with One Baseband 6303 as One eNodeB with CPRI

		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
Maximum number of LTE carriers	1TX/1RX	FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
		TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
		MI	NB-IoT in- band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT standalon e	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB +SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB- IoT	FDD + TDD + NB- IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB- IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB- IoT SA with 4–6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
	1TX/2RX 2TX/0RX 2TX/2RX		FDD + TDD + NB- IoT	15	15	15	15	15	18	18	18	18	18
		FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
		TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12
		MI	NB-IoT in- band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT standalon e	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB +SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB- IoT	FDD + TDD + NB- IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB- IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB- IoT SA with 4–6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾	12	12	12	12



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
	1TX/4RX 2TX/4RX 4TX/4RX	FDD	FDD + TDD + NB- IoT	15	15	15	15	15	18	18	18	18	18
			FDD only ⁽¹⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
			TDD only ⁽¹⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾
			FDD + TDD	FDD + TDD only	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600– 960 MHz ⁽⁶⁾
			FDD + TDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6	6	6	6	6



		Standard		Software Version										
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3	
			(ABW ≤ 480 MHz)											
			FDD + TDD with 4–6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-	
		MI	NB-IoT in-band ⁽⁴⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6	6
			NB-IoT in-band ⁽⁴⁾ (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽⁴⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾ (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3	3	3
			NB-IoT standalone	6	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA) (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6-12 ⁽³⁾ 600–960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600–960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600–960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600–960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600–960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600–960 MHz ⁽⁶⁾



		Standard		Software Version									
				L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2	L20. Q3
			(ABW > 480 MHz)										
			FDD + TDD + NB-IoT SA with 4–6 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
			FDD + TDD + NB-IoT SA with 4–6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
			FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12-15 ⁽³⁾	12-15 ⁽³⁾	12-15 ⁽³⁾	12-15 ⁽³⁾	12-15 ⁽³⁾
			FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9-15 ⁽³⁾ 600–720 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600–720 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600–720 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600–720 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600–720 MHz ⁽⁶⁾
	8TX/8RX	FDD		-	-	-	-	-	-	-	-	-	-
		TDD		6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	
Maximum number of sectors in one eNodeB		FDD		12	12	12	12	12	12	12	12	12	12
		TDD		12	12	12	12	12	12	12	12	12	12
		FDD + TDD		12	12	12	12	12	12	12	12	12	12
Maximum number of radios in one eNodeB		FDD		48	48	48	48	48	48	48	48	48	48
		TDD		48	48	48	48	48	48	48	48	48	48
		FDD + TDD		48	48	48	48	48	48	48	48	48	48

(1) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.

(2) Minimum one NB-IoT in-band or guard band cell.

(3) Not possible to configure Elastic RAN when exceeding the lower limit.

(4) Each NB-IoT in-band or guard band cell requires one host LTE cell. For example, for three NB-IoT in-band cells there must be a minimum of three LTE cells.

(5) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.



- (6) Within stated ABW range, maximum 600 MHz with radios from group 1-6, 800 MHz with radios from group 3-6, and 960 MHz with radios from group 5 and 6. See [Radio Groups](#) on page 101.

6.4.5 LTE Baseband Support and Configuration for Baseband 6318 in One eNodeB

The following tables list configuration support for Baseband 6318 in one eNodeB.

Table 334 Baseband 6318 General Configuration Support

	FDD / TDD	Software Version									
		L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	8	8	8	8	8	8	8	8	8	8
	TDD	6	8	8	8	8	8	8	8	8	8
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
	TDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
Supported eCPRI line rates (Gbps)	TDD	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Maximum number of radios per cascade chain ⁽²⁾	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD and TDD	6	6	6	6	6	6	6	6	6	6

(1) In one or many 3GPP bands, including band 0.

(2) Cascading is not supported for RRUS 61 and mRRUS 61.



Table 335 Configuration Support with One Baseband 6318 as One eNodeB with CPRI

		Standard		Software Version									
				L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
Maximum number of LTE carrier s	1TX/1 RX	FDD	FDD only ⁽¹⁾	24	24	24	24	24	24	24	24	24	24
			FDD with E- RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾
			FDD with 7–12 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 13–15 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
		TDD	TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24
			TDD with E- RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD + TDD with 4–6 NB- IoT	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾



		Standard		Software Version										
				L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3	
			IB/GB cells ⁽²⁾											
			FDD + TDD with 7–12 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18	
			FDD + TDD with 13–15 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15	
		MI	NB- IoT in- band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15	15
			NB- IoT guard band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15	15
			NB- IoT standa- lone	18	18	18	18	18	18	18	18	18	18	18
			NB- IoT (IB +GB +SA)	15	15	15	15	15	15	15	15	15	15	15
			Cat- M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB- IoT	FDD + TDD + NB- IoT SA	18	18	18	18	21	21	21	21	21	21	21
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD + TDD + NB- IoT SA with 4–12 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾
			FDD + TDD + NB- IoT SA with	15	15	15	15	15	15	15	15	15	15	15



		Standard		Software Version											
				L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3		
			13–15 NB- IoT IB/GB cells ⁽²⁾												
			FDD + TDD + NB- IoT	30	30	30	30	30	30	30	30	30	30	30	
	1TX/2 RX 2TX/0 RX 2TX/2 RX	FDD	FDD only ⁽¹⁾	24	24	24	24	24	24	24	24	24	24	24	
			FDD with E- RAN ⁽¹⁾)	18	18	18	18	18	18	18	18	18	18	18	
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	
			FDD with 7–12 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18	18	
			FDD with 13–15 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15	15	
		TDD	TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24	24	24
			TDD with E- RAN ⁽¹⁾)	18	18	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only ⁽¹⁾	18	24	24	24	24	24	24	24	24	24	24	24
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾



		Standard		Software Version									
				L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
			FDD + TDD with 4–6 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾
			FDD + TDD with 7–12 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD with 13–15 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
		MI	NB-IoT in-band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT guard band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT standalone	18	18	18	18	18	18	18	18	18	18
			NB-IoT (IB +GB +SA)	15	15	15	15	15	15	15	15	15	15
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	18	18	18	18	21	21	21	21	21	21
			FDD + TDD with 1–3 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	21	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 4–12 NB-IoT	18	18	18	18	18	18	18	18	18	18



		Standard		Software Version									
				L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
			IB/GB cells ⁽²⁾										
			FDD + TDD + NB- IoT SA with 13–15 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
			FDD + TDD + NB- IoT	30	30	30	30	30	30	30	30	30	30
	1TX/4 RX 2TX/4 RX 4TX/4 RX	FDD	FDD only ⁽¹⁾	24 1440 MHz	24 1440 MHz	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24	24	24	24	24	24
			FDD with E- RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15-24 ⁽³⁾	15-24 ⁽³⁾	15-24 ⁽³⁾	15-24 ⁽³⁾	15-24 ⁽³⁾
			FDD with 7–8 NB- IoT IB/GB cells ⁽²⁾	8	8	8	8	8	8	8	8	8	8
		TDD	TDD only ⁽¹⁾	18	24 1440 MHz	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾
			TDD with E- RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only	18	24 1440 MHz	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾	24 1440– 1560 MHz ⁽⁶⁾



		Standard		Software Version									
				L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
			FDD + TDD with 1–3 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	21	21-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	21-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	21-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	21-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	21-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾
			FDD + TDD with 4–6 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	15-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	15-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	15-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾	15-24 ⁽³⁾ 1440–1560 MHz ⁽⁶⁾
			FDD + TDD with 7–8 NB-IoT IB/GB cells ⁽²⁾	8	8	8	8	8	8	8	8	8	8
		MI	NB-IoT in-band ⁽⁴⁾	8	8	8	8	8	8	8	8	8	8
			NB-IoT guard band ⁽⁴⁾	8	8	8	8	8	8	8	8	8	8
			NB-IoT standalone	9	9	9	9	9	9	9	9	9	9
			NB-IoT (IB +GB +SA)	8	8	8	8	8	8	8	8	8	8
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	18	18	18	18	21	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	21	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 4–6	15	15	15	15	15	15	15	15	15	15



		Standard		Software Version									
				L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
			NB- IoT IB/GB cells ⁽²⁾										
			FDD + TDD + NB- IoT SA with 7–8 NB- IoT IB/GB cells ⁽²⁾	8	8	8	8	8	8	8	8	8	8
			FDD + TDD + NB- IoT	21	21	21	21	24	30 1440– 1560 MHz ⁽⁶⁾	30 1440– 1560 MHz ⁽⁶⁾	30 1440– 1560 MHz ⁽⁶⁾	30 1440– 1560 MHz ⁽⁶⁾	30 1440– 1560 MHz ⁽⁶⁾
	8TX/8 RX	FDD		-	-	-	-	-	-	-	-	-	-
		TDD ⁽¹⁾		9 Maxim um 72 carrier branch es	12 1440 MHz Maxim um 96 carrier branch es	12 1560 MHz Maxim um 96 carrier branch es	12 1560 MHz Maxim um 96 carrier branch es	12 1560 MHz Maxim um 96 carrier branch es	12 1560 MHz Maxim um 96 carrier branch es	12 1560 MHz Maxim um 96 carrier branch es	12 1560 MHz Maxim um 96 carrier branch es	12 1560 MHz Maxim um 96 carrier branch es	
	16TX/ 16RX	FDD		-	-	-	-	-	-	-	-	6	6
		MI	NB- IoT in- band ⁽⁴⁾	-	-	-	-	-	-	-	-	6	6
			NB- IoT guard band ⁽⁴⁾	-	-	-	-	-	-	-	-	6	6
			NB- IoT (IB + GB)	-	-	-	-	-	-	-	-	6	6
		FDD + NB-IoT		-	-	-	-	-	-	-	-	12	12
	32TX/ 32RX	FDD		-	3 ⁽⁷⁾	3	3	3	3	3	3	3	3
		MI	NB- IoT in- band ⁽⁴⁾	-	-	-	-	3	3	3	3	3	3
			NB- IoT guard band ⁽⁴⁾	-	-	-	-	3	3	3	3	3	3
			NB- IoT (IB + GB)	-	-	-	-	3	3	3	3	3	3
Maxim um numbe r of	FDD	16TX/16RX		-	-	-	-	-	-	-	4	4	
		32TX/32RX		-	4 ⁽⁷⁾	4	4	4	4	4	4	4	



		Standard	Software Version									
			L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
MIMO layers in one eNode B												
Maximum number of sectors in one eNodeB	FDD		24	24	24	24	24	24	24	24	24	24
	TDD		18	24	24	24	24	24	24	24	24	24
	FDD + TDD		24	24	24	24	24	24	24	24	24	24
Maximum number of radios in one eNodeB	FDD		48	48	48	48	48	48	48	48	48	48
	TDD		36	48	48	48	48	48	48	48	48	48
	FDD + TDD		48	48	48	48	48	48	48	48	48	48

- (1) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.
- (2) Minimum one NB-IoT in-band or guard band cell.
- (3) Not possible to configure NB-IoT standalone when exceeding the lower limit.
- (4) Each NB-IoT in-band or guard band cell requires one host LTE cell.
- (5) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

- (6) Maximum 1440 MHz with radios from group 1-6 and 1560 MHz with radios from group 3-6. See [Radio Groups](#) on page 101.
- (7) Cannot be combined with other antenna configurations.

Table 336 Configuration Support with One Baseband 6318 as One eNodeB with eCPRI

Number of		Stand ard	Software Version									
			L18.Q 2 ⁽¹⁾	L18.Q 3 ⁽¹⁾	L18.Q 4 ⁽¹⁾	L19.Q 1 ⁽¹⁾	L19.Q 2 ⁽¹⁾	L19.Q 3 ⁽¹⁾	L19.Q 4	L20.Q 1	L20.Q 2	L20.Q 3
Cells		TDD	3	3	3	3	3	3	3	3	3	3
MIMO layers per carrier	MU-MIMO downlink	TDD	1	1	1	1	8– 16 ⁽²⁾ (3)	8– 16 ⁽²⁾ (3)	8– 16 ⁽²⁾ (3)	8– 16 ⁽²⁾ (3)	8– 16 ⁽²⁾ (3)	8– 16 ⁽²⁾ (3)
	MU-MIMO uplink	TDD	1	1	1	1	8	8	8	8	8	8
	SU-MIMO downlink	TDD	1	1	1	1	2	2	2	2	2	2
	SU-MIMO uplink	TDD	1	1	1	1	1	1	1	1	1	1
Sectors		TDD	3	3	3	3	3	3	3	3	3	3
Radios		TDD	3	3	3	3	3	3	3	3	3	3
Bandwidths		TDD	3	3	3	3	3	3	3	3	3	3
Carrier frequencies in one or many 3GPP bands		TDD	3	3	3	3	3	3	3	3	3	3
Radio cascading support		TDD	No	No	No	No	No	No	No	No	No	No
Supported RI ports on Baseband unit		TDD	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F	D,E,F

- (1) CPRI and eCPRI cannot be combined on the same Baseband unit.



- (2) Maximum 16 layer MU-MIMO downlink is supported for 15 MHz and 20 MHz carrier bandwidths.
Maximum 10 layers MU-MIMO DL is supported for 10 MHz carrier bandwidth.
- (3) Maximum one carrier in the node can have more than eight MU-MIMO layers in downlink. Then the other carriers can only have four MU-MIMO layers in downlink.

6.4.6 LTE Baseband Support and Configuration for Baseband 6502 in One eNodeB

The following tables list configuration support for Baseband 6502 in one eNodeB.

Table 337 Baseband 6502 General Configuration Support

	FDD / TDD	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
	TDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
Maximum number of radios per cascade chain	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD and TDD	6	6	6	6	6	6	6	6	6	6

(1) In one or many 3GPP bands, including band 0.



Table 338 Configuration Support with One Baseband 6502 as One eNodeB

		Standard ⁽¹⁾	Software Version									
			L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of LTE carriers	1TX/1RX	FDD	6	6	6	6	6	6	6	6	6	6
		TDD	6	6	6	6	6	6	6	6	6	6
		NB-IoT	-	-	-	-	-	-	-	-	-	-
		Cat-M1	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT	6	6	6	6	6	6	6	6	6	6
	1TX/2RX 2TX/2RX	FDD	6	6	6	6	6	6	6	6	6	6
		TDD	6	6	6	6	6	6	6	6	6	6
		NB-IoT	-	-	-	-	-	-	-	-	-	-
		Cat-M1	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT	6	6	6	6	6	6	6	6	6	6
	1TX/4RX 2TX/4RX 4TX/4RX	FDD	6	6	6	6	6	6	6	6	6	6
		TDD	6	6	6	6	6	6	6	6	6	6
		NB-IoT	-	-	-	-	-	-	-	-	-	-
		Cat-M1	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT	6	6	6	6	6	6	6	6	6	6
Maximum bandwidth for all carrier branches in one eNodeB (MHz)	FDD		240	240	240	240	240	240	240	240	240	240
	TDD		240	240	240	240	240	240	240	240	240	240
	FDD + TDD		240	240	240	240	240	240	240	240	240	240
Maximum number or carrier branches in one eNodeB	FDD		24	24	24	24	24	24	24	24	24	24
	TDD		24	24	24	24	24	24	24	24	24	24
	FDD + TDD		24	24	24	24	24	24	24	24	24	24
Maximum number of sectors in one eNodeB	FDD		6	6	6	6	6	6	6	6	6	6
	TDD		6	6	6	6	6	6	6	6	6	6
	FDD + TDD		6	6	6	6	6	6	6	6	6	6
Maximum number of radios in one eNodeB	FDD		12	12	12	12	12	12	12	12	12	12
	TDD		12	12	12	12	12	12	12	12	12	12
	FDD + TDD		12	12	12	12	12	12	12	12	12	12

(1) Each LTE FDD cell can include Cat-M1.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier. Each LTE FDD cell can include Cat-M1.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

6.4.7 LTE Baseband Support and Configuration for Baseband 6620 in One eNodeB

The following tables list configuration support for Baseband 6620 in one eNodeB.



Table 339 Baseband 6620 General Configuration Support

	FDD / TDD	Software Version									
		L17.Q4	L18.Q1	L18.Q2	L18.Q3	L18.Q4	L19.Q1	L19.Q2	L19.Q3	L19.Q4	L20.Q1
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
	TDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
Maximum number of radios per cascade chain ⁽²⁾	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD and TDD	6	6	6	6	6	6	6	6	6	6

(1) In one or many 3GPP bands, including band 0.

(2) Cascading is not supported for RRUS 61 and mRRUS 61.

Table 340 Configuration Support with One Baseband 6620 as One eNodeB with CPRI

		Standard		Software Version									
				L17.Q4	L18.Q1	L18.Q2	L18.Q3	L18.Q4	L19.Q1	L19.Q2	L19.Q3	L19.Q4	L20.Q1
Maximum number of LTE carriers	1TX/1RX	FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾	9	9	12	12	12	12	12	12	12	12
			FDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6	6	6-12 ⁽³⁾	12	12
		TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				L17.Q 4	L18.Q 1	L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽²⁾	9	9	12	12	12	12	12	12	12	12
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6	6	6-12 ⁽³⁾	12	12
		MI	NB-IoT in-band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾	-	-	6	6	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽²⁾	9	9	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6	6	6-12 ⁽³⁾	12	12
			FDD + TDD + NB-IoT	12	12	15	15	15	15	15	18	18	18
	1TX/2RX 2TX/0RX 2TX/2RX	FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾	9	9	12	12	12	12	12	12	12	12
			FDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6	6	6-12 ⁽³⁾	12	12



		Standard		Software Version									
				L17.Q 4	L18.Q 1	L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1
		TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽²⁾	9	9	12	12	12	12	12	12	12	12
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6	6	6-12 ⁽³⁾	12	12
		MI	NB-IoT in-band ⁽⁴⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾	-	-	6	6	6	6	6	6	6	6
			NB-IoT standalone	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽²⁾	9	9	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾	6	6	6	6	6	6	6	6-12 ⁽³⁾	12	12
			FDD + TDD + NB-IoT	12	12	15	15	15	15	15	18	18	18
	1TX/4RX 2TX/4RX 4TX/4RX	FDD	FDD only ⁽¹⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾



		Standard		Software Version									
				L17.Q 4	L18.Q 1	L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6	6	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾
			FDD with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
			FDD with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		TDD	TDD only ⁽¹⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾
		FDD + TDD	FDD + TDD only	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾
			FDD + TDD with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6	6	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾
			FDD + TDD with 4-6 NB-IoT IB/GB	6	6	6	6	6	6	6	6	6	6



		Standard	Software Version									
			L17.Q 4	L18.Q 1	L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1
			cells ⁽²⁾ (ABW ≤ 480 MHz)									
			FDD + TDD with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-
		MI	NB-IoT in-band ⁽⁴⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			NB-IoT in-band ⁽⁴⁾ (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽⁴⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁴⁾ (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3
			NB-IoT standalone	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA) (ABW > 480 MHz)	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽⁵⁾	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾	12 600-960 MHz ⁽⁶⁾
			FDD + TDD + NB-IoT SA with	9	9	9	9	9	9	9-12 ⁽³⁾	9-12 ⁽³⁾	9-12 ⁽³⁾



		Standard	Software Version									
			L17.Q 4	L18.Q 1	L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1
		1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)										
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	6	6	6	6	6	6	6	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾	6-12 ⁽³⁾ 600-960 MHz ⁽⁶⁾
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT IB/GB cells ⁽²⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12	12	12-15 ⁽³⁾	12-15 ⁽³⁾	12-15 ⁽³⁾
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9	9	9-15 ⁽³⁾ 600-720 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600-720 MHz ⁽⁶⁾	9-15 ⁽³⁾ 600-720 MHz ⁽⁶⁾
	8TX/8RX	FDD	-	-	-	-	-	-	-	-	-	-
		TDD	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches	6 960 MHz Maximum 48 carrier branches
Maximum number of sectors in one eNodeB	FDD		12	12	12	12	12	12	12	12	12	12
	TDD		12	12	12	12	12	12	12	12	12	12



	Standard	Software Version									
		L17.Q 4	L18.Q 1	L18.Q 2	L18.Q 3	L18.Q 4	L19.Q 1	L19.Q 2	L19.Q 3	L19.Q 4	L20.Q 1
	FDD + TDD	12	12	12	12	12	12	12	12	12	12
Maximum number of radios in one eNodeB	FDD	48	48	48	48	48	48	48	48	48	48
	TDD	48	48	48	48	48	48	48	48	48	48
	FDD + TDD	48	48	48	48	48	48	48	48	48	48

- (1) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.
- (2) Minimum one NB-IoT in-band or guard band cell.
- (3) Not possible to configure Elastic RAN when exceeding the lower limit.
- (4) Each NB-IoT in-band or guard band cell requires one host LTE cell. For example, for three NB-IoT in-band cells there must be a minimum of three LTE cells.
- (5) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

- (6) Within stated ABW range, maximum 600 MHz with radios from group 1-6, 800 MHz with radios from group 3-6, and 960 MHz with radios from group 5 and 6. See [Radio Groups](#) on page 101.

6.4.8 LTE Baseband Support and Configuration for Baseband 6630 in One eNodeB

The following tables list configuration support for Baseband 6630 in one eNodeB.

Table 341 Baseband 6630 General Configuration Support

	FDD / TDD	Software Version									
		L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	8	8	8	8	8	8	8	8	8	8
	TDD	6	6	8	8	8	8	8	8	8	8
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz



	FDD / TDD	Software Version									
		L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
	TDD	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1	2.5, 4.9, 9.8, 10.1
Maximum number of radios per cascade chain ⁽²⁾	FDD	6	6		6	6	6	6	6	6	6
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD and TDD	6	6	6	6	6	6	6	6	6	6

(1) In one or many 3GPP bands, including band 0.

(2) Cascading is not supported for RRUS 61 and mRRUS 61.

Table 342 Configuration Support with One Baseband 6630 as One eNodeB with CPRI

		Standard		Software Version									
				L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
Maximum number of LTE carriers	1TX/1RX	FDD	FDD only ⁽¹⁾	24	24	24	24	24	24	24	24	24	24
			FDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 1–3 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD with 4–6 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾
			FDD with 7–12 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 13–15 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
		TDD	TDD only ⁽¹⁾	18	18	24	24	24	24	24	24	24	24
			TDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only ⁽¹⁾	18	18	24	24	24	24	24	24	24	24
			FDD + TDD with 1–3 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD + TDD with	18	18	18	18	18	18	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾



		Standard		Software Version									
				L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
			4–6 NB-IoT IB/GB cells ⁽²⁾										
			FDD + TDD with 7–12 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD with 13–15 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
		MI	NB-IoT in-band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT guard band ⁽⁴⁾	-	15	15	15	15	15	15	15	15	15
			NB-IoT standalone	18	18	18	18	18	18	18	18	18	18
			NB-IoT (IB+GB +SA)	15	15	15	15	15	15	15	15	15	15
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	18	18	18	18	18	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	21	21	21	21	21
			FDD + TDD + NB-IoT SA with 4–12 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD + NB-IoT SA with 13–15 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
			FDD + TDD + NB-IoT	30	30	30	30	30	30	30	30	30	30
	1TX/2RX 2TX/0RX 2TX/2RX	FDD	FDD only ⁽¹⁾	24	24	24	24	24	24	24	24	24	24
			FDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18



		Standard		Software Version									
				L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
			FDD with 1–3 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD with 4–6 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾
			FDD with 7–12 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 13–15 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
		TDD	TDD only ⁽¹⁾	18	18	24	24	24	24	24	24	24	24
			TDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD	FDD + TDD only ⁽¹⁾	18	18	24	24	24	24	24	24	24	24
			FDD + TDD with 1–3 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	21	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾	21-24 ⁽³⁾
			FDD + TDD with 4–6 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾	18-24 ⁽³⁾
			FDD + TDD with 7–12 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD with 13–15 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
		MI	NB-IoT in-band ⁽⁴⁾	15	15	15	15	15	15	15	15	15	15
			NB-IoT guard band ⁽⁴⁾	-	15	15	15	15	15	15	15	15	15
			NB-IoT standalone	18	18	18	18	18	18	18	18	18	18
			NB-IoT (IB+GB+SA)	15	15	15	15	15	15	15	15	15	15
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18



		Standard		Software Version									
				L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
		FDD + TDD + NB- IoT	FDD + TDD + NB- IoT SA	18	18	18	18	18	21	21	21	21	21
			FDD + TDD + NB- IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	21	21	21	21	21
			FDD + TDD + NB- IoT SA with 4–12 NB-IoT IB/GB cells ⁽²⁾	18	18	18	18	18	18	18	18	18	18
			FDD + TDD + NB- IoT SA with 13– 15 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
			FDD + TDD + NB- IoT	30	30	30	30	30	30	30	30	30	30
	1TX/4RX 2TX/4RX 4TX/4RX	FDD	FDD only ⁽¹⁾	24 1440 MHz	24 1440 MHz	24 1440 MHz	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾
			FDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18
			FDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	21	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾
			FDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾
			FDD with 7–8 NB- IoT IB/GB cells ⁽²⁾	8	8	8	8	8	8	8	8	8	8
		TDD	TDD only ⁽¹⁾	18	18	24 1440 MHz – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾
			TDD with E-RAN ⁽¹⁾	18	18	18	18	18	18	18	18	18	18



		Standard		Software Version									
				L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
		FDD + TDD	FDD + TDD only	18	18	24 1440 MHz	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾	24 1440 – 1560 MHz ⁽⁶⁾
			FDD + TDD with 1–3 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	21	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	21-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾
			FDD + TDD with 4–6 NB- IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾	15-2 4 ⁽³⁾ 1440 – 1560 MHz ⁽⁶⁾
			FDD + TDD with 7–8 NB- IoT IB/GB cells ⁽²⁾	8	8	8	8	8	8	8	8	8	8
		MI	NB-IoT in- band ⁽⁴⁾	8	8	8	8	8	8	8	8	8	8
			NB-IoT guard band ⁽⁴⁾	-	8	8	8	8	8	8	8	8	8
			NB-IoT standalone	9	9	9	9	9	9	9	9	9	9
			NB-IoT (IB+GB +SA)	8	8	8	8	8	8	8	8	8	8
			Cat-M1 ⁽⁵⁾	18	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB- IoT	FDD + TDD + NB- IoT SA	18	18	18	18	18	21	21	21	21	21
			FDD + TDD + NB- IoT SA with 1–3 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	21	21	21	21	21
			FDD + TDD + NB- IoT SA with 4–6 NB-IoT IB/GB cells ⁽²⁾	15	15	15	15	15	15	15	15	15	15
			FDD + TDD + NB- IoT SA with 7–8 NB-IoT	8	8	8	8	8	8	8	8	8	8



		Standard		Software Version									
				L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4	L20. Q1	L20. Q2
			IB/GB cells ⁽²⁾										
			FDD + TDD + NB-IoT	21	21	21	21	21	24	30 1440 – 1560 MHz ⁽⁶⁾	30 1440 – 1560 MHz ⁽⁶⁾	30 1440 – 1560 MHz ⁽⁶⁾	30 1440 – 1560 MHz ⁽⁶⁾
	8TX/8RX	FDD		-	-	-	-	-	-	-	-	-	-
		TDD ⁽¹⁾		9 Maximum 72 carrier branches	9 Maximum 72 carrier branches	12 1440 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches	12 1560 MHz Maximum 96 carrier branches
	16TX/ 16RX	FDD		-	-	-	-	-	-	-	-	-	6
		MI	NB-IoT in-band ⁽⁴⁾	-	-	-	-	-	-	-	-	-	6
			NB-IoT guard band ⁽⁴⁾	-	-	-	-	-	-	-	-	-	6
			NB-IoT (IB + GB)	-	-	-	-	-	-	-	-	-	6
		FDD + NB-IoT		-	-	-	-	-	-	-	-	-	12
		32TX/ 32RX		-	-	3 ⁽⁷⁾	3	3	3	3	3	3	3
		MI	NB-IoT in-band ⁽⁴⁾	-	-	-	-	-	3	3	3	3	3
			NB-IoT guard band ⁽⁴⁾	-	-	-	-	-	3	3	3	3	3
			NB-IoT (IB + GB)	-	-	-	-	-	3	3	3	3	3
Maximum number of MIMO layers in one eNodeB	FDD	16TX/16RX		-	-	-	-	-	-	-	-	-	4
		32TX/32RX		-	-	4 ⁽⁷⁾	4	4	4	4	4	4	4
Maximum number of sectors in one eNodeB	FDD			24	24	24	24	24	24	24	24	24	24
	TDD			18	18	24	24	24	24	24	24	24	24
	FDD + TDD			24	24	24	24	24	24	24	24	24	24
Maximum number of radios in one eNodeB	FDD			48	48	48	48	48	48	48	48	48	48
	TDD			36	36	48	48	48	48	48	48	48	48
	FDD + TDD			48	48	48	48	48	48	48	48	48	48

(1) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.

(2) Minimum one NB-IoT in-band or guard band cell.

(3) Not possible to configure NB-IoT standalone when exceeding the lower limit.

(4) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(5) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.



From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

(6) Maximum 1440 MHz with radios from group 1-6 and 1560 MHz with radios from group 3-6. See [Radio Groups](#) on page 101.

(7) Cannot be combined with other antenna configurations.

Table 343 Configuration Support with One Baseband 6630 as One eNodeB with eCPRI

Number of		Standard	Software Version									
			L18.Q 1 (1)	L18.Q 2 (1)	L18.Q 3 (1)	L18.Q 4 (1)	L19.Q 1 (1)	L19.Q 2 (1)	L19.Q 3 (1)	L19.Q 4 (1)	L20.Q 1 (1)	L20.Q 2 (1)
Cells		TDD	3	3	3	3	3	3	3	3	3-9 ⁽²⁾	3-9 ⁽²⁾
MIMO layers per carrier	MU-MIMO downlink	TDD	1	1	1	1	1	8-16 ⁽³⁾ (4)	8-16 ⁽³⁾ (4)	8-16 ⁽³⁾ (4)	8-16 ⁽³⁾ (4)	8-16 ⁽³⁾ (4)
	MU-MIMO uplink	TDD	1	1	1	1	1	4	4	4	4	4
	SU-MIMO downlink	TDD	1	1	1	1	1	2	2	2	2	2
	SU-MIMO uplink	TDD	1	1	1	1	1	1	1	1	1	1
Sectors		TDD	3	3	3	3	3	3	3	3	3	3
Radios		TDD	3	3	3	3	3	3	3	3	3	3
Bandwidths		TDD	3	3	3	3	3	3	3	3	3	3
Carrier frequencies in one or many 3GPP bands		TDD	3	3	3	3	3	3	3	3	3	3
Radio cascading support		TDD	No	No	No	No	No	No	No	No	No	No
Supported RI ports on Baseband unit		TDD	3 D-F	3 D-F	3 D-F	3 D-F	6 A-F	6 A-F	6 A-F	6 A-F	6 A-F	9 A-J

(1) CPRI and eCPRI cannot be combined on the same Baseband unit.

(2) More than three carriers are only supported under the following conditions:

- Connected radios shall be of same type (AIR 6488 or AIR 6454).
- Only LTE single mode on radio.
- Only SU-MIMO is supported.

(3) Maximum 16 layer MU-MIMO downlink is supported for 15 MHz and 20 MHz carrier bandwidth.

Maximum ten layers MU-MIMO DL is supported for ten MHz carrier bandwidth.

(4) Maximum one carrier in the node can have more than eight MU-MIMO layers in downlink. Then the other carriers can only have four MU-MIMO layers in downlink.

6.4.9 LTE Baseband Support and Configuration for DUL 20 in One eNodeB

The following tables list general configuration support and configuration support that are specific to a number of DUL 20 in one eNodeB.



Note: Configurations with two DUs must comply with the supported maximum configuration per DU.

Table 344 DUL 20 General Configuration Support

	FDD / TDD ⁽¹⁾	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of different carrier frequencies ⁽²⁾ in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Maximum number of radios per cascade chain ⁽³⁾	FDD	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾	3 ⁽⁴⁾

(1) LTE TDD is not supported for DUL 20.

(2) In one or many 3GPP bands, including band 0.

(3) Cascading is not supported for RRUS 61 and mRRUS 61.

(4) Maximum four radios if two RBB22_1C are cascaded.



Table 345 Configuration Support with One DUL 20 as One eNodeB

	FDD / TDD ⁽¹⁾	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of cells and bandwidth in one eNodeB	1TX/1RX	FDD	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz	3 x 20 MHz or 6 x 10 MHz
	2TX/0RX 1TX/2RX 2TX/2RX	FDD	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz	3 x 20 MHz or 6 x 10 MHz or 3 x 15 MHz + 3 x 5 MHz
	1TX/4RX 2TX/4RX ⁽²⁾ 4TX/4RX	FDD	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾	1 x 20 MHz or 3 x 10 MHz ⁽³⁾
Maximum number of sectors in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6
Maximum number of radios in one eNodeB	FDD	12	12	12	12	12	12	12	12	12	12

(1) LTE TDD is not supported for DUL 20.

(2) An RBB with 4TX/4RX is used but only two of the branches are configured for TX.

(3) Any cell can be replaced with a 1TX/1RX, 1TX/2TX or 2TX/2RX with the same carrier bandwidth.

Table 346 Configuration Support with Two DUL 20 as One eNodeB

	FDD / TDD ⁽¹⁾	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of cells and bandwidth in one eNodeB	Carriers per DU	FDD	3	3	3	3	3	3	3	3	3
	1TX/1RX	FDD	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz
	2TX/0RX 1TX/2RX 2TX/2RX	FDD	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz	6 x 20 MHz
	1TX/4RX 2TX/4RX ⁽²⁾ 4TX/4RX	FDD	6 x 10 MHz	6 x 10 MHz	6 x 10 MHz	6 x 10 MHz	6 x 10 MHz	6 x 10 MHz	6 x 10 MHz	6 x 10 MHz	6 x 10 MHz
Maximum number of sectors in one eNodeB	FDD	6	6	6	6	6	6	6	6	6	6



	FDD / TDD ⁽¹⁾	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of radios in one eNodeB	FDD	12	12	12	12	12	12	12	12	12	12

(1) LTE TDD is not supported for DUL 20.

(2) An RBB with 4TX/4RX is used but only two of the branches are configured for TX.

6.4.10 LTE Baseband Support and Configuration for DUS 31 in One eNodeB

The following tables list general configuration support and configuration support that are specific to a number of DUS 31 in one eNodeB.

Note: Configurations with two or more DUs must comply with the supported maximum configuration per DU.

Table 347 DUS 31 General Configuration Support

	Standard	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of different carrier frequencies ⁽¹⁾ in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Supported carrier bandwidths	FDD	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz	1.4, 3.5, 10, 15 or 20 MHz
	TDD	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8
	TDD	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8
Maximum number of radios per cascade chain ⁽²⁾	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
	FDD and TDD	4	4	4	4	4	4	4	4	4	4

(1) In one or many 3GPP bands, including band 0.

(2) Cascading is not supported for RRUS 61 and mRRUS 61.



Table 348 Configuration Support with One DUS 31 as One eNodeB

		Standard		Software Version									
				17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4
Maximum number of LTE carriers	1TX/1RX	FDD	FDD only ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD with NB-IoT IB/GB	6	6	6	6	6	6	6	6	6	6
		TDD	TDD only ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
			FDD + TDD	9	9	9	9	9	9	9	9	9	9
		FDD + TDD	FDD + TDD only ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD + TDD with NB-IoT IB/GB	6	6	6	6	6	6	6	6	6	6
		MI	NB-IoT in- band ⁽²⁾	3	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3	3
			NB-IoT standalone	9	9	9	9	9	9	9	9	9	9
			NB-IoT (IB+GB +SA)	3	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9	9
		Total for FDD + TDD + NB- IoT	FDD + TDD + NB- IoT SA	9	9	9	9	9	9	9	9	9	9
			FDD + TDD + NB- IoT	9	9	9	9	9	9	9	9	9	9
	1TX/2RX 2TX/2RX	FDD	FDD only ⁽¹⁾	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz
			FDD with NB-IoT IB/GB	6	6	6	6	6	6	6	6	6	6
		TDD	TDD only ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
			FDD + TDD	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz
		FDD + TDD	FDD + TDD only ⁽¹⁾	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz
			FDD + TDD with NB-IoT IB/GB	6	6	6	6	6	6	6	6	6	6
		MI	NB-IoT in- band ⁽²⁾	3	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3	3



		Standard		Software Version									
				17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4
			NB-IoT standalone	9	9	9	9	9	9	9	9	9	9
			NB-IoT (IB+GB+SA)	3	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9	9
		Total for	FDD + TDD + NB-IoT SA	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz
		FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA with NB-IoT IB/GB	6	6	6	6	6	6	6	6	6	6
			FDD + TDD + NB-IoT	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz	9 240 MHz
	2TX/4RX or 4TX/4RX	FDD	FDD only ⁽¹⁾	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz
			FDD with NB-IoT IB/GB	-	3	3	3	3	3	3	3	3	3
		TDD	TDD only ⁽¹⁾	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz
		MI	NB-IoT in-band ⁽²⁾	-	1	1	3	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3	3
			NB-IoT standalone	-	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA)	-	-	-	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	6	6	6	6	6	6	6	6	6	6
		FDD + TDD	FDD + TDD only ⁽¹⁾	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz
			FDD + TDD with NB-IoT IB/GB	-	3	3	3	3	3	3	3	3	3
		Total for FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	-	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz	6 240 MHz
			FDD + TDD + NB-IoT SA with NB-IoT IB/GB	-	3	3	3	3	3	3	3	3	3
			FDD + TDD + NB-IoT	-	4	4	6	6	6	6	6	6	6



	Standard	Software Version									
		17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4
Maximum number of sectors in one eNodeB	FDD	9	9	9	9	9	9	9	9	9	9
	TDD	6	6	6	6	6	6	6	6	6	6
	FDD+TDD	9	9	9	9	9	9	9	9	9	9
Maximum number of radios in one eNodeB	FDD	24	24	24	24	24	24	24	24	24	24
	TDD	12	12	12	12	12	12	12	12	12	12
	FDD+TDD	24	24	24	24	24	24	24	24	24	24
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
	FDD+TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of bands in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
	FDD+TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of radios per cascade chain	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
	FDD+TDD	4	4	4	4	4	4	4	4	4	4

(1) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

Table 349 Configuration Support with Two DUS 31 as One eNodeB

	Standard	Software Version									
		L17. Q3	L17. Q4	L 18.Q 1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of LTE carriers	1TX/1RX	FDD	12	12	12	12	12	12	12	12	12
		TDD	12	12	12	12	12	12	12	12	12
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	3	3	3	3	3	3	3	3
				-	-	-	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3
			NB-IoT standalone	9	9	9	9	9	9	9	9
			NB-IoT (IB+GB+SA)	3	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9
		Total for FDD + TDD + NB-IoT		12	12	12	12	12	12	12	12
	1TX/2RX 2TX/2RX	FDD	12	12	12	12	12	12	12	12	12
		TDD	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				L17. Q3	L17. Q4	L 18.Q 1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	3	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3	3
			NB-IoT standalone	9	9	9	9	9	9	9	9	9	9
			NB-IoT (IB+GB+SA)	3	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9	9
		Total for FDD + TDD + NB-IoT		12	12	12	12	12	12	12	12	12	12
		2TX/4RX 4TX/4RX	FDD		6	6	6	6	6	6	6	6	6
	TDD		6	6	6	6	6	6	6	6	6	6	
	MI ⁽¹⁾		NB-IoT in-band ⁽²⁾	-	1	1	3	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3	3
			NB-IoT standalone	-	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA)	-	-	-	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	6	6	6	6	6	6	6	6	6	6
	Total for FDD + TDD + NB-IoT		-	6	6	6	6	6	6	6	6	6	
	Maximum number of sectors in one eNodeB		FDD	12	12	12	12	12	12	12	12	12	12
			TDD	12	12	12	12	12	12	12	12	12	12
			FDD+TDD	12	12	12	12	12	12	12	12	12	12
	Maximum number of radios in one eNodeB		FDD	24	24	24	24	24	24	24	24	24	24
			TDD	24	24	24	24	24	24	24	24	24	24
			FDD+TDD	24	24	24	24	24	24	24	24	24	24
Maximum number of simultaneous carrier bandwidths in one eNodeB		FDD	4	4	4	4	4	4	4	4	4	4	
		TDD	4	4	4	4	4	4	4	4	4	4	
		FDD+TDD	4	4	4	4	4	4	4	4	4	4	
Maximum number of bands in one eNodeB		FDD	4	4	4	4	4	4	4	4	4	4	
		TDD	4	4	4	4	4	4	4	4	4	4	
		FDD+TDD	4	4	4	4	4	4	4	4	4	4	
Maximum number of radios per cascade chain		FDD	4	4	4	4	4	4	4	4	4	4	
		TDD	4	4	4	4	4	4	4	4	4	4	
		FDD+TDD	4	4	4	4	4	4	4	4	4	4	

(1) Massive IoT is only configured on the core DU.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.



From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

Table 350 Configuration Support with Three DUS 31 as One eNodeB

		Standard	Software Version									
			L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of LTE carriers	1TX/1RX	FDD		12	12	12	12	12	12	12	12	12
		TDD		12	12	12	12	12	12	12	12	12
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3
			NB-IoT standalone	9	9	9	9	9	9	9	9	9
			NB-IoT (IB+GB+SA)	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9
		Total for FDD + NB-IoT		12	12	12	12	12	12	12	12	12
	1TX/2RX 2TX/2RX	FDD		12	12	12	12	12	12	12	12	12
		TDD		12	12	12	12	12	12	12	12	12
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	3	3	3	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3
			NB-IoT standalone	9	9	9	9	9	9	9	9	9
			NB-IoT (IB+GB+SA)	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9
		Total for FDD + NB-IoT		12	12	12	12	12	12	12	12	12
	2TX/4RX 4TX/4RX	FDD		6	6	6	6	6	6	6	6	6
		TDD		6	6	6	6	6	6	6	6	6
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	-	1	1	3	3	3	3	3	3
			NB-IoT guard band ⁽²⁾	-	-	-	3	3	3	3	3	3
			NB-IoT standalone	-	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA)	-	-	-	3	3	3	3	3	3
			Cat-M1 ⁽³⁾	6	6	6	6	6	6	6	6	6
		Total for FDD + NB-IoT		6	6	6	6	6	6	6	6	6



	Standard	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of sectors in one eNodeB	FDD	12	12	12	12	12	12	12	12	12	12
	TDD	12	12	12	12	12	12	12	12	12	12
Maximum number of radios in one eNodeB	FDD	24	24	24	24	24	24	24	24	24	24
	TDD	24	24	24	24	24	24	24	24	24	24
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of bands in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of radios per cascade chain	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4

(1) Massive IoT is only configured on the core DU.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.

6.4.11 LTE Baseband Support and Configuration for DUS 41 in One eNodeB

The following tables list general configuration support and configuration support that are specific to a number of DUS 41 in one eNodeB.

Note: The total BW capacity for one DUS 41 depends on which radios that are used in the configuration. For more information and maximum configurations, refer to document [DU and Baseband Capacity Examples](#).

Configurations with two or more DUs must comply with the supported maximum configuration per DU.

Table 351 Configuration Support with One DUS 41 as One eNodeB

		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of LTE carriers	1TX/1RX	FDD	FDD only	12 240 MHz	12 240 MHz	12 240 MHz	12 240 MHz	12 240 MHz	12 240 MHz	12 240 MHz	12 240 MHz	12 240 MHz	12 240 MHz
			FDD with 1–3 NB-IoT cells ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD with 4–6 NB-IoT cells ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		TDD	TDD only	6 120 MHz	6 120 MHz	6 120 MHz	6 120 MHz	6 120 MHz	6 120 MHz	6 120 MHz	6 120 MHz	6 120 MHz	6 120 MHz



		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
		MI	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 1–3 NB-IoT cells ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD + TDD with 4–6 NB-IoT cells ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		Total for FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD + TDD + NB-IoT SA with 4–6 NB-IoT cells ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
			FDD + TDD + NB-IoT SA +IB/GB	9	9	9	9	9	9	9	9	9	9
	1TX/2RX 2TX/2RX	FDD	FDD only	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz
			FDD with 1–3 NB-IoT cells ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD with 4–6 NB-IoT cells ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		TDD	TDD only	6	6	6	6	6	6	6	6	6	6
		MI	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6	6



		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	FDD + TDD	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz
			FDD + TDD with 1–3 NB-IoT cells ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD + TDD with 4–6 NB-IoT cells ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		Total for FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz	12 320–480 MHz
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells ⁽¹⁾	9	9	9	9	9	9	9	9	9	9
			FDD + TDD + NB-IoT SA with 4–6 NB-IoT cells ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
			FDD + TDD + NB-IoT SA +IB/GB	9	9	9	9	9	9	9	9	9	9
	2TX/4RX 4TX/4RX	FDD	FDD	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz
				9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz
			FDD with 1–3 NB-IoT cells ⁽¹⁾	-	3	3	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz
							9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz
			FDD with 4–6 NB-IoT cells ⁽¹⁾	-	-	-	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz
		TDD	TDD only	6	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz	6 340–480 MHz



		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
				340– 480 MHz									
		MI	NB-IoT in-band	-	3	3	6	6	6	6	6	6	6
			NB-IoT guard band	-	-	-	6	6	6	6	6	6	6
			NB-IoT standalone	-	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA)	-	3	3	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9	9
		FDD + TDD	FDD + TDD	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
			FDD + TDD with 1–3 NB-IoT cells ⁽¹⁾	-	3	3	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
			FDD + TDD with 4–6 NB-IoT cells ⁽¹⁾	-	-	-	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
		Total for FDD + TDD + NB-IoT	FDD + NB-IoT SA	-	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
			FDD + TDD + NB-IoT SA	-	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
			FDD + NB-IoT SA with 1–3 NB-IoT cells ⁽¹⁾	-	3	3	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
							9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz	9 180 MHz
			FDD + NB-IoT SA with 4–6 NB-IoT cells ⁽¹⁾	-	-	-	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells ⁽¹⁾	-	3	3	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
			FDD + TDD + NB-IoT SA with 4–6 NB-IoT cells ⁽¹⁾	-	-	-	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz	6 340– 480 MHz
	8TX/8RX	TDD		3	3	3	3	3	3	3	3	3	3



		Standard	Software Version									
			L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
			480 MHz	480 MHz	480 MHz	480 MHz	480 MHz	480 MHz	480 MHz	480 MHz	480 MHz	480 MHz
Maximum number of sectors in one eNodeB		FDD	12	12	12	12	12	12	12	12	12	12
		TDD	6	6	6	6	6	6	6	6	6	6
		FDD+TDD	12	12	12	12	12	12	12	12	12	12
Maximum number of radios in one eNodeB		FDD	24	24	24	24	24	24	24	24	24	24
		TDD	12	12	12	12	12	12	12	12	12	12
		FDD+TDD	24	24	24	24	24	24	24	24	24	24
Maximum number of bandwidths		FDD	4	4	4	4	4	4	4	4	4	4
		TDD	4	4	4	4	4	4	4	4	4	4
		FDD+TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of bands		FDD	4	4	4	4	4	4	4	4	4	4
		TDD	4	4	4	4	4	4	4	4	4	4
		FDD+TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of radios per cascade chain		FDD	4	4	4	4	4	4	4	4	4	4
		TDD	4	4	4	4	4	4	4	4	4	4
		FDD+TDD	4	4	4	4	4	4	4	4	4	4

(1) Minimum one NB-IoT in-band or guard band cell.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Groups](#) on page 101.

Table 352 Configuration Support with Two DUS 41 as One eNodeB

		Standard	Software Version									
			L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of LTE carriers	1TX/1RX	FDD	18	18	18	18	18	18	18	18	18	18
		TDD	12	12	12	12	12	12	12	12	12	12
		FDD + TDD	18	18	18	18	18	18	18	18	18	18
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12
		Total for FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	18	18	18	18	18	18	18	18	18



		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
			FDD + TDD + NB- IoT	18	18	18	18	18	18	18	18	18	18
	1TX/2RX 2TX/2RX	FDD		18	18	18	18	18	18	18	18	18	18
		TDD		12	12	12	12	12	12	12	12	12	12
		FDD + TDD		18	18	18	18	18	18	18	18	18	18
		MI ⁽¹⁾	NB-IoT in- band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB +SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
		Total for FDD + TDD + NB- IoT	FDD + TDD + NB- IoT SA	18	18	18	18	18	18	18	18	18	18
			FDD + TDD + NB- IoT	18	18	18	18	18	18	18	18	18	18
	2TX/4RX 4TX/4RX	FDD	FDD only	18	18	18	18	18	18	18	18	18	18
			FDD with 1–3 NB- IoT cells ⁽⁴⁾	-	12	12	18	18	18	18	18	18	18
			FDD with 4–6 NB- IoT cells ⁽⁴⁾	-	-	-	15	15	15	15	15	15	15
		TDD		12	12	12	12	12	12	12	12	12	12
		FDD+TDD		12	12	12	12	12	12	12	12	12	12
		MI ⁽¹⁾	NB-IoT in- band ⁽²⁾	-	3	3	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6	6
			NB-IoT standalone	-	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB +SA)	-	3	3	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9	9
		Total for	FDD + NB- IoT SA	-	18	18	18	18	18	18	18	18	18
		FDD + TDD + NB- IoT	FDD + NB- IoT SA with 1–3 NB-IoT cells ⁽⁴⁾	-	12	12	18	18	18	18	18	18	18
			FDD + NB- IoT SA	-	-	-	15	15	15	15	15	15	15



		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
			with 4–6 NB-IoT cells ⁽⁴⁾										
			FDD + TDD + NB- IoT SA	-	12	12	12	12	12	12	12	12	12
	8TX/8RX	TDD		6 960 MHz	6 960 MHz	6 960 MHz	6 960 MHz	6 960 MHz	6 960 MHz	6 960 MHz	6 960 MHz	6 960 MHz	6 960 MHz
Maximum number of sectors in one eNodeB		FDD		18	18	18	18	18	18	18	18	18	18
		TDD		12	12	12	12	12	12	12	12	12	12
		FDD+TDD		18	18	18	18	18	18	18	18	18	18
Maximum number of radios in one eNodeB		FDD		36	36	36	36	36	36	36	36	36	36
		TDD		36	36	36	36	36	36	36	36	36	36
		FDD+TDD		36	36	36	36	36	36	36	36	36	36
Maximum number of bandwidths		FDD		4	4	4	4	4	4	4	4	4	4
		TDD		4	4	4	4	4	4	4	4	4	4
		FDD+TDD		4	4	4	4	4	4	4	4	4	4
Maximum number of bands		FDD		6	6	6	6	6	6	6	6	6	6
		TDD		4	4	4	4	4	4	4	4	4	4
		FDD+TDD		6	6	6	6	6	6	6	6	6	6
Maximum number of radios per cascade chain		FDD		4	4	4	4	4	4	4	4	4	4
		TDD		4	4	4	4	4	4	4	4	4	4
		FDD+TDD		4	4	4	4	4	4	4	4	4	4

(1) Massive IoT is only configured on the core DU.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Groups](#) on page 101.

(4) Minimum one NB-IoT in-band or guard band cell.

Table 353 Configuration Support with Three DUS 41 as One eNodeB

		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of LTE carriers	1TX/1RX	FDD		18	18	18	18	18	18	18	18	18	18
		TDD		12	12	12	12	12	12	12	12	12	12
		MI ⁽¹⁾	NB-IoT in- band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6	6
			NB-IoT standalon e	12	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
		Total for FDD + NB-IoT	FDD + NB-IoT SA	18	18	18	18	18	18	18	18	18	18
			FDD + NB-IoT	9	9	9	9	9	9	9	9	9	9
	1TX/2RX 2TX/2RX	FDD		18	18	18	18	18	18	18	18	18	18
		TDD		12	12	12	12	12	12	12	12	12	12
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
		Total for FDD + NB-IoT	FDD + NB-IoT SA	18	18	18	18	18	18	18	18	18	18
			FDD + NB-IoT	18	18	18	18	18	18	18	18	18	18
	2TX/4RX 4TX/4RX	FDD		18	18	18	18	18	18	18	18	18	18
		TDD		12	12	12	12	12	12	12	12	12	12
		MI ⁽¹⁾	NB-IoT in-band ⁽²⁾	-	3	3	6	6	6	6	6	6	6
			NB-IoT guard band ⁽²⁾	-	-	-	6	6	6	6	6	6	6
			NB-IoT standalone	-	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB+SA)	-	3	3	6	6	6	6	6	6	6
			Cat-M1 ⁽³⁾	9	9	9	9	9	9	9	9	9	9
		Total for FDD + NB-IoT	FDD + NB-IoT SA	-	18	18	18	18	18	18	18	18	18
			FDD + NB-IoT	-	18	18	18	18	18	18	18	18	18
	8TX/8RX	TDD		9 1440 MHz	9 1440 MHz	9 1440 MHz	9 1440 MHz	9 1440 MHz	9 1440 MHz	9 1440 MHz	9 1440 MHz	9 1440 MHz	9 1440 MHz
Maximum number of sectors in one eNodeB		FDD		18	18	18	18	18	18	18	18	18	18
		TDD		12	12	12	12	12	12	12	12	12	12
Maximum number of radios in one eNodeB		FDD		36	36	36	36	36	36	36	36	36	36
		TDD		24	24	24	24	24	24	24	24	24	24



	Standard	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of bandwidths	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of bands	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4
Maximum number of radios per cascade chain	FDD	4	4	4	4	4	4	4	4	4	4
	TDD	4	4	4	4	4	4	4	4	4	4

(1) Massive IoT is only configured on the core DU.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.

From SW L17.Q3: Support for Cat-M1 and NB-IoT at the same time for the same LTE carrier.

For additional limitations with Cat-M1 and NB-IoT, see [Radio Groups](#) on page 101.

6.4.12 LTE Baseband Support and Configuration with IDU 5205

Table 354 General Configuration Support with IDU 5205 for LTE

	Software Version									
	L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Supported Duplex modes	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D
Supported carrier bandwidths	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Maximum number of simultaneous bandwidths	3	3	3	3	3	3	3	3	3	3
Supported CPRI line rates (Gbps)	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8



Table 355 LTE Configuration Support with IDU 5205

		Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of carriers and bandwidth ⁽¹⁾	1TX/1RX 1TX/2RX 2TX/2RX	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches
	4TX/4RX	-	-	-	-	-	-	-	3	3	3
Maximum number of sectors		3	3	3	3	3	3	3	3	3	3
Maximum number of IRUs ⁽²⁾		3	3	3	3	3	3	3	6	6	6
Maximum number of 3GPP bands ⁽³⁾		3	3	3	3	3	3	3	3	3	3
Maximum number of IRUs per cascade chain		3	3	3	3	3	3	3	3	3	3

(1) It is possible to mix configurations with different antenna configurations.

(2) With up to eight RDs per IRU.

(3) Including band 0.

6.4.13 LTE Baseband Support and Configuration with IDU 5209

Table 356 General Configuration Support with IDU 5209 for LTE

	Software Version									
	L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Supported Duplex modes	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D
Supported carrier bandwidths	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Maximum number of simultaneous bandwidths	4	4	4	4	4	4	4	4	4	4
Supported CPRI line rates (Gbps)	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8



Table 357 LTE Configuration Support with IDU 5209

		Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of carriers and bandwidth ⁽¹⁾	1TX/1RX 1TX/2RX 2TX/2RX	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches
	4TX/4RX	-	-	-	-	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches	6 Maximum 240 MHz in total BW for all carrier branches
Maximum number of sectors		6	6	6	6	6	6	6	6	6	6
Maximum number of IRUs ⁽²⁾		6	6	6	6	12	12	12	12	12	12
Maximum number of 3GPP bands ⁽³⁾		6	6	6	6	6	6	6	6	6	6
Maximum number of IRUs per cascade chain		6	6	6	6	6	6	6	6	6	6

(1) It is possible to mix configurations with different antenna configurations.

(2) With up to eight RDs per IRU.

(3) Including band 0.

6.4.14 LTE Baseband Support and Configuration for RBS 6501 DU Part in One eNodeB

The following tables list configuration support for RBS 6501 DU part in one eNodeB.

Table 358 RBS 6501 DU Part General Configuration Support

	FDD / TDD ⁽¹⁾	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of different carrier frequencies ⁽²⁾ in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4
Maximum number of simultaneous carrier bandwidths in one eNodeB	FDD	4	4	4	4	4	4	4	4	4	4



	FDD / TDD ⁽¹⁾	Software Version									
		L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Supported carrier bandwidths	FDD	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz	1.4, 3, 5, 10, 15 or 20 MHz
Supported CPRI line rates (Gbps)	FDD	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8
Maximum number of radios per cascade chain	FDD	2	2	2	2	2	2	2	2	2	2

(1) LTE TDD is not supported for RBS 6501.

(2) In one or many 3GPP bands, including band 0.

Table 359 Configuration Support with One RBS 6501 DU Part as One eNodeB

		FDD / TDD ⁽¹⁾	Software Version									
			L17. Q3	L17. Q4	L18. Q1	L18. Q2	L18. Q3	L18. Q4	L19. Q1	L19. Q2	L19. Q3	L19. Q4
Maximum number of cells and bandwidth in one eNodeB	1TX/1RX	FDD	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)
	2TX/0RX 1TX/2RX 2TX/2RX	FDD	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)	6 Maximum 120 MHz in total BW for all carrier branches (2)
Maximum number of sectors in one eNodeB		FDD	3	3	3	3	3	3	3	3	3	3
Maximum number of radios in one eNodeB		FDD	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)

(1) LTE TDD is not supported for RBS 6501.

(2) 40 MHz used for the internal RBS 6501 radio part and 80 MHz used for external radios.

(3) Two external radios and the internal RBS 6501 radio part.



7

Radio Configurations for Massive IoT

This section describes the radio configurations for Massive IoT and the following supported technologies:

- Category M1 (Cat-M1) access
- Narrowband IoT (NB-IoT) access in-band mode
- Narrowband IoT (NB-IoT) access guard band mode
- Narrowband IoT (NB-IoT) access standalone mode
- Extended Coverage GSM IoT (EC-GSM-IoT) access

Table 360 DU and Baseband Support for Massive IoT

DU or Baseband	Software Version				
	Cat-M1 ⁽¹⁾ (2)	NB-IoT			EC-GSM-IoT
		In-band ⁽¹⁾	Guard band ⁽²⁾	Standalone	
Baseband 5212	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Baseband 5216	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Mixed Mode Baseband 5216	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Baseband 6303	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Baseband 6318	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Mixed Mode Baseband 6318	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Baseband 6502	MI18.Q2	-	-	-	-
Baseband 6620	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Baseband 6630	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
Mixed Mode Baseband 6630	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2
DUG 20	-	-	-	-	MI18.Q2
DUS 31	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	-
DUS 41	MI18.Q2	MI18.Q2	MI18.Q2	MI18.Q2	-
RBS 6501 DU part	MI18.Q2	-	-	-	-

(1) Cat-M1 and NB-IoT in-band at the same time is supported for the same sector carrier.

(2) Cat-M1 and NB-IoT guard band at the same time is supported for the same sector carrier.

Table 361 Summary of Capacity Used for One Massive IoT Cell

Technology	DU and Baseband Capacity	CPRI Capacity	Carrier Capacity of Radio	CPRI Compression Support
Cat-M1	No effect Part of the LTE host cell	No effect Part of the LTE host carrier	No effect Part of the LTE host carrier	Yes

Technology	DU and Baseband Capacity	CPRI Capacity	Carrier Capacity of Radio	CPRI Compression Support
NB-IoT in-band	Uses one cell capacity from the total DU or Baseband capacity	No effect Part of the LTE host carrier	No effect Part of the LTE host carrier	Yes
NB-IoT guard band	Uses one cell capacity from the total DU capacity	No effect Part of the LTE host carrier	No effect Part of the LTE host carrier	No
NB-IoT standalone	Uses one cell capacity from the total DU or Baseband capacity	Same as for a 5 MHz LTE carrier	Same as for a 5 MHz LTE carrier	No
EC-GSM-IoT	No effect Part of the GSM TRX	No effect Part of the GSM TRX	No effect Part of the GSM TRX	No

7.1 Configurations for Category M1 Access

The following rules apply to Category M1 (Cat-M1) access:

- Cat-M1 is part of an LTE FDD host cell with both uplink and downlink capabilities.
- Cat-M1 does not consume any additional cell capacity from the total DU or Baseband. capacity.
- Supported LTE host carrier bandwidths are 5, 10, 15, and 20 MHz.
- Cat-M1 has no impact on CPRI capacity, as it is contained within the capacity used for the LTE host carrier.
- Cat-M1 does not consume any additional carrier capacity of the radio, as it is contained within the capacity used for the LTE host carrier.
- Combined cell is supported, but Cat-M1 can only be used in the first sector carrier in the list of sector carriers.
- PSI-coverage is not supported.
- Cat-M1 can be used together with CPRI compression.
- Cat-M1 is supported on all LTE FDD radio units except on TX-only capable radios.
- RBBs used for LTE FDD on supported DU or Baseband are also valid for Cat-M1. For supported DU and Baseband, see [Radio Configurations for Massive IoT](#) on page 455.
- Cat-M1 can be used together with NB-IoT in-band for the same sector carrier.
- Cat-M1 can be used together with NB-IoT guard band for the same sector carrier.



- Mixed mode with GSM, WCDMA, CDMA, and Multi-Operator RAN LTE + LTE is supported, see [Supported Mixed Mode Configurations for Cat-M1](#) on page 457.

7.1.1 Supported Mixed Mode Configurations for Cat-M1

Table 362 Supported Mixed Mode Configurations for Cat-M1

Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband	Configuration	DU or Baseband	Configuration
Cat-M1 + LTE + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Cat-M1 + LTE	DUG Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
	Baseband 5216 Baseband 6318 Baseband 6630	Cat-M1 + LTE + GSM	-	-
Cat-M1 + LTE + WCDMA	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	Cat-M1 + LTE	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	WCDMA
	Baseband 5216 Baseband 6318 Baseband 6630	Cat-M1 + LTE + WCDMA	-	-
Cat-M1 + LTE + CDMA	DUS 31 with XMU DUS 41 with XMU	Cat-M1 + LTE	DBA connected to XMU	CDMA
Cat-M1 + LTE + NR	Baseband 6630	Cat-M1 + LTE + NR	-	-
	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	Cat-M1 + LTE	Baseband 6630	NR



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband	Configuration	DU or Baseband	Configuration
Cat-M1 + LTE + GSM + WCDMA	Baseband 5216 Baseband 6318 Baseband 6630	Cat-M1 + LTE + GSM + WCDMA	-	-
		Cat-M1 + LTE + WCDMA	DUG Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
		Cat-M1 + LTE + GSM	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	WCDMA
Cat-M1 + Multi-Operator RAN LTE + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	Cat-M1 + LTE	DUL 20 DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	LTE
			DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	Cat-M1 + LTE
Cat-M1 + LTE + GSM + NR	Baseband 5216 Baseband 6318 Baseband 6630	Cat-M1 + LTE + GSM	Baseband 6630	NR
	Baseband 6630	Cat-M1 + LTE + NR	DUG 20 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
Cat-M1 + LTE + WCDMA + NR	Baseband 5216 Baseband 6318 Baseband 6630	Cat-M1 + LTE + WCDMA	Baseband 6630	NR
	Baseband 6630	Cat-M1 + LTE + NR	DUW 10 DUW 20 DUW 30 DUW 31 DUW 41 DUS 11 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	WCDMA



7.2 Configurations for Narrowband IoT Access In-Band Mode

The following rules apply to Narrowband IoT (NB-IoT) access in-band mode:

- One in-band NB-IoT cell is configured per LTE host cell.
- NB-IoT in-band and Cat-M1 can be used at the same time for the same sector carrier.
- NB-IoT in-band and NB-IoT guard band is not supported for the same sector carrier.
- One NB-IoT cell consumes one cell capacity from the total DU or Baseband capacity.
- One NB-IoT cell can use:
 - up to SW 19.Q2:
 - one PRB
 - from SW 19.Q3:
 - one PRB or
 - two PRBs using NB-IoT non-anchor carrier support
- A non-anchor PRB will use the same power level as the LTE host cell PRBs.
- Supported LTE host carrier bandwidths are 3, 5, 10, 15, and 20 MHz.
- In-band NB-IoT has no impact on CPRI capacity, as it is contained within the capacity used for the LTE host carrier.
- In-band NB-IoT does not consume any additional carrier capacity of the radio, as it is contained within the capacity used for the LTE host carrier.
- The NB-IoT and the LTE host cell share the same sector carrier, and must use the same antenna configuration for the cell.
- Supported antenna configurations from SW MI18.Q2:
 - 1TX/1RX
 - 1TX/2RX
 - 1TX/4RX
 - 2TX/2RX
 - 2TX/4RX



- 4TX/2RX
- 4TX/4RX
- Up to two NB-IoT in-band carriers in downlink are supported per RF port.
- DU or Baseband capacity applies.
- From L19.Q2, one sector carrier in an NB-IoT cell can coexist with one combined LTE cell with two sectors. The LTE host cell should be configured with two sector carriers with 2TX/2RX. Otherwise the NB-IoT cell can not be unlocked.
- PSI-coverage is not supported.
- In-band NB-IoT can be used together with CPRI compression.
- For supported radio units, see [Supported Radio Frequencies](#) on page 8.
- For supported RBBs, see [Supported RBBs for NB-IoT In-Band](#) on page 460.
- Mixed mode with GSM, WCDMA, CDMA, and Multi-Operator RAN LTE + LTE is supported, see [Supported Mixed Mode Configurations for NB-IoT In-Band](#) on page 463.

7.2.1 Supported RBBs for NB-IoT In-Band

The following RBBs, valid for single mode or mixed mode configurations, are supported by NB-IoT in-band mode.

Table 363 NB-IoT In-Band Configurations

RBB	From SW Release					
	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 Mixed Mode Baseband 6620	Baseband 5216	Baseband 6318	Mixed Mode Baseband 6318	Baseband 6630
RBB10_1A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_1A	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_1A for AIR 11	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_1C	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_1D	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_2A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_2B	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1A for AIR 21	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2



RBB	From SW Release					
	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 Mixed Mode Baseband 6620	Baseband 5216	Baseband 6318	Mixed Mode Baseband 6318	Baseband 6630
RBB12_1C	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1D	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1E	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1F	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2B	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2C	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2D	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2E	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB14_1A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB14_2A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB20_1A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB20_2A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1A ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1B	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1C	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1C for AIR 11	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1F	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1F for RDS	-	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3
RBB22_1G	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1N	18.Q3 ⁽³⁾	18.Q3 ⁽⁴⁾	18.Q3 ⁽⁴⁾	18.Q3	18.Q3	18.Q3 ⁽²⁾
RBB22_1P	18.Q4	18.Q4	18.Q4	18.Q4	18.Q4	18.Q4
RBB22_1Q	18.Q4	18.Q4	18.Q4	18.Q4	18.Q4	18.Q4
RBB22_2A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2A for AIR 11	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2B ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2C	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2E	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2J ⁽¹⁾	18.Q2					
RBB22_2K	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2K for RDS	-	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3
RBB22_2L	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2S	18.Q3 ⁽³⁾	18.Q3 ⁽⁴⁾	18.Q3 ⁽⁴⁾	18.Q3	18.Q3	18.Q3 ⁽²⁾
RBB22_2T	19.Q4	19.Q4	19.Q4	19.Q4	19.Q4	19.Q4
RBB22_2U	19.Q4	19.Q4	19.Q4	19.Q4	19.Q4	19.Q4
RBB24_1A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2



RBB	From SW Release					
	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 Mixed Mode Baseband 6620	Baseband 5216	Baseband 6318	Mixed Mode Baseband 6318	Baseband 6630
RBB24_1B	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_1C	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_2A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_2B	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_2D	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB32_1A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB32_1B ⁽¹⁾	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB32_3A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB32_3B ⁽¹⁾	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB42_2D ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB43_1A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB43_4A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_1B	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_1D	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_1G	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_1M	18.Q3 ⁽³⁾	18.Q3 ⁽⁴⁾	18.Q3 ⁽⁴⁾	18.Q3	18.Q3	18.Q3 ⁽²⁾
RBB44_1N for RDS	-	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3
RBB44_2C	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2F	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2J	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2K	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2L	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2R	18.Q3 ⁽³⁾	18.Q3 ⁽⁴⁾	18.Q3 ⁽⁴⁾	18.Q3	18.Q3	18.Q3 ⁽²⁾
RBB44_2S for RDS	-	19.Q3	19.Q3	19.Q3	19.Q3	19.Q3
RBB44_3A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_3B	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_4A	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2	18.Q2
RBBAIR_1A	-	-	19.Q2	19.Q2	-	19.Q2
RBBAIR_2A	-	-	19.Q2	19.Q2	-	19.Q2
RBBAIR_3A	-	-	19.Q2	19.Q2	-	19.Q2
RBBAIR_4A	-	-	19.Q2	19.Q2	-	19.Q2

(1) Mixed mode only.

(2) Baseband 6630 only.

(3) DUS 41 only.

(4) Baseband 5216 only.



7.2.2 Supported Mixed Mode Configurations for NB-IoT In-Band

Table 364 Supported Mixed Mode Configurations for NB-IoT In-Band

Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
NB-IoT + LTE + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUG Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + LTE + GSM	-	-
NB-IoT + LTE + WCDMA	DUS 31 DUS 41 Baseband 5212 Baseband 6303 Baseband 6318 Baseband 5216 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	WCDMA
	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + LTE + WCDMA	-	-
NB-IoT + LTE + CDMA	DUS 31 with XMU DUS 41 with XMU	NB-IoT + LTE	DBA connected to XMU	CDMA
NB-IoT + LTE + NR	Baseband 6630	LTE + NR + NB-IoT	-	-
	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	LTE + NB-IoT	Baseband 6630	NR



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
NB-IoT + LTE + GSM + WCDMA	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM + WCDMA	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE
	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + LTE + GSM + WCDMA	-	-
		NB-IoT + LTE + WCDMA	DUG Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
		NB-IoT + LTE + GSM	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	WCDMA
NB-IoT + Multi-Operator RAN LTE + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUL 20 DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6502 Baseband 6630	LTE
			DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE ⁽¹⁾
GSM + LTE + NB-IoT + NR	Baseband 5216 Baseband 6318 Baseband 6630	GSM + LTE + NB-IoT	Baseband 6630	NR
	Baseband 6630	LTE + NR + NB-IoT	DUG 20 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
WCDMA + LTE + NB-IoT + NR	Baseband 5216 Baseband 6318 Baseband 6630	WCDMA + LTE + NB-IoT	Baseband 6630	NR
	Baseband 6630	LTE + NR + NB-IoT	DUW 10 DUW 20 DUW 30 DUW 31 DUW 41 DUS 11 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	WCDMA

(1) For supported RBBs, see [Supported RBBs for NB-IoT In-Band](#) on page 460

7.3 Configurations for Narrowband IoT Access Guard Band Mode

The following rules apply to Narrowband IoT (NB-IoT) access guard band mode:

- One guard band NB-IoT cell is configured per LTE host cell.
- NB-IoT guard band and Cat-M1 can be used at the same time for the same sector carrier.
- NB-IoT guard band and NB-IoT guard band is not supported for the same sector carrier.
- One NB-IoT cell consumes one cell capacity from the total DU or Baseband capacity.
- One NB-IoT cell can use:
 - up to SW 19.Q2:
 - one PRB
 - from SW 19.Q3:
 - one PRB or
 - two PRBs using NB-IoT non-anchor carrier support
- A non-anchor PRB will use the same power level as the LTE host cell PRBs.
- Supported LTE host carrier bandwidths are 10, 15, and 20 MHz.

- Guard band NB-IoT has no impact on CPRI capacity, as it is contained within the capacity used for the LTE host carrier.
- Without CPRI Compression, NB-IoT guard band has no impact on total CPRI capacity, as it is contained within the capacity used for the LTE host carrier.
- Up to SW 18.Q4, NB-IoT guard band is not supported with CPRI Compression on the node.
- From SW 19.Q1, CPRI Compression can be activated on the node, but automatically disabled on the LTE host carrier with NB IoT guard band.
- The NB-IoT and the LTE host cell share the same SectorCarrier, and must use the same antenna configuration for the cell. Supported configurations:
 - 1TX/1RX
 - 1TX/2RX
 - 1TX/4RX
 - 2TX/2RX
 - 2TX/4RX
 - 4TX/2RX
 - 4TX/4RX
- DU or Baseband capacity applies.
- From L19.Q2, one sector carrier in an NB-IoT cell can coexist with one combined LTE cell with two sectors. The LTE host cell should be configured with two sector carriers with 2TX/2RX. Otherwise the NB-IoT cell can not be unlocked.
- PSI-coverage is not supported.
- For supported radio units, see [Supported Radio Frequencies](#) on page 8.
- For supported RBBs, see [Supported RBBs for NB-IoT Guard Band](#) on page 466.
- Mixed mode with GSM, WCDMA, CDMA, and Multi-Operator RAN LTE + LTE is supported, see [Supported Mixed Mode Configurations for NB-IoT Guard Band](#) on page 468.

7.3.1 Supported RBBs for NB-IoT Guard Band

The following RBBs, valid for single mode or mixed mode configurations, are supported by NB-IoT guard band mode.



Table 365 NB-IoT Guard Band Configurations

RBB	From SW Release		
	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 Mixed Mode Baseband 6318 Mixed Mode Baseband 6630	Baseband 5216 Baseband 6318 Baseband 6630
RBB10_1A	18.Q2	18.Q2	18.Q2
RBB11_1A	-	18.Q2	18.Q2
RBB11_1A for AIR 11	-	18.Q2	18.Q2
RBB11_1C	18.Q2	18.Q2	18.Q2
RBB11_1D	18.Q2	18.Q2	18.Q2
RBB12_1A	18.Q2	18.Q2	18.Q2
RBB12_1A	18.Q2	18.Q2	18.Q2
RBB12_1C	18.Q2	18.Q2	18.Q2
RBB12_1D	18.Q2	18.Q2	18.Q2
RBB12_2A	18.Q2	18.Q2	18.Q2
RBB12_2B	18.Q2	18.Q2	18.Q2
RBB12_2C	18.Q2	18.Q2	18.Q2
RBB20_1A	18.Q2	18.Q2	18.Q2
RBB20_2A	18.Q2	18.Q2	18.Q2
RBB22_1A ⁽¹⁾	18.Q2	18.Q2	18.Q2
RBB22_1A for AIR 11 ⁽¹⁾	18.Q2	18.Q2	18.Q2
RBB22_1B	18.Q2	18.Q2	18.Q2
RBB22_1C	18.Q2	18.Q2	18.Q2
RBB22_1C for AIR 11	18.Q2	18.Q2	18.Q2
RBB22_1F	18.Q2	18.Q2	18.Q2
RBB22_1G	18.Q2	18.Q2	18.Q2
RBB22_1N	18.Q3 ⁽²⁾	18.Q3 ⁽³⁾	18.Q3 ⁽³⁾
RBB22_1P	18.Q4	18.Q4	18.Q4
RBB22_1Q	18.Q4	18.Q4	18.Q4
RBB22_2A	18.Q2	18.Q2	18.Q2
RBB22_2A for AIR 11	18.Q2	18.Q2	18.Q2
RBB22_2B ⁽¹⁾	18.Q2	18.Q2	18.Q2
RBB22_2E	18.Q2	18.Q2	18.Q2
RBB22_2J ⁽¹⁾	18.Q2		
RBB22_2K	18.Q2	18.Q2	18.Q2
RBB22_2L	18.Q2	18.Q2	18.Q2
RBB22_2S	18.Q3 ⁽²⁾	18.Q3 ⁽³⁾	18.Q3 ⁽³⁾
RBB22_2T	19.Q4	19.Q4	19.Q4
RBB22_2U	19.Q4	19.Q4	19.Q4
RBB24_1A	18.Q2	18.Q2	18.Q2
RBB24_1B	18.Q2	18.Q2	18.Q2
RBB24_2A	18.Q2	18.Q2	18.Q2



RBB	From SW Release		
	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 Mixed Mode Baseband 6318 Mixed Mode Baseband 6630	Baseband 5216 Baseband 6318 Baseband 6630
RBB24_2B	18.Q2	18.Q2	18.Q2
RBB32_1A ⁽¹⁾	-	18.Q2	18.Q2
RBB32_1B ⁽¹⁾	-	18.Q2	18.Q2
RBB32_3A ⁽¹⁾	-	18.Q2	18.Q2
RBB32_3B ⁽¹⁾	-	18.Q2	18.Q2
RBB42_2D ⁽¹⁾	18.Q2	18.Q2	18.Q2
RBB43_1A ⁽¹⁾	-	18.Q2	18.Q2
RBB43_4A ⁽¹⁾	-	18.Q2	18.Q2
RBB44_1B	18.Q2	18.Q2	18.Q2
RBB44_1D	18.Q2	18.Q2	18.Q2
RBB44_1G	18.Q2	18.Q2	18.Q2
RBB44_1M	18.Q3 ⁽²⁾	18.Q3 ⁽³⁾	18.Q3 ⁽³⁾
RBB44_2C	18.Q2	18.Q2	18.Q2
RBB44_2F	18.Q2	18.Q2	18.Q2
RBB44_2J	18.Q2	18.Q2	18.Q2
RBB44_2K	18.Q2	18.Q2	18.Q2
RBB44_2L	18.Q2	18.Q2	18.Q2
RBB44_2R	18.Q3 ⁽²⁾	18.Q3 ⁽³⁾	18.Q3 ⁽³⁾
RBB44_3A	18.Q2	18.Q2	18.Q2
RBB44_3B	18.Q2	18.Q2	18.Q2
RBB44_4A	18.Q2	18.Q2	18.Q2
RBBAIR_1A	-	-	19.Q2
RBBAIR_2A	-	-	19.Q2
RBBAIR_3A	-	-	19.Q2
RBBAIR_4A	-	-	19.Q2

(1) Mixed mode only.

(2) DUS 41 only.

(3) Baseband 5216, Baseband 6318 and Baseband 6630 only.

7.3.2 Supported Mixed Mode Configurations for NB-IoT Guard Band

Table 366 Supported Mixed Mode Configurations for NB-IoT Guard Band

Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
NB-IoT + LTE + GSM	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + LTE + GSM	-	-



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
NB-IoT + LTE + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUG Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
NB-IoT + LTE + WCDMA	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + LTE + WCDMA	-	-
NB-IoT + LTE + WCDMA	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	WCDMA
NB-IoT + LTE + CDMA	DUS 31 with XMU DUS 41 with XMU	NB-IoT + LTE	DBA connected to XMU	CDMA
NB-IoT + LTE + NR	Baseband 6630	LTE + NR + NB-IoT	-	-
	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	LTE + NB-IoT	Baseband 6630	NR
NB-IoT + Multi-Operator RAN LTE + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUL 20 DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	LTE
			DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE ⁽¹⁾
NB-IoT + WCDMA + GSM + LTE	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + WCDMA + GSM + LTE	-	-



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
GSM + LTE + NB-IoT + NR	Baseband 5216 Baseband 6318 Baseband 6630	GSM + LTE + NB-IoT	Baseband 6630	NR
	Baseband 6630	LTE + NB-IoT + NR	DUG 20 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
WCDMA + LTE + NB-IoT + NR	Baseband 5216 Baseband 6318 Baseband 6630	WCDMA + LTE + NB-IoT	Baseband 6630	NR
	Baseband 6630	LTE + NB-IoT + NR	DUW 10 DUW 20 DUW 30 DUW 31 DUW 41 DUS 11 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6502 Baseband 6620 Baseband 6630	WCDMA

(1) For supported RBBs, see [Supported RBBs for NB-IoT Guard Band](#) on page 466

7.4 Configurations for Narrowband IoT Access Standalone Mode

The following rules apply to Narrowband IoT (NB-IoT) access standalone mode:

- A standalone NB-IoT cell does not require an LTE host cell, but is configured from an LTE DU or Baseband.
- One standalone NB-IoT cell consumes one cell capacity from the total DU or Baseband capacity.
- One standalone NB-IoT carrier consumes CPRI capacity equivalent to a 5 MHz LTE carrier.
- One standalone NB-IoT carrier consumes carrier capacity on the radio equivalent to a 5 MHz LTE carrier.
- Supported antenna configurations from SW MI18.Q2:
 - 1TX/1RX
 - 1TX/2RX
 - 1TX/4RX



- 2TX/2RX
- 2TX/4RX
- DU and Baseband capacity applies.
- Combined cell is not supported.
- PSI-coverage is not supported.
- CPRI compression is not supported.
- For supported radio units, see [Supported Radio Frequencies](#) on page 8.
- For supported RBBs, see [Supported RBBs for NB-IoT Standalone](#) on page 471.
- Mixed mode with GSM, CDMA, WCDMA, LTE, and Multi-Operator RAN LTE + LTE is supported, see [Supported Mixed Mode Configurations for NB-IoT Standalone](#) on page 474.

Note: Mixed mode standalone NB-IoT + LTE uses single mode LTE RBBs.

7.4.1 Supported RBBs for NB-IoT Standalone

The following RBBs, valid for single mode or mixed mode configurations, are supported by NB-IoT standalone mode. See the relevant DU and Baseband configurations.

Table 367 NB-IoT Standalone Configurations

Supported RBBs	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 MixedMode Baseband 6630	Baseband 5216 Baseband 6630	Baseband 6318 Mixed Mode Baseband 6318
RBB10_1A	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_1A	-	18.Q2	18.Q2	18.Q2
RBB11_1A for AIR 11	-	18.Q2	18.Q2	18.Q2
RBB11_1C	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_1D	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_2A ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB11_2B ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1A	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1C	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1D	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1E	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_1F	18.Q2	18.Q2	18.Q2	18.Q2



Supported RBBs	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 MixedMode Baseband 6630	Baseband 5216 Baseband 6630	Baseband 6318 Mixed Mode Baseband 6318
RBB12_2A	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2B	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2C	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2D ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB12_2E ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB14_1A	18.Q2	18.Q2	18.Q2	18.Q2
RBB14_2A	18.Q2	18.Q2	18.Q2	18.Q2
RBB20_1A	18.Q2	18.Q2	18.Q2	18.Q2
RBB20_2A	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1A ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1A for AIR 11 ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1B	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1C	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1C for AIR 11	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1C for AIR 21	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1F	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1G	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_1P	18.Q4	18.Q4	18.Q4	18.Q4
RBB22_1Q	18.Q4	18.Q4	18.Q4	18.Q4
RBB22_2A	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2A for AIR 11	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2B ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2C ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2E	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2K ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2L ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB22_2T ⁽¹⁾	18.Q4	18.Q4	18.Q4	18.Q4
RBB22_2U ⁽¹⁾	18.Q4	18.Q4	18.Q4	18.Q4
RBB24_1A	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_1A for AIR 21	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_1B	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_1C	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_1D	-	18.Q4	18.Q4	18.Q4
RBB24_2A	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_2B	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_2D ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB24_2E	-	18.Q4	18.Q4	18.Q4
RBB24_2F	-	18.Q4	18.Q4	18.Q4



Supported RBBs	DUS 31 DUS 41	Baseband 5212 Baseband 6303 Baseband 6620 Mixed Mode Baseband 5216 MixedMode Baseband 6630	Baseband 5216 Baseband 6630	Baseband 6318 Mixed Mode Baseband 6318
RBB32_1A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2
RBB32_1B ⁽¹⁾	-	18.Q2	18.Q2	18.Q2
RBB32_3A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2
RBB32_3B ⁽¹⁾	-	18.Q2	18.Q2	18.Q2
RBB42_2D ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB43_1A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2
RBB43_4A ⁽¹⁾	-	18.Q2	18.Q2	18.Q2
RBB44_1B	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_1D	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_1G	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_1L	-	18.Q4	18.Q4	18.Q4
RBB44_2C	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2F ⁽¹⁾	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2J	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2K	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2L	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_2Q	-	18.Q4	18.Q4	18.Q4
RBB44_3A	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_3B	18.Q2	18.Q2	18.Q2	18.Q2
RBB44_3C	-	18.Q4	18.Q4	18.Q4
RBB44_3D	-	18.Q4	18.Q4	18.Q4
RBB44_4A	18.Q2	18.Q2	18.Q2	18.Q2
RBB46_1A	-	18.Q4	18.Q4	18.Q4
RBB46_2A	-	18.Q4	18.Q4	18.Q4
RBB66_1A	-	18.Q4	18.Q4	18.Q4
RBB66_2A	-	18.Q4	18.Q4	18.Q4

(1) For MSMM only.



7.4.2 Supported Mixed Mode Configurations for NB-IoT Standalone

Table 368 Supported Mixed Mode Configurations for NB-IoT Standalone

Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
NB-IoT + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT	DUG Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for LTE + GSM	NB-IoT + GSM	-	-
NB-IoT + CDMA	DUS 31 + XMU DUS 41 + XMU	NB-IoT	DBA + XMU	CDMA
NB-IoT + WCDMA	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6303 Baseband 6620 Baseband 6630	NB-IoT	DUW Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6303 Baseband 6620 Baseband 6630	WCDMA
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for WCDMA + LTE	NB-IoT + WCDMA	-	-
NB-IoT + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT	DUL 20 DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	LTE
	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	-	-



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
NB-IoT + WCDMA + GSM	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for LTE + GSM	NB-IoT + GSM	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	WCDMA
	Mixed Mode Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630 configured for WCDMA + GSM	WCDMA + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for WCDMA + GSM + LTE	NB-IoT + WCDMA + GSM	-	-
NB-IoT + LTE + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUG Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	GSM
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for LTE + GSM	NB-IoT + GSM	DUL 20 DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	LTE
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for LTE + GSM	LTE + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for LTE + GSM	NB-IoT + LTE + GSM	-	-



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
NB-IoT + WCDMA + LTE	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for WCDMA + LTE	NB-IoT + WCDMA	DUL 20 DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	LTE
	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	WCDMA
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for WCDMA + LTE	WCDMA + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT
	Mixed Mode Baseband 5216 Baseband 6318 Baseband 6630 configured for WCDMA + LTE	NB-IoT + WCDMA + LTE	-	-
NB-IoT + LTE + CDMA	DUS 31 + XMU DUS 41 + XMU	NB-IoT + LTE	DBA + XMU	CDMA
NB-IoT + LTE + NR	Baseband 6630	LTE + NR + NB-IoT	-	-
	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	LTE + NB-IoT	Baseband 6630	NR
NB-IoT + Multi-Operator RAN LTE + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUL 20 DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	LTE
Multi-Operator RAN NB-IoT + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE ⁽¹⁾	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT



Mixed Mode Configuration in Radio	Node 1		Node 2	
	DU or Baseband ⁽¹⁾	Configuration	DU or Baseband	Configuration
Multi-Operator RAN NB-IoT + Multi-Operator RAN LTE + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE
NB-IoT + WCDMA + GSM + LTE	Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6620 Baseband 6630	WCDMA + GSM	DUL DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT + LTE
	Baseband 5216 Baseband 6318 Baseband 6630	LTE + GSM	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + WCDMA
		NB-IoT + GSM	Baseband 5216 Baseband 6318 Baseband 6630	WCDMA + LTE
		WCDMA + GSM + LTE	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6620 Baseband 6630	NB-IoT
		NB-IoT + WCDMA + GSM	DUS 31 DUS 41 Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6620 Baseband 6630	LTE
		NB-IoT + LTE + GSM	DUW Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6620 Baseband 6630	WCDMA
		NB-IoT + WCDMA + LTE	DUG Baseband 5212 Baseband 5216 Baseband 6318 Baseband 6620 Baseband 6630	GSM
		NB-IoT + WCDMA + GSM + LTE	-	-
NB-IoT + WCDMA + WCDMA	Baseband 5216 Baseband 6318 Baseband 6630	NB-IoT + WCDMA	DUW Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	WCDMA

(1) For supported RBBs, see [Supported RBBs for NB-IoT Standalone](#) on page 471

7.5 Configurations for Extended Coverage GSM IoT Access

The following rules apply to Extended Coverage GSM IoT (EC-GSM-IoT) access:

- EC-GSM-IoT is part of a GSM TRX.
- EC-GSM-IoT does not consume any additional TRX capacity from the total capacity of the DU or Baseband.
- EC-GSM-IoT has no impact on CPRI capacity, as it is contained within the capacity used for the GSM TRX.
- EC-GSM-IoT does not consume any additional carrier capacity of the radio, as it is contained within the capacity used for the GSM TRX.
- 4-WRXD is not supported.
- TX Diversity is not supported.
- Combined Cell is not supported.
- EC-GSM-IoT is supported on all radio units that support GSM.
- RBBs for single mode GSM or mixed mode with GSM are also supported for EC-GSM-IoT.



8 Radio Configurations for NR

This section describes the radio configurations for NR as a single standard.

8.1 Sector Configuration for NR

See [NR RBB Summary for Radios](#) on page 479 when selecting an RBB according to the required sector capabilities. The maximum output power per radio is found in [Radio Capabilities](#) on page 5 and more information on the available levels of output power is found in the description document for each radio type.

Note: There may be limitations to the combinations of RBBs that are supported in a specific software version or RBS type. See [Supported Radio Configurations for NR](#) on page 483 for information on supported configurations.

8.1.1 NR RBB Summary for Radios

Table 369 NR RBB Summary for Radios

Radio	Maximum Carriers per RF Port in Downlink	RBB
AIR 1281	4	RBBAIR_1A RBBAIR_2A RBBAIR_3A RBBAIR_4A
AIR 2488	4	RBB24_1C RBB24_2D
AIR 2488 MB	4	RBB24_1C RBB24_2D
AIR 3239	1	RBBAIR_1A RBBAIR_2A RBBAIR_3A
AIR 4455	4 ⁽¹⁾ 6 ⁽²⁾	RBB44_1D RBB44_2F
AIR 5121	4 ⁽³⁾	RBBAIR_1A RBBAIR_2A
AIR 5331	24 ⁽⁴⁾	RBBAIR_1A RBBAIR_2A RBBAIR_3A RBBAIR_4A
AIR 6449	1	RBBAIR_1A RBBAIR_2A RBBAIR_3A RBBAIR_4A
AIR 6454	1	RBBAIR_1A RBBAIR_2A RBBAIR_3A
AIR 6488	1	RBBAIR_1A RBBAIR_2A



Radio	Maximum Carriers per RF Port in Downlink	RBB
		RBBAIR_3A
Dot 4479 + IRU 8846	3	RBB44_1D for RDS RBB44_2F for RDS
Dot 4489 + IRU 8846	3	RBB22_1F for RDS RBB22_1G for RDS RBB22_2K for RDS RBB22_2L for RDS RBB44_1D for RDS RBB44_2F for RDS
Radio 2203	3	RBB22_1B RBB22_2C
Any combinations of two radios on the same band: Radio 2203 Vault Radio System 2268	3	RBB22_2E RBB44_1B RBB44_2C
Radio 2212	4	RBB22_1B RBB22_2C
Radio 2217	3	RBB22_1B RBB22_2C RBB24_1B RBB24_2B
Radio 2219	4	
Radio 2242	4 ⁽¹⁾ 6 ⁽²⁾	
Any combinations of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279	4	RBB22_2E RBB44_1B RBB44_2C
Any combinations of two radios on the same band: Radio 2217 And one radio: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279	3	
Any combinations of two radios: Radio 2212 Radio 2219 Radio 2242 Radio 2260 Radio 2279 And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	4	RBB24_1B RBB24_2B
Any combinations of two radios: Radio 2217 And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	3	
Radio 2228	2	RBB22_1B RBB22_2C
Radio 2228 + Radio 2228	2	RBB44_1B RBB44_2C
Radio 2260	4 ⁽¹⁾	RBB22_1B RBB22_2C



Radio	Maximum Carriers per RF Port in Downlink	RBB
	8 ⁽²⁾	RBB22_2E RBB24_1B RBB24_2B RBB44_1B RBB44_2C
Radio 2279	4 ⁽¹⁾ 8 ⁽²⁾	RBB22_1B RBB22_2C RBB22_2E RBB24_1B RBB24_2B RBB44_1B RBB44_2C
Radio 2468	4	RBB22_1F RBB22_2K RBB24_1C
Radio 4408	3	RBB22_1F RBB22_1G RBB22_2K RBB22_2L RBB44_1D RBB44_2F
Radio 4415	4	
Radio 4418	3 ⁽⁵⁾	
Radio 4426	4	
Radio 4442 Radio 4455	4 ⁽¹⁾ 6 ⁽²⁾	
Radio 4443	4 ⁽¹⁾ 6 ⁽²⁾	RBB22_1F RBB22_1G RBB22_2K RBB22_2L RBB44_1D RBB44_2F
Radio 4422	2	
Radio 4428 Radio 4429	4	
Radio 4449	4 ⁽¹⁾⁽⁶⁾ 4 ⁽²⁾⁽⁶⁾	RBB22_1F RBB22_1G RBB22_1K ⁽⁷⁾ RBB22_1N ⁽⁸⁾ RBB22_2K RBB22_2L RBB22_2P ⁽⁷⁾ RBB22_2S ⁽⁸⁾ RBB44_1D RBB44_2F
Radio 4449 + Radio 4449	3 ⁽¹⁾ 3 ⁽²⁾	RBB44_1H ⁽⁷⁾ RBB44_1M ⁽⁸⁾ RBB44_2M ⁽⁷⁾ RBB44_2R ⁽⁸⁾
Radio 4478	4	RBB22_1F RBB22_1G RBB22_2K RBB44_1D RBB44_2F
Radio 8823	3	RBB44_1E RBB44_1F RBB44_2G RBB44_2H RBB88_1A RBB88_2A
Radio 8836	1	RBB44_1E RBB44_1F RBB44_2G



Radio	Maximum Carriers per RF Port in Downlink	RBB
		RBB44_2H RBB88_1A RBB88_2A
Radio 8843	3 ⁽¹⁾ 6 ⁽²⁾	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_1L ⁽⁹⁾ RBB22_1M ⁽⁹⁾ RBB22_2K RBB22_2L RBB22_2M RBB22_2N RBB22_2Q ⁽⁹⁾ RBB22_2R ⁽⁹⁾ RBB44_1E RBB44_1F RBB44_2G RBB44_2H RBB88_1A RBB88_2A
Radio 8843 + Radio 8843	3 ⁽¹⁾ 6 ⁽²⁾	RBB44_1J ⁽⁹⁾ RBB44_1K ⁽⁹⁾ RBB44_2N ⁽⁹⁾ RBB44_2P ⁽⁹⁾
Radio 8863	1	RBB22_1F RBB22_1G RBB22_1H RBB22_1J RBB22_2K RBB22_2L RBB22_2M RBB22_2N RBB44_1E RBB44_1F RBB44_2G RBB44_2H RBB88_1A RBB88_2A
Streetmacro 6701	4	RBB44_4A
Vault Radio System 2268	3	RBB22_1B RBB22_2C

(1) Carriers per band.

(2) Carriers in total for both bands.

(3) AIR 5121 supports four beams and maximum one carrier per beam.

(4) AIR 5331 supports eight beams and maximum three carriers per beam.

(5) For Radio 4418 B38A:

2 carriers per RF port in downlink.

(6) For Radio 4449 B5 B12A and Radio 4449 B5 B13,

3 carriers per band

3 carriers for both bands.

(7) High output power mode. Only supported by Radio 4449 B5 B13.

(8) High output power mode. Only supported by Radio 4449 B5 B12A.

(9) High output power mode.



8.2 Supported Radio Configurations for NR

This section describes the supported NR radio configurations.

Note: The configurations in this section are dependent on DU or Baseband capacity listed in [Baseband Support and Configuration for NR](#) on page 493.

8.2.1 NR Configuration for Baseband

Table 370 NR FDD Frequency Range 1 (FR1) CPRI Configurations for Baseband

RBB	From Software Version ⁽¹⁾
	Baseband 6630
RBB22_1B	19.Q4
RBB22_1F	19.Q4
RBB22_1G	19.Q4
RBB22_1H	19.Q4
RBB22_1J	19.Q4
RBB22_1K	19.Q4
RBB22_1L	19.Q4
RBB22_1M	19.Q4
RBB22_1N	19.Q4
RBB22_2C	19.Q4
RBB22_2E	19.Q4
RBB22_2K	19.Q4
RBB22_2L	19.Q4
RBB22_2M	19.Q4
RBB22_2N	19.Q4
RBB22_2P	19.Q4
RBB22_2Q	19.Q4
RBB22_2R	19.Q4
RBB22_2S	19.Q4
RBB24_1C	20.Q1
RBB24_2D	20.Q1
RBB44_1B	19.Q4
RBB44_1D	19.Q4
RBB44_1E	19.Q4
RBB44_1F	19.Q4
RBB44_1H	19.Q4
RBB44_1J	19.Q4
RBB44_1K	19.Q4
RBB44_1M	19.Q4
RBB44_2C	19.Q4



RBB	From Software Version ⁽¹⁾
	Baseband 6630
RBB44_2F	19.Q4
RBB44_2G	19.Q4
RBB44_2H	19.Q4
RBB44_2M	19.Q4
RBB44_2N	19.Q4
RBB44_2P	19.Q4
RBB44_2R	19.Q4
RBB88_1A	19.Q4
RBB88_2A	19.Q4

(1) With DBB 10_81.

Table 371 NR TDD FR1 CPRI Configurations for Baseband

RBB	From Software Version ⁽¹⁾
	Baseband 6630
RBB22_1B	19.Q4
RBB22_1F	19.Q4
RBB22_1F for RDS	19.Q4
RBB22_1G	19.Q4
RBB22_1G for RDS	19.Q4
RBB22_1H	20.Q2
RBB22_1J	20.Q2
RBB22_2C	19.Q4
RBB22_2K	19.Q4
RBB22_2K for RDS	19.Q4
RBB22_2L	19.Q4
RBB22_2L for RDS	19.Q4
RBB22_2M	20.Q2
RBB22_2N	20.Q2
RBB24_1B	19.Q4
RBB24_2B	19.Q4
RBB44_1B	19.Q4
RBB44_1D	19.Q2
RBB44_1D for RDS	19.Q3
RBB44_1E	20.Q2
RBB44_1F	20.Q2
RBB44_2C	19.Q4
RBB44_2F	19.Q2
RBB44_2F for RDS	19.Q3
RBB44_2G	20.Q2
RBB44_2H	20.Q2
RBB88_1A	19.Q4



RBB	From Software Version ⁽¹⁾
	Baseband 6630
RBB88_2A	19.Q4

(1) With DBB 10_81.

Table 372 NR FR1 eCPRI Configurations for Baseband

RBB	From Software Version ⁽¹⁾	
	Baseband 6630	Baseband 6648
RBBAIR_1A	18.Q4	20.Q1
RBBAIR_2A	18.Q4	20.Q1
RBBAIR_3A	18.Q4	20.Q1
RBBAIR_4A	20.Q1	20.Q1

(1) With DBB 10_81.

Table 373 NR Frequency Range 2 (FR2) CPRI Configurations for Baseband

RBB	From Software Version ⁽¹⁾	
	Baseband 6630	Streetmacro 6701
RBBAIR_1A	19.Q2	-
RBBAIR_2A	19.Q2	-
RBBAIR_3A	19.Q2	-
RBBAIR_4A	19.Q2	19.Q4

(1) With DBB 10_81.

8.3 Carrier Allocation for NR

This section describes carrier allocation for single mode NR configurations.

8.3.1 Carrier Allocation for NR FDD

Table 374 NR FDD Carrier Allocation

RBB	Radio Type	From Software Version	Configuration
RBB22_1B	Radio 2203 Radio 2260 Radio 2279 Vault Radio System 2268	20.Q1	-
	Radio 2212 Radio 2217 Radio 2219 Radio 2242	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB22_1F	Radio 4415 Radio 4426	19.Q4	Not supported in SSMM.



RBB	Radio Type	From Software Version	Configuration
	Radio 4442 Radio 4443 Radio 4449 Radio 4455 Radio 4478 Radio 8843	20.Q1	-
	Radio 2468 Radio 4428 Radio 4429	20.Q1	-
RBB22_1G	Radio 4415 Radio 4426 Radio 4442 Radio 4443 Radio 4449 Radio 4455 Radio 4478 Radio 8843	19.Q4	Not supported in SSMM.
		20.Q1	-
	Radio 4428 Radio 4429	20.Q1	-
RBB22_1H	Radio 8843	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB22_1J	Radio 8843	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB22_1K	Radio 4449	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB22_1L	Radio 8843	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB22_1M	Radio 8843	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB22_1N	Radio 4449	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB22_2C	Radio 2203 Radio 2260 Radio 2279 Vault Radio System 2268	20.Q1	-
	Radio 2212 Radio 2217 Radio 2219 Radio 2242	19.Q4	-
RBB22_2E	Any combinations of two radios on the same band: Radio 2203 Vault Radio System 2268 Any combinations of two radios on the same band: Radio 2217 Radio 2219 Radio 2242	19.Q4	Not supported in SSMM.
	Any combinations of two radios on the same band: Radio 2212	20.Q1	-



RBB	Radio Type	From Software Version	Configuration
	Radio 2219 Any combinations of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279		
RBB22_2K	Radio 4415 Radio 4426 Radio 4442 Radio 4443 Radio 4449 Radio 4455 Radio 4478 Radio 8843	19.Q4	-
	Radio 2468 Radio 4428 Radio 4429	20.Q1	-
RBB22_2L	Radio 4415 Radio 4426 Radio 4442 Radio 4443 Radio 4449 Radio 4455 Radio 4478 Radio 8843	19.Q4	-
	Radio 4428 Radio 4429	20.Q1	-
RBB22_2M	Radio 8843	19.Q4	-
RBB22_2N	Radio 8843	19.Q4	-
RBB22_2P	Radio 4449	19.Q4	-
RBB22_2Q	Radio 8843	19.Q4	High output power mode.
RBB22_2R	Radio 8843	19.Q4	High output power mode.
RBB22_2S	Radio 4449	19.Q4	-
RBB24_1B	Any combinations of two radios: Radio 2212 One radio unit with RX capability on the same band: Radio 0208 RRUS A2 Any combinations of two radios: Radio 2217 Radio 2219 Radio 2242 One radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	19.Q4	Supported only in MSMM with Baseband.
	Any combinations of two radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242	20.Q1	Supported only in MSMM with Baseband.



RBB	Radio Type	From Software Version	Configuration
	Radio 2260 Radio 2279 One radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3		
RBB24_1C	AIR 2488 AIR 2488 MB Radio 2468	20.Q1	-
RBB24_2B	Any combinations of two radios: Radio 2212 One radio unit with RX capability on the same band: Radio 0208 RRUS A2 Any combinations of two radios: Radio 2217 Radio 2219 Radio 2242 One radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	19.Q4	Supported only in MSMM with Baseband.
	Any combinations of two radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279 One radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	20.Q1	
RBB24_2D	AIR 2488 AIR 2488 MB Radio 2468	20.Q1	-
RBB44_1B	Any combinations of two radios on the same band: Radio 2203 Vault Radio System 2268 Any combinations of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279	20.Q1	-
	Any combinations of two radios on the same band: Radio 2212 Radio 2219 Any combinations of two radios on the same band: Radio 2217	19.Q4	Not supported in SSMM.



RBB	Radio Type	From Software Version	Configuration
	Radio 2219 Radio 2242		
RBB44_1D	AIR 4455 Radio 4415 Radio 4426 Radio 4442 Radio 4443 Radio 4449 Radio 4455 Radio 4478	19.Q4	Not supported in SSMM.
		20.Q1	-
	Radio 4428 Radio 4429	20.Q1	-
RBB44_1E	Radio 8843	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB44_1F	Radio 8843	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB44_1H	Radio 4449 + Radio 4449	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB44_1J	Radio 8843 + Radio 8843	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB44_1K	Radio 8843 + Radio 8843	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	Not supported in SSMM. High output power mode.
RBB44_1M	Radio 4449 + Radio 4449	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB44_2C	Any combinations of two radios on the same band: Radio 2203 Vault Radio System 2268 Any combinations of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 Radio 2260 Radio 2279	20.Q1	-
	Any combinations of two radios on the same band: Radio 2212 Radio 2219 Any combinations of two radios on the same band: Radio 2217 Radio 2219 Radio 2242	19.Q4	Not supported in SSMM.
RBB44_2F	AIR 4455 Radio 4415	19.Q4	-



RBB	Radio Type	From Software Version	Configuration
	Radio 4426 Radio 4442 Radio 4443 Radio 4449 Radio 4455 Radio 4478		
	Radio 4428 Radio 4429	20.Q1	-
RBB44_2G	Radio 8843	19.Q4	-
RBB44_2H	Radio 8843	19.Q4	-
RBB44_2M	Radio 4449 + Radio 4449	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB44_2N	Radio 8843 + Radio 8843	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB44_2P	Radio 8843 + Radio 8843	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB44_2R	Radio 4449 + Radio 4449	19.Q4	Not supported in SSMM. High output power mode.
		20.Q1	High output power mode.
RBB88_1A	Radio 8843	19.Q4	Not supported in SSMM.
		20.Q1	-
RBB88_2A	Radio 8843	19.Q4	-

8.3.2

Carrier Allocation for NR TDD

Table 375 NR TDD Carrier Allocation

RBB	Radio Type	From Software Version	Configuration
RBB22_1B	Radio 2228	19.Q4	Supported only in single mode.
		20.Q1	-
RBB22_1F	Radio 4408	20.Q1	Supported only in single mode.
	Radio 4418	19.Q4	Supported only in single mode.
		20.Q1	-
	Radio 4422	19.Q4	Supported only in single mode.
		20.Q1	Supported in single mode and SSMM.
	Radio 8863	20.Q2	Supported only in single mode.



RBB	Radio Type	From Software Version	Configuration
RBB22_1F for RDS	Dot 4489 + IRU 8846	19.Q4	Supported only in single mode.
RBB22_1G	Radio 4408	20.Q1	Supported only in single mode.
	Radio 4418	19.Q4	Supported only in single mode.
		20.Q1	-
	Radio 4422	19.Q4	Supported only in single mode.
		20.Q1	Supported in single mode and SSMM.
	Radio 8863	20.Q2	Supported only in single mode.
RBB22_1G for RDS	Dot 4489 + IRU 8846	19.Q4	Supported only in single mode.
RBB22_1H	Radio 8863	20.Q2	Supported only in single mode.
RBB22_1J	Radio 8863	20.Q2	Supported only in single mode.
RBB22_2C	Radio 2228	19.Q4	Supported only in single mode.
RBB22_2K	Radio 4408	20.Q1	Supported only in single mode.
	Radio 4418 Radio 4422	19.Q4	Supported only in single mode.
	Radio 8863	20.Q2	-
RBB22_2K for RDS	Dot 4489 + IRU 8846	19.Q4	Supported only in single mode.
RBB22_2L	Radio 4408	20.Q1	Supported only in single mode.
	Radio 4418 Radio 4422	19.Q4	Supported only in single mode.
	Radio 8863	20.Q2	-
RBB22_2L for RDS	Dot 4489 + IRU 8846	19.Q4	Supported only in single mode.
RBB22_2M	Radio 8863	20.Q2	Supported only in single mode.
RBB22_2N	Radio 8863	20.Q2	-
RBB44_1B	Radio 2228 + Radio 2228	19.Q4	-
		20.Q1	-
RBB44_1D	Radio 4408	20.Q1	Supported only in single mode.
	Radio 4418	19.Q4	Supported only in single mode.
		20.Q1	-
	Radio 4422	19.Q2	Supported only in single mode.
		20.Q1	Supported in single mode and SSMM.
RBB44_1D for RDS	Dot 4479 or Dot 4489 + IRU 8846	19.Q3	Supported only in single mode.
RBB44_1E	Radio 8823 Radio 8836	20.Q2	-



RBB	Radio Type	From Software Version	Configuration
	Radio 8863	20.Q2	Supported only in single mode.
RBB44_1F	Radio 8823 Radio 8836	20.Q2	-
	Radio 8863	20.Q2	Supported only in single mode.
RBB44_2C	Radio 2228 + Radio 2228	19.Q4	Supported only in single mode.
		20.Q1	-
RBB44_2F	Radio 4408	20.Q1	Supported only in single mode.
	Radio 4418	19.Q4	Supported only in single mode.
	Radio 4422	19.Q2	
RBB44_2F for RDS	Dot 4479 or Dot 4489 + IRU 8846	19.Q3	Supported only in single mode.
RBB44_2G	Radio 8823 Radio 8836 Radio 8863	20.Q2	-
RBB44_2H	Radio 8823 Radio 8836 Radio 8863	20.Q2	-
RBB88_1A	Radio 8823 Radio 8836	19.Q4	Supported only in single mode.
	Radio 8836	20.Q1	-
	Radio 8863	20.Q2	Supported only in single mode.
RBB88_2A	Radio 8823 Radio 8836	19.Q4	-
	Radio 8863	20.Q2	Supported only in single mode.
RBBAIR_1A	AIR 1281	20.Q2	-
	AIR 3239 AIR 6488	18.Q4	-
	AIR 5121	19.Q1	-
	AIR 5331	19.Q2	-
	AIR 6449	20.Q1	-
	AIR 6454	19.Q3	-
RBBAIR_2A	AIR 1281	20.Q2	-
	AIR 3239 AIR 6488	18.Q4	-
	AIR 5121	19.Q1	-
	AIR 5331	19.Q2	-
	AIR 6449	20.Q1	-
	AIR 6454	19.Q3	-
RBBAIR_3A	AIR 1281	20.Q2	-
	AIR 3239 AIR 6488	18.Q4	-
	AIR 5331	19.Q2	-
	AIR 6449	20.Q1	-
	AIR 6454	19.Q3	-
RBBAIR_4A	AIR 1281	20.Q2	-



RBB	Radio Type	From Software Version	Configuration
	AIR 5331	19.Q2	-
	AIR 6449	20.Q1	-
	Streetmacro 6701	19.Q4	-

8.4 Baseband Support and Configuration for NR

This section contains information on the Baseband support for the configurations.

8.4.1 NR Baseband Radio Support

Note: Software versions are valid for the first release of the radio. For supported software versions for frequency variants, see [Radio Software Support](#).

Table 376 NR Baseband Support per Radio

Radio	Software Version	
	Baseband 6630	Baseband 6648
AIR 1281	20.Q2	-
AIR 2488	20.Q1	-
AIR 2488 MB	20.Q1	-
AIR 3239	18.Q4	20.Q1
AIR 4455	19.Q4	-
AIR 5121	19.Q1	-
AIR 5331	19.Q2	-
AIR 6449	20.Q1	20.Q1
AIR 6454	19.Q3	20.Q1
AIR 6488	18.Q4	20.Q1
Dot 4479 + IRU 8846	19.Q3	-
Dot 4489 + IRU 8846	19.Q3	-
Radio 2212	19.Q4	-
Radio 2217	19.Q4	-
Radio 2219	19.Q4	-
Radio 2228	19.Q4	-
Radio 2242	19.Q4	-
Radio 2260	20.Q1	-
Radio 2279	20.Q1	-
Radio 2468	20.Q1	-
Radio 4408	20.Q1	-
Radio 4415	19.Q4	-
Radio 4418	19.Q4	-
Radio 4422	19.Q2	-



Radio	Software Version	
	Baseband 6630	Baseband 6648
Radio 4426	19.Q4	-
Radio 4442	19.Q4	-
Radio 4428	20.Q1	-
Radio 4429	20.Q1	-
Radio 4442	19.Q4	-
Radio 4443	19.Q4	-
Radio 4449	19.Q4	-
Radio 4455	19.Q4	-
Radio 4478	19.Q4	-
Radio 8823	19.Q4	-
Radio 8836	19.Q4	-
Radio 8843	19.Q4	-
Radio 8863	20.Q2	-

8.4.2 NR Baseband Support and Configuration with Baseband 6630

Table 377 Baseband 6630 General Configuration Support for FR1 with CPRI

Number of	Standard	Software Version					
		19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
Carriers 2TX/2RX	NR FDD	-	-	3	3	3	3
	NR TDD	-	-	3	3	3	3
Carriers 2TX/4RX, 4TX/4RX	NR FDD 2TX/4RX, 4TX/4RX	-	-	3 (only 4TX/4RX)	3	3	3
	NR TDD 4TX/4RX	1	3 100 MHz total CBW	3	3	3	3
Carriers 8TX/8RX	NR TDD	-	-	3	3	3	3
Total number of carriers	NR FDD	-	-	3	3	3	3
	NR TDD	1	3	3	3	3	3
Number of MIMO layers per carrier	SU-MIMO downlink FDD	-	-	1	1	1	1
	SU-MIMO downlink TDD	1	1	4 ⁽¹⁾	4	4	4
	SU-MIMO uplink FDD	-	-	1	1	1	1
	SU-MIMO uplink TDD	1	1	1	1	1	1
Total bandwidth (MHz)	NR	80	400	2400	2400	2400	2400
Sectors	NR	1	3	3	3	3	3
Radios	NR	1	3	3	3	3	3
Supported carrier bandwidths	NR FDD	-	-	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20
	NR TDD 2TX/2RX	-	-	20, 100	20, 30, 40, 50, 60, 80, 100	20, 30, 40, 50, 60, 80, 100	20, 30, 40, 50, 60, 80, 100



Number of	Standard	Software Version					
		19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	NR TDD 4TX/4RX	20	20, 100	20, 100	20, 30, 40, 50, 60, 80, 100	20, 30, 40, 50, 60, 80, 100	20, 30, 40, 50, 60, 80, 100
	NR TDD 8TX/8RX	-	-	20, 40, 100	20, 40, 100	20, 40, 100	20, 40, 100
Carrier frequencies in one or many 3GPP bands	NR	1	3	3	3	3	3
Radio units level in one cascade chain	NR	1	3	3	3	3	3
Carrier branches on baseband	NR	288	288	288	288	288	288
Carrier branches per RI port in DL	NR	128	128	128	128	128	128
Carrier branches per RI port in UL	NR	128	128	128	128	128	128
No. of supported RI ports on baseband unit	NR	9 (A–J)	9 (A–J)	9 (A–J)	9 (A–J)	9 (A–J)	9 (A–J)

- (1) For SW 19.Q4, supported for:
- 4TX/4RX with up to four layers,
 - 8TX/8RX with up to two layers.

Table 378 Baseband 6630 General Configuration Support for FR1 with eCPRI

Number of	Standard	Software Version							
		18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
Carrier	NR	3	3	3	3	3	3	3	3
MIMO layers per carrier	MU-MIMO downlink	1	1	1	1	1	1	1	1
	MU-MIMO uplink	1	1	1	1	1	1	1	1
	SU-MIMO downlink	1	1	4	4	4	4	4	4
	SU-MIMO uplink	1	1	1	1	1	1	1	1
Sectors	NR	3	3	3	3	3	3	3	3
Radios	NR	3	3	3	3	3	3	3	3
Supported Bandwidths	NR	20	20	20, 40, 50, 60, 80, 100	20, 30, 40, 50, 60, 80, 90, 100	20, 30, 40, 50, 60, 80, 90, 100	20, 30, 40, 50, 60, 80, 90, 100	20, 30, 40, 50, 60, 80, 90, 100	20, 30, 40, 50, 60, 80, 90, 100
Carrier frequencies in one or many 3GPP bands	NR	3	3	3	3	3	3	3	3
Radio units level in one cascade chain	NR	1	1	1	1	1	1	1	1
Supported RI ports on Baseband unit	NR	3 (D–F)	6 (A–F)	6 (A–F)	6 (A–F)	6 (A–F)	6 (A–F)	9 (A–J)	9 (A–J)

Table 379 Baseband 6630 General Configuration Support for FR2 with CPRI

Number of	NR	Software Version					
		19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
Maximum NR carriers per sector	Downlink	4	4	4 ⁽¹⁾	4 ⁽¹⁾	4 ⁽¹⁾	4 ⁽¹⁾
	Uplink	1	1	1	1	1	1
Maximum NR carriers per node	Downlink	4	4	8 ⁽²⁾	8 ⁽²⁾	8 ⁽²⁾	8 ⁽²⁾
	Uplink	1	1	3 ⁽²⁾	3 ⁽²⁾	3 ⁽²⁾	3 ⁽²⁾
Number of MIMO layers per carrier	SU-MIMO downlink	2	2	2	2	2	2
	SU-MIMO uplink	2	2	2	2	2	2
Sectors	NR	1	1	3	3	3	3
Radios	NR	1	1	3 ⁽³⁾	3 ⁽³⁾	3 ⁽³⁾	3 ⁽³⁾
Supported Bandwidths	NR	50, 100	50, 100	50, 100	50, 100	50, 100	50, 100
Carrier frequencies in one or many 3GPP bands	NR	4	4	4 ⁽²⁾	4 ⁽²⁾	4 ⁽²⁾	4 ⁽²⁾
Radio units level in one cascade chain	NR	1	1	1	1	1	1
Supported RI ports on baseband unit	NR	9 (A–J)	9 (A–J)	9 (A–J)	9 (A–J)	9 (A–J)	9 (A–J)

(1) Four downlink carriers for one or two sector configurations. Two downlink carriers for three sector configurations.

(2) The single carrier with both downlink and uplink in each sector must use the same center frequency and bandwidth for all sectors.

(3) AIR 5121 and AIR 5331 cannot be mixed in the same node.

8.4.3 NR Baseband Support and Configuration with Baseband 6648

Table 380 Baseband 6648 General Configuration Support for FR1 (mid-band) with eCPRI

Number of	Standard	Software Version		
		20.Q1	20.Q2	20.Q3
Carrier	NR	3	6	6
MIMO layers per carrier	MU-MIMO downlink	1	8	8
	MU-MIMO uplink	1	2	2
	SU-MIMO downlink	4	4	4
	SU-MIMO uplink	1	1	1
Sectors	NR	3	6	6
Radios	NR	3	6	6
Supported Bandwidths	NR	20, 30, 40, 50, 60, 80, 100	20, 30, 40, 50, 60, 80, 100	20, 30, 40, 50, 60, 80, 100
Carrier frequencies in one or many 3GPP bands	NR	3	6	6



Number of	Standard	Software Version		
		20.Q1	20.Q2	20.Q3
Radio units level in one cascade chain	NR	1	1	1
Supported RI ports on Baseband unit	NR	12 (A–M)	12 (A–M)	12 (A–M)

8.4.4 NR Baseband Support and Configuration with Streetmacro 6701

Table 381 Streetmacro 6701 General Configuration Support for FR2 (high-band) with CPRI

Number of	Standard	Software Version			
		19.Q4	20.Q1	20.Q2	20.Q3
Maximum NR carriers per sector	Downlink	4	4	4	4
	Uplink	1	1	1	1
Maximum NR carriers per node	Downlink	4	4	4	4
	Uplink	1	1	1	1
Number of MIMO layers per carrier	SU-MIMO Downlink	2	2	2	2
	SU-MIMO Uplink	2	2	2	2
Sectors	NR	1	1	1	1
Radios	NR	1	1	1	1
Bandwidths	NR	50 and 100 MHz	50 and 100 MHz	50 and 100 MHz	50 and 100 MHz
Carrier frequencies in one or many 3GPP bands	NR	4	4	4	4
Radio units level in one cascade chain	NR	1	1	1	1
No. of supported RI ports on Baseband unit	NR	4 ⁽¹⁾ (A–D)	4 ⁽¹⁾ (A–D)	4 ⁽¹⁾ (A–D)	4 ⁽¹⁾ (A–D)

(1) The internal CPRI between the baseband unit and the internal AIR unit.



9 Radio Configurations for ESS

This section describes the radio configurations for ESS (Ericsson Spectrum Sharing).

9.1 Sector Configuration for ESS

See [ESS RBB Summary for Radios](#) on page 498 when selecting an RBB according to the required sector capabilities. The maximum output power per radio is found in [Radio Capabilities](#) on page 5 and more information on the available levels of output power is found in the description document for each radio type.

Note: There may be limitations to the combinations of RBBs that are supported in a specific software version or RBS type. See [Supported Radio Configurations for ESS](#) on page 499 for information on supported configurations.

9.1.1 ESS RBB Summary for Radios

Table 382 ESS RBB Summary for Radios

Radio	Maximum Carrier per RF Port in Downlink	Maximum Carrier per RF Port in Uplink	Maximum Carrier per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB	Additional Radios in RBB
Radio 2212	2	2	2	2×2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2212
				2×2	4	RBB24_1B RBB24_2B	Radio 0208
				4×2 4×4	4	RBB44_1B RBB44_2C	Radio 2212
Radio 2217	3	3	3	2×2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2217 Radio 2242
				2×2	4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				4×2 4×4	4	RBB44_1B RBB44_2C	Radio 2217 Radio 2242
Radio 2242	4 ⁽¹⁾ 6 ⁽²⁾	4 ⁽¹⁾ 6 ⁽²⁾	4 ⁽¹⁾ 6 ⁽²⁾	2×2	2	RBB22_1B RBB22_2C	-
						RBB22_2E	Radio 2217 Radio 2242
				2×2	4	RBB24_1B RBB24_2B	Radio 0208 RRUS A2 RRUS A3
				4×2	4	RBB44_1B	Radio 2217



Radio	Maximum Carrier per RF Port in Downlink	Maximum Carrier per RF Port in Uplink	Maximum Carrier per Radio	MIMO Capability	RX Branches (x-Way RX Diversity)	RBB	Additional Radios in RBB
				4x4		RBB44_2C	Radio 2242
Radio 4415	4	4	4	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4442	4 ⁽¹⁾ 6 ⁽²⁾	4 ⁽¹⁾ 6 ⁽²⁾	4 ⁽¹⁾ 6 ⁽²⁾	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				4x2 4x4	4	RBB44_1D RBB44_2F	-
Radio 4449	2 ⁽¹⁾⁽³⁾ 2 ⁽²⁾	2 ⁽¹⁾⁽³⁾ 2 ⁽²⁾⁽³⁾	2 ⁽¹⁾⁽³⁾ 2 ⁽²⁾⁽³⁾	2x2	2	RBB22_1F RBB22_1G RBB22_1K ⁽⁴⁾ RBB22_1N ⁽⁴⁾ RBB22_2K RBB22_2L RBB22_2P ⁽⁴⁾ RBB22_2S ⁽⁴⁾	-
				4x2 4x4	4	RBB44_1D	-
						RBB44_1H RBB44_1M	Radio 4449
						RBB44_2F	-
						RBB44_2M RBB44_2R	Radio 4449
Radio 4478	2	2	2	2x2	2	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	-
				4x2 4x4	4	RBB44_1D RBB44_2F	-

(1) Carriers per band.

(2) Carriers in total for all bands.

(3) Radio 4449 B71 B85A on band 71 supports three carriers per RF port and three carriers per radio

(4) High output power mode.

9.2 Supported Radio Configurations for ESS

This section describes the supported ESS radio configurations.

Note: The configurations in this section are dependent on Baseband capacity listed in [ESS Configuration for Baseband](#) on page 500.



9.2.1 ESS Configuration for Baseband

Table 383 ESS Configurations for Baseband

RBB	From Software Version ⁽¹⁾
	Baseband 6630
RBB22_1B	20.Q1
RBB22_1F	20.Q1
RBB22_1G	20.Q1
RBB22_1K	20.Q1
RBB22_1N	20.Q1
RBB22_2C	20.Q1
RBB22_2E	20.Q1
RBB22_2K	20.Q1
RBB22_2L	20.Q1
RBB22_2P	20.Q1
RBB22_2S	20.Q1
RBB44_1B	20.Q1
RBB44_1D	20.Q1
RBB44_1H	20.Q1
RBB44_1M	20.Q1
RBB44_2C	20.Q1
RBB44_2F	20.Q1
RBB44_2M	20.Q1
RBB44_2R	20.Q1

(1) With DBB 10_81.

9.3 Carrier Allocation for ESS

This section describes carrier allocation for single mode ESS configurations.

Table 384 ESS CArrier Allocation

RBB	Radion	From Software Version
RBB22_1B	Radio 2212 Radio 2217 Radio 2242	20.Q1
RBB22_1F	Radio 4415 Radio 4442 Radio 4449 Radio 4478	20.Q1
RBB22_1G	Radio 4415 Radio 4442 Radio 4449 Radio 4478	20.Q1
RBB22_1K	Radio 4449	20.Q1
RBB22_1N	Radio 4449	20.Q1



RBB	Radion	From Software Version
RBB22_2C	Radio 2212 Radio 2217 Radio 2242	20.Q1
RBB22_2E	Radio 2212 + Radio 2212 Any mix of 2 radio units on the same band: Radio 2217 Radio 2242	20.Q1
RBB22_2K	Radio 4415 Radio 4442 Radio 4449 Radio 4478	20.Q1
RBB22_2L	Radio 4415 Radio 4442 Radio 4449 Radio 4478	20.Q1
RBB22_2P	Radio 4449	20.Q1
RBB22_2S	Radio 4449	20.Q1
RBB24_1B	Any mix of one radio unit with TX/RX capability: Radio 2212 And one radio unit with RX capability on the same band: Radio 0208 Any mix of 2 radio units on the same band: Radio 2217 Radio 2242 And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	20.Q1
RBB24_2B	Any mix of one radio unit with TX/RX capability: Radio 2212 And one radio unit with RX capability on the same band: Radio 0208 Any mix of 2 radio units on the same band: Radio 2217 Radio 2242 And one radio unit with RX capability on the same band: Radio 0208 RRUS A2 RRUS A3	20.Q1
RBB44_1B	Radio 2212 + Radio 2212 Any mix of 2 radio units on the same band: Radio 2217 Radio 2242	20.Q1
RBB44_1D	Radio 4415 Radio 4442 Radio 4449 Radio 4478	20.Q1
RBB44_1H	Radio 4449 + Radio 4449	20.Q1
RBB44_1M	Radio 4449 + Radio 4449	20.Q1
RBB44_2C	Radio 2212 + Radio 2212 Any mix of 2 radio units on the same band: Radio 2217 Radio 2242	20.Q1



RBB	Radion	From Software Version
RBB44_2F	Radio 4415 Radio 4442 Radio 4449 Radio 4478	20.Q1
RBB44_2M	Radio 4449 + Radio 4449	20.Q1
RBB44_2R	Radio 4449 + Radio 4449	20.Q1



10

Radio Configurations for Multistandard Single Mode

Multistandard Single Mode (MSSM) configurations can be built up by any combination of supported single standard configurations with radios, with the limitation of maximum 6 internal radios per radio shelf or 12 external radios. MSSM configurations can also be built using AIR, with one standard per radio unit in the AIR.

See [Radio Capabilities](#) on page 5 for the supported frequency bands available for MSSM configurations.

[Table 385](#) lists the RBS support for MSSM with internal radios and external radios. MSSM with AIR is supported for all multistandard RBSs unless stated otherwise.

[Table 386](#) contains the MSSM radio configurations supported for AIR. All other supported configurations are listed in the following sections:

GSM radio configurations: [Supported Radio Configurations for GSM](#) on page 118.

GSM RUG radio configurations: [GSM Configurations with RUG](#) on page 122.

WCDMA radio configurations: [Radio Configurations for WCDMA](#) on page 182

LTE radio configurations: [Supported Radio Configurations for LTE](#) on page 300.

CDMA radio configurations: [Supported Radio Configurations for CDMA](#) on page 175.

Table 385 RBS Support for MSSM with Internal Radios or External Radios

RBS	GSM + WCDMA	WCDMA + LTE	GSM + LTE	GSM + WCDMA + LTE	LTE + CDMA
6101	Yes	Yes	Yes	Yes	Yes
6102	Yes	Yes	Yes	Yes	Yes
6110	Yes	Yes	Yes	Yes	-
6120	Yes	Yes	Yes	Yes	-
6131 AC	Yes	Yes	Yes	-	-
6131 DC	-	Yes	-	-	-
6201	Yes	Yes	Yes	Yes	Yes
6202	Yes	Yes	Yes	Yes	Yes
6301	Yes	Yes	Yes	Yes	Yes
6302	-	Yes	-	-	-
6320	Yes	Yes	Yes	Yes	-
6601	Yes ⁽¹⁾	Yes ⁽¹⁾	Yes	Yes	Yes

(1) For WCDMA when DUW 11 01 is installed



Table 386 MSSM 1–3 Sector Star Configurations with AIR

Supported AIR Unit Type	Standard 1				Standard 2			
	Radio Standard	RBB	DBB	Number of Carriers per Sector	Radio Standard	RBB	DBB	Number of Carriers per Sector
AIR 11	WCDMA	RBB11_1A	DBB10_01	1–4	GSM	RBB11_1A	DBB10_01	1–4
AIR 21	WCDMA	RBB12_1A	DBB10_01	1–4	GSM	RBB12_1A	DBB10_01	1–4
	LTE	RBB12_1A	DBB10_01	1–2	GSM	RBB12_1A	DBB10_01	1–4
	WCDMA	RBB12_1A	DBB10_01	1–4	LTE	RBB12_1A	DBB10_01	1–2



11 Radio Configurations for Multistandard and Single Standard Mixed Mode

This section provides general information on configurations for Multistandard RBS in mixed mode (MSMM), radio standard combination WCDMA + WCDMA, GSM + GSM with Dual DUG Sharing, and Multi-Operator RAN LTE + LTE.

Information on the maximum number of DUs, Baseband units and radios for each cabinet can be found in RBS Description.

[Baseband Configuration for Mixed Mode](#) on page 506 describes how to select DU or Baseband based on a given mixed mode configuration.

[Mixed Mode Synchronization](#) on page 513 describes synchronization in mixed mode configurations.

[Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531 describes baseband support for mixed mode Baseband, where two or three standards are combined on the same Baseband unit.

[Sector Configuration for MSMM](#) on page 615 describes sector configuration in general.

For detailed information on MSMM, SSMM, and Multi-Operator RAN configurations, see:

[Radio Configurations for Multistandard Mixed Mode WCDMA + GSM](#) on page 622 describes MSMM WCDMA + GSM configurations.

[Radio Configurations for Multistandard Mixed Mode LTE + GSM](#) on page 702 describes MSMM GSM + LTE configurations.

[Radio Configurations for Multistandard Mixed Mode WCDMA + LTE](#) on page 827 describes MSMM WCDMA + LTE configurations.

[Radio Configurations for Multistandard Mixed Mode LTE + CDMA](#) on page 802 describes MSMM LTE + CDMA configurations.

[Radio Configurations for Multistandard Mixed Mode WCDMA + GSM + LTE](#) on page 944 describes MSMM WCDMA + GSM + LTE configurations.

[Radio Configurations for Multi-Operator RAN LTE + LTE](#) on page 999 describes Multi-Operator RAN LTE + LTE configurations.

[Radio Configurations for Single Standard Mixed Mode GSM + GSM](#) on page 1083 describes SSMM GSM + GSM configurations.

[Radio Configurations for Single Standard Mixed Mode WCDMA + WCDMA](#) on page 1085 describes SSMM WCDMA + WCDMA configurations.



11.1 Baseband Configuration for Mixed Mode

For selecting DU or Baseband based on a given mixed mode configuration, see:

[SSMM Configurations with Mixed Mode Radio Using Separate CPRI](#) on page 506.

[MSMM Configurations with Mixed Mode Radio for Two Standards Using Separate CPRI per Standard](#) on page 508.

[MSMM Configurations with Mixed Mode Radio for Two Standards Using Shared CPRI](#) on page 509.

[MSMM Configurations with Mixed Mode Radio for Three Standards Using Shared CPRI](#) on page 511.

[MSMM Configurations with Mixed Mode Radio for Three Standards Using Two Nodes with Separate CPRI](#) on page 512.

11.1.1 SSMM Configurations with Mixed Mode Radio Using Separate CPRI

The following table is used to select DU or Baseband for a SSMM configuration with mixed mode radio using separate CPRI:

- First select the mixed mode configuration at the top
- Then in the same column select two DUs or Baseband units, supporting the relevant standards

Table 387 Supported SSMM Configurations with Mixed Mode Radio Using Separate CPRI

DU or Baseband		SSMM Configuration		
Type	Configuration	WCDMA + WCDMA	GSM + GSM	Multi-Operator RAN LTE + LTE ⁽¹⁾
DUW	W	WCDMA ⁽²⁾⁽³⁾		
DUG 20	G		GSM	
DUL 20	L			LTE FDD ⁽⁴⁾
DUS 31 DUS 41	L			LTE FDD LTE TDD
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	C			
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	L+C			



DU or Baseband		SSMM Configuration		
Type	Configuration	WCDMA + WCDMA	GSM + GSM	Multi-Operator RAN LTE + LTE ⁽¹⁾
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W	WCDMA		
Baseband 6502	W	WCDMA		
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	G			
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	L			LTE FDD LTE TDD
Baseband 6502	L			LTE FDD
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W+G			
Baseband 5216 Baseband 6318 Baseband 6630	L+G			LTE FDD LTE TDD
Baseband 5216 Baseband 6318 Baseband 6630	W+L	WCDMA		LTE FDD LTE TDD
Baseband 5216 Baseband 6318 Baseband 6630	W+G+L	WCDMA		LTE FDD LTE TDD
IDU 5205 IDU 5209	W	WCDMA		
IDU 5205 IDU 5209	L			LTE FDD
IDU 5209	W+L	WCDMA		LTE FDD

(1) Either LTE FDD + LTE FDD or LTE TDD + LTE TDD supported

(2) Two DUW nodes not supported in SSMM. One of the nodes must be a Baseband Radio Node.

(3) DUW 11, DUW 31, and DUW 41 only supported in combination with IDU 5205 and IDU 5209.

(4) Not supported with IDU 5205 or IDU 5209.



11.1.2 MSMM Configurations with Mixed Mode Radio for Two Standards Using Separate CPRI per Standard

The following tables are used to select DU or Baseband for a MSMM configuration with mixed mode radio for two standards using separate CPRI per standard:

- First select the mixed mode configuration at the top
- Then in the same column select two DUs or Baseband units, supporting the relevant standards

Table 388 Supported MSMM Configurations with Mixed Mode Radio for Two Standards Using Separate CPRI per Standard

DU or Baseband		MSMM Configuration				
Type	Configuration	WCDMA + GSM	LTE + GSM	WCDMA + LTE	LTE + CDMA	LTE + NR
DUW	W	WCDMA		WCDMA ⁽¹⁾		
DUG 20	G	GSM	GSM			
DUL 20	L		LTE FDD	LTE FDD ⁽²⁾		
DUS 31 DUS 41	L		LTE FDD	LTE FDD	LTE FDD ⁽³⁾	
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	C				CDMA ⁽⁴⁾	
DUL 20 + XMU DUL 31 + XMU DUS 41 + XMU	L+C					
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W	WCDMA		WCDMA		
Baseband 6502	W			WCDMA		
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	G	GSM				
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	L		LTE FDD	LTE FDD	LTE FDD ⁽⁵⁾	
Baseband 6630	L+NR					L+NR
Baseband 6502	L			LTE FDD		



DU or Baseband		MSMM Configuration				
Type	Configuration	WCDMA + GSM	LTE + GSM	WCDMA + LTE	LTE + CDMA	LTE + NR
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W+G	WCDMA	GSM	WCDMA		
Baseband 5216 Baseband 6318 Baseband 6630	L+G	GSM	LTE FDD GSM		LTE FDD	
Baseband 5216 Baseband 6318 Baseband 6630	W+L	WCDMA	LTE FDD	WCDMA LTE FDD	LTE FDD	
Baseband 5216 Baseband 6318 Baseband 6630	W+G+L	WCDMA GSM	LTE FDD GSM	WCDMA LTE FDD	LTE FDD	
IDU 5205 IDU 5209	W			WCDMA		
IDU 5205 IDU 5209	L			LTE FDD		
IDU 5209	W+L			WCDMA LTE FDD		

(1) IDU 5205 and IDU 5209 only supported with DUW 11, DUW 31, and DUW 41.

(2) Not supported with IDU 5205 or IDU 5209.

(3) Only DUS 41 supported.

(4) Only DUS 41 + XMU supported.

(5) Only Baseband 5216 and Baseband 6630 are supported.

11.1.3 MSMM Configurations with Mixed Mode Radio for Two Standards Using Shared CPRI

The following tables are used to select DU or Baseband for a MSMM configuration with mixed mode radio for two standards using shared CPRI:

- First select the mixed mode configuration at the top
- Then in the same column select one DU or Baseband unit, supporting the relevant standards

Table 389 Supported MSMM Configurations with Mixed Mode Radio for Two Standards Using Shared CPRI

DU or Baseband		MSMM Configuration				
Type	Configuration	WCDMA + GSM	LTE + GSM	WCDMA + LTE	LTE + CDMA	LTE + NR
DUW	W					
DUG 20	G					



DU or Baseband		MSMM Configuration				
Type	Configuration	WCDMA + GSM	LTE + GSM	WCDMA + LTE	LTE + CDMA	LTE + NR
DUL 20	L					
DUS 31 DUS 41	L					
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	C					
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	L+C				LTE FDD + CDMA	
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W					
Baseband 6502	W					
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	G					
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	L					
Baseband 6502	L					
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W+G	WCDMA + GSM				
Baseband 5216 Baseband 6318 Baseband 6630	L+G		LTE FDD + GSM			
Baseband 5216 Baseband 6318 Baseband 6630	W+L			WCDMA + LTE FDD		
Baseband 5216 Baseband 6318 Baseband 6630	W+G+L	WCDMA + GSM	LTE FDD + GSM	WCDMA + LTE FDD		
Baseband 6630						LTE + NR
IDU 5205 IDU 5209	W					
IDU 5205 IDU 5209	L					
IDU 5209	W+L			WCDMA + LTE FDD		



11.1.4 MSMM Configurations with Mixed Mode Radio for Three Standards Using Shared CPRI

The following tables are used to select DU or Baseband for a MSMM configuration with mixed mode radio for three standards using shared CPRI:

- First select the mixed mode configuration at the top
- Then in the same column select one DU or Baseband unit, supporting the relevant standards

Table 390 Supported MSMM Configurations with Mixed Mode Radio for Three Standards Using Shared CPRI

DU or Baseband		MSMM Configuration
Type	Configuration	WCDMA + GSM + LTE
DUW	W	
DUG 20	G	
DUL 20	L	
DUS 31 DUS 41	L	
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	C	
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	L+C	
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W	
Baseband 6501	W	
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	G	
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	L	
Baseband 6502	L	
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W+G	

DU or Baseband		MSMM Configuration
Type	Configuration	WCDMA + GSM + LTE
Baseband 5216 Baseband 6318 Baseband 6630	L+G	
Baseband 5216 Baseband 6318 Baseband 6630	W+L	
Baseband 5216 Baseband 6318 Baseband 6630	W+G+L	WCDMA + GSM + LTE FDD
IDU 5205 IDU 5209	W	
IDU 5205 IDU 5209	L	
IDU 5209	W+L	

11.1.5 MSMM Configurations with Mixed Mode Radio for Three Standards Using Two Nodes with Separate CPRI

The following tables are used to select DU or Baseband for a MSMM configuration with mixed mode radio for three standards using two nodes with separate CPRI:

- First select the mixed mode configuration at the top
- Then in the same column select one DU or Baseband unit supporting a relevant two standard mixed mode configuration and one DU or Baseband supporting the third standard

Table 391 Supported MSMM Configurations with Mixed Mode Radio for Three Standards Using Two Nodes with Separate CPRI

DU or Baseband		MSMM Configuration		
Type	Configuration	[WCDMA + GSM] ⁽¹⁾ + [LTE]	[WCDMA] + [LTE + GSM] ⁽¹⁾	[WCDMA + LTE] ⁽¹⁾ + [GSM]
DUW	W		WCDMA	
DUG 20	G			GSM
DUL 20	L	LTE FDD		
DUS 31 DUS 41	L	LTE FDD		
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	C			
DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	L+C			



DU or Baseband		MSMM Configuration		
Type	Configuration	[WCDMA + GSM] ⁽¹⁾ + [LTE]	[WCDMA] + [LTE + GSM] ⁽¹⁾	[WCDMA + LTE] ⁽¹⁾ + [GSM]
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W		WCDMA	
Baseband 6502	W			
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	G			GSM
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	L	LTE FDD		
Baseband 6502	L			
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	W+G	WCDMA + GSM	WCDMA	GSM
Baseband 5216 Baseband 6318 Baseband 6630	L+G	LTE FDD	LTE FDD + GSM	GSM
Baseband 5216 Baseband 6318 Baseband 6630	W+L			WCDMA + LTE FDD
Baseband 5216 Baseband 6318 Baseband 6630	W+G+L	WCDMA + GSM	LTE FDD + GSM	WCDMA + LTE FDD
IDU 5205 IDU 5209	W			
IDU 5205 IDU 5209	L			
IDU 5209	W+L			

(1) The two standards must be configured on the same mixed mode Baseband using shared CPRI.

11.2 Mixed Mode Synchronization

Mixed mode synchronization can be achieved using either GPS Out or Node Group Synchronization (NGS).

See [Mixed Mode Synchronization Using GPS Out](#) on page 515 for synchronization using GPS Out.



See [Mixed Mode Synchronization Using Node Group Synchronization](#) on page 521 for synchronization using Node Group Synchronization. For more information on Node Group Synchronization and example figures, refer to [Manage Node Group Synchronization](#) in the LTE RBS CPI library.

[Table 392](#) lists supported synchronization methods and software dependencies.

Note: The mixed mode radio must be supported by both DUs or Baseband units.

Table 392 DU and Baseband Synchronization Support

DU or Baseband	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	DUL 20	DUG 20	DUS 31 DUS 41	DUW	IDU 5205 IDU 5209	DBA + XMU ⁽¹⁾
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	NGS (18.Q2)	NGS (18.Q2)	NGS (18.Q2)	NGS (18.Q2)	NGS (18.Q2)	NGS (18.Q2)	NGS (18.Q2)
DUL 20	NGS (18.Q2)	GPS Out IDL1 ⁽²⁾ NGS (18.Q2)	GPS Out NGS (18.Q2)	GPS Out NGS (18.Q2)	GPS Out NGS (18.Q2)	-	GPS Out ⁽³⁾
DUG 20	NGS (18.Q2)	GPS Out NGS (18.Q2)	IDL2 GPS Out	GPS Out NGS (18.Q2)	GPS Out NGS (18.Q2)	-	-
DUS 31 DUS 41	NGS (18.Q2)	GPS Out NGS (18.Q2)	GPS Out NGS (18.Q2)	GPS Out IDL1 ⁽²⁾ IDL2 ⁽²⁾ NGS (18.Q2)	GPS Out NGS (18.Q2)	NGS (18.Q2)	GPS Out ⁽³⁾ NGS (18.Q2) ⁽⁴⁾
DUW	NGS (18.Q2)	GPS Out NGS (18.Q2)	GPS Out NGS (18.Q2)	GPS Out NGS (18.Q2)	IDL1 ⁽²⁾	NGS (18.Q2) ⁽⁵⁾	-
IDU 5205 IDU 5209	NGS (18.Q2)	-	-	NGS (18.Q2)	NGS (18.Q2) ⁽⁵⁾	NGS (18.Q2)	-
DBA + XMU	NGS (18.Q2)	GPS Out ⁽³⁾	-	GPS Out ⁽³⁾ NGS (18.Q2) ⁽⁴⁾	-	-	-

(1) For MSMM L+C nodes, DU + DBA + XMU can only act as sync receiver.

(2) Within one node.

(3) Through a GPS Out synchronization link between DU and XMU.

(4) Only DUS 41 is supported.

(5) Only with DUW 11, DUW 31, DUW 41.



11.2.1 Mixed Mode Synchronization Using GPS Out

The following rules apply to synchronization using GPS Out:

- DUs within one node are synchronized through IDL1 or IDL2:
 - Only one DU can act as core DU of the node.
 - DUGs that are synchronized through IDL2 are handled as one common node. Up to three DUGs can be synchronized in this way.
- Up to three nodes that are sharing mixed mode radios can be synchronized through GPS Out:
 - In configurations with three nodes and no GPS Out Splitter, the node providing the GPS Out signal must have exactly two DUs: a core DU and an extension DU. The core DU provides the signal for the second node, and the extension DU provides the signal for the third node. See [Figure 7](#).
 - A GPS Out Splitter can take the synchronization signal from the core DU and use it for up to two additional nodes.
 - DUW can only act as provider of a GPS Out signal.
 - DUG can only act as receiver of a GPS Out signal.
 - DUL and DUS can either act as provider or as receiver of a GPS Out signal.
- Nodes are connected using radio cascading chains.
 - Each chain must include one mixed mode radio that is shared between the nodes.
 - AIR 11 counts as two radio units, where only one can be in mixed mode.
 - AIR 21 counts as two radio units, where one or both can be in mixed mode.
 - A mixed mode radio in a chain, connecting the second node with the third node, is only supported between core DUs.
 - In chains between the second and the third node, mixed mode radios are only supported if the chain is between core DUs.

See [Figure 6](#) for an example with two DU Radio Nodes synchronized using GPS Out.

See [Figure 7](#) for an example with three DU Radio Nodes synchronized using GPS Out.

See [Figure 8](#) for an example with three DU Radio Nodes synchronized using GPS Out with a GPS Out Splitter.

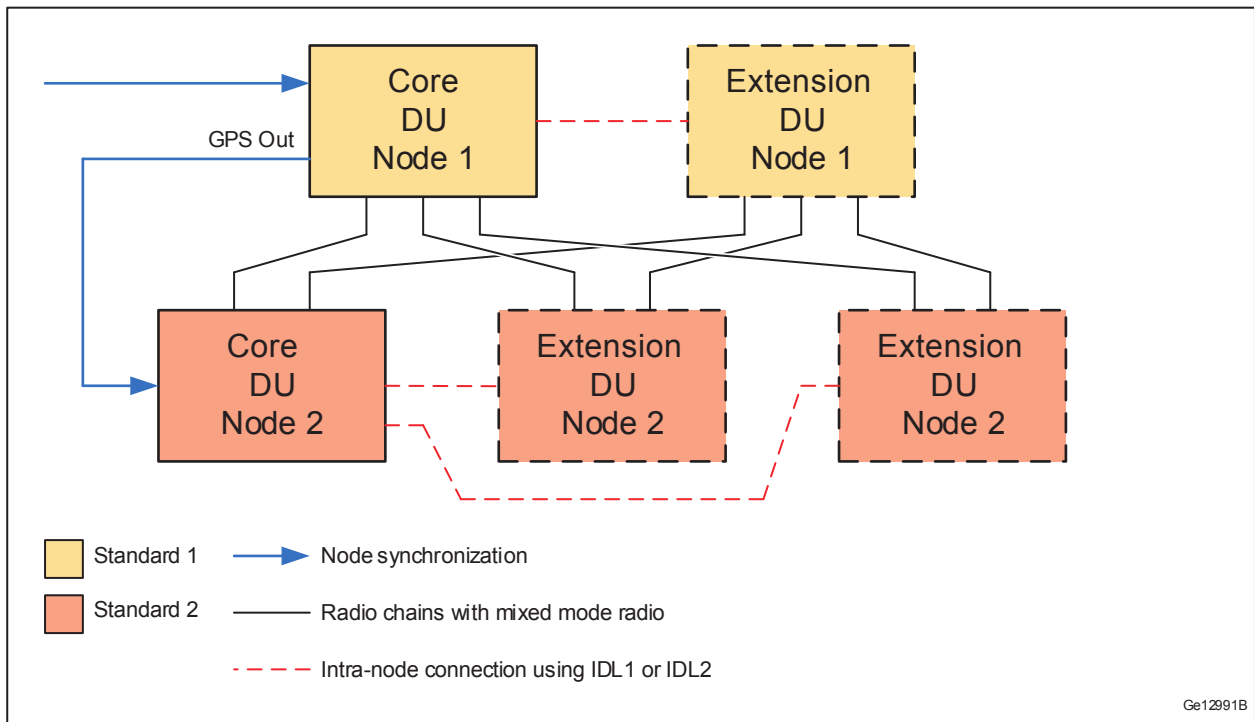


Figure 6 Topology for Two DU Radio Nodes Synchronized Using GPS Out

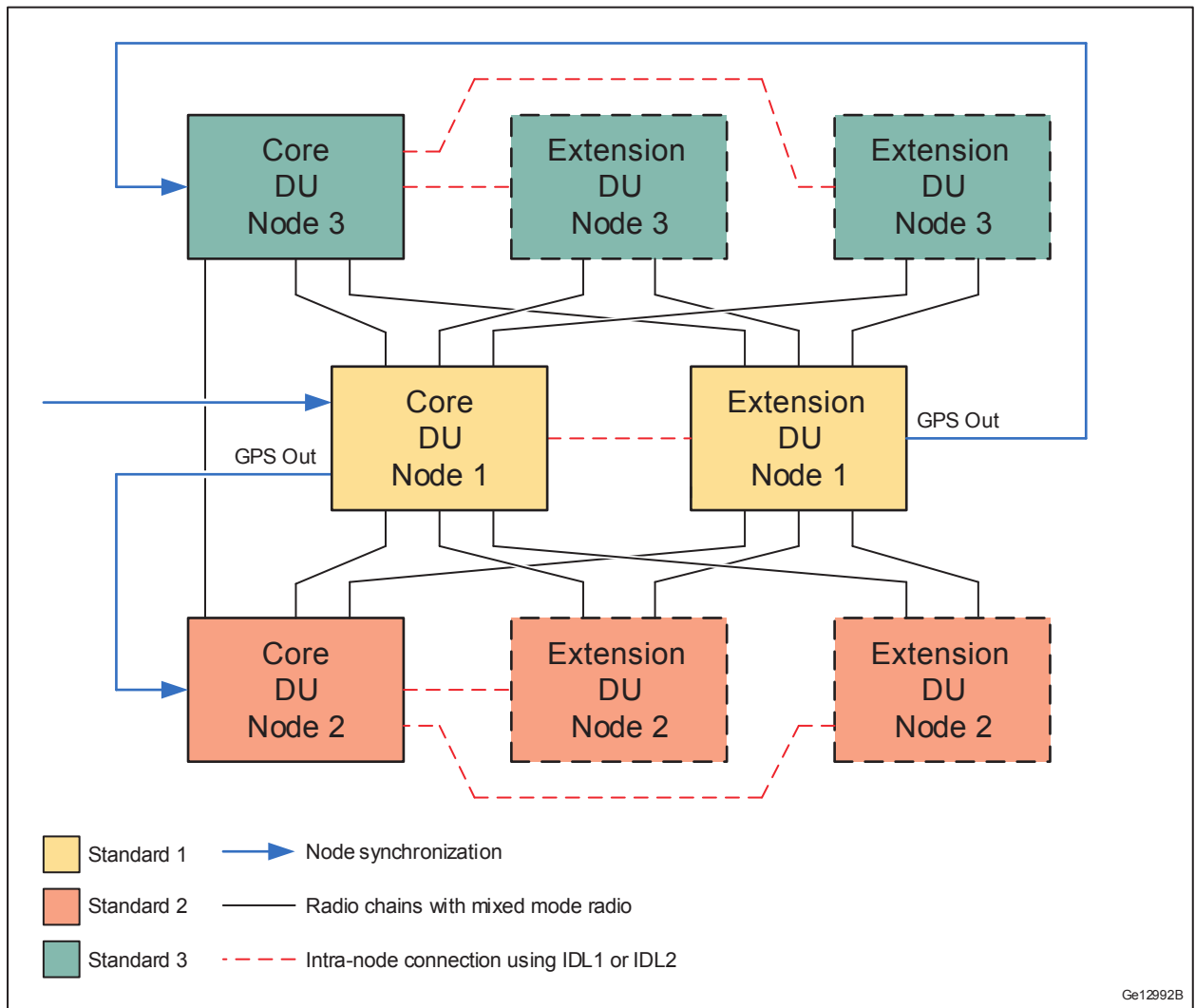


Figure 7 Topology for Three DU Radio Nodes Synchronized Using GPS Out

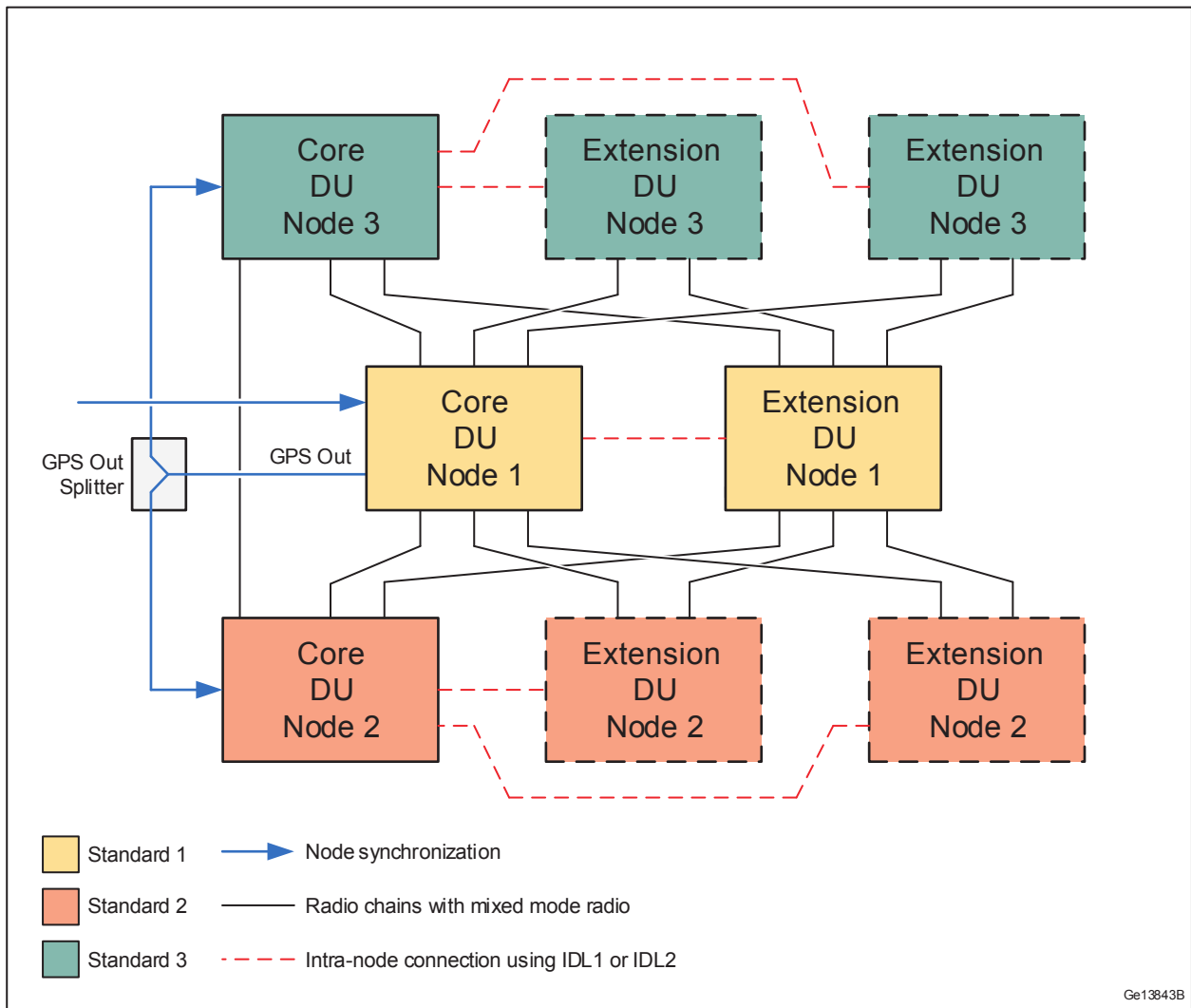


Figure 8 Topology for Three DU Radio Nodes Synchronized Using GPS Out with a GPS Out Splitter

The following rules apply to radio chains between nodes synchronized using GPS Out:

- A radio chain with one mixed mode radio can contain up to three radios or Baseband R units between the DUs:
 - [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
 - The mixed mode radio and other radios in the same chain must all have data 1 connected towards the DU acting as synchronization provider.
 - In case of Multi-Operator RAN LTE +LTE with DUS only, all the radios must have data 1 connected towards the DUS acting as synchronization provider.



- There can be up to two radios or Baseband R units per chain controlled by a single DU, with the radio furthest away from the DU being mixed mode.
- AIR 11 counts as two radio units, where only one can be in mixed mode.
- AIR 21 counts as two radio units, where one or both can be in mixed mode.
- For configurations rules with Baseband R503, see [Baseband R503](#) on page 1293.

See [Figure 9](#) for examples of radio chains between nodes synchronized using GPS Out.

See [Figure 10](#) for examples of radio chains with AIR 11 or AIR 21 between nodes synchronized using GPS Out.

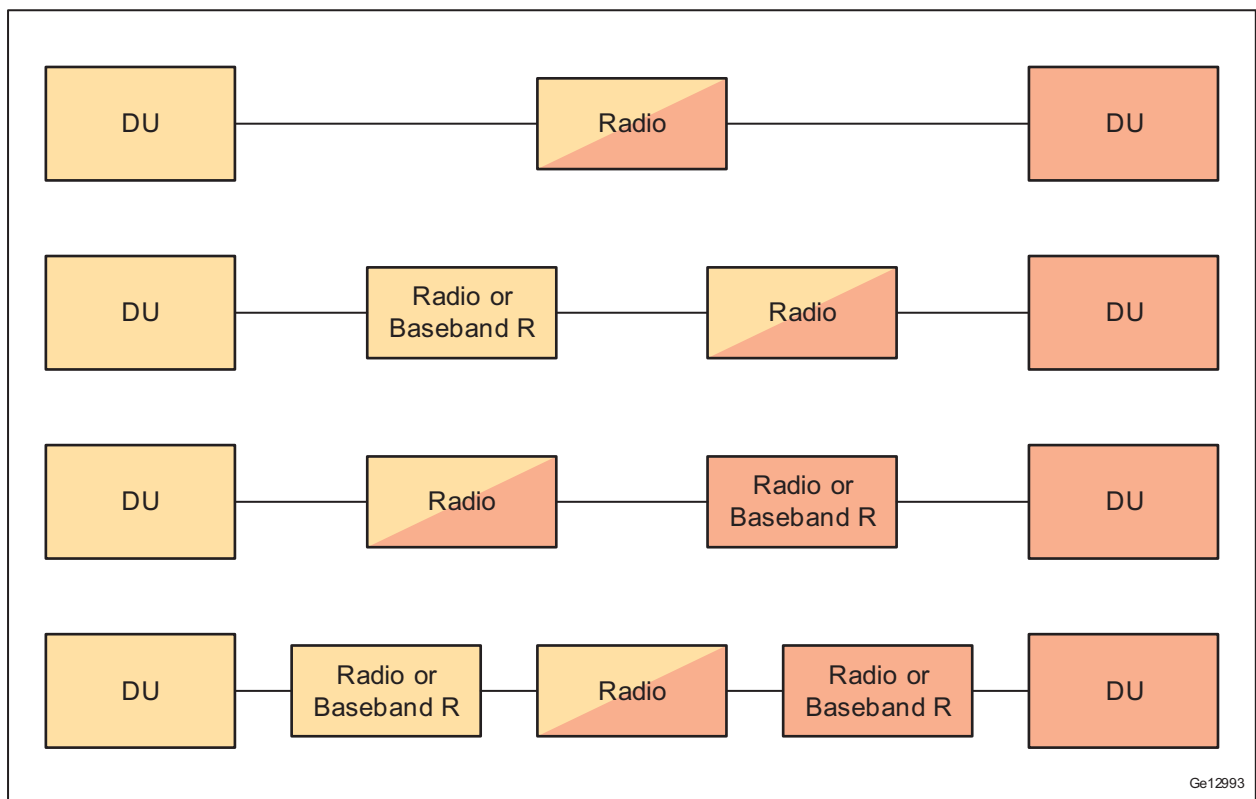


Figure 9 Radio Chains Between Nodes Synchronized Using GPS Out

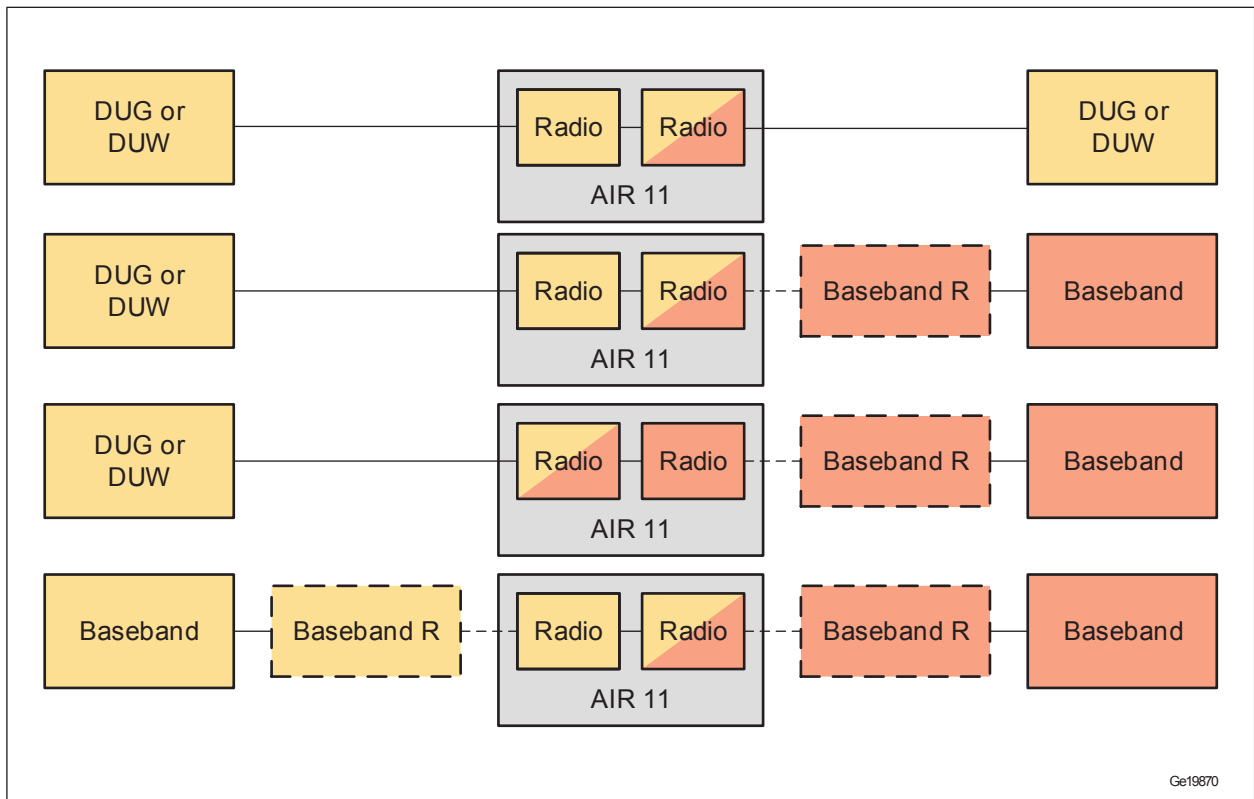


Figure 10 Radio Chains with AIR 11 Handled as Two Radio Units Between Nodes Synchronized Using GPS Out

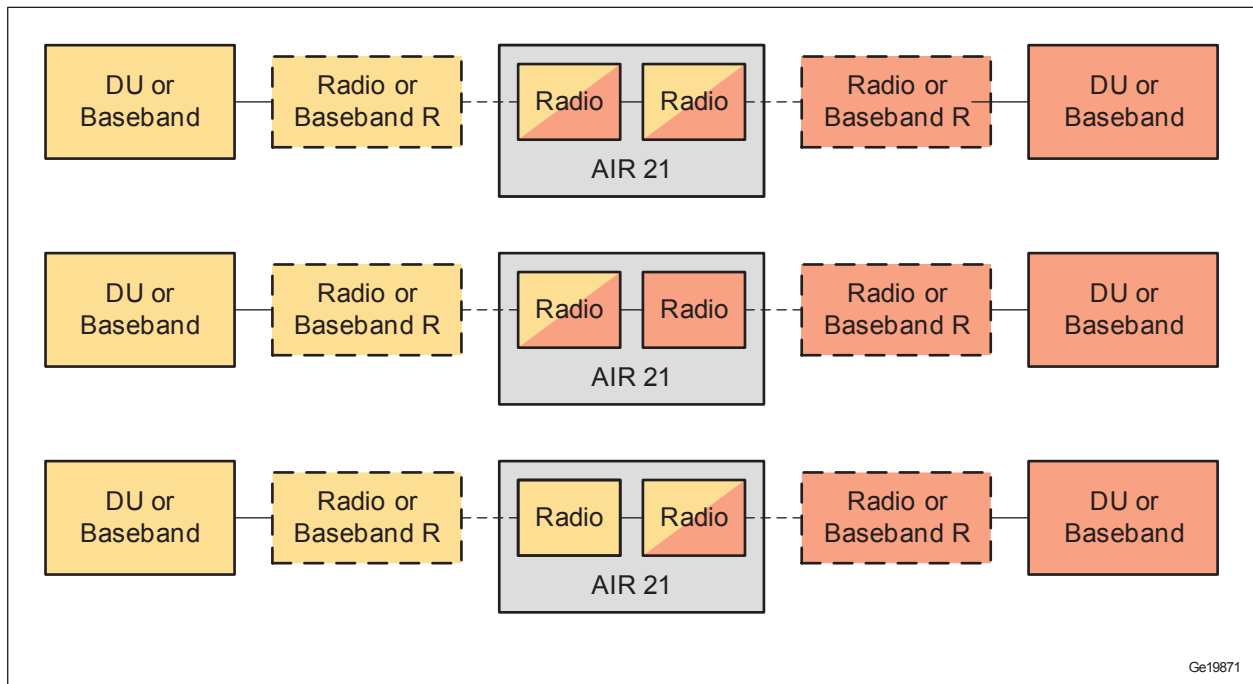


Figure 11 Radio Chains with AIR 21 Handled as Two Radio Units Between Nodes Synchronized Using GPS Out

11.2.2 Mixed Mode Synchronization Using Node Group Synchronization

This section lists rules that apply to configurations using Node Group Synchronization. For more information refer to [Manage Node Group Synchronization](#) in the LTE RBS CPI library.

The following rules apply to synchronization using Node Group Synchronization:

- Only one DU can act as core DU of the node.
- DUGs that are synchronized through IDL2 are handled as one common node. Up to three DUGs can be synchronized in this way.
- Up to fifteen nodes sharing mixed mode radios can be synchronized through Node Group Synchronization:
 - Each node is assigned a unique priority between 1 and 15.
 - Dynamic Node Group Synchronization is available, introducing two modes for defining sync provider, reduced mode and enhanced mode:
 - Reduced or enhanced mode can be set per node.
 - Reduced mode works as previous software versions, where the node with the highest priority and an active reference is sync provider. The

node remains sync provider as long as it is active, even if it goes into frequency holdover mode.

- In enhanced mode, both synchronization reference priority and node priority is used:
 - The node with the best synchronization reference priority is used.
 - If multiple nodes have the same synchronization reference priority, the node priority is used to define a sync provider.
 - If a sync provider goes into frequency holdover mode, a different node is used.
- DUs and Baseband units can act as sync provider or sync receiver:
 - DUG supports reduced mode only.
 - DUG, DUW, DUL, DUS, and Baseband can act as either sync provider or sync receiver.
 - CDMA + LTE is supported with Node Group Synchronization. The CDMA node must use DUS 41 + XMU and can only act as sync receiver.
- Supported Node Group topology:
 - Nodes are synchronized through radio cascading chains where one mixed mode radio is shared between the connected nodes:
 - AIR 11 counts as two radio units, where only one can be in mixed mode.
 - AIR 21 counts as two radio units, where one or both can be in mixed mode.
 - In nodes with multiple DUs, the radio cascading chain carrying the synchronization information can be connected to either a core DU or an extension DU.
 - Any node can be connected directly to the node with the highest node priority.
 - Nodes can be cascaded, up to three hops away from the node with the highest node priority:
 - A node that is one hop away must have at least one chain where one radio is shared with the node with the highest node priority. See A in [Figure 12](#).
 - A node that is two hops away must have at least one chain where one radio is shared with the node that is one hop away. See B in [Figure 12](#).



- A node that is three hops away must have at least one chain where one radio is shared with the node that is two hops away. See E in [Figure 12](#).
- A node that is one hop away can have chains where one radio is shared between two nodes that are both one hop away. See C in [Figure 12](#).
- A node that is two hops away can have chains where one radio is shared between two nodes that are both two hops away. See D in [Figure 12](#).
- A node that is three hops away can have chains where one radio is shared between two nodes that are both three hops away. See F in [Figure 12](#).
- A chain shared between two nodes, where the nodes are the same amount of hops away, is not used for synchronization. See C, D, and F in [Figure 12](#). In such a case, both nodes independently synchronizes with a node one hop closer. If both nodes are one hop away, they both synchronize with the node with the highest node priority.

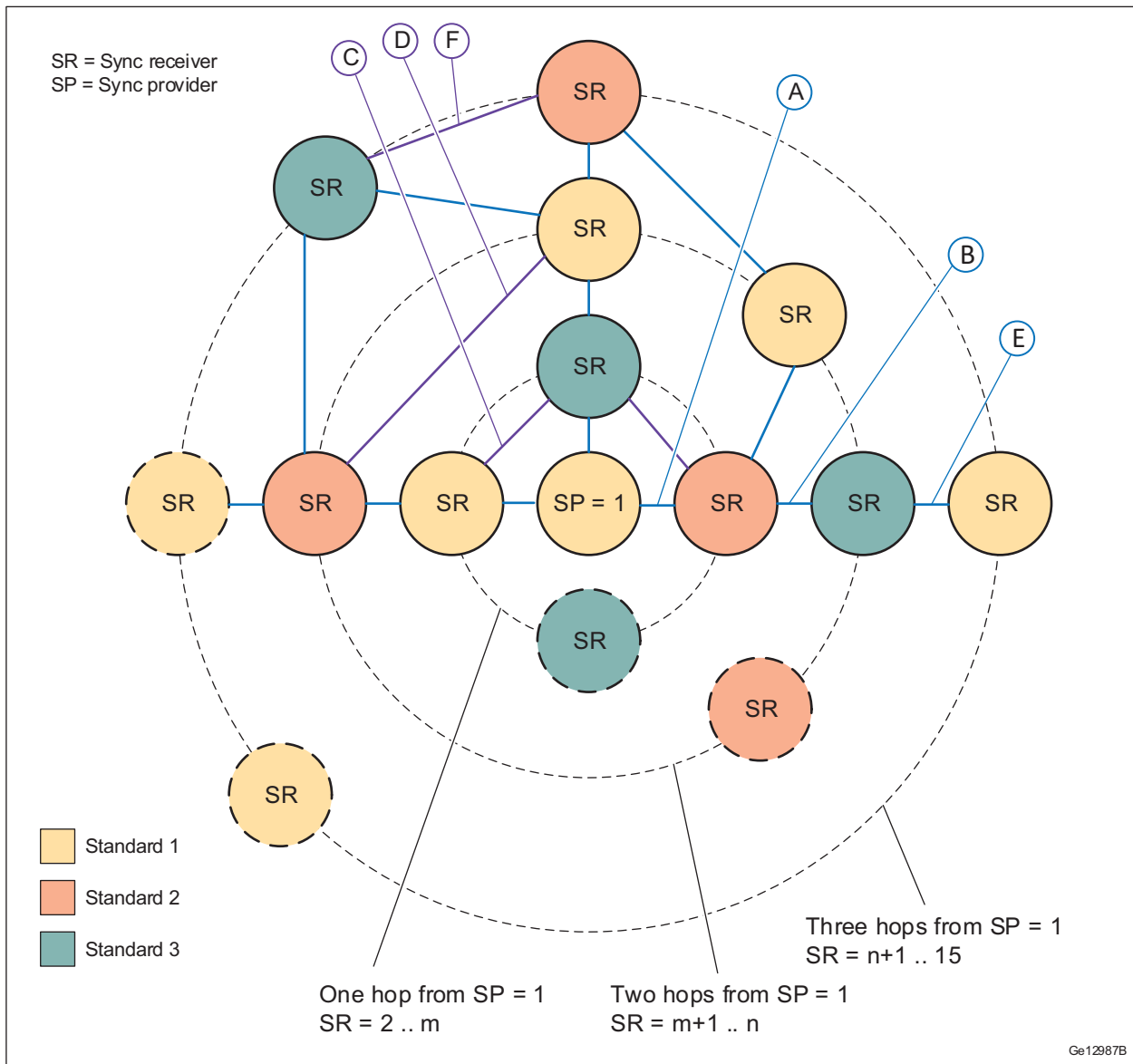


Figure 12 Topology for DU or Baseband Radio Nodes Synchronized Using Node Group Synchronization

The following rules apply to multiple nodes that are connected to the same Baseband R:

- A Baseband Radio Node that is connected to Baseband R can have up to four nodes behind every splitter block, see [Figure 13](#).
 - The unit before the splitter block must be a Baseband unit. Units behind the splitter block can be either DU or Baseband.
 - In case of sync provider failure, a group of nodes behind a splitter block can become its own node group independent of other nodes.



- Nodes behind the splitter block must always have lower priority than the nodes before the splitter block. The nodes behind the splitter block can only use the reduced mode of Dynamic Node Group Synchronization.

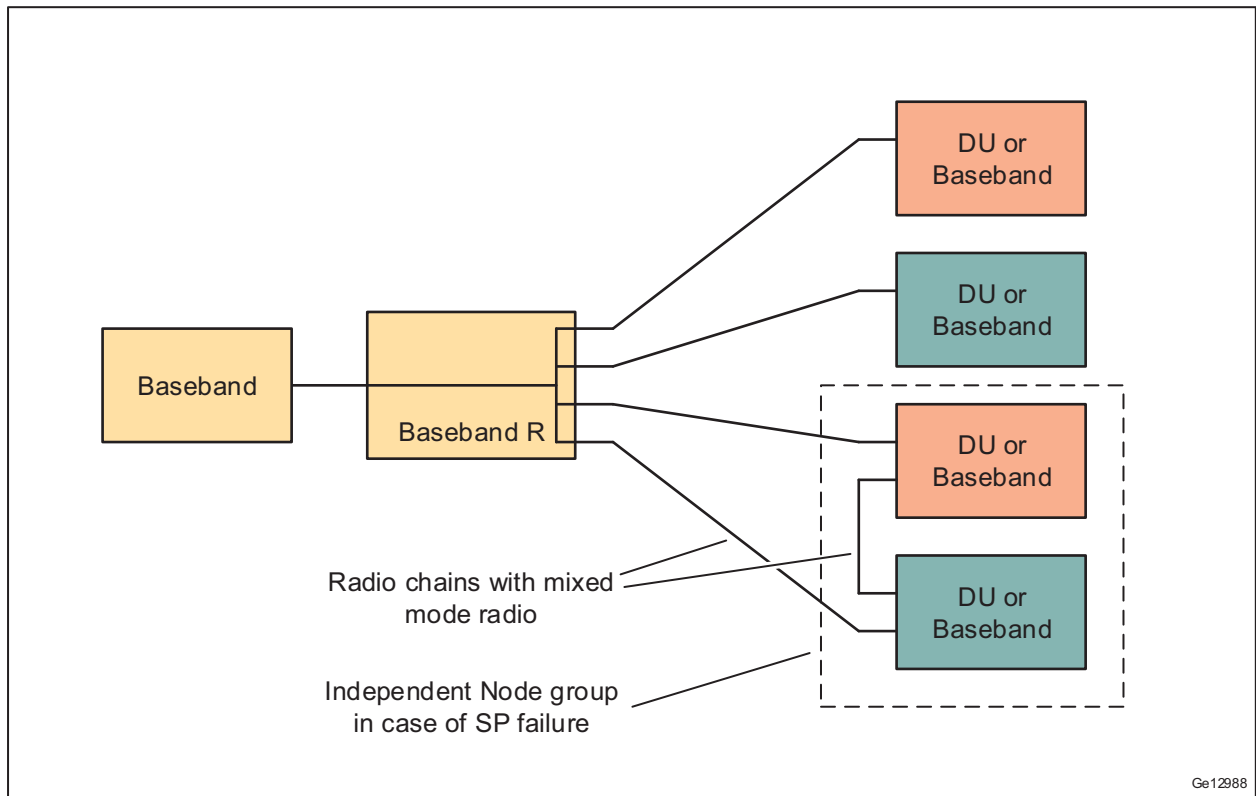


Figure 13 Topology for DU or Baseband Radio Nodes Connected to Baseband R and Synchronized Using Node Group Synchronization

The following rules apply to radio chains between nodes synchronized using Node Group Synchronization:

- A radio chain that includes one mixed mode radio can have up to six radio or Baseband R units between the DU or Baseband units, see [Figure 13](#) and [Figure 14](#):
 - The last radio seen from each DU or Baseband is a mixed mode radio shared between two nodes.
 - Additional single mode limitations for DU, Baseband, or Baseband R can reduce the maximum number of radios in a cascaded radio chain between the DU or Baseband units.
 - Cascaded radios can belong to the same or to different RBBs.
 - [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

- AIR 11 counts as two radio units, where only one can be in mixed mode.
- AIR 21 counts as two radio units, where one or both can be in mixed mode.
- For configuration rules with Baseband R503, see [Baseband R503](#) on page 1293.

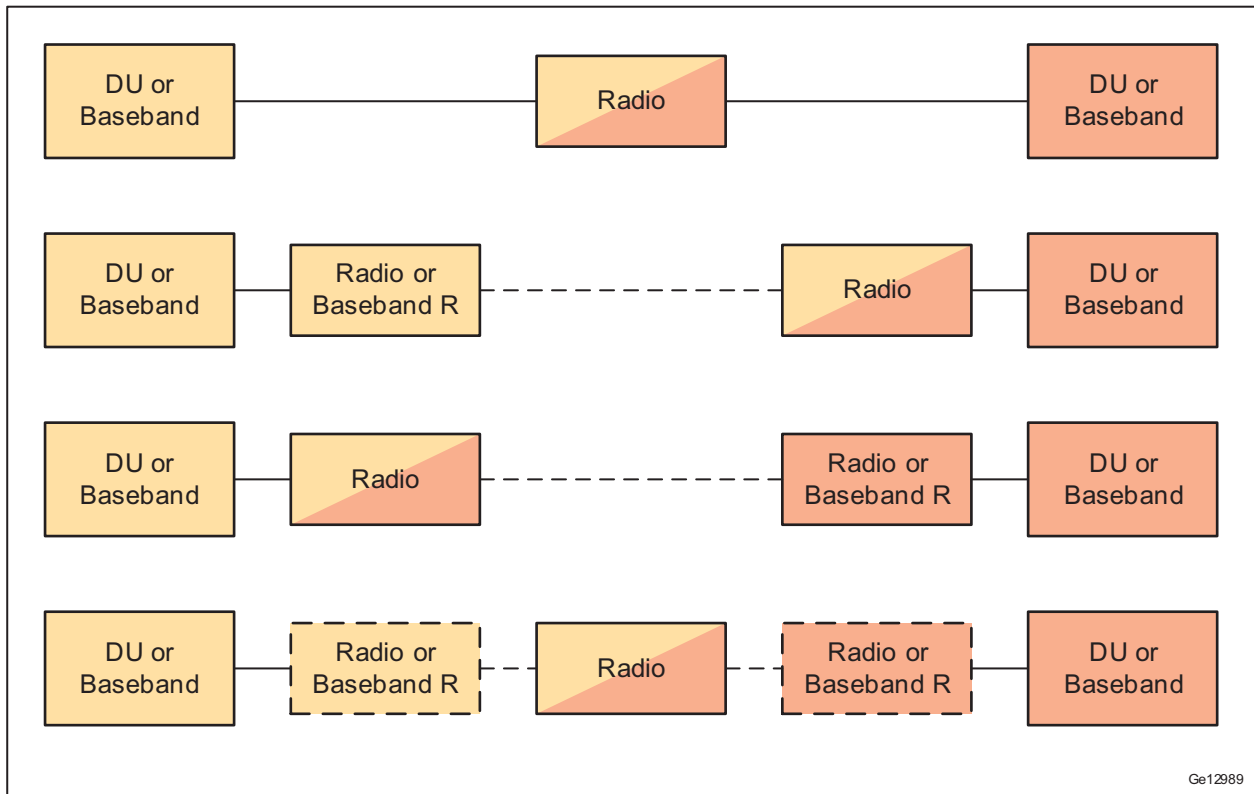


Figure 14 Radio Chains Between Nodes Synchronized Using Node Group Synchronization

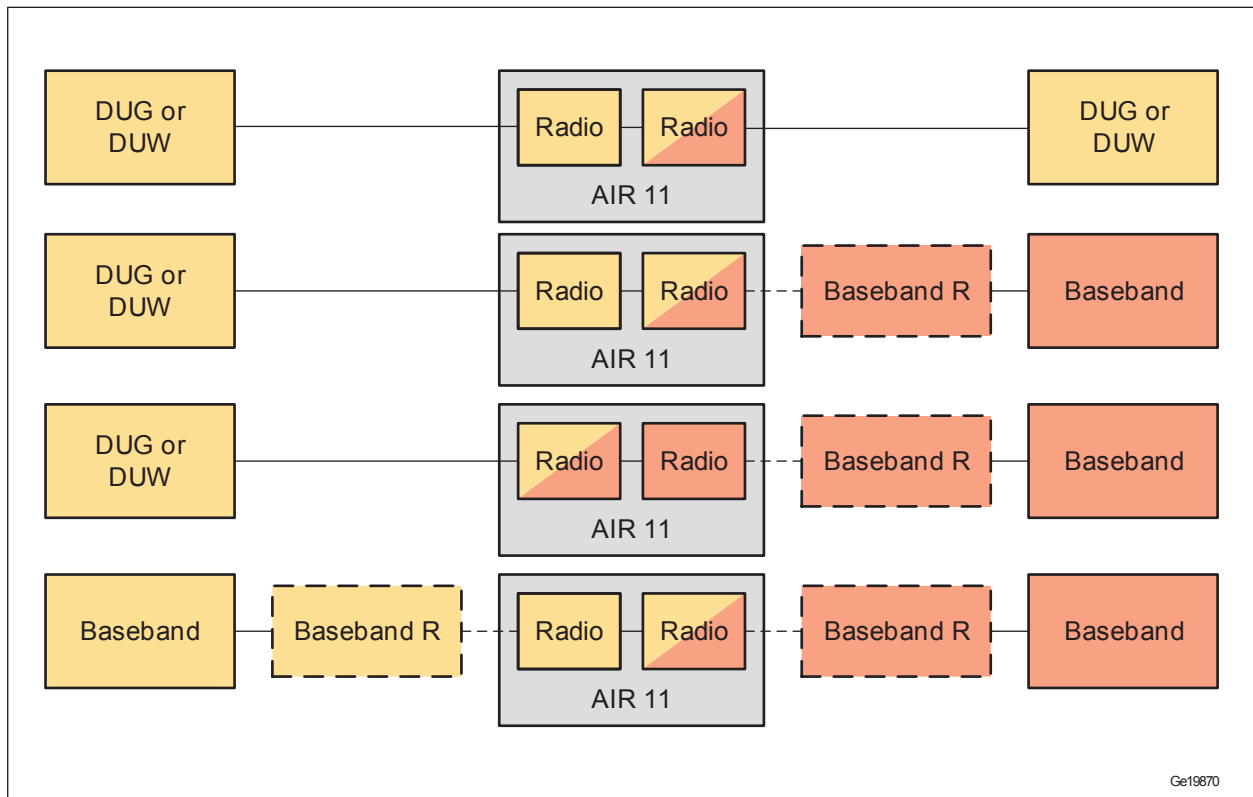


Figure 15 Radio Chains with AIR 11 Handled as Two Radio Units Between Nodes Synchronized Using GPS Out

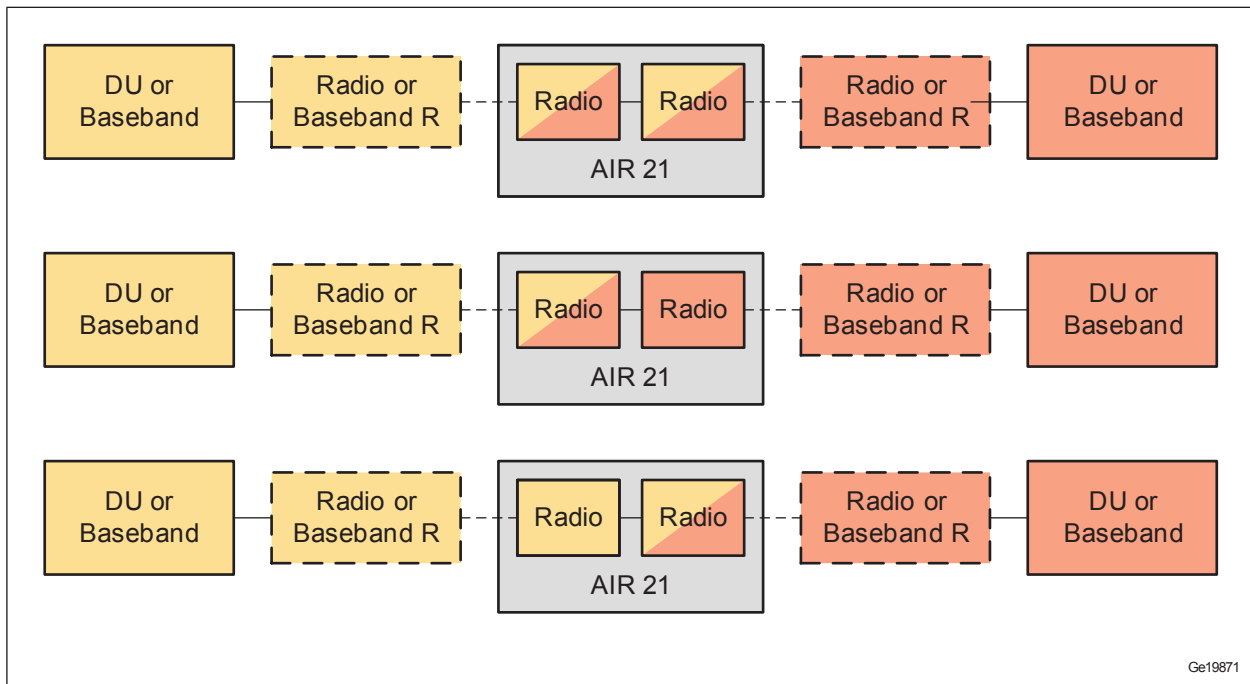


Figure 16 Radio Chains with AIR 21 Handled as Two Radio Units Between Nodes Synchronized Using GPS Out

The following rules apply to radio chains between nodes with mixed mode baseband and synchronized using Node Group Synchronization:

- Mixed mode from two nodes using node group synchronization can be combined with mixed mode Baseband, see [Figure 17](#):
 - Any radio in the cascading chain from a mixed mode Baseband up to the shared mixed mode radio can have one or several standards.
 - Only one mixed mode radio is shared between the two nodes.
 - The radio shared between two nodes can support three standards. Two standards from the mixed mode Baseband node and one standard from the other node. This is only supported for some radios, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE](#) on page 944.

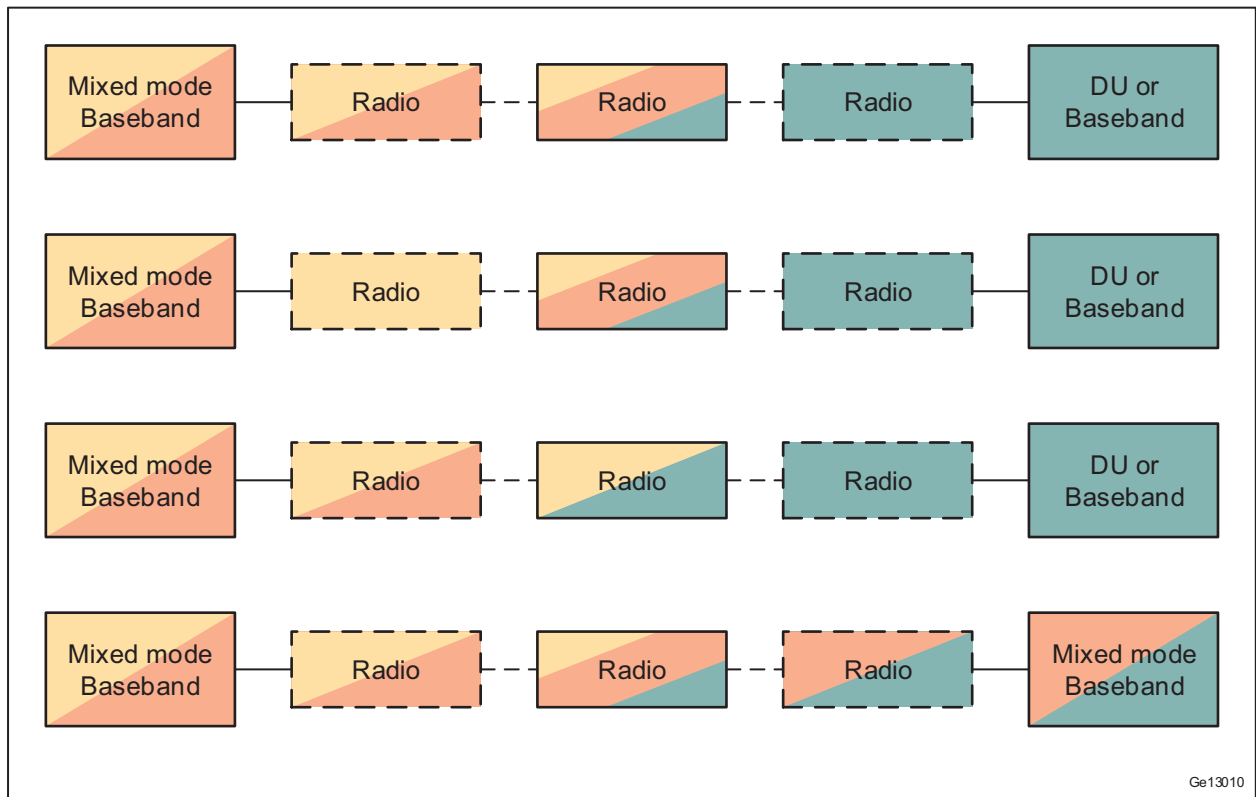


Figure 17 Radio Chains Between Nodes With Mixed Mode Baseband Synchronized Using Node Group Synchronization

The following rules apply to configurations with Mixed Mode Baseband R503:

- Two DU or Baseband Radio Nodes can be connected in front of two splitter blocks with mixed mode radios behind them. The third splitter block can additionally be used by one of the two nodes.
 - Node Group Synchronization between the two nodes are provided between the first and the second splitter block. See [Figure 18](#).
- The unit in front of the splitter block must be a DUS or a Baseband unit. Dual and triple DU configurations are supported.
- Node Group Synchronization for additional nodes must be provided through a mixed mode radio connected to a node in front of the splitter blocks. See [Figure 19](#).
- For cascading rules with Baseband R503, see [Baseband R503](#) on page 1293.

Note: The RI port of the node behind the splitter blocks connected to the radio in cascade with the Mixed Mode Baseband R503 must not be configured as syncRiPortCandidate.

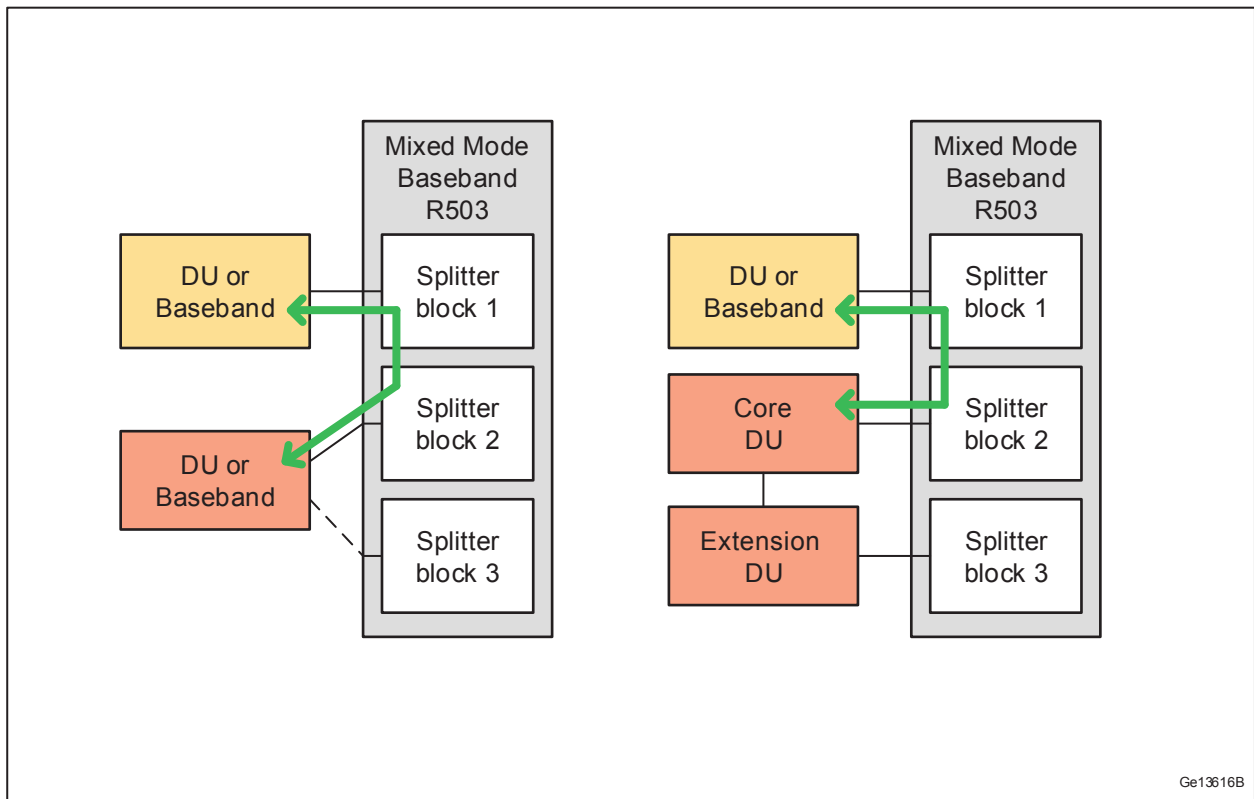


Figure 18 Node Group Synchronization Between Two DU or Baseband Radio Nodes Provided Through a Mixed Mode Baseband R503

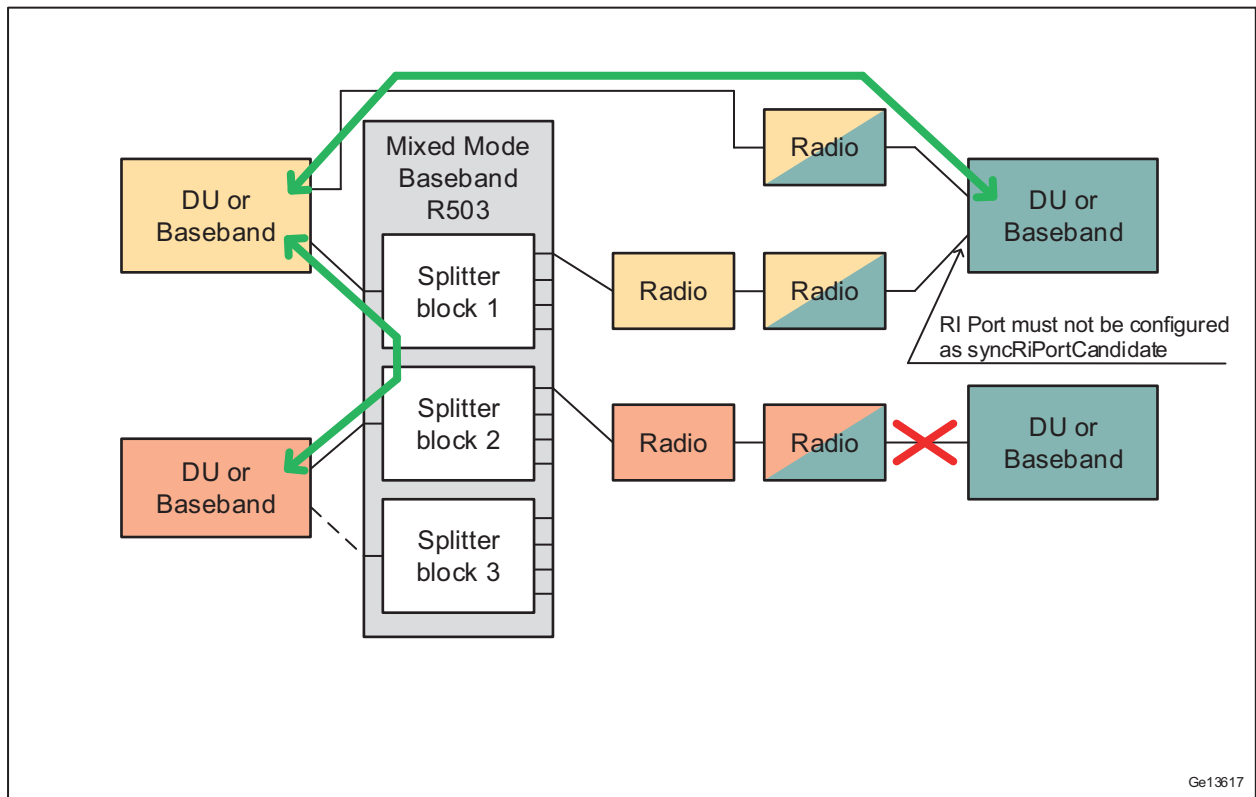


Figure 19 Node Group Synchronization with a DU or Baseband Connected to a Mixed Mode Radio Behind a Mixed Mode Baseband R503

11.3 Baseband Support and Configuration for Mixed Mode Baseband

A mixed mode Baseband provides support for up to three standards on the same Baseband unit. When configured for mixed mode, the Baseband unit has different capacity per standard compared to when configured for one standard only.

For supported mixed mode Baseband configurations, see [Table 393](#).

Table 393 Mixed Mode Baseband Configuration Support

Configuration	Baseband	From Software Version
WCDMA + GSM	Baseband 5212	18.Q2
	Baseband 5216	18.Q2
	Baseband 6303	18.Q2
	Baseband 6318	18.Q2
	Baseband 6620	18.Q2
	Baseband 6630	18.Q2



Configuration	Baseband	From Software Version
LTE + GSM	Baseband 5216	18.Q2
	Baseband 6318	18.Q2
	Baseband 6630	18.Q2
LTE + NR	Baseband 6630	19.Q4
WCDMA + LTE	Baseband 5216	18.Q2
	Baseband 6318	18.Q2
	Baseband 6630	18.Q2
	IDU 5209	18.Q2
LTE + ESS	Baseband 6630	20.Q1
NR + ESS	Baseband 6630	20.Q1
WCDMA + GSM + LTE	Baseband 5216	18.Q2
	Baseband 6318	18.Q2
	Baseband 6630	18.Q2
LTE + NR + ESS	Baseband 6630	20.Q1

In addition to the Baseband support and configuration, the following rules apply to mixed mode Baseband:

- For cascading rules with Baseband R503, see [Cascade Configurations with Baseband R503](#) on page 1303.
- Single mode radios and mixed mode radios can be mixed and placed in any position in the same cascade chain.

For an example of configuration with mixed mode Baseband, see [Figure 20](#) below.

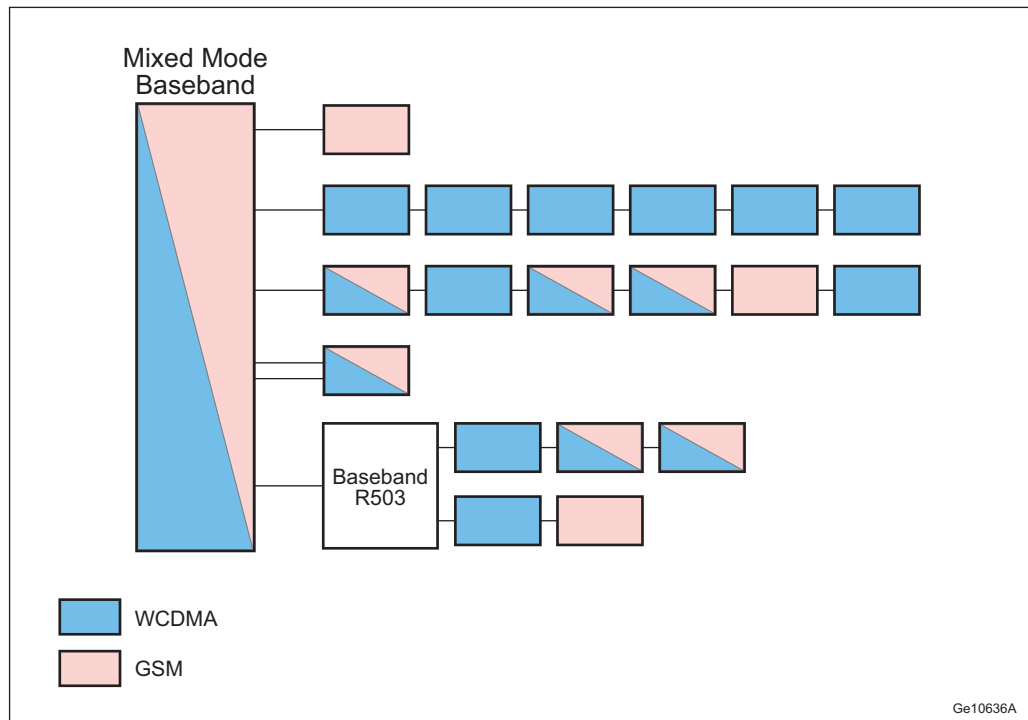


Figure 20 Example of Configuration with Mixed Mode Baseband

11.3.1 Mixed Mode Baseband Support WCDMA + GSM with Baseband 5212

Table 394 Configuration Support with One WCDMA + GSM Mixed Mode Baseband 5212

		Standard	Software Version									
			18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of WCDMA carriers	1TX/1RX	WCDMA	6	6	6	6	6	6	6	6	6	6
	1TX/2RX 2TX/2RX	WCDMA	6	6	6	6	6	6	6	6	6	6
	1TX/4RX 2TX/4RX	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of GSM TRXs	1TX/1RX	GSM	12	12	12	12	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾
	1TX/2RX	GSM	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾
	1TX/4RX	GSM	12	12	12	12	12	12	12	12	12	12
	2TX/2RX	GSM	12	12	12	12	12	12	12-20 ⁽¹⁾	12-20 ⁽¹⁾	12-20 ⁽¹⁾	12-20 ⁽¹⁾
	2TX/4RX	GSM	12	12	12	12	12	12	12	12	12	12



	Standard	Software Version									
		18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of sectors	WCDMA ⁽²⁾	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Mixed mode WCDMA + GSM	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	Total ⁽⁴⁾	18	18	18	18	18	18	18	18	18	18
Maximum number of cells per sector	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁵⁾ (HSPA)	WCDMA	4	4	4	4	4	4	4	4	4	4
Maximum number of radios	WCDMA	12	12	12	12	12	12	12	12	12	12
	GSM	24	24	24	24	24	24	24	24	24	24
	WCDMA + GSM	12	12	12	12	12	12	12	12	12	12
	Total	24	24	24	24	24	24	24	24	24	24
Maximum number of 3GPP bands ⁽⁶⁾	WCDMA	2	2	2	2	2	2	2	2	2	2
	GSM	5	5	5	5	5	5	5	5	5	5
	WCDMA + GSM	2	2	2	2	2	2	2	2	2	2
	Total	7	7	7	7	7	7	7	7	7	7
Maximum number of radios per cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA + GSM	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 12 TRXs are only available with Combined Cell.

(2) The total amount of sectors that uses WCDMA, counting both single mode and mixed mode sectors.

(3) The total amount of sectors that uses GSM, counting both single mode and mixed mode sectors.

(4) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.

(5) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

(6) Including band 0.



11.3.2 Mixed Mode Baseband Support WCDMA + GSM with Baseband 5216

Table 395 Configuration Support with One WCDMA + GSM Mixed Mode Baseband 5216

		Standard	Software Version									
			18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of WCDMA carriers	1TX/1RX	WCDMA	12	12	12	12	12	12	12	12	12	12
	1TX/2RX 2TX/2RX	WCDMA	12	12	12	12	12	12	12	12	12	12
	1TX/4RX 2TX/4RX	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of GSM TRXs	1TX/1RX	GSM	24	24	24	24	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/2RX	GSM	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/4RX	GSM	24	24	24	24	24	24	24	24	24	24
	2TX/2RX	GSM	24	24	24	24	24	24	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾
	2TX/4RX	GSM	24	24	24	24	24	24	24	24	24	24
Maximum number of sectors	WCDMA ⁽²⁾		6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
		GSM ⁽³⁾	24	24	24	24	24	24	24	24	24	24
		Mixed mode WCDMA + GSM	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
	Total ⁽⁴⁾		36	36	36	36	36	36	36	36	36	36
Maximum number of cells per sector		WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁵⁾ (HSPA)		WCDMA	4	4	4	4	4	4	4	4	4	4
Maximum number of radios	WCDMA		24	24	24	24	24	24	24	24	24	24
	GSM		36	36	36	36	36	36	36	36	36	36
	WCDMA + GSM		24	24	24	24	24	24	24	24	24	24
	Total		36	36	36	36	36	36	36	36	36	36
Maximum number of bands	WCDMA		2	2	2	2	2	2	2	2	2	2
	GSM		5	5	5	5	5	5	5	5	5	5
	WCDMA + GSM		2	2	2	2	2	2	2	2	2	2
	Total		7	7	7	7	7	7	7	7	7	7



	Standard	Software Version									
		18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of radios per cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA + GSM	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6

- (1) Configurations with more than 24 TRXs are only available with Combined Cell.
- (2) The total amount of sectors that uses WCDMA, counting both single mode and mixed mode sectors.
- (3) The total amount of sectors that uses GSM, counting both single mode and mixed mode sectors.
- (4) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.
- (5) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

11.3.3 Mixed Mode Baseband Support WCDMA + GSM with Baseband 6303

Table 396 Configuration Support with One WCDMA + GSM Mixed Mode Baseband 6303

		Standard	Software Version									
			18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of WCDMA carriers	1TX/1RX	WCDMA	6	6	6	6	6	6	6	6	6	6
	1TX/2RX 2TX/2RX	WCDMA	6	6	6	6	6	6	6	6	6	6
	1TX/4RX 2TX/4RX	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of GSM TRXs	1TX/1RX	GSM	12	12	12	12	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾
	1TX/2RX	GSM	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾	12–40 ⁽¹⁾
	1TX/4RX	GSM	12	12	12	12	12	12	12	12	12	12
	2TX/2RX	GSM	12	12	12	12	12	12	12–20 ⁽¹⁾	12–20 ⁽¹⁾	12–20 ⁽¹⁾	12–20 ⁽¹⁾
	2TX/4RX	GSM	12	12	12	12	12	12	12	12	12	12
Maximum number of sectors	WCDMA ⁽²⁾		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM ⁽³⁾		12	12	12	12	12	12	12	12	12	12
	Mixed mode WCDMA + GSM		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	Total ⁽⁴⁾		18	18	18	18	18	18	18	18	18	18



	Standard	Software Version									
		18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of cells per sector	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁵⁾ (HSPA)	WCDMA	4	4	4	4	4	4	4	4	4	4
Maximum number of radios	WCDMA	12	12	12	12	12	12	12	12	12	12
	GSM	24	24	24	24	24	24	24	24	24	24
	WCDMA + GSM	12	12	12	12	12	12	12	12	12	12
	Total	24	24	24	24	24	24	24	24	24	24
Maximum number of bands	WCDMA	2	2	2	2	2	2	2	2	2	2
	GSM	5	5	5	5	5	5	5	5	5	5
	WCDMA + GSM	2	2	2	2	2	2	2	2	2	2
	Total	7	7	7	7	7	7	7	7	7	7
Maximum number of radios per cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA + GSM	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6

- (1) Configurations with more than 12 TRXs are only available with Combined Cell.
 (2) The total amount of sectors that uses WCDMA, counting both single mode and mixed mode sectors.
 (3) The total amount of sectors that uses GSM, counting both single mode and mixed mode sectors.
 (4) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.
 (5) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

11.3.4 Mixed Mode Baseband Support WCDMA + GSM with Baseband 6318

Table 397 Configuration Support with One WCDMA + GSM Mixed Mode Baseband 6318

		Standard	Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
Maximum number of WCDMA carriers	1TX/1 RX	WCDMA	12	12	12	12	12	12	12	12	12	12
	1TX/2 RX 2TX/2 RX	WCDMA	12	12	12	12	12	12	12	12	12	12
	1TX/4 RX 2TX/4 RX	WCDMA	6	6	6	6	6	6	6	6	6	6



		Standard	Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
Maximum number of GSM TRXs	1TX/1 RX	GSM	24	24	24	24	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/2 RX	GSM	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/4 RX	GSM	24	24	24	24	24	24	24	24	24	24
	2TX/2 RX	GSM	24	24	24	24	24	24	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾
	2TX/4 RX	GSM	24	24	24	24	24	24	24	24	24	24
Maximum number of sectors		WCDMA ⁽²⁾	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
		GSM ⁽³⁾	24	24	24	24	24	24	24	24	24	24
		Mixed mode WCDMA + GSM	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
		Total ⁽⁴⁾	36	36	36	36	36	36	36	36	36	36
Maximum number of cells per sector		WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁵⁾ (HSPA)		WCDMA	4	4	4	4	4	4	4	4	4	4
Maximum number of radios		WCDMA	24	24	24	24	24	24	24	24	24	24
		GSM	36	36	36	36	36	36	36	36	36	36
		WCDMA + GSM	24	24	24	24	24	24	24	24	24	24
		Total	36	36	36	36	36	36	36	36	36	36
Maximum number of bands		WCDMA	2	2	2	2	2	2	2	2	2	2
		GSM	5	5	5	5	5	5	5	5	5	5
		WCDMA + GSM	2	2	2	2	2	2	2	2	2	2
		Total	7	7	7	7	7	7	7	7	7	7
Maximum number of radios per cascade chain		WCDMA	6	6	6	6	6	6	6	6	6	6
		GSM	6	6	6	6	6	6	6	6	6	6
		WCDMA + GSM	6	6	6	6	6	6	6	6	6	6
		Total	6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 24 TRXs are only available with Combined Cell.

(2) The total amount of sectors that uses WCDMA, counting both single mode and mixed mode sectors.

(3) The total amount of sectors that uses GSM, counting both single mode and mixed mode sectors.

(4) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.

(5) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.



11.3.5 Mixed Mode Baseband Support WCDMA + GSM with Baseband 6620

Table 398 Configuration Support with One WCDMA + GSM Mixed Mode Baseband 6620

		Standard	Software Version									
			18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of WCDMA carriers	1TX/1RX	WCDMA	6	6	6	6	6	6	6	6	6	6
	1TX/2RX 2TX/2RX	WCDMA	6	6	6	6	6	6	6	6	6	6
	1TX/4RX 2TX/4RX	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of GSM TRXs	1TX/1RX	GSM	12	12	12	12	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾
	1TX/2RX	GSM	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	12– 40 ⁽¹⁾	
	1TX/4RX	GSM	12	12	12	12	12	12	12	12	12	
	2TX/2RX	GSM	12	12	12	12	12	12	12– 20 ⁽¹⁾	12– 20 ⁽¹⁾	12– 20 ⁽¹⁾	
	2TX/4RX	GSM	12	12	12	12	12	12	12	12	12	
Maximum number of sectors		WCDMA ⁽²⁾	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	
		GSM ⁽³⁾	12	12	12	12	12	12	12	12	12	12
		Mixed mode WCDMA + GSM	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	
		Total ⁽⁴⁾	18	18	18	18	18	18	18	18	18	18
Maximum number of cells per sector		WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁵⁾ (HSPA)		WCDMA	4	4	4	4	4	4	4	4	4	4
Maximum number of radios		WCDMA	12	12	12	12	12	12	12	12	12	12
		GSM	24	24	24	24	24	24	24	24	24	24
		WCDMA + GSM	12	12	12	12	12	12	12	12	12	12
		Total	24	24	24	24	24	24	24	24	24	24
Maximum number of bands		WCDMA	2	2	2	2	2	2	2	2	2	2
		GSM	5	5	5	5	5	5	5	5	5	5
		WCDMA + GSM	2	2	2	2	2	2	2	2	2	2
		Total	7	7	7	7	7	7	7	7	7	7



	Standard	Software Version									
		18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of radios per cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA + GSM	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 12 TRXs are only available with Combined Cell.

(2) The total amount of sectors that uses WCDMA, counting both single mode and mixed mode sectors.

(3) The total amount of sectors that uses GSM, counting both single mode and mixed mode sectors.

(4) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.

(5) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

11.3.6 Mixed Mode Baseband Support WCDMA + GSM with Baseband 6630

Table 399 Configuration Support with One WCDMA + GSM Mixed Mode Baseband 6630

		Standard	Software Version										
			18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3	
Maximum number of WCDMA carriers	1TX/1RX	WCDMA	12	12	12	12	12	12	12	12	12	12	
	1TX/2RX 2TX/2RX	WCDMA	12	12	12	12	12	12	12	12	12	12	
	1TX/4RX 2TX/4RX	WCDMA	6	6	6	6	6	6	6	6	6	6	
Maximum number of GSM TRXs	1TX/1RX	GSM	24	24	24	24	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	
	1TX/2RX	GSM	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾	24– 80 ⁽¹⁾		
	1TX/4RX	GSM	24	24	24	24	24	24	24	24	24	24	
	2TX/2RX	GSM	24	24	24	24	24	24	24– 40 ⁽¹⁾	24– 40 ⁽¹⁾	24– 40 ⁽¹⁾	24– 40 ⁽¹⁾	
	2TX/4RX	GSM	24	24	24	24	24	24	24	24	24	24	
Maximum number of sectors		WCDMA ⁽²⁾	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in singl e band or 12 in dual band	
		GSM ⁽³⁾	24	24	24	24	24	24	24	24	24	24	24
		Mixed mode WCDMA + GSM	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in singl e band or 12 in dual band	
		Total ⁽⁴⁾	36	36	36	36	36	36	36	36	36	36	36



	Standard	Software Version									
		18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of cells per sector	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁵⁾ (HSPA)	WCDMA	4	4	4	4	4	4	4	4	4	4
Maximum number of radios	WCDMA	24	24	24	24	24	24	24	24	24	24
	GSM	36	36	36	36	36	36	36	36	36	36
	WCDMA + GSM	24	24	24	24	24	24	24	24	24	24
	Total	36	36	36	36	36	36	36	36	36	36
Maximum number of bands	WCDMA	2	2	2	2	2	2	2	2	2	2
	GSM	5	5	5	5	5	5	5	5	5	5
	WCDMA + GSM	2	2	2	2	2	2	2	2	2	2
	Total	7	7	7	7	7	7	7	7	7	7
Maximum number of radios per cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA + GSM	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6

- (1) Configurations with more than 24 TRXs are only available with Combined Cell.
 (2) The total amount of sectors that uses WCDMA, counting both single mode and mixed mode sectors.
 (3) The total amount of sectors that uses GSM, counting both single mode and mixed mode sectors.
 (4) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.
 (5) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.

11.3.7 Mixed Mode Baseband Support LTE + GSM with Baseband 5216

Table 400 Configuration Support with One LTE + GSM Mixed Mode Baseband 5216

		Standard		Software Version									
				18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of GSM TRXs	1TX/1RX	GSM		24	24	24	24	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	1TX/2RX	GSM		24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾	24–80 ⁽¹⁾
	2TX/2RX	GSM		24	24	24	24	24	24	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾	24–40 ⁽¹⁾
	1TX/4RX 2TX/4RX	GSM		24	24	24	24	24	24	24	24	24	24
Maximum number of LTE carriers	1TX/1RX	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1–3 NB-IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
			FDD with 4–6 NB- IoT cells ⁽³⁾	6	6	6	6	6	6– 12 ⁽⁴⁾	12	12	12	12
		LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 1–3 NB- IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 4–6 NB- IoT cells ⁽³⁾	6	6	6	6	6	6– 12 ⁽⁴⁾	12	12	12	12
		MI	NB-IoT in- band ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT standalon e	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB +SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁷⁾	12	12	12	12	12	12	12	12	12	12
		Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 1–3 NB- IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 4–6 NB- IoT cells ⁽³⁾	6	6	6	6	6	6– 12 ⁽⁴⁾	12	12	12	12
			FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		1TX/2RX	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12
				FDD with 1–3 NB- IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
			FDD with 4–6 NB-IoT cells ⁽³⁾	6	6	6	6	6	6–12 ⁽⁴⁾	12	12	12	12
		LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 1–3 NB-IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 4–6 NB-IoT cells ⁽³⁾	6	6	6	6	6	6–12 ⁽⁴⁾	12	12	12	12
		MI	NB-IoT in-band ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁷⁾	12	12	12	12	12	12	12	12	12	12
		Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD + NB-IoT SA with 4–6 NB-IoT cells ⁽³⁾	6	6	6	6	6	6–12 ⁽⁴⁾	12	12	12	12
			FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
	2TX/2RX	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD with 1–3 NB-IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12



		Standard		Software Version									
				18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
			FDD with 4–6 NB- IoT cells ⁽³⁾	6	6	6	6	6	6– 12 ⁽⁴⁾	12	12	12	12
		LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 1–3 NB- IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12
			FDD + TDD with 4–6 NB- IoT cells ⁽³⁾	6	6	6	6	6	6– 12 ⁽⁴⁾	12	12	12	12
		MI	NB-IoT in- band ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
			NB-IoT (IB+GB +SA)	6	6	6	6	6	6	6	6	6	6
			Cat-M1 ⁽⁷⁾	12	12	12	12	12	12	12	12	12	12
		Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
			FDD +TDD + NB-IoT SA (with 1–3 NB- IoT cells ⁽³⁾	12	12	12	12	12	12	12	12	12	12
			FDD +TDD + NB-IoT SA (with 4–6 NB- IoT cells ⁽³⁾	6	6	6	6	6	6– 12 ⁽⁴⁾	12	12	12	12
			FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
	1TX/4RX 2TX/4RX	LTE FDD	FDD only ⁽²⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾



		Standard	Software Version									
			18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
			FDD with 1–3 NB- IoT cells ⁽³⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9– 12 ⁽⁴⁾	9– 12 ⁽⁴⁾	9– 12 ⁽⁴⁾	9– 12 ⁽⁴⁾
			FDD with 1–3 NB- IoT cells ⁽³⁾ (ABW > 480 MHz)	6	6	6	6	6	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾
			FDD with 4–6 NB- IoT cells ⁽³⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			FDD with 4–6 NB- IoT cells ⁽³⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-
		LTE TDD	TDD only ⁽²⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾
		Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾	12 600– 960 MHz ⁽⁶⁾
			FDD + TDD with 1–3 NB- IoT cells ⁽³⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9– 12 ⁽⁴⁾	9– 12 ⁽⁴⁾	9– 12 ⁽⁴⁾	9– 12 ⁽⁴⁾
			FDD + TDD with 1–3 NB- IoT cells ⁽³⁾ (ABW > 480 MHz)	6	6	6	6	6	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾	6– 12 ⁽⁴⁾ 600– 960 MHz ⁽⁶⁾
			FDD + TDD with 4–6 NB- IoT cells ⁽³⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
			FDD + TDD with 4–6 NB- IoT cells ⁽³⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-



		Standard		Software Version									
				18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
		MI	NB-IoT in-band (ABW ≤ 480 MHz) ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT in-band (ABW > 480 MHz) ⁽⁵⁾	3	3	3	3	3	3	3	3	3	3
			NB-IoT guard band (ABW ≤ 480 MHz) ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT guard band (ABW > 480 MHz) ⁽⁵⁾	3	3	3	3	3	3	3	3	3	3
			NB-IoT standalone ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB +SA) (ABW ≤ 480 MHz) ⁽⁵⁾	6	6	6	6	6	6	6	6	6	6
			NB-IoT (IB+GB +SA) (ABW > 480 MHz) ⁽⁵⁾	3	3	3	3	3	3	3	3	3	3
			Cat-M1 ⁽⁷⁾	12	12	12	12	12	12	12	12	12	12
		Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾	12 600–960 MHz ⁽⁶⁾
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells ⁽³⁾ (ABW ≤ 480 MHz)	9	9	9	9	9	9–12 ⁽⁴⁾	9–12 ⁽⁴⁾	9–12 ⁽⁴⁾	9–12 ⁽⁴⁾	9–12 ⁽⁴⁾
			FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells ⁽³⁾ (ABW ≤ 480 MHz)	6	6	6	6	6	9–12 ⁽⁴⁾	9–12 ⁽⁴⁾	6–12 ⁽⁴⁾ 600–960 MHz ⁽⁶⁾	6–12 ⁽⁴⁾ 600–960 MHz ⁽⁶⁾	6–12 ⁽⁴⁾ 600–960 MHz ⁽⁶⁾
			FDD + TDD +	6	6	6	6	6	6	6	6	6	6



		Standard		Software Version									
				18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
			NB-IoT SA with 4–6 NB- IoT cells ⁽³⁾ (ABW ≤ 480 MHz)										
			FDD + TDD + NB-IoT SA with 4–6 NB- IoT cells ⁽³⁾ (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
			FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12– 15 ⁽⁴⁾	12– 15 ⁽⁴⁾	12– 15 ⁽⁴⁾	12– 15 ⁽⁴⁾	12– 15 ⁽⁴⁾
			FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9– 15 ⁽⁴⁾ 600– 720 MHz ⁽⁶⁾	9– 15 ⁽⁴⁾ 600– 720 MHz ⁽⁶⁾	9– 15 ⁽⁴⁾ 600– 720 MHz ⁽⁶⁾	9– 15 ⁽⁴⁾ 600– 720 MHz ⁽⁶⁾	9– 15 ⁽⁴⁾ 600– 720 MHz ⁽⁶⁾
		8TX/8RX	LTE TDD ⁽²⁾		12 960 MHz	12 960 MHz	12 960 MHz	12 960 MHz	12 960 MHz	12 960 MHz	12 960 MHz	12 960 MHz	12 960 MHz
Maximum number of sectors		GSM ⁽⁸⁾		24	24	24	24	24	24	24	24	24	24
		LTE + NB-IoT ⁽⁹⁾		12	12	12	12	12	12	12	12	12	12
		Mixed mode GSM + LTE + NB-IoT		12	12	12	12	12	12	12	12	12	12
		Total ⁽¹⁰⁾		36	36	36	36	36	36	36	36	36	36
Maximum number of radios		GSM		36	36	36	36	36	36	36	36	36	36
		LTE + NB-IoT		24	24	24	24	24	24	24	24	24	24
		GSM + LTE + NB-IoT		36	36	36	36	36	36	36	36	36	36
		Total		36	36	36	36	36	36	36	36	36	36
Maximum number of bands		GSM		5	5	5	5	5	5	5	5	5	5
		LTE + NB-IoT		6	6	6	6	6	6	6	6	6	6
		GSM + LTE + NB-IoT		5	5	5	5	5	5	5	5	5	5
		Total		11	11	11	11	11	11	11	11	11	11
Maximum number of radios per cascade chain		GSM		6	6	6	6	6	6	6	6	6	6
		LTE + NB-IoT		6	6	6	6	6	6	6	6	6	6
		GSM + LTE + NB-IoT		6	6	6	6	6	6	6	6	6	6
		Total		6	6	6	6	6	6	6	6	6	6

(1) Configurations with more than 24 TRXs are only available with Combined Cell.

(2) Any combination of possible antenna configurations is supported. Total number of cells and maximum bandwidth depends on CPRI capacity.

(3) Minimum one NB-IoT in-band or guard band cell.

(4) Not possible to configure Elastic RAN when exceeding the lower limit.

(5) Each NB-IoT in-band or guard band cell requires one host LTE cell.



- (6) Maximum 600 MHz with radios from group 1-6, 800 MHz with radios from group 3-6, and 960 MHz with radios from group 5 and 6. See [Radio Groups](#) on page 101.
- (7) Each Cat-M1 cell requires one host LTE cell. Cat-M1 is not included in total cell count.
Cat-M1 and NB-IoT at the same time for the same LTE carrier is supported.
For additional limitations with Cat-M1 and NB-IoT, see [Radio Configurations for Massive IoT](#) on page 455.
- (8) The total amount of sectors that uses GSM, counting both single mode and mixed mode sectors.
- (9) The total amount of sectors that uses LTE + NB-IoT, counting both single mode and mixed mode sectors.
- (10) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.

11.3.8 Mixed Mode Baseband Support LTE + GSM with Baseband 6318

Table 401 Configuration Support with One LTE + GSM Mixed Mode Baseband 6318

	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	GSM		24	24	24	24	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		IB/GB cell)										
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
	1TX/2 RX	GSM	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾
		LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12
			FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12
			FDD with	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12



	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)										
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
2TX/2RX		NB-IoT cells (min 1 NB-IoT IB/GB cell)										
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
	GSM		24	24	24	24	24	24	24-40 ⁽¹⁾	24-40 ⁽¹⁾	24-40 ⁽¹⁾	24-40 ⁽¹⁾
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6



	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA (with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell))	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA (with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell))	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/4 RX 2TX/4 RX	GSM		24	24	24	24	24	24	24	24	24	24
	LTE FDD	FDD only	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾



Standard		Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	(ABW > 480 MHz)										
	FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
	FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	LTE TDD	TDD only	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6



	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		480 MHz)										
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	MI	NB-IoT in-band (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT in-band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		NB-IoT stand alone (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		Cat-M1 (4)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)



	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6 - 12 ⁽²⁾ 60 0-960 ⁽³⁾	6 - 12 ⁽²⁾ 60 0-960 ⁽³⁾	6 - 12 ⁽²⁾ 60 0-960 ⁽³⁾	6 - 12 ⁽²⁾ 60 0-960 ⁽³⁾	6 - 12 ⁽²⁾ 60 0-960 ⁽³⁾
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 - 15 ⁽²⁾ 60 0-960 ⁽³⁾	9 - 15 ⁽²⁾ 60 0-960 ⁽³⁾	9 - 15 ⁽²⁾ 60 0-960 ⁽³⁾	9 - 15 ⁽²⁾ 60 0-960 ⁽³⁾	9 - 15 ⁽²⁾ 60 0-960 ⁽³⁾
8TX/8 RX	LTE TDD ⁽⁴⁾		12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960



	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
Sectors	GSM	24	24	24	24	24	24	24	24	24	24
	LTE + NB-IoT	12	12	12	12	12	12	12	12	12	12
	GSM + LTE + NB-IoT	12	12	12	12	12	12	12	12	12	12
	Total	36	36	36	36	36	36	36	36	36	36
Radios	GSM	36	36	36	36	36	36	36	36	36	36
	LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	GSM + LTE + NB-IoT	36	36	36	36	36	36	36	36	36	36
	Total	36	36	36	36	36	36	36	36	36	36
Bands	GSM	5	5	5	5	5	5	5	5	5	5
	LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	GSM + LTE + NB-IoT	5	5	5	5	5	5	5	5	5	5
	Total	11	11	11	11	11	11	11	11	11	11
Radio units level in one cascade chain	GSM	6	6	6	6	6	6	6	6	6	6
	LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	GSM + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	GSM + LTE + NB-IoT	256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in downlink	GSM + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in uplink	GSM + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128

- (1) Configurations with more than 12 TRXs only supported with Combined Cell.
- (2) Do not support Elastic RAN when exceeding the lower limit.
- (3) Maximum 600 MHz with a mix of radios from group 1-6.
800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.
For the radios belonging to each radio group, see [Radio Groups](#) on page 101.
- (4) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.



11.3.9 Mixed Mode Baseband Support LTE + GSM with Baseband 6630

Table 402 Configuration Support with One LTE + GSM Mixed Mode Baseband 6630

Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	GSM		24	24	24	24	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾	24-80 ⁽¹⁾
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB +GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/2RX	GSM		24-80 (1)	24-80 (1)	24-80 (1)	24-80 (1)	24-80 (1)	24-80 (1)	24-80 (1)	24-80 (1)	24-80 (1)	24-80 (1)
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB + GB + SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
2TX/2RX	GSM		24	24	24	24	24	24	24-40 (1)	24-40 (1)	24-40 (1)	24-40 (1)
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB +GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD +TDD + NB-IoT SA (with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD +TDD + NB-IoT SA (with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	12	12	15	15	15	18	18	18	18	18
1TX/4RX 2TX/4RX	GSM		24	24	24	24	24	24	24	24	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	LTE FDD	FDD only	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	LTE TDD	TDD only	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾	12 – 600-9 60 ⁽³⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾	6 – 12 ⁽²⁾ 6 00-96 0 ⁽³⁾
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	MI	NB-IoT in-band (ABW	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		≤ 480 MHz) (1)										
		NB-IoT in-band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		NB-IoT standalone (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		Cat-M1 (4)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)	12 – 600-960 (3)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12 (2)	9 – 12 (2)	9 – 12 (2)	9 – 12 (2)	9 – 12 (2)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6 – 12 (2) 600-960 (3)	6 – 12 (2) 600-960 (3)	6 – 12 (2) 600-960 (3)	6 – 12 (2) 600-960 (3)	6 – 12 (2) 600-960 (3)
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		FDD + TDD + NB-IoT	12	12	12	12	12	12 – 15 (2)	12 – 15 (2)	12 – 15 (2)	12 – 15 (2)	12 – 15 (2)



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		(ABW ≤ 480 MHz)										
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 - 15 ⁽²⁾ _{00-960⁽³⁾}	9 - 15 ⁽²⁾ _{00-960⁽³⁾}	9 - 15 ⁽²⁾ _{00-960⁽³⁾}	9 - 15 ⁽²⁾ _{00-960⁽³⁾}	9 - 15 ⁽²⁾ _{600-960⁽³⁾}
8TX/8RX	LTE TDD ⁽⁴⁾		12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960
Sectors	GSM		24	24	24	24	24	24	24	24	24	24
	LTE + NB-IoT		12	12	12	12	12	12	12	12	12	12
	GSM + LTE + NB-IoT		12	12	12	12	12	12	12	12	12	12
	Total		36	36	36	36	36	36	36	36	36	36
Radios	GSM		36	36	36	36	36	36	36	36	36	36
	LTE + NB-IoT		24	24	24	24	24	24	24	24	24	24
	GSM + LTE + NB-IoT		36	36	36	36	36	36	36	36	36	36
	Total		36	36	36	36	36	36	36	36	36	36
Bands	GSM		5	5	5	5	5	5	5	5	5	5
	LTE + NB-IoT		6	6	6	6	6	6	6	6	6	6
	GSM + LTE + NB-IoT		5	5	5	5	5	5	5	5	5	5
	Total		11	11	11	11	11	11	11	11	11	11
Radio units level in one cascade chain	GSM		6	6	6	6	6	6	6	6	6	6
	LTE + NB-IoT		6	6	6	6	6	6	6	6	6	6
	GSM + LTE + NB-IoT		6	6	6	6	6	6	6	6	6	6
	Total		6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	GSM + LTE + NB-IoT		256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in DL	GSM + LTE + NB-IoT		128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in UL	GSM + LTE + NB-IoT		128	128	128	128	128	128	128	128	128	128

(1) Configurations with more than 24 TRXs only supported with Combined Cell.

(2) Do not support Elastic RAN when exceeding the lower limit.

(3) Maximum 600 MHz with a mix of radios from group 1-6.

800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.

For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

(4) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.



11.3.10 Mixed Mode Baseband Support LTE + NR + ESS with Baseband 6630

Table 403 Configuration Support with One LTE + NR + ESS Mixed Mode Baseband 6630

Num ber of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
1TX/ 1RX	LTE FDD	FDD only ⁽³⁾	12	12	12	12
		FDD with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
		FDD with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
	LTE TDD	TDD only ⁽³⁾	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12
		FDD + TDD with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
		FDD + TDD with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
	MI	NB-IoT in-band	6	6	6	6
		NB-IoT guard band	6	6	6	6
		NB-IoT standalone	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6
		Cat-M1 ⁽¹⁾	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12
		FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells	12	12	12	12



Num ber of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
		(min 1 NB-IoT IB/GB cell)				
		FDD + TDD + NB-IoT SA with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
		FDD + TDD + NB-IoT	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12
	NR	FDD	-	-	-	-
		TDD	-	-	-	-
		FDD + TDD	-	-	-	-
	ESS ⁽²⁾	FDD	-	-	-	-
	LTE FDD	FDD only ⁽³⁾	12	12	12	12
		FDD with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
		FDD with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
1TX/ 2RX, 2TX/ 0RX, 2TX/ 2RX	LTE TDD	TDD only ⁽³⁾	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12
		FDD + TDD with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
		FDD + TDD with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
	MI	NB-IoT in-band	6	6	6	6



Num ber of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT guard band	6	6	6	6
		NB-IoT standalone	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6
		Cat-M1 ⁽¹⁾	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12
		FDD + TDD + NB-IoT SA with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
		FDD + TDD + NB-IoT SA with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12
		FDD + TDD + NB-IoT	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12
	NR	FDD	2	4	4	4
		TDD	-	-	-	-
		FDD + TDD	-	-	-	-
	ESS ⁽²⁾	FDD	-	4	4	4
	Total for LTE FDD + LTE TDD + NB-IoT + ESS ⁽²⁾	FDD + TDD + NB-IoT SA + ESS ⁽²⁾	-	12	12	12
		FDD + TDD + NB-IoT SA + ESS ⁽²⁾ with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	-	12	12	12



Number of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD + NB-IoT SA + ESS ⁽²⁾ with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	-	12	12	12
		FDD + TDD + NB-IoT + ESS ⁽²⁾	-	18	18	18
		FDD + TDD + NB-IoT + ESS ⁽²⁾				
	Total for NR + ESS ⁽²⁾	NR FDD + ESS ⁽²⁾	-	4	4	4
		NR FDD + NR TDD + ESS ⁽²⁾	-	-	-	-
1TX/4RX ⁽⁴⁾ , 2TX/4RX ⁽⁵⁾ , 4TX/4RX	LTE FDD	FDD only	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾
		FDD with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9–12 ⁽³⁾	9–12 ⁽³⁾	9–12 ⁽³⁾	9–12 ⁽³⁾
		FDD with 1–3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾
		FDD with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6
		FDD with 4–6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-
	LTE TDD	TDD only	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾



Num ber of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽³⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾
		FDD + TDD with 1–3 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9–12 ⁽³⁾	9–12 ⁽³⁾	9–12 ⁽³⁾	9–12 ⁽³⁾
		FDD + TDD with 1–3 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾
		FDD + TDD with 4–6 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6
		FDD + TDD with 4–6 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-
	MI	NB-IoT in-band (ABW ≤ 480 MHz)	6	6	6	6
		NB-IoT in-band (ABW > 480 MHz)	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz)	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz)	3	3	3	3
		NB-IoT standalon e	6	6	6	6
		NB-IoT (IB+GB +SA)	6	6	6	6



Num ber of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
		(ABW ≤ 480 MHz)				
		NB-IoT (IB+GB +SA) (ABW > 480 MHz)	3	3	3	3
		Cat-M1 ⁽¹⁾	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾	12 600–960 ⁽⁶⁾
		FDD + TDD + NB-IoT SA with 1–3 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9–12 ⁽³⁾	9–12 ⁽³⁾	9–12 ⁽³⁾	9–12 ⁽³⁾
		FDD + TDD + NB-IoT SA with 1–3 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾	6–12 ⁽³⁾ 600–960 ⁽⁶⁾
		FDD + TDD + NB-IoT SA with 4–6 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6
		FDD + TDD + NB-IoT SA with 4–6 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12–15 ⁽³⁾	12–15 ⁽³⁾	12–15 ⁽³⁾	12–15 ⁽³⁾
		FDD + TDD + NB-IoT	9–15 ⁽³⁾ 600–960 ⁽⁶⁾	9–15 ⁽³⁾ 600–960 ⁽⁶⁾	9–15 ⁽³⁾ 600–960 ⁽⁶⁾	9–15 ⁽³⁾ 600–960 ⁽⁶⁾



Num ber of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
		(ABW > 480 MHz)				
	NR	FDD	2	4	4	4
		TDD	-	-	-	-
		FDD + TDD	-	-	-	-
	ESS ⁽²⁾	FDD	-	4	4	4
	Total for LTE FDD + LTE TDD + NB-IoT + ESS ⁽²⁾	(ESS + LTE FDD) (⁽²⁾)	-	12 800	12 800	12 800
		(ESS + LTE FDD) (⁽²⁾) + LTE TDD + NB-IoT SA	-	12 800	12 800	12 800
		(ESS ⁽²⁾ + LTE FDD) + LTE TDD + NB-IoT SA with 1-3 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	-	9-12 ⁽³⁾	9-15 ⁽³⁾	9-15 ⁽³⁾
		(ESS ⁽²⁾ + LTE FDD) + LTE TDD + NB-IoT SA + ESS ⁽²⁾ with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	-	6-12 ⁽³⁾ 800	6-12 ⁽³⁾ 800	6-12 ⁽³⁾ 800
		(ESS ⁽²⁾ + LTE FDD) + LTE TDD + NB-IoT SA with 4-6 NB- IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	-	6	6	6
		(ESS ⁽²⁾ + LTE FDD) + LTE TDD +	-	-	-	-



Num ber of	Standard		Software Version			
			19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)				
		(ESS ⁽²⁾ + LTE FDD) + LTE TDD + NB-IoT (ABW ≤480 MHz)	-	12–15 ⁽³⁾	12–15 ⁽³⁾	12–15 ⁽³⁾
		(ESS ⁽²⁾ + LTE FDD) + LTE TDD + NB-IoT (ABW > 480 MHz)	-	9–15 ⁽³⁾ 800	9–15 ⁽³⁾ 800	9–15 ⁽³⁾ 800
	Total for NR + ESS ⁽²⁾	FDD	-	4	4	4
		FDD + TDD	-	-	-	-
	8TX/8RX	LTE TDD ⁽¹⁾		12–960	12–960	12–960
Total no. of Carriers	NR FDD		2	4	4	4
	NR TDD		-	-	-	-
	NR FDD + NR TDD		-	-	-	-
Number of MIMO layers per carrier	LTE	SU-MIMO downlink	4	4	4	4
		SU-MIMO uplink	2	2	2	2
	NR	SU-MIMO downlink	1	1	4	4
		SU-MIMO uplink	1	1	1	1
Sectors			14	16	16	16
Radios	LTE + NB-IoT		24	24	24	24
	NR		4	8	8	8
	LTE + NB-IoT + NR		-	-	-	-
	Total		26	26	26	26
Supported carrier bandwidths	LTE FDD		1.4, 3, 5, 10, 15, 20	1.4, 3, 5, 10, 15, 20	1.4, 3, 5, 10, 15, 20	1.4, 3, 5, 10, 15, 20
	LTE TDD		5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20
	NR FDD		5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20
	NR TDD		-	-	-	-
	ESS		-	10, 15, 20	10, 15, 20	10, 15, 20
Bands	LTE + NB-IoT		6	6	6	6
	NR		2	4	4	4
	LTE + NB-IoT + NR		2	4	4	4
	Total		8	8	8	8



Number of	Standard	Software Version			
		19.Q4	20.Q1	20.Q2	20.Q3
Radio units level in one cascade chain	LTE + NB-IoT	6	6	6	6
	NR	4	6	6	6
	LTE + NB-IoT + NR	6	6	6	6
	Total	6	6	6	6
No. of supported RI ports on Baseband unit		9 (A–J)	9 (A–J)	9 (A–J)	9 (A–J)

- (1) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.
- (2) For each ESS carrier, the capacity is reduced with both one LTE carrier and one NR carrier.
- (3) Do not support Elastic RAN when exceeding the lower limit.
- (4) 1TX/4RX is not supported with NR and ESS.
- (5) 2TX/4RX is not supported with ESS, and it is supported with NR from SW 20.Q1.
- (6) Maximum 600 MHz with a mix of radios from group 1-6.
800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.
For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

11.3.11 Mixed Mode Baseband Support WCDMA + LTE with Baseband 5216

Table 404 Configuration Support with One WCDMA + LTE Mixed Mode Baseband 5216

Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE FDD	FDD only	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	6 - 12 ⁽¹⁾	6 - 12 ⁽¹⁾	12	12
	LTE TDD		TDD only	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	MI		NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT guard band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB +GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/2RX 2TX/2RX	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE FDD	FDD only	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	LTE TDD		12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	MI	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	Total for LTE FDD + LTE TDD + NB-IoT	NB-IoT (IB +GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD +TDD + NB-IoT SA (with 1-3 NB-IoT cells (min 1 NB- IoT IB/GB cell))	12	12	12	12	12	12	12	12	12	12
		FDD +TDD + NB-IoT SA (with 4-6 NB-IoT cells (min 1 NB- IoT IB/GB cell))	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/4RX 2TX/4RX	WCDMA		6	6	6	6	6	6	6	6	6	6
1TX/4RX 2TX/4RX 4TX/4RX	LTE FDD	FDD only	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽¹⁾ 6 00-96 0 ⁽⁴⁾	6 - 12 ⁽¹⁾ 6 00-96 0 ⁽⁴⁾	6 - 12 ⁽¹⁾ 6 00-96 0 ⁽⁴⁾	6 - 12 ⁽¹⁾ 6 00-96 0 ⁽⁴⁾	6 - 12 ⁽¹⁾ 6 00-96 60 ⁽⁴⁾
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	LTE TDD	TDD only	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾
	Total for LTE FDD + LTE TDD	FDD + TDD only	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾	12 – 600-9 60 ⁽⁴⁾
		FDD + TDD with 1-3 NB-IoT cells	9	9	9	9	9	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		(min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)										
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽¹⁾ _{00-960⁽⁴⁾}	6 - 12 ⁽¹⁾ _{00-960⁽⁴⁾}	6 - 12 ⁽¹⁾ _{00-960⁽⁴⁾}	6 - 12 ⁽¹⁾ _{00-960⁽⁴⁾}	6 - 12 ⁽¹⁾ _{600-960⁽⁴⁾}
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	MI	NB-IoT in-band (ABW ≤ 480 MHz) ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT in-band (ABW > 480 MHz) ⁽²⁾	3	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) ⁽²⁾	3	3	3	3	3	3	3	3	3	3
		NB-IoT standalone ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz) ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW > 480 MHz) ⁽²⁾	3	3	3	3	3	3	3	3	3	3
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB)	9	9	9	9	9	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		cell) (ABW ≤ 480 MHz)										
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12 - 15	12 - 15	12 - 15	12 - 15	12 - 15
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 - 15600-960 ⁽⁴⁾	9 - 15600-960 ⁽⁴⁾	9 - 15600-960 ⁽⁴⁾	9 - 15600-960 ⁽⁴⁾	9 - 15600-960 ⁽⁴⁾
8TX/8RX	LTE TDD		12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960
Sectors	WCDMA		6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
	LTE + NB-IoT		12	12	12	12	12	12	12	12	12	12
	WCDMA + LTE + NB-IoT		6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
	Total		24	24	24	24	24	24	24	24	24	24
Maximum number of cells per sector	WCDMA		6	6	6	6	6	6	6	6	6	6
HSPA: Maximum number of cells per sector with same tCell	WCDMA		4	4	4	4	4	4	4	4	4	4
Radios	WCDMA		24	24	24	24	24	24	24	24	24	24
	LTE + NB-IoT		24	24	24	24	24	24	24	24	24	24



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	WCDMA + LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	Total	36	36	36	36	36	36	36	36	36	36
Bands	WCDMA	2	2	2	2	2	2	2	2	2	2
	LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	Total	8	8	8	8	8	8	8	8	8	8
Radio units level in one cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	WCDMA + LTE + NB-IoT	256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in DL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in UL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128

- (1) Do not support Elastic RAN when exceeding the lower limit.
- (2) Each NB-IoT in-band or guard band cell requires one host LTE cell.
- (3) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.
- (4) Maximum 600 MHz with a mix of radios from group 1-6.
800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.
For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

11.3.12 Mixed Mode Baseband Support WCDMA + LTE with Baseband 6318

Table 405 Configuration Support with One WCDMA + LTE Mixed Mode Baseband 6318

Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE FDD	FDD only(5)	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT IB/GB cell)										
	LTE TDD	TDD only(5)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	MI	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		IB/GB cell)										
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
1TX/2 RX 2TX/2 RX	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE FDD	FDD only(5)	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	LTE TDD	TDD only	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only(5)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	MI	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA (with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell))	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA (with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell))	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/4 RX 2TX/4 RX	WCDMA		6	6	6	6	6	6	6	6	6	6
1TX/4 RX 2TX/4 RX 4TX/4 RX	LTE FDD	FDD only	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾	12 - 600-960 ⁽⁴⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	LTE TDD	TDD only	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
	Total for LTE FDD + LTE TDD	FDD + TDD only(5)	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	9	9	9	9	9	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 – 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽¹⁾ 600-960 ⁽⁴⁾
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	MI	NB-IoT in-band (ABW ≤ 480 MHz) (2)	6	6	6	6	6	6	6	6	6	6
		NB-IoT in-band (ABW > 480 MHz) (2)	3	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) (2)	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) (2)	3	3	3	3	3	3	3	3	3	3
		NB-IoT standalone (2)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz) (2)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW > 480 MHz) (2)	3	3	3	3	3	3	3	3	3	3
		Cat-M1 (3)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)
		FDD + TDD + NB-IoT SA with	9	9	9	9	9	9 – 12 (1)	9 – 12 (1)	9 – 12 (1)	9 – 12 (1)	9 – 12 (1)



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)										
	FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	6	6	6	6	6	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽¹⁾ 600-960 ⁽⁴⁾
	FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤480 MHz)	6	6	6	6	6	6	6	6	6	6
	FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	FDD + TDD + NB-IoT (ABW ≤480 MHz)	12	12	12	12	12	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾
	FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 - 15 ⁽¹⁾ 600-960 ⁽⁴⁾	9 - 15 ⁽¹⁾ 600-960 ⁽⁴⁾	9 - 15 ⁽¹⁾ 600-960 ⁽⁴⁾	9 - 15 ⁽¹⁾ 600-960 ⁽⁴⁾	9 - 15 ⁽¹⁾ 600-960 ⁽⁴⁾
8TX/8 RX	LTE TDD	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960	12- 960
Sectors	WCDMA	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in	6 in single band or 12 in



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		dual band	dual band	dual band	dual band	dual band	dual band	dual band	dual band	dual band	dual band
	LTE + NB-IoT	12	12	12	12	12	12	12	12	12	12
	WCDMA + LTE + NB-IoT	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
	Total	24	24	24	24	24	24	24	24	24	24
Maximum number of cells per sector	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with same tCell	WCDMA	4	4	4	4	4	4	4	4	4	4
Radios	WCDMA	24	24	24	24	24	24	24	24	24	24
	LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	WCDMA + LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	Total	36	36	36	36	36	36	36	36	36	36
Bands	WCDMA	2	2	2	2	2	2	2	2	2	2
	LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	Total	8	8	8	8	8	8	8	8	8	8
Radio units level in one cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	WCDMA + LTE + NB-IoT	256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in DL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in UL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128

(1) Do not support Elastic RAN when exceeding the lower limit.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.



(4) Maximum 600 MHz with a mix of radios from group 1-6.

800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.

For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

11.3.13 Mixed Mode Baseband Support WCDMA + LTE with Baseband 6630

Table 406 Configuration Support with One WCDMA + LTE Mixed Mode Baseband 6630

Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	LTE TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	MI	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/2RX 2TX/2RX	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE FDD	FDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
	LTE TDD	TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽¹⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		IB/GB cell)										
	MI	NB-IoT in-band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽²⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽⁴⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA (with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell))	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA (with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell))	6	6	6	6	6	6 - 12 ⁽¹⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/4RX 2TX/4RX	WCDMA		6	6	6	6	6	6	6	6	6	6
1TX/4RX 2TX/4RX 4TX/4RX	LTE FDD	FDD only	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾	9 - 12 ⁽¹⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽¹⁾ 600-960 ⁽³⁾	6 - 12 ⁽¹⁾ 600-960 ⁽³⁾	6 - 12 ⁽¹⁾ 600-960 ⁽³⁾	6 - 12 ⁽¹⁾ 600-960 ⁽³⁾	6 - 12 ⁽¹⁾ 600-960 ⁽³⁾



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	LTE TDD	TDD only	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽¹⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾	9 – 12 ⁽¹⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 – 12 ⁽¹⁾ 600-960 ⁽³⁾	6 – 12 ⁽¹⁾ 600-960 ⁽³⁾	6 – 12 ⁽¹⁾ 600-960 ⁽³⁾	6 – 12 ⁽¹⁾ 600-960 ⁽³⁾	6 – 12 ⁽¹⁾ 600-960 ⁽³⁾
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		MI	6	6	6	6	6	6	6	6	6	6
		NB-IoT in-band (ABW ≤ 480 MHz) ⁽²⁾	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT in-band (ABW > 480 MHz) (2)	3	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) (2)	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) (2)	3	3	3	3	3	3	3	3	3	3
		NB-IoT standalone (2)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz) (2)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW > 480 MHz) (2)	3	3	3	3	3	3	3	3	3	3
		Cat-M1(4)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)	12 – 600-960(3)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12(1)	9 – 12(1)	9 – 12(1)	9 – 12(1)	9 – 12(1)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6 – 12(1)600-960(3)	6 – 12(1)600-960(3)	6 – 12(1)600-960(3)	6 – 12(1)600-960(3)	6 – 12(1)600-960(3)
		FDD + TDD + NB-IoT SA with	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)										
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾	12 - 15 ⁽¹⁾
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 - 15 ⁽¹⁾ ₀₀₋₉₆ ⁽³⁾	9 - 15 ⁽¹⁾ ₀₀₋₉₆ ⁽³⁾	9 - 15 ⁽¹⁾ ₀₀₋₉₆ ⁽³⁾	9 - 15 ⁽¹⁾ ₀₀₋₉₆ ⁽³⁾	9 - 15 ⁽¹⁾ ₀₀₋₉₆ ⁽³⁾
8TX/8RX	LTE TDD		12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960
Sectors	WCDMA		6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
	LTE + NB-IoT		12	12	12	12	12	12	12	12	12	12
	WCDMA + LTE + NB-IoT		6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band	6 in single band or 12 in dual band
	Total		24	24	24	24	24	24	24	24	24	24
Maximum number of cells per sector	WCDMA		6	6	6	6	6	6	6	6	6	6
HSPA: Maximum number of cells per sector with same tCell	WCDMA		4	4	4	4	4	4	4	4	4	4
Radios	WCDMA		24	24	24	24	24	24	24	24	24	24
	LTE + NB-IoT		24	24	24	24	24	24	24	24	24	24
	WCDMA + LTE + NB-IoT		24	24	24	24	24	24	24	24	24	24
	Total		36	36	36	36	36	36	36	36	36	36
Bands	WCDMA		2	2	2	2	2	2	2	2	2	2
	LTE + NB-IoT		6	6	6	6	6	6	6	6	6	6



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	Total	8	8	8	8	8	8	8	8	8	8
Radio units level in one cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	WCDMA + LTE + NB-IoT	256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in DL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in UL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128

(1) Do not support Elastic RAN when exceeding the lower limit.

(2) Each NB-IoT in-band or guard band cell requires one host LTE cell.

(3) Maximum 600 MHz with a mix of radios from group 1-6.

800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.

For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

(4) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.

11.3.14 Mixed Mode Baseband Support WCDMA + LTE with IDU 5209

Table 407 Mixed Mode IDU 5209 WCDMA + LTE General Configuration Support

	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
Supported Duplex modes	LTE	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D	FDD, TDD, FDD +TD D
Supported carrier bandwidths	LTE	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz	5, 10, 15 or 20 MHz
Maximum number of simultaneous bandwidths	LTE	3	3	3	3	3	3	3	3	3	3
Maximum number of carriers in one sector (for one frequency band)	WCDMA	4	4	4	4	4	4	4	4	4	4
	LTE	2	2	2	2	2	2	2	2	2	2
Supported CPRI line rates (Gbps)	WCDMA LTE	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8	2.5, 4.9, 9.8



Table 408 Configuration Support with One WCDMA + LTE Mixed Mode IDU 5209

		Standard	SW Version									
			18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of WCDMA carriers	1TX/1RX 1TX/2RX 2TX/2RX	WCDMA	6	6	6	6	6	6	6	6	6	6
	1TX/4RX 2TX/4RX	WCDMA	-	3	3	3	3	3	3	3	3	3
Maximum number of LTE carriers and bandwidth ⁽¹⁾	1TX/1RX 1TX/2RX 2TX/2RX	LTE	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches
	1TX/4RX 2TX/4RX 4TX/4RX	LTE	-	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches	3 Maximum 120 MHz in total BW for all carrier branches
Maximum number of sectors		WCDMA ⁽²⁾	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
		LTE ⁽³⁾	3	3	3	3	3	3	3	3	3	3
		Mixed mode WCDMA + LTE	3	3	3	3	3	3	3	3	3	3
		Total ⁽⁴⁾	9	9	9	9	9	9	9	9	9	9
Maximum number of cells per sector		WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with the same tCell ⁽⁵⁾ (HSPA)		WCDMA	4	4	4	4	4	4	4	4	4	4
Maximum number of IRUs ⁽⁶⁾		WCDMA	6	6	6	6	6	6	6	6	6	6
		LTE	3	6	6	6	6	6	6	6	6	6
		WCDMA + LTE	3	6	6	6	6	6	6	6	6	6
		Total	9	12	12	12	12	12	12	12	12	12



	Standard	SW Version									
		18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4	20.Q 1	20.Q 2	20.Q 3
Maximum number of bands	WCDMA	2	2	2	2	2	2	2	2	2	2
	LTE	3	3	3	3	3	3	3	3	3	3
	WCDMA + LTE	2	2	2	2	2	2	2	2	2	2
	Total	5	5	5	5	5	5	5	5	5	5
Maximum number of IRUs per cascade chain	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE	3	3	3	3	3	3	3	3	3	3
	WCDMA + LTE	3	3	3	3	3	3	3	3	3	3
	Total	6	6	6	6	6	6	6	6	6	6

- (1) It is possible to mix configurations with different antenna configurations.
- (2) The total amount of sectors that uses WCDMA, counting both single mode and mixed mode sectors.
- (3) The total amount of sectors that uses LTE, counting both single mode and mixed mode sectors.
- (4) The total amount of all sectors, counting both single mode and mixed mode sectors. Maximum number of sectors can only be reached if all sectors are single mode.
- (5) tCell is an attribute to UtranCell in WCDMA RNC. Defines timing delay for start of SCH, CPICH and the downlink scrambling codes.
- (6) With up to eight RDs per IRU.

11.3.15 Mixed Mode Baseband Support WCDMA + GSM + LTE with Baseband 5216

Table 409 Configuration Support with One WCDMA + LTE + GSM Mixed Mode Baseband 5216

15 Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	GSM		12	12	12	12	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12	12
	LTE TDD		12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB- IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12	12



15 Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT cells (min 1 NB-IoT IB/GB cell)										
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
1TX/2RX	GSM		12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12



15 Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB +GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
2TX/2RX	GSM		12	12	12	12	12	12	12-20 ⁽¹⁾	12-20 ⁽¹⁾	12-20 ⁽¹⁾	12-20 ⁽¹⁾
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD		12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells	12	12	12	12	12	12	12	12	12	12



15 Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		(min 1 NB-IoT IB/GB cell)										
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB +GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
		FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
1TX/4RX 2TX/4RX	GSM		12	12	12	12	12	12	12	12	12	12
	WCDMA		3	3	3	3	3	3	3	3	3	3
1TX/4RX 2TX/4RX 4TX/4RX	LTE FDD	FDD only	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 - 12 ⁽²⁾ 600-960 ⁽⁴⁾
		FDD with 4-6 NB-IoT	6	6	6	6	6	6	6	6	6	6



15 Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)										
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	LTE TDD	TDD only	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
	MI	NB-IoT in-band (ABW ≤ 480 MHz) ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT in-band (ABW > 480 MHz) ⁽¹⁾	3	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) ⁽¹⁾	3	3	3	3	3	3	3	3	3	3



15 Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT standalone ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz) ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW > 480 MHz) ⁽¹⁾	3	3	3	3	3	3	3	3	3	3
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾	9 – 12 ⁽²⁾
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾	6 – 12 ⁽²⁾ 600-960 ⁽⁴⁾
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12 – 15 ⁽²⁾	12 – 15 ⁽²⁾	12 – 15 ⁽²⁾	12 – 15 ⁽²⁾	12 – 15 ⁽²⁾
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 – 15 ⁽²⁾ 600-960 ⁽⁴⁾	9 – 15 ⁽²⁾ 600-960 ⁽⁴⁾	9 – 15 ⁽²⁾ 600-960 ⁽⁴⁾	9 – 15 ⁽²⁾ 600-960 ⁽⁴⁾	9 – 15 ⁽²⁾ 600-960 ⁽⁴⁾
8TX/8RX	LTE		12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960
Sectors	GSM		12	12	12	12	12	12	12	12	12	12
	WCDMA		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band



15 Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		dual band									
	LTE	12	12	12	12	12	12	12	12	12	12
	GSM + WCDMA	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM + LTE	12	12	12	12	12	12	12	12	12	12
	WCDMA + LTE	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM + WCDMA + LTE	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	Total	30	30	30	30	30	30	30	30	30	30
Maximum number of cells per sector	WCDMA	6	6	6	6	6	6	6	6	6	6
Maximum number of cells per sector with same tCell	WCDMA	4	4	4	4	4	4	4	4	4	4
Radios	GSM	12	12	12	12	12	12	12	12	12	12
	WCDMA	12	12	12	12	12	12	12	12	12	12
	LTE	24	24	24	24	24	24	24	24	24	24
	GSM + WCDMA	12	12	12	12	12	12	12	12	12	12
	GSM + LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	WCDMA + LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	GSM + WCDMA + LTE + NB-IoT	12	12	12	12	12	12	12	12	12	12
	Total	36	36	36	36	36	36	36	36	36	36
Bands	GSM	5	5	5	5	5	5	5	5	5	5
	WCDMA	2	2	2	2	2	2	2	2	2	2
	LTE	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA	2	2	2	2	2	2	2	2	2	2
	GSM + LTE + NB-IoT	5	5	5	5	5	5	5	5	5	5
	WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	GSM + WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	Total	13	13	13	13	13	13	13	13	13	13
Radio units level in one cascade chain	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA	6	6	6	6	6	6	6	6	6	6



15 Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	GSM + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	WCDMA + LTE + NB-IoT	256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in DL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in UL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128

- (1) Configurations with more than 12 TRXs only supported with Combined Cell.
- (2) Do not support Elastic RAN when exceeding the lower limit.
- (3) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.
- (4) Maximum 600 MHz with a mix of radios from group 1-6.
800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.
For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

11.3.16 Mixed Mode Baseband Support WCDMA + GSM + LTE with Baseband 6318

Table 410 Configuration Support with One WCDMA + LTE + GSM Mixed Mode Baseband 6318

Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	GSM		12	12	12	12	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1(1)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/2RX	GSM		12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		Cat-M1(1)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
2TX/2RX	GSM		12	12	12	12	12	12	12-20 ⁽¹⁾	12-20 ⁽¹⁾	12-20 ⁽¹⁾	12-20 ⁽¹⁾
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1	12	12	12	12	12	12	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		NB-IoT IB/GB cell)										
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB+GB+SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1(1)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
	1TX/4 RX 2TX/4 RX	GSM	12	12	12	12	12	12	12	12	12	12
		WCDMA	3	3	3	3	3	3	3	3	3	3
1TX/4 RX 2TX/4 RX 4TX/4 RX	LTE FDD	FDD only	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
		FDD with	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)										
	FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾
	FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
	FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	.	.	.	.	.	.	.	.	.	.
	LTE TDD	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
	Total for LTE FDD + LTE TDD	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾	12 – 600-960 ⁽³⁾
	FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾
	FDD + TDD with 1-3 NB-IoT	6	6	6	6	6	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾	6 - 12 ⁽²⁾ 600-960 ⁽³⁾



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)									
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-
	MI	NB-IoT in-band (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6
		NB-IoT in-band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3
		NB-IoT standalone (1)	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		MHz) (1)										
		NB-IoT (IB+GB +SA) (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		Cat- M1(1)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)	12 – 600-96 0(3)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12(2)	9 - 12(2)	9 - 12(2)	9 - 12(2)	9 - 12(2)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6 - 12(2) 600-96 0(3)	6 - 12(2) 600-96 0(3)	6 - 12(2) 600-96 0(3)	6 - 12(2) 600-96 0(3)	6 - 12(2) 600-96 0(3)
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW >	-	-	-	-	-	-	-	-	-	-



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		480 MHz)										
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12 - 15 ⁽⁴⁾	12 - 15 ⁽⁴⁾	12 - 15 ⁽⁴⁾	12 - 15 ⁽⁴⁾	12 - 15 ⁽⁴⁾
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 - 15 ⁽⁴⁾ 600-960 ⁽²⁾	9 - 15 ⁽⁴⁾ 600-960 ⁽²⁾	9 - 15 ⁽⁴⁾ 600-960 ⁽²⁾	9 - 15 ⁽⁴⁾ 600-960 ⁽²⁾	9 - 15 ⁽⁴⁾ 600-960 ⁽²⁾
8TX/8 RX	LTE TDD		12 - 960	12 - 960	12 - 960	12 - 960	12 - 960	12 - 960	12 - 960	12 - 960	12 - 960	12 - 960
Sectors	GSM		12	12	12	12	12	12	12	12	12	12
	WCDMA		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	LTE		12	12	12	12	12	12	12	12	12	12
	GSM + WCDMA		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM + LTE		12	12	12	12	12	12	12	12	12	12
	WCDMA + LTE		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM + WCDMA + LTE		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	Total		30	30	30	30	30	30	30	30	30	30
Maximum number of cells per sector	WCDMA		6	6	6	6	6	6	6	6	6	6
HSPA: Maximum number of cells per sector with same tCell	WCDMA		4	4	4	4	4	4	4	4	4	4
Radios	GSM		12	12	12	12	12	12	12	12	12	12
	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE		24	24	24	24	24	24	24	24	24	24



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	GSM + WCDMA	12	12	12	12	12	12	12	12	12	12
	GSM + LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	WCDMA + LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	GSM + WCDMA + LTE + NB-IoT	12	12	12	12	12	12	12	12	12	12
	Total	36	36	36	36	36	36	36	36	36	36
Bands	GSM	5	5	5	5	5	5	5	5	5	5
	WCDMA	2	2	2	2	2	2	2	2	2	2
	LTE	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA	2	2	2	2	2	2	2	2	2	2
	GSM + LTE + NB-IoT	5	5	5	5	5	5	5	5	5	5
	WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	GSM + WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	Total	13	13	13	13	13	13	13	13	13	13
Radio units level in one cascade chain	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA	6	6	6	6	6	6	6	6	6	6
	GSM + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	WCDMA + LTE + NB-IoT	256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in DL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in UL	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128

(1) Configurations with more than 12 TRXs only supported with Combined Cell.

(2) Do not support Elastic RAN when exceeding the lower limit.

(3) Maximum 600 MHz with a mix of radios from group 1-6.

800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.

For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

(4) Do not support Elastic RAN when exceeding the lower limit.



11.3.17 Mixed Mode Baseband Support WCDMA + GSM + LTE with Baseband 6630

Table 411 Configuration Support with One WCDMA + LTE + GSM Mixed Mode Baseband 6630

Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
1TX/1RX	GSM	12	12	12	12	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾	12-40 ⁽¹⁾
	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD	TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12
		NB-IoT (IB +GB+SA)	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		(min 1 NB-IoT IB/GB cell)										
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
1TX/2RX	GSM		12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)	12-40 (1)
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD		TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB + GB + SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		(min 1 NB-IoT IB/GB cell)										
		FDD + TDD + NB-IoT	15	15	15	15	15	18	18	18	18	18
2TX/2RX	GSM		12	12	12	12	12	12	12-20 (1)	12-20 (1)	12-20 (1)	12-20 (1)
	WCDMA		6	6	6	6	6	6	6	6	6	6
	LTE FDD	FDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	LTE TDD		12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell)	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12
	MI	NB-IoT in-band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band ⁽¹⁾	6	6	6	6	6	6	6	6	6	6
		NB-IoT standalone	12	12	12	12	12	12	12	12	12	12
		NB-IoT (IB + GB + SA)	6	6	6	6	6	6	6	6	6	6
		Cat-M1 ⁽³⁾	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell)	12	12	12	12	12	12	12	12	12	12
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells	6	6	6	6	6	6 - 12 ⁽²⁾	12	12	12	12



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		(min 1 NB-IoT IB/GB cell)										
		FDD + TDD + NB-IoT	15	15	15	15	15	6 - 12 ⁽²⁾	6 - 12 ⁽²⁾	6 - 12 ⁽²⁾	6 - 12 ⁽²⁾	6 - 12 ⁽²⁾
1TX/4RX 2TX/4RX	GSM		12	12	12	12	12	12	12	12	12	12
	WCDMA		3	3	3	3	3	3	3	3	3	3
1TX/4RX 2TX/4RX 4TX/4RX	LTE FDD	FDD only ⁽²⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾
		FDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6
		FDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	.	.	.	.	.	.	.	.	.	.
	TDD	TDD only ⁽²⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
	Total for LTE FDD + LTE TDD	FDD + TDD only ⁽²⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾	12 – 600-960 ⁽⁴⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾	9 - 12 ⁽²⁾
		FDD + TDD with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	6	6	6	6	6	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾	6 - 12(6)600-960 ⁽²⁾
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	.	.	.	.	.	.	.	.	.	.
	MI	NB-IoT in-band (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT in-band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		NB-IoT guard band (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT guard band (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		NB-IoT standalone (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW ≤ 480 MHz) (1)	6	6	6	6	6	6	6	6	6	6
		NB-IoT (IB+GB+SA) (ABW > 480 MHz) (1)	3	3	3	3	3	3	3	3	3	3
		Cat-M1 (3)	12	12	12	12	12	12	12	12	12	12
	Total for LTE FDD + LTE TDD + NB-IoT	FDD + TDD + NB-IoT SA	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)	12 – 600-960 (4)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	9	9	9	9	9	9 – 12 (2)	9 – 12 (2)	9 – 12 (2)	9 – 12 (2)	9 – 12 (2)
		FDD + TDD + NB-IoT SA with 1-3 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6 – 12(6)600-960 (2)	6 – 12(6)600-960 (2)	6 – 12(6)600-960 (2)	6 – 12(6)600-960 (2)	6 – 12(6)600-960 (2)
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW ≤ 480 MHz)	6	6	6	6	6	6	6	6	6	6



Number of	Standard		Software Version									
			18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
		FDD + TDD + NB-IoT SA with 4-6 NB-IoT cells (min 1 NB-IoT IB/GB cell) (ABW > 480 MHz)	-	-	-	-	-	-	-	-	-	-
		FDD + TDD + NB-IoT (ABW ≤ 480 MHz)	12	12	12	12	12	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾	12 - 15 ⁽²⁾
		FDD + TDD + NB-IoT (ABW > 480 MHz)	9	9	9	9	9	9 - 15 ⁽²⁾ _{00-960⁽⁴⁾}	9 - 15 ⁽²⁾ _{00-960⁽⁴⁾}	9 - 15 ⁽²⁾ _{00-960⁽⁴⁾}	9 - 15 ⁽²⁾ _{00-960⁽⁴⁾}	9 - 15 ⁽²⁾ _{600-960⁽⁴⁾}
8TX/8RX	LTE TDD		12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960	12-960
Sectors	GSM		12	12	12	12	12	12	12	12	12	12
	WCDMA		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	LTE		12	12	12	12	12	12	12	12	12	12
	GSM + WCDMA		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM + LTE		12	12	12	12	12	12	12	12	12	12
	WCDMA + LTE		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	GSM + WCDMA + LTE		3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band	3 in single band or 6 in dual band
	Total		30	30	30	30	30	30	30	30	30	30
Maximum number of cells per sector	WCDMA		6	6	6	6	6	6	6	6	6	6
HSPA: Maximum number of cells per sector with same tCell	WCDMA		4	4	4	4	4	4	4	4	4	4
Radios	GSM		12	12	12	12	12	12	12	12	12	12
	WCDMA		12	12	12	12	12	12	12	12	12	12
	LTE		24	24	24	24	24	24	24	24	24	24
	GSM + WCDMA		12	12	12	12	12	12	12	12	12	12
	GSM + LTE + NB-IoT		24	24	24	24	24	24	24	24	24	24



Number of	Standard	Software Version									
		18.Q2	18.Q3	18.Q4	19.Q1	19.Q2	19.Q3	19.Q4	20.Q1	20.Q2	20.Q3
	WCDMA + LTE + NB-IoT	24	24	24	24	24	24	24	24	24	24
	GSM + WCDMA + LTE + NB-IoT	12	12	12	12	12	12	12	12	12	12
	Total	36	36	36	36	36	36	36	36	36	36
Bands	GSM	5	5	5	5	5	5	5	5	5	5
	WCDMA	2	2	2	2	2	2	2	2	2	2
	LTE	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA	2	2	2	2	2	2	2	2	2	2
	GSM + LTE + NB-IoT	5	5	5	5	5	5	5	5	5	5
	WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	GSM + WCDMA + LTE + NB-IoT	2	2	2	2	2	2	2	2	2	2
	Total	13	13	13	13	13	13	13	13	13	13
Radio units level in one cascade chain	GSM	6	6	6	6	6	6	6	6	6	6
	WCDMA	6	6	6	6	6	6	6	6	6	6
	LTE	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA	6	6	6	6	6	6	6	6	6	6
	GSM + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	GSM + WCDMA + LTE + NB-IoT	6	6	6	6	6	6	6	6	6	6
	Total	6	6	6	6	6	6	6	6	6	6
Carrier branches on baseband	WCDMA + LTE + NB-IoT	256	256	288	288	288	288	288	288	288	288
Carrier branches per RI port in downlink	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128
Carrier branches per RI port in uplink	WCDMA + LTE + NB-IoT	128	128	128	128	128	128	128	128	128	128

- (1) Configurations with more than 12 TRXs only supported with Combined Cell.
- (2) Do not support Elastic RAN when exceeding the lower limit.
- (3) Each LTE FDD cell can include Cat-M1. Cat-M1 is supported at the same time as NB-IoT.
- (4) Maximum 600 MHz with a mix of radios from group 1-6.
800 MHz with a mix of radios from group 3-6, and 960 MHz with radios from group 5 and 6.
For the radios belonging to each radio group, see [Radio Groups](#) on page 101.

11.4 Sector Configuration for MSMM

This section describes the supported sector configurations for MSMM WCDMA + GSM, MSMM LTE + GSM, MSMM WCDMA + LTE, and MSMM CDMA + LTE, SSMM WCDMA + WCDMA, Multi-Operator RAN configurations with LTE + LTE and GSM + GSM configurations with Dual DUG Sharing.

[Star Configurations for MSMM](#) on page 616 describes sector configuration for MSMM star configurations.

[Cascade Configurations for MSMM](#) on page 618 describes sector configuration MSMM cascade configurations.

11.4.1 Star Configurations for MSMM

This section describes the supported sector configurations for MSMM star configurations with GSM + WCDMA, GSM + LTE, WCDMA + LTE, or CDMA + LTE; SSMM WCDMA + WCDMA, Multi-Operator RAN star configurations with LTE + LTE and GSM + GSM star configurations with Dual DUG Sharing.

[Figure 21](#) to [Figure 27](#) show examples of the supported MSMM star configurations.

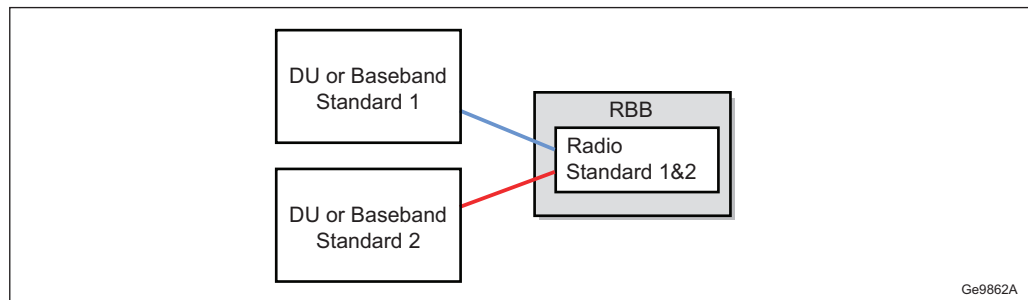


Figure 21 MSMM with One Radio Unit

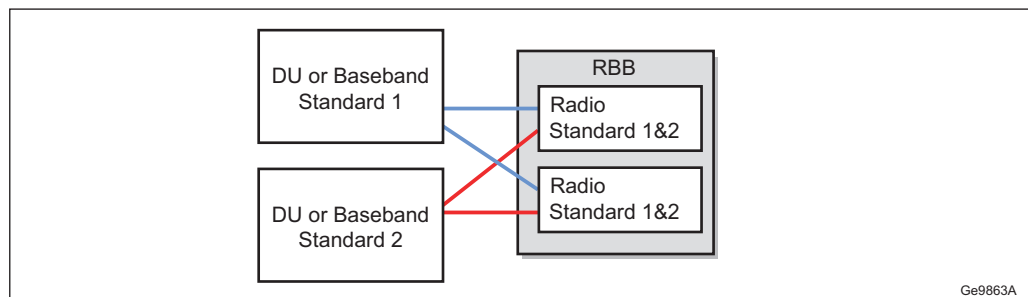


Figure 22 MSMM with Two Radio Units

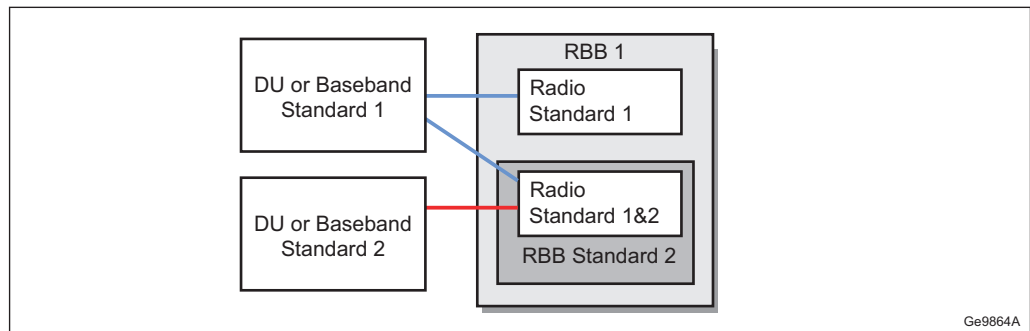


Figure 23 MSMM with One Radio Unit for Single Mode, and One for Mixed Mode.

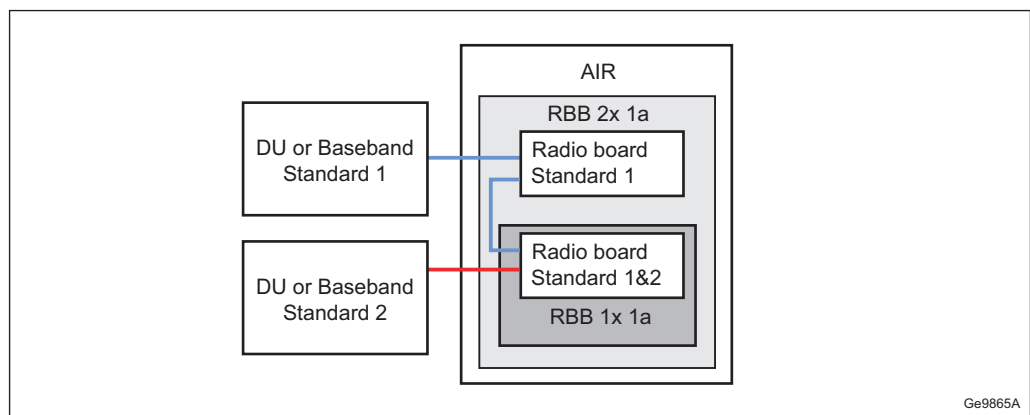


Figure 24 MSMM with AIR 21. One Radio board for Single Mode, and One for Mixed Mode. The Internal Cascade Link is Used by One Standard.

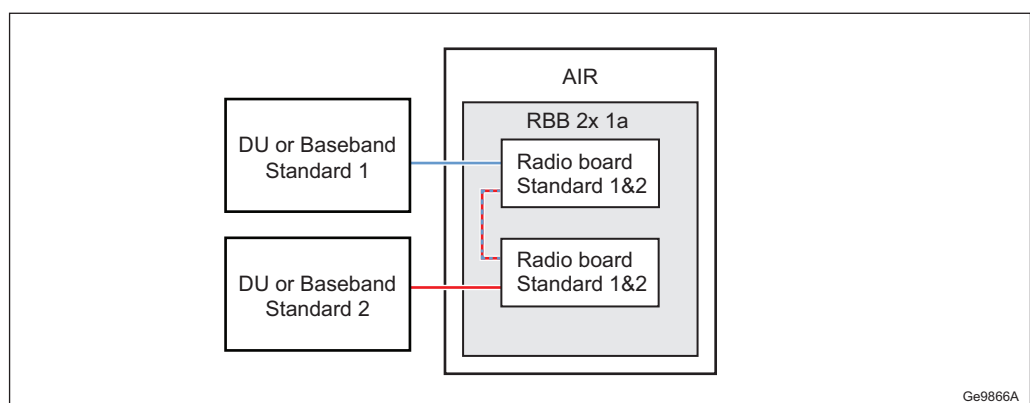


Figure 25 MSMM with AIR 21. Both Radio Boards Use Mixed Mode. The Internal Cascade Link is Used by Both Standards.

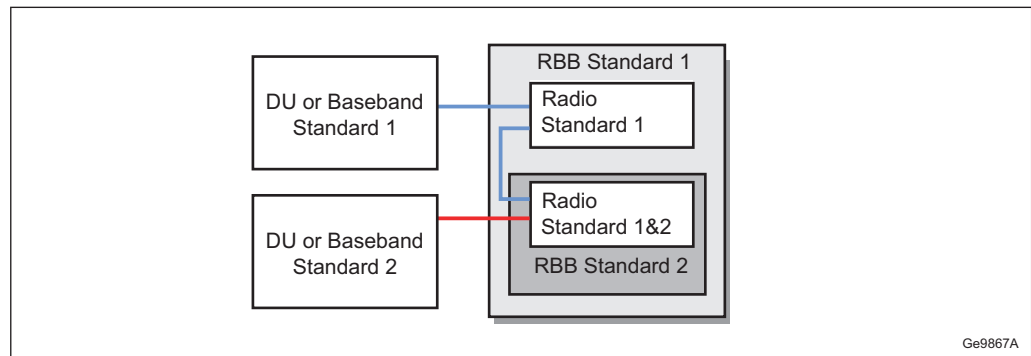


Figure 26 MSMM with Radio Cascading. One Radio unit for Single Mode, and One for Mixed Mode.

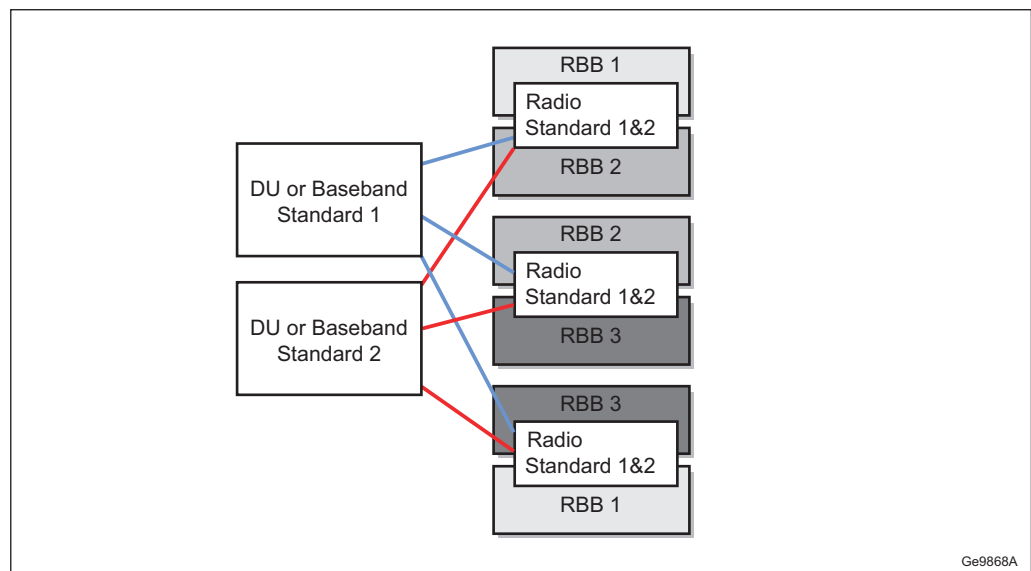


Figure 27 MSMM with CSASR

11.4.2

Cascade Configurations for MSMM

This section describes the supported sector configurations for MSMM WCDMA + GSM, LTE + GSM, WCDMA + LTE, SSMM WCDMA + WCDMA, and Multi-Operator RAN LTE + LTE in a cascade configuration.

[Figure 28](#), [Figure 29](#), [Figure 30](#), [Figure 31](#), [Figure 32](#), and [Figure 33](#) illustrate the cascade configurations.

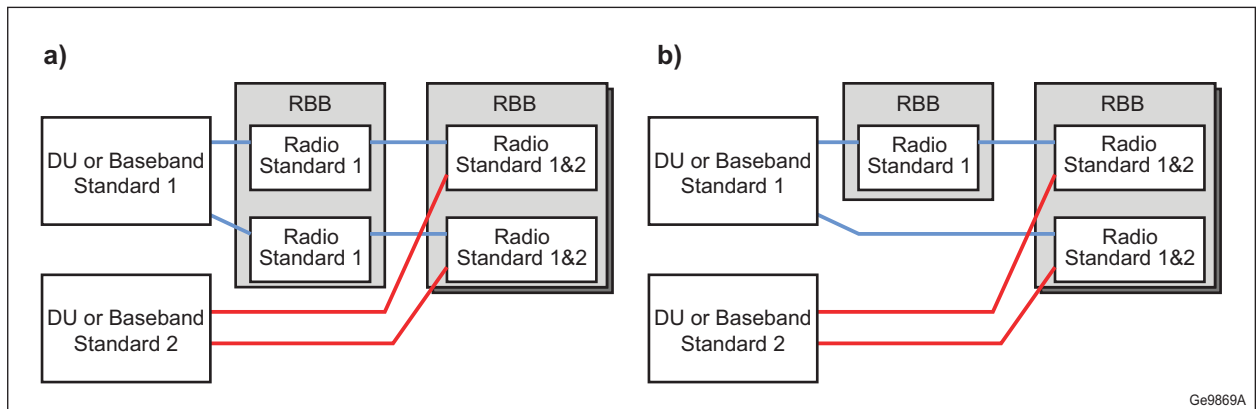


Figure 28 Sector Cascading Used by One Standard. Two Radio Units in Mixed Mode RBB, Cascaded Through Two Radio Units in Single Mode RBB.

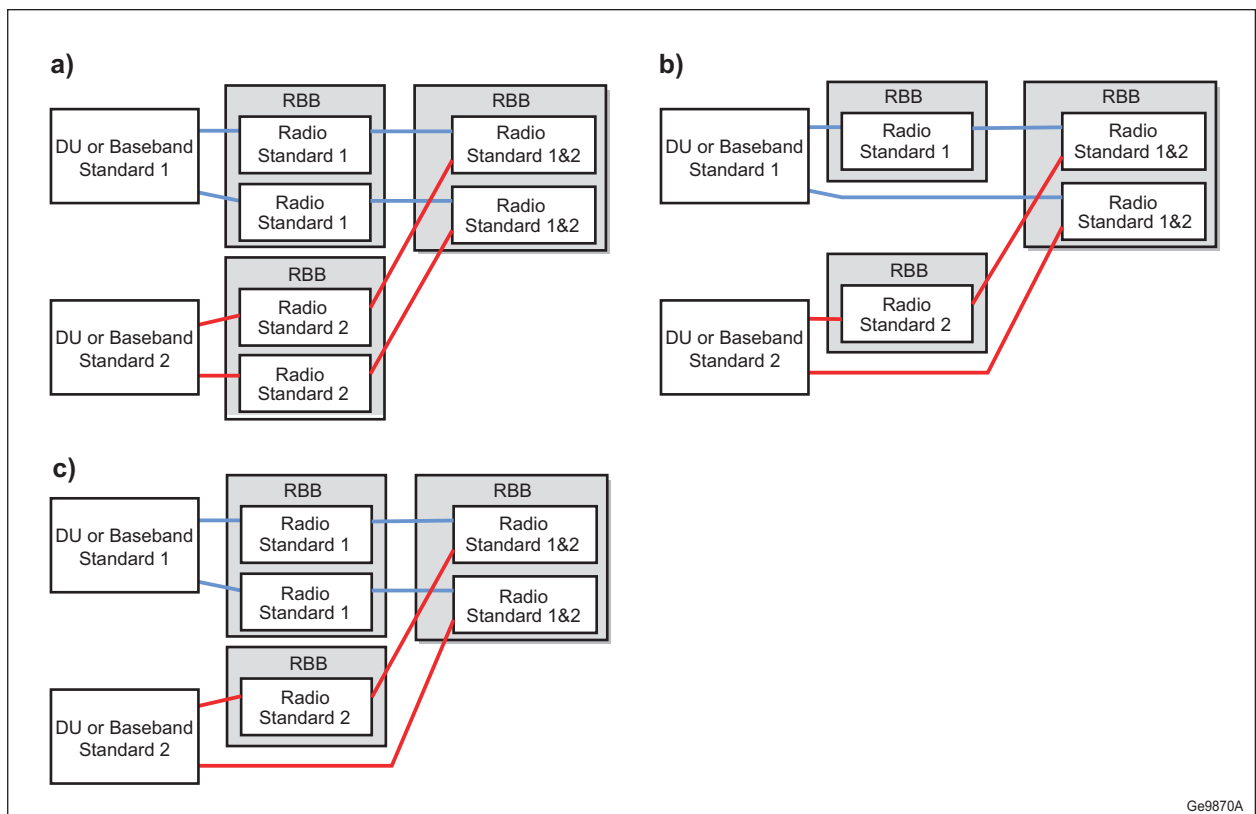


Figure 29 Sector Cascading Used by Two Standards. Two Radio Units in Mixed Mode RBB, Cascaded Through One or Two Radio Units in Single Mode RBBs.

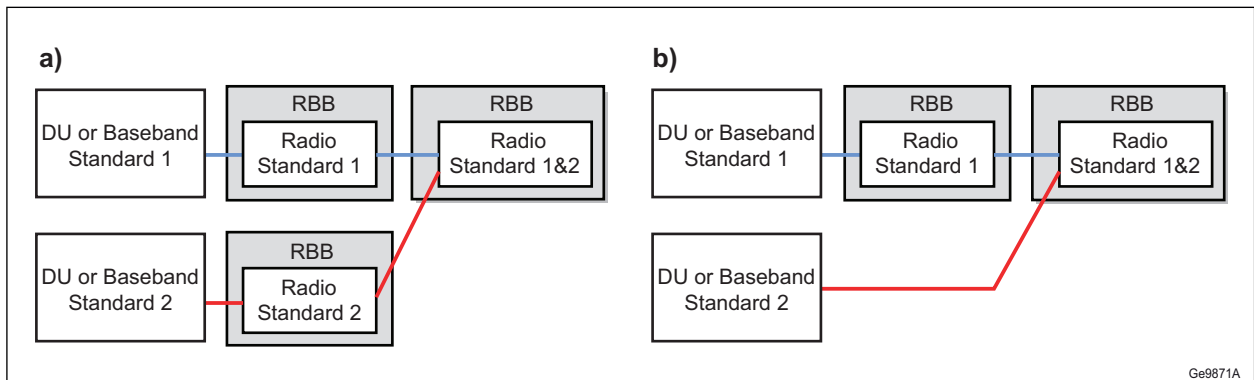


Figure 30 Sector Cascading Used by One or Two Standards. One Radio Unit in Mixed Mode RBB, Cascaded Through One Radio Unit in Single Mode RBB.

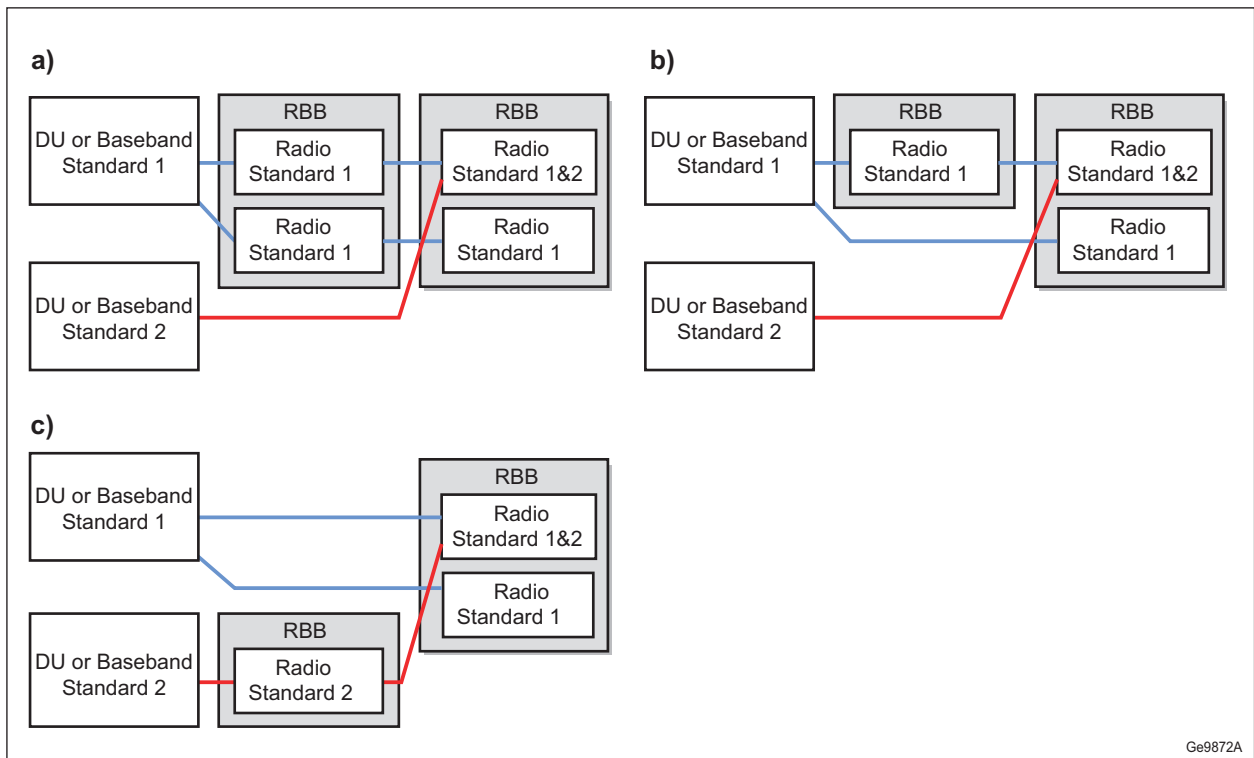


Figure 31 Sector Cascading Used by One Standard. In the Mixed Mode RBB, One Radio Unit is Used for Mixed Mode and One for Single Mode. One or Two Radio Units in a Mixed Mode RBB are Cascaded Through One or Two Radio Units in a Single Mode RBB.

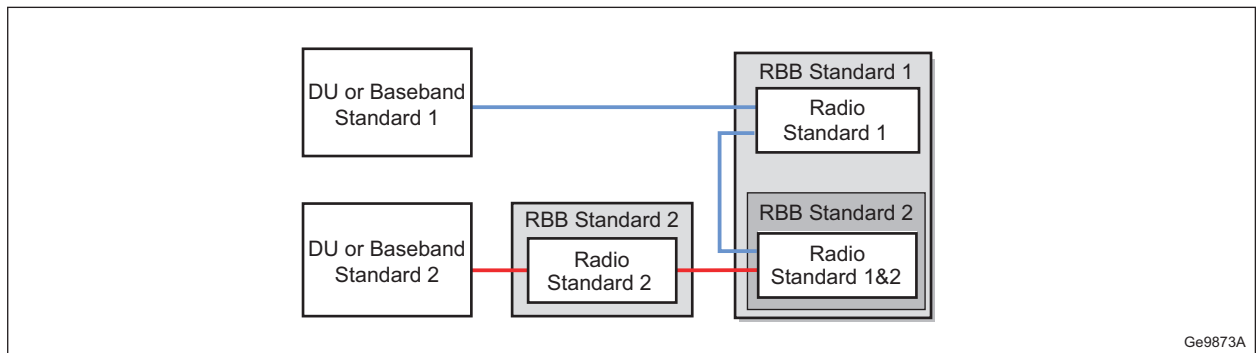


Figure 32 Cascading Within an RBB Used by One Standard, While the Other Standard Uses Sector Cascading between RBBs.

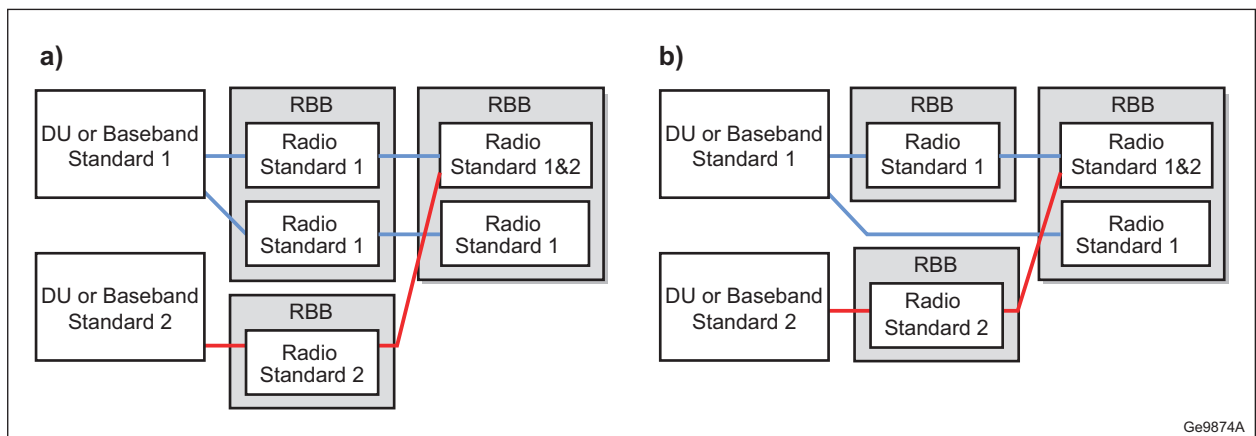


Figure 33 Sector Cascading Used by Two Standards. In the Mixed Mode RBB, One Radio Unit for Mixed Mode and One for Single Mode. One or Two Radio Units in a Mixed Mode RBB Are Cascaded Through One or Two Radio Units in a Single Mode RBB.



12 Radio Configurations for Multistandard Mixed Mode WCDMA + GSM

This section describes MSMM WCDMA + GSM configurations:

[Star Configurations for MSMM WCDMA + GSM](#) on page 622 describes MSMM WCDMA + GSM star configurations.

[Cascade Configurations for MSMM WCDMA + GSM](#) on page 701 describes MSMM WCDMA + GSM cascade configurations.

12.1 Star Configurations for MSMM WCDMA + GSM

This section describes MSMM WCDMA + GSM star configurations:

[Carrier Allocation for Star Configurations WCDMA + GSM](#) on page 632 describes carrier allocation for star configurations WCDMA + GSM.

The following rules apply to MSMM WCDMA + GSM star configurations:

- Different RBBs can be chosen for different sectors to create asymmetric configurations
- Unused DU or Baseband CPRI ports in a mixed mode configuration can be used for single mode sectors according to the single mode configuration tables
- DU or Baseband Capacity for respective radio standard apply
- CPRI Capacity applies, see [CPRI Capacity](#) on page 1309

Table 412 DU and Baseband Support for WCDMA + GSM MSMM Configurations

DU or Baseband Node	Software Release	
	WCDMA	GSM
Baseband 5212	17.Q3	17.Q3
Baseband 5216	17.Q3	17.Q3
Baseband 6303	17.Q3	17.Q3
Baseband 6318	18.Q2	18.Q2
Baseband 6502	17.Q3	17.Q3
Baseband 6620	17.Q3	17.Q3
Baseband 6630	17.Q3	17.Q3
DUG 20	-	17.Q3
DUW 10	17.Q3	-



DU or Baseband Node	Software Release	
	WCDMA	GSM
DUW 20	17.Q3	-
DUW 30	17.Q3	-
DUW 11	17.Q3	-
DUW 31	17.Q3	-
DUW 41	17.Q3	-
2 × DUW 10 2 × DUW 20 2 × DUW 30	17.Q3	-
2 × DUW 11 2 × DUW 31 2 × DUW 41	17.Q3	-

12.1.1

WCDMA + GSM MSMM Configurations with Two DU Radio Nodes

Table 413 WCDMA + GSM MSMM Configurations with Two DU Radio Nodes

Supported RBBs		Software Version
WCDMA	GSM	
DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	DUG 20	
RBB10_1A	RBB32_3A	17.Q3
RBB10_1A	RBB32_3B	17.Q3
RBB10_1A	RBB43_4A	17.Q3
RBB11_1A	RBB11_1A	17.Q3
RBB11_1A for AIR 11 ⁽¹⁾	RBB11_1A for AIR 11 ⁽¹⁾	17.Q3
RBB11_1A	RBB22_1A	17.Q3
RBB11_1A	RBB22_2B	17.Q3
RBB11_1A	RBB32_3A	17.Q3
RBB11_1A	RBB32_3B	17.Q3
RBB11_1A	RBB43_4A	17.Q3
RBB12_1A	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3
RBB12_1A	RBB24_1A	17.Q3
RBB12_1A for AIR 21	RBB24_1A for AIR 21	17.Q3
RBB12_1A	RBB24_2A	17.Q3
RBB12_1E	RBB12_1E	18.Q1
RBB12_1F	RBB12_1F	18.Q1
RBB14_2A	RBB12_1A	17.Q3
RBB22_1A	RBB11_1A	17.Q3
RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB44_2C	17.Q3



Supported RBBs		Software Version
WCDMA	GSM	
DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	DUG 20	
RBB22_1C for AIR 21	RBB12_1A for AIR 21	17.Q3
RBB22_1F	RBB22_1B	18.Q1
RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	17.Q3
RBB22_2B	RBB11_1A	17.Q3
RBB22_2B	RBB22_2B	17.Q3
RBB22_2B	RBB32_3A	17.Q3
RBB22_2B	RBB32_3B	17.Q3
RBB22_2B	RBB43_4A	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A for AIR 21	RBB12_1A for AIR 21	17.Q3
RBB24_1A for AIR 21	RBB24_1A for AIR 21	17.Q3
RBB24_1C	RBB24_1C	18.Q1
RBB24_2B	RBB22_1B	17.Q3
RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	17.Q3
RBB44_1D	RBB44_1D	17.Q3
RBB44_2C	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	17.Q3

(1) Separate Radio parts used for the two standards.

12.1.2

WCDMA + GSM MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 414 WCDMA + GSM MSMM Configurations with DU for WCDMA and Baseband for GSM

Supported RBBs		Software Version
WCDMA	GSM	
DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB10_1A	RBB10_1A	17.Q3
RBB10_1A	RBB20_2A	17.Q3
RBB10_1A	RBB32_3A	17.Q3
RBB10_1A	RBB32_3B	17.Q3



Supported RBBs		Software Version
WCDMA	GSM	
DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB10_1A	RBB43_4A	17.Q3
RBB11_1A	RBB11_1A	17.Q3
RBB11_1A for AIR 11 ⁽¹⁾	RBB11_1A for AIR 11 ⁽¹⁾	17.Q3
RBB11_1A	RBB22_1A	17.Q3
RBB11_1A	RBB22_2B	17.Q3
RBB11_1A	RBB32_1A	17.Q3
RBB11_1A	RBB32_1B	17.Q3
RBB11_1A	RBB32_3A	17.Q3
RBB11_1A	RBB32_3B	17.Q3
RBB11_1A	RBB43_1A	17.Q3
RBB11_1A	RBB43_4A	17.Q3
RBB12_1A	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3
RBB12_1A for AIR 21	RBB22_1C for AIR 21	17.Q3
RBB12_1A	RBB24_1A	17.Q3
RBB12_1A for AIR 21	RBB24_1A for AIR 21	17.Q3
RBB12_1A	RBB24_2A	17.Q3
RBB12_1E	RBB12_1E	18.Q1
RBB12_1E	RBB22_1P	18.Q4
RBB12_1F	RBB12_1F	18.Q1
RBB12_1F	RBB22_1Q	18.Q4
RBB12_2B	RBB11_1C	17.Q3
RBB12_2C	RBB11_1D	17.Q3
RBB14_2A	RBB12_1A	17.Q3
RBB22_1A	RBB11_1A	17.Q3
RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB44_1B	17.Q3
RBB22_1B	RBB44_2C	17.Q3
RBB22_1C for AIR 21	RBB12_1A for AIR 21	17.Q3
RBB22_1C	RBB11_1C	17.Q3
RBB22_1C for AIR 21	RBB11_1C for AIR 21	17.Q3
RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	17.Q3
RBB22_2A	RBB11_1C	17.Q3
RBB22_2A	RBB22_2A	17.Q3
RBB22_2B	RBB11_1A	17.Q3
RBB22_2B	RBB22_2B	17.Q3
RBB22_2B	RBB32_3A	17.Q3
RBB22_2B	RBB32_3B	17.Q3



Supported RBBs		Software Version
WCDMA	GSM	
DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB22_2B	RBB43_4A	17.Q3
RBB22_2E	RBB11_1C	17.Q3
RBB22_2E	RBB11_1D	17.Q3
RBB22_2E	RBB22_2E	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A	RBB22_1C	17.Q3
RBB24_1A	RBB24_1A	17.Q3
RBB24_1C	RBB24_1C	18.Q1
RBB24_1C	RBB44_1D	18.Q4
RBB24_2B	RBB22_1B	17.Q3
RBB32_1A	RBB10_1A	17.Q3
RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	17.Q3
RBB44_1D	RBB44_1D	17.Q3
RBB44_2C	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	17.Q3

(1) Separate Radio parts used for the two standards.

Table 415 WCDMA + GSM MSMM Configurations with DU for GSM and Baseband for WCDMA

Supported RBBs		Software Version
WCDMA	GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	DUG 20	
RBB10_1A	RBB32_3A	17.Q3
RBB10_1A	RBB32_3B	17.Q3
RBB10_1A	RBB43_4A	17.Q3
RBB11_1A	RBB11_1A	17.Q3
RBB11_1A for AIR 11 ⁽¹⁾	RBB11_1A for AIR 11 ⁽¹⁾	17.Q3
RBB11_1A	RBB22_1A	17.Q3
RBB11_1A for AIR 11	RBB22_1A for AIR 11	17.Q3
RBB11_1A	RBB22_2B	17.Q3
RBB11_1A	RBB32_3A	17.Q3
RBB11_1A	RBB32_3B	17.Q3



Supported RBBs		Software Version
WCDMA	GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	DUG 20	
RBB11_1A	RBB43_4A	17.Q3
RBB12_1A	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3
RBB12_1A	RBB24_1A	17.Q3
RBB12_1A	RBB24_1A	17.Q3
RBB12_1A	RBB24_2A	17.Q3
RBB12_1E	RBB12_1E	18.Q1
RBB12_1F	RBB12_1F	18.Q1
RBB14_1A	RBB12_1A	17.Q3
RBB14_2A	RBB12_1A	17.Q3
RBB22_1A	RBB11_1A	17.Q3
RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB44_2C	17.Q3
RBB22_1C	RBB12_1A	17.Q3
RBB22_1C	RBB24_1A	17.Q3
RBB22_1F	RBB22_1B	18.Q1
RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	17.Q3
RBB22_1P	RBB12_1E	19.Q4
RBB22_1Q	RBB12_1F	19.Q4
RBB22_2B	RBB11_1A	17.Q3
RBB22_2B	RBB22_2B	17.Q3
RBB22_2B	RBB32_3A	17.Q3
RBB22_2B	RBB32_3B	17.Q3
RBB22_2B	RBB43_4A	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A	RBB24_1A	17.Q3
RBB24_1B	RBB22_1B	17.Q3
RBB24_1C	RBB24_1C	18.Q1
RBB24_2A	RBB12_1A	17.Q3
RBB24_2A	RBB24_2A	17.Q3
RBB24_2B	RBB22_1B	17.Q3
RBB32_1A	RBB11_1A	17.Q3
RBB32_1B	RBB11_1A	17.Q3
RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	17.Q3
RBB44_1D	RBB24_1C	19.Q4
RBB44_1D	RBB44_1D	17.Q3



Supported RBBs		Software Version
WCDMA	GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	DUG 20	
RBB44_2C	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	17.Q3

(1) Separate Radio parts used for the two standards.

12.1.3 WCDMA + GSM MSMM Configurations with Two Baseband Radio Nodes

Table 416 WCDMA + GSM MSMM Configurations with Two Baseband Radio Nodes

Supported RBBs		Software Version
WCDMA	GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB10_1A	RBB10_1A	17.Q3
RBB10_1A	RBB20_2A	17.Q3
RBB10_1A	RBB32_1A	17.Q3
RBB10_1A	RBB32_1B	17.Q3
RBB10_1A	RBB32_3A	17.Q3
RBB10_1A	RBB32_3B	17.Q3
RBB10_1A	RBB43_4A	17.Q3
RBB11_1A	RBB11_1A	17.Q3
RBB11_1A for AIR 11 ⁽¹⁾	RBB11_1A for AIR 11 ⁽¹⁾	17.Q3
RBB11_1A	RBB22_1A	17.Q3
RBB11_1A for AIR 11	RBB22_1A for AIR 11	17.Q3
RBB11_1A	RBB22_2B	17.Q3
RBB11_1A	RBB32_1A	17.Q3
RBB11_1A	RBB32_1B	17.Q3
RBB11_1A	RBB32_3A	17.Q3
RBB11_1A	RBB32_3B	17.Q3
RBB11_1A	RBB43_1A	17.Q3
RBB11_1A	RBB43_4A	17.Q3
RBB11_1C	RBB11_1C	17.Q3
RBB11_1C	RBB22_1C	17.Q3
RBB11_1C for AIR 11	RBB22_1C for AIR 11	17.Q3
RBB11_1C	RBB22_2A	17.Q3



Supported RBBs		Software Version
WCDMA	GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB11_1C	RBB22_2E	17.Q3
RBB11_1D	RBB11_1D	17.Q3
RBB11_1D	RBB22_2E	17.Q3
RBB12_1A	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3
RBB12_1A	RBB22_1C	17.Q3
RBB12_1A	RBB24_1A	17.Q3
RBB12_1A	RBB24_1A	17.Q3
RBB12_1A	RBB24_2A	17.Q3
RBB12_1C	RBB11_1C	17.Q3
RBB12_1D	RBB11_1D	17.Q3
RBB12_1E	RBB12_1E	18.Q1
RBB12_1F	RBB12_1F	18.Q1
RBB12_2B	RBB11_1C	17.Q3
RBB12_2C	RBB11_1D	17.Q3
RBB14_1A	RBB12_1A	17.Q3
RBB14_2A	RBB12_1A	17.Q3
RBB20_1A	RBB20_1A	17.Q3
RBB20_2A	RBB10_1A	17.Q3
RBB20_2A	RBB20_2A	17.Q3
RBB22_1A	RBB11_1A	17.Q3
RBB22_1A for AIR 11	RBB11_1A for AIR 11	17.Q3
RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB44_1B	17.Q3
RBB22_1B	RBB44_2C	17.Q3
RBB22_1C	RBB11_1C	17.Q3
RBB22_1C for AIR 11	RBB11_1C for AIR 11	17.Q3
RBB22_1C	RBB12_1A	17.Q3
RBB22_1C for AIR 11	RBB22_1C for AIR 11	17.Q3
RBB22_1C for AIR 21	RBB22_1C for AIR 21	17.Q3
RBB22_1C	RBB24_1A	17.Q3
RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	17.Q3
RBB22_1P	RBB22_1P	18.Q4
RBB22_1Q	RBB22_1Q	18.Q4
RBB22_2A	RBB11_1C	17.Q3
RBB22_2A	RBB22_2A	17.Q3
RBB22_2B	RBB11_1A	17.Q3
RBB22_2B	RBB22_2B	17.Q3



Supported RBBs		Software Version
WCDMA	GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB22_2B	RBB32_3A	17.Q3
RBB22_2B	RBB32_3B	17.Q3
RBB22_2B	RBB43_4A	17.Q3
RBB22_2E	RBB11_1C	17.Q3
RBB22_2E	RBB11_1D	17.Q3
RBB22_2E	RBB22_2E	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A	RBB22_1C	17.Q3
RBB24_1A	RBB24_1A	17.Q3
RBB24_1B	RBB22_1B	17.Q3
RBB24_1C	RBB24_1C	18.Q1
RBB24_2A	RBB12_1A	17.Q3
RBB24_2A	RBB24_2A	17.Q3
RBB24_2B	RBB22_1B	17.Q3
RBB32_1A	RBB10_1A	17.Q3
RBB32_1A	RBB11_1A	17.Q3
RBB32_1B	RBB10_1A	17.Q3
RBB32_1B	RBB11_1A	17.Q3
RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	17.Q3
RBB44_1D	RBB44_1D	17.Q3
RBB44_2C	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	17.Q3

(1) Separate Radio parts used for the two standards.

12.1.4

WCDMA + GSM MSMM Configurations with One Mixed Mode Baseband

DBBs supported in single mode are also supported in mixed mode.

Note: Minimum software versions required for mixed mode Baseband units and IDUs are listed in [DU and Baseband Support for WCDMA + LTE MSMM Configurations](#) on page 828.



Table 417 RBB Support for WCDMA + LTE MSMM Configurations with One Mixed Mode Baseband

Supported RBBs			Software Version ⁽¹⁾
WCDMA + LTE			
RBB	Mixed Mode Baseband 5216 Mixed Mode Baseband 6318 ⁽²⁾ Mixed Mode Baseband 6630 ⁽³⁾	Mixed Mode IDU 5209	
RBB10_1A	X	-	17.Q3
RBB11_1A	X	-	17.Q3
RBB11_1C	X	-	17.Q3
RBB11_1D	X	-	17.Q3
RBB11_2A	X	-	17.Q3
RBB11_2B	X	-	17.Q3
RBB12_1A	X	-	17.Q3
RBB12_1C	X	-	17.Q3
RBB12_1D	X	-	17.Q3
RBB12_1E	X	-	18.Q1
RBB12_1F	X	-	18.Q1
RBB12_2A	X	-	17.Q3
RBB12_2B	X	-	17.Q3
RBB12_2C	X	-	17.Q3
RBB12_2D	X	-	18.Q1
RBB12_2E	X	-	18.Q1
RBB14_1A	X	-	17.Q3
RBB14_2A	X	-	17.Q3
RBB20_1A	X	-	17.Q3
RBB20_2A	X	-	17.Q3
RBB22_1A	X	-	17.Q3
RBB22_1B	X	-	17.Q3
RBB22_1B for RDS	X	X	17.Q3
RBB22_1C	X	-	17.Q3
RBB22_1F	X	-	17.Q3
RBB22_1F for RDS	X	-	19.Q1
RBB22_1G	X	-	17.Q3
RBB22_2A	X	-	17.Q3
RBB22_2B	X	-	17.Q3
RBB22_2C	X	-	17.Q3
RBB22_2E	X	-	17.Q3
RBB22_2K	X	-	17.Q3



Supported RBBs			Software Version ⁽¹⁾
WCDMA + LTE			
RBB	Mixed Mode Baseband 5216 Mixed Mode Baseband 6318 ⁽²⁾ Mixed Mode Baseband 6630 ⁽³⁾	Mixed Mode IDU 5209	
RBB22_2K for RDS	X	-	19.Q1
RBB22_2L	X	-	17.Q3
RBB24_1A	X	-	17.Q3
RBB24_1B	X	-	17.Q3
RBB24_1C	X	-	17.Q1
RBB24_2A	X	-	17.Q3
RBB24_2B	X	-	17.Q3
RBB24_2D	X	-	17.Q1
RBB32_1A	X	-	17.Q3
RBB32_1B	X	-	17.Q3
RBB32_3A	X	-	17.Q3
RBB32_3B	X	-	17.Q3
RBB42_1B	X	-	17.Q3
RBB42_2D	X	-	17.Q3
RBB43_4A	X	-	17.Q3
RBB44_1B	X	-	17.Q3
RBB44_1B for RDS	X	X	18.Q3
RBB44_1D	X	-	17.Q3
RBB44_1N for RDS	X	-	19.Q1
RBB44_2C	X	-	17.Q3
RBB44_2C for RDS	X	X	18.Q3
RBB44_2F	X	-	17.Q3
RBB44_2S for RDS	X	-	19.Q1

(1) The RBB is supported from the software version listed here. Baseband units and IDUs must also support the software version used, see [DU and Baseband Support for WCDMA + LTE MSMM Configurations](#) on page 828.

(2) Supported from SW 18.Q2

(3) Supported from SW 17.Q2

12.1.5 Carrier Allocation for Star Configurations WCDMA + GSM

The following tables are showing the carrier allocation for supported RBBs and radios from the stated SW version, either by rows presenting a combination of carriers or by equations to calculate the number of carriers per RF-branch. For configurations where two different types of radio units are used in the same RBB, the radio types are given as radio x + radio y, where radio x is the first radio in the RBB.



The following rule applies to carrier allocation for MSMM WCDMA + GSM star configurations:

- Depending on the band, the operational bandwidth and number of carriers can be different than listed in the carrier allocation table, but has to be considered. For operational bandwidth, see [Supported Radio Frequencies](#) on page 8. For number of WCDMA carriers, see [Sector Configuration for WCDMA](#) on page 182. For number of GSM carriers, see [Sector Configuration for GSM](#) on page 105.

12.1.5.1 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A

Table 418 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A

Radio Type	From SW Release	WCDMA		GSM	
		RBB10_1A		RBB10_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A		TX A	
RRUS 01 RUS 01	17.Q3	A = number of carriers A ≤ 4	2-WRXD	B = number of carriers B ≤ 4	2-WRXD
		A+B ≤ 4 (radio limitation)			
RRUS 02 RUS 02	17.Q3	A = number of carriers A ≤ 4	2-WRXD	B = number of carriers B ≤ 8	2-WRXD
		A+B ≤ 8 (radio limitation)			



12.1.5.2 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Table 419 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Radio Type	From SW Release	WCDMA		GSM		
		RBB10_1A		RBB20_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A		TX A	TX C	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.				



12.1.5.3 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Table 420 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Radio Type	From SW Release	WCDMA		GSM			
		RBB20_2A		RBB10_1A			
		Downlink		Uplink	Downlink	Uplink	
		TX A	TX C		TX A		
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							

12.1.5.4 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1A

Table 421 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1A

Radio Type	From SW Release	WCDMA		GSM			
		RBB10_1A		RBB32_1A			
		Downlink	Uplink	Downlink			Uplink
		TX A		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
Baseband capacity applies. CPRI capacity applies.							
Any three radio combination of: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
Baseband capacity applies. CPRI capacity applies.							



12.1.5.5 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB10_1A

Table 422 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB10_1A

Radio Type	From SW Release	WCDMA				GSM	
		RBB32_1A				RBB10_1A	
		Downlink			Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B	TX C		TX A	
Any combination of three radios on the same band RRUS 01 RRUS 02 Any combination of three radios on the same band RRUS 01 RRUW 02 Any combination of three radios on the same band RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with DUW only.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Maximum of one carrier per radio and three carriers in total.					
Any combination of three radios on the same band RRUS 01 RRUS 02 Any combination of three radios on the same band RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



12.1.5.6 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1B

Table 423 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1B

Radio Type	From SW Release	WCDMA		GSM			
		RBB10_1A		RBB32_1B			
		Downlink	Uplink	Downlink			Uplink
		TX A		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any three radio combination of: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

12.1.5.7 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB10_1A

Table 424 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB10_1A

Radio Type	From SW Release	WCDMA			GSM			
		RBB32_1B			RBB10_1A			
		Downlink			Uplink	Downlink	Uplink	
		TX A/RX A	TX B/RX B	TX C		TX A		
Any three radio combination of: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
Baseband capacity applies. CPRI capacity applies.								



12.1.5.8 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A

Table 425 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A

Radio Type	From SW Release	WCDMA		GSM	
		RBB11_1A		RBB11_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 RUS 01	17A	C1	2-WRXD	C1, C2, C3	2-WRXD
		C1, C2		C1, C2	
		C1, C2, C3		C1	
RRUS 02 RUS 02	17A	C1	2-WRXD	C1, ..., C7	2-WRXD
		C1, C2		C1, ..., C6	
		C1, C2, C3		C1, ..., C5	

12.1.5.9 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_1A

Table 426 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_1A

Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1A		RBB22_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
		A+B ≤ 8 (radio 1 and radio 2 limitation) A+C ≤ 4 (radio 1 limitation)				
RRUS 01 + RRUS 02 RUS 01 + RUS 02	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 8	2-WRXD
		A+B ≤ 12 (radio 1 and radio 2 limitation) A+C ≤ 4 (radio 1 limitation)				
RRUS 02 + RRUS 01 RUS 02+ RUS 01	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 8	B = number of carriers B ≤ 4	2-WRXD
		A+B ≤ 12 (radio 1 and radio 2 limitation) A+C ≤ 8 (radio 1 limitation)				
RRUS 02 + RRUS 02 RUS 02 + RUS 02	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 8	B = number of carriers B ≤ 8	2-WRXD
		A+B ≤ 12 (radio 1 and radio 2 limitation) A+C ≤ 8 (radio 1 limitation)				



12.1.5.10 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A and RBB11_1A

Table 427 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A and RBB11_1A

Radio Type	From SW Release	WCDMA			GSM	
		RBB22_1A			RBB11_1A	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
RRUS 01 + RRUS 01 RRUS 02 + RRUS 01 RRUW 02 + RRUS 01 RUS 01 + RUS 01 RUS 02 + RUS 01	17.Q3	B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 4	2-WRXD
D = number of 2TX carriers D ≤ 4						
B+D ≤ 4 (radio 1 limitation) A+C+D ≤ 4 (radio 2 limitation) B+C+D ≤ 4 (RAT limitation)						
RRUS 01 + RRUS 02 RRUS 02 + RRUS 02 RUS 01 + RUS 02 RUS 02 + RUS 02	17.Q3	B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 8	2-WRXD
D = number of 2TX carriers D ≤ 4						
B+D ≤ 4 (radio 1 limitation) A+C+D ≤ 8 (radio 2 limitation) C+D ≤ 4 (radio 2 limitation) B+C+D ≤ 8 (RAT limitation)						

12.1.5.11 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_2B

Table 428 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_2B

Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1A		RBB22_2B		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
		A+C ≤ 4 (radio 1 limitation) A+B ≤ 8 (RAT limitation)				
RRUS 01 + RRUS 02 RUS 01 + RUS 02	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 8	2-WRXD
		A+C ≤ 4 (radio 1 limitation) A+B ≤ 12 (RAT limitation)				



Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1A		RBB22_2B		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RRUS 02 + RRUS 01 RUS 02+ RUS 01	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 8	B = number of carriers B ≤ 4	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+B ≤ 12 (RAT limitation)				
RRUS 02 + RRUS 02 RUS 02 + RUS 02	17.Q3	C = number of carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 8	B = number of carriers B ≤ 8	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+B ≤ 12 (RAT limitation)				

12.1.5.12 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB11_1A

Table 429 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB11_1A

Radio Type	From SW Release	WCDMA		GSM		
		RBB22_2B		RBB11_1A		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 01 + RRUW 02 RUS 01 + RUS 01 RUS 01 + RUS 02	17.Q3	B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 4	2-WRXD
D = number of 2TX carriers D ≤ 4						
A+B+D ≤ 4 (radio 1 limitation) C+D ≤ 4 (radio 2 limitation) B+C+D ≤ 8 (RAT limitation)						
RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUW 01	17.Q3	B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 8	2-WRXD
D = number of 2TX carriers D ≤ 4						
A+B+D ≤ 8 (radio 1 limitation) C+D ≤ 4 (radio 2 limitation) B+C+D ≤ 8 (RAT limitation)						



12.1.5.13 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1A

Table 430 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1A

Radio Type	From SW Release	WCDMA		GSM			
		RBB11_1A		RBB32_1A			
		Downlink	Uplink	Downlink			Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

12.1.5.14 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB11_1A

Table 431 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB11_1A

Radio Type	From SW Release	WCDMA			GSM			
		RBB32_1A			RBB11_1A			
		Downlink		Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B		TX C	TX A/RX A		
Any three radio combination of: RRUS 01 RRUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.						
Any three radio combination of: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.						



12.1.5.15 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1B

Table 432 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1B

Radio Type	From SW Release	WCDMA		GSM			
		RBB11_1A		RBB32_1B			
		Downlink	Uplink	Downlink			Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

12.1.5.16 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB11_1A

Table 433 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB11_1A

Radio Type	From SW Release	WCDMA			GSM			
		RBB32_1B			RBB11_1A			
		Downlink		Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B		TX C	TX A/RX A		
Any three radio combination of: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.						



12.1.5.17 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB43_1A

Table 434 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB43_1A

Radio Type	From SW Release	WCDMA		GSM					
		RBB11_1A		RBB43_1A					
		Downlink	Uplink	Downlink				Uplink	
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	TX D/RX D		
Any combination of four radios on the same band: RRUS 01 RRUS 02 Any combination of four radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.					2-WRXD
		Baseband capacity applies. CPRI capacity applies.							

12.1.5.18 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C

Table 435 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C

Radio Type	From SW Release	WCDMA		GSM	
		RBB11_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 01 RRUS 02 RRUS 12 RRUS 13 RUS 01 RUS 02	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.					
Radio 2217	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.					



12.1.5.19 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C and RBB11_1C

Table 436 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C and RBB11_1C

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.20 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Table 437 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_2B		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.21 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_1C

Table 438 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_1C

Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1C		RBB22_1C		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
AIR 11 AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
Baseband capacity applies. CPRI capacity applies						

12.1.5.22 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB11_1C

Table 439 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB11_1C

Radio Type	From SW Release	WCDMA			GSM		
		RBB22_1C			RBB11_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A		
AIR 11 AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		No diversity
DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA			GSM	
		RBB22_1C			RBB11_1C	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: RUS 01 RUS 02	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Supported with Baseband only. Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: RUS 01 RUS 02	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Supported with Baseband only. Baseband capacity applies. CPRI capacity applies.				

12.1.5.23 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Table 440 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1C		RBB22_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies. CPRI capacity applies				



12.1.5.24 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Table 441 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Radio Type	From SW Release	WCDMA			GSM	
		RBB22_2A			RBB11_1C	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: RRUS 01 RRUS 02	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: RUS 01 RUS 02	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Supported with Baseband only. Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: RUS 01 RUS 02	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Supported with Baseband only. Baseband capacity applies. CPRI capacity applies.				

12.1.5.25 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Table 442 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1C		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.				



Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1C		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.				

12.1.5.26 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Table 443 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Radio Type	From SW Release	WCDMA		GSM		
		RBB22_2E		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				



Radio Type	From SW Release	WCDMA			GSM	
		RBB22_2E			RBB11_1C	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				

12.1.5.27 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D

Table 444 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D

Radio Type	From SW Release	WCDMA		GSM	
		RBB11_1D		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 01 RRUS 02 RRUS 12 RRUS 13	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2217	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.28 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D and RBB11_1D

Table 445 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D and RBB11_1D

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1D		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.29 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C and RBB11_1D

Table 446 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C and RBB11_1D

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_2C		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.30 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Table 447 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Radio Type	From SW Release	WCDMA		GSM		
		RBB11_1D		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				



12.1.5.31 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1D

Table 448 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1D

Radio Type	From SW Release	WCDMA			GSM	
		RBB22_2E			RBB11_1D	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		DU and Baseband capacity applies. CPRI Capacity applies.				

12.1.5.32 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A

Table 449 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
AIR 21	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 RUS 01	17.Q3	C1	2-WRXD	C1, C2, C3	2-WRXD
		C1, C2		C1, C2	
		C1, C2, C3		C1	
RRUS 02 RUS 02	17.Q3	C1	2-WRXD	C1, ..., C7	2-WRXD
		C1, C2		C1, ..., C6	
		C1, C2, C3		C1, ..., C5	

12.1.5.33 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB14_1A and RBB12_1A

Table 450 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB14_1A and RBB12_1A

Radio Type ⁽¹⁾	From SW Release	WCDMA		GSM	
		RBB14_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + Radio 0208	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			

(1) First radio used for mixed mode.



12.1.5.34 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A and RBB12_1A

Table 451 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A and RBB12_1A

Radio Type ⁽¹⁾	From SW Release	WCDMA		GSM	
		RBB14_2A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17.Q3	B = number of carriers, $B \leq 4$	2- or 4-WRXD	A = number of carriers, $A \leq 4$	2-WRXD
A+B ≤ 4 (radio 1 limitation)					

(1) First radio used for mixed mode.

12.1.5.35 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Table 452 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Radio Type	From SW Release	WCDMA		GSM		
		RBB12_1A		RBB22_1C		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
AIR 21	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI Capacity applies.						



12.1.5.36 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB12_1A

Table 453 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB12_1A

Radio Type	From SW Release	WCDMA			GSM	
		RBB22_1C			RBB12_1A	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
AIR 21	17.Q3	B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	A = number of carriers A ≤ 4	2-WRXD
		D = number of 2TX carriers D ≤ 4				
		B+C+D ≤ 4 (radio 1 and radio 2 limitation) A+B+C+D ≤ 4 (radio 1 and radio 2 limitation)				

12.1.5.37 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Table 454 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Radio Type	From SW release	WCDMA		GSM		
		RBB12_1A		RBB24_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX C/RX C	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						



12.1.5.38 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Table 455 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Radio Type	From SW Release	GSM		WCDMA		
		RBB12_1A		RBB24_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX C/RX C	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				



12.1.5.39 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Table 456 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Radio Type	From SW release	WCDMA		GSM		
		RBB12_1A		RBB24_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX C/RX C	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 4-WRXD supported with DUG.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				

12.1.5.40 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Table 457 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Radio Type ⁽¹⁾	From SW Release	WCDMA		GSM			
		RBB24_2A		RBB12_1A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A		
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

(1) First radio used for mixed mode.



12.1.5.41 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C

Table 458 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1C		RBB12_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.42 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D

Table 459 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1D		RBB12_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.43 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1E

Table 460 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1E

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1E		RBB12_1E	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			

12.1.5.44 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1F

Table 461 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1F

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_1F		RBB12_1F	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.45 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B

Table 462 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_2B		RBB12_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.46 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C

Table 463 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_2C		RBB12_2C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



12.1.5.47 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2D

Table 464 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2D

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_2D		RBB12_2D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			

12.1.5.48 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2E

Table 465 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2E

Radio Type	From SW Release	WCDMA		GSM	
		RBB12_2E		RBB12_2E	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			

12.1.5.49 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A

Table 466 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A

Radio Type ⁽¹⁾	From SW Release	WCDMA		GSM	
		RBB14_2A		RBB14_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17A	B = number of carriers, B ≤ 4	2- or 4-WRXD	A = number of carriers, A ≤ 4	2-WRXD
		A+B ≤ 4 (radio 1 limitation)			

(1) First radio used for mixed mode.



12.1.5.50 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB20_1A

Table 467 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB20_1A

Radio Type	From SW release	WCDMA			GSM		
		RBB20_1A ⁽¹⁾			RBB20_1A		
		Downlink		Uplink	Downlink ⁽²⁾		Uplink
		TX A	TX B		TX A	TX B	
RRUS 12 RRUS 13	17.Q3	Each GSM carrier can be configured with one or two TX branches. Supported with Baseband.					

(1) Maximum three carriers with 4-6 sectors.

(2) Same limitations for both 1TX and 2TX carriers.

12.1.5.51 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A

Table 468 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A

Radio Type	From SW Release	WCDMA			GSM		
		RBB20_2A			RBB20_2A		
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					

(1) Same limitations for 1TX and 2TX configured carriers.



12.1.5.52 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A

Table 469 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A

Radio Type	From SW Release	WCDMA		GSM			
		RBB22_1A		RBB22_1A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX B	TX B/RX B	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							

12.1.5.53 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1F and RBB22_1B

Table 470 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1F and RBB22_1B

Radio Type	From SW Release	WCDMA			GSM		
		RBB22_1F			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with DUG only.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



12.1.5.54 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Table 471 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Radio Type	From SW Release	WCDMA			GSM		
		RBB24_1B			RBB22_1B		
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

(1) Same limitations for 1TX and 2TX configured carriers.



12.1.5.55 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Table 472 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Radio Type	From SW Release	WCDMA			GSM		
		RBB24_2B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



12.1.5.56 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Table 473 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Radio Type	From SW Release	WCDMA			GSM				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2212 GSM capable radios: Radio 2212 Radio 2219 RRUS 12	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband. Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA			GSM				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2219 RRUS 12 GSM capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband. Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: RRUS 13 GSM capable radios: Radio 2219 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband. Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA			GSM				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode GSM capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported only with Baseband.				2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.							



12.1.5.57 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Table 474 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Radio Type	From SW Release	WCDMA				GSM			
		RBB44_1B ⁽¹⁾				RBB22_1B			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX C/RX C	TX D/ RX D	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2212 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2219 RRUS 12 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA				GSM			
		RBB44_1B ⁽¹⁾				RBB22_1B			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX C/RX C	TX D/ RX D	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: RRUS 13 WCDMA capable radios: Radio 2217 Radio 2219 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2217 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported only with Baseband.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.							

(1) Flexible carrier allocation is supported.



12.1.5.58 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Table 475 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Radio Type	From SW Release	WCDMA			GSM				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2212 GSM capable radios: Radio 2212 Radio 2219 RRUS 12 Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2219 RRUS 12 GSM capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2219 RRUS 12 RRUS 13 GSM capable radios: Radio 2219 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA			GSM				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: RRUS 12 RRUS 13 WCDMA capable radios: RRUS 12 RRUS 13	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2- or 4-WRXD supported with DUG.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode GSM capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies. Each carrier can be configured with one or two TX branches. .							



12.1.5.59 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Table 476 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Radio Type	From SW Release	WCDMA				GSM				
		RBB44_2C				RBB22_1B				
		Downlink				Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A + TX B/ RX B			
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2212 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2219 RRUS 12 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: RRUS 13 WCDMA capable radios: Radio 2217 Radio 2219 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.								
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.								
17.Q2	Each carrier can be configured with one or two TX branches. Supported with Baseband only.									



Radio Type	From SW Release	WCDMA				GSM		
		RBB44_2C				RBB22_1B		
		Downlink				Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A + TX B/ RX B	
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. WCDMA + GSM capable radios: Radio 2217 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of one mixed mode WCDMA + GSM capable radio and one single mode WCDMA capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported only with Baseband.	2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies. Each carrier can be configured with one or two TX branches. Supported with Baseband only.						

12.1.5.60 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C

Table 477 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C

Radio Type	From SW Release	WCDMA			GSM		
		RBB22_1C			RBB22_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI Capacity applies.					



Radio Type	From SW Release	WCDMA			GSM			
		RBB22_1C			RBB22_1C			
		Downlink		Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B		
AIR 11 AIR 21 Any combinations of two radios on the same band: RRUS 01 RRUS 02 Any combinations of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI Capacity applies.								

12.1.5.61 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB24_1A

Table 478 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB 22_1C and RBB24_1A

Radio Type	From SW release	WCDMA			GSM		
		RBB22_1C			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
AIR 21 (dual mixed mode)	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



12.1.5.62 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB22_1C

Table 479 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB22_1C

Radio Type	From SW release	WCDMA			GSM		
		RBB24_1A			RBB22_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

12.1.5.63 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1F

Table 480 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1F

Radio Type	From SW Release	WCDMA		GSM			
		RBB22_1F		RBB22_1F			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4415	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
RRUS 32	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
RRUS 32	17.Q2	Each GSM carrier can be configured with one or two TX branches. Supported with Baseband only.					



12.1.5.64 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1G

Table 481 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1G

Radio Type	From SW Release	WCDMA		GSM			
		RBB22_1G		RBB22_1G			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 32	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	Each carrier can be configured with one or two TX branches. Supported with Baseband only.					
Radio 4415	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

12.1.5.65 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A

Table 482 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A

Radio Type	From SW Release	WCDMA			GSM		
		RBB22_2A			RBB22_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX B	TX B/RX B	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Supported with Baseband only. Baseband capacity applies. CPRI capacity applies.					



12.1.5.66 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B

Table 483 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B

Radio Type	From SW Release	WCDMA			GSM		
		RBB22_2B			RBB22_2B		
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01	17.Q3	A total of up to eight carriers can be freely allocated to the TX ports. All the following conditions must be met:					
		B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	X X ≤ 4	Y Y ≤ 4	2-WRXD
		Total numbers of 1TX carriers: B+C ≤ 8					
		D = number of 2TX carriers D ≤ 4					
		Total number of WCDMA carriers: B+C+2×D ≤ 8		Total number of GSM carriers: X+Y ≤ 8			
		Total number of WCDMA + GSM carriers (B+C+2×D) + (X+Y) ≤ 8					
RRUS 02 + RRUS 02 RUS 02 + RUS 02	17.Q3	A total of up to sixteen carriers can be freely allocated to the TX ports. All the following conditions must be met:					
		B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	X X ≤ 8	Y Y ≤ 8	2-WRXD
		Total numbers of 1TX carriers: B+C ≤ 8					
		D = number of 2TX carriers D ≤ 4					
		Total number of WCDMA carriers: B+C+2×D ≤ 8		Total number of GSM carriers: X+Y ≤ 12			
		Total number of WCDMA + GSM carriers (B+C+2×D) + (X+Y) ≤ 16					
RRUS 01 + RRUS 02 RUS 01 + RUS 02	17.Q3	A total of up to 12 carriers can be freely allocated to the TX ports. All the following conditions must be met:					
		B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	X X ≤ 8	Y Y ≤ 4	2-WRXD
		Total numbers of 1TX carriers: B+C ≤ 8					
		D = number of 2TX carriers D ≤ 4					
		Total number of WCDMA carriers: B+C+2×D ≤ 8		Total number of GSM carriers: X+Y ≤ 12			
		Total number of WCDMA + GSM carriers: (B+C+2×D) + (X+Y) ≤ 12					



Radio Type	From SW Release	WCDMA		GSM			
		RBB22_2B		RBB22_2B			
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 02 + RRUS 01 RUS 02 + RUS 01	17.Q3	A total of up to 12 carriers can be freely allocated to the TX ports. All the following conditions must be met:					
		B = number of 1TX carriers B ≤ 4	C = number of 1TX carriers C ≤ 4	2-WRXD	X X ≤ 4	Y Y ≤ 8	2-WRXD
		Total numbers of 1TX carriers: B+C ≤ 8					
		D = number of 2TX carriers D ≤ 4					
		Total number of WCDMA carriers: B+C+2×D ≤ 8					
		Total number of WCDMA + GSM carriers: (B+C+2×D) + (X+Y) ≤ 12					

(1) The WCDMA carriers in TX A and TX B can be same, resulting in a 2TX/2RX configuration. Alternatively the WCDMA carriers in TX A and TX B could be different, resulting in a 1TX/2RX configuration.

12.1.5.67 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E

Table 484 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E

Radio Type	From SW Release	WCDMA		GSM			
		RBB22_2E		RBB22_2E			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.					
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.					



Radio Type	From SW Release	WCDMA			GSM		
		RBB22_2E			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.					

12.1.5.68 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2K

Table 485 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2K

Radio Type	From SW Release	WCDMA			GSM		
		RBB22_2K			RBB22_2K		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.					
Radio 4415	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.					
RRUS 32	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.					
RRUS 32	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU and Baseband capacity applies. CPRI Capacity applies.					



12.1.5.69 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2L

Table 486 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1L

Radio Type	From SW Release	WCDMA			GSM		
		RBB22_2L			RBB22_2L		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4415	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
RRUS 32	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	Each GSM carrier can be configured with one or two TX branches.					
		DU or Baseband capacity applies. CPRI capacity applies.					

12.1.5.70 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A

Table 487 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A

Radio Type	From SW release	WCDMA			GSM		
		RBB24_1A			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
Supported with Baseband Baseband capacity applies. CPRI capacity applies.							



12.1.5.71 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B

Table 488 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B

Radio Type	From SW Release	WCDMA			GSM		
		RBB24_1B			RBB24_1B		
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

(1) Same limitations for 1TX and 2TX configured carriers.



12.1.5.72 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1C

Table 489 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1C

Radio Type	From SW Release	WCDMA			GSM		
		RBB24_1C			RBB24_1C		
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

(1) Same limitations for 1TX and 2TX configured carriers.

12.1.5.73 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1C and RBB44_1D

Table 490 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1C and RBB44_1D

Radio Type	From SW Release	WCDMA			GSM				
		RBB24_1C			RBB44_1D				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2460 Radio 2479	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with DUW.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported only with Baseband.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									



12.1.5.74 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D and RBB24_1C

Table 491 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D and RBB24_1C

Radio Type	From SW Release	WCDMA				GSM			
		RBB44_1D				RBB24_1C			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX C/RX C	TX D/ RX D	
Radio 2460 Radio 2479	19.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with Baseband				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported only with DUG 20.		2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									

12.1.5.75 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A

Table 492 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A

Radio Type	From SW release	WCDMA			GSM		
		RBB24_2A			RBB24_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
AIR 21	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
Supported with Baseband. DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2- or 4-WRXD supported with Baseband. 4-WRXD supported with DUG.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



12.1.5.76 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B

Table 493 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B

Radio Type	From SW Release	WCDMA			GSM		
		RBB24_2B			RBB24_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	WCDMA			GSM		
		RBB24_2B			RBB24_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2212 + Radio 0208 Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RX only capable radios: Radio 0208 RRUS A2	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							

12.1.5.77 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2D

Table 494 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2D

Radio Type	From SW Release	WCDMA			GSM		
		RBB24_2D			RBB24_2D		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



12.1.5.78 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A

Table 495 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A

Radio Type	From SW Release	WCDMA			GSM				
		RBB32_1A			RBB32_1A				
		Downlink			Uplink	Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.							
Any three radio combination of: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.							

12.1.5.79 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B

Table 496 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B

Radio Type	From SW Release	WCDMA			GSM				
		RBB32_1B			RBB32_1B				
		Downlink			Uplink	Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.							
Any three radio combination of: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.							



12.1.5.80 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3A

Table 497 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3A

Radio Type	From SW Release	WCDMA			GSM	
		RBB32_3A			RBB32_3A	
		Downlink			Downlink	Uplink
		TX A/RX A	TX B/RX B	TX C	TX A/RX A	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	2-WRXD
		Baseband capacity applies. CPRI capacity applies.				

12.1.5.81 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3B

Table 498 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3B

Radio Type	From SW Release	WCDMA			GSM	
		RBB32_3B			RBB32_3B	
		Downlink			Downlink	Uplink
		TX A/RX A	TX B/RX B	TX C	TX A/RX A	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	2-WRXD
		Baseband capacity applies. CPRI capacity applies.				



12.1.5.82 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB42_1B

Table 499 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB42_1B

Radio Type	From SW Release	GSM					WCDMA				
		RBB42_1B					RBB42_1B				
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 12 RRUS 13	17.Q3	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-WRXD
		Baseband capacity applies. CPRI capacity applies. Each GSM carrier can be configured with one or two TX branches on the same radio only.									

(1) Same limitations for 1TX and 2TX carriers.

12.1.5.83 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB42_2D

Table 500 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB42_2D

Radio Type	From SW Release	WCDMA					GSM				
		RBB42_2D					RBB42_2D				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Maximum four carriers per radio with DUW. For configurations with DUW, the following equations have to be fulfilled for calculating the maximum number of 1TX and 2TX carriers configured on ports A and B on radio 1 and C and D on radio 2: For radio 1: $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 8$ (for RRUS 11 or RRUS 12) $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 16$ (for RRUS 13) For radio 2: $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 8$ (for RRUS 11 or RRUS 12) $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 16$ (for RRUS 13)				2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Each GSM carrier can be configured with one or two TX branches. Supported with Baseband.									



12.1.5.84 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB43_1A

Table 501 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB43_1A and RBB43_1A

Radio Type	From SW Release	WCDMA		GSM				
		RBB43_1A		RBB43_1A				
		Downlink	Uplink	Downlink				Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	TX D/RX D	
Any combination of four radios on the same band: RRUS 01 RRUS 02 Any combination of four radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Baseband capacity applies. CPRI capacity applies.						

12.1.5.85 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB43_4A

Table 502 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB43_4A and RBB43_4A

Radio Type	From SW Release	WCDMA		GSM				
		RBB43_4A		RBB43_4A				
		Downlink	Uplink	Downlink				Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	TX D/RX D	
Any combination of four radios on the same band: RRUS 01 RRUS 02 Any combination of four radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Baseband capacity applies. CPRI capacity applies.						



12.1.5.86 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B

Table 503 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B

Radio Type	From SW Release	WCDMA					GSM				
		RBB44_1B ⁽¹⁾					RBB44_1B				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: Radio 2212 WCDMA or WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA					GSM				
		RBB44_1B ⁽¹⁾					RBB44_1B				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: Radio 2219 RRUS 12 WCDMA or WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA					GSM				
		RBB44_1B ⁽¹⁾					RBB44_1B				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: RRUS 13 WCDMA or WCDMA + GSM capable radios: Radio 2217 Radio 2219 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: Radio 2217 WCDMA or WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Supported with Baseband. Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA				GSM					
		RBB44_1B ⁽¹⁾				RBB44_1B					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.									

(1) Flexible carrier allocation is supported.

12.1.5.87 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D

Table 504 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D

Radio Type	From SW Release	WCDMA					GSM				
		RBB44_1D					RBB44_1D				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB RRUS 32	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband only. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
Radio 2460 Radio 2479	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
Radio 4415	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											



12.1.5.88 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C

Table 505 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C

Radio Type	From SW Release	GSM					WCDMA				
		RBB44_2C					RBB44_2C				
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: Radio 2212 WCDMA or WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: Radio 2219 RRUS 12 WCDMA or WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: RRUS 13 WCDMA or WCDMA + GSM capability: Radio 2217 Radio 2219 RRUS 12 RRUS 13	17A	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.				2- or 4-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.									
	17A	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG				2- or 4-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.									
	17.Q2	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG				2- or 4-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.									
	17.Q3	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	GSM				WCDMA					
		RBB44_2C				RBB44_2C					
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. GSM or WCDMA + GSM capable radios: Radio 2217 WCDMA or WCDMA + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.											
Any combination of one single mode GSM or mixed mode WCDMA + GSM capable radio and one single mode WCDMA or mixed mode WCDMA + GSM capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.											

(1) Same limitations for 1TX and 2TX carriers.

12.1.5.89 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2F

Table 506 WCDMA + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2F

Radio Type	From SW Release	WCDMA					GSM				
		RBB44_2F					RBB44_2F				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB RRUS 32	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
DU or Baseband capacity applies.Each carrier can be configured with one or two TX branches. Supported with Baseband only. CPRI capacity applies.											



Radio Type	From SW Release	WCDMA					GSM				
		RBB44_2F					RBB44_2F				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2460 Radio 2479	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. EachEach carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Radio 4415	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. EachEach carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									

12.2 Cascade Configurations for MSMM WCDMA + GSM

This section describes WCDMA + GSM configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for WCDMA + GSM star configuration, single mode WCDMA and single mode GSM cascade configuration all applies.

For mixed mode WCDMA + GSM star configurations, see [Star Configurations for MSMM WCDMA + GSM](#) on page 622.

For single mode WCDMA configurations, see [Radio Configurations for WCDMA](#) on page 182.

For single mode GSM configurations, see [Radio Configurations for GSM](#) on page 105.

For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



13 Radio Configurations for Multistandard Mixed Mode LTE + GSM

This section describes MSMM LTE + GSM configurations:

[Star Configurations for MSMM LTE + GSM](#) on page 702 describes MSMM LTE + GSM star configurations.

[Cascade Configurations for MSMM LTE + GSM](#) on page 794 describes MSMM LTE + GSM cascade configurations.

13.1 Star Configurations for MSMM LTE + GSM

This section describes MSMM LTE + GSM star configurations:

[Carrier Allocation for Star Configurations LTE + GSM](#) on page 712 describes carrier allocation for LTE + GSM configurations.

The following rules apply to MSMM LTE + GSM star configurations:

- All radios of type Radio support 1.4 and 3 MHz LTE carriers in MSMM configurations.
- Out of RRU, RU, and all other AIR, the following radio units support 1.4 and 3 MHz LTE carriers in MSMM LTE + GSM configurations:
 - AIR 21 B2A B4P
 - AIR 21 B2A B12P B8P
 - AIR 21 B3A B12P B8P
 - AIR 21 B3A B1P
 - RRUS 01 B0
 - RRUS 01 B3
 - RRUS 01 B5
 - RRUS 01 B8
 - RRUS 02 B0
 - RRUS 02 B0A
 - RRUS 12 B2



- RRUS 12 B3
 - RRUS 12 B5
 - RRUS 12 B8
 - RRUS 13 B3
 - RUS 01 B0
 - RUS 01 B3
 - RUS 01 B5
 - RUS 01 B8
 - RUS 02 B0
 - RUS 02 B2
 - RUS 02 B3
 - RUS 02 B5
 - RUS 02 B8
 - RUS 03 B3
- Different RBBs can be chosen for different sectors to create asymmetric configurations.
 - In configurations where DUS 41 is used, the ODS 41 digital unit can also be used.
 - Unused DU or Baseband CPRI ports in a mixed mode configuration can be used for single mode sectors according to the single mode configuration tables.
 - DU or Baseband Capacity for respective radio standard apply.
 - CPRI Capacity applies, see [CPRI Capacity](#) on page 1309.

13.1.1 LTE + GSM MSMM Configurations with Two DU Radio Nodes

Table 507 LTE + GSM MSMM Configurations with Two DU Radio Nodes

LTE			GSM	
RBB	1-2 DUS 31 1-2 DUS 41	1 DUL 20	RBB	DUG 20
RBB10_1A	17.Q3	17.Q3	RBB32_3A	17.Q3
RBB10_1A	17.Q3	17.Q3	RBB32_3B	17.Q3



LTE			GSM	
RBB	1-2 DUS 31 1-2 DUS 41	1 DUL 20	RBB	DUG 20
RBB10_1A	17.Q3	17.Q3	RBB43_4A	17.Q3
RBB12_1A	17.Q3	17.Q3	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	17.Q3	17.Q3	RBB12_1A for AIR 21 (1)	17.Q3
RBB12_1A	17.Q3	17.Q3	RBB24_1A	17.Q3
RBB12_1A for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21	17.Q3
RBB12_1A	17.Q3	17.Q3	RBB24_2A	17.Q3
RBB12_1E	17.Q3	-	RBB12_1E	17.Q3
RBB12_1F	17.Q3	-	RBB12_1F	17.Q3
RBB14_1A	17.Q3	17.Q3	RBB12_1A	17.Q3
RBB14_2A	17.Q3	17.Q3	RBB12_1A	17.Q3
RBB22_1A	17.Q3	17.Q3	RBB11_1A	17.Q3
RBB22_1B	17.Q3	17.Q3	RBB22_1B	17.Q3
RBB22_1B	17.Q3	17.Q3	RBB44_2C	17.Q3
RBB22_1C for AIR 21	17.Q3	17.Q3	RBB12_1A for AIR 21	17.Q3
RBB22_1C for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21	17.Q3
RBB22_1F	17.Q3	-	RBB22_1B	17.Q3
RBB22_1F	17.Q3	17.Q3	RBB22_1F	17.Q3
RBB22_1G	17.Q3	17.Q3	RBB22_1G	17.Q3
RBB22_1P	19.Q4	-	RBB12_1E	19.Q4
RBB22_1Q	19.Q4	-	RBB12_1F	19.Q4
RBB22_2B	17.Q3	17.Q3	RBB11_1A	17.Q3
RBB22_2B	17.Q3	17.Q3	RBB22_2B	17.Q3
RBB22_2B	17.Q3	17.Q3	RBB32_3A	17.Q3
RBB22_2B	17.Q3	17.Q3	RBB32_3B	17.Q3
RBB22_2B	17.Q3	17.Q3	RBB43_4A	17.Q3
RBB24_1A	17.Q3	17.Q3	RBB12_1A	17.Q3
RBB24_1A for AIR 21	17.Q3	17.Q3	RBB12_1A for AIR 21	17.Q3
RBB24_1A for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21	17.Q3
RBB24_1B	17.Q3	17.Q3	RBB22_1B	17.Q3
RBB24_1C	17.Q3	17.Q3	RBB24_1C	17.Q3
RBB24_2A	17.Q3	17.Q3	RBB12_1A	17.Q3
RBB24_2A	17.Q3	17.Q3	RBB24_2A	17.Q3
RBB24_2B	17.Q3	17.Q3	RBB22_1B	17.Q3
RBB42_2D	17.Q3	17.Q3	RBB42_2D	17.Q3
RBB44_1B	17.Q3	17.Q3	RBB22_1B	17.Q3
RBB44_1D	19.Q4	-	RBB24_1C	19.Q4
RBB44_1D	17.Q3	17.Q3	RBB44_1D	17.Q3
RBB44_2C	17.Q3	17.Q3	RBB22_1B	17.Q3
RBB44_2C	17.Q3	17.Q3	RBB44_2C	17.Q3

(1) Separate Radio parts used for the two standards.



13.1.2 LTE + GSM MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 508 LTE + GSM MSMM Configurations with Baseband for LTE and DU for GSM

Supported RBBs			Software Release
LTE		GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 6502 IDU 5205 IDU 5209	DUG 20	
RBB10_1A	-	RBB32_3A	17.Q3
RBB10_1A	-	RBB32_3B	17.Q3
RBB10_1A	-	RBB43_4A	17.Q3
RBB11_1A	-	RBB11_1A	17.Q3
RBB11_1A	-	RBB22_1A	17.Q3
RBB11_1A	-	RBB22_2B	17.Q3
RBB11_1A	-	RBB32_3A	17.Q3
RBB11_1A	-	RBB32_3B	17.Q3
RBB11_1A	-	RBB43_4A	17.Q3
RBB12_1A	-	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	-	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3
RBB12_1A	-	RBB24_1A	17.Q3
RBB12_1A for AIR 21	-	RBB24_1A for AIR 21	17.Q3
RBB12_1A	-	RBB24_2A	17.Q3
RBB12_1E	-	RBB12_1E	17.Q3
RBB12_1F	-	RBB12_1F	17.Q3
RBB14_1A	-	RBB12_1A	17.Q3
RBB14_2A	-	RBB12_1A	17.Q3
RBB22_1A	-	RBB11_1A	17.Q3
RBB22_1B	-	RBB22_1B	17.Q3
RBB22_1B	-	RBB44_2C	17.Q3
RBB22_1B for RDS	RBB22_1B for RDS	RBB22_1B for RDS ⁽¹⁾	17.Q4
RBB22_1B for RDS	RBB22_1B for RDS	RBB44_2C for RDS ⁽¹⁾	17.Q4
RBB22_1C for AIR 21	-	RBB12_1A for AIR 21	17.Q3
RBB22_1C for AIR 21	-	RBB24_1A for AIR 21	17.Q3
RBB22_1F	-	RBB22_1B	17.Q3
RBB22_1F	-	RBB22_1F	17.Q3
RBB22_1G	-	RBB22_1G	17.Q3
RBB22_1P	-	RBB12_1E	19.Q4
RBB22_1Q	-	RBB12_1F	19.Q4
RBB22_2B	-	RBB11_1A	17.Q3
RBB22_2B	-	RBB22_2B	17.Q3
RBB22_2B	-	RBB32_3A	17.Q3



Supported RBBs			Software Release
LTE		GSM	
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 6502 IDU 5205 IDU 5209	DUG 20	
RBB22_2B	-	RBB32_3B	17.Q3
RBB22_2B	-	RBB43_4A	17.Q3
RBB24_1A	-	RBB12_1A	17.Q3
RBB24_1A for AIR 21	-	RBB12_1A for AIR 21	17.Q3
RBB24_1A for AIR 21	-	RBB24_1A for AIR 21	17.Q3
RBB24_1B	-	RBB22_1B	17.Q3
RBB24_1C	-	RBB24_1C	17.Q3
RBB24_2A	-	RBB12_1A	17.Q3
RBB24_2A	-	RBB24_2A	17.Q3
RBB24_2B	-	RBB22_1B	17.Q3
RBB42_2D	-	RBB42_2D	17.Q3
RBB44_1B	-	RBB22_1B	17.Q3
RBB44_1B for RDS	RBB44_1B for RDS	RBB22_1B for RDS ⁽¹⁾	18.Q3
RBB44_1D	-	RBB24_1C	19.Q4
RBB44_1D	-	RBB44_1D	17.Q3
RBB44_2C	-	RBB22_1B	17.Q3
RBB44_2C	-	RBB44_2C	17.Q3
RBB44_2C for RDS	RBB44_2C for RDS	RBB22_1B for RDS ⁽¹⁾	18.Q3
RBB44_2C for RDS	RBB44_2C for RDS	RBB44_2C for RDS ⁽¹⁾	18.Q3

(1) Separate Radio parts used for the two standards.

Table 509 LTE + GSM MSMM Configurations with DU for LTE and Baseband for GSM

LTE			GSM
RBB	1- 2 DUS 31 1- 2 DUS 41	1 DUL 20	RBB
RBB10_1A	17.Q3	17.Q3	RBB10_1A
RBB10_1A	17.Q3	17.Q3	RBB20_2A
RBB10_1A	17.Q3	17.Q3	RBB32_1A
RBB10_1A	17.Q3	17.Q3	RBB32_1B
RBB10_1A	17.Q3	17.Q3	RBB32_3A
RBB10_1A	17.Q3	17.Q3	RBB32_3B
RBB10_1A	17.Q3	17.Q3	RBB43_4A
RBB11_1C	17.Q3	17.Q3	RBB11_1C
RBB11_1C	17.Q3	17.Q3	RBB22_1C
RBB11_1C for AIR 21	17.Q3	17.Q3	RBB22_1C for AIR 21
RBB11_1C	17.Q3	17.Q3	RBB22_2A
RBB11_1C	17.Q3	17.Q3	RBB22_2E



LTE			GSM
RBB	1- 2 DUS 31 1- 2 DUS 41	1 DUL 20	RBB
RBB11_1D	17.Q3	17.Q3	RBB11_1D
RBB11_1D	17.Q3	17.Q3	RBB22_2E
RBB12_1A	17.Q3	17.Q3	RBB12_1A
RBB12_1A for AIR 21 ⁽¹⁾	17.Q3	17.Q3	RBB12_1A for AIR 21 ⁽¹⁾
RBB12_1A for AIR 21	17.Q3	17.Q3	RBB22_1C for AIR 21
RBB12_1A	17.Q3	17.Q3	RBB24_1A
RBB12_1A for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21
RBB12_1A	17.Q3	17.Q3	RBB24_2A
RBB12_1C	17.Q3	-	RBB11_1C
RBB12_1D	17.Q3	-	RBB11_1D
RBB12_1E	17.Q3	-	RBB12_1E
RBB12_1F	17.Q3	-	RBB12_1F
RBB12_2B	17.Q3	-	RBB11_1C
RBB12_2C	17.Q3	-	RBB11_1D
RBB14_1A	17.Q3	-	RBB12_1A
RBB14_2A	17.Q3	-	RBB12_1A
RBB20_1A	17.Q3	17.Q3	RBB20_1A
RBB20_2A	17.Q3	17.Q3	RBB10_1A
RBB20_2A	17.Q3	17.Q3	RBB20_2A
RBB22_1A	17.Q3	17.Q3	RBB11_1A
RBB22_1B	17.Q3	17.Q3	RBB22_1B
RBB22_1B	17.Q3	17.Q3	RBB44_1B
RBB22_1B	17.Q3	17.Q3	RBB44_2C
RBB22_1C	17.Q3	17.Q3	RBB11_1C
RBB22_1C for AIR 21	17.Q3	17.Q3	RBB11_1C for AIR 21
RBB22_1C for AIR 21	17.Q3	17.Q3	RBB12_1A for AIR 21
RBB22_1C for AIR 21	17.Q3	17.Q3	RBB22_1C for AIR 21
RBB22_1C for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21
RBB22_1F	17.Q3	17.Q3	RBB22_1F
RBB22_1G	17.Q3	17.Q3	RBB22_1G
RBB22_1P	18.Q4	-	RBB22_1P
RBB22_1Q	18.Q4	-	RBB22_1Q
RBB22_2A	17.Q3	17.Q3	RBB11_1C
RBB22_2A	17.Q3	17.Q3	RBB22_2A
RBB22_2B	17.Q3	17.Q3	RBB11_1A
RBB22_2B	17.Q3	17.Q3	RBB22_2B
RBB22_2B	17.Q3	17.Q3	RBB32_3A
RBB22_2B	17.Q3	17.Q3	RBB32_3B
RBB22_2B	17.Q3	17.Q3	RBB43_4A
RBB22_2E	17.Q3	17.Q3	RBB11_1C
RBB22_2E	17.Q3	17.Q3	RBB11_1D
RBB22_2E	17.Q3	17.Q3	RBB22_2E



LTE			GSM
RBB	1- 2 DUS 31 1- 2 DUS 41	1 DUL 20	RBB
RBB24_1A	17.Q3	17.Q3	RBB12_1A
RBB24_1A for AIR 21	17.Q3	17.Q3	RBB12_1A for AIR 21
RBB24_1A for AIR 21	17.Q3	17.Q3	RBB22_1C for AIR 21
RBB24_1A for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21
RBB24_1B	17.Q3	17.Q3	RBB22_1B
RBB24_1C	17.Q3	17.Q3	RBB24_1C
RBB24_2A	17.Q3	17.Q3	RBB12_1A
RBB24_2A	17.Q3	17.Q3	RBB24_2A
RBB24_2B	17.Q3	17.Q3	RBB22_1B
RBB42_2D	17.Q3	17.Q3	RBB42_2D
RBB44_1B	17.Q3	17.Q3	RBB22_1B
RBB44_1D	17.Q3	17.Q3	RBB44_1D
RBB44_2C	17.Q3	17.Q3	RBB22_1B
RBB44_2C	17.Q3	17.Q3	RBB44_2C

(1) Separate Radio parts used for the two standards.

13.1.3 LTE + GSM MSMM Configurations with Two Baseband Radio Nodes

Table 510 LTE + GSM MSMM Configurations with Two Baseband Radio Nodes

LTE	GSM	Software Release
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB10_1A	RBB10_1A	17.Q3
RBB10_1A	RBB20_2A	17.Q3
RBB10_1A	RBB32_1A	17.Q3
RBB10_1A	RBB32_1B	17.Q3
RBB10_1A	RBB32_3A	17.Q3
RBB10_1A	RBB32_3B	17.Q3
RBB10_1A	RBB43_4A	17.Q3
RBB11_1A	RBB11_1A	17.Q3
RBB11_1A	RBB22_1A	17.Q3
RBB11_1A	RBB22_2B	17.Q3
RBB11_1A	RBB32_1A	17.Q3
RBB11_1A	RBB32_1B	17.Q3
RBB11_1A	RBB32_3A	17.Q3
RBB11_1A	RBB32_3B	17.Q3
RBB11_1A	RBB43_1A	17.Q3
RBB11_1A	RBB43_4A	17.Q3



LTE	GSM	Software Release
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB11_1C	RBB11_1C	17.Q3
RBB11_1C	RBB22_1C	17.Q3
RBB11_1C for AIR 21	RBB22_1C for AIR 21	17.Q3
RBB11_1C	RBB22_2A	17.Q3
RBB11_1C	RBB22_2E	17.Q3
RBB11_1D	RBB11_1D	17.Q3
RBB11_1D	RBB22_2E	17.Q3
RBB12_1A	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3
RBB12_1A for AIR 21	RBB22_1C for AIR 21	17.Q3
RBB12_1A	RBB24_1A	17.Q3
RBB12_1A for AIR 21	RBB24_1A for AIR 21	17.Q3
RBB12_1A	RBB24_2A	17.Q3
RBB12_1C	RBB11_1C	17.Q3
RBB12_1D	RBB11_1D	17.Q3
RBB12_1E	RBB12_1E	17.Q3
RBB12_1F	RBB12_1F	17.Q3
RBB12_2B	RBB11_1C	17.Q3
RBB12_2C	RBB11_1D	17.Q3
RBB14_1A	RBB12_1A	17.Q3
RBB14_2A	RBB12_1A	17.Q3
RBB20_1A	RBB20_1A	17.Q3
RBB20_2A	RBB10_1A	17.Q3
RBB20_2A	RBB20_2A	17.Q3
RBB22_1A	RBB11_1A	17.Q3
RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB44_1B	17.Q3
RBB22_1B	RBB44_2C	17.Q3
RBB22_1C	RBB11_1C	17.Q3
RBB22_1C for AIR 21	RBB11_1C for AIR 21	17.Q3
RBB22_1C for AIR 21	RBB12_1A for AIR 21	17.Q3
RBB22_1C for AIR 21	RBB22_1C for AIR 21	17.Q3
RBB22_1C for AIR 21	RBB24_1A for AIR 21	17.Q3
RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	17.Q3
RBB22_1P	RBB22_1P	18.Q4
RBB22_1Q	RBB22_1Q	18.Q4
RBB22_2A	RBB11_1C	17.Q3
RBB22_2A	RBB22_2A	17.Q3
RBB22_2B	RBB11_1A	17.Q3



LTE	GSM	Software Release
Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318 (min 18.Q2), Baseband 6620, Baseband 6630	
RBB22_2B	RBB22_2B	17.Q3
RBB22_2B	RBB32_3A	17.Q3
RBB22_2B	RBB32_3B	17.Q3
RBB22_2B	RBB43_4A	17.Q3
RBB22_2E	RBB11_1C	17.Q3
RBB22_2E	RBB11_1D	17.Q3
RBB22_2E	RBB22_2E	17.Q3
RBB24_1A	RBB12_1A	17.Q3
RBB24_1A for AIR 21	RBB12_1A for AIR 21	17.Q3
RBB24_1A for AIR 21	RBB22_1C for AIR 21	17.Q3
RBB24_1A for AIR 21	RBB24_1A for AIR 21	17.Q3
RBB24_1B	RBB22_1B	17.Q3
RBB24_1C	RBB24_1C	17.Q3
RBB24_2A	RBB12_1A	17.Q3
RBB24_2A	RBB24_2A	17.Q3
RBB24_2B	RBB22_1B	17.Q3
RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	17.Q3
RBB44_1D	RBB44_1D	17.Q3
RBB44_2C	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	17.Q3

(1) Separate Radio parts used for the two standards.

13.1.4 LTE + GSM MSMM Configurations with One Mixed Mode Baseband

Table 511 RBB Support for LTE + GSM MSMM Configurations with One Mixed Mode Baseband

Supported RBBs	From Software Release
LTE + GSM	Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630
RBB10_1A	17.Q3
RBB11_1A	17.Q3
RBB11_1C	17.Q3
RBB11_1D	17.Q3
RBB11_2A	17.Q3
RBB11_2B	17.Q3
RBB12_1A	17.Q3



Supported RBBs	From Software Release
LTE + GSM	Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630
RBB12_1A	17.Q3
RBB12_1C	17.Q3
RBB12_1D	17.Q3
RBB12_1E	17.Q3
RBB12_1F	17.Q3
RBB12_2A	17.Q3
RBB12_2B	17.Q3
RBB12_2C	17.Q3
RBB12_2D	17.Q3
RBB12_2E	17.Q3
RBB14_1A	17.Q3
RBB14_2A	17.Q3
RBB20_1A	17.Q3
RBB20_2A	17.Q3
RBB22_1A	17.Q3
RBB22_1B	17.Q3
RBB22_1C	17.Q3
RBB22_1C	17.Q3
RBB22_1F	17.Q3
RBB22_1G	17.Q3
RBB22_1P	18.Q4
RBB22_1Q	18.Q4
RBB22_2A	17.Q3
RBB22_2A	17.Q3
RBB22_2B	17.Q3
RBB22_2C	17.Q3
RBB22_2E	17.Q3
RBB22_2K	17.Q3
RBB22_2L	17.Q3
RBB22_2T	18.Q4
RBB22_2Q	18.Q4
RBB24_1A	17.Q3
RBB24_1A	17.Q3
RBB24_1B	17.Q3
RBB24_1C	17.Q3
RBB24_2A	17.Q3
RBB24_2A	17.Q3
RBB24_2B	17.Q3
RBB24_2D	17.Q3
RBB32_1A	17.Q3
RBB32_1B	17.Q3



Supported RBBs	From Software Release
LTE + GSM	Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630
RBB32_3A	17.Q3
RBB32_3B	17.Q3
RBB42_1B	17.Q3
RBB42_2D	17.Q3
RBB43_1A	17.Q3
RBB43_4A	17.Q3
RBB44_1B	17.Q3
RBB44_1D	17.Q3
RBB44_2C	17.Q3
RBB44_2F	17.Q3

13.1.5 Carrier Allocation for Star Configurations LTE + GSM

The following tables are showing the carrier allocation for supported RBBs and radios from the stated SW version, either by rows presenting a combination of carriers or by equations to calculate the number of carriers per RF-branch. For configurations where two different types of radio units are used in the same RBB, the radio types are given as radio x + radio y, where radio x is the first radio in the RBB.

The following rule applies to carrier allocation for MSMM LTE + GSM star configurations:

- Depending on the band, the operational bandwidth and number of carriers can be different than listed in the carrier allocation table, but has to be considered. For operational bandwidth, see [Supported Radio Frequencies](#) on page 8. For number of LTE carriers, see [Sector Configuration for LTE](#) on page 271. For number of GSM carriers, see [Sector Configuration for GSM](#) on page 105.



13.1.5.1 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A

Table 512 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A

Radio Type	From SW Release	LTE		GSM	
		RBB10_1A		RBB10_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A		TX A	
RRUS 01 RUS 01	17.Q3	B = number of LTE carriers $B \leq 2$ C = total LTE bandwidth (MHz) $C \leq 20$	2-WRXD with Ext RX A and Ext RX B	A = number of GSM carriers $A \leq 4$	2-WRXD with Ext RX A and Ext RX B
		A+B ≤ 4 (radio limitation) A+C/5 ≤ 4 (radio limitation)			
RRUS 02 RUS 02	17.Q3	B = number of LTE carriers $B \leq 2$ C = total LTE bandwidth (MHz) $C \leq 20$	2-WRXD with Ext RX A and Ext RX B	A = number of GSM carriers $A \leq 8$	2-WRXD with Ext RX A and Ext RX B
		A+B ≤ 8 (radio limitation) A+C/5 ≤ 8 (radio limitation)			
RUS 03	17.Q3	B = number of LTE carriers $B \leq 2$ C = total LTE bandwidth (MHz) $C \leq 40$	2-WRXD with Ext RX A and Ext RX B	A = number of GSM carriers $A \leq 8$	2-WRXD with Ext RX A and Ext RX B
		A+B ≤ 8 (radio limitation) A+C/10 ≤ 8 (radio limitation)			

13.1.5.2 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Table 513 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Radio Type	From SW Release	LTE		GSM		
		RBB10_1A		RBB20_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A		TX A	TX C	
Any combination of two radios: RRUS 01 RRUS 02 Any combination of two radios: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.						



Radio Type	From SW Release	LTE		GSM		
		RBB10_1A		RBB20_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A		TX A	TX C	
Any combination of two radios: RRUS 01 RRUS 02 Any combination of two radios: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2- or 4-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.						

13.1.5.3 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Table 514 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Radio Type	From SW Release	LTE		GSM		
		RBB20_2A		RBB10_1A		
		Downlink		Uplink	Downlink	Uplink
		TX A	TX C		TX A	
Any two radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.				
Any two radio combination of: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.				



13.1.5.4 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1A

Table 515 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1A

Radio Type	From SW Release	LTE		GSM			
		RBB10_1A		RBB32_1A			
		Downlink	Uplink	Downlink			Uplink
		TX C		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any three radio combination of: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

13.1.5.5 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_3A

Table 516 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_3A

Radio Type	From SW Release	LTE		GSM			
		RBB10_1A		RBB32_3A			
		Downlink	Uplink	Downlink			Uplink
		TX C		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
Baseband capacity applies. CPRI capacity applies.							



13.1.5.6 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1B

Table 517 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_1B

Radio Type	From SW Release	LTE		GSM			
		RBB10_1A		RBB32_1B			
		Downlink	Uplink	Downlink			Uplink
		TX C		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any three radio combination of: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

13.1.5.7 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_3B

Table 518 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB32_3B

Radio Type	From SW Release	LTE		GSM			
		RBB10_1A		RBB32_3B			
		Downlink	Uplink	Downlink			Uplink
		TX C		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
Baseband capacity applies. CPRI capacity applies.							



13.1.5.8 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A

Table 519 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A

Radio Type	From SW Release	LTE		GSM	
		RBB11_1A		RBB11_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 RUS 01	17.Q3	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	2-WRXD	A = number of GSM carriers A ≤ 4	2-WRXD
		A+B ≤ 4 (radio limitation) A+C/5 ≤ 4 (radio limitation)			
RRUS 02 RUS 02	17.Q3	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	2-WRXD	A = number of GSM carriers A ≤ 8	2-WRXD
		A+B ≤ 8 (radio limitation) A+C/5 ≤ 8 (radio limitation)			
RUS 03	17.Q3	B = number of LTE carriers B ≤ 3 C = total LTE bandwidth (MHz) C ≤ 40	2-WRXD	A = number of GSM carriers A ≤ 8	2-WRXD
		A+B ≤ 8 (radio limitation) A+C/10 ≤ 8 (radio limitation)			

13.1.5.9 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_1A

Table 520 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_1A

Radio Type	From SW Release	LTE		GSM		
		RBB11_1A		RBB22_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any two radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.				



Radio Type	From SW Release	LTE		GSM		
		RBB11_1A		RBB22_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any two radio combination of: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.				

13.1.5.10 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A and RBB11_1A

Table 521 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A and RBB11_1A

Radio Type ⁽¹⁾	From SW Release	LTE		GSM	
		RBB22_1A		RBB11_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX B/RX B	
RRUS 01 + RRUS 01 RRUS 02 + RRUS 01 RUS 01 + RUS 01 RUS 02 + RUS 01	17.Q3	B = number of carriers B ≤ 2 C = total bandwidth (MHz) C ≤ 20	2-WRXD	A = number of carriers A ≤ 4	2-WRXD
A+B ≤ 4 (radio 2 limitation) A+C/5 ≤ 4 (radio 2 limitation)					
RRUS 01 + RRUS 02 RRUS 02 + RRUS 02 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 02	17.Q3	B = number of carriers B ≤ 2 C = total bandwidth (MHz) C ≤ 20	2-WRXD	A = number of carriers A ≤ 8	2-WRXD
A+B ≤ 8 (radio 2 limitation) A+C/5 ≤ 8 (radio 2 limitation)					
RUS 03 + RUS 01	17.Q3	B = number of carriers B ≤ 2 C = total bandwidth (MHz) C ≤ 20	2-WRXD	A = number of carriers A ≤ 4	2-WRXD
A+B ≤ 5 (radio 2 limitation) A+C/5 ≤ 5 (radio 2 limitation)					
RUS 03 + RUS 03	17.Q3	B = number of carriers B ≤ 3 C = total bandwidth (MHz) C ≤ 40	2-WRXD	A = number of carriers A ≤ 8	2-WRXD
A+B ≤ 8 (radio 2 limitation) A+C/5 ≤ 8 (radio 2 limitation)					



(1) Second radio used for MSMM

13.1.5.11 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB11_1A

Table 522 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB11_1A

Radio Type	From SW Release	LTE		GSM	
		RBB22_2B		RBB11_1A	
		Downlink		Downlink	Uplink
		TX A/RX A	TX B/RX B	TX A/RX A	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03	17.Q3	B = number of LTE carriers, $B \leq 2$ C = total LTE bandwidth (MHz), $C \leq 20$		2-WRXD	A = number of GSM carriers, $A \leq 4$ 2-WRXD
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			
RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03	17.Q3	B = number of LTE carriers, $B \leq 2$ C = total LTE bandwidth (MHz), $C \leq 20$		2-WRXD	A = number of GSM carriers, $A \leq 8$ 2-WRXD
		A+B ≤ 8 (radio 1 limitation) A+C/5 ≤ 8 (radio 1 limitation)			
RUS 03 + RUS 01 RUS 03 + RUS 02	17.Q3	B = number of LTE carriers, $B \leq 2$ C = total LTE bandwidth (MHz), $C \leq 20$		2-WRXD	A = number of GSM carriers, $A \leq 8$ 2-WRXD
		A+B ≤ 8 (radio 1 limitation) A+C/10 ≤ 8 (radio 1 limitation)			
RUS 03 + RUS 03	17.Q3	B = number of LTE carriers, $B \leq 3$ C = total LTE bandwidth (MHz), $C \leq 40$		2-WRXD	A = number of GSM carriers, $A \leq 8$ 2-WRXD
		A+B ≤ 8 (radio 1 limitation) A+C/10 ≤ 8 (radio 1 limitation)			



13.1.5.12 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1A

Table 523 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1A

Radio Type	From SW Release	LTE		GSM			
		RBB11_1A		RBB32_1A			
		Downlink	Uplink	Downlink			Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any three radio combination of: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

13.1.5.13 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_3A

Table 524 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_3A

Radio Type	From SW Release	LTE		GSM			
		RBB11_1A		RBB32_3A			
		Downlink	Uplink	Downlink			Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					



13.1.5.14 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1B

Table 525 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_1B

Radio Type	From SW Release	LTE		GSM			
		RBB11_1A		RBB32_1B			
		Downlink	Uplink	Downlink			Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	
Any three radio combination of: RRUS 01 RRUS 02	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any three radio combination of: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

13.1.5.15 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_3B

Table 526 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB32_3B

Radio Type	From SW Release	LTE		GSM			
		RBB11_1A		RBB32_3B			
		Downlink	Uplink	Downlink			Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					



13.1.5.16 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB43_1A

Table 527 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB43_1A

Radio Type	From SW Release	LTE		GSM				
		RBB11_1A		RBB43_1A				
		Downlink	Uplink	Downlink				Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	TX D/RX D	
Any combination of four radios on the same band: RRUS 01 RRUS 02 Any combination of four radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Baseband capacity applies. CPRI capacity applies.						

13.1.5.17 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C

Table 528 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C

Radio Type	From SW Release	LTE		GSM	
		RBB11_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 01 RRUS 02 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RUS 01 RUS 02 RUS 03	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.					
Radio 2217	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



Radio Type	From SW Release	LTE		GSM	
		RBB11_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			

13.1.5.18 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C and RBB11_1C

Table 529 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C and RBB11_1C

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_1C		RBB11_1C	
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾		Downlink	Uplink	Downlink	Uplink
			TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.



13.1.5.19 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Table 530 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_2B		RBB11_1C	
			Downlink	Uplink	Downlink	Uplink
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.



13.1.5.20 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_1C

Table 531 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_1C

Radio Type	From SW Release	LTE		GSM		
		RBB11_1C		RBB22_1C		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						

13.1.5.21 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Table 532 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Radio Type	From SW Release	LTE		GSM		
		RBB11_1C		RBB22_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				



13.1.5.22 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Table 533 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Radio Type	From SW Release	LTE		GSM		
		RBB22_2A		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radio on the same band: RRUS 01 RRUS 02 Any combination of two radio on the same band: RUS 01 RUS 02 RUS 03	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				

13.1.5.23 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Table 534 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Radio Type	From SW Release	LTE		GSM		
		RBB11_1C		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband.	2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.						



Radio Type	From SW Release	LTE		GSM		
		RBB11_1C		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband.	2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband.	2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity	
DU and Baseband capacity applies. CPRI Capacity applies.						



13.1.5.24 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Table 535 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Radio Type	From SW Release	LTE		GSM		
		RBB22_2E		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radio on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of two radio on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of two radio on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of two radio on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.						



Radio Type	From SW Release	LTE			GSM	
		RBB22_2E			RBB11_1C	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				

13.1.5.25 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D

Table 536 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D

Radio Type	From SW Release	LTE		GSM	
		RBB11_1D		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.					
Radio 2217	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.					
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.					



13.1.5.26 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D and RBB11_1D

Table 537 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D and RBB11_1D

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_1D		RBB11_1D	
			Downlink	Uplink	Downlink	Uplink
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾	TX A/RX A	TX A/RX A			
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.

13.1.5.27 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C and RBB11_1D

Table 538 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C and RBB11_1D

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_2C		RBB11_1D	
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾		Downlink	Uplink	Downlink	Uplink
		TX A/RX A	TX A/RX A			
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			



Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_2C		RBB11_1D	
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾		Downlink	Uplink	Downlink	Uplink
			TX A/RX A		TX A/RX A	
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
			Baseband capacity applies. CPRI capacity applies.			

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.

13.1.5.28 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Table 539 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Radio Type	From SW Release	LTE		GSM		
		RBB11_1D		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				



Radio Type	From SW Release	LTE		GSM		
		RBB11_1D		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		No diversity
Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.						



13.1.5.29 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1D

Table 540 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1D

Radio Type	From SW Release	LTE		GSM		
		RBB22_2E		RBB11_1D		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				



Radio Type	From SW Release	LTE			GSM	
		RBB22_2E			RBB11_1D	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				

13.1.5.30 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_2A

Table 541 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_2A

Radio Type	From SW Release	LTE		GSM	
		RBB11_2A		RBB11_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 13 RRUS 14 RRUS 14s RUS 03	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2217	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



13.1.5.31 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_2B

Table 542 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB11_2B

Radio Type	From SW Release	LTE		GSM	
		RBB11_2B		RBB11_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 13 RRUS 14 RRUS 14s	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2217	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	No diversity	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Baseband capacity applies. CPRI capacity applies.			

13.1.5.32 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A

Table 543 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A

Radio Type	From SW Release	LTE		GSM	
		RBB12_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
AIR 21	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD with TX A/RX A and RX B	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD with TX A/RX A and RX B
		Baseband capacity applies. CPRI capacity applies.			
RRUS 01 RUS 01	17.Q3	B = number of LTE carriers $B \leq 2$ C = total bandwidth (MHz) $C \leq 20$	2-WRXD with TX A/RX A and RX B	A = number of GSM carriers $A \leq 4$	2-WRXD with TX A/RX A and RX B
		$A + B \leq 4$ $A + C/5 \leq 4$			



Radio Type	From SW Release	LTE		GSM	
		RBB12_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 02 RUS 02	17.Q3	B = number of LTE carriers $B \leq 2$ C = total bandwidth (MHz) $C \leq 20$	2-WRXD with TX A/RX A and RX B	A = number of GSM carriers $A \leq 8$	2-WRXD with TX A/RX A and RX B
		$A + B \leq 8$ $A + C/5 \leq 8$			
RUS 03	17.Q3	B = number of LTE carriers $B \leq 3$ C = total bandwidth (MHz) $C \leq 40$	2-WRXD with TX A/RX A and RX B	A = number of GSM carriers $A \leq 8$	2-WRXD with TX A/RX A and RX B
		$A + B \leq 8$ $A + C/10 \leq 8$			

13.1.5.33 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_1A and RBB12_1A

Table 544 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_1A and RBB12_1A

Radio Type	From SW Release	LTE		GSM	
		RBB14_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A3	17A	B = number of LTE carriers $B \leq 2$ C = total bandwidth (MHz) $C \leq 20$	4-WRXD	A = number of GSM carriers $A \leq 4$	2-WRXD
		$A + B \leq 4$ (radio 1 limitation) $A + C/5 \leq 4$ (radio 1 limitation)			
RRUS 01 + RRUS A2	17A	B = number of LTE carriers $B \leq 2$ C = total bandwidth (MHz) $C \leq 10$	4-WRXD	A = number of GSM carriers $A \leq 4$	2-WRXD
		$A + B \leq 4$ (radio 1 limitation) $A + C/5 \leq 4$ (radio 1 limitation)			



13.1.5.34 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Table 545 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Radio Type	From SW Release	LTE			GSM		
		RBB12_1A			RBB22_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 21	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

13.1.5.35 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB12_1A

Table 546 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB12_1A

Radio Type	From SW Release	LTE			GSM		
		RBB22_1C			RBB12_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A		
AIR 21	17.Q3	B = number of LTE carriers, $B \leq 2$ C = total LTE bandwidth (MHz), $C \leq 20$		2-WRXD	A = number of GSM carriers, $A \leq 4$		2-WRXD
		A+B ≤ 4 (radio 1 and radio 2 limitation) A+C/5 ≤ 4 (radio 1 and radio 2 limitation)					



13.1.5.36 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Table 547 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Radio Type	From SW Release	LTE			GSM		
		RBB12_1A			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



13.1.5.37 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Table 548 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Radio Type	From SW Release	LTE			GSM	
		RBB24_1A			RBB12_1A	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX C/RX C		TX C/RX C	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				

13.1.5.38 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Table 549 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Radio Type	From SW Release	LTE			GSM	
		RBB12_1A			RBB24_2A	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 4-WRXD supported with DUG.	2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				



Radio Type	From SW Release	LTE			GSM		
		RBB12_1A			RBB24_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2- or 4-WRXD supported with Baseband. 4-WRXD supported with DUG.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

13.1.5.39 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Table 550 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Radio Type	From SW Release	LTE			GSM		
		RBB24_2A			RBB12_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A		
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



13.1.5.40 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A and RBB12_1A

Table 551 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A and RBB12_1A

Radio Type	From SW Release	LTE		GSM	
		RBB14_2A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17.Q3	B = number of LTE carriers $B \leq 2$ C = total bandwidth (MHz) $C \leq 20$	4-WRXD	A = number of GSM carriers $A \leq 4$	2-WRXD
A + B $\leq$ 4 (radio 1 limitation) A + C/5 $\leq$ 4 (radio 1 limitation)					

13.1.5.41 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C

Table 552 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1C

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_1C		RBB12_1C	
			Downlink	Uplink	Downlink	Uplink
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾		TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.



13.1.5.42 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D

Table 553 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1D

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_1D		RBB12_1D	
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾		Downlink	Uplink	Downlink	Uplink
			TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.

13.1.5.43 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1E

Table 554 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1E

Radio Type	From SW Release	LTE		GSM	
		RBB12_1E		RBB12_1E	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
DU and Baseband capacity applies. CPRI capacity applies.					



13.1.5.44 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1F

Table 555 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_1F

Radio Type	From SW Release	LTE		GSM	
		RBB12_1F		RBB12_1F	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		DU and Baseband capacity applies. CPRI capacity applies.			

13.1.5.45 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B

Table 556 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2B

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_2B		RBB12_2B	
			Downlink	Uplink	Downlink	Uplink
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾	TX A/RX A	TX A/RX A			
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.



13.1.5.46 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C

Table 557 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2C

Radio Type ⁽¹⁾		From SW Release	LTE		GSM	
			RBB12_2C		RBB12_2C	
Radio 1 in RBB ⁽²⁾	Radio 2 in RBB ⁽³⁾		Downlink	Uplink	Downlink	Uplink
			TX A/RX A		TX A/RX A	
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	Radio 0208 RRUS A2 RRUS A3	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						
Radio 2242	Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
Baseband capacity applies. CPRI capacity applies.						

(1) Any combination of one TX/RX capable radio with one RX only capable radio on the same band.

(2) TX/RX capable radios.

(3) RX only radios.

13.1.5.47 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2D

Table 558 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2D

Radio Type	From SW Release	LTE		GSM	
		RBB12_2D		RBB12_2D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
Baseband capacity applies. CPRI capacity applies.					



13.1.5.48 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2E

Table 559 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB12_2E

Radio Type	From SW Release	LTE		GSM	
		RBB12_2E		RBB12_2E	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.			

13.1.5.49 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_1A

Table 560 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_1A

Radio Type	From SW Release	LTE		GSM	
		RBB14_1A		RBB14_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 0208 + RRUS 01 RRUS A3 + RRUS 01	17.Q3	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	4-WRXD	A = number of GSM carriers A ≤ 4	2-WRXD
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3 RRUS A2 + RRUS 01	17.Q3	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	4-WRXD	A = number of GSM carriers A ≤ 4	2-WRXD
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			



13.1.5.50 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A

Table 561 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB14_2A

Radio Type	From SW Release	LTE		GSM	
		RBB14_2A		RBB14_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17.Q3	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	4-WRXD	A = number of GSM carriers A ≤ 4	2-WRXD
A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)					

13.1.5.51 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB20_1A

Table 562 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB20_1A

Radio Type	From SW Release	LTE			GSM		
		RBB20_1A			RBB20_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A	TX B		TX A	TX B	
RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



13.1.5.52 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A

Table 563 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB20_2A

Radio Type	From SW Release	LTE		GSM			
		RBB20_2A		RBB20_2A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios: RRUS 01 RRUS 02 Any combination of two radios: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of two radios: RRUS 01 RRUS 02 Any combination of two radios: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

13.1.5.53 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A

Table 564 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1A

Radio Type	From SW Release	LTE			GSM		
		RBB22_1A			RBB22_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 01 RUS 01 + RUS 01	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 4$	2-WRXD
		A+C ≤ 4 (radio 1 limitation) 5×A+D ≤ 20 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) 5×B+D ≤ 20 (radio 2 limitation) CPRI capacity applies.					



Radio Type	From SW Release	LTE			GSM		
		RBB22_1A			RBB22_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 02 RUS 01 + RUS 02	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of 1TX/2RX carriers, $A \leq 4$	B = number of 1TX/2RX carriers, $B \leq 8$	2-WRXD
		A+C ≤ 4 (radio 1 limitation) 5×A+D ≤ 20 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) 5×B+D ≤ 40 (radio 2 limitation) CPRI capacity applies.					
RRUS 02 + RRUS 01 RUS 02 + RUS 01	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 4$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) 5×A+D ≤ 40 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) 5×B+D ≤ 20 (radio 2 limitation) CPRI capacity applies.					
RRUS 02 + RRUS 02 RUS 02 + RUS 02	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of 1TX/2RX carriers, $A \leq 8$	B = number of 1TX/2RX carriers, $B \leq 8$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) 5×A+D ≤ 40 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) 5×B+D ≤ 40 (radio 2 limitation) CPRI capacity applies.					
RUS 01 + RUS 03	17.Q3	E = number of LTE carriers $E \leq 2$ F = total LTE bandwidth (MHz) $F \leq 20$		2-WRXD	A = number of 1TX/2RX carriers, $C \leq 4$ B = number of 1TX/4RX carriers, $C \leq 0$	B = number of 1TX/2RX carriers, $B \leq 8$ D = number of 1TX/4RX carriers, $D \leq 0$	2-WRXD
		A+C+D ≤ 8 (radio 1 limitation) A+C+D+E ≤ 8 (radio 1 limitation) 5×(A+C+D)+F ≤ 40 (radio 1 limitation) B+C+D ≤ 8 (radio 2 limitation) B+C+D+E ≤ 8 (radio 2 limitation) 5×(B+C+D)+F ≤ 40 (radio 2 limitation) CPRI capacity applies.					
RUS 02 + RUS 03 RUS 03 + RUS 02	17.Q3	E = number of LTE carriers $E \leq 2$ F = total LTE bandwidth (MHz) $F \leq 20$		2-WRXD	A = number of 1TX/2RX carriers, $C \leq 8$ B = number of 1TX/4RX carriers, $C \leq 0$	B = number of 1TX/2RX carriers, $B \leq 8$ D = number of 1TX/4RX carriers, $D \leq 0$	2-WRXD
		A+C+D ≤ 8 (radio 1 limitation) A+C+D+E ≤ 8 (radio 1 limitation) 5×(A+C+D)+F ≤ 40 (radio 1 limitation) B+C+D ≤ 8 (radio 2 limitation) B+C+D+E ≤ 8 (radio 2 limitation) 5×(B+C+D)+F ≤ 40 (radio 2 limitation) CPRI capacity applies.					



Radio Type	From SW Release	LTE			GSM		
		RBB22_1A			RBB22_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
RUS 03 + RUS 01	17.Q3	E = number of LTE carriers E ≤ 2 F = total LTE bandwidth (MHz) F ≤ 20		2-WRXD	A = number of 1TX/2RX carriers, C ≤ 8 B = number of 1TX/4RX carriers, C ≤ 0	B = number of 1TX/2RX carriers, B ≤ 4 D = number of 1TX/4RX carriers, D ≤ 0	2-WRXD
		A+C+D ≤ 8 (radio 1 limitation) A+C+D+E ≤ 8 (radio 1 limitation) 5×(A+C+D)+F ≤ 40 (radio 1 limitation) B+C+D ≤ 4 (radio 2 limitation) B+C+D+E ≤ 4 (radio 2 limitation) 5×(B+C+D)+F ≤ 20 (radio 2 limitation) CPRI capacity applies.					
RUS 03 + RUS 03	17.Q3	E = number of LTE carriers E ≤ 3 F = total LTE bandwidth (MHz) F ≤ 40		2-WRXD	A = number of 1TX/2RX carriers, C ≤ 8 B = number of 1TX/4RX carriers, C ≤ 0	B = number of 1TX/2RX carriers, B ≤ 8 D = number of 1TX/4RX carriers, D ≤ 0	2-WRXD
		A+C+D ≤ 8 (radio 1 limitation) A+C+D+E ≤ 8 (radio 1 limitation) 5×(A+C+D)+F ≤ 40 (radio 1 limitation) B+C+D ≤ 8 (radio 2 limitation) B+C+D+E ≤ 8 (radio 2 limitation) 5×(B+C+D)+F ≤ 40 (radio 2 limitation) CPRI capacity applies.					

13.1.5.54 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Table 565 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Radio Type	From SW Release	LTE			GSM		
		RBB24_1B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	2-WRXD		
DU or Baseband capacity applies CPRI capacity applies.							



Radio Type	From SW Release	LTE			GSM		
		RBB24_1B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies CPRI capacity applies.					



13.1.5.55 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Table 566 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Radio Type	From SW Release	LTE			GSM		
		RBB24_2B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies CPRI capacity applies.					



13.1.5.56 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Table 567 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Radio Type	From SW Release	LTE			GSM				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE			GSM				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2217 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode GSM + LTE capable radio and one single mode GSM capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



13.1.5.57 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Table 568 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Radio Type	From SW Release	LTE				GSM			
		RBB44_1B				RBB22_1B			
		Downlink ⁽¹⁾				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2212 Radio 2219 RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: RRUS 13 RRUS 14 RRUS 14s LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE					GSM		
		RBB44_1B					RBB22_1B		
		Downlink ⁽¹⁾				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2212 Radio 2219 RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2242 RRUS 13 RRUS 14 RRUS 14s LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE capable radio on the same band. GSM + LTE capable radios: Radio 2217 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE FDD capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



- (1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded

13.1.5.58 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Table 569 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Radio Type	From SW Release	LTE			GSM				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM capable radio and one mixed mode LTE + GSM capable radio on the same band. GSM capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2- or 4-WRXD supported with DUG. 2-WRXD supported with Baseband.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2- or 4-WRXD supported with DUG. 2-WRXD supported with Baseband. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one single mode GSM capable radio and one mixed mode LTE + GSM capable radio on the same band. GSM capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE			GSM				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 14 RRUS 14s									
Any combination of one single mode GSM capable radio and one mixed mode LTE + GSM capable radio on the same band. GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of one single mode GSM capable radio and one mixed mode LTE + GSM capable radio on the same band. GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 LTE + GSM capable radios: Radio 2217	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode GSM + LTE capable radio and one single mode GSM capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported only with Baseband.				2- or 4-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.							



13.1.5.59 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Table 570 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Radio Type	From SW Release	LTE					GSM		
		RBB44_2C					RBB22_1B		
		Downlink ⁽¹⁾⁽²⁾				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Any combination of one single mode LTE capable radio and one mixed mode LTE + GSM capable radio on the same band. LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one single mode LTE capable radio and one mixed mode LTE + GSM capable radio on the same band. LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one single mode LTE capable radio and one mixed mode LTE + GSM capable radio on the same band.Each carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband only. LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE					GSM			
		RBB44_2C					RBB22_1B			
		Downlink ⁽¹⁾⁽²⁾				Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B		
RRUS 14s LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12 Each carrier can be configured with one or two TX branches on the same radioAny combination of one single mode LTE capable radio and one mixed mode LTE + GSM capable radio on the same band. LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2242 RRUS 13 RRUS 14 RRUS 14s										
Any combination of one single mode LTE capable radio and one mixed mode LTE + GSM capable radio on the same band. LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12 Any combination of one single mode LTE capable radio and one mixed mode LTE + GSM capable radio on the same band. LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 LTE + GSM capable radios: Radio 2217 Any combination of one single mode LTE capable radio and one mixed mode LTE + GSM capable radio on the same band.	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband only.		2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.										



Radio Type	From SW Release	LTE					GSM		
		RBB44_2C					RBB22_1B		
		Downlink ⁽¹⁾⁽²⁾				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s LTE + GSM capable radios: Radio 2242 RRUS 13 RRUS 14 RRUS 14s									
Any combination of one mixed mode GSM + LTE capable radio and one single mode LTE FDD capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2- or 4-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.									

(1) Same limitations for 1TX and 2TX carriers

(2) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded

13.1.5.60 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C

Table 571 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C

Radio Type	From SW Release	LTE			GSM		
		RBB22_1C			RBB22_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE		GSM			
		RBB22_1C		RBB22_1C			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

13.1.5.61 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB24_1A

Table 572 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB24_1A

Radio Type	From SW Release	LTE			GSM		
		RBB22_1C			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX C	TX B/RX C	
AIR 21	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
AIR 21	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



13.1.5.62 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB22_1C

Table 573 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB22_1C

Radio Type	From SW Release	LTE		GSM			
		RBB24_1A		RBB22_1C			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX C	TX B/RX C	
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							

13.1.5.63 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1F

Table 574 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1F

Radio Type	From SW Release	LTE		GSM			
		RBB22_1F		RBB22_1F			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. ⁽¹⁾ Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4415	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE			GSM		
		RBB22_1F			RBB22_1F		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4428	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4429 Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
RRUS 32	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



(1) With DUG 20, RBB22_1B has to be selected in some OMT versions for Radio 2468.

13.1.5.64 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1G

Table 575 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_1G

Radio Type	From SW Release	LTE			GSM		
		RBB22_1G			RBB22_1G		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A		
RRUS 32	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG 20. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4415	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE			GSM		
		RBB22_1G			RBB22_1G		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A		
Radio 4428	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4429 Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



13.1.5.65 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A

Table 576 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2A

Radio Type	From SW Release	LTE		GSM			
		RBB22_2A		RBB22_2A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

13.1.5.66 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B

Table 577 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B

Radio Type	From SW Release	LTE			GSM		
		RBB22_2B			RBB22_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 4$	B = number of carriers, $B \leq 4$	2-WRXD
		A+C ≤ 4 (radio 1 limitation) A+D/5 ≤ 4 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) B+D/5 ≤ 4 (radio 2 limitation) A+B ≤ 8 (DUG limitation)					
RRUS 01 + RRUS 02 RUS 01 + RUS 02	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 4$	B = number of carriers, $B \leq 8$	2-WRXD
		A+C ≤ 4 (radio 1 limitation) A+D/5 ≤ 4 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) B+D/5 ≤ 8 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					



Radio Type	From SW Release	LTE			GSM		
		RBB22_2B			RBB22_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 02 + RRUS 01 RUS 02 + RUS 01	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 4$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+D/5 ≤ 8 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) B+D/5 ≤ 4 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					
RRUS 02 + RRUS 02 RUS 02 + RUS 02	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 8$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+D/5 ≤ 8 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) B+D/5 ≤ 8 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					
RUS 01 + RUS 03	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 4$	B = number of carriers, $B \leq 8$	2-WRXD
		A+C ≤ 4 (radio 1 limitation) A+D/5 ≤ 4 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) B+D/10 ≤ 8 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					
RUS 02 + RUS 03	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 8$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+D/5 ≤ 8 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) B+D/10 ≤ 8 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					
RUS 03 + RUS 01	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 8$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+D/10 ≤ 8 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) B+D/5 ≤ 4 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					
RUS 03 + RUS 02	17.Q3	C = number of LTE carriers, $C \leq 2$ D = total LTE bandwidth (MHz), $D \leq 20$		2-WRXD	A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 8$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+D/10 ≤ 8 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) B+D/5 ≤ 8 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					
RUS 03 + RUS 03	17.Q3	C = number of LTE carriers, $C \leq 3$ D = total LTE bandwidth (MHz), $D \leq 40$		2-WRXD	A = number of carriers, $A \leq 8$	B = number of carriers, $B \leq 8$	2-WRXD
		A+C ≤ 8 (radio 1 limitation) A+D/10 ≤ 8 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) B+D/10 ≤ 8 (radio 2 limitation) A+B ≤ 12 (DUG limitation)					



13.1.5.67 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB32_3A

Table 578 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB32_3A

Radio Type	From SW Release	LTE			GSM			
		RBB22_2B			RBB32_3A			
		Downlink		Uplink	Downlink			Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.						

13.1.5.68 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB32_3B

Table 579 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2B and RBB32_3B

Radio Type	From SW Release	LTE			GSM			
		RBB22_2B			RBB32_3B			
		Downlink		Uplink	Downlink			Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.						



13.1.5.69 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2C

Table 580 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2C

Radio Type	From SW Release	LTE			GSM		
		RBB22_2C			RBB22_2C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
Radio 2217	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
Radio 2238	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



13.1.5.70 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E

Table 581 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2E

Radio Type	From SW Release	LTE		GSM			
		RBB22_2E		RBB22_2E			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of two radios on the same band: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE			GSM		
		RBB22_2E			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

13.1.5.71 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2K

Table 582 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2K

Radio Type	From SW Release	LTE			GSM		
		RBB22_2K			RBB22_2K		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468 Radio 4415	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4428 RRUS 32	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE			GSM		
		RBB22_2K			RBB22_2K		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4429 Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							

13.1.5.72 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2L

Table 583 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB22_2L

Radio Type	From SW Release	LTE			GSM		
		RBB22_2L			RBB22_2L		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4428 RRUS 32	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4415	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE			GSM		
		RBB22_2L			RBB22_2L		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4429 Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

13.1.5.73 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A

Table 584 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1A

Radio Type	From SW Release	LTE		GSM			
		RBB24_1A		RBB24_1A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX C	TX B/RX C	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE			GSM		
		RBB24_1A			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX C	TX B/RX C	
AIR 21 Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
AIR 21 (dual mixed mode)	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



13.1.5.74 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B

Table 585 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1B

Radio Type ⁽¹⁾	From SW Release	LTE			GSM		
		RBB24_1B			RBB24_1B		
		Downlink ⁽²⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
DU or Baseband capacity applies CPRI capacity applies.							
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies CPRI capacity applies.							
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2217 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies CPRI capacity applies.							
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches.		2-WRXD
DU or Baseband capacity applies CPRI capacity applies.							

(1) First radio is used for MSMM. Second radio is used for LTE only.

(2) Same limitations for 1TX and 2TX carriers.



13.1.5.75 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1C

Table 586 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_1C

Radio Type	From SW Release	LTE		GSM			
		RBB24_1C		RBB24_1C			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 2488	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
AIR 2488	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
AIR 2488 Radio 2468	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches. Supported with Baseband.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



13.1.5.76 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D and RBB24_1C

Table 587 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D and RBB24_1C

Radio Type	From SW Release	LTE				GSM				
		RBB44_1D				RBB24_1C				
		Downlink				Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B		
Radio 2460 Radio 2479	19.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with DUG 20 only.		2- or 4-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.										

13.1.5.77 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A

Table 588 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2A

Radio Type	From SW Release	LTE			GSM ⁽¹⁾		
		RBB24_2A			RBB24_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
AIR 21	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		4-WRXD
		Baseband capacity applies. CPRI capacity applies.					
AIR 21	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE		GSM ⁽¹⁾			
		RBB24_2A		RBB24_2A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of two radios on the same band: RRUS 01 RRUS 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

(1) 4-WRXD not supported with Baseband.



13.1.5.78 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B

Table 589 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2B

Radio Type ⁽¹⁾	From SW Release	LTE			GSM		
		RBB24_2B			RBB24_2B		
		Downlink ⁽²⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		2-WRXD
		Baseband capacity applies CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. Baseband capacity applies TX/RX capable radios: Radio 2212 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only. Baseband		2-WRXD
		Baseband capacity applies CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.		2-WRXD
		Baseband capacity applies CPRI capacity applies.					

(1) First radio is used for MSMM. Second radio is used for LTE only.

(2) Same limitations for 1TX and 2TX carriers.



13.1.5.79 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2D

Table 590 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB24_2D

Radio Type	From SW Release	LTE		GSM			
		RBB24_2D		RBB24_2D			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 2488	17.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		4-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Radio 2468	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches.		4-WRXD
		Baseband capacity applies. CPRI capacity applies.					
AIR 2488 Radio 2468	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each GSM carrier can be configured with one or two TX branches.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					

13.1.5.80 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A

Table 591 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1A

Radio Type	From SW Release	LTE			GSM			
		RBB32_1A			RBB32_1A			
		Downlink		Uplink	Downlink			Uplink
		TX A/RX A	TX B/RX B	TX A/RX A + TX B/RX B	TX A/RX A	TX B/RX B	TX C	
Any combination of three radios: RRUS 01 RRUS 02 Any combination of three radios: RUS 01 RUS 02 RUS 03	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.								



13.1.5.81 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B

Table 592 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_1B

Radio Type	From SW Release	LTE		GSM			
		RBB32_1B		RBB32_1B			
		Downlink	Uplink	Downlink			Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

13.1.5.82 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3A

Table 593 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3A

Radio Type	From SW Release	LTE			GSM			
		RBB32_3A			RBB32_3A			
		Downlink		Uplink	Downlink			Uplink
		TX A/RX A	TX B/RX B		TX C	TX A/RX A	TX B/RX B	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
		Baseband capacity applies. CPRI capacity applies.						



13.1.5.83 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3B

Table 594 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB32_3B

Radio Type	From SW Release	LTE			GSM				
		RBB32_3B			RBB32_3B				
		Downlink			Uplink	Downlink			Uplink
		TX A/RX A	TX B/RX B	TX C		TX A/RX A	TX B/RX B	TX C	
Any combination of three radios on the same band: RRUS 01 RRUS 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.			2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.			2-WRXD
Baseband capacity applies. CPRI capacity applies.									

13.1.5.84 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB42_1B

Table 595 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB42_1B

Radio Type	From SW Release	LTE		GSM				
		RBB42_1B		RBB42_1B				
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink
		TX A/RX A + TX C/RX C or TX B + TX C	TX A/RX A + TX C/RX C	TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	Each GSM carrier can be configured with one or two TX branches on the same radio only.						



(1) Same limitations for 1TX and 2TX carriers.

13.1.5.85 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB42_2D

Table 596 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB42_2D

Radio Type	From SW Release	LTE					GSM				
		RBB42_2D					RBB42_2D				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Any combination of two radios on the same band: RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	Each GSM carrier can be configured with one or two TX branches on the same radio only. Supported with Baseband.									



13.1.5.86 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB43_1A

Table 597 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB43_1A

Radio Type	From SW Release	LTE			GSM				
		RBB43_1A			RBB43_1A				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX A/RX A + TX B/RX B	TX A/RX A	TX B/RX B	TX C	TX D/RX D	
Any combination of four radios on the same band: RRUS 01 RRUS 02 Any combination of four radios on the same band: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		Baseband capacity applies. CPRI capacity applies.							

13.1.5.87 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB43_4A

Table 598 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB43_4A

Radio Type	From SW Release	LTE			GSM				
		RBB43_4A			RBB43_4A				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX A/RX A + TX B/RX B	TX A/RX A	TX B/RX B	TX C	TX D/RX D	
Any combination of three radios: RRUS 01 RRUS 02 Any combination of three radios: RUS 01 RUS 02 RUS 03	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



13.1.5.88 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B

Table 599 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1B

Radio Type	From SW Release	LTE		GSM					
		RBB44_1B		RBB44_1B					
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink	
		TX A/RX A + TX B/RX B or TX C/RX C + TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		
Any combination of one single mode GSM or mixed mode GSM + LTE capable radio and one single mode LTE or mixed mode GSM + LTE capable radio. GSM or GSM + LTE capable radios: Radio 2212 Radio 2219 RRUS 12 LTE or GSM + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE		GSM				
		RBB44_1B		RBB44_1B				
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink
		TX A/RX A + TX B/RX B or TX C/RX C + TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode GSM + LTE capable radio and one single mode LTE or mixed mode GSM + LTE capable radio. GSM or GSM + LTE capable radios: RRUS 14 RRUS 14s LTE or GSM + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband Each carrier can be configured with one or two TX branches on the same radio.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
Any combination of one single mode GSM or mixed mode GSM + LTE capable radio and one single mode LTE or mixed mode GSM + LTE capable radio. GSM or GSM + LTE capable radios: Radio 2212 Radio 2219 RRUS 12 LTE or GSM + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						



Radio Type	From SW Release	LTE		GSM				
		RBB44_1B		RBB44_1B				
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink
		TX A/RX A + TX B/RX B or TX C/RX C + TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode GSM + LTE capable radio and one single mode LTE or mixed mode GSM + LTE capable radio. GSM or GSM + LTE capable radios: Radio 2242 RRUS 14 RRUS 14s LTE or GSM + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.								
Any combination of one single mode GSM or mixed mode GSM + LTE capable radio and one single mode LTE or mixed mode GSM + LTE capable radio. GSM or GSM + LTE capable radios: Radio 2217 LTE or GSM + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Supported with Baseband Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.								
Any combination of single mode GSM or mixed mode GSM + LTE capability and single mode LTE FDD or mixed mode GSM + LTE FDD capability radio on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.								

(1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded



13.1.5.89 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D

Table 600 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_1D

Radio Type	From SW Release	LTE				GSM					
		RBB44_1D				RBB44_1D					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB RRUS 32	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUG.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Radio 4415	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Radio 2460 Radio 2479	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	LTE				GSM						
		RBB44_1D				RBB44_1D						
		Downlink				Uplink	Downlink				Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		
Radio 4428	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG.				2-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.										
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.										
	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Not supported with DUG. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.										
	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.										
	Radio 4429 Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
			DU or Baseband capacity applies. CPRI capacity applies.									
	Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
			DU or Baseband capacity applies. CPRI capacity applies.									



13.1.5.90 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C

Table 601 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2C

Radio Type	From SW Release	LTE		GSM				
		RBB44_2C		RBB44_2C				
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink
		TX A/RX A + TX B/RX B or TX C/RX C + TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode LTE + GSM capable radio and single mode LTE or mixed mode LTE + GSM capable radio on the same band. GSM or LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12 LTE or LTE + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of one single mode GSM or mixed mode LTE + GSM capable radio and single mode LTE or mixed mode LTE + GSM capable radio on the same band. GSM or LTE + GSM capable radios: RRUS 14 RRUS 14s LTE or LTE + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD Supported with Baseband only.2- or 2- or 4-WRXD supported with DUG.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. 2-WRXD Supported with Baseband only. 2- or 4-WRXD supported with DUG.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only. 2-WRXD Supported with Baseband only. 2- or 4-WRXD supported with DUG.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						
	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						



Radio Type	From SW Release	LTE		GSM				
		RBB44_2C		RBB44_2C				
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink
		TX A/RX A + TX B/RX B or TX C/RX C + TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode LTE + GSM capable radio and single mode LTE or mixed mode LTE + GSM capable radio on the same band. GSM or LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12 LTE or LTE + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of one single mode GSM or mixed mode LTE + GSM capable radio and single mode LTE or mixed mode LTE + GSM capable radio on the same band. GSM or LTE + GSM capable radios: Radio 2242 RRUS 14 RRUS 14s LTE or LTE + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.								



Radio Type	From SW Release	LTE		GSM				
		RBB44_2C		RBB44_2C				
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink
		TX A/RX A + TX B/RX B or TX C/RX C + TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode GSM or mixed mode LTE + GSM capable radio and single mode LTE or mixed mode LTE + GSM capable radio on the same band. GSM or LTE + GSM capable radios: Radio 2212 Radio 2219 RRUS 12 LTE or LTE + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Any combination of one single mode GSM or mixed mode LTE + GSM capable radio and single mode LTE or mixed mode LTE + GSM capable radio on the same band. GSM or LTE + GSM capable radios: Radio 2217 LTE or LTE + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 12 Any combination of one single mode GSM or mixed mode LTE + GSM capable radio and single mode LTE or mixed mode LTE + GSM capable radio on the same band. GSM or LTE + GSM capable radios: Radio 2242 RRUS 14 RRUS 14s LTE or LTE + GSM capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.								



Radio Type	From SW Release	LTE		GSM				
		RBB44_2C		RBB44_2C				
		Downlink ⁽¹⁾	Uplink	Downlink				Uplink
		TX A/RX A + TX B/RX B or TX C/RX C + TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of single mode GSM or mixed mode GSM + LTE capability and single mode LTE FDD or mixed mode GSM + LTE FDD capability radio on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.						

(1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded

13.1.5.91 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2F

Table 602 LTE + GSM MSMM Star Configurations: Carrier Allocation for RBB44_2F

Radio Type	From SW Release	LTE				GSM					
		RBB44_2F				RBB44_2F					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB RRUS 32 Radio 4415	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
AIR 4455 Radio 2460 Radio 2479 Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
Radio 4415	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											



Radio Type	From SW Release	LTE				GSM					
		RBB44_2F				RBB44_2F					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Radio 4428	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Radio 4428 Radio 4428	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									
Radio 4429 Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106. Each carrier can be configured with one or two TX branches. Supported with Baseband only.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									

13.2 Cascade Configurations for MSMM LTE + GSM

This section describes LTE + GSM configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for LTE + GSM star configuration, single mode LTE and single mode GSM cascade configuration all applies.

For mixed mode LTE + GSM star configurations, see [Star Configurations for MSMM LTE + GSM](#) on page 702.

For single mode LTE configurations, see [Radio Configurations for LTE](#) on page 271.

For single mode GSM configurations, see [Radio Configurations for GSM](#) on page 105.



For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



14 Radio Configurations for Multistandard Mixed Mode NR + GSM

This section describes MSMM NR + GSM configurations:

14.1 Star Configurations for MSMM NR + GSM

This section describes MSMM NR + GSM star configurations:

14.1.1 Baseband Support for NR + GSM MSMM

Table 603 Baseband Support for NR + GSM MSMM Configurations

DU or Baseband Node	From Software Version	
	NR	GSM
Baseband 5212	-	20.Q1
Baseband 5216	-	20.Q1
Baseband 6303	-	20.Q1
Baseband 6318	-	20.Q1
Baseband 6620	-	20.Q1
Baseband 6630	20.Q1	20.Q1
DUG 20	-	20.Q1

14.1.1.1 NR + GSM MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 604 NR + GSM MSMM Configurations with Baseband for NR and DU for GSM

Supported RBBs		From Software Version
NR	GSM	
Baseband 6630	DUG 20	
RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB44_2C	20.Q1
RBB22_1F	RBB22_1B	20.Q1
RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	20.Q1
RBB24_1C	RBB22_1B	20.Q1
RBB24_1C	RBB24_1C	20.Q1
RBB44_1B	RBB22_1B	20.Q1



Supported RBBs		From Software Version
NR	GSM	
Baseband 6630	DUG 20	
RBB44_1D	RBB24_1C	20.Q1
RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	20.Q1

14.1.1.2

NR + GSM MSMM Configurations with Two Baseband Radio Nodes

Table 605 NR + GSM MSMM Configurations with Two Baseband Radio Nodes

Supported RBBs		From Software Version
NR	GSM	
Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	
RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB44_1B	20.Q1
RBB22_1B	RBB44_2C	20.Q1
RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	20.Q1
RBB22_2E	RBB11_1C	20.Q1
RBB22_2E	RBB11_1D	20.Q1
RBB22_2E	RBB22_2E	20.Q1
RBB24_1C	RBB24_1C	20.Q1
RBB44_1B	RBB22_1B	20.Q1
RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	20.Q1

14.2

Cascade Configurations for MSMM NR + GSM

This section describes NR + GSM configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for NR + GSM star configuration, single mode NR and single mode GSM cascade configuration all applies.

For mixed mode NR + GSM star configurations, see [Star Configurations for MSMM NR + GSM](#) on page 796.

For single mode NR configurations, see [Radio Configurations for NR](#) on page 479.



For single mode GSM configurations, see [Radio Configurations for GSM](#) on page 105.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



15 Radio Configurations for Multistandard Mixed Mode ESS + GSM

This section describes MSMM ESS + GSM configurations:

15.1 Star Configurations for MSMM ESS + GSM

This section describes MSMM ESS + GSM star configurations:

15.1.1 Baseband Support for ESS + GSM MSMM

Table 606 Baseband Support for ESS + GSM MSMM Configurations

DU or Baseband Node	From Software Version	
	ESS	GSM
Baseband 5212	-	20.Q1
Baseband 5216	-	20.Q1
Baseband 6303	-	20.Q1
Baseband 6318	-	20.Q1
Baseband 6620	-	20.Q1
Baseband 6630	20.Q1	20.Q1
DUG 20	-	20.Q1

15.1.1.1 ESS + GSM MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 607 ESS + GSM MSMM Configurations with Baseband for ESS and DU for GSM

Supported RBBs		From Software Version
ESS	GSM	
Baseband 6630	DUG 20	
RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB44_2C	20.Q1
RBB22_1F	RBB22_1B	20.Q1
RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	20.Q1
RBB24_1C	RBB22_1B	20.Q1
RBB24_1C	RBB24_1C	20.Q1
RBB44_1B	RBB22_1B	20.Q1



Supported RBBs		From Software Version
ESS	GSM	
Baseband 6630	DUG 20	
RBB44_1D	RBB24_1C	20.Q1
RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	20.Q1

15.1.1.2

ESS + GSM MSMM Configurations with Two Baseband Radio Nodes

Table 608 ESS + GSM MSMM Configurations with Two Baseband Radio Nodes

Supported RBBs		From Software Version
ESS	GSM	
Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	
RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB44_1B	20.Q1
RBB22_1B	RBB44_2C	20.Q1
RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	20.Q1
RBB22_2E	RBB11_1C	20.Q1
RBB22_2E	RBB11_1D	20.Q1
RBB22_2E	RBB22_2E	20.Q1
RBB24_1C	RBB24_1C	20.Q1
RBB44_1B	RBB22_1B	20.Q1
RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	20.Q1

15.2

Cascade Configurations for MSMM ESS + GSM

This section describes ESS + GSM configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for ESS + GSM star configuration, single mode ESS and single mode GSM cascade configuration all applies.

For mixed mode ESS + GSM star configurations, see [Star Configurations for MSMM ESS + GSM](#) on page 799.

For single mode ESS configurations, see [Radio Configurations for ESS](#) on page 498.



For single mode GSM configurations, see [Radio Configurations for GSM](#) on page 105.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



16 Radio Configurations for Multistandard Mixed Mode LTE + CDMA

This section describes MSMM LTE + CDMA configurations:

[Star Configurations for MSMM LTE + CDMA](#) on page 802 describes MSMM LTE + CDMA star configurations.

[Cascade Configurations for MSMM LTE + CDMA](#) on page 826 describes MSMM LTE + CDMA cascade configurations.

16.1 Star Configurations for MSMM LTE + CDMA

This section describes MSMM LTE + CDMA star configurations:

[Carrier Allocation for Star Configurations LTE + CDMA](#) on page 804 describes carrier allocation for LTE + CDMA configurations.

The following rules apply to MSMM LTE + CDMA star configurations:

- 1.4 and 3 MHz LTE carriers are not supported in mixed mode configurations.
- Different RBBs can be chosen for different sectors to create asymmetric configurations.
- Unused DU or Baseband CPRI ports in a mixed mode configuration can be used for single mode sectors according to the single mode configuration tables.
- The capacity limitations of the respective radio standard apply.

Table 609 DU Support for LTE + CDMA MSMM Configurations Using Shared CPRI

DU		Software Version
LTE	CDMA	
DUL 20 DUS 31 DUS 41	DUL 20 + XMU DUS 31 + XMU DUS 41 + XMU	17.Q3



Table 610 DU and Baseband Support for LTE + CDMA MSMM Configurations Using Separate CPRI per Standard

DU or Baseband		Software Versions
LTE	CDMA	
Baseband 5216 Baseband 6630 DUS 41	DUS 41 + XMU	17.Q4
Baseband 6318	DUS 41 + XMU	18.Q2

16.1.1

LTE + CDMA MSMM Configurations with One DU Radio Node

Table 611 LTE + CDMA MSMM Configurations with One DU Radio Node

Supported RBBs	Software Release
LTE + CDMA	
DUL 20 + XMU 02 DUS 31 + XMU 02 DUS 41 + XMU 02	
RBB10_1A	17.Q3
RBB11_1C	17.Q3
RBB12_1A	17.Q3
RBB20_1A	17.Q3
RBB20_2A	17.Q3
RBB22_1B	17.Q3
RBB22_1C	17.Q3
RBB22_1C	17.Q3
RBB22_2A	17.Q3
RBB22_2E	17.Q3
RBB22_2J	17.Q3
RBB24_1A	17.Q3
RBB24_1A	17.Q3
RBB24_2A	17.Q3
RBB24_2A	17.Q3
RBB44_1B	17.Q3
RBB44_1D	17.Q3
RBB44_2C	17.Q3
RBB44_2F	17.Q3



16.1.2 LTE + CDMA MSMM Configurations with DU Radio Node and DU or Baseband Radio Node

Table 612 LTE + CDMA MSMM Configurations with One DU Radio Node and One DU or Baseband Radio Node

CDMA		LTE		
RBB	DUS 41 + XMU	RBB	DUS 41	Baseband 5216, Baseband 6318 (min 18.Q2), Baseband 6630
RBB10_1A	17.Q4	RBB10_1A	17.Q4	17.Q4
RBB10_1A	17.Q4	RBB20_2A	17.Q4	17.Q4
RBB11_1C	17.Q4	RBB11_1C	17.Q4	17.Q4
RBB11_1C	17.Q4	RBB12_1C	17.Q4	17.Q4
RBB11_1C	17.Q4	RBB12_2B	17.Q4	17.Q4
RBB11_1C	17.Q4	RBB22_1C	17.Q4	17.Q4
RBB11_1C	17.Q4	RBB22_2A	17.Q4	17.Q4
RBB11_1C	17.Q4	RBB22_2E	17.Q4	17.Q4
RBB12_1A	17.Q4	RBB12_1A	17.Q4	17.Q4
RBB12_1A	17.Q4	RBB24_2A	17.Q4	17.Q4
RBB20_1A	17.Q4	RBB20_1A	17.Q4	17.Q4
RBB20_2A	17.Q4	RBB10_1A	17.Q4	17.Q4
RBB20_2A	17.Q4	RBB20_2A	17.Q4	17.Q4
RBB22_1B	17.Q4	RBB22_1B	17.Q4	17.Q4
RBB22_1B	17.Q4	RBB24_1B	17.Q4	17.Q4
RBB22_1B	17.Q4	RBB24_2B	17.Q4	17.Q4
RBB22_1B	17.Q4	RBB44_2C	17.Q4	17.Q4
RBB22_1C	17.Q4	RBB11_1C	17.Q4	17.Q4
RBB22_2A	17.Q4	RBB11_1C	17.Q4	17.Q4
RBB22_2A	17.Q4	RBB22_2A	17.Q4	17.Q4
RBB22_2E	17.Q4	RBB11_1C	17.Q4	17.Q4
RBB22_2E	17.Q4	RBB11_1D	17.Q4	17.Q4
RBB22_2E	17.Q4	RBB22_2E	17.Q4	17.Q4
RBB22_2J	17.Q4	RBB22_2J	17.Q4	-
RBB24_2A	17.Q4	RBB12_1A	17.Q4	17.Q4
RBB24_2A	17.Q4	RBB24_2A	17.Q4	17.Q4
RBB44_1D	17.Q4	RBB44_1D	17.Q4	17.Q4
RBB44_2C	17.Q4	RBB22_1B	17.Q4	17.Q4
RBB44_2C	17.Q4	RBB44_2C	17.Q4	17.Q4

16.1.3 Carrier Allocation for Star Configurations LTE + CDMA

This section describes carrier allocation for MSMM LTE + CDMA star configurations.



The following rule applies to carrier allocation for MSMM LTE + CDMA star configurations:

- Depending on the band, the operational bandwidth and number of carriers can be different than listed in the carrier allocation table, but has to be considered. For operational bandwidth, see [Supported Radio Frequencies](#) on page 8. For number of LTE carriers, see [Sector Configuration for LTE](#) on page 271. For number of CDMA carriers, see [Sector Configuration for CDMA](#) on page 172.

16.1.3.1 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB10_1A

Table 613 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB10_1A

Radio Type	From SW Release	LTE		CDMA	
		RBB10_1A		RBB10_1A	
		Downlink	Uplink	Downlink ⁽¹⁾	Uplink
		TX A		TX A	
RUS 01	17.Q3	B = number of carriers B ≤ 1 C = total LTE bandwidth (MHz) C ≤ 20	2-WRXD	A = number of carriers A ≤ 4	2-WRXD
		A+B ≤ 4 (radio limitation) A+C/5 ≤ 4 (radio limitation) 2×A+4×C/5 ≤ 16 (CPRI limitation)			
RUS 02	17.Q3	B = number of carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	2-WRXD	A = number of carriers A ≤ 5 ⁽²⁾	2-WRXD
		A+B ≤ 5 (radio limitation) A+C/5 ≤ 8(radio limitation) 2×A+4×C/5 ≤ 16 (CPRI limitation)			

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.



16.1.3.2 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Table 614 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Radio Type	From SW Release	LTE		CDMA		
		RBB10_1A		RBB20_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A		TX A	TX C	
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.3 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Table 615 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Radio Type	From SW Release	LTE			CDMA		
		RBB20_2A			RBB10_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A	TX C		TX A		
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE		CDMA		
		RBB20_2A		RBB10_1A		
		Downlink		Uplink	Downlink	Uplink
		TX A	TX C		TX A	
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.4 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB11_1C

Table 616 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB11_1C

Radio Type	From SW Release	LTE		CDMA	
		RBB11_1C		RBB11_1C	
		Downlink	Uplink	Downlink ⁽¹⁾	Uplink
		TX A/RX A		TX A/RX A	
RRUS 11 RUS 01	17.Q3	B = number of carriers B ≤ 1 C = total LTE bandwidth (MHz) C ≤ 20	No diversity	A = number of carriers A ≤ 4	No diversity
		A+B ≤ 4 (radio limitation) A+C/5 ≤ 4 (radio limitation) A+2×C/5 ≤ 16 (CPRI limitation)			
RUS 02	17.Q3	B = number of carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	No diversity	A = number of carriers A ≤ 5	No diversity
		A+B ≤ 5 (radio limitation) A+C/5 ≤ 8 (radio limitation) A+2×C/5 ≤ 16 (CPRI limitation)			

(1) Maximum three carriers are supported for 4–6 sector configurations.



16.1.3.5 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_1C and RBB11_1C

Table 617 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB12_1C

Radio Type	From SW Release	LTE			CDMA	
		RBB12_1C			RBB11_1C	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	RX B		TX A/RX A	
RRUS 11 + Radio 0208 RRUS 11 + RRUS A2	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				

16.1.3.6 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Table 618 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Radio Type	From SW Release	LTE			CDMA		
		RBB12_2B			RBB11_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	RX B		TX A/RX A		
RRUS 11 + Radio 0208 RRUS 11 + RRUS A2	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172.		No diversity
		DU or Baseband capacity applies. CPRI capacity applies.					



16.1.3.7 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_1C

Table 619 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_1C

Radio Type	From SW Release	LTE		CDMA		
		RBB11_1C		RBB22_1C		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.8 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB11_1C

Table 620 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB11_1C

Radio Type	From SW Release	LTE		CDMA		
		RBB22_1C		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
RUS 01 + RUS 01	17.Q4	A = number of carriers $A \leq 1$ For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				



Radio Type	From SW Release	LTE		CDMA		
		RBB22_1C		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.9 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Table 621 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Radio Type	From SW Release	LTE		CDMA		
		RBB11_1C		RBB22_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.



16.1.3.10 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Table 622 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Radio Type	From SW Release	LTE		CDMA		
		RBB22_2A		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.11 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Table 623 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Radio Type	From SW Release	LTE			CDMA		
		RBB22_2E			RBB11_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A		
RRUS 11 + RRUS 11	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		No diversity	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations.



16.1.3.12 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_1A

Table 624 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_1A

Radio Type	From SW Release	LTE		CDMA			
		RBB12_1A		RBB12_1A			
		Downlink		Uplink	Downlink ⁽¹⁾		Uplink
		TX A/RX A	RX B		TX A/RX A	RX B	
RUS 01	17.Q3	B = number of carriers B ≤ 1 C = total LTE bandwidth (MHz) C ≤ 20		2-WRXD with TX A/RX A	A = number of carriers A ≤ 4		2-WRXD with TX A/RX A
		A+B ≤ 4 (radio limitation) A+C/5 ≤ 4 (radio limitation) 2×A+4×C/5 ≤ 16 (CPRI limitation)					
RUS 02	17.Q3	B = number of carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20		2-WRXD with TX A/RX A	A = number of carriers A ≤ 5		2-WRXD with TX A/RX A
		A+B ≤ 5 (radio limitation) A+C/5 ≤ 8 (radio limitation) 2×A+4×C/5 ≤ 16 (CPRI limitation)					

(1) Maximum three carriers are supported for 4–6 sector configurations.

16.1.3.13 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Table 625 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Radio Type	From SW Release	LTE			CDMA				
		RBB12_1A			RBB24_1A				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	RX B		TX A/RX A	RX B	TX C/RX C	RX D	
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



- (1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.
- (2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.14 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Table 626 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Radio Type	From SW Release	LTE				CDMA			
		RBB24_1A				RBB12_1A			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	RX B	TX C/RX C	RX D		TX A/RX A	RX B	
RUS 01 + RUS 01	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. ⁽¹⁾ For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽²⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽²⁾⁽³⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							

- (1) Maximum one LTE carrier is supported on the RRUS 11 configured for mixed mode.
- (2) Maximum three CDMA carriers are supported for 4–6 sector configurations.
- (3) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.



16.1.3.15 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Table 627 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Radio Type	From SW Release	LTE			CDMA				
		RBB12_1A			RBB24_2A				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	RX B		TX A/RX A	RX B	TX C/RX C	RX D	
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.16 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Table 628 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Radio Type	From SW Release	LTE				CDMA			
		RBB24_2A				RBB12_1A			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	RX B	TX C/RX C	RX D		TX A/RX A	RX B	
RUS 01 + RUS 01	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. ⁽¹⁾ For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽²⁾		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	LTE				CDMA			
		RBB24_2A				RBB12_1A			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	RX B	TX C/RX C	RX D		TX A/RX A	RX B	
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽²⁾⁽³⁾		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									

(1) Maximum one LTE carrier is supported on the RRUS 11 configured for mixed mode.

(2) Maximum three CDMA carriers are supported for 4–6 sector configurations.

(3) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.17 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB20_1A

Table 629 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB20_1A

Radio Type	From SW Release	LTE			CDMA		
		RBB20_1A			RBB20_1A		
		Downlink		Uplink	Downlink ⁽¹⁾		Uplink
		TX A	TX B		TX A	TX B	
RRUS 11	17.Q3	C = number of carriers C ≤ 1 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
					A+B ≤ 4		
		A+B+C ≤ 4 (radio limitation) A+B+D/5 ≤ 4 (radio limitation) 2×A+2×B+4×D/5 ≤ 16 (CPRI limitation)					

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.



16.1.3.18 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB20_2A

Table 630 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB20_2A

Radio Type	From SW Release	LTE						CDMA		
		RBB20_2A						RBB20_2A		
		Downlink		Uplink				Downlink ⁽¹⁾		Uplink
		TX A	TX C	Ext RX A	Ext RX B	Ext RX C	Ext RX D	TX A	TX C	
RUS 01	17.Q3	C = number of carriers C ≤ 1 D = total LTE bandwidth (MHz) D ≤ 20		E = bandwidth received on Ext RX A + bandwidth received on Ext RX B E ≤ 40		2-WRXD with any 2RX branches or 4-WRXD with all 4RX branches	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD	
				F = bandwidth received on Ext RX C + bandwidth received on Ext RX D F ≤ 40			A+B ≤ 6			
		A+C ≤ 4 (radio 1 limitation) A+D/5 ≤ 4 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) B+D/5 ≤ 4 (radio 2 limitation) 2×A+2×E/5 ≤ 16 (CPRI to radio 1 limitation) 2×B+2×F/5 ≤ 16 (CPRI to radio 2 limitation)								
RUS 02	17.Q3	C = number of carriers C ≤ 2 D = total LTE bandwidth (MHz) D ≤ 20		E = bandwidth received on Ext RX A + bandwidth received on Ext RX B E ≤ 40		2-WRXD with any 2RX branches or 4-WRXD with all 4RX branches	A = number of carriers A ≤ 5	B = number of carriers B ≤ 5	2-WRXD	
				F = bandwidth received on Ext RX C + bandwidth received on Ext RX D F ≤ 40			A+B ≤ 6			
		A+B+D/5 ≤ 8 for D ≤ 15 (frequency band limitation) A+B+D/5 ≤ 7 for D = 20 (frequency band limitation) A+C ≤ 5 (radio 1 limitation) B+C ≤ 5 (radio 2 limitation) 2×A+2×E/5 ≤ 16 (CPRI to radio 1 limitation) 2×B+2×F/5 ≤ 16 (CPRI to radio 2 limitation)								

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.



16.1.3.19 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1B

Table 631 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1B

Radio Type	From SW Release	LTE			CDMA		
		RBB22_1B			RBB22_1B		
		Downlink		Uplink	Downlink ⁽¹⁾		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 11	17.Q3	C = number of carriers C ≤ 1 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
					A+B ≤ 4		
		A+B+C ≤ 4 (radio limitation) A+B+D/5 ≤ 4 (radio limitation) 2×A+2×B+4×D/5 ≤ 16 (CPRI limitation)					

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.

16.1.3.20 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Table 632 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Radio Type	From SW Release	LTE				CDMA			
		RBB24_1B				RBB22_1B			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	RX C	RX D		TX A/RX A	TX B/RX B	
RRUS 11 + Radio 0208 RRUS 11 + RRUS A2	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.			4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾		2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.									

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations.



16.1.3.21 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Table 633 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Radio Type	From SW Release	LTE				CDMA			
		RBB24_2B				RBB22_1B			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	RX C	RX D		TX A/RX A	TX B/RX B	
RRUS 11 + Radio 0208 RRUS 11 + RRUS A2	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations.

16.1.3.22 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Table 634 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Radio Type	From SW Release	LTE			CDMA				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11 + RRUS 11	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.



16.1.3.23 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Table 635 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Radio Type	From SW Release	LTE				CDMA			
		RBB44_1B				RBB22_1B			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
RRUS 11 + RRUS 11	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. ⁽¹⁾ For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽²⁾		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							

(1) Maximum one LTE carrier is supported on the RRUS 11 configured for mixed mode.

(2) Maximum three CDMA carriers are supported for 4–6 sector configurations.

16.1.3.24 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Table 636 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Radio Type	From SW Release	LTE			CDMA				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11 + RRUS 11	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.



16.1.3.25 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Table 637 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Radio Type	From SW Release	LTE				CDMA			
		RBB44_2C				RBB22_1B			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
RRUS 11 + RRUS 11	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. ⁽¹⁾ For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽²⁾		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									

(1) Maximum one LTE carrier is supported on the RRUS 11 configured for mixed mode.

(2) Maximum three CDMA carriers are supported for 4–6 sector configurations.

16.1.3.26 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1C

Table 638 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_1C

Radio Type	From SW Release	LTE			CDMA		
		RBB22_1C			RBB22_1C		
		Downlink		Uplink	Downlink ⁽¹⁾		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	17.Q3	C = number of carriers C ≤ 1 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
					A+B ≤ 4		
		A+B+C ≤ 4 (radio 1 and radio 2 limitation) A+B+D/5 ≤ 4 (radio 1 and radio 2 limitation) 2×A+2×B+4×D/5 ≤ 16 (CPRI limitation)					
RUS 02 + RUS 02	17.Q3	C = number of carriers C ≤ 2 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 5	B = number of carriers B ≤ 5	2-WRXD
					A+B ≤ 5		
		A+C ≤ 5 (radio 1 limitation) B+C ≤ 5 (radio 2 limitation) A+B+D/5 ≤ 8 for D ≤ 15 (frequency band limitation) A+B+D/5 ≤ 7 for D = 20 (frequency band limitation) 2×A+2×B+4×D/5 ≤ 16 (CPRI limitation)					

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.



16.1.3.27 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2A

Table 639 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2A

Radio Type	From SW Release	LTE		CDMA			
		RBB22_2A		RBB22_2A			
		Downlink		Uplink	Downlink ⁽¹⁾		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	17.Q3	C = number of carriers C ≤ 1 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
		A+B ≤ 4					
		A+B+C ≤ 4 (radio 1 and radio 2 limitation) A+B+D/5 ≤ 4 (radio 1 and radio 2 limitation) 2×A+2×B+4×D/5 ≤ 16 (CPRI limitation)					
RUS 02 + RUS 02	17.Q3	C = number of carriers C ≤ 2 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 5	B = number of carriers B ≤ 5	2-WRXD
		A+B ≤ 5					
		A+C ≤ 5 (radio 1 limitation) B+C ≤ 5 (radio 2 limitation) A+B+D/5 ≤ 8 for D ≤ 15 (frequency band limitation) A+B+D/5 ≤ 7 for D = 20 (frequency band limitation) 2×A+2×B+4×D/5 ≤ 16 (CPRI limitation)					

(1) Maximum six carriers are supported for 1–3 sector configurations and maximum three carriers are supported for 4–6 sector configurations.

16.1.3.28 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2E

Table 640 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2E

Radio Type	From SW Release	LTE		CDMA			
		RBB22_2E		RBB22_2E			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 11 + RRUS 11	17.Q3	C = number of carriers C ≤ 1 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
					A+B ≤ 4		
		A+B+C ≤ 4 (radio 1 and radio 2 limitation) A+B+D/5 ≤ 4 (radio 1 and radio 2 limitation) A+B+2×D/5 ≤ 16 (CPRI limitation)					



16.1.3.29 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2J

Table 641 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB22_2J

Radio Type	From SW Release	LTE			CDMA		
		RBB22_2J			RBB22_2J		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RUS 01 + RUS 01	17.Q3	C = number of carriers C ≤ 1 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 4	B = number of carriers B ≤ 4	2-WRXD
		A+B ≤ 6					
		A+C ≤ 4 (radio 1 limitation) A+D/5 ≤ 4 (radio 1 limitation) B+C ≤ 4 (radio 2 limitation) B+D/5 ≤ 4 (radio 2 limitation) 2×A+2×D/5 ≤ 16 (CPRI limitation) 2×B+2×D/5 ≤ 16 (CPRI limitation)					
RUS 02 + RUS 02	17.Q3	C = number of carriers C ≤ 2 D = total LTE bandwidth (MHz) D ≤ 20		2-WRXD	A = number of carriers A ≤ 5	B = number of carriers B ≤ 5	2-WRXD
		A+B ≤ 6					
		A+C ≤ 5 (radio 1 limitation) A+D/5 ≤ 8 (radio 1 limitation) B+C ≤ 8 (radio 2 limitation) B+D/5 ≤ 8 (radio 2 limitation) A+B+D/5 ≤ 9 for D ≤ 15 (frequency band limitation) A+B+D/5 ≤ 7 for D = 20 (frequency band limitation) 2×A+2×D/5 ≤ 16 (CPRI limitation) 2×B+2×D/5 ≤ 16 (CPRI limitation)					

16.1.3.30 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_1A

Table 642 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_1A

Radio Type	From SW Release	LTE				CDMA					
		RBB24_1A				RBB24_1A					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	RX B	TX C/RX C	RX D		TX A/RX A	RX B	TX C/RX C	RX D	
RUS 01 + RUS 01	17.Q3	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	LTE				CDMA					
		RBB24_1A				RBB24_1A					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	RX B	TX C/RX C	RX D		TX A/RX A	RX B	TX C/RX C	RX D	
RUS 02 + RUS 02	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾				2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											

(1) Maximum three CDMA carriers are supported for 4–6 sector configurations and maximum six CDMA carriers in total.

(2) Maximum three CDMA carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.

16.1.3.31 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_2A

Table 643 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB24_2A

Radio Type	From SW Release	LTE				CDMA					
		RBB24_2A				RBB24_2A					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	RX B	TX C/RX C	RX D		TX A/RX A	RX B	TX C/RX C	RX D	
RUS 01 + RUS 01	17.Q4	A = number of carriers A ≤ 1 For total bandwidth, see Supported Radio Frequencies on page 8.				2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾				2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
RUS 02 + RUS 02	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾				2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											

(1) Maximum three carriers with four to six sectors.

(2) Maximum three carriers if LTE is configured with 20 MHz in total, due to frequency restrictions for CDMA on band 5.



16.1.3.32 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_1B

Table 644 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_1B

Radio Type	From SW Release	LTE				Uplink	CDMA				
		RBB44_1B					RBB44_1B				
		Downlink					Downlink				Uplink
		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11 + RRUS 11	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172.				2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Carriers can be allocated accordingly: — Up to three CDMA carriers on any port and up to one 5 MHz LTE carrier allocated on any two ports. — Up to three CDMA carriers on RF B of both radios, maximum two CDMA carriers per port, and up to one 5 MHz LTE carrier on all four ports. — Up to four CDMA carriers, maximum one CDMA carrier per port, and up to one 5 MHz LTE carrier on any two ports. — Up to four CDMA carriers on RF A of both radios, maximum two CDMA carrier per port, and up to one 5 MHz LTE carrier on any two ports.									

16.1.3.33 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_1D

Table 645 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_1D

Radio Type	From SW Release	LTE					Uplink	CDMA					
		RBB44_1D						RBB44_1D					
		Downlink						Downlink				Uplink	
		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	MIMO		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D		
RRUS 31	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Maximum one carrier supported with DUL. Maximum three carriers supported with DUS.					2- or 4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. ⁽¹⁾⁽²⁾					2- or 4-WRXD
	DU or Baseband capacity applies. CPRI capacity applies.												

(1) Maximum six carriers are supported in total.

(2) The uplink takes the same branch as the downlink and the next branch, which could be in another radio.



16.1.3.34 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_2C

Table 646 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_2C

Radio Type	From SW Release	LTE				CDMA					
		RBB44_2C				RBB44_2C					
		Downlink The total BW (MHz) for the carriers is shown in parentheses				Uplink ⁽¹⁾	Downlink				Uplink ⁽²⁾
		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 11	17.Q3	C1 (5) can be allocated on any two antenna branches with different polarization.				4-WRXD	C1, C2, C3	-	C4, C5, C6	-	2-WRXD
		C1 (10) can be allocated on any two antenna branches with different polarization.					C1, C2	-	C3, C4	-	
		C1 (15) can be allocated on any two antenna branches with different polarization.					C1	-	C2	-	
RRUS 11	17.Q3	C1 (5)	C1 (5)	C1 (5)	C1 (5)	4-WRXD	-	C1, C3	-	C2	2-WRXD
		C1 (5)	C1 (5)	C1 (5)	C1 (5)		-	C1	-	C2, C3	

(1) 4-WRXD on all four branches.

(2) 2-WRXD. In uplink, the first branch is the same as in downlink provided that it is uplink-capable, otherwise the subsequent available branch with uplink-capability within the sector is used. The second branch is the subsequent available branch with uplink-capability within the sector.

16.1.3.35 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_2F

Table 647 LTE + CDMA MSMM Star Configurations: Carrier Allocation for RBB44_2F

Radio Type	From SW Release	LTE				CDMA					
		RBB44_2F				RBB44_2F					
		Downlink				Uplink	Downlink				Uplink ⁽¹⁾
		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
RRUS 31	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Maximum one carrier supported with DUL. Maximum three carriers supported with DUS.				2- or 4-WRXD	For number of carriers, see CDMA RBB Summary for External Radios and Internal Radios on page 172. Maximum three carriers with 4–6 sectors. Maximum six carriers in total.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									

(1) The first branch in UL is the same as in DL provided that this branch is UL capable. If it is not UL capable, the subsequent available branch with UL capability within the sector is used.



16.2 Cascade Configurations for MSMM LTE + CDMA

This section describes supported cascade configurations for MSMM LTE + CDMA.

Information and rules for both LTE + CDMA star configuration and single mode LTE, CDMA cascade configuration applies.

For mixed mode LTE + CDMA star configurations, see [Star Configurations for MSMM LTE + CDMA](#) on page 802.

For single mode LTE configurations, see [Radio Configurations for LTE](#) on page 271.

For single mode CDMA configurations, see [Supported Radio Configurations for CDMA](#) on page 175.

The following rules apply to LTE + CDMA cascade configurations:

- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Cascade configuration between RBBs only supported with remote radio units
- Up to two level radio cascading is supported
- Dual CPRI towards one radio is not supported



17 Radio Configurations for Multistandard Mixed Mode WCDMA + LTE

This section describes MSMM WCDMA + LTE configurations:

[Star Configurations for MSMM WCDMA + LTE](#) on page 827 describes MSMM WCDMA + LTE star configurations.

[Cascade Configurations for MSMM WCDMA + LTE](#) on page 925 describes MSMM WCDMA + LTE cascade configurations.

17.1 Star Configurations for MSMM WCDMA + LTE

This section describes MSMM WCDMA + LTE star configurations:

[Carrier Allocation for Star Configurations WCDMA + LTE](#) on page 839 describes carrier allocation for WCDMA + LTE configurations.

The following rules apply to MSMM WCDMA + LTE star configurations:

- All radios of type Radio support 1.4 and 3 MHz LTE carriers in MSMM configurations.
- Out of RRU, RU, and all other AIR, the following radio units support 1.4 and 3 MHz LTE carriers in MSMM WCDMA + LTE configurations:
 - AIR 21 B2A B4P
 - AIR 21 B2A B12P B8P
 - AIR 21 B4A B2P
 - AIR 21 B4A B12P B5P
 - AIR 21 B4A B12P B8P
 - AIR 2488
 - mRRUS 12 B3
 - mRRUS 12 B4
 - RRUS 01 B5
 - RRUS 11 B2
 - RRUS 11 B4



- RRUS 11 B5
 - RRUS 12 B2
 - RRUS 12 B3
 - RRUS 12 B5
 - RRUS 12 B8
 - RUS 01 B4
 - RUS 01 B5
 - RUS 01 B8
 - RUS 02 B2
 - RUS 02 B5
- Out of AIR, RRU, and RU, the following radio units support 3 MHz LTE carriers in MSMM WCDMA + LTE configurations:
- mRRUS 12 B2
 - RRUS 12 B4
- Different RBBs can be chosen for different sectors to create asymmetric configurations.
- Unused DU or Baseband CPRI ports in a mixed mode configuration can be used for single mode sectors according to the single mode configuration tables.
- DU or Baseband Capacity for respective radio standard apply.
- CPRI Capacity applies, see [CPRI Capacity](#) on page 1309.

17.1.1 DU and Baseband Support for WCDMA + LTE MSMM Configurations

Table 648 DU and Baseband Support for WCDMA + LTE MSMM Configurations

DU or Baseband Node	Software Release	
	WCDMA	LTE
Baseband 5212	17.Q3	17.Q3
Baseband 5216	17.Q3	17.Q3
Baseband 6303	17.Q3	17.Q3
Baseband 6318	18.Q2	18.Q2
Baseband 6502	17.Q3	17.Q3
Baseband 6620	17.Q3	17.Q3



DU or Baseband Node	Software Release	
	WCDMA	LTE
Baseband 6630	17.Q3	17.Q3
DUL 20	-	17.Q3
2 x DUL 20	-	_(1)
DUS 31	-	17.Q3
2 x DUS 31	-	17.Q3
3 x DUS 31	-	_(1)
DUS 41	-	17.Q3
2 x DUS 41	-	17.Q3
3 x DUS 41	-	_(1)
DUW 10	17.Q3	-
DUW 20	17.Q3	-
DUW 30	17.Q3	-
DUW 11	17.Q3	-
DUW 31	17.Q3	-
DUW 41	17.Q3	-
2 x DUW 10 2 x DUW 20 2 x DUW 30	17.Q3	-
2 x DUW 11 2 x DUW 31 2 x DUW 41	17.Q3	-
IDU 5205	17.Q3	17.Q3
IDU 5209	17.Q3	17.Q3

(1) Only supported for LTE single mode.

17.1.2

WCDMA + LTE MSMM Configurations with Two DU Radio Nodes

Table 649 Supported RBB Combinations for WCDMA + LTE MSMM Configurations with Two DU Radio Nodes

WCDMA Software Release	Supported RBBs	LTE Software Release		Supported RBBs
		1-2 DUS 31 1-2 DUS 41	1 DUL 20	
DUW 2 x DUW				
17.Q3	RBB10_1A	17.Q3	17.Q3	RBB10_1A
17.Q3	RBB10_1A	17.Q3	17.Q3	RBB20_2A
17.Q3	RBB11_1A	17.Q3	17.Q3	RBB22_1A
17.Q3	RBB11_1A	17.Q3	17.Q3	RBB22_2B
17.Q3	RBB12_1A	17.Q3	17.Q3	RBB12_1A
17.Q3	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3	17.Q3	RBB12_1A for AIR 21 ⁽¹⁾
17.Q3	RBB12_1A	17.Q3	17.Q3	RBB14_1A
17.Q3	RBB12_1A	17.Q3	17.Q3	RBB14_2A



WCDMA Software Release	Supported RBBs	LTE Software Release		Supported RBBs
DUW 2 × DUW		1-2 DUS 31 1-2 DUS 41	1 DUL 20	
17.Q3	RBB12_1A for AIR 21	17.Q3	17.Q3	RBB22_1C for AIR 21
17.Q3	RBB12_1A	17.Q3	17.Q3	RBB24_1A
17.Q3	RBB12_1A for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21
17.Q3	RBB12_1A	17.Q3	17.Q3	RBB24_2A
17.Q3	RBB12_1C	17.Q3	-	RBB11_1C
17.Q3	RBB12_1D	17.Q3	-	RBB11_1D
18.Q1	RBB12_1E	18.Q1	-	RBB12_1E
18.Q4	RBB12_1E	18.Q4	-	RBB22_1P
18.Q1	RBB12_1F	18.Q1	-	RBB12_1F
18.Q4	RBB12_1F	18.Q4	-	RBB22_1Q
17.Q3	RBB12_2B	17.Q3	17.Q3	RBB11_1C
17.Q3	RBB12_2B	17.Q3	-	RBB12_2B
17.Q3	RBB12_2C	17.Q3	-	RBB11_1D
17.Q3	RBB12_2C	17.Q3	-	RBB12_2C
17.Q3	RBB14_2A	17.Q3	17.Q3	RBB12_1A
17.Q3	RBB14_2A	17.Q3	-	RBB14_2A
17.Q3	RBB22_1B	17.Q3	17.Q3	RBB22_1B
17.Q3 ⁽²⁾	RBB22_1B for RDS	17.Q3	17.Q3	RBB22_1B for RDS
17.Q3	RBB22_1B	17.Q3	17.Q3	RBB24_1B
17.Q3	RBB22_1B	17.Q3	17.Q3	RBB24_2B
17.Q3	RBB22_1B	17.Q3	17.Q3	RBB44_1B
17.Q3	RBB22_1B	17.Q3	-	RBB44_2C
17.Q3	RBB22_1C	17.Q3	17.Q3	RBB11_1C
17.Q3	RBB22_1C for AIR 21	17.Q3	17.Q3	RBB11_1C for AIR 21
17.Q3	RBB22_1C for AIR 21	17.Q3	-	RBB12_1A for AIR 21
17.Q3	RBB22_1F	17.Q3	-	RBB22_1F
17.Q3	RBB22_1G	17.Q3	-	RBB22_1G
17.Q3	RBB22_2A	17.Q3	17.Q3	RBB11_1C
17.Q3	RBB22_2A	17.Q3	-	RBB22_2A
17.Q3	RBB22_2B	17.Q3	-	RBB22_2B
17.Q3	RBB22_2E	17.Q3	17.Q3	RBB11_1C
17.Q3	RBB22_2E	17.Q3	17.Q3	RBB11_1D
17.Q3	RBB22_2E	17.Q3	-	RBB22_2E
17.Q3	RBB24_1A	17.Q3	17.Q3	RBB12_1A
17.Q3	RBB24_1A for AIR 21	17.Q3	-	RBB12_1A for AIR 21
17.Q3	RBB24_1A for AIR 21	17.Q3	-	RBB22_1C for AIR 21
17.Q3	RBB24_1A for AIR 21	17.Q3	17.Q3	RBB24_1A for AIR 21
17.Q3	RBB24_1C	17.Q3	17.Q3	RBB24_1C



WCDMA Software Release	Supported RBBs	LTE Software Release		Supported RBBs
DUW 2 × DUW		1-2 DUS 31 1-2 DUS 41	1 DUL 20	
18.Q4	RBB24_1C	18.Q4	-	RBB44_1D
17.Q3	RBB24_2B	17.Q3	-	RBB22_1B
17.Q3	RBB24_2B	17.Q3	-	RBB24_2B
17.Q3	RBB32_1A	17.Q3	17.Q3	RBB10_1A
17.Q3	RBB42_2D	17.Q3	17.Q3	RBB42_2D
17.Q3	RBB44_1B	17.Q3	17.Q3	RBB22_1B
17.Q3	RBB44_1D	17.Q3	17.Q3	RBB44_1D
17.Q3	RBB44_2C	17.Q3	17.Q3	RBB22_1B
17.Q3	RBB44_2C	17.Q3	17.Q3	RBB44_2C

(1) Separate radio parts used for the two standards.

(2) RDS can be connected only to DUW 11, DUW 31 or DUW 41.

17.1.3

WCDMA + LTE MSMM Configurations with DU Radio Node and Baseband Radio Node

DBBs supported in single mode are also supported in mixed mode.

Note: Minimum software versions required for DUs, Baseband units and IDUs are listed in [DU and Baseband Support for WCDMA + LTE MSMM Configurations](#) on page 828.

Table 650 Supported RBB Combinations for WCDMA + LTE MSMM Configurations with WCDMA DU Radio Node and LTE Baseband Radio Node

Supported RBBs						Software Version ⁽¹⁾
WCDMA		LTE				
RBB	DUW 2 × DUW	RBB	Baseband 5212 Baseband 5216 ⁽²⁾ Baseband 6303 ⁽³⁾ Baseband 6318 ⁽²⁾⁽⁴⁾ Baseband 6620 ⁽³⁾ Baseband 6630 ⁽²⁾⁽³⁾	Baseband 6502 ⁽³⁾	IDU 5205 IDU 5209	
RBB10_1A	X	RBB10_1A	X	-	-	17.Q3
RBB10_1A	X	RBB20_2A	X	-	-	17.Q3
RBB11_1A	X	RBB11_1A	X	-	-	17.Q3
RBB11_1A	X	RBB22_1A	X	-	-	17.Q3
RBB11_1A	X	RBB22_2B	X	-	-	17.Q3



Supported RBBs						Software Version ⁽¹⁾
WCDMA		LTE				
RBB	DUW 2 × DUW	RBB	Baseband 5212 Baseband 5216 ⁽²⁾ Baseband 6303 ⁽³⁾ Baseband 6318 ⁽²⁾⁽⁴⁾ Baseband 6620 ⁽³⁾ Baseband 6630 ⁽²⁾⁽³⁾	Baseband 6502 ⁽³⁾	IDU 5205 IDU 5209	
RBB12_1A	X	RBB12_1A	X	-	-	17.Q3
RBB12_1A	X	RBB14_1A	X	-	-	17.Q3
RBB12_1A	X	RBB14_2A	X	-	-	17.Q3
RBB12_1A	X	RBB22_1C	X	-	-	17.Q3
RBB12_1A	X	RBB24_1A	X	-	-	17.Q3
RBB12_1A for AIR 21	X	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB12_1A	X	RBB24_2A	X	-	-	17.Q3
RBB12_1E	X	RBB12_1E	X	-	-	18.Q1
RBB12_1E	X	RBB22_1P	X	-	-	18.Q4
RBB12_1F	X	RBB22_1Q	X	-	-	18.Q4
RBB12_1F	X	RBB12_1F	X	-	-	18.Q1
RBB12_2B	X	RBB11_1C	X	-	-	17.Q3
RBB12_2B	X	RBB12_2B	X	-	-	17.Q3
RBB12_2C	X	RBB11_1D	X	-	-	17.Q3
RBB12_2C	X	RBB12_2C	X	-	-	17.Q3
RBB14_2A	X	RBB12_1A	X	-	-	17.Q3
RBB14_2A	X	RBB14_2A	X	-	-	17.Q3
RBB22_1A	X	RBB11_1A	X	-	-	17.Q3
RBB22_1B	X	RBB22_1B	X	X	-	17.Q3
RBB22_1B for RDS	X ⁽⁵⁾	RBB22_1B for RDS	X	X	X	17.Q3
RBB22_1B	X	RBB24_1B	X	-	-	17.Q3
RBB22_1B	X	RBB24_2B	X	-	-	17.Q3
RBB22_1B	X	RBB44_1B	X	X	-	17.Q3
RBB22_1B for RDS	X	RBB44_1B for RDS	X	X	X	18.Q3
RBB22_1B	X	RBB44_2C	X	X	-	17.Q3
RBB22_1B for RDS	X	RBB44_2C for RDS	X	X	X	18.Q3
RBB22_1C	X	RBB11_1C	X	-	-	17.Q3
RBB22_1C for AIR 21	X	RBB11_1C for AIR 21	X	-	-	17.Q3



Supported RBBs						Software Version ⁽¹⁾
WCDMA		LTE				
RBB	DUW 2 × DUW	RBB	Baseband 5212 Baseband 5216 ⁽²⁾ Baseband 6303 ⁽³⁾ Baseband 6318 ⁽²⁾⁽⁴⁾ Baseband 6620 ⁽³⁾ Baseband 6630 ⁽²⁾⁽³⁾	Baseband 6502 ⁽³⁾	IDU 5205 IDU 5209	
RBB22_1C	X	RBB12_1A	X	-	-	17.Q3
RBB22_1F	X	RBB22_1F	X	-	-	17.Q3
RBB22_1G	X	RBB22_1G	X	-	-	17.Q3
RBB22_2A	X	RBB11_1C	X	-	-	17.Q3
RBB22_2A	X	RBB22_2A	X	-	-	17.Q3
RBB22_2B	X	RBB11_1A	X	-	-	17.Q3
RBB22_2B	X	RBB22_2B	X	-	-	17.Q3
RBB22_2E	X	RBB11_1C	X	X	-	17.Q3
RBB22_2E	X	RBB11_1D	X	X	-	17.Q3
RBB22_2E	X	RBB22_2E	X	X	-	17.Q3
RBB24_1A	X	RBB12_1A	X	-	-	17.Q3
RBB24_1A for AIR 21	X	RBB12_1A for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB24_1C	X	RBB24_1C	X	-	-	17.Q3
RBB24_1C	X	RBB44_1D	X	-	-	18.Q4
RBB24_2B	X	RBB22_1B	X	-	-	17.Q3
RBB24_2B	X	RBB24_2B	X	-	-	17.Q3
RBB32_1A	X	RBB10_1A	X	-	-	17.Q3
RBB42_2D	X	RBB42_2D	X	-	-	17.Q3
RBB44_1B	X	RBB22_1B	X	X	-	17.Q3
RBB44_1D	X	RBB44_1D	X	-	-	17.Q3
RBB44_2C	X	RBB22_1B	X	X	-	17.Q3
RBB44_2C	X	RBB44_2C	X	X	-	17.Q3

(1) The RBB combination is supported from the software version listed here. Both nodes must use the same software version. DUs, Baseband units and IDUs must also support the software version used, see [DU and Baseband Support for WCDMA + LTE MSMM Configurations](#) on page 828.

(2) Mixed mode Baseband also supported.

(3) Supported from SW 17.Q3

(4) Supported from SW 18.Q2



(5) RBB22_1B for RDS is not supported by DUW 10, DUW 20, and DUW 30.

Table 651 Supported RBB Combinations for WCDMA + LTE MSMM Configurations with WCDMA Baseband Radio Node and LTE DU Radio Node

Supported RBBs							Software Version ⁽¹⁾
WCDMA				LTE			
RBB	Baseband 5212 ⁽²⁾ Baseband 5216 ⁽²⁾ Baseband 6303 ⁽²⁾⁽³⁾ Baseband 6318 ⁽²⁾⁽⁴⁾ Baseband 6620 ⁽²⁾⁽³⁾ Baseband 6630 ⁽²⁾⁽³⁾	Baseband 6502 ⁽³⁾	IDU 5205 IDU 5209	RBB	DUL 20	DUS 31 DUS 41 2 × DUS 31 2 × DUS 41	
RBB10_1A	X	-	-	RBB10_1A	X	X	17.Q3
RBB10_1A	X	-	-	RBB20_2A	X	X	17.Q3
RBB11_1A	X	-	-	RBB22_1A	X	X	17.Q3
RBB11_1A	X	-	-	RBB22_2B	X	X	17.Q3
RBB11_1C	X	X	-	RBB11_1C	X	X	17.Q3
RBB11_1C	X	-	-	RBB12_1C	-	X	17.Q3
RBB11_1C	X	-	-	RBB12_2B	-	X	17.Q3
RBB11_1C	X	-	-	RBB22_1C	X	X	17.Q3
RBB11_1C for AIR 21	X	-	-	RBB22_1C for AIR 21	X	X	17.Q3
RBB11_1C	X	-	-	RBB22_2A	X	X	17.Q3
RBB11_1C	X	X	-	RBB22_2E	X	X	17.Q3
RBB11_1D	X	X	-	RBB11_1D	X	X	17.Q3
RBB11_1D	X	-	-	RBB12_1D	-	X	17.Q3
RBB11_1D	X	-	-	RBB12_2C	-	X	17.Q3
RBB11_1D	X	X	-	RBB22_2E	X	X	17.Q3
RBB12_1A	X	-	-	RBB12_1A	X	X	17.Q3
RBB12_1A	X	-	-	RBB14_1A	X	X	17.Q3
RBB12_1A	X	-	-	RBB14_2A	X	X	17.Q3
RBB12_1A for AIR 21	X	-	-	RBB22_1C for AIR 21	X	X	17.Q3
RBB12_1A	X	-	-	RBB24_1A	X	X	17.Q3
RBB12_1A for AIR 21	X	-	-	RBB24_1A for AIR 21	X	X	17.Q3
RBB12_1A	X	-	-	RBB24_2A	X	X	17.Q3
RBB12_1C	X	-	-	RBB11_1C	X	X	17.Q3
RBB12_1D	X	-	-	RBB11_1D	X	X	17.Q3



Supported RBBs							Software Version ⁽¹⁾
WCDMA				LTE			
RBB	Baseband 5212 ⁽²⁾ Baseband 5216 ⁽²⁾ Baseband 6303 ⁽²⁾⁽³⁾ Baseband 6318 ⁽²⁾⁽⁴⁾ Baseband 6620 ⁽²⁾⁽³⁾ Baseband 6630 ⁽²⁾⁽³⁾	Baseband 6502 ⁽³⁾	IDU 5205 IDU 5209	RBB	DUL 20	DUS 31 DUS 41 2 × DUS 31 2 × DUS 41	
RBB12_1E	X	-	-	RBB12_1E	-	X	18.Q1
RBB12_1F	X	-	-	RBB12_1F	-	X	18.Q1
RBB12_2B	X	-	-	RBB11_1C	X	X	17.Q3
RBB12_2B	X	-	-	RBB12_2B	-	X	17.Q3
RBB12_2C	X	-	-	RBB11_1D	X	X	17.Q3
RBB12_2C	X	-	-	RBB12_2C	-	X	17.Q3
RBB14_1A	X	-	-	RBB12_1A	X	X	17.Q3
RBB14_2A	X	-	-	RBB12_1A	X	X	17.Q3
RBB14_2A	X	-	-	RBB14_2A	X	X	17.Q3
RBB20_1A	X	-	-	RBB20_1A	X	X	17.Q3
RBB20_2A	X	-	-	RBB10_1A	X	X	17.Q3
RBB20_2A	X	-	-	RBB20_2A	X	X	17.Q3
RBB22_1B	X	X	-	RBB22_1B	X	X	17.Q3
RBB22_1B for RDS	X	X	X	RBB22_1B for RDS	-	X	17.Q3
RBB22_1B	X	-	-	RBB24_1B	X	X	17.Q3
RBB22_1B	X	-	-	RBB24_2B	X	X	17.Q3
RBB22_1B	X	X	-	RBB44_1B	X	X	17.Q3
RBB22_1B	X	X	-	RBB44_2C	X	X	17.Q3
RBB22_1C	X	-	-	RBB11_1C	X	X	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB11_1C for AIR 21	X	X	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB12_1A for AIR 21	X	X	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB22_1C for AIR 21	X	X	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB24_1A for AIR 21	X	X	17.Q3
RBB22_1F	X	19.Q3	-	RBB22_1F	X	X	17.Q3
RBB22_1G	X	19.Q3	-	RBB22_1G	X	X	17.Q3
RBB22_1P	X	18.Q4	-	RBB22_1P	X	X	18.Q4
RBB22_1Q	X	18.Q4	-	RBB22_1Q	X	X	18.Q4



Supported RBBs							Software Version ⁽¹⁾
WCDMA				LTE			
RBB	Baseband 5212 ⁽²⁾ Baseband 5216 ⁽²⁾ Baseband 6303 ⁽²⁾⁽³⁾ Baseband 6318 ⁽²⁾⁽⁴⁾ Baseband 6620 ⁽²⁾⁽³⁾ Baseband 6630 ⁽²⁾⁽³⁾	Baseband 6502 ⁽³⁾	IDU 5205 IDU 5209	RBB	DUL 20	DUS 31 DUS 41 2 × DUS 31 2 × DUS 41	
RBB22_2A	X	-	-	RBB11_1C	X	X	17.Q3
RBB22_2A	X	-	-	RBB22_2A	X	X	17.Q3
RBB22_2B	X	-	-	RBB22_2B	X	X	17.Q3
RBB22_2E	X	X	-	RBB11_1C	X	X	17.Q3
RBB22_2E	X	X	-	RBB11_1D	X	X	17.Q3
RBB22_2E	X	X	-	RBB22_2E	X	X	17.Q3
RBB24_1A	X	-	-	RBB12_1A	X	X	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB12_1A for AIR 21	X	X	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB22_1C for AIR 21	X	X	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB24_1A for AIR 21	X	X	17.Q3
RBB24_1B	X	-	-	RBB22_1B	X	X	17.Q3
RBB24_1C	X	-	-	RBB24_1C	X	X	17.Q3
RBB24_2A	X	-	-	RBB12_1A	X	X	17.Q3
RBB24_2A	X	-	-	RBB24_2A	X	X	17.Q3
RBB24_2B	X	-	-	RBB22_1B	X	X	17.Q3
RBB24_2B	X	-	-	RBB24_2B	X	X	17.Q3
RBB32_1A	X	-	-	RBB10_1A	X	X	17.Q3
RBB32_1B	X	-	-	RBB10_1A	X	X	17.Q3
RBB42_2D	X	-	-	RBB42_2D	X	X	17.Q3
RBB44_1B	X	X	-	RBB22_1B	X	X	17.Q3
RBB44_1B for RDS	X	X	X	RBB22_1B for RDS	X	X	18.Q3
RBB44_1D	X	19.Q3	-	RBB44_1D	X	X	17.Q3
RBB44_2C	X	X	-	RBB22_1B	X	X	17.Q3
RBB44_2C for RDS	X	X	X	RBB22_1B for RDS	X	X	18.Q3
RBB44_2C	X	X	-	RBB44_2C	X	X	17.Q3

(1) The RBB combination is supported from the software version listed here. Both nodes must use the same software version. DUs, Baseband units and IDUs must also support the software version used, see [DU and Baseband Support for WCDMA + LTE MSMM Configurations](#) on page 828.



- (2) Mixed mode Baseband also supported.
- (3) Supported from SW 17.Q3
- (4) Supported from SW 18.Q2

17.1.4 WCDMA + LTE MSMM Configurations with Two Baseband Radio Nodes

Table 652 LTE + NR MSMM Configurations with Two Baseband Radio Nodes

LTE		Supported RBBs	NR	Supported RBBs	Software Release
Baseband 5212 Baseband 6303	Baseband 5216 Baseband 6318 Baseband 6630		Baseband 6630		
X	X	RBB22_1B	X	RBB22_1B	19.Q4
X	X	RBB22_1B	X	RBB44_1B	19.Q4
X	X	RBB22_1B	X	RBB44_2C	19.Q4
-	X	RBB22_1K	X	RBB22_1K	19.Q4
-	X	RBB22_1K	X	RBB44_1H	19.Q4
-	X	RBB22_1K	X	RBB44_2M	19.Q4
X	X	RBB44_1B	X	RBB22_1B	19.Q4
X	X	RBB44_1D	X	RBB44_1D	19.Q4
-	X	RBB44_1H	X	RBB22_1K	19.Q4
X	X	RBB44_2C	X	RBB22_1B	19.Q4
X	X	RBB44_2C	X	RBB44_2C	19.Q4
-	X	RBB44_2M	X	RBB22_1K	19.Q4
-	X	RBB44_2M	X	RBB44_2M	19.Q4

17.1.5 WCDMA + LTE MSMM Configurations with One Mixed Mode Baseband

Table 653 RBB Support for WCDMA + LTE MSMM Configurations with One Mixed Mode Baseband

Supported RBBs	From Software Release	
WCDMA + LTE	Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630	IDU 5209
RBB10_1A	17.Q3	-
RBB11_1A	17.Q3	-
RBB11_1C	17.Q3	-
RBB11_1D	17.Q3	-
RBB11_2A	17.Q3	-
RBB11_2B	17.Q3	-
RBB12_1A	17.Q3	-
RBB12_1A for AIR 21	17.Q3	-
RBB12_1C	17.Q3	-
RBB12_1D	17.Q3	-



Supported RBBs	From Software Release	
	Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630	IDU 5209
RBB12_1E	18.Q1	-
RBB12_1F	18.Q1	-
RBB12_2A	17.Q3	-
RBB12_2B	17.Q3	-
RBB12_2C	17.Q3	-
RBB12_2D	18.Q1	-
RBB12_2E	18.Q1	-
RBB14_1A	17.Q3	-
RBB14_2A	17.Q3	-
RBB20_1A	17.Q3	-
RBB20_2A	17.Q3	-
RBB22_1A	17.Q3	-
RBB22_1B	17.Q3	-
RBB22_1B for RDS	17.Q3	17.Q3
RBB22_1C	17.Q3	-
RBB22_1C for AIR 21	17.Q3	-
RBB22_1F	17.Q3	-
RBB22_1F for RDS	19.Q2	19.Q2
RBB22_1G	17.Q3	-
RBB22_1P	19.Q4	-
RBB22_1Q	19.Q4	-
RBB22_2A	17.Q3	-
RBB22_2A for AIR 21	17.Q3	-
RBB22_2B	17.Q3	-
RBB22_2C	17.Q3	-
RBB22_2E	17.Q3	-
RBB22_2K	17.Q3	-
RBB22_2T	19.Q4	-
RBB22_2U	19.Q4	-
RBB22_2K for RDS	19.Q2	19.Q2
RBB22_2L	17.Q3	-
RBB24_1A	17.Q3	-
RBB24_1A for AIR 21	17.Q3	-
RBB24_1B	17.Q3	-
RBB24_1C	17.Q3	-
RBB24_2A	17.Q3	-
RBB24_2A for AIR 21	17.Q3	-
RBB24_2B	17.Q3	-
RBB24_2D	17.Q3	-
RBB32_1A	17.Q3	-
RBB32_1B	17.Q3	-
RBB42_1B	17.Q3	-



Supported RBBs	From Software Release	
WCDMA + LTE	Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630	IDU 5209
RBB42_2D	17.Q3	-
RBB44_1B	17.Q3	-
RBB44_1B for RDS	18.Q3	18.Q3
RBB44_1D	17.Q3	-
RBB44_1N for RDS	19.Q2	19.Q2
RBB44_2C	17.Q3	-
RBB44_2C for RDS	18.Q3	18.Q3
RBB44_2F	17.Q3	-
RBB44_2S for RDS	19.Q2	19.Q2

17.1.6 Carrier Allocation for Star Configurations WCDMA + LTE

This section describes carrier allocation for MSMM WCDMA + LTE star configurations.

The following rules apply to carrier allocation for MSMM WCDMA + LTE star configurations:

- Depending on the band, the operational bandwidth and number of carriers can be different than listed in the carrier allocation table, but has to be considered. For operational bandwidth, see [Supported Radio Frequencies](#) on page 8. For number of WCDMA carriers, see [Sector Configuration for WCDMA](#) on page 182. For number of LTE carriers, see [Sector Configuration for LTE](#) on page 271.

17.1.6.1 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB10_1A

Table 654 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB10_1A

Radio Type	From SW Release	WCDMA		LTE	
		RBB10_1A		RBB10_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A		TX A	
RRUS 01 RRUW 02 RUS 01 RUS 02 RUW 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.2 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Table 655 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB10_1A and RBB20_2A

Radio Type	From SW Release	WCDMA		LTE		
		RBB10_1A		RBB20_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A		TX A	TX C	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02 RUW 02 + RUW 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.						

17.1.6.3 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Table 656 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB20_2A and RBB10_1A

Radio Type	From SW Release	WCDMA			LTE		
		RBB20_2A			RBB10_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A	TX C		TX A		
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02 RUW 02 + RUW 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							



17.1.6.4 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB10_1A

Table 657 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB10_1A

Radio Type	From SW Release	WCDMA			LTE			
		RBB32_1A			RBB10_1A			
		Downlink			Uplink	Downlink	Uplink	
		TX A/RX A	TX B/RX B	TX C		TX C		
Any combination of three radios on the same band: RRUS 01 RRUW 01 Any combination of three radios on the same band: RRUS 01 RRUW 02 Any combination of three radios on the same band: RUS 01 RUS 02 RUW 01	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with DUW only.			2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Maximum of one carrier per radio and three carriers in total.								
RRUS 01 + RRUS 01 + RRUS 01 Any combination of three radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband.			2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.								



17.1.6.5 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB10_1A

Table 658 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB10_1A

Radio Type	From SW Release	WCDMA				LTE		
		RBB32_1B				RBB10_1A		
		Downlink			Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C		TX C		
RRUS 01 + RRUS 01 + RRUS 01 Any three radio combination of: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.								

17.1.6.6 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1A

Table 659 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1A

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_1A		RBB11_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 RRUW 02 RUS 01 RUS 02 RUW 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.7 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_1A

Table 660 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_1A

Radio Type	From SW Release	WCDMA		LTE		
		RBB11_1A		RBB22_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02	17.Q3	A = number of 1TX carriers A ≤ 4	2-WRXD	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20		2-WRXD
A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)						
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17.Q3	A = number of 1TX carriers A ≤ 4	2-WRXD	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 10		2-WRXD
A+B ≤ 2 (radio 1 limitation) A+C/5 ≤ 2 (radio 1 limitation)						

17.1.6.8 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1A and RBB11_1A

Table 661 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1A and RBB11_1A

Radio Type	From SW Release	WCDMA		LTE			
		RBB22_1A		RBB11_1A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX B/RX B		
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02 RUW 02 + RUW 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							



17.1.6.9 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_2B

Table 662 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1A and RBB22_2B

Radio Type	From SW Release	WCDMA		LTE		
		RBB11_1A		RBB22_2B		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02	17.Q3	A = number of 1TX carriers A ≤ 4	2-WRXD	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20		2-WRXD
A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)						
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17.Q3	A = number of 1TX carriers A ≤ 2	2-WRXD	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 10		2-WRXD
A+B ≤ 2 (radio 1 limitation) A+C/5 ≤ 2 (radio 1 limitation)						

17.1.6.10 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB11_1A

Table 663 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1A and RBB11_1A

Radio Type	From SW Release	WCDMA			LTE		
		RBB32_1A			RBB11_1A		
		Downlink			Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B	TX C		TX A/RX A	
RRUS 01 + RRUS 01 + RRUS 01 Any three radio combination of: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
Baseband capacity applies. CPRI capacity applies.							



17.1.6.11 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB11_1A

Table 664 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1B and RBB11_1A

Radio Type	From SW Release	WCDMA			LTE		
		RBB32_1B			RBB11_1A		
		Downlink			Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B	TX C		TX A/RX A	
RRUS 01 + RRUS 01 + RRUS 01 Any three radio combination of: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
Baseband capacity applies. CPRI capacity applies.							

17.1.6.12 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C

Table 665 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 RRUS 01 RRUS 11 RRUS 12 RRUS 13 RRUW 02 RUS 01 RUS 02 RUW 02 Vault Radio System 2268	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2242	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.13 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB12_1C

Table 666 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB12_1C

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_1C		RBB12_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			



17.1.6.14 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1C and RBB11_1C

Table 667 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1C and 11_1C

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



17.1.6.15 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB12_2B

Table 668 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB12_2B

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_1C		RBB12_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



17.1.6.16 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Table 669 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2B and RBB11_1C

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2B		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.			



17.1.6.17 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB11_1C

Table 670 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB11_1C

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_1C			RBB11_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A		
AIR 21 RRUS 01 + RRUS 01 RRUW 02 + RRUW 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		No diversity
DU or Baseband capacity applies. CPRI capacity applies.							
RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		No diversity
DU or Baseband capacity applies. CPRI capacity applies.							

17.1.6.18 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Table 671 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2A

Radio Type	From SW Release	WCDMA		LTE		
		RBB11_1C		RBB22_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 2 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						



17.1.6.19 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Table 672 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2A and RBB11_1C

Radio Type	From SW Release	WCDMA		LTE		
		RBB22_2A		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				
RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				



17.1.6.20 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Table 673 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Radio Type	From SW Release	WCDMA		LTE		
		RBB11_1C		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		No diversity
		DU and Baseband capacity applies. CPRI Capacity applies.				



17.1.6.21 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Table 674 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1C

Radio Type	From SW Release	WCDMA		LTE		
		RBB22_2E		RBB11_1C		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies. Flexible carrier allocation is not supported with DUW.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies. Flexible carrier allocation is not supported with DUW.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		DU and Baseband capacity applies. CPRI Capacity applies.				



17.1.6.22 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D

Table 675 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_1D		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Vault Radio System 2268	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2242	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.23 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB12_1D

Table 676 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB12_1D

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_1D		RBB12_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			



17.1.6.24 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1D and RBB11_1D

Table 677 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1D and RBB11_1D

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1D		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies.			



17.1.6.25 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB12_2C

Table 678 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB12_2C

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_1D		RBB12_2C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



17.1.6.26 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2C and RBB11_1D

Table 679 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2C and RBB11_1D

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2C		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.			



17.1.6.27 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Table 680 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Radio Type	From SW Release	WCDMA		LTE		
		RBB11_1D		RBB22_2E		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.		No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				



17.1.6.28 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1D

Table 681 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2E and RBB11_1D

Radio Type	From SW Release	WCDMA		LTE		
		RBB22_2E		RBB11_1D		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		DU or Baseband capacity applies. CPRI capacity applies. Flexible carrier allocation is not supported with DUW.				
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.	No diversity
		Flexible carrier allocation not supported with DUW. DU and Baseband capacity applies. CPRI Capacity applies.				



17.1.6.29 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_2A

Table 682 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_2A

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_2A		RBB11_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2203 Radio 2217 Radio 2219 Vault Radio System 2268	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2242	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					

17.1.6.30 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_2B

Table 683 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB11_2B

Radio Type	From SW Release	WCDMA		LTE	
		RBB11_2B		RBB11_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2203 Radio 2217 Radio 2219 Vault Radio System 2268	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2242	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.31 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A

Table 684 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
AIR 21	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 RUS 01 RUS 02	17.Q3	A = number of 1TX carriers A ≤ 4	2-WRXD	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 20	2-WRXD
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			
RRUW 02 RUW 02	17A	A = number of 1TX carriers A ≤ 2	2-WRXD	B = number of LTE carriers B ≤ 2 C = total LTE bandwidth (MHz) C ≤ 10	2-WRXD
		A+B ≤ 2 (radio 1 limitation) A+C/5 ≤ 2 (radio 1 limitation)			

17.1.6.32 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB14_1A

Table 685 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB14_1A

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1A		RBB14_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A3	17A	A = number of WCDMA carriers A ≤ 4	2-WRXD	B = number of LTE carriers B ≤ 2	4-WRXD
				C = total bandwidth (MHz) C ≤ 20	
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			



Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1A		RBB14_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + RRUS A2	17A	A = number of WCDMA carriers A ≤ 4	2-WRXD	B = number of LTE carriers B ≤ 2	4-WRXD
				C = total bandwidth (MHz) C ≤ 10	
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			

17.1.6.33 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_1A and RBB12_1A

Table 686 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_1A and RBB12_1A

Radio Type ⁽¹⁾	From SW Release	WCDMA		LTE	
		RBB14_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS A2	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
RRUS 01 + RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			

(1) First radio used for mixed mode.



17.1.6.34 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB14_2A

Table 687 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB14_2A

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1A		RBB14_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17A	A = number of WCDMA carriers A ≤ 4	2-WRXD	B = number of LTE carriers B ≤ 2	4-WRXD
				C = total bandwidth (MHz) C ≤ 20	
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			

17.1.6.35 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_2A and RBB12_1A

Table 688 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_2A and RBB12_1A

Radio Type ⁽¹⁾	From SW Release	WCDMA		LTE	
		RBB14_2A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17A	A = number of WCDMA carriers A ≤ 4	2- or 4-WRXD	B = number of LTE carriers B ≤ 2	2-WRXD
				C = total bandwidth (MHz) C ≤ 20	
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			

(1) First radio used for mixed mode.



17.1.6.36 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Table 689 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Radio Type	From SW Release	WCDMA		LTE		
		RBB12_1A		RBB22_1C		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
AIR 21	17.Q3	A = number of 1TX carriers A ≤ 4	2-WRXD	D = number of LTE carriers D ≤ 2		2-WRXD
				E = total LTE bandwidth (MHz) E ≤ 20		
		A+D ≤ 4 (radio 1 and radio 2 limitation) A+E/5 ≤ 4 (radio 1 and radio 2 limitation)				

17.1.6.37 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB12_1A

Table 690 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB12_1A

Radio Type	From SW Release	WCDMA		LTE		
		RBB22_1C		RBB12_1A		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
AIR 21	17.Q3	A = number of 1TX carriers A ≤ 4	B = number of 1TX carriers B ≤ 4	2-WRXD	D = number of LTE carriers D ≤ 2 E = total LTE bandwidth (MHz) E ≤ 20	2-WRXD
		C = number of 2TX carriers C ≤ 4				
		A+B+C ≤ 4 (radio 1 and radio 2 limitation) A+B+C+E/5 ≤ 4 (radio 1 radio 1 and radio 2 limitation)				



17.1.6.38 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Table 691 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Radio Type	From SW Release	WCDMA		LTE		
		RBB12_1A		RBB24_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX C/RX C	
AIR 21 RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						

17.1.6.39 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Table 692 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB12_1A

Radio Type	From SW Release	WCDMA		LTE	
		RBB24_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
AIR 21 RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	WCDMA		LTE	
		RBB24_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
AIR 21 RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
Baseband capacity applies. CPRI capacity applies.					
AIR 21 RUW 02 + RUW 02 Any combination of two radios on the same band: RRUS 01 RRUW 01 Any combination of two radios on the same band: RRUS 01 RRUW 02 Any combination of two radios on the same band: RUS 01 RUS 02 RUW 01	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with DUW.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
Baseband capacity applies. CPRI capacity applies.					



17.1.6.40 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Table 693 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Radio Type	From SW Release	WCDMA		LTE		
		RBB12_1A		RBB24_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						

17.1.6.41 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Table 694 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2A and RBB12_1A

Radio Type	From SW Release	WCDMA			LTE		
		RBB24_2A			RBB12_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A		
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA		LTE		
		RBB24_2A		RBB12_1A		
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						

17.1.6.42 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1C

Table 695 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1C

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1C		RBB12_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			



Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1C		RBB12_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			

17.1.6.43 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1D

Table 696 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1D

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1D		RBB12_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			



Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1D		RBB12_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			

17.1.6.44 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1E

Table 697 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1E

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1E		RBB12_1E	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			



17.1.6.45 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1F

Table 698 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_1F

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_1F		RBB12_1F	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			

17.1.6.46 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2B

Table 699 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2B

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2B		RBB12_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2B		RBB12_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			

17.1.6.47 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2C

Table 700 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2C

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2C		RBB12_2C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2C		RBB12_2C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			

17.1.6.48 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2D

Table 701 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2D

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2D		RBB12_2D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



17.1.6.49 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2E

Table 702 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB12_2E

Radio Type	From SW Release	WCDMA		LTE	
		RBB12_2E		RBB12_2E	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			

17.1.6.50 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_1A

Table 703 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_1A

Radio Type	From SW Release	WCDMA		LTE	
		RBB14_1A		RBB14_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	4-WRXD
Baseband capacity applies. CPRI capacity applies.					



17.1.6.51 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_2A

Table 704 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB14_2A

Radio Type	From SW Release	WCDMA		LTE	
		RBB14_2A		RBB14_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17A	A = number of WCDMA carriers $A \leq 4$	2-WRXD with TX A/RX A and RX B or 4-WRXD with TX A/RX A, RX B, RX C and RX D	B = number of LTE carriers $B \leq 2$	2-WRXD with TX A/RX A and RX B
			C = total bandwidth (MHz) $C \leq 20$		
		A+B ≤ 4 (radio 1 limitation) A+C/5 ≤ 4 (radio 1 limitation)			

17.1.6.52 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB20_2A

Table 705 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB20_2A

Radio Type	From SW Release	WCDMA			LTE		
		RBB20_2A			RBB20_2A		
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A	TX C		TX A	TX C	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02 RUW 02 + RUW 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	4-WRXD		
DU or Baseband capacity applies. CPRI capacity applies.							

(1) Same limitations for 1TX and 2TX configured carriers.



17.1.6.53 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1A

Table 706 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1A

Radio Type	From SW Release	WCDMA		LTE			
		RBB22_1A		RBB22_1A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02 RUW 02 + RUW 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD		
DU or Baseband capacity applies. CPRI capacity applies.							

17.1.6.54 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B

Table 707 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_1B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Vault Radio System 2268	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							
Radio 2242	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Table 708 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B for RDS

Radio Type	From SW Release	WCDMA		LTE			
		RBB22_1B for RDS		RBB22_1B for RDS			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Flexible carrier allocation is not supported with DUW.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							

17.1.6.55 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB24_1B

Table 709 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB24_1B

Radio Type	From SW Release	WCDMA		LTE			
		RBB22_1B		RBB24_1B			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	WCDMA			LTE		
		RBB22_1B			RBB24_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.56 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Table 710 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1B and RBB22_1B

Radio Type	From SW Release	WCDMA			LTE		
		RBB24_1B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.57 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB24_2B

Table 711 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB24_2B

Radio Type	From SW Release	WCDMA		LTE			
		RBB22_1B		RBB24_2B			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	4-WRXD		
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	4-WRXD		
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	WCDMA		LTE			
		RBB22_1B		RBB24_2B			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.58 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Table 712 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2B and RBB22_1B

Radio Type	From SW Release	WCDMA			LTE		
		RBB24_2B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	WCDMA			LTE		
		RBB24_2B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

17.1.6.59 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Table 713 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 13 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 13 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + LTE FDD capable radio and one single mode LTE FDD capable radio. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							

(1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded



Table 714 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B for RDS and RBB44_1B for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB22_1B for RDS		RBB44_1B for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	18.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			

17.1.6.60 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Table 715 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1B and RBB22_1B

Radio Type	From SW Release	WCDMA					LTE			
		RBB44_1B					RBB22_1B			
		Downlink				Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B		
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 WCDMA capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.								
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.								



Radio Type	From SW Release	WCDMA					LTE		
		RBB44_1B					RBB22_1B		
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 WCDMA capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA					LTE			
		RBB44_1B					RBB22_1B			
		Downlink				Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B		
Any combination of one mixed mode WCDMA + LTE FDD capable radio and one single mode WCDMA capable radio. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.										

Table 716 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1B for RDS and RBB22_1B for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB44_1B for RDS		RBB22_1B for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	18.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



17.1.6.61 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Table 717 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: Radio 2217 Radio 2219 RRUS 11 RRUS 13 LTE capable radios: Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: RRUS 12 LTE capable radios: Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD				
DU or Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA			LTE					
		RBB22_1B			RBB44_2C					
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink	
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 13 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD		
		DU or Baseband capacity applies. CPRI capacity applies.								



Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 13 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio on the same band. WCDMA + LTE capable radios: RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14s	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	
		DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE FDD capable radio and one single mode LTE-FDD capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									

(1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded

Table 718 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1B for RDS and RBB44_2C for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB22_1B for RDS		RBB44_2C for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	18.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



17.1.6.62 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Table 719 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2C and RBB22_1B

Radio Type	From SW Release	WCDMA					LTE			
		RBB44_2C					RBB22_1B			
		Downlink				Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B		
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 WCDMA capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.										



Radio Type	From SW Release	WCDMA					LTE		
		RBB44_2C					RBB22_1B		
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 WCDMA capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD				
DU or Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA					LTE			
		RBB44_2C					RBB22_1B			
		Downlink				Uplink	Downlink		Uplink	
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B		
WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 WCDMA capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one mixed mode WCDMA + LTE capable radio and one single modeAny combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.										
Any combination of one mixed mode WCDMA + LTE FDD capable radio and one single mode WCDMA capable radio on the same band. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	
DU or Baseband capacity applies. CPRI capacity applies.										



Table 720 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2C for RDS and RBB22_1B for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB44_2C for RDS		RBB22_1B for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	18.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			

17.1.6.63 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C

Table 721 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C

Radio Type	From SW Release	WCDMA			LTE	
		RBB22_1C			RBB22_1C	
		Downlink		Uplink	Downlink	Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	
AIR 21 (dual mixed mode)	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						
AIR 21 RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.						



17.1.6.64 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB24_1A

Table 722 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1C and RBB24_1A

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_1C			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX C/RX C	
AIR 21 (dual mixed mode)	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.							

17.1.6.65 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB22_1C

Table 723 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1A and RBB22_1C

Radio Type	From SW Release	WCDMA		LTE	
		RBB24_1A		RBB22_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
AIR 21 (dual mixed mode)	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			
AIR 21 (dual mixed mode)	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- WRXD
		Baseband capacity applies. CPRI capacity applies.			



17.1.6.66 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1F

Table 724 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1F

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_1F			RBB22_1F		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4402	19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 2468 Radio 4426 Radio 4442	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4428 Radio 4443	18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4455	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4480 Radio 4499	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

Table 725 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1F for RDS

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_1F for RDS			RBB22_1F for RDS		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

(1) RBB used for the first band in the Dot product name.



17.1.6.67 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1F and RBB44_1N

Table 726 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1F for RDS and RBB44_1N for RDS

Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1F for RDS			RBB44_1N for RDS				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4- WRXD
Baseband capacity applies. CPRI capacity applies.									

(1) RBB used for the first band in the Dot product name.

17.1.6.68 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1F and RBB44_2S

Table 727 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1F for RDS and RBB44_2S for RDS

Radio Type	From SW Release	WCDMA			LTE				
		RBB22_1F for RDS			RBB44_2S for RDS				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4- WRXD
		Baseband capacity applies. CPRI capacity applies.							

(1) RBB used for the first band in the Dot product name.



17.1.6.69 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1N and RBB22_1F

Table 728 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1N for RDS and RBB22_1F for RDS

Radio Type	From SW Release	WCDMA					LTE		
		RBB44_1N for RDS					RBB22_1F for RDS		
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.									

(1) RBB used for the first band in the Dot product name.

17.1.6.70 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2S and RBB22_1F

Table 729 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2S for RDS and RBB22_1F for RDS

Radio Type	From SW Release	WCDMA				LTE			
		RBB44_2S for RDS				RBB22_1F for RDS			
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD
							For total bandwidth, see Supported Radio Frequencies on page 8.		
Baseband capacity applies. CPRI capacity applies.									

(1) RBB used for the first band in the Dot product name.



17.1.6.71 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1G

Table 730 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_1G

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_1G			RBB22_1G		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4402	19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4426 Radio 4442	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4428 Radio 4443	18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4455	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4480 Radio 4499	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

17.1.6.72 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2A

Table 731 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2A

Radio Type	From SW Release	WCDMA		LTE			
		RBB22_2A		RBB22_2A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 21 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	WCDMA			LTE		
		RBB22_2A			RBB22_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

17.1.6.73 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2B

Table 732 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2B

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_2B			RBB22_2B		
		Downlink ⁽¹⁾		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 02 + RUS 01 RUS 02 + RUS 02	17A	A = number of 1TX carriers A ≤ 4	B = number of 1TX carriers B ≤ 4	2-WRXD	D = number of LTE carriers D ≤ 2 E = total LTE bandwidth (MHz) E ≤ 20		2-WRXD
		C = number of 2TX carriers C ≤ 4					
		A+C+D ≤ 4 (radio 1 limitation) A+C+E/5 ≤ 4 (radio 1 limitation) B+C+D ≤ 4 (radio 2 limitation) B+C+E/5 ≤ 4 (radio 2 limitation) A+B+C ≤ 8 (RAT limitation) ⁽²⁾					
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17A	A = number of 1TX carriers A ≤ 2	B = number of 1TX carriers B ≤ 2	2-WRXD	D = number of LTE carriers D ≤ 2 E = total LTE bandwidth (MHz) E ≤ 10		2-WRXD
		C = number of 2TX carriers C ≤ 2					
		A+C+D ≤ 2 (radio 1 limitation) A+C+E/5 ≤ 2 (radio 1 limitation) B+C+D ≤ 2 (radio 2 limitation) B+C+E/5 ≤ 2 (radio 2 limitation) A+B+C ≤ 2 (RAT limitation) ⁽²⁾					

(1) The WCDMA carriers in TX A and TX B can be same, resulting in a 2TX/2RX configuration. Alternatively the WCDMA carriers in TX A and TX B could be different, resulting in a 1TX/2RX configuration.

(2) Flexible carrier allocation is supported.



17.1.6.74 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2C

Table 733 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2C

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_2C			RBB22_2C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2212 Radio 2217 Radio 2219 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							
Radio 2238	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							
Radio 2242	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Each carrier can be configured with one or two TX branches on the same radio.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							



17.1.6.75 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2E

Table 734 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2E

Radio Type	From SW Release	WCDMA		LTE			
		RBB22_2E		RBB22_2E			
		Downlink		Uplink	Downlink		Uplink
					The total BW (MHz) for the carriers is shown in parentheses		
TX A/RX A	TX B/RX B	TX A/RX A	TX B/RX B				
Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD		
		DU or Baseband capacity applies. CPRI capacity applies. Flexible carrier allocation is not supported with DUW.					
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD		
		DU or Baseband capacity applies. CPRI capacity applies. Flexible carrier allocation is not supported with DUW.					
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD		
		DU or Baseband capacity applies. CPRI capacity applies. Flexible carrier allocation is not supported with DUW.					



Radio Type	From SW Release	WCDMA		LTE	
		RBB22_2E		RBB22_2E	
		Downlink		Uplink	Uplink
		TX A/RX A	TX B/RX B		
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see GSM RBB Summary for External and Internal Radios on page 106.
		DU and Baseband capacity applies. CPRI Capacity applies.			

17.1.6.76 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2K

Table 735 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2K

Radio Type	From SW Release	WCDMA		LTE	
		RBB22_2K		RBB22_2K	
		Downlink		Uplink	Uplink
		TX A/RX A	TX B/RX B		
Radio 4415 Radio 4478 RRUS 32	17.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.
Radio 4402	19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.
Radio 2468 Radio 4426 Radio 4442	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.
Radio 4428 Radio 4443	18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.
Radio 4455	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.
Radio 4480 Radio 4499	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.



Table 736 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2K for RDS

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_2K for RDS			RBB22_2K for RDS		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 (1)	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD

(1) RBB used for the first band in the Dot product name.

17.1.6.77 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2L

Table 737 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB22_2L

Radio Type	From SW Release	WCDMA			LTE		
		RBB22_2L			RBB22_2L		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4415 Radio 4478 RRUS 32	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4402	19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4426 Radio 4442	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4428 Radio 4443	18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4455	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Radio 4480 Radio 4499	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD



17.1.6.78 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1A

Table 738 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1A

Radio Type	From SW Release	WCDMA			LTE		
		RBB24_1A			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
					The total BW (MHz) for the carriers is shown in parentheses		
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
AIR 21	17A	A = number of 1TX/2RX carriers A ≤ 4	B = number of 1TX/2RX carriers B ≤ 4	4-WRXD with TX A/RX A, RX B, TX C/RX C and RX D	G = number of 2TX/2RX carriers, G ≤ 2 H = total bandwidth (MHz), H ≤ 20		4-WRXD with TX A/RX A, RX B, TX C/RX C and RX D
		C = number of 1TX/4RX carriers C ≤ 4	D = number of 1TX/4RX carriers D ≤ 4				
		E = number of 2TX/2RX carriers E ≤ 4					
		F = number of 2TX/4RX carriers F ≤ 4					
		A+C+D+E+F ≤ 4 (radio 1 limitation) A+C+D+E+F+G ≤ 4 (radio 1 limitation) 5×(A+C+D+E+F)+H ≤ 20 (radio 2 limitation) B+C+D+E+F ≤ 4 (radio 2 limitation) B+C+D+E+F+G ≤ 4 (radio 2 limitation) 5×(B+C+D+E+F)+H ≤ 20 (radio 2 limitation) 2×(A+B+E)+4×(C+D+F) ≤ 16 (CPRI limitation) A+B+C+D+E+F ≤ 8 (RAT limitation)					



17.1.6.79 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1B

Table 739 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1B

Radio Type	From SW Release	WCDMA		LTE			
		RBB24_1B		RBB24_1B			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.80 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1C

Table 740 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1C

Radio Type	From SW Release	WCDMA			LTE		
		RBB24_1C			RBB24_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX A/RX A	TX A/RX A	TX B/RX B	
AIR 2488	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

17.1.6.81 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1C and RBB44_1D

Table 741 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_1C and RBB44_1D

Radio Type	From SW Release	WCDMA			LTE				
		RBB24_1C			RBB44_1D				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2460 Radio 2479	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with DUW.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									



17.1.6.82 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2A

Table 742 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2A

Radio Type	From SW Release	WCDMA		LTE			
		RBB24_2A		RBB24_2A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
AIR 21	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Supported with Baseband only. Baseband capacity applies. CPRI capacity applies.					
AIR 21	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Supported with Baseband only. Baseband capacity applies. CPRI capacity applies.					
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
RRUS 01 + RRUS 01 RRUW 02 + RRUW 02 RUW 02 + RUW 02 Any combination of two radios on the same band: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.83 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2B

Table 743 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2B

Radio Type	From SW Release	WCDMA			LTE		
		RBB24_2B			RBB24_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX A/RX A	TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	WCDMA			LTE		
		RBB24_2B			RBB24_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX A/RX A	TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		2-WRXD or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					

17.1.6.84 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2D

Table 744 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB24_2D

Radio Type	From SW Release	WCDMA			LTE		
		RBB24_2D			RBB24_2D		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX A/RX A	TX A/RX A	TX B/RX B	
AIR 2488	17.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Radio 2468	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.		4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



17.1.6.85 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1A

Table 745 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1A

Radio Type	From SW Release	WCDMA			LTE			
		RBB32_1A			RBB32_1A			
		Downlink			Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 + RRUS 01 Any three radio combination of: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.								

17.1.6.86 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1B

Table 746 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB32_1B

Radio Type	From SW Release	WCDMA			LTE			
		RBB32_1B			RBB32_1B			
		Downlink			Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 + RRUS 01 Any three radio combination of: RUS 01 RUS 02	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.			2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.								



17.1.6.87 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB42_1B

Table 747 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB42_1B

Radio Type	From SW Release	WCDMA					LTE		
		RBB42_1B					RBB42_1B		
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B	TX C/RX C	TX D		TX A/RX A + TX C/RX C or TX B + TX D		
Any two radio combination of: RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-WRXD or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.							

17.1.6.88 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB42_2D

Table 748 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB42_2D

Radio Type	From SW Release	WCDMA					LTE				
		RBB42_2D					RBB42_2D				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B	TX C/RX C	TX D		TX A/RX A	TX B	TX C/RX C	TX D	
Any combination of two radios on the same band: RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Maximum four carriers per radio with DUW. For configurations with DUW, the following equations have to be fulfilled for calculating the maximum number of 1TX and 2TX carriers configured on ports A and B on radio 1 and C and D on radio 2: For radio 1: $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 8$ (for RRUS 11 or RRUS 12) $A \times 2 + B \times 4 + AB \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 4 \leq 16$ (for RRUS 13) For radio 2: $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 8$ (for RRUS 11 or RRUS 12) $C \times 2 + D \times 4 + AC \times 2 + AD \times 2 + BC \times 2 + BD \times 2 + CD \times 4 \leq 16$ (for RRUS 13)				2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2-WRXD



17.1.6.89 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1B

Table 749 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1B

Radio Type	From SW Release	WCDMA					LTE				
		RBB44_1B					RBB44_1B				
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-- WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.											
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 13 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-- WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.											
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode LTE capable radio. WCDMA + LTE capable radios: RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14s	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2-- WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.											



Radio Type	From SW Release	WCDMA					LTE				
		RBB44_1B					RBB44_1B				
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode WCDMA or mixed mode WCDMA + LTE capable radio and one single mode LTE or mixed mode LTE + WCDMA capable radio. WCDMA or WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE or LTE + WCDMA capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		Baseband capacity applies. CPRI capacity applies.									
Any combination of one single mode WCDMA or mixed mode WCDMA + LTE capable radio and one single mode LTE or mixed mode LTE + WCDMA capable radio. WCDMA or WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 13 LTE or LTE + WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		Baseband capacity applies. CPRI capacity applies.									
Any combination of one single mode WCDMA or mixed mode WCDMA + LTE capable radio and one single mode LTE or mixed mode LTE + WCDMA capable radio. WCDMA or WCDMA + LTE capable radios: RRUS 12 LTE or LTE + WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14s	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA				LTE					
		RBB44_1B				RBB44_1B					
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode WCDMA or mixed mode WCDMA + LTE FDD capable radio and one single mode LTE FDD or mixed mode LTE FDD + WCDMA capable radio. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.											

(1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded

Table 750 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1B for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB44_1B for RDS		RBB44_1B for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	18.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	4-WRXD
		Baseband capacity applies. CPRI capacity applies.			

17.1.6.90 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1D

Table 751 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1D

Radio Type	From SW Release	WCDMA				LTE					
		RBB44_1D				RBB44_1D					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB Radio 4415 Radio 4478 RRUS 32	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD



Radio Type	From SW Release	WCDMA					LTE				
		RBB44_1D					RBB44_1D				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 4455 Radio 4480 Radio 4499	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 2460 Radio 2479	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported only with Baseband.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4402	19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4426 Radio 4442	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4428 Radio 4443	18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Radio 4455	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD

17.1.6.91 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1N

Table 752 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_1N for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB44_1N for RDS		RBB44_1N for RDS	
		Downlink	Uplink	Downlink	Uplink
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.			

(1) RBB used for the first band in the Dot product name.



17.1.6.92 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2C

Table 753 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2C

Radio Type	From SW Release	WCDMA					LTE				
		RBB44_2C					RBB44_2C				
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 13 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of one mixed mode WCDMA + LTE capable radio and one single mode WCDMA capable radio on the same band. WCDMA + LTE capable radios: RRUS 12 LTE capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
	DU or Baseband capacity applies. CPRI capacity applies.										
	17A	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	WCDMA				LTE					
		RBB44_2C				RBB44_2C					
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode WCDMA or mixed mode WCDMA + LTE capable radio and one single mode LTE or mixed mode WCDMA + LTE capable radio on the same band. WCDMA or WCDMA + LTE capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 LTE or LTE + WCDMA capable radios: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of one single mode WCDMA or mixed mode WCDMA + LTE capable radio and one single mode LTE or mixed mode WCDMA + LTE capable radio on the same band. WCDMA or WCDMA + LTE capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 13 LTE or LTE + WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of one single mode WCDMA or mixed mode WCDMA + LTE capable radio and one single mode LTE or mixed mode WCDMA + LTE capable radio on the same band. WCDMA or WCDMA + LTE capable radios: RRUS 12 LTE or LTE + WCDMA capable radios: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD						
DU or Baseband capacity applies. CPRI capacity applies.											



Radio Type	From SW Release	WCDMA				LTE					
		RBB44_2C				RBB44_2C					
		Downlink				Uplink	Downlink ⁽¹⁾				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of one single mode WCDMA or mixed mode WCDMA + LTE FDD capable radio and one single mode LTE FDD or mixed mode LTE FDD + WCDMA capable radio. Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											

(1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded

Table 754 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2C for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB44_2C for RDS		RBB44_2C for RDS	
		Downlink		Uplink	
		Downlink		Uplink	
Any combination of two radios on the same band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242	18.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.
		Baseband capacity applies. CPRI capacity applies.			

17.1.6.93 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2F

Table 755 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2F

Radio Type	From SW Release	WCDMA				LTE					
		RBB44_2F				RBB44_2F					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB Radio 4415 Radio 4478 RRUS 32	17.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. 2-WRXD supported with Baseband. 2- or 4-WRXD supported with DUW.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2--WRXD
DU or Baseband capacity applies. CPRI capacity applies.											



Radio Type	From SW Release	WCDMA					LTE				
		RBB44_2F					RBB44_2F				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
AIR 4455 Radio 2460 Radio 2479 Radio 4480 Radio 4499	18.Q4	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
Radio 4402	19.Q3	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
Radio 4426 Radio 4442	18.Q1	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
Radio 4428 Radio 4443	18.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											
Radio 4455	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.											

17.1.6.94 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2S

Table 756 WCDMA + LTE MSMM Star Configurations: Carrier Allocation for RBB44_2S for RDS

Radio Type	From SW Release	WCDMA		LTE	
		RBB44_2S for RDS		RBB44_2S for RDS	
		Downlink	Uplink	Downlink	Uplink
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q2	For number of carriers, see WCDMA RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 183. Supported with Baseband only.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD



Radio Type	From SW Release	WCDMA		LTE	
		RBB44_2S for RDS		RBB44_2S for RDS	
		Downlink	Uplink	Downlink	Uplink
		Baseband capacity applies. CPRI capacity applies.			

(1) RBB used for the first band in the Dot product name.

17.2 Psi-Coverage Configurations for WCDMA + LTE MSMM

This section describes the radio configurations that support ψ -Coverage (Psi-Coverage).

The use of ψ -Coverage requires a license. For more information on licenses, refer to [Manage Licenses and Hardware Activation Codes](#).

ψ -coverage for WCDMA + LTE is supported by:

- Baseband 5216, Baseband 6318, and Baseband 6630 from SW 18.Q4

Y-coverage is not supported.

Carrier allocation for ψ -Coverage configurations:

- One UL carrier in ψ -Coverage configurations require three carrier resources on the RF port

For radio configurations that support ψ -Coverage with Baseband 5216, Baseband 6318, and Baseband 6630, see [WCDMA + LTE MSMM Radio Configurations Supporting Psi-Coverage with Baseband 5216, Baseband 6318, and Baseband 6630](#) on page 924.

Refer to [Installing Psi-Coverage Hardware and Psi-Coverage Hardware Description](#) for more detailed information on Psi configuration.

17.2.1 WCDMA + LTE MSMM Radio Configurations Supporting Psi-Coverage with Baseband 5216, Baseband 6318, and Baseband 6630

Table 757 WCDMA + LTE MSMM Radio Configurations Supporting ψ -Coverage with Baseband 5216, Baseband 6318, and Baseband 6630

From SW Release	RBB	Number of Carriers		Radio
		WCDMA	LTE	
18.Q4 ⁽¹⁾	RBB22_1B RBB22_2C	2 (1 DL/UL ⁽²⁾ + 1 DL) or 1 (1 DL/UL ⁽²⁾)	2 (1 DL/UL 5 MHz ⁽³⁾ + 1 DL up to 20 MHz) or 1 (1 DL/UL 5 MHz ⁽³⁾)	Radio 2212 Radio 2217 Radio 2219



From SW Release	RBB	Number of Carriers		Radio
		WCDMA	LTE	
19.Q1 ⁽¹⁾	RBB12_1E RBB12_1F RBB12_2D RBB12_2E	2 (1 DL/UL ⁽²⁾ + 1 DL) or 1 (1 DL/UL ⁽²⁾)	2 (1 DL/UL 5 MHz ⁽³⁾ + 1 DL up to 20 MHz) or 1 (1 DL/UL 5 MHz ⁽³⁾)	Radio 2468
	RBB22_1B RBB22_2C	2 (1 DL/UL ⁽²⁾ + 1 DL) or 1 (1 DL/UL ⁽²⁾)	2 (1 DL/UL 5 MHz ⁽³⁾ + 1 DL up to 20 MHz) or 1 (1 DL/UL 5 MHz ⁽³⁾)	Radio 2212 Radio 2217 Radio 2219
	RBB22_1F RBB22_1G RBB22_2K RBB22_2L	2 (1 DL/UL ⁽²⁾ + 1 DL) or 1 (1 DL/UL ⁽²⁾)	2 (1 DL/UL 5 MHz ⁽³⁾ + 1 DL up to 20 MHz) or 1 (1 DL/UL 5 MHz ⁽³⁾)	Radio 4415 ⁽⁴⁾ Radio 4428 ⁽⁵⁾

(1) Inter-band and intra-band carrier aggregation is supported.

(2) Configured as 4.7 MHz due to TTMF limitations in UL.

(3) Configured as 4.5 MHz due to TTMF limitations in UL.

(4) Each RBB can independently be configured for any supported ψ -Coverage or normal sector with one or several RATs.

(5) One RBB is configured for ψ -Coverage and the other RBB is configured as a normal sector with one or several RATs.

17.3 Cascade Configurations for MSMM WCDMA + LTE

This section describes WCDMA + LTE configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for both WCDMA + LTE star configuration and single mode WCDMA, LTE cascade configuration applies

For mixed mode WCDMA + GSM star configurations, see [Star Configurations for MSMM WCDMA + LTE](#) on page 827.

For single mode WCDMA configurations, see [Radio Configurations for WCDMA](#) on page 182.

For single mode LTE configurations, see [Radio Configurations for LTE](#) on page 271.

For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



18 Radio Configurations for Multistandard Mixed Mode WCDMA + NR

This section describes MSMM NR + GSM configurations:

18.1 Star Configurations for MSMM WCDMA + NR

This section describes MSMM WCDMA + NR star configurations:

18.1.1 Baseband Support for WCDMA + NR MSMM

Table 758 Baseband Support for WCDMA + NR MSMM Configurations

DU or Baseband Node	From Software Version	
	NR	WCDMA
Baseband 5212	-	20.Q1
Baseband 5216	-	20.Q1
Baseband 6303	-	20.Q1
Baseband 6318	-	20.Q1
Baseband 6502	-	20.Q1
Baseband 6620	-	20.Q1
Baseband 6630	20.Q1	20.Q1
DUW	-	20.Q1

18.1.1.1 WCDMA + NR MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 759 WCDMA + NR MSMM Configurations with Baseband for NR and DU for WCDMA

Supported RBBs		From Software Version
NR	WCDMA	
Baseband 6630	DUW	
RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB24_2B	20.Q1
RBB22_1B	RBB44_1B	20.Q1
RBB22_1B	RBB44_2C	20.Q1
RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	20.Q1



Supported RBBs		From Software Version
NR	WCDMA	
Baseband 6630	DUW	
RBB22_2E	RBB22_2E	20.Q1
RBB24_1C	RBB24_1C	20.Q1
RBB44_1B	RBB22_1B	20.Q1
RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	20.Q1

18.1.1.2

WCDMA + NR MSMM Configurations with Two Baseband Radio Nodes

Table 760 WCDMA + NR MSMM Configurations with Two Baseband Radio Nodes

NR		WCDMA			From Software Version
Baseband 6630	Supported RBBs	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	Supported RBBs	
X	RBB22_1B	X	X	RBB22_1B	20.Q1
X	RBB22_1B	X	-	RBB24_1B	20.Q1
X	RBB22_1B	X	-	RBB24_2B	20.Q1
X	RBB22_1B	X	X	RBB44_1B	20.Q1
X	RBB22_1B	X	X	RBB44_2C	20.Q1
X	RBB22_1F	X	X	RBB22_1F	20.Q1
X	RBB22_1G	X	X	RBB22_1G	20.Q1
X	RBB22_2E	X	X	RBB11_1C	20.Q1
X	RBB22_2E	X	X	RBB11_1D	20.Q1
X	RBB22_2E	X	X	RBB22_2E	20.Q1
X	RBB24_1C	X	-	RBB24_1C	20.Q1
X	RBB44_1B	X	X	RBB22_1B	20.Q1
X	RBB44_1D	X	-	RBB44_1D	20.Q1
X	RBB44_2C	X	X	RBB22_1B	20.Q1
X	RBB44_2C	X	X	RBB44_2C	20.Q1

18.2

Cascade Configurations for MSMM WCDMA + NR

This section describes WCDMA + NR configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for WCDMA + NR star configuration, single mode WCDMA and single mode NR cascade configuration all applies.

For mixed mode WCDMA + NR star configurations, see [Cascade Configurations for MSMM WCDMA + NR](#) on page 927.



For single mode WCDMA configurations, see [Radio Configurations for WCDMA](#) on page 182.

For single mode NR configurations, see [Radio Configurations for NR](#) on page 479.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



19 Radio Configurations for Multistandard Mixed Mode WCDMA + ESS

This section describes MSMM WCDMA + ESS configurations:

19.1 Star Configurations for MSMM WCDMA + ESS

This section describes MSMM WCDMA + ESS star configurations:

19.1.1 Baseband Support for WCDMA + ESS MSMM

Table 761 Baseband Support for WCDMA + ESS MSMM Configurations

DU or Baseband Node	From Software Version	
	ESS	WCDMA
Baseband 5212	-	20.Q1
Baseband 5216	-	20.Q1
Baseband 6303	-	20.Q1
Baseband 6318	-	20.Q1
Baseband 6502	-	20.Q1
Baseband 6620	-	20.Q1
Baseband 6630	20.Q1 ⁽¹⁾	20.Q1
DUW	-	20.Q1

(1) ESS carriers from an LTE+NR mixed-mode Baseband.

19.1.1.1 WCDMA + ESS MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 762 WCDMA + ESS MSMM Configurations with Baseband for ESS and DU for WCDMA

Supported RBBs		From Software Version
ESS	WCDMA	
Baseband 6630	DUW	
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB24_2B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F



Supported RBBs		From Software Version
ESS	WCDMA	
Baseband 6630	DUW	
20.Q1	RBB22_1G	RBB22_1G
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

19.1.1.2

WCDMA + ESS MSMM Configurations with Two Baseband Radio Nodes

Table 763 WCDMA + ESS MSMM Configurations with Two Baseband Radio Nodes

From Software Version	ESS		WCDMA		
	Baseband 6630	Supported RBBs	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	Supported RBBs
20.Q1	X	RBB22_1B	X	-	RBB22_1B
20.Q1	X	RBB22_1B	X	-	RBB24_1B
20.Q1	X	RBB22_1B	X	-	RBB24_2B
20.Q1	X	RBB22_1B	X	-	RBB44_1B
20.Q1	X	RBB22_1B	X	-	RBB44_2C
20.Q1	X	RBB22_1F	X	-	RBB22_1F
20.Q1	X	RBB22_1G	X	-	RBB22_1G
20.Q1	X	RBB22_2E	X	-	RBB11_1C
20.Q1	X	RBB22_2E	X	-	RBB11_1D
20.Q1	X	RBB22_2E	X	-	RBB22_2E
20.Q1	X	RBB44_1B	X	-	RBB22_1B
20.Q1	X	RBB44_1D	X	-	RBB44_1D
20.Q1	X	RBB44_2C	X	-	RBB22_1B
20.Q1	X	RBB44_2C	X	-	RBB44_2C

19.2

Cascade Configurations for MSMM WCDMA + ESS

This section describes WCDMA + ESS configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for WCDMA + ESS star configuration, single mode WCDMA and single mode ESS cascade configuration all applies.

For mixed mode WCDMA + ESS star configurations, see [Star Configurations for MSMM WCDMA + ESS](#) on page 929.



For single mode WCDMA configurations, see [Radio Configurations for WCDMA](#) on page 182.

For single mode ESS configurations, see [Radio Configurations for ESS](#) on page 498.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



20 Radio Configurations for Multistandard Mixed Mode LTE + NR

This section describes MSMM LTE + NR configurations:

[Star Configurations for MSMM LTE + NR](#) on page 932 describes MSMM LTE + NR star configurations.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

20.1 Star Configurations for MSMM LTE + NR

This section describes MSMM LTE + NR star configurations:

[LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband](#) on page 937 describes carrier allocation for LTE + NR configurations.

The following rule applies to MSMM LTE + NR star configurations:

- Radio units connected to an LTE + NR mixed mode Baseband can work in single mode radio for LTE FDD and single mode radio NR FDD.
- Radio units connected to an LTE + NR mixed mode Baseband can work in mixed mode radio LTE FDD + NR FDD with shared CPRI.
- Radio units connected both to an LTE + NR mixed mode Baseband and another node (single or mixed mode) can work in mixed mode, LTE FDD + GSM, LTE FDD + WCDMA, LTE FDD + GSM + WCDMA with separate CPRI.
- Radio units working in a single mode or mixed-mode configuration can be connected directly to any available RI port, through cascade chain or through Baseband R503.

20.1.1 Baseband Support for LTE + NR MSMM

Table 764 Baseband Support for LTE FDD + NR FDD MSMM Configurations

DU or Baseband Node	From Software Version	
	LTE FDD	NR FDD
Baseband 5212	19.Q4	-
Baseband 5216	19.Q4	-
Baseband 6303	19.Q4	-
Baseband 6318	19.Q4	-



DU or Baseband Node	From Software Version	
	LTE FDD	NR FDD
Baseband 6502	20.Q1	-
Baseband 6620	19.Q4	-
Baseband 6630	19.Q4	19.Q4
DUS 31	19.Q4	-
2 × DUS 31	19.Q4	-
3 × DUS 31	_(1)	-
DUS 41	19.Q4	-
2 × DUS 41	19.Q4	-
3 × DUS 41	_(1)	-

(1) Only supported for LTE single mode.

20.1.1.1 LTE + NR MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 765 LTE FDD + NR FDD MSMM Configurations FR1 (low-band) CPRI with DU Radio Node and Baseband Radio Node

LTE FDD			NR FDD		Software Release
DUS 31	DUS 41	Supported RBBs	Baseband 6630	Supported RBBs	
X	X	RBB11_1C	X	RBB22_2E	19.Q4
X	X	RBB11_1D	X	RBB22_2E	19.Q4
X	X	RBB22_1B	X	RBB22_1B	19.Q4
X	X	RBB22_1B	X	RBB44_1B	19.Q4
X	X	RBB22_1B	X	RBB44_2C	19.Q4
X	X	RBB22_1F	X	RBB22_1F	19.Q4
X	X	RBB22_1G	X	RBB22_1G	19.Q4
X	X	RBB22_1H	X	RBB22_1H	19.Q4
X	X	RBB22_1J	X	RBB22_1J	19.Q4
-	X	RBB22_1K	X	RBB22_1K	19.Q4
-	X	RBB22_1K	X	RBB44_1H	19.Q4
-	X	RBB22_1K	X	RBB44_2M	19.Q4
X	X	RBB22_1L	X	RBB22_1L	19.Q4
X	X	RBB22_1L	X	RBB44_1J	19.Q4
X	X	RBB22_1L	X	RBB44_1N	19.Q4
X	X	RBB22_1M	X	RBB22_1M	19.Q4
X	X	RBB22_1M	X	RBB44_1K	19.Q4
X	X	RBB22_1M	X	RBB44_2P	19.Q4
-	X	RBB22_1N	X	RBB22_1N	19.Q4
-	X	RBB22_1N	X	RBB44_1M	19.Q4
-	X	RBB22_1N	X	RBB44_2R	19.Q4
X	X	RBB22_2E	X	RBB22_2E	19.Q4



LTE FDD			NR FDD		Software Release
DUS 31	DUS 41	Supported RBBs	Baseband 6630	Supported RBBs	
X	X	RBB24_1B	X	RBB22_1B	19.Q4
X	X	RBB24_1C	X	RBB24_1C	20.Q1
X	X	RBB24_2B	X	RBB22_1B	19.Q4
X	X	RBB44_1B	X	RBB22_1B	19.Q4
X	X	RBB44_1D	X	RBB44_1D	19.Q4
X	X	RBB44_1E	X	RBB44_1E	19.Q4
X	X	RBB44_1E	X	RBB88_1A	19.Q4
X	X	RBB44_1F	X	RBB44_1F	19.Q4
X	X	RBB44_1F	X	RBB88_1A	19.Q4
-	X	RBB44_1H	X	RBB22_1K	19.Q4
-	X	RBB44_1J	X	RBB22_1L	19.Q4
-	X	RBB44_1K	X	RBB22_1M	19.Q4
-	X	RBB44_1M	X	RBB22_1N	19.Q4
X	X	RBB44_2C	X	RBB22_1B	19.Q4
X	X	RBB44_2C	X	RBB44_2C	19.Q4
-	X	RBB44_2M	X	RBB22_1K	19.Q4
-	X	RBB44_2M	X	RBB44_2M	19.Q4
-	X	RBB44_2N	X	RBB22_1L	19.Q4
-	X	RBB44_2N	X	RBB44_2N	19.Q4
-	X	RBB44_2P	X	RBB22_1M	19.Q4
-	X	RBB44_2P	X	RBB44_2P	19.Q4
-	X	RBB44_2R	X	RBB22_1N	19.Q4
-	X	RBB44_2R	X	RBB44_2R	19.Q4
X	X	RBB88_1A	X	RBB44_1E	19.Q4
X	X	RBB88_1A	X	RBB44_1F	19.Q4
X	X	RBB88_1A	X	RBB88_1A	19.Q4

Table 766 LTE TDD + NR TDD MSMM Configurations FR1 (low-band) CPRI with DU Radio Node and Baseband Radio Node

LTE TDD			NR TDD		Software Release
DUS 31	DUS 41	Supported RBBs	Baseband 6630	Supported RBBs	
X	X	RBB22_1B	X	RBB22_1B	20.Q1
X	X	RBB22_1B	X	RBB44_1B	20.Q1
X	X	RBB22_1B	X	RBB44_2C	20.Q1
X	X	RBB22_1F	X	RBB22_1F	20.Q1
X	X	RBB22_1G	X	RBB22_1G	20.Q1
X	X	RBB44_1B	X	RBB22_1B	20.Q1
X	X	RBB44_1D	X	RBB44_1D	20.Q1
X	X	RBB44_2C	X	RBB22_1B	20.Q1
X	X	RBB44_2C	X	RBB44_2C	20.Q1



20.1.1.2 LTE + NR MSMM Configurations with Two Baseband Radio Nodes

Table 767 LTE FDD + NR FDD MSMM Configurations FR1 (low-band) CPRI with Two Baseband Radio Nodes

LTE FDD				NR FDD		Software Release
Baseband 5212 Baseband 6303 Baseband 6620	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	Supported RBBs	Baseband 6630	Supported RBBs	
X	X	X	RBB11_1C	X	RBB22_2E	19.Q4
X	X	X	RBB11_1D	X	RBB22_2E	19.Q4
X	X	X	RBB22_1B	X	RBB22_1B	19.Q4
X	X	X	RBB22_1B	X	RBB44_1B	19.Q4
X	X	X	RBB22_1B	X	RBB44_2C	19.Q4
X	X	-	RBB22_1F	X	RBB22_1F	19.Q4
X	X	-	RBB22_1G	X	RBB22_1G	19.Q4
X	X	-	RBB22_1H	X	RBB22_1H	19.Q4
X	X	-	RBB22_1J	X	RBB22_1J	19.Q4
-	X	-	RBB22_1K	X	RBB22_1K	19.Q4
-	X	-	RBB22_1K	X	RBB44_1H	19.Q4
-	X	-	RBB22_1K	X	RBB44_2M	19.Q4
X	X	-	RBB22_1L	X	RBB22_1L	19.Q4
X	X	-	RBB22_1L	X	RBB44_1J	19.Q4
X	X	-	RBB22_1L	X	RBB44_2N	19.Q4
X	X	-	RBB22_1M	X	RBB22_1M	19.Q4
X	X	-	RBB22_1M	X	RBB44_1K	19.Q4
X	X	-	RBB22_1M	X	RBB44_2P	19.Q4
-	X	-	RBB22_1N	X	RBB22_1N	19.Q4
-	X	-	RBB22_1N	X	RBB44_1M	19.Q4
-	X	-	RBB22_1N	X	RBB44_2R	19.Q4
X	X	X	RBB22_2E	X	RBB22_2E	19.Q4
X	X	-	RBB24_1B	X	RBB22_1B	19.Q4
X	X	-	RBB24_1C	X	RBB24_1C	20.Q1
X	X	-	RBB24_2B	X	RBB22_1B	19.Q4
X	X	X	RBB44_1B	X	RBB22_1B	19.Q4
X	X	-	RBB44_1D	X	RBB44_1D	19.Q4
X	X	-	RBB44_1E	X	RBB44_1E	19.Q4
X	X	-	RBB44_1E	X	RBB88_1A	19.Q4
X	X	-	RBB44_1F	X	RBB44_1F	19.Q4
X	X	-	RBB44_1F	X	RBB88_1A	19.Q4
-	X	-	RBB44_1H	X	RBB22_1K	19.Q4
-	X	-	RBB44_1M	X	RBB22_1N	19.Q4
-	X	-	RBB44_1J	X	RBB22_1L	19.Q4
-	X	-	RBB44_1K	X	RBB22_1M	19.Q4
X	X	X	RBB44_2C	X	RBB22_1B	19.Q4
X	X	X	RBB44_2C	X	RBB44_2C	19.Q4



LTE FDD				NR FDD		Software Release
Baseband 5212 Baseband 6303 Baseband 6620	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	Supported RBBs	Baseband 6630	Supported RBBs	
-	X	-	RBB44_2M	X	RBB22_1K	19.Q4
-	X	-	RBB44_2M	X	RBB44_2M	19.Q4
-	X	-	RBB44_2N	X	RBB22_2L	19.Q4
-	X	-	RBB44_2N	X	RBB44_2N	19.Q4
-	X	-	RBB44_2P	X	RBB22_1M	19.Q4
-	X	-	RBB44_2P	X	RBB44_2P	19.Q4
-	X	-	RBB44_2R	X	RBB22_1N	19.Q4
-	X	-	RBB44_2R	X	RBB44_2R	19.Q4
X	X	-	RBB88_1A	X	RBB44_1E	19.Q4
X	X	-	RBB88_1A	X	RBB44_1F	19.Q4
X	X	-	RBB88_1A	X	RBB88_1A	19.Q4

Table 768 LTE TDD + NR TDD MSMM Configurations FR1 (low-band) CPRI with Two Baseband Radio Nodes

LTE TDD		NR TDD		Software Release
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Supported RBBs	Baseband 6630	Supported RBBs	
X	RBB22_1B	X	RBB22_1B	20.Q1
X	RBB22_1B	X	RBB44_1B	20.Q1
X	RBB22_1B	X	RBB44_2C	20.Q1
X	RBB22_1F	X	RBB22_1F	20.Q1
X	RBB22_1G	X	RBB22_1G	20.Q1
X	RBB44_1B	X	RBB22_1B	20.Q1
X	RBB44_1D	X	RBB44_1D	20.Q1
X	RBB44_2C	X	RBB22_1B	20.Q1
X	RBB44_2C	X	RBB44_2C	20.Q1

Table 769 LTE TDD + NR TDD MSMM Configurations FR1 (mid-band) CPRI with Two Baseband Radio Nodes

LTE TDD		NR TDD		Software Release
Baseband 5212 Baseband 6303 Baseband 6620	Supported RBBs	Baseband 6630	Supported RBBs	
X	RBBAIR_1A	X	RBBAIR_1A	19.Q2
X	RBBAIR_2A	X	RBBAIR_1A	19.Q2



20.1.1.3

LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband

Table 770 LTE FDD + NR FDD + ESS MSMM Configurations with Mixed Mode Baseband with CPRI Sharing

Supported RBBs	From Software Version	
	Baseband 6630 ⁽¹⁾	
	LTE + NR	LTE + ESS NR + ESS LTE + NR + ESS
RBB22_1B	19.Q4	20.Q1
RBB22_1F	19.Q4	20.Q1
RBB22_1G	19.Q4	20.Q1
RBB22_1K	19.Q4	20.Q1
RBB22_1N	19.Q4	20.Q1
RBB22_2C	19.Q4	20.Q1
RBB22_2E	19.Q4	20.Q1
RBB22_2K	19.Q4	20.Q1
RBB22_2L	19.Q4	20.Q1
RBB22_2P	19.Q4	20.Q1
RBB22_2S	19.Q4	20.Q1
RBB24_1B	19.Q4	20.Q1
RBB24_2B	19.Q4	20.Q1
RBB44_1B	19.Q4	20.Q1
RBB44_1D	19.Q4	20.Q1
RBB44_1H	19.Q4	20.Q1
RBB44_1M	19.Q4	20.Q1
RBB44_2C	19.Q4	20.Q1
RBB44_2F	19.Q4	20.Q1
RBB44_2M	19.Q4	20.Q1
RBB44_2R	19.Q4	20.Q1

(1) Using DBB10_81.

20.2

Cascade Configurations for MSMM LTE + NR

This section describes supported cascade configurations for MSMM LTE + NR.

Information and rules for both LTE + NR star configuration and single mode LTE, NR cascade configuration applies.

For mixed mode LTE + NR star configurations, see [Star Configurations for MSMM LTE + NR](#) on page 932.

For single mode LTE configurations, see [Radio Configurations for LTE](#) on page 271.

For single mode NR configurations, see [Radio Configurations for NR](#) on page 479.



The following rule applies to LTE + NR cascade configurations with CPRI:

- Both nodes must use the same SW version.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



21 Radio Configurations for Multistandard Mixed Mode LTE + ESS

This section describes MSMM LTE + ESS configurations:

[Star Configurations for MSMM LTE + ESS](#) on page 939 describes MSMM LTE + ESS star configurations.

[Cascade Configurations for MSMM LTE + ESS](#) on page 941 describes radio cascade configuration rules.

21.1 Star Configurations for MSMM LTE + ESS

This section describes MSMM LTE + ESS star configurations.

21.1.1 Baseband Support for LTE + ESS MSMM

Table 771 Baseband Support for LTE FDD + ESS MSMM Configurations

DU or Baseband Node	From Software Version	
	LTE FDD	ESS
Baseband 5212	19.Q4	-
Baseband 5216	19.Q4	-
Baseband 6303	19.Q4	-
Baseband 6318	19.Q4	-
Baseband 6502	20.Q1	-
Baseband 6620	19.Q4	-
Baseband 6630	19.Q4	20.Q1
DUS 31	19.Q4	-
2 × DUS 31	19.Q4	-
3 × DUS 31	_(1)	-
DUS 41	19.Q4	-
2 × DUS 41	19.Q4	-
3 × DUS 41	_(1)	-

(1) Only supported for LTE single mode.



21.1.1.1 LTE + ESS MSMM Configurations with DU Radio Node and Baseband Radio Node

Table 772 LTE FDD + ESS MSMM Configurations with DU Radio Node and Baseband Radio Node

Software Release	LTE FDD			ESS	
	DUS 31	DUS 41	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	X	RBB11_1C	X	RBB22_2E
20.Q1	X	X	RBB11_1D	X	RBB22_2E
20.Q1	X	X	RBB22_1B	X	RBB22_1B
20.Q1	X	X	RBB22_1B	X	RBB44_1B
20.Q1	X	X	RBB22_1B	X	RBB44_2C
20.Q1	X	X	RBB22_1F	X	RBB22_1F
20.Q1	X	X	RBB22_1G	X	RBB22_1G
20.Q1	-	X	RBB22_1K	X	RBB22_1K
20.Q1	-	X	RBB22_1K	X	RBB44_1H
20.Q1	-	X	RBB22_1K	X	RBB44_2M
20.Q1	-	X	RBB22_1N	X	RBB22_1N
20.Q1	-	X	RBB22_1N	X	RBB44_1M
20.Q1	-	X	RBB22_1N	X	RBB44_2R
20.Q1	X	X	RBB22_2E	X	RBB22_2E
20.Q1	X	X	RBB24_1B	X	RBB22_1B
20.Q1	X	X	RBB24_2B	X	RBB22_1B
20.Q1	X	X	RBB44_1B	X	RBB22_1B
20.Q1	X	X	RBB44_1D	X	RBB44_1D
20.Q1	-	X	RBB44_1H	X	RBB22_1K
20.Q1	-	X	RBB44_1M	X	RBB22_1N
20.Q1	X	X	RBB44_2C	X	RBB22_1B
20.Q1	X	X	RBB44_2C	X	RBB44_2C
20.Q1	-	X	RBB44_2M	X	RBB22_1K
20.Q1	-	X	RBB44_2M	X	RBB44_2M
20.Q1	-	X	RBB44_2R	X	RBB22_1N
20.Q1	-	X	RBB44_2R	X	RBB44_2R

21.1.1.2 LTE + ESS MSMM Configurations with Two Baseband Radio Nodes

Table 773 LTE FDD + ESS MSMM Configurations with Two Baseband Radio Nodes

Software Release	LTE FDD				NR FDD	
	Baseband 5212 Baseband 6303 Baseband 6620	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	X	-	RBB11_1C	X	RBB22_2E
20.Q1	X	X	-	RBB11_1D	X	RBB22_2E
20.Q1	X	X	-	RBB22_1B	X	RBB22_1B
20.Q1	X	X	-	RBB22_1B	X	RBB44_1B



Software Release	LTE FDD				NR FDD	
	Baseband 5212 Baseband 6303 Baseband 6620	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	X	-	RBB22_1B	X	RBB44_2C
20.Q1	X	X	-	RBB22_1F	X	RBB22_1F
20.Q1	X	X	-	RBB22_1G	X	RBB22_1G
20.Q1	-	X	-	RBB22_1K	X	RBB22_1K
20.Q1	-	X	-	RBB22_1K	X	RBB44_1H
20.Q1	-	X	-	RBB22_1K	X	RBB44_2M
20.Q1	-	X	-	RBB22_1N	X	RBB22_1N
20.Q1	-	X	-	RBB22_1N	X	RBB44_1M
20.Q1	-	X	-	RBB22_1N	X	RBB44_2R
20.Q1	X	X	-	RBB22_2E	X	RBB22_2E
20.Q1	X	X	-	RBB24_1B	X	RBB22_1B
20.Q1	X	X	-	RBB24_2B	X	RBB22_1B
20.Q1	X	X	-	RBB44_1B	X	RBB22_1B
20.Q1	X	X	-	RBB44_1D	X	RBB44_1D
20.Q1	-	X	-	RBB44_1H	X	RBB22_1K
20.Q1	-	X	-	RBB44_1M	X	RBB22_1N
20.Q1	X	X	-	RBB44_2C	X	RBB22_1B
20.Q1	X	X	-	RBB44_2C	X	RBB44_2C
20.Q1	-	X	-	RBB44_2M	X	RBB22_1K
20.Q1	-	X	-	RBB44_2M	X	RBB44_2M
20.Q1	-	X	-	RBB44_2R	X	RBB22_1N
20.Q1	-	X	-	RBB44_2R	X	RBB44_2R

21.2 Cascade Configurations for MSMM LTE + ESS

This section describes supported cascade configurations for MSMM LTE + ESS.

Information and rules for both LTE + ESS star configuration and single mode LTE, ESS cascade configuration applies.

For mixed mode LTE + ESS star configurations, see [Star Configurations for MSMM LTE + ESS](#) on page 939.

For single mode LTE configurations, see [Radio Configurations for LTE](#) on page 271.

For single mode ESS configurations, see [Radio Configurations for ESS](#) on page 498.

The following rules apply to LTE + ESS cascade configurations:

- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



22 Radio Configurations for Multistandard Mixed Mode NR + ESS

This section describes MSMM NR + ESS configurations:

[Star Configurations for MSMM NR + ESS](#) on page 942 describes MSMM NR + ESS star configurations.

[Cascade Configurations for MSMM NR + ESS](#) on page 943 describes radio cascade configuration rules.

22.1 Star Configurations for MSMM NR + ESS

This section describes MSMM NR + ESS star configurations.

22.1.1 Baseband Support for NR + ESS MSMM

Table 774 Baseband Support for NR FDD + ESS MSMM Configurations

DU or Baseband Node	From Software Version	
	NR FDD	ESS
Baseband 6630	19.Q4	20.Q1

22.1.1.1 NR + ESS MSMM Configurations with Two Baseband Radio Nodes

Table 775 NR FDD + ESS MSMM Configurations with Two Baseband Radio Nodes

Software Release	NR FDD		ESS	
	Baseband 6630	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	RBB22_1B	X	RBB22_1B
20.Q1	X	RBB22_1B	X	RBB44_1B
20.Q1	X	RBB22_1B	X	RBB44_2C
20.Q1	X	RBB22_1F	X	RBB22_1F
20.Q1	X	RBB22_1G	X	RBB22_1G
20.Q1	X	RBB22_1K	X	RBB22_1K
20.Q1	X	RBB22_1K	X	RBB44_1H
20.Q1	X	RBB22_1K	X	RBB44_2M
20.Q1	X	RBB22_1N	X	RBB22_1N
20.Q1	X	RBB22_1N	X	RBB44_1M
20.Q1	X	RBB22_1N	X	RBB44_2R
20.Q1	X	RBB22_2E	X	RBB22_2E



Software Release	NR FDD		ESS	
	Baseband 6630	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	RBB44_1B	X	RBB22_1B
20.Q1	X	RBB44_1D	X	RBB44_1D
20.Q1	X	RBB44_1H	X	RBB22_1K
20.Q1	X	RBB44_1M	X	RBB22_1N
20.Q1	X	RBB44_2C	X	RBB22_1B
20.Q1	X	RBB44_2C	X	RBB44_2C
20.Q1	X	RBB44_2M	X	RBB22_1K
20.Q1	X	RBB44_2M	X	RBB44_2M
20.Q1	X	RBB44_2R	X	RBB22_1N
20.Q1	X	RBB44_2R	X	RBB44_2R

22.2 Cascade Configurations for MSMM NR + ESS

This section describes supported cascade configurations for MSMM NR + ESS.

Information and rules for both NR + ESS star configuration and single mode NR, ESS cascade configuration applies.

For mixed mode NR + ESS star configurations, see [Star Configurations for MSMM NR + ESS](#) on page 942.

For single mode NR configurations, see [Radio Configurations for NR](#) on page 479.

For single mode ESS configurations, see [Radio Configurations for ESS](#) on page 498.

The following rules apply to NR + ESS cascade configurations:

- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

23 Radio Configurations for Multistandard Mixed Mode WCDMA + GSM + LTE

This section describes MSMM WCDMA + GSM + LTE configurations:

[Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE](#) on page 944 describes MSMM WCDMA + GSM + LTE star configurations.

23.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE

This section describes MSMM WCDMA + GSM + LTE configurations:

The following rules apply to MSMM WCDMA + GSM + LTE configurations:

- Radio units can work in single mode WCDMA, single mode GSM, single mode LTE FDD, single mode LTE TDD, mixed mode WCDMA + GSM, mixed mode LTE + GSM, mixed mode WCDMA + LTE, or mixed mode WCDMA + GSM + LTE all using shared CPRI
- All radio units supported by Baseband 5216, Baseband 6318, and Baseband 6630 in single mode GSM, WCDMA, LTE FDD, or LTE TDD configurations are supported by mixed mode Baseband 5216, Baseband 6318, and Baseband 6630.
- Radio units working in single mode or mixed mode configurations can be connected directly to any available Baseband port, through cascade chain or through Baseband R503.
- Possible single mode configurations on mixed mode Baseband 5216, Baseband 6318, and Baseband 6630:
 - For supported GSM configurations, see [Supported Radio Configurations for GSM](#) on page 118. For supported radios and carrier allocation, see [Carrier Allocation for GSM](#) on page 136.
 - For supported WCDMA configurations, see [WCDMA Configurations for Baseband, DU, and RBS 6501](#) on page 199. For supported radios and carrier allocation, see [Carrier Allocation for WCDMA](#) on page 218.
 - For supported LTE configurations, see [LTE FDD and TDD Configurations](#) on page 300. For supported radios and carrier allocation, see [Carrier Allocation for LTE](#) on page 331.
- Possible mixed mode configurations with shared CPRI on one mixed mode Baseband 5216, Baseband 6318, and Baseband 6630:



- For supported WCDMA + GSM configurations, see [Star Configurations for MSMM WCDMA + GSM](#) on page 622. For supported radios and carrier allocation, see [Carrier Allocation for Star Configurations WCDMA + GSM](#) on page 632.
 - For supported LTE + GSM configurations, see [Star Configurations for MSMM LTE + GSM](#) on page 702. For supported radios and carrier allocation, see [Carrier Allocation for Star Configurations LTE + GSM](#) on page 712.
 - For supported WCDMA + LTE configurations, see [Star Configurations for MSMM WCDMA + LTE](#) on page 827. For supported radios and carrier allocation, see [Carrier Allocation for Star Configurations WCDMA + LTE](#) on page 839.
 - For supported WCDMA + GSM + LTE configurations, see [Supported RBBs and Radio Units for MSMM WCDMA + GSM + LTE with Shared CPRI](#) on page 949.
- Possible mixed mode configurations with separate CPRI using additional DU or Baseband:
- For supported WCDMA + GSM configurations, supported radios, and carrier allocation, see [Star Configurations for MSMM WCDMA + GSM](#) on page 622.
 - For supported LTE + GSM configurations, supported radios, and carrier allocation, see [Star Configurations for MSMM LTE + GSM](#) on page 702.
 - For supported WCDMA + LTE configurations, supported radios, and carrier allocation, see [Star Configurations for MSMM WCDMA + LTE](#) on page 827.
 - For supported WCDMA + GSM + LTE configurations and supported radios, see [Supported RBBs and Radio Units for MSMM WCDMA + GSM + LTE with Separate CPRI](#) on page 952.
- Baseband R503 is adding one cascade level
- Baseband capacity applies.
- CPRI capacity applies, see document *CPRI Capacity*.

Note: Radios that support all three standards can use up to two standards per TX branch, configured using the rfBranchTxRef attribute. This restriction does not apply to the RX branches.



23.1.1 WCDMA + GSM + LTE MSMM Configurations with One Mixed Mode Baseband

Table 776 WCDMA + GSM + LTE MSMM Configurations with One Baseband

Supported RBBs	From SW Release Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630
RBB11_1C	17.Q4
RBB11_1D	17.Q4
RBB11_2A	17.Q4
RBB11_2B	17.Q4
RBB20_1A	17.Q3
RBB22_1B	17.Q3
RBB22_1F	17.Q3
RBB22_1G	17.Q3
RBB22_1P	18.Q4
RBB22_1Q	18.Q4
RBB22_2C	17.Q3
RBB22_2E	17.Q3
RBB22_2K	17.Q3
RBB22_2L	17.Q3
RBB22_2T	18.Q4
RBB22_2U	18.Q4
RBB24_1B	17.Q3
RBB24_1C	18.Q1
RBB24_2B	17.Q3
RBB24_2D	18.Q1
RBB42_1B	17.Q3
RBB42_2D	17.Q3
RBB44_1B	17.Q3
RBB44_1D	17.Q3
RBB44_2C	17.Q3
RBB44_2F	17.Q3



23.1.2 WCDMA + GSM + LTE MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One LTE Node

Table 777 WCDMA + GSM + LTE MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One LTE Node

Supported RBB			From SW Release
WCDMA + GSM	LTE		
Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 (min 18.Q2) Baseband 6620 Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 (min 18.Q2) Baseband 6620 Baseband 6630 DUS 20 DUS 31 DUS 41	DUL 20	
RBB11_1C	RBB11_1C	-	17.Q4
RBB11_1D	RBB11_1C	-	17.Q4
RBB20_1A	RBB20_1A	RBB20_1A	17.Q3
RBB22_1B	RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB24_1B	RBB24_1B	17.Q3
RBB22_1B	RBB24_2B	RBB24_2B	17.Q3
RBB22_1B	RBB44_1B	RBB44_1B	17.Q3
RBB22_1B	RBB44_2C	RBB44_2C	17.Q3
RBB22_1F	RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	RBB22_1G	17.Q3
RBB22_1P	RBB22_1P	-	18.Q4
RBB22_1Q	RBB22_1Q	-	18.Q4
RBB22_2E	RBB22_2E	RBB22_2E	17.Q3
RBB24_1B	RBB22_1B	RBB22_1B	17.Q3
RBB24_1C	RBB24_1C	-	18.Q1
RBB24_2B	RBB22_1B	RBB22_1B	17.Q3
RBB24_2B	RBB24_2B	RBB24_2B	17.Q3
RBB42_2D	RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	RBB22_1B	17.Q3
RBB44_1D	RBB44_1D	RBB44_1D	17.Q3
RBB44_2C	RBB22_1B	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	RBB44_2C	17.Q3



23.1.3 WCDMA + GSM + LTE MSMM Configurations with One Mixed Mode Baseband for LTE + GSM Node and One WCDMA Node

Table 778 WCDMA + GSM + LTE MSMM Configurations with One Mixed Mode Baseband for LTE + GSM Node and One WCDMA Node

Supported RBB			From SW Release
LTE + GSM	WCDMA		
Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 (min 18.Q2) Baseband 6620 Baseband 6630	DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41	
RBB11_1C	RBB11_1C	-	17.Q4
RBB11_1C	RBB11_1C	-	17.Q4
RBB20_1A	RBB20_1A	-	17.Q3
RBB22_1B	RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB24_1B	-	17.Q3
RBB22_1B	RBB24_2B	RBB24_2B	17.Q3
RBB22_1B	RBB44_1B	RBB44_1B	17.Q3
RBB22_1B	RBB44_2C	RBB44_2C	17.Q3
RBB22_1F	RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	RBB22_1G	17.Q3
RBB22_1P	RBB22_1P	RBB 12 1E	18.Q4
RBB22_1Q	RBB22_1Q	RBB 12 1F	18.Q4
RBB22_2E	RBB22_2E	RBB22_2E	17.Q3
RBB24_1B	RBB22_1B	RBB22_1B	17.Q3
RBB24_1C	RBB24_1C	RBB24_1C	18.Q1
RBB24_2B	RBB22_1B	RBB22_1B	17.Q3
RBB24_2B	RBB24_2B	RBB24_2B	17.Q3
RBB42_2D	RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	RBB22_1B	17.Q3
RBB44_1D	-	RBB24_1C	18.Q4
RBB44_1D	RBB44_1D	RBB44_1D	17.Q3
RBB44_2C	RBB22_1B	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	RBB44_2C	17.Q3



23.1.4 WCDMA + GSM + LTE MSMM Configurations with One Mixed Mode Baseband for WCDMA + LTE Node and One GSM Node

Table 779 WCDMA + GSM + LTE MSMM Configurations with One Mixed Mode Baseband for WCDMA + LTE Node and One GSM Node

Supported RBB			From SW Release
WCDMA + LTE	GSM		
Baseband 5216 Baseband 6318 (min 18.Q2) Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 (min 18.Q2) Baseband 6620 Baseband 6630	DUG 20	
RBB11_1C	RBB11_1C	-	17.Q4
RBB11_1D	RBB11_1D	-	17.Q4
RBB20_1A	RBB20_1A	-	17.Q3
RBB22_1B	RBB22_1B	RBB22_1B	17.Q3
RBB22_1B	RBB44_1B	-	17.Q3
RBB22_1B	RBB44_2C	RBB44_2C	17.Q3
RBB22_1F	-	RBB22_1B	17.Q3
RBB22_1F	RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	RBB22_1G	17.Q3
RBB22_1P	RBB22_1P	RBB 12 1E	18.Q4
RBB22_1Q	RBB22_1Q	RBB 12 1F	18.Q4
RBB22_2E	RBB22_2E	-	17.Q3
RBB24_1B	RBB22_1B	RBB22_1B	17.Q3
RBB24_1C	RBB24_1C	RBB24_1C	18.Q1
RBB24_2B	RBB22_1B	RBB22_1B	17.Q3
RBB42_2D	RBB42_2D	RBB42_2D	17.Q3
RBB44_1B	RBB22_1B	RBB22_1B	17.Q3
RBB44_1D	-	RBB24_1C	19.Q4
RBB44_2C	RBB22_1B	RBB22_1B	17.Q3
RBB44_2C	RBB44_2C	RBB44_2C	17.Q3

23.1.5 Supported RBBs and Radio Units for MSMM WCDMA + GSM + LTE with Shared CPRI

Table 780 Supported RBBs and Radio Units for MSMM WCDMA + GSM + LTE with Shared CPRI

RBB ⁽¹⁾	From SW Release	Radio Type ⁽²⁾	
		Radio 1 in RBB	Radio 2 in RBB
RBB20_1A	17.Q3	RRUS 12 RRUS 13	-



RBB ⁽¹⁾	From SW Release	Radio Type ⁽²⁾	
		Radio 1 in RBB	Radio 2 in RBB
RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12 RRUS 13	-
RBB22_1B	18.Q1	Radio 2217	-
RBB22_1B	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_1F	17.Q3	RRUS 32	-
RBB22_1F	17.Q4	Radio 4415	-
RBB22_1F	18.Q1	Radio 2468	-
RBB22_1G	17.Q3	RRUS 32	-
RBB22_1G	17.Q4	Radio 4415	-
RBB22_2C	17.Q3	Radio 2212 Radio 2219 RRUS 12 RRUS 13	-
RBB22_2C	18.Q1	Radio 2217	-
RBB22_2C	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_2E	17.Q2	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2219 RRUS 12
		Radio 2212 RRUS 12 RRUS 13	Radio 2212 RRUS 12 RRUS 13
RBB22_2E	18.Q1	Radio 2212 Radio 2217 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB22_2E	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_2K	17.Q3	RRUS 32	-
RBB22_2K	17.Q4	Radio 4415	-
RBB22_2K	18.Q1	Radio 2468	-
RBB22_2L	17.Q3	RRUS 32	-
RBB22_2L	17.Q4	Radio 4415	-
RBB24_1B	17.Q3	Radio 2212	Radio 0208
		Radio 2219 RRUS 12	Radio 0208 RRUS A2



RBB ⁽¹⁾	From SW Release	Radio Type ⁽²⁾	
		Radio 1 in RBB	Radio 2 in RBB
RBB24_1B	17.Q4	Radio 2212	RRUS A2
RBB24_1C	18.Q1	Radio 2468	-
RBB24_2B	17.Q3	Radio 2212	Radio 0208
		Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB24_2B	17.Q4	Radio 2212	RRUS A2
RBB24_2D	18.Q1	Radio 2468	-
RBB42_1B	17.Q3	RRUS 12 RRUS 13	RRUS 12 RRUS 13
RBB42_2D	17.Q3	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
		Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_1B ⁽³⁾	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
		Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_1B	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB44_1B	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB44_1D	17.Q3	AIR 32 RRUS 32	-
RBB44_1D	17.Q4	Radio 4415	-
RBB44_1D	19.Q2	AIR 4455	-
RBB44_2C ⁽³⁾	17.Q3	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
		Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_2C ⁽³⁾	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12



RBB ⁽¹⁾	From SW Release	Radio Type ⁽²⁾	
		Radio 1 in RBB	Radio 2 in RBB
RBB44_2F	17.Q3	AIR 32 RRUS 32	-
RBB44_2F	19.Q2	AIR 4455	-
RBB44_2F	17.Q4	Radio 4415	-

(1) From SW 17.Q2: For all RBBs with radios that has two TX branches, each GSM carrier can be configured with one or two TX branches on the same radio.

Supported with Baseband only.

(2) In RBBs with multiple radios, the combined radios must be operating on the same band and at least one radio must support mixed mode with three standards. See [Supported Radio Frequencies](#) on page 8 for valid combinations.

(3) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded

23.1.6

Supported RBBs and Radio Units for MSMM WCDMA + GSM + LTE with Separate CPRI

Table 781 Supported RBBs and Radio Units for MSMM WCDMA + GSM and LTE with separate CPRI

RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA + GSM ⁽³⁾	LTE		Radio 1 in RBB	Radio 2 in RBB
RBB20_1A	RBB20_1A	17.Q3	RRUS 12 RRUS 13	-
RBB22_1B	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12 RRUS 13	-
RBB22_1B	RBB24_1B	17.Q3	Radio 2212	Radio 0208
RBB22_1B	RBB24_1B	17.Q4	Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB22_1B	RBB24_1B	17.Q4	Radio 2212	RRUS A2
RBB22_1B	RBB24_2B	17.Q3	Radio 2212	Radio 0208
RBB22_1B	RBB24_2B	17.Q4	Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB22_1B	RBB24_2B	17.Q4	Radio 2212	RRUS A2
RBB22_1B	RBB44_1B ⁽⁴⁾	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
RBB22_1B	RBB44_1B ⁽⁴⁾	17.Q3	Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13



RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA + GSM ⁽³⁾	LTE		Radio 1 in RBB	Radio 2 in RBB
RBB22_1B	RBB44_1B ⁽⁴⁾	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB22_1B ⁽⁵⁾⁽⁶⁾	RBB44_1B	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_1B	RBB44_2C ⁽⁴⁾	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB22_1B	RBB44_2C ⁽⁴⁾	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB22_1B ⁽⁵⁾⁽⁶⁾	RBB44_2C	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_1F	RBB22_1F	17.Q3	Radio 4415 RRUS 32	-
RBB22_1F	RBB22_1F	18.Q1	Radio 2468	-
RBB22_1G	RBB22_1G	17.Q3	Radio 4415 RRUS 32	-
RBB22_2C ⁽⁵⁾	RBB22_2C ⁽⁵⁾	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_2E	RBB22_2E	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2219 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB22_2E	RBB22_2E	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB24_1B	RBB22_1B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB24_1B	RBB22_1B	17.Q4	Radio 2212	RRUS A2
RBB24_1C	RBB24_1C	18.Q1	Radio 2468	-



RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA + GSM ⁽³⁾	LTE		Radio 1 in RBB	Radio 2 in RBB
RBB24_2B	RBB22_1B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB24_2B	RBB22_1B	17.Q4	Radio 2212	RRUS A2
RBB24_2B	RBB24_2B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB42_2D	RBB42_2D	17.Q3	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_1B	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_1B	RBB22_1B	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB44_1D	RBB44_1D	17.Q3	AIR 32 Radio 4415 RRUS 32	-
RBB44_1D	RBB44_1D	19.Q2	AIR 4455	-
RBB44_2C	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_2C ⁽⁵⁾⁽⁶⁾	RBB22_1B	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB44_2C	RBB44_2C	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13



- (1) From SW 17.Q3: For all RBBs with radios that has two TX branches, each GSM carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.
- (2) In RBBs with multiple radios, the combined radios must be operating on the same band and at least one radio must support mixed mode with three standards. See [Supported Radio Frequencies](#) on page 8 for valid combinations.
- (3) Using shared CPRI.
- (4) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded
- (5) Each GSM carrier can be configured with one or two TX branches on the same radio.
- (6) Supported only with Baseband.

Table 782 Supported RBBs and Radio Units for MSMM WCDMA and GSM + LTE with separate CPRI

RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA	GSM + LTE ⁽³⁾		Radio 1 in RBB	Radio 2 in RBB
RBB20_1A	RBB20_1A	17.Q3	RRUS 12 RRUS 13	-
RBB22_1B	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12 RRUS 13	-
RBB22_1B	RBB24_1B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB22_1B	RBB24_1B	17.Q4	Radio 2212	RRUS A2
RBB22_1B	RBB24_2B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB22_1B	RBB24_2B	17.Q4	Radio 2212	RRUS A2
RBB22_1B	RBB44_1B ⁽⁴⁾	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB22_1B	RBB44_1B ⁽⁴⁾	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB22_1B	RBB44_2C ⁽⁴⁾	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13



RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA	GSM + LTE ⁽³⁾		Radio 1 in RBB	Radio 2 in RBB
RBB22_1B ⁽⁵⁾⁽⁶⁾	RBB44_2C	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_1F	RBB22_1F	17.Q3	Radio 4415 RRUS 32	-
RBB22_1F	RBB22_1F	18.Q1	Radio 2468	-
RBB22_1G	RBB22_1G	17.Q3	Radio 4415 RRUS 32	-
RBB22_2E	RBB22_2E	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2219 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB24_1B	RBB22_1B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB24_1B	RBB22_1B	17.Q4	Radio 2212	RRUS A2
RBB24_1C	RBB24_1C	18.Q1	Radio 2468	-
RBB24_2B	RBB22_1B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB24_2B	RBB22_1B	17.Q4	Radio 2212	RRUS A2
RBB24_2B	RBB24_2B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB42_2D	RBB42_2D	17.Q3	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_1B	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_1B	RBB22_1B	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12



RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA	GSM + LTE ⁽³⁾		Radio 1 in RBB	Radio 2 in RBB
RBB44_1D	RBB44_1D	17.Q3	AIR 32 Radio 4415 RRUS 32	-
RBB44_1D	RBB44_1D	19.Q2	AIR 4455	-
RBB44_2C	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_2C	RBB22_1B	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB44_2C ⁽⁵⁾⁽⁶⁾	RBB22_1B	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB44_2C	RBB44_2C	17.Q3	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13

- (1) From SW 17.Q3: For all RBBs with radios that has two TX branches, each GSM carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.
- (2) In RBBs with multiple radios, the combined radios must be operating on the same band and at least one radio must support mixed mode with three standards. See [Supported Radio Frequencies](#) on page 8 for valid combinations.
- (3) Using shared CPRI.
- (4) The following applies to LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units:
L17.Q3 and earlier: not supported
From L17.Q3: supported but performance might be degraded
- (5) Each GSM carrier can be configured with one or two TX branches on the same radio.
- (6) Supported only with Baseband.



Table 783 Supported RBBs and Radio Units for MSMM WCDMA and GSM + LTE with separate CPRI

RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA + LTE ⁽³⁾	GSM		Radio 1 in RBB	Radio 2 in RBB
RBB20_1A	RBB20_1A	17.Q3	RRUS 12 RRUS 13	-
RBB22_1B	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12 RRUS 13	-
RBB22_1B	RBB44_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB22_1B	RBB44_1B	18.Q1	Radio 2212 Radio 2217 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB22_1B	RBB44_2C	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2219 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB22_1B ⁽⁴⁾⁽⁵⁾	RBB44_2C	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB22_1F	RBB22_1B ⁽⁶⁾	18.Q1	Radio 2468	-
RBB22_1F	RBB22_1F	17.Q3	Radio 4415 RRUS 32	-
RBB22_1F	RBB22_1F ⁽⁷⁾	18.Q1	Radio 2468	-
RBB22_1G	RBB22_1G	17.Q3	Radio 4415 RRUS 32	-
RBB22_2E	RBB22_2E	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2219 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB24_1B	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 0208 Radio 0208 RRUS A2
RBB24_1B	RBB22_1B	17.Q4	Radio 2212	RRUS A2
RBB24_1C	RBB24_1C	18.Q1	Radio 2468	-



RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA + LTE ⁽³⁾	GSM		Radio 1 in RBB	Radio 2 in RBB
RBB24_2B	RBB22_1B	17.Q3	Radio 2212	Radio 0208
			Radio 2219 RRUS 12	Radio 0208 RRUS A2
RBB24_2B	RBB22_1B	17.Q4	Radio 2212	RRUS A2
RBB42_2D	RBB42_2D	17.Q3	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			RRUS 13	RRUS 13
RBB44_1B ⁽⁸⁾	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_1B	RBB22_1B	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB44_1D	RBB44_1D	17.Q3	AIR 32 Radio 4415 RRUS 32	-
RBB44_1D	RBB44_1D	19.Q2	AIR 4455	-
RBB44_2C ⁽⁸⁾	RBB22_1B	17.Q3	Radio 2212 Radio 2219 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13
RBB44_2C ⁽⁸⁾	RBB22_1B	18.Q1	Radio 2217	Radio 2212 Radio 2217 Radio 2219 RRUS 12
RBB44_2C ⁽⁴⁾⁽⁵⁾	RBB22_1B	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12
RBB44_2C	RBB44_2C	17.Q3	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12	Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12
			Radio 2219 RRUS 12 RRUS 13	Radio 2219 RRUS 12 RRUS 13



RBB ⁽¹⁾		From SW Release	Radio Type ⁽²⁾	
WCDMA + LTE ⁽³⁾	GSM		Radio 1 in RBB	Radio 2 in RBB
RBB44_2C ⁽⁴⁾⁽⁵⁾	RBB44_2C	18.Q4	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12

- (1) From SW 17.Q3: For all RBBs with radios that has two TX branches, each GSM carrier can be configured with one or two TX branches on the same radio. Supported with Baseband only.
- (2) In RBBs with multiple radios, the combined radios must be operating on the same band and at least one radio must support mixed mode with three standards. See [Supported Radio Frequencies](#) on page 8 for valid combinations.
- (3) Using shared CPRI.
- (4) Each GSM carrier can be configured with one or two TX branches on the same radio.
- (5) Supported only with Baseband.
- (6) Supported with DUG only.
- (7) Not supported with DUG.
- (8) The following applies to LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units:
L17.Q3 and earlier: not supported

23.2 Cascade Configurations for MSMM WCDMA + GSM + LTE

This section describes supported cascade configurations for MSMM WCDMA + GSM + LTE.

For mixed mode WCDMA + GSM + LTE configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE](#) on page 944.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



24 Radio Configurations for Multistandard Mixed Mode WCDMA + GSM + NR

This section describes MSMM WCDMA + GSM + NR configurations:

[Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + NR](#) on page 961 describes MSMM WCDMA + GSM + NR star configurations.

24.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + NR

This section describes MSMM WCDMA + GSM + NR configurations.

24.1.1 WCDMA + GSM + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One NR Node

Table 784 WCDMA + GSM + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One NR Node

From Software Release	WCDMA + GSM	NR
	Baseband 5212 (G+W) Baseband 5216 (G+W or G+W+L) Baseband 6303 (G+W) Baseband 6318 (G+W or G+W+L) Baseband 6630 (G+W or G+W+L)	Baseband 6630 (NR or L+NR)
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_1C	RBB24_1C
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C



24.2 Cascade Configurations for MSMM WCDMA + GSM + NR

This section describes supported cascade configurations for MSMM WCDMA + GSM + NR.

For mixed mode WCDMA + GSM + NR configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + NR](#) on page 961.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



25 Radio Configurations for Multistandard Mixed Mode WCDMA + GSM + ESS

This section describes MSMM WCDMA + GSM + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + ESS](#) on page 963 describes MSMM WCDMA + GSM + ESS star configurations.

25.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + ESS

This section describes MSMM WCDMA + GSM + ESS configurations.

Table 785 WCDMA + GSM + ESS configurations with One Mixed Mode Baseband + One Baseband or DU

Mixed Mode Baseband			DU or Baseband		
Standard Used for Triple Standard Mixed Mode	Baseband	Mixed Mode Baseband Configuration	Standard Used for Triple Standard Mixed Mode	DU or Baseband	Single standard DU or Baseband or Mixed Mode Baseband Configuration
G+W	Baseband 5212 Baseband 6303 Baseband 6620	G+W	ESS	Baseband 6630	L+NR
	Baseband 5216 Baseband 6318 Baseband 6630	G+W G+W+L			

25.1.1 WCDMA + GSM + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One NR Node

Table 786 WCDMA + GSM + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One ESS Node

From Software Release	WCDMA + GSM	ESS
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B



From Software Release	WCDMA + GSM	ESS
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

25.2 Cascade Configurations for MSMM WCDMA + GSM + ESS

This section describes supported cascade configurations for MSMM WCDMA + GSM + ESS.

For mixed mode WCDMA + GSM + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + ESS](#) on page 963.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



26 Radio Configurations for Multistandard Mixed Mode GSM + LTE + NR

This section describes MSMM GSM + LTE + NR configurations:

[Configurations for Mixed Mode Baseband with MSMM GSM + LTE + NR](#) on page 965 describes MSMM GSM + LTE + NR star configurations.

26.1 Configurations for Mixed Mode Baseband with MSMM GSM + LTE + NR

This section describes MSMM GSM + LTE + NR configurations.

26.1.1 GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for GSM + LTE Node and One NR Node

Table 787 GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for GSM + LTE Node and One NR Node

Supported RBB		From Software Version
GSM + LTE	NR	
Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630	
RBB11_1C	RBB22_2E	20.Q1
RBB11_1D	RBB22_2E	20.Q1
RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB44_1B	20.Q1
RBB22_1B	RBB44_2C	20.Q1
RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	20.Q1
RBB22_2E	RBB22_2E	20.Q1
RBB24_1B	RBB22_1B	20.Q1
RBB24_1C	RBB24_1C	20.Q1
RBB24_2B	RBB22_1B	20.Q1
RBB44_1B	RBB22_1B	20.Q1
RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	20.Q1



26.1.2 GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for LTE + NR Node and One GSM Node

Table 788 GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for LTE + NR Node and One GSM Node

Supported RBB			From SW Release
LTE + NR	GSM		
Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	DUG 20	
RBB22_1B	RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB44_1B	-	20.Q1
RBB22_1B	RBB44_2C	RBB44_2C	20.Q1
RBB22_1F	-	RBB22_1B	20.Q1
RBB22_1F	RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	RBB22_1G	20.Q1
RBB22_2E	RBB11_1C	-	20.Q1
RBB22_2E	RBB11_1D	-	20.Q1
RBB22_2E	RBB22_2E	-	20.Q1
RBB24_1B	RBB22_1B	RBB22_1B	20.Q1
RBB24_1C	-	RBB22_1B	20.Q1
RBB24_1C	RBB24_1C	RBB24_1C	20.Q1
RBB24_2B	RBB22_1B	RBB22_1B	20.Q1
RBB44_1B	RBB22_1B	RBB22_1B	20.Q1
RBB44_1D	RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	RBB44_2C	20.Q1

26.2 Cascade Configurations for MSMM GSM + LTE + NR

This section describes supported cascade configurations for MSMM GSM + LTE + NR.

For mixed mode GSM + LTE + NR configurations, see [Configurations for Mixed Mode Baseband with MSMM GSM + LTE + NR](#) on page 965.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



27 Radio Configurations for Multistandard Mixed Mode GSM + LTE + ESS

This section describes MSMM GSM + LTE + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM GSM + LTE + ESS](#) on page 967 describes MSMM GSM + LTE + ESS star configurations.

27.1 Configurations for Mixed Mode Baseband with MSMM GSM + LTE + ESS

This section describes MSMM GSM + LTE + ESS configurations.

Table 789 GSM + LTE + ESS configurations with One Mixed Mode Baseband + One Baseband or DU

Mixed Mode Baseband			DU or Baseband		
Standard Used for Triple Standard Mixed Mode	Baseband	Mixed Mode Baseband Configuration	Standard Used for Triple Standard Mixed Mode	DU or Baseband	Single standard DU or Baseband or Mixed Mode Baseband Configuration
G+L	Baseband 5216 Baseband 6318 Baseband 6630	G+L G+W+L	ESS	Baseband 6630	L+NR
L+ESS	Baseband 6630	L+NR	G	Baseband 5212 Baseband 6303 Baseband 6620	G G+W
				Baseband 5216 Baseband 6318 Baseband 6630	G G+W G+L G+W+L
				DUG 20	G

27.1.1 GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for GSM + LTE Node and One NR Node

Table 790 GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for GSM + LTE Node and One ESS Node

From Software Version	Supported RBB	
	GSM + LTE	ESS
	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630
20.Q1	RBB11_1C	RBB22_2E



From Software Version	Supported RBB	
	GSM + LTE	ESS
	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

27.1.2 GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + ESS Node and One GSM Node

Table 791 GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + ESS Node and One GSM Node

From SW Release	Supported RBB		
	LTE + ESS	GSM	
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	DUG 20
20.Q1	RBB22_1B	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B	-
20.Q1	RBB22_1B	RBB44_2C	RBB44_2C
20.Q1	RBB22_2E	RBB11_1C	-
20.Q1	RBB22_2E	RBB11_1D	-
20.Q1	RBB22_2E	RBB22_2E	-
20.Q1	RBB24_1B	RBB22_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C	RBB44_2C

27.2 Cascade Configurations for MSMM GSM + LTE + ESS

This section describes supported cascade configurations for MSMM GSM + LTE + ESS.



For mixed mode GSM + LTE + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM GSM + LTE + ESS](#) on page 967.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



28 Radio Configurations for Multistandard Mixed Mode GSM + NR + ESS

This section describes MSMM GSM + NR + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM GSM + NR + ESS](#) on page 970 describes MSMM GSM + NR + ESS star configurations.

28.1 Configurations for Mixed Mode Baseband with MSMM GSM + NR + ESS

This section describes MSMM GSM + NR + ESS configurations.

Table 792 GSM + NR + ESS configurations with One Mixed Mode Baseband + One Baseband or DU

Mixed Mode Baseband			DU or Baseband		
Standard Used for Triple Standard Mixed Mode	Baseband	Mixed Mode Baseband Configuration	Standard Used for Triple Standard Mixed Mode	DU or Baseband	Single standard DU or Baseband or Mixed Mode Baseband Configuration
NR + ESS	Baseband 6630	L+NR	G	Baseband 5212 Baseband 6303 Baseband 6620	G G+W
				Baseband 5216 Baseband 6318 Baseband 6630	G G+W G+L G+W+L
				DUG 20	G

28.1.1 GSM + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One GSM Node

Table 793 GSM + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One GSM Node

From SW Release	Supported RBB		
	NR + ESS	GSM	
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	DUG 20
20.Q1	RBB22_1B	RBB22_1B	RBB22_1B



From SW Release	Supported RBB		
	NR + ESS	GSM	
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	DUG 20
20.Q1	RBB22_1B	RBB44_1B	-
20.Q1	RBB22_1B	RBB44_2C	RBB44_2C
20.Q1	RBB22_2E	RBB11_1C	-
20.Q1	RBB22_2E	RBB11_1D	-
20.Q1	RBB22_2E	RBB22_2E	-
20.Q1	RBB44_1B	RBB22_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C	RBB44_2C

28.2 Cascade Configurations for MSMM GSM + NR + ESS

This section describes supported cascade configurations for MSMM GSM + NR + ESS.

For mixed mode GSM + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM GSM + NR + ESS](#) on page 970.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



29 Radio Configurations for Multistandard Mixed Mode WCDMA + LTE + NR

This section describes MSMM WCDMA + LTE + NR configurations:

29.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + LTE + NR

This section describes MSMM WCDMA + LTE + NR configurations.

29.1.1 WCDMA + LTE + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + LTE Node and One NR Node

Table 794 WCDMA + LTE + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + LTE Node and One NR Node

Supported RBB		From Software Version
WCDMA + LTE	NR	
Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630	
RBB11_1C	RBB22_2E	20.Q1
RBB11_1D	RBB22_2E	20.Q1
RBB22_1B	RBB22_1B	20.Q1
RBB22_1B	RBB44_1B	20.Q1
RBB22_1B	RBB44_2C	20.Q1
RBB22_1F	RBB22_1F	20.Q1
RBB22_1G	RBB22_1G	20.Q1
RBB22_2E	RBB22_2E	20.Q1
RBB24_1B	RBB22_1B	20.Q1
RBB24_1C	RBB24_1C	20.Q1
RBB24_2B	RBB22_1B	20.Q1
RBB44_1B	RBB22_1B	20.Q1
RBB44_1D	RBB44_1D	20.Q1
RBB44_2C	RBB22_1B	20.Q1
RBB44_2C	RBB44_2C	20.Q1



29.1.2 WCDMA + LTE + NR MSMM Configurations with One Mixed Mode Baseband for LTE + NR Node and One WCDMA Node

Table 795 WCDMA + LTE + NR MSMM Configurations with One Mixed Mode Baseband for LTE + NR Node and One WCDMA Node

From Software Release	Supported RBB			
	LTE + NR	WCDMA		
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41
20.Q1	RBB22_1B	RBB22_1B	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB24_1B	-	-
20.Q1	RBB22_1B	RBB24_2B	-	RBB24_2B
20.Q1	RBB22_1B	RBB44_1B	RBB44_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C	RBB44_2C	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F	-	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G	-	RBB22_1G
20.Q1	RBB22_2E	RBB11_1C	RBB11_1C	-
20.Q1	RBB22_2E	RBB11_1D	RBB11_1D	-
20.Q1	RBB22_2E	RBB22_2E	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB24_1C	RBB24_1C	-	RBB24_1C
20.Q1	RBB24_2B	RBB22_1B	-	RBB22_1B
20.Q1	RBB24_2B	RBB24_2B	-	RBB24_2B
20.Q1	RBB44_1B	RBB22_1B	RBB22_1B	RBB22_1B
-	RBB44_1D	-	-	RBB24_1C
20.Q1	RBB44_1D	RBB44_1D	-	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B	RBB22_1B	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C	RBB44_2C	RBB44_2C

29.2 Cascade Configurations for MSMM WCDMA + LTE + NR

This section describes supported cascade configurations for MSMM WCDMA + LTE + NR.

For mixed mode WCDMA + LTE + NR configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + LTE + NR](#) on page 972.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



30 Radio Configurations for Multistandard Mixed Mode WCDMA + LTE + ESS

This section describes MSMM WCDMA + LTE + ESS configurations:

30.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + LTE + ESS

This section describes MSMM WCDMA + LTE + ESS configurations.

Table 796 WCDMA + LTE + ESS Configurations with One Mixed Mode Baseband + One Baseband or DU

Mixed Mode Baseband			DU or Baseband		
Standard Used for Triple Standard Mixed Mode	Baseband	Mixed Mode Baseband Configuration	Standard Used for Triple Standard Mixed Mode	DU or Baseband	Single Standard DU or Baseband or Mixed Mode Baseband Configuration
L+ESS	Baseband 6630	L+NR	W	Baseband 5212 Baseband 6303 Baseband 6620	W G+W
				Baseband 5216 Baseband 6318 Baseband 6630	W G+W W+L G+W+L
				Baseband 6502 DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41	W



30.1.1 WCDMA + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + ESS Node and One WCDMA Node

Table 797 WCDMA + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + ESS Node and One WCDMA Node

From Software Release	Supported RBB			
	LTE + ESS	WCDMA		
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41
20.Q1	RBB22_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB22_1B	RBB24_1B	-	-
20.Q1	RBB22_1B	RBB24_2B	-	RBB24_2B
20.Q1	RBB22_1B	RBB44_1B	-	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C	-	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F	-	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G	-	RBB22_1G
20.Q1	RBB22_2E	RBB11_1C	-	-
20.Q1	RBB22_2E	RBB11_1D	-	-
20.Q1	RBB22_2E	RBB22_2E	-	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B	-	RBB22_1B
20.Q1	RBB24_2B	RBB24_2B	-	RBB24_2B
20.Q1	RBB44_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D	-	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B	-	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C	-	RBB44_2C

30.2 Cascade Configurations for MSMM WCDMA + LTE + ESS

This section describes supported cascade configurations for MSMM WCDMA + LTE + ESS.

For mixed mode WCDMA + LTE + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + LTE + ESS](#) on page 974.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



31 Radio Configurations for Multistandard Mixed Mode WCDMA + NR + ESS

This section describes MSMM WCDMA + NR + ESS configurations:

31.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + NR + ESS

This section describes MSMM WCDMA + NR + ESS configurations.

Table 798 WCDMA + NR + ESS configurations with One Mixed Mode Baseband + One Baseband or DU

Mixed Mode Baseband			DU or Baseband		
Standard Used for Triple Standard Mixed Mode	Baseband	Mixed Mode Baseband Configuration	Standard Used for Triple Standard Mixed Mode	DU or Baseband	Single Standard DU or Baseband or Mixed Mode Baseband Configuration
NR+ESS	Baseband 6630	L+NR	W	Baseband 5212 Baseband 6303 Baseband 6620	W G+W
				Baseband 5216 Baseband 6318 Baseband 6630	W G+W W+L G+W+L
				Baseband 6502 DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41	W



31.1.1 WCDMA + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One WCDMA Node

Table 799 WCDMA + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One WCDMA Node

From Software Release	Supported RBB			
	NR + ESS	WCDMA		
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41
20.Q1	RBB22_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB22_1B	RBB24_1B	-	-
20.Q1	RBB22_1B	RBB24_2B	-	RBB24_2B
20.Q1	RBB22_1B	RBB44_1B	-	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C	-	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F	-	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G	-	RBB22_1G
20.Q1	RBB22_2E	RBB11_1C	-	-
20.Q1	RBB22_2E	RBB11_1D	-	-
20.Q1	RBB22_2E	RBB22_2E	-	RBB22_2E
20.Q1	RBB44_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D	-	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B	-	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C	-	RBB44_2C

31.2 Cascade Configurations for MSMM WCDMA + NR + ESS

This section describes supported cascade configurations for MSMM WCDMA + NR + ESS.

For mixed mode WCDMA + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + NR + ESS](#) on page 976.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



32 Radio Configurations for Multistandard Mixed Mode LTE + NR + ESS

This section describes MSMM LTE + NR + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM LTE + NR + ESS](#) on page 978 describes MSMM LTE + NR + ESS star configurations.

32.1 Configurations for Mixed Mode Baseband with MSMM LTE + NR + ESS

This section describes MSMM LTE + NR + ESS configurations:

Table 800 LTE + NR + ESS Configurations with One Mixed Mode Baseband + One Baseband or DU

Mixed Mode Baseband			DU or Baseband		
Standard Used for Triple Standard Mixed Mode	Baseband	Mixed Mode Baseband Configuration	Standard Used for Triple Standard Mixed Mode	DU or Baseband	Single Standard DU or Baseband or Mixed Mode Baseband Configuration
LTE+ESS	Baseband 6630	L+NR	NR	Baseband 6630	NR L+NR
NR+ESS	Baseband 6630	L+NR	LTE	DUS 31 DUS 41	LTE
				Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6502 Baseband 6620 Baseband 6630	LTE
				Baseband 5216 Baseband 6318 Baseband 6630	GSM+LTE WCDMA+LTE GSM+WCDMA+LTE
				Baseband 6630	LTE+NR



32.1.1 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One DU for LTE Node

Table 801 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One DU for LTE Node

From Software Release	LTE			NR+ESS	
	DUS 31	DUS 41	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	X	RBB11_1C	X	RBB22_2E
20.Q1	X	X	RBB11_1D	X	RBB22_2E
20.Q1	X	X	RBB22_1B	X	RBB22_1B
20.Q1	X	X	RBB22_1B	X	RBB44_1B
20.Q1	X	X	RBB22_1B	X	RBB44_2C
20.Q1	X	X	RBB22_1F	X	RBB22_1F
20.Q1	X	X	RBB22_1G	X	RBB22_1G
20.Q1	-	X	RBB22_1K	X	RBB22_1K
20.Q1	-	X	RBB22_1K	X	RBB44_1H
20.Q1	-	X	RBB22_1K	X	RBB44_2M
20.Q1	-	X	RBB22_1N	X	RBB22_1N
20.Q1	-	X	RBB22_1N	X	RBB44_1M
20.Q1	-	X	RBB22_1N	X	RBB44_2R
20.Q1	X	X	RBB22_2E	X	RBB22_2E
20.Q1	X	X	RBB24_1B	X	RBB22_1B
20.Q1	X	X	RBB24_2B	X	RBB22_1B
20.Q1	X	X	RBB44_1B	X	RBB22_1B
20.Q1	X	X	RBB44_1D	X	RBB44_1D
20.Q1	-	X	RBB44_1H	X	RBB22_1K
20.Q1	-	X	RBB44_1M	X	RBB22_1N
20.Q1	X	X	RBB44_2C	X	RBB22_1B
20.Q1	X	X	RBB44_2C	X	RBB44_2C
20.Q1	-	X	RBB44_2M	X	RBB22_1K
20.Q1	-	X	RBB44_2M	X	RBB44_2M
20.Q1	-	X	RBB44_2R	X	RBB22_1N
20.Q1	-	X	RBB44_2R	X	RBB44_2R



32.1.2 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One Baseband for LTE Node

Table 802 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One Baseband for LTE Node

From Software Release	LTE				NR+ESS	
	Baseband 5212 Baseband 6303 Baseband 6620	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6502	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	X	-	RBB11_1C	X	RBB22_2E
20.Q1	X	X	-	RBB11_1D	X	RBB22_2E
20.Q1	X	X	-	RBB22_1B	X	RBB22_1B
20.Q1	X	X	-	RBB22_1B	X	RBB44_1B
20.Q1	X	X	-	RBB22_1B	X	RBB44_2C
20.Q1	X	X	-	RBB22_1F	X	RBB22_1F
20.Q1	X	X	-	RBB22_1G	X	RBB22_1G
20.Q1	-	X	-	RBB22_1K	X	RBB22_1K
20.Q1	-	X	-	RBB22_1K	X	RBB44_1H
20.Q1	-	X	-	RBB22_1K	X	RBB44_2M
20.Q1	-	X	-	RBB22_1N	X	RBB22_1N
20.Q1	-	X	-	RBB22_1N	X	RBB44_1M
20.Q1	-	X	-	RBB22_1N	X	RBB44_2R
20.Q1	X	X	-	RBB22_2E	X	RBB22_2E
20.Q1	X	X	-	RBB24_1B	X	RBB22_1B
20.Q1	X	X	-	RBB24_2B	X	RBB22_1B
20.Q1	X	X	-	RBB44_1B	X	RBB22_1B
20.Q1	X	X	-	RBB44_1D	X	RBB44_1D
20.Q1	-	X	-	RBB44_1H	X	RBB22_1K
20.Q1	-	X	-	RBB44_1M	X	RBB22_1N
20.Q1	X	X	-	RBB44_2C	X	RBB22_1B
20.Q1	X	X	-	RBB44_2C	X	RBB44_2C
20.Q1	-	X	-	RBB44_2M	X	RBB22_1K
20.Q1	-	X	-	RBB44_2M	X	RBB44_2M
20.Q1	-	X	-	RBB44_2R	X	RBB22_1N
20.Q1	-	X	-	RBB44_2R	X	RBB44_2R



32.1.3 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + NR Node and One ESS Node

Table 803 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + NR Node and One ESS Node

From Software Release	LTE + NR		ESS	
	Baseband 6630	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	RBB22_1B	X	RBB22_1B
20.Q1	X	RBB22_1B	X	RBB44_1B
20.Q1	X	RBB22_1B	X	RBB44_2C
20.Q1	X	RBB22_1F	X	RBB22_1F
20.Q1	X	RBB22_1G	X	RBB22_1G
20.Q1	X	RBB22_1K	X	RBB22_1K
20.Q1	X	RBB22_1K	X	RBB44_1H
20.Q1	X	RBB22_1K	X	RBB44_2M
20.Q1	X	RBB22_1N	X	RBB22_1N
20.Q1	X	RBB22_1N	X	RBB44_1M
20.Q1	X	RBB22_1N	X	RBB44_2R
20.Q1	X	RBB22_2E	X	RBB22_2E
20.Q1	X	RBB44_1B	X	RBB22_1B
20.Q1	X	RBB44_1D	X	RBB44_1D
20.Q1	X	RBB44_1H	X	RBB22_1K
20.Q1	X	RBB44_1M	X	RBB22_1N
20.Q1	X	RBB44_2C	X	RBB22_1B
20.Q1	X	RBB44_2C	X	RBB44_2C
20.Q1	X	RBB44_2M	X	RBB22_1K
20.Q1	X	RBB44_2M	X	RBB44_2M
20.Q1	X	RBB44_2R	X	RBB22_1N
20.Q1	X	RBB44_2R	X	RBB44_2R

32.1.4 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + ESS Node and One NR Node

Table 804 LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + ESS Node and One NR Node

From Software Release	LTE + ESS		NR	
	Baseband 6630	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	RBB22_1B	X	RBB22_1B
20.Q1	X	RBB22_1B	X	RBB44_1B
20.Q1	X	RBB22_1B	X	RBB44_2C
20.Q1	X	RBB22_1F	X	RBB22_1F
20.Q1	X	RBB22_1G	X	RBB22_1G



From Software Release	LTE + ESS		NR	
	Baseband 6630	Supported RBBs	Baseband 6630	Supported RBBs
20.Q1	X	RBB22_1K	X	RBB22_1K
20.Q1	X	RBB22_1K	X	RBB44_1H
20.Q1	X	RBB22_1K	X	RBB44_2M
20.Q1	X	RBB22_1N	X	RBB22_1N
20.Q1	X	RBB22_1N	X	RBB44_1M
20.Q1	X	RBB22_1N	X	RBB44_2R
20.Q1	X	RBB22_2E	X	RBB22_2E
20.Q1	X	RBB24_1B	X	RBB22_1B
20.Q1	X	RBB24_2B	X	RBB22_1B
20.Q1	X	RBB44_1B	X	RBB22_1B
20.Q1	X	RBB44_1D	X	RBB44_1D
20.Q1	X	RBB44_1H	X	RBB22_1K
20.Q1	X	RBB44_1M	X	RBB22_1N
20.Q1	X	RBB44_2C	X	RBB22_1B
20.Q1	X	RBB44_2C	X	RBB44_2C
20.Q1	X	RBB44_2M	X	RBB22_1K
20.Q1	X	RBB44_2M	X	RBB44_2M
20.Q1	X	RBB44_2R	X	RBB22_1N
20.Q1	X	RBB44_2R	X	RBB44_2R

32.2 Cascade Configurations for MSMM LTE + NR + ESS

This section describes supported cascade configurations for MSMM LTE + NR + ESS.

For mixed mode LTE + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM LTE + NR + ESS](#) on page 978.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



33 Radio Configurations for Multistandard Mixed Mode WCDMA + GSM + LTE + NR

This section describes MSMM WCDMA + GSM + LTE + NR configurations:

[Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE + NR](#) on page 983 describes MSMM WCDMA + GSM + LTE + NR star configurations.

33.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE + NR

This section describes MSMM WCDMA + GSM + LTE + NR configurations.

33.1.1 WCDMA + GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One Mixed Mode Baseband for LTE + NR Node

Table 805 WCDMA + GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One Mixed Mode Baseband for LTE + NR Node

From Software Release	WCDMA + GSM	LTE + NR
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_1C	RBB24_1C
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B



From Software Release	WCDMA + GSM	LTE + NR
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB44_2C	RBB44_2C

33.1.2

WCDMA + GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM + LTE Node and One NR Node

Table 806 WCDMA + GSM + LTE + NR MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One NR Node

From Software Release	WCDMA + GSM + LTE	NR
	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630 (L+NR)
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_1C	RBB24_1C
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

33.2

Cascade Configurations for MSMM WCDMA + GSM + LTE + NR

This section describes supported cascade configurations for MSMM WCDMA + GSM + LTE + NR.

For mixed mode WCDMA + GSM + LTE + NR configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE + NR](#) on page 983.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



34 Radio Configurations for Multistandard Mixed Mode WCDMA + GSM + LTE + ESS

This section describes MSMM WCDMA + GSM + LTE + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE + ESS](#) on page 985 describes MSMM WCDMA + GSM + LTE + ESS star configurations.

34.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE + ESS

This section describes MSMM WCDMA + GSM + LTE + ESS configurations.

Table 807 WCDMA + GSM + LTE + ESS Configurations with One Mixed Mode Baseband + One single standard or Mixed Mode Baseband

Baseband			Baseband		
Standard Used for Quad Standard Mixed Mode	Baseband	Single Standard Baseband or Mixed Mode Baseband Configuration	Standard Used for Quad Standard Mixed Mode	Single or Mixed Mode Baseband	Mixed Mode Baseband Configuration
G+W	Baseband 5212 Baseband 6303 Baseband 6620	G+W	L+ESS	Baseband 6630	L+NR
	Baseband 5216 Baseband 6318 Baseband 6630	G+W G+W+L			
G+W+L	Baseband 5216 Baseband 6318 Baseband 6630	G+W+L	ESS	Baseband 6630	L+NR



34.1.1 WCDMA + GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One Mixed Mode Baseband for LTE + ESS Node

Table 808 WCDMA + GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One Mixed Mode Baseband for LTE + ESS Node

From Software Release	WCDMA + GSM	LTE + ESS
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB24_1B
20.Q1	RBB22_1B	RBB24_2B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB24_2B	RBB24_2B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

34.1.2 WCDMA + GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM + LTE Node and One ESS Node

Table 809 WCDMA + GSM + LTE + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM + LTE Node and One ESS Node

From Software Release	WCDMA + GSM + LTE	ESS
	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B



From Software Release	WCDMA + GSM + LTE	ESS
	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

34.2 Cascade Configurations for MSMM WCDMA + GSM + NR + ESS

This section describes supported cascade configurations for MSMM WCDMA + GSM + NR + ESS.

For mixed mode WCDMA + GSM + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + LTE + ESS](#) on page 985.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



35 Radio Configurations for Multistandard Mixed Mode WCDMA + GSM + NR + ESS

This section describes MSMM WCDMA + GSM + NR + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + NR + ESS](#) on page 988 describes MSMM WCDMA + GSM + NR + ESS star configurations.

35.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + NR + ESS

This section describes MSMM WCDMA + GSM + NR + ESS configurations.

Table 810 WCDMA + GSM + NR + ESS Configurations with One Mixed Mode Baseband + One single standard or Mixed Mode Baseband

Baseband			Baseband		
Standard Used for Quad Standard Mixed Mode	Baseband	Single Standard Baseband or Mixed Mode Baseband Configuration	Standard Used for Quad Standard Mixed Mode	Single or Mixed Mode Baseband	Mixed Mode Baseband Configuration
G+W	Baseband 5212 Baseband 6303 Baseband 6620	G+W	NR+ESS	Baseband 6630	L+NR
	Baseband 5216 Baseband 6318 Baseband 6630	G+W G+W+L			

35.1.1 WCDMA + GSM + NR + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One Mixed Mode Baseband for NR + ESS Node

Table 811 WCDMA + GSM + NR + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM Node and One Mixed Mode Baseband for NR + ESS Node

From Software Release	WCDMA + GSM	NR + ESS
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB11_1D	RBB22_2E



From Software Release	WCDMA + GSM	NR + ESS
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

35.2 Cascade Configurations for MSMM WCDMA + GSM + NR + ESS

This section describes supported cascade configurations for MSMM WCDMA + GSM + NR + ESS.

For mixed mode WCDMA + GSM + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + GSM + NR + ESS](#) on page 988.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



36 Radio Configurations for Multistandard Mixed Mode GSM + LTE + NR + ESS

This section describes MSMM GSM + LTE + NR + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM GSM + LTE + NR + ESS](#) on page 990 describes MSMM GSM + LTE + NR + ESS star configurations.

36.1 Configurations for Mixed Mode Baseband with MSMM GSM + LTE + NR + ESS

This section describes MSMM GSM + LTE + NR + ESS configurations.

Table 812 GSM + LTE FDD + NR + ESS Configurations with One Mixed Mode Baseband + One single standard or Mixed Mode Baseband

Baseband			Baseband		
Standard Used for Quad Standard Mixed Mode	Baseband	Single Standard Baseband or Mixed Mode Baseband Configuration	Standard Used for Quad Standard Mixed Mode	Single or Mixed Mode Baseband	Mixed Mode Baseband Configuration
NR+ESS	Baseband 6630	L+NR	G+L	Baseband 5216 Baseband 6318 Baseband 6630	G+L G+W+L
L+NR+ESS	Baseband 6630	L+NR	G	Baseband 5212 Baseband 6303 Baseband 6620	G G+W
			G	Baseband 5216 Baseband 6318 Baseband 6630	G G+W G+L G+W+L
			G	DUG 20	G



36.1.1 GSM + LTE + NR+ ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One Mixed Mode Baseband for GSM + LTE Node

Table 813 GSM + LTE + NR+ ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One Mixed Mode Baseband for GSM + LTE Node

From Software Release	NR + ESS	GSM + LTE
	Baseband 6630	Baseband 5216 Baseband 6318 Baseband 6630
-	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB24_1B
20.Q1	RBB22_1B	RBB24_2B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB11_1C
20.Q1	RBB22_2E	RBB11_1D
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

36.1.2 GSM + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + NR + ESS Node and One GSM Node

Table 814 GSM + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + NR + ESS Node and One GSM Node

From Software Release	LTE + NR + ESS	GSM	
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	DUG 20
20.Q1	RBB22_1B	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B	-
20.Q1	RBB22_1B	RBB44_2C	RBB44_2C
20.Q1	RBB22_2E	RBB11_1C	-
20.Q1	RBB22_2E	RBB11_1D	-
20.Q1	RBB22_2E	RBB22_2E	-
20.Q1	RBB24_1B	RBB22_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B	RBB22_1B



From Software Release	LTE + NR + ESS	GSM	
	Baseband 6630	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	DUG 20
20.Q1	RBB44_2C	RBB22_1B	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C	RBB44_2C

36.2 Cascade Configurations for MSMM GSM + LTE + NR + ESS

This section describes supported cascade configurations for MSMM GSM + LTE + NR + ESS.

For mixed mode GSM + LTE + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM GSM + LTE + NR + ESS](#) on page 990.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



37 Radio Configurations for Multistandard Mixed Mode WCDMA + LTE + NR + ESS

This section describes MSMM WCDMA + LTE + NR + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM WCDMA + LTE + NR + ESS](#) on page 993 describes MSMM WCDMA + LTE + NR + ESS star configurations.

37.1 Configurations for Mixed Mode Baseband with MSMM WCDMA + LTE + NR + ESS

This section describes MSMM WCDMA + LTE + NR + ESS configurations.

Table 815 GSM + LTE FDD + NR + ESS Configurations with One Mixed Mode Baseband + One single standard or Mixed Mode Baseband

Baseband			Baseband		
Standard Used for Quad Standard Mixed Mode	Baseband	Single Standard Baseband or Mixed Mode Baseband Configuration	Standard Used for Quad Standard Mixed Mode	Single or Mixed Mode Baseband	Mixed Mode Baseband Configuration
NR+ESS	Baseband 6630	L+NR	W+L	Baseband 5216 Baseband 6318 Baseband 6630	W+L G+W+L
L+NR+ESS	Baseband 6630	L+NR	W	Baseband 5212 Baseband 6303 Baseband 6620	W G+W
			W	Baseband 5216 Baseband 6318 Baseband 6630	W G+W W+L G+W+L
			W	Baseband 6502 DUW	W



37.1.1 WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One Mixed Mode Baseband for WCDMA + LTE Node

Table 816 WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for NR + ESS Node and One Mixed Mode Baseband for WCDMA + LTE Node

From Software Release	NR + ESS	WCDMA + LTE
	Baseband 6630	Baseband 5216 Baseband 6318 Baseband 6630
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G
20.Q1	RBB22_2E	RBB11_1C
20.Q1	RBB22_2E	RBB11_1D
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

37.1.2 WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for LTE + NR + ESS Node and One WCDMA Node

Table 817 WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for WCDMA + GSM + LTE Node and One NR Node

From Software Release	LTE + NR + ESS	WCDMA		
	Baseband 6630	Baseband 5212 Baseband 6303 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41
20.Q1	RBB22_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB22_1B	RBB24_1B	-	-
20.Q1	RBB22_1B	RBB24_2B	-	RBB24_2B
20.Q1	RBB22_1B	RBB44_1B	-	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C	-	RBB44_2C
20.Q1	RBB22_1F	RBB22_1F	-	RBB22_1F
20.Q1	RBB22_1G	RBB22_1G	-	RBB22_1G
20.Q1	RBB22_2E	RBB11_1C	-	-



From Software Release	LTE + NR + ESS	WCDMA		
	Baseband 6630	Baseband 5212 Baseband 6303 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	DUW 10 DUW 11 DUW 20 DUW 30 DUW 31 DUW 41
20.Q1	RBB22_2E	RBB11_1D	-	-
20.Q1	RBB22_2E	RBB22_2E	-	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B	-	RBB22_1B
20.Q1	RBB24_2B	RBB24_2B	-	RBB24_2B
20.Q1	RBB44_1B	RBB22_1B	-	RBB22_1B
20.Q1	RBB44_1D	RBB44_1D	-	RBB44_1D
20.Q1	RBB44_2C	RBB22_1B	-	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C	-	RBB44_2C

37.2 Cascade Configurations for MSMM WCDMA + LTE + NR + ESS

This section describes supported cascade configurations for MSMM WCDMA + LTE + NR + ESS.

For mixed mode WCDMA + LTE + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM WCDMA + LTE + NR + ESS](#) on page 993.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



38 Radio Configurations for Multistandard Mixed Mode GSM + WCDMA + LTE + NR + ESS

This section describes MSMM GSM + WCDMA + LTE + NR + ESS configurations:

[Configurations for Mixed Mode Baseband with MSMM GSM + WCDMA + LTE + NR + ESS](#) on page 996 describes GSM + WCDMA + LTE + NR + ESS star configurations.

38.1 Configurations for Mixed Mode Baseband with MSMM GSM + WCDMA + LTE + NR + ESS

This section describes MSMM GSM + WCDMA + LTE + NR + ESS configurations.

Table 818 Baseband Support for GSM + WCDMA + LTE + NR + ESS MSMM Configurations

Baseband #1			Baseband #2		
Standard Used for Quad Standard Mixed Mode	Baseband	Mixed Mode Baseband Configuration	Standard Used for Quad Standard Mixed Mode	Single or Mixed Mode Baseband	Single Standard Baseband or Mixed Mode Baseband Configuration
G+W	Baseband 5212 Baseband 6303 Baseband 6620	G+W	L+NR+ESS	Baseband 6630	L+NR
	Baseband 5216 Baseband 6318 Baseband 6630	G+W G+W+L			
G+W+L	Baseband 5216 Baseband 6318 Baseband 6630	G+W+L	NR+ESS	Baseband 6630	L+NR



38.1.1

GSM + WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for GSM + WCDMA Node and One Mixed Mode Baseband for LTE + NR + ESS Node

Table 819 GSM + WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for GSM + WCDMA Node and One Mixed Mode Baseband for LTE + NR + ESS Node

From Software Release	GSM + WCDMA	LTE + NR + ESS
	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6630
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

38.1.2

GSM + WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for GSM + WCDMA + LTE Node and One Mixed Mode Baseband for NR + ESS Node

Table 820 GSM + WCDMA + LTE + NR + ESS MSMM Configurations with One Mixed Mode Baseband for GSM + WCDMA + LTE Node and One Mixed Mode Baseband for NR + ESS Node

From Software Release	GSM + WCDMA + LTE	NR + ESS
	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630
20.Q1	RBB11_1C	RBB22_2E
20.Q1	RBB11_1D	RBB22_2E
20.Q1	RBB22_1B	RBB22_1B
20.Q1	RBB22_1B	RBB44_1B
20.Q1	RBB22_1B	RBB44_2C
20.Q1	RBB22_2E	RBB22_2E
20.Q1	RBB24_1B	RBB22_1B
20.Q1	RBB24_2B	RBB22_1B



From Software Release	GSM + WCDMA + LTE	NR + ESS
	Baseband 5216 Baseband 6318 Baseband 6630	Baseband 6630
20.Q1	RBB44_1B	RBB22_1B
20.Q1	RBB44_2C	RBB22_1B
20.Q1	RBB44_2C	RBB44_2C

38.2 Cascade Configurations for MSMM GSM + WCDMA + LTE + NR + ESS

This section describes supported cascade configurations for MSMM GSM + WCDMA + LTE + NR + ESS.

For mixed mode GSM + WCDMA + LTE + NR + ESS configurations, see [Configurations for Mixed Mode Baseband with MSMM GSM + WCDMA + LTE + NR + ESS](#) on page 996.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.



39 Radio Configurations for Multi-Operator RAN LTE + LTE

This section describes Multi-Operator RAN LTE + LTE configurations:

[Star Configurations for Multi-Operator RAN LTE + LTE](#) on page 999 describes Multi-Operator RAN LTE + LTE star configurations.

[Cascade Configurations for Multi-Operator RAN LTE + LTE](#) on page 1075 describes Multi-Operator RAN LTE + LTE cascade configurations.

39.1 Star Configurations for Multi-Operator RAN LTE + LTE

This section describes Multi-Operator RAN LTE + LTE star configurations without CPRI sharing:

[Carrier Allocation for Star Configurations Multi-Operator RAN LTE + LTE](#) on page 1011 describes carrier allocation for Multi-Operator RAN LTE + LTE configurations.

The following rules apply to Multi-Operator RAN LTE + LTE star configurations:

- Different RBBs can be chosen for different sectors to create asymmetric configurations.
- Unused DU or Baseband CPRI ports in a mixed mode configuration can be used for single mode sectors according to the single mode configuration tables.
- Additional rules for connecting radio data ports in Multi-Operator RAN LTE + LTE configurations with Baseband R503 apply, see [Baseband R503](#) on page 1293.

Table 821 DU and Baseband Support for Multi-Operator RAN LTE FDD + LTE FDD Configurations

DU or Baseband Node	LTE
	Software Release
Baseband 5212	17.Q3
Baseband 5216	17.Q3
Baseband 6303	17.Q3
Baseband 6318	18.Q2
Baseband 6502	17.Q3
Baseband 6620	17.Q3
Baseband 6630	17.Q3



DU or Baseband Node	LTE
	Software Release
DUL 20	17.Q3
2 × DUL 20	..(1)
DUS 31	17.Q3
2 × DUS 31	17.Q3
3 × DUS 31	..(1)
DUS 41	17.Q3
2 × DUS 41	17.Q3
3 × DUS 41	..(1)
IDU 5205	17.Q3
IDU 5209	17.Q3

(1) Only supported for LTE single mode.

Table 822 DU and Baseband Support for Multi-Operator RAN LTE TDD + LTE TDD Configurations

DU or Baseband Node	LTE
	Software Release
Baseband 5212	17.Q3
Baseband 5216	17.Q3
Baseband 6303	17.Q3
Baseband 6318	18.Q2
Baseband 6502	17.Q3
Baseband 6620	17.Q3
Baseband 6630	17.Q3
DUL 20	-
2 × DUL 20	-
DUS 31	17.Q3
2 × DUS 31	17.Q3
3 × DUS 31	..(1)
DUS 41	17.Q3
2 × DUS 41	17.Q3
3 × DUS 41	..(1)
IDU 5205	17.Q3
IDU 5209	17.Q3

(1) Only supported for LTE single mode.



39.1.1 Multi-Operator RAN LTE FDD + LTE FDD Configurations with Two DU Radio Nodes

Table 823 Supported RBB Combinations for LTE FDD + LTE FDD Configurations with Two DU Radio Nodes

Supported RBBs						Software Version
LTE FDD			LTE FDD			
RBB	DUL	DUS	RBB ⁽¹⁾	DUL	DUS	
RBB10_1A	X	X	RBB10_1A	X	X	17.Q3
RBB11_1C	X	X	RBB11_1C	X	X	17.Q3
RBB11_1D	X	X	RBB11_1D	X	X	17.Q3
RBB12_1A	X	X	RBB12_1A	X	X	17.Q3
RBB12_1E	-	X	RBB12_1E	-	X	17.Q3
RBB12_1F	-	X	RBB12_1F	-	X	17.Q3
RBB12_2B	-	X	RBB12_2B	-	X	17.Q3
RBB12_2C	-	X	RBB12_2C	-	X	17.Q3
RBB14_2A	X	X	RBB14_2A	X	X	17.Q3
RBB20_1A	X	X	RBB20_1A	X	X	17.Q3
RBB20_1B	X	X	RBB20_1B	X	X	17.Q3
RBB20_2A	X	X	RBB20_2A	X	X	17.Q3
RBB22_1B	X	X	RBB22_1B	X	X	17.Q3
RBB22_1B for RDS	-	X	RBB22_1B for RDS	-	X	17.Q3
RBB22_1C for AIR 21	X	X	RBB22_1C for AIR 21	X	X	17.Q3
RBB22_1F	X	X	RBB22_1F	X	X	17.Q3
RBB22_1G	X	X	RBB22_1G	X	X	17.Q3
RBB22_1H	-	X	RBB22_1H	-	X	18.Q1
RBB22_1J	-	X	RBB22_1J	-	X	18.Q1
RBB22_1K	-	X ⁽¹⁾	RBB22_1K	-	X ⁽¹⁾	17.Q3
RBB22_1L	-	X	RBB22_1L	-	X	18.Q1
RBB22_1M	-	X	RBB22_1M	-	X	18.Q1
RBB22_1N	-	X ⁽¹⁾	RBB22_1N	-	X ⁽¹⁾	18.Q3
RBB22_1P	-	X	RBB22_1P	-	X	18.Q4
RBB22_1Q	-	X	RBB22_1Q	-	X	18.Q4
RBB22_2A	X	X	RBB22_2A	X	X	17.Q3
RBB22_2E	X	X	RBB22_2E	X	X	17.Q3
RBB24_1A for AIR 21	X	X	RBB24_1A for AIR 21	X	X	17.Q3
RBB24_1C	X	X	RBB24_1C	X	X	17.Q3
RBB24_2A	X	X	RBB24_2A	X	X	17.Q3
RBB24_2B	X	X	RBB24_2B	X	X	17.Q3
RBB44_1D	X	X	RBB44_1D	X	X	17.Q3
RBB44_1E	-	X	RBB44_1E	-	X	18.Q1
RBB44_1F	-	X	RBB44_1F	-	X	18.Q1



Supported RBBs						Software Version
LTE FDD			LTE FDD			
RBB	DUL	DUS	RBB ⁽¹⁾	DUL	DUS	
RBB44_2C	X	X	RBB44_2C	X	X	17.Q3
RBB44_2M	-	X ⁽¹⁾	RBB44_2M	-	X ⁽¹⁾	17.Q3
RBB44_2N	-	X	RBB44_2N	-	X	18.Q1
RBB44_2P	-	X	RBB44_2P	-	X	18.Q1
RBB44_2R	-	X ⁽¹⁾	RBB44_2R	-	X ⁽¹⁾	18.Q3
RBB88_1A	-	X	RBB88_1A	-	X	18.Q1

(1) Only supported with DUS 41.

39.1.2 Multi-Operator RAN LTE FDD + LTE FDD Configurations with DU Radio Node and Baseband Radio Node

Table 824 Supported RBB Combinations for LTE FDD + LTE FDD Configurations with One DU Radio Node and One Baseband Radio Node

Supported RBBs							Software Version
LTE FDD			LTE FDD				
RBB ⁽¹⁾	DUL	DUS	RBB ⁽¹⁾	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB10_1A	X	X	RBB10_1A	X	-	-	17.Q3
RBB11_1C	X	X	RBB11_1C	X	X	-	17.Q3
RBB11_1D	X	X	RBB11_1D	X	X	-	17.Q3
RBB12_1A	X	X	RBB12_1A	X	-	-	17.Q3
RBB12_1E	-	X	RBB12_1E	X	-	-	17.Q3
RBB12_1F	-	X	RBB12_1F	X	-	-	17.Q3
RBB12_2B	-	X	RBB12_2B	X	-	-	17.Q3
RBB12_2C	-	X	RBB12_2C	X	-	-	17.Q3
RBB14_2A	X	X	RBB14_2A	X	-	-	17.Q3
RBB20_1A	X	X	RBB20_1A	X	-	-	17.Q3
RBB20_1B	X	X	RBB20_1B	X	-	-	17.Q3
RBB20_2A	X	X	RBB20_2A	X	-	-	17.Q3
RBB22_1B	X	X	RBB22_1B	X	X	-	17.Q3
RBB22_1B for RDS	-	X	RBB22_1B for RDS	X	X	X	17.Q3
RBB22_1C for AIR 21	X	X	RBB22_1C for AIR 21	X	-	-	17.Q3



Supported RBBs							Software Version
LTE FDD			LTE FDD				
RBB ⁽¹⁾	DUL	DUS	RBB ⁽¹⁾	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB22_1F	X	X	RBB22_1F	X	19.Q3	-	17.Q3
RBB22_1G	X	X	RBB22_1G	X	19.Q3	-	17.Q3
RBB22_1H	-	X	RBB22_1H	X	-	-	18.Q1
RBB22_1J	-	X	RBB22_1J	X	-	-	18.Q1
RBB22_1K	-	X ⁽²⁾	RBB22_1K	X ⁽³⁾	-	-	18.Q1
RBB22_1L	-	X	RBB22_1L	X	-	-	18.Q1
RBB22_1M	-	X	RBB22_1M	X	-	-	18.Q1
RBB22_1N	-	X ⁽²⁾	RBB22_1N	X ⁽³⁾	-	-	18.Q3
RBB22_1P	-	X	RBB22_1P	X	-	-	18.Q4
RBB22_1Q	-	X	RBB22_1Q	X	-	-	18.Q4
RBB22_2A	X	X	RBB22_2A	X	-	-	17.Q3
RBB22_2E	X	X	RBB22_2E	X	X	-	17.Q3
RBB24_1A for AIR 21	X	X	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB24_1C	X	X	RBB24_1C	X	-	-	17.Q3
RBB24_2A	X	X	RBB24_2A	X	-	-	17.Q3
RBB24_2B	X	X	RBB24_2B	X	-	-	17.Q3
RBB44_1D	X	X	RBB44_1D	X	19.Q3	-	17.Q3
RBB44_1E	-	X	RBB44_1E	X	-	-	18.Q1
RBB44_1F	-	X	RBB44_1F	X	-	-	18.Q1
RBB44_2C	X	X	RBB44_2C	X	X	-	17.Q3
RBB44_2M	-	X ⁽²⁾	RBB44_2M	X ⁽³⁾	-	-	17.Q3
RBB44_2N	-	X	RBB44_2N	X	-	-	18.Q1
RBB44_2P	-	X	RBB44_2P	X	-	-	18.Q1
RBB44_2R	-	X ⁽²⁾	RBB44_2R	X ⁽³⁾	-	-	18.Q3
RBB88_1A	-	X	RBB88_1A	X	-	-	18.Q1

(1) Same DBBs are supported in MSMM as in single mode.

(2) Only supported with DUS 41.

(3) Only supported with Baseband 5216, Baseband 6318 and Baseband 6630.



39.1.3 Multi-Operator RAN LTE FDD + LTE FDD Configurations with Two Baseband Radio Nodes

Table 825 Supported RBB Combinations for LTE FDD + LTE FDD Configurations with Two Baseband Radio Nodes

Supported RBBs								Software Version
LTE FDD				LTE FDD				
RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB 10 1A	X	-	-	RBB 10 1A	X	-	-	17.Q3
RBB 10 1A	X	-	-	RBB20_2A	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB22_1A	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB22_2B	X	-	-	17.Q3
RBB11_1C	X	X	-	RBB11_1C	X	X	-	17.Q3
RBB11_1C	X	-	-	RBB12_1C	X	-	-	17.Q3
RBB11_1C	X	-	-	RBB12_2B	X	-	-	17.Q3
RBB11_1C	X	-	-	RBB22_1C	X	-	-	17.Q3
RBB11_1C for AIR 21	X	-	-	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB11_1C	X	-	-	RBB22_2A	X	-	-	17.Q3
RBB11_1C	X	X	-	RBB22_2E	X	X	-	17.Q3
RBB11_1D	X	X	-	RBB11_1D	X	X	-	17.Q3
RBB11_1D	X	-	-	RBB12_1D	X	-	-	17.Q3
RBB11_1D	X	-	-	RBB12_2C	X	-	-	17.Q3
RBB11_1D	X	X	-	RBB22_2E	X	X	-	17.Q3
RBB12_1A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB14_1A	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB14_2A	X	-	-	17.Q3
RBB12_1A for AIR 21	X	-	-	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB24_1A	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB24_1A	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB24_2A	X	-	-	17.Q3
RBB12_1C	X	-	-	RBB11_1C	X	-	-	17.Q3
RBB12_1D	X	-	-	RBB11_1D	X	-	-	17.Q3
RBB12_1E	X	-	-	RBB12_1E	X	-	-	17.Q3
RBB12_1F	X	-	-	RBB12_1F	X	-	-	17.Q3
RBB12_2B	X	-	-	RBB11_1C	X	-	-	17.Q3



Supported RBBs								Software Version
LTE FDD				LTE FDD				
RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB12_2B	X	-	-	RBB12_2B	X	-	-	17.Q3
RBB12_2C	X	-	-	RBB11_1D	X	-	-	17.Q3
RBB12_2C	X	-	-	RBB12_2C	X	-	-	17.Q3
RBB14_1A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB14_2A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB14_2A	X	-	-	RBB14_2A	X	-	-	17.Q3
RBB20_1A	X	-	-	RBB20_1A	X	-	-	17.Q3
RBB20_1B	X	-	-	RBB20_1B	X	-	-	17.Q3
RBB20_2A	X	-	-	RBB 10 1A	X	-	-	17.Q3
RBB20_2A	X	-	-	RBB20_2A	X	-	-	17.Q3
RBB22_1A	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB22_1B	X	X	-	RBB22_1B	X	X	-	17.Q3
RBB22_1B for RDS	X	X	X	RBB22_1B for RDS	X	X	X	17.Q3
RBB22_1B	X	-	-	RBB24_1B	X	-	-	17.Q3
RBB22_1B	X	-	-	RBB24_2B	X	-	-	17.Q3
RBB22_1B	X	X	-	RBB44_1B	X	X	-	17.Q3
RBB22_1B for RDS	X	X	X	RBB44_1B for RDS	X	X	X	18.Q3
RBB22_1B	X	X	-	RBB44_2C	X	X	-	17.Q3
RBB22_1B for RDS	X	X	X	RBB44_2C for RDS	X	X	X	18.Q3
RBB22_1C	X	-	-	RBB11_1C	X	-	-	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB11_1C for AIR 21	X	-	-	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB12_1A for AIR 21	X	-	-	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB22_1F	X	19.Q3	-	RBB22_1F	X	19.Q3	-	17.Q3
RBB22_1F for RDS	X	X	X	RBB22_1F for RDS	X	X	X	19.Q1
RBB22_1F for RDS	X	X	X	RBB44_1N for RDS	X	X	X	19.Q1
RBB22_1F for RDS	X	X	X	RBB44_2S for RDS	X	X	X	19.Q1
RBB22_1G	X	19.Q3	-	RBB22_1G	X	19.Q3	-	17.Q3



Supported RBBs								Software Version
LTE FDD				LTE FDD				
RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB22_1G for RDS	X	X	X	RBB22_1G for RDS	X	X	X	19.Q2
RBB22_1G for RDS	X	X	X	RBB44_1P for RDS	X	X	X	19.Q2
RBB22_1G for RDS	X	X	X	RBB44_2T for RDS	X	X	X	19.Q2
RBB22_1H	X	-	-	RBB22_1H	X	-	-	18.Q1
RBB22_1J	X	-	-	RBB22_1J	X	-	-	18.Q1
RBB22_1K	X ⁽¹⁾	-	-	RBB22_1K	X ⁽¹⁾	-	-	18.Q1
RBB22_1K	X ⁽¹⁾	-	-	RBB44_1H	X ⁽¹⁾	-	-	18.Q1
RBB22_1K	X ⁽¹⁾	-	-	RBB44_2M	X ⁽¹⁾	-	-	18.Q1
RBB22_1L	X	-	-	RBB22_1L	X	-	-	18.Q1
RBB22_1L	X	-	-	RBB44_1J	X	-	-	18.Q1
RBB22_1L	X	-	-	RBB44_2N	X	-	-	18.Q1
RBB22_1M	X	-	-	RBB22_1M	X	-	-	18.Q1
RBB22_1M	X	-	-	RBB44_1K	X	-	-	18.Q1
RBB22_1M	X	-	-	RBB44_2P	X	-	-	18.Q1
RBB22_1N	X ⁽¹⁾	-	-	RBB22_1N	X ⁽¹⁾	-	-	18.Q3
RBB22_1N	X ⁽¹⁾	-	-	RBB44_1M	X ⁽¹⁾	-	-	18.Q1
RBB22_1N	X ⁽¹⁾	-	-	RBB44_2R	X ⁽¹⁾	-	-	18.Q1
RBB22_1P	X	-	-	RBB22_1P	X	-	-	18.Q4
RBB22_1Q	X	-	-	RBB22_1Q	X	-	-	18.Q4
RBB22_2A	X	-	-	RBB11_1C	X	-	-	17.Q3
RBB22_2A	X	-	-	RBB22_2A	X	-	-	17.Q3
RBB22_2B	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB22_2E	X	X	-	RBB11_1C	X	X	-	17.Q3
RBB22_2E	X	X	-	RBB11_1D	X	X	-	17.Q3
RBB22_2E	X	X	-	RBB22_2E	X	X	-	17.Q3
RBB24_1A	X	-	-	RBB12_1A	X			17.Q3
RBB24_1A for AIR 21	X	-	-	RBB12_1A for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB24_1B	X	-	-	RBB22_1B	X	-	-	17.Q3
RBB24_1C	X	-	-	RBB24_1C	X	-	-	17.Q3



Supported RBBs								Software Version
LTE FDD				LTE FDD				
RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB24_2A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB24_2A	X	-	-	RBB24_2A	X	-	-	17.Q3
RBB24_2B	X	-	-	RBB22_1B	X	-	-	17.Q3
RBB24_2B	X	-	-	RBB24_2B	X	-	-	17.Q3
RBB44_1B	X	X	-	RBB22_1B	X	X	-	17.Q3
RBB44_1B for RDS	X	X	X	RBB22_1B for RDS	X	X	X	18.Q3
RBB44_1D	X	19.Q3	-	RBB44_1D	X	19.Q3	-	17.Q3
RBB44_1E	X	-	-	RBB44_1E	X	-	-	18.Q1
RBB44_1E	X	-	-	RBB88_1A	X	-	-	18.Q1
RBB44_1F	X	-	-	RBB44_1F	X	-	-	18.Q1
RBB44_1F	X	-	-	RBB88_1A	X	-	-	18.Q1
RBB44_1H	X ⁽¹⁾	-	-	RBB22_1K	X ⁽¹⁾	-	-	17.Q3
RBB44_1J	X	-	-	RBB22_1L	X	-	-	18.Q1
RBB44_1K	X	-	-	RBB22_1M	X	-	-	18.Q1
RBB44_1M	X ⁽¹⁾	-	-	RBB22_1N	X ⁽¹⁾	-	-	18.Q3
RBB44_1N for RDS	X	X	X	RBB22_1F for RDS	X	X	X	19.Q1
RBB44_1P for RDS	X	X	X	RBB22_1G for RDS	X	X	X	19.Q2
RBB44_2C	X	X	-	RBB22_1B	X	X	-	17.Q3
RBB44_2C for RDS	X	X	X	RBB22_1B for RDS	X	X	X	18.Q3
RBB44_2C	X	X	-	RBB44_2C	X	X	-	17.Q3
RBB44_2C for RDS	X	X	X	RBB44_2C for RDS	X	X	X	18.Q3
RBB44_2M	X ⁽¹⁾	-	-	RBB22_1K	X ⁽¹⁾	-	-	17.Q3
RBB44_2M	X ⁽¹⁾	-	-	RBB44_2M	X ⁽¹⁾	-	-	17.Q3
RBB44_2N	X	-	-	RBB22_1L	X	-	-	18.Q1
RBB44_2N	X	-	-	RBB44_2N	X	-	-	18.Q1
RBB44_2P	X	-	-	RBB22_1M	X	-	-	18.Q1
RBB44_2P	X	-	-	RBB44_2P	X	-	-	18.Q1
RBB44_2R	X ⁽¹⁾	-	-	RBB22_1N	X ⁽¹⁾	-	-	18.Q3
RBB44_2R	X ⁽¹⁾	-	-	RBB44_2R	X ⁽¹⁾	-	-	18.Q3
RBB44_2S for RDS	X	X	X	RBB22_1F for RDS	X	X	X	19.Q1



Supported RBBs								Software Version
LTE FDD				LTE FDD				
RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB44_2S for RDS	X	X	X	RBB44_2S for RDS	X	X	X	19.Q1
RBB44_2T for RDS	X	X	X	RBB22_1G for RDS	X	X	X	19.Q2
RBB44_2T for RDS	X	X	X	RBB44_2T for RDS	X	X	X	19.Q2
RBB88_1A	X	-	-	RBB44_1E	X	-	-	18.Q1
RBB88_1A	X	-	-	RBB44_1F	X	-	-	18.Q1
RBB88_1A	X	-	-	RBB88_1A	X	-	-	18.Q1
RBBAIR_1A	X ⁽¹⁾	-	-	RBBAIR_1A	X ⁽¹⁾	-	-	20.Q2
RBBAIR_1A	X ⁽¹⁾	-	-	RBBAIR_2A	X ⁽¹⁾	-	-	20.Q2
RBBAIR_1A	X ⁽¹⁾	-	-	RBBAIR_3A	X ⁽¹⁾	-	-	20.Q2
RBBAIR_2A	X ⁽¹⁾	-	-	RBBAIR_1A	X ⁽¹⁾	-	-	20.Q2
RBBAIR_2A	X ⁽¹⁾	-	-	RBBAIR_2A	X ⁽¹⁾	-	-	20.Q2
RBBAIR_3A	X ⁽¹⁾	-	-	RBBAIR_1A	X ⁽¹⁾	-	-	20.Q2

(1) Only supported with Baseband 5216, 6318 and 6630.

39.1.4 Multi-Operator RAN LTE TDD + LTE TDD Configurations with Two DU Radio Nodes

Table 826 Supported RBB Combinations for LTE TDD + LTE TDD Configurations with Two DU Radio Nodes

Supported RBBs						Software Version
LTE TDD			LTE TDD			
RBB	DUS 31	DUS 41	RBB	DUS 31	DUS 41	
RBB11_1C	X	X	RBB11_1C	X	X	17.Q4
RBB11_1D	X	X	RBB11_1D	X	X	17.Q4
RBB22_1B	X	X	RBB22_1B	X	X	17.Q4
RBB22_1B for RDS	X	X	RBB22_1B for RDS	X	X	18.Q1
RBB22_1F	X	X	RBB22_1F	X	X	17.Q3
RBB22_1G	X	X	RBB22_1G	X	X	17.Q3
RBB22_1H	-	X	RBB22_1H	-	X	17.Q3
RBB22_1J	-	X	RBB22_1J	-	X	17.Q3



Supported RBBs						Software Version
LTE TDD			LTE TDD			
RBB	DUS 31	DUS 41	RBB	DUS 31	DUS 41	
RBB44_1D	X	X	RBB44_1D	X	X	17.Q3
RBB44_1E	-	X	RBB44_1E	-	X	17.Q3
RBB44_1F	-	X	RBB44_1F	-	X	17.Q3
RBB44_2C	X	X	RBB44_2C	X	X	17.Q4
RBB88_1A	-	X	RBB88_1A	-	X	17.Q3

39.1.5 Multi-Operator RAN LTE TDD + LTE TDD Configurations with DU Radio Node and Baseband Radio Node

Table 827

Supported RBBs							Software Version
LTE TDD			LTE TDD				
RBB ⁽¹⁾	Supported RBB Combinations for LTE TDD + LTE TDD Configurations with One DU Radio DUS 31	DUS 41	RBB ⁽¹⁾	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB11_1C	X	X	RBB11_1C	X	X	-	17.Q4
RBB11_1D	X	X	RBB11_1D	X	X	-	17.Q4
RBB22_1B	X	X	RBB22_1B	X	X	-	17.Q4
RBB22_1B for RDS	X	X	RBB22_1B for RDS	X	X	X	18.Q1
RBB22_1F	X	X	RBB22_1F	X	X	19.Q3	17.Q3
RBB22_1G	X	X	RBB22_1G	X	X	19.Q3	17.Q3
RBB22_1H	-	X	RBB22_1H	X	-	-	17.Q3
RBB22_1J	-	X	RBB22_1J	X	-	-	17.Q3
RBB44_1D	X	X	RBB44_1D	X	X	19.Q3	17.Q3
RBB44_1E	-	X	RBB44_1E	X	-	-	17.Q3
RBB44_1F	-	X	RBB44_1F	X	-	-	17.Q3
RBB44_2C	X	X	RBB44_2C	X	X	-	17.Q4
RBB88_1A	-	X	RBB88_1A	X	-	-	17.Q3

(1) Same DBBs are supported in MSMM as in single mode.



39.1.6 Multi-Operator RAN LTE TDD + LTE TDD Configurations with Two Baseband Radio Nodes

Table 828 Supported RBB Combinations for LTE TDD + LTE TDD Configurations with Two Baseband Radio Nodes

Supported RBBs								Software Version
LTE TDD				LTE TDD				
RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB11_1C	X	X	-	RBB11_1C	X	X	-	17.Q4
RBB11_1D	X	X	-	RBB11_1D	X	X	-	17.Q4
RBB22_1B	X	X	-	RBB22_1B	X	X	-	17.Q4
RBB22_1B for RDS	X	X	X	RBB22_1B for RDS	X	X	X	18.Q1
RBB22_1B	X	X	-	RBB44_1B	X	X	-	17.Q4
RBB22_1B for RDS	X	X	X	RBB44_1B for RDS	X	X	X	18.Q3
RBB22_1B	X	X	-	RBB44_2C	X	X	-	17.Q4
RBB22_1B for RDS	X	X	X	RBB44_2C for RDS	X	X	X	18.Q3
RBB22_1F	X	X	-	RBB22_1F	X	X 19.Q3	-	17.Q3
RBB22_1G	X	X	-	RBB22_1G	X	X 19.Q3	-	17.Q3
RBB22_1G for RDS	X	X	X	RBB22_1G for RDS	X	X	X	19.Q1
RBB22_1G for RDS	X	X	X	RBB44_1P for RDS	X	X	X	19.Q1
RBB22_1G for RDS	X	X	X	RBB44_2T for RDS	X	X	X	19.Q1
RBB22_1H	X	-	-	RBB22_1H	X	-	-	17.Q3
RBB22_1J	X	-	-	RBB22_1J	X	-	-	17.Q3
RBB44_1B	X	X	-	RBB22_1B	X	X	-	17.Q4
RBB44_1B for RDS	X	X	X	RBB22_1B for RDS	X	X	X	18.Q3
RBB44_1D	X	X	-	RBB44_1D	X	X 19.Q3	-	17.Q3
RBB44_1E	X	-	-	RBB44_1E	X	-	-	17.Q3
RBB44_1F	X	-	-	RBB44_1F	X	-	-	17.Q3
RBB44_1P for RDS	X	X	X	RBB22_1G for RDS	X	X	X	19.Q1
RBB44_2C	X	X	-	RBB22_1B	X	X	-	17.Q4
RBB44_2C for RDS	X	X	X	RBB22_1B for RDS	X	X	X	18.Q3
RBB44_2C	X	X	-	RBB44_2C	X	X	-	17.Q4



Supported RBBs								Software Version
LTE TDD				LTE TDD				
RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 Baseband 6620 Baseband 6630	Baseband 6502	IDU	
RBB44_2C for RDS	X	X	X	RBB44_2C for RDS	X	X	X	18.Q3
RBB44_2T for RDS	X	X	X	RBB22_1G for RDS	X	X	X	19.Q1
RBB44_2T for RDS	X	X	X	RBB44_2T for RDS	X	X	X	19.Q1
RBB88_1A	X	-	-	RBB88_1A	X	-	-	17.Q3

39.1.7 Carrier Allocation for Star Configurations Multi-Operator RAN LTE + LTE

This section describes carrier allocation for Multi-Operator RAN LTE + LTE star configurations.

The following rules apply to carrier allocation for Multi-Operator RAN LTE + LTE star configurations:

- With DUL 20, DUS 31 or DUS 41 for both operators, radio resources are shared equally between the two operators
- With DUL 20, DUS 31 or DUS 41 for one operator and Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6620, or Baseband 6630 for the other operator, radio resources are shared equally between the two operators
- With Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6620, or Baseband 6630 for both operators, radio resources can be allocated freely between the two operators
- Depending on the band, the operational bandwidth and number of carriers can be different than listed in the carrier allocation table, but has to be considered. For operational bandwidth, see [Supported Radio Frequencies](#) on page 8. For number of LTE carriers, see [Sector Configuration for LTE](#) on page 271



39.1.7.1 LTE + LTE Star Configurations: Carrier Allocation for RBB10_1A

Table 829 LTE + LTE Star Configurations: Carrier Allocation for RBB10_1A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB10_1A		RBB10_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 1, C \leq 1$ $B \leq 10, D \leq 10$ Baseband limitations: $A + C \leq 2$ (radio limitation) $B + D \leq 10$ (radio limitation)			
RUS 01 RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 1, C \leq 1$ $B \leq 10, D \leq 10$ Baseband limitations: $A + C \leq 2$ (radio limitation) $B + D \leq 20$ (radio limitation)			
RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 1, C \leq 1$ $B \leq 20, D \leq 20$ Baseband limitations: $A + C \leq 3$ (radio limitation) $B + D \leq 40$ (radio limitation)			

39.1.7.2 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1A

Table 830 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1A		RBB11_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 RRUS 02 RUS 01 RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		Baseband limitations: $A + C \leq 2$ (radio limitation) $B + D \leq 20$ (radio limitation)			



Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1A		RBB11_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUW 02 RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)			
RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		Baseband limitations: A + C ≤ 3 (radio limitation) B + D ≤ 40 (radio limitation)			

39.1.7.3 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C

Table 831 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2237 RRUS 01 RRUS 02 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RRUW 02 RUL 01 RUS 01 RUS 02 RUS 03 RUW 02 Vault Radio System 2268	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.			
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			



Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1C		RBB11_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2218	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			
Radio 2208 RRU 2208 RRU 2216	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			
RRUL 63 RRUS 62	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			



39.1.7.4 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C and RBB12_1C

Table 832 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C and RBB11_1C

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1C		RBB12_1C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.			



39.1.7.5 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C and RBB12_2B

Table 833 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C and RBB12_2B

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1C		RBB12_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



39.1.7.6 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Table 834 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1C and RBB22_2E

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB11_1C			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Radio Vault System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	Baseband capacity applies. CPRI capacity applies.	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD		



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB11_1C			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same LTE FDD band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

39.1.7.7 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D

Table 835 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1D		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2237 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Vault Radio System 2268	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			
Radio 2218	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			



Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1D		RBB11_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2208 RRU 2208 RRU 2216	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			
RRUL 63 RRUS 62	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			



39.1.7.8 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D and RBB12_1D

Table 836 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D and RBB12_1D

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1D		RBB12_1D	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.			



39.1.7.9 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D and RBB12_2C

Table 837 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D and RBB12_2C

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB11_1D		RBB12_2C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies.			



39.1.7.10 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Table 838 LTE + LTE Star Configurations: Carrier Allocation for RBB11_1D and RBB22_2E

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB11_1D			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Radio Vault System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD		
Baseband capacity applies. CPRI capacity applies.							
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD		
Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB11_1D			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of two radios on the same LTE FDD band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		No diversity	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.					

39.1.7.11 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A

Table 839 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB12_1A		RBB12_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
AIR 21 RRUS 01 RRUS 02 RUS 01 RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 10, D ≤ 10 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)			
RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 20, D ≤ 20 Baseband limitations: A + C ≤ 3 (radio limitation) B + D ≤ 40 (radio limitation)			
RRUW 02 RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 5, D ≤ 5 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)			



39.1.7.12 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB14_1A

Table 840 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB14_1A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB12_1A		RBB14_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A3	17.Q3	A = number of 1TX/2RX carriers B = total bandwidth (MHz)	2-WRXD	C = number of 1TX/4RX carriers D = total bandwidth (MHz)	4-WRXD
		Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)			
RRUS 01 + RRUS A2	17.Q3	A = number of 1TX/2RX carriers B = total bandwidth (MHz)	2-WRXD	C = number of 1TX/4RX carriers D = total bandwidth (MHz)	4-WRXD
		Baseband limitations: A + C ≤ 2 (radio limitation) D ≤ 10 (CPRI limitation) B + D ≤ 20 (radio limitation)			

39.1.7.13 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB14_2A

Table 841 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB14_2A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB12_1A		RBB14_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17.Q3	A = number of 1TX/2RX carriers B = total bandwidth (MHz)	2-WRXD	C = number of 1TX/4RX carriers D = total bandwidth (MHz)	4-WRXD
		Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)			



39.1.7.14 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Table 842 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB22_1C

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2		
		RBB12_1A		RBB22_1C		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX B/RX B	
AIR 21	17A	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
		Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)				

39.1.7.15 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Table 843 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB24_1A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2		
		RBB12_1A		RBB24_1A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX C	TX B/RX C	
AIR 21	17A	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
		Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)				



39.1.7.16 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Table 844 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1A and RBB24_2A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2		
		RBB12_1A		RBB24_2A		
		Downlink	Uplink	Downlink		Uplink
		TX A/RX A		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)						
RUS 03 + RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
Baseband limitations: A + C ≤ 3 (radio limitation) B + D ≤ 40 (radio limitation)						
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)						



39.1.7.17 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1E

Table 845 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1E

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB12_1E		RBB12_1E	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	17.Q2	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 3, C \leq 3$ $B \leq 10, D \leq 10$ Baseband limitations: $A + C \leq 6$ (radio limitation) $B + D \leq 20$ (radio limitation)			

39.1.7.18 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1F

Table 846 LTE + LTE Star Configurations: Carrier Allocation for RBB12_1F

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB12_1F		RBB12_1F	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Radio 2468	17.Q2	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 3, C \leq 3$ $B \leq 10, D \leq 10$ Baseband limitations: $A + C \leq 6$ (radio limitation) $B + D \leq 20$ (radio limitation)			



39.1.7.19 LTE + LTE Star Configurations: Carrier Allocation for RBB12_2B

Table 847 LTE + LTE Star Configurations: Carrier Allocation for RBB12_2B

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB12_2B		RBB12_2B	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.			



39.1.7.20 LTE + LTE Star Configurations: Carrier Allocation for RBB12_2C

Table 848 LTE + LTE Star Configurations: Carrier Allocation for RBB12_2C

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB12_2C		RBB12_2C	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.			



39.1.7.21 LTE + LTE Star Configurations: Carrier Allocation for RBB14_2A

Table 849 LTE + LTE Star Configurations: Carrier Allocation for RBB14_2A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB14_2A		RBB14_2A	
		Downlink	Uplink	Downlink	Uplink
		TX A/RX A		TX A/RX A	
RRUS 01 + Radio 0208 RRUS 01 + RRUS A2 RRUS 01 + RRUS A3	17.Q3	A = number of carriers B = total bandwidth (MHz)	4-WRXD	C = number of carriers D = total bandwidth (MHz)	4-WRXD
		DU limitations: $A \leq 1, C \leq 1$ $B \leq 10, D \leq 10$ Baseband limitations: $A + C \leq 2$ (radio limitation) $B + D \leq 20$ (radio limitation)			

39.1.7.22 LTE + LTE Star Configurations: Carrier Allocation for RBB20_1A

Table 850 LTE + LTE Star Configurations: Carrier Allocation for RBB20_1A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB20_1A		RBB20_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A		TX A	
RRUS 11 RRUS 12	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 1, C \leq 1$ $B \leq 10, D \leq 10$ Baseband limitations: $A + C \leq 2$ (radio limitation) $B + D \leq 20$ (radio limitation)			
RRUS 13	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 1, C \leq 1$ $B \leq 20, D \leq 20$ Baseband limitations: $A + C \leq 3$ (radio limitation) $B + D \leq 40$ (radio limitation)			
RRUS 14 RRUS 14s	17.Q3	A = number of carriers B = total bandwidth (MHz)	2-WRXD	C = number of carriers D = total bandwidth (MHz)	2-WRXD
		DU limitations: $A \leq 1, C \leq 1$ $B \leq 20, D \leq 20$ Baseband limitations: $A + C \leq 3$ (radio limitation) $B + D \leq 60$ (radio limitation)			



39.1.7.23 LTE + LTE Star Configurations: Carrier Allocation for RBB20_1B

Table 851 LTE + LTE Star Configurations: Carrier Allocation for RBB20_1B

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB20_1B			RBB20_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
Radio 2012	17.Q3	A = number of carriers B = total bandwidth (MHz)		Not supported	C = number of carriers D = total bandwidth (MHz)		Not supported
		DU limitations: A ≤ 3, C ≤ 3 B ≤ 20, D ≤ 20 Baseband limitations: A + C ≤ 6 (radio limitation) B + D ≤ 40 (radio limitation)					
RRUS E2	17.Q3	A = number of carriers B = total bandwidth (MHz)		Not supported	C = number of carriers D = total bandwidth (MHz)		Not supported
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 5, D ≤ 5 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)					



39.1.7.24 LTE + LTE Star Configurations: Carrier Allocation for RBB20_2A

Table 852 LTE + LTE Star Configurations: Carrier Allocation for RBB20_2A

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB20_2A			RBB20_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		4-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)							
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		4-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)							
RUS 03 + RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)		4-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
Baseband limitations: A + C ≤ 4 (radio limitation) B + D ≤ 40 (radio limitation)							



39.1.7.25 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B

Table 853 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1B			RBB22_1B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
mRRUS 12 Radio 2203 Radio 2212 Radio 2217 Radio 2219 Radio 2237 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s Vault Radio System 2268	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.							
Radio 2242	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 2218	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 2208 RRU 2208 RRU 2216	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
RRUL 63 RRUS 62	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					



Table 854 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B for RDS

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1B for RDS			RBB22_1B for RDS		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RD 2242 + IRU 2242 ⁽¹⁾ RD 2243 + IRU 2242 ⁽¹⁾ RD 4442 + IRU 2242 ⁽¹⁾ RD 4453 + IRU 2242 ⁽¹⁾	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.							
RD 2242 + IRU 2242 ⁽²⁾ RD 2243 + IRU 2242 ⁽²⁾ RD 2253 + IRU 2242 ⁽²⁾ RD 4442 + IRU 2242 ⁽²⁾	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.							

(1) Radio on FDD band.

(2) Radio on TDD band.



39.1.7.26 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB24_1B

Table 855 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB24_1B

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2			
		RBB22_1B		RBB24_1B			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					



39.1.7.27 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB24_2B

Table 856 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB24_2B

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2			
		RBB22_1B			RBB24_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					



39.1.7.28 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Table 857 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB44_1B

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/ RX A	TX B/RX B		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1B			RBB44_1B				
		Downlink		Uplink	Downlink ⁽¹⁾				Uplink
		TX A/ RX A	TX B/RX B		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2218 + Radio 2218	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.				2- or 4-WRXD
		For total bandwidth, see Supported Radio Frequencies on page 8.			For total bandwidth, see Supported Radio Frequencies on page 8.				
Baseband capacity applies. CPRI capacity applies.									
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.				2- or 4-WRXD
		For total bandwidth, see Supported Radio Frequencies on page 8.			For total bandwidth, see Supported Radio Frequencies on page 8.				
Baseband capacity applies. CPRI capacity applies.									
Radio 2208 + Radio 2208 RRU 2208 + RRU 2208 RRU 2216 + RRU 2216	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.				2- or 4-WRXD
		For total bandwidth, see Supported Radio Frequencies on page 8.			For total bandwidth, see Supported Radio Frequencies on page 8.				
Baseband capacity applies. CPRI capacity applies.									
RRUL 63 + RRUL 63 RRUS 62 + RRUS 62	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.				2- or 4-WRXD
		For total bandwidth, see Supported Radio Frequencies on page 8.			For total bandwidth, see Supported Radio Frequencies on page 8.				
Baseband capacity applies. CPRI capacity applies.									
Any combination of two radios on the same FDD band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271.				2- or 4-WRXD
		For total bandwidth, see Supported Radio Frequencies on page 8.			For total bandwidth, see Supported Radio Frequencies on page 8.				
Baseband capacity applies. CPRI capacity applies.									

(1) LTE features 4x4 Quad Antenna Downlink and 4x2 Quad Antenna Downlink in combination with antenna branches for the same polarization from separate radio units are supported but performance might be degraded



Table 858 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B for RDS and RBB44_1B for RDS

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB22_1B for RDS		RBB44_1B for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same FDD band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242 Any combination of two radios on the same TDD band: RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 Two radios on the same TDD band: RD 2242 + IRU 2242	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.			

39.1.7.29 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Table 859 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B and RBB44_2C

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/ RX A	TX B/RX B		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/ RX A	TX B/RX B		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s									
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD				
Baseband capacity applies. CPRI capacity applies.									
Radio 2218 + Radio 2218	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2- or 4-WRXD				
Baseband capacity applies. CPRI capacity applies.									



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1B			RBB44_2C				
		Downlink		Uplink	Downlink				Uplink
		TX A/ RX A	TX B/RX B		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2208 + Radio 2208 RRU 2208 + RRU 2208 RRU 2216 + RRU 2216	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									
RRUL 63 + RRUL 63 RRUS 62 + RRUS 62	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									
Any combination of two radios on the same FDD band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									

Table 860 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1B for RDS and RBB44_2C for RDS

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB22_1B for RDS		RBB44_2C for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same FDD band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242 Any combination of two radios on the same TDD band:	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.					



Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB22_1B for RDS		RBB44_2C for RDS	
		Downlink	Uplink	Downlink	Uplink
RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 Two radios on the same TDD band: RD 2242 + IRU 2242					

39.1.7.30 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1C

Table 861 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1C

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2			
		RBB22_1C		RBB22_1C			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
AIR 21	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 10, D ≤ 10					
AIR 21	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 10, D ≤ 10 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)					



39.1.7.31 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1C and RBB24_1A

Table 862 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1C and RBB24_1A

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1C			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX C	TX B/RX C	
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD with
		DU or Baseband capacity applies. CPRI capacity applies.					

39.1.7.32 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1F

Table 863 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1F

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1F			RBB22_1F		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4402 Radio 4408	19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4415 Radio 4428 Radio 4478 RRUS 32	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1F			RBB22_1F		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2468	17.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 4407 Radio 4429	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 4426 Radio 4442	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 4449	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 4455	19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1F			RBB22_1F		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 8843	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 4412 RRUS 72	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 4418	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8808	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8818	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1F			RBB22_1F		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 8823 (1) Radio 8836 (1)	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.							

(1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1F and RBB22_1G.

Table 864 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1F for RDS

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1F for RDS			RBB22_1F for RDS		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Dot 2272, or Dot 2282 + IRU 8844 or IRU 8884 (1)	19.Q1	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							

(1) RBB used for the first band in the Dot product name.

39.1.7.33 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1F and RBB44_2S

Table 865 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1F and RBB44_2S for RDS

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1F for RDS			RBB44_2S for RDS				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of : Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
Baseband capacity applies. CPRI capacity applies.									



(1) RBB used for the first band in the Dot product name.

39.1.7.34 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1G

Table 866 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1G

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1G			RBB22_1G		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4402 Radio 4408	19.Q3	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4407 Radio 4429	18.Q2	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4415 Radio 4428 Radio 4478 RRUS 32	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4426 Radio 4442	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					
Radio 4449	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1G			RBB22_1G		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 4455	19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 8843	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 4412 RRUS 72	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Radio 4418	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1G			RBB22_1G		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 8808	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them usesEqual number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8818	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8823 (1) Radio 8836 (1)	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					

(1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1F and RBB22_1G.

Table 867 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1G for RDS

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1G for RDS			RBB22_1G for RDS		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Dot 2272, or Dot 2282 + IRU 8844 or IRU 8884 (1)	19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
Baseband capacity applies. CPRI capacity applies.							

(1) RBB used for the second band in the Dot product name.



39.1.7.35 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1G and RBB44_2T

Table 868 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1G and RBB44_2T for RDS

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1G for RDS			RBB44_2T for RDS				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of : Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers and total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.									

(1) RBB used for the second band in the Dot product name.

39.1.7.36 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2T and RBB22_1G

Table 869 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1G and RBB44_2T for RDS

Radio Type	From SW Release	LTE Operator 1					LTE Operator 2		
		RBB44_2T for RDS					RBB22_1G for RDS		
		Downlink				Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	
Two in any combination of : Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	L19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		Baseband capacity applies. CPRI capacity applies.							

(1) RBB used for the second band in the Dot product name.



39.1.7.37 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1H

Table 870 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1H

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1H			RBB22_1H		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 8843	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 8808	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8818	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8823 (1) Radio 8836 (1)	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					

(1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1H and RBB22_1J.



39.1.7.38 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1J

Table 871 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1J

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1J			RBB22_1J		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 8843	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					
Radio 8808	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8818	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					
Radio 8823 (1) Radio 8836 (1)	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					

(1) All sectors must have the same number of carriers with the same carrier frequencies on the two sectors with RBB22_1H and RBB22_1J.



39.1.7.39 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1K

Table 872 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1K

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1K			RBB22_1K		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4449 B5 B13 ⁽¹⁾	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					

(1) High output power mode.

39.1.7.40 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1K and RBB44_1H

Table 873 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1K and RBB44_1H

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1K			RBB44_1H				
		Downlink		Uplink	Downlink				Uplink
		TX A/ RX A	TX B/RX B		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B13 + Radio 4449 B5 B13 ⁽¹⁾	L17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									

(1) High output power mode.



39.1.7.41 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1K and RBB44_2M

Table 874 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1K and RBB44_2M

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1K			RBB44_2M				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B13 + Radio 4449 B5 B13 ⁽¹⁾	L17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies.									

(1) High output power mode.

39.1.7.42 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1L

Table 875 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1L

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2			
		RBB22_1L		RBB22_1L			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 8843 ⁽¹⁾	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					

(1) High output power mode.



39.1.7.43 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1L and RBB44_1J

Table 876 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1L and RBB44_1J

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1L			RBB44_1J				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.							

(1) High output power mode.

39.1.7.44 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1L and RBB44_2N

Table 877 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1L and RBB44_2N

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1L			RBB44_2N				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.							

(1) High output power mode.



39.1.7.45 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1M

Table 878 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1M

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1M			RBB22_1M		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 8843 ⁽¹⁾	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.					

(1) High output power mode.

39.1.7.46 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1M and RBB44_1K

Table 879 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1M and RBB44_1K

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1M			RBB44_1K				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.									

(1) High output power mode.



39.1.7.47 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1M and RBB44_2P

Table 880 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1M and RBB44_2P

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1M			RBB44_2P				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	L18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.							

(1) High output power mode.

39.1.7.48 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1N

Table 881 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1N

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_1N			RBB22_1N		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.					

(1) High output power mode.



39.1.7.49 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1N and RBB44_1M

Table 882 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1N and RBB44_1M

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1N			RBB44_1M				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B12A + Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		Baseband capacity applies. CPRI capacity applies.							

(1) High output power mode.

39.1.7.50 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1N and RBB44_2R

Table 883 LTE + LTE Star Configurations: Carrier Allocation for RBB22_1N and RBB44_2R

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2				
		RBB22_1N			RBB44_2R				
		Downlink		Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B12A + Radio 4449 B5 B12A ⁽¹⁾	L18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.									

(1) High output power mode.



39.1.7.51 LTE + LTE Star Configurations: Carrier Allocation for RBB22_2A

Table 884 LTE + LTE Star Configurations: Carrier Allocation for RBB22_2A

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_2A			RBB22_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
DU limitations: A ≤ 1, C ≤ 1 B ≤ 10, D ≤ 10							
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
DU limitations: A ≤ 1, C ≤ 1 B ≤ 10, D ≤ 10 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)							
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
DU limitations: A ≤ 1, C ≤ 1 B ≤ 5, D ≤ 5							



Radio Type	From SW Release	LTE Operator 1		LTE Operator 2			
		RBB22_2A		RBB22_2A			
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 5, D ≤ 5 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)					
RUS 03 + RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 20, D ≤ 20					
RUS 03 + RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		2-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 20, D ≤ 20 Baseband limitations: A + C ≤ 4 (radio limitation) B + D ≤ 40 (radio limitation)					

39.1.7.52 LTE + LTE Star Configurations: Carrier Allocation for RBB22_2E

Table 885 LTE + LTE Star Configurations: Carrier Allocation for RBB22_2E

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_2E			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band:	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
DU or Baseband capacity applies. CPRI capacity applies.							



Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB22_2E			RBB22_2E		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s							
Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					
Any combination of two radios on the same FDD band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2-WRXD
		DU or Baseband capacity applies. CPRI capacity applies.					



39.1.7.53 LTE + LTE Star Configurations: Carrier Allocation for RBB24_1A

Table 886 LTE + LTE Star Configurations: Carrier Allocation for RBB24_1A

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB24_1A			RBB24_1A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX C	TX B/RX C	
AIR 21 (dual mixed mode)	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		4-WRXD with
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.					

39.1.7.54 LTE + LTE Star Configurations: Carrier Allocation for RBB24_1C

Table 887 LTE + LTE Star Configurations: Carrier Allocation for RBB24_1C

Radio Type	From SW Release	LTE Operator 1			LTE Operator 2		
		RBB24_1C			RBB24_1C		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TXB/RX B		TX A/RX A	TX B/RX B	
AIR 2488	17.Q1	A = number of carriers B = total bandwidth (MHz)		4-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
		DU limitations: A ≤ 3, C ≤ 3 B ≤ 35, D ≤ 35 Baseband limitations: A + C ≤ 6 (radio limitation) B + D ≤ 70 (radio limitation)					
Radio 2468	17.Q2	A = number of carriers B = total bandwidth (MHz)		4-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
		DU limitations: A ≤ 3, C ≤ 3 B ≤ 10, D ≤ 10 Baseband limitations: A + C ≤ 6 (radio limitation) B + D ≤ 20 (radio limitation)					



39.1.7.55 LTE + LTE Star Configurations: Carrier Allocation for RBB24_2A

Table 888 LTE + LTE Star Configurations: Carrier Allocation for RBB24_2A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2			
		RBB24_2A			RBB24_2A		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX C/RX C		TX A/RX A	TX C/RX C	
RRUS 01 + RRUS 01 RRUS 01 + RRUS 02 RRUS 02 + RRUS 01 RRUS 02 + RRUS 02 RUS 01 + RUS 01 RUS 01 + RUS 02 RUS 01 + RUS 03 RUS 02 + RUS 01 RUS 02 + RUS 02 RUS 02 + RUS 03 RUS 03 + RUS 01 RUS 03 + RUS 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		4-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
DU limitations: A ≤ 1, C ≤ 1 B ≤ 10, D ≤ 10 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 20 (radio limitation)							
RUS 03 + RUS 03	17.Q3	A = number of carriers B = total bandwidth (MHz)		4-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 20, D ≤ 20 Baseband limitations: A + C ≤ 3 (radio limitation) B + D ≤ 40 (radio limitation)					
RRUW 02 + RRUW 02 RUW 02 + RUW 02	17.Q3	A = number of carriers B = total bandwidth (MHz)		2-WRXD	C = number of carriers D = total bandwidth (MHz)		4-WRXD
		DU limitations: A ≤ 1, C ≤ 1 B ≤ 5, D ≤ 5 Baseband limitations: A + C ≤ 2 (radio limitation) B + D ≤ 10 (radio limitation)					



39.1.7.56 LTE + LTE Star Configurations: Carrier Allocation for RBB24_2B

Table 889 LTE + LTE Star Configurations: Carrier Allocation for RBB24_2B

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2			
		RBB24_2B			RBB24_2B		
		Downlink		Uplink	Downlink		Uplink
		TX A/RX A	TX B/RX B		TX A/RX A	TX B/RX B	
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 RRUS 14 RRUS 14s RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					
Any combination of one TX/RX capable radio with one RX only capable radio on the same band. TX/RX capable radios: Radio 2242 RX only capable radios: Radio 0208 RRUS A2 RRUS A3	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.		2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.					



39.1.7.57 LTE + LTE Star Configurations: Carrier Allocation for RBB44_1D

Table 890 LTE + LTE Star Configurations: Carrier Allocation for RBB44_1D

Radio Type	From SW Release	LTE Operator 1				LTE Operator 2					
		RBB44_1D				RBB44_1D					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX C	TX B/RX C	TX C/RX C	TX D/RX D	
AIR 32 AIR 32 MB RRUS 32 Radio 4415 Radio 4428 Radio 4478	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.											
Radio 2460 Radio 2479 Radio 4480 Radio 4499	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both nodes if any of them uses a DU.											
Radio 4402 Radio 4408	19.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.											
Radio 4407 Radio 4429	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.											
Radio 4417	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.											



Radio Type	From SW Release	LTE Operator 1					LTE Operator 2				
		RBB44_1D					RBB44_1D				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX C	TX B/RX C	TX C/RX C	TX D/RX D	
Radio 4426 Radio 4442	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.									
Radio 4443	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									
Radio 4449	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									
Radio 4412 RRUS 72	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.									
Radio 4418	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.									
Radio 4455	19.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUL 20, DUS 31, or DUS 41.									



39.1.7.58 LTE + LTE Star Configurations: Carrier Allocation for RBB44_1E

Table 891 LTE + LTE Star Configurations: Carrier Allocation for RBB44_1E

Radio Type	From SW Release	LTE Operator 1				LTE Operator 2					
		RBB44_1E				RBB44_1E					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.									
Radio 8808	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									
Radio 8818	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									
Radio 8823 Radio 8836	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									



39.1.7.59 LTE + LTE Star Configurations: Carrier Allocation for RBB44_1F

Table 892 LTE + LTE Star Configurations: Carrier Allocation for RBB44_1F

Radio Type	From SW Release	LTE Operator 1					LTE Operator 2				
		RBB44_1F					RBB44_1F				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.									
Radio 8808	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									
Radio 8818	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									
Radio 8823 Radio 8836	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									



39.1.7.60

LTE + LTE Star Configurations: Carrier Allocation for RBB44_2C

Table 893 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2C

Radio Type	From SW Release	LTE Operator 1					LTE Operator 2				
		RBB44_2C					RBB44_2C				
		Downlink				Uplink	Downlink				Uplink
		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 RRUS 12 RRUS 13 RRUS 14 RRUS 14s	17A	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.											
Radio 2237 + Radio 2237 Any combination of two radios on the same band: mRRUS 12 Radio 2203 Vault Radio System 2268 Any combination of two radios on the same band:	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.											



Radio Type	From SW Release	LTE Operator 1					LTE Operator 2				
		RBB44_2C					RBB44_2C				
		Downlink				Uplink	Downlink				Uplink
		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 11 RRUS 12 RRUS 13 Any combination of two radios on the same band: Radio 2212 Radio 2217 Radio 2219 Radio 2242 RRUS 12 RRUS 13 RRUS 14 RRUS 14s											
Radio 2218 + Radio 2218	17.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.									
Radio 2208 + Radio 2208 RRU 2208 + RRU 2208 RRU 2216 + RRU 2216	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.									
RRUL 63 + RRUL 63 RRUS 62 + RRUL 62	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.									
Any combination of two radios on the same FDD band: Radio 2212 Radio 2217 Radio 2219 Radio 2238 RRUS 12	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				2- or 4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.									



Table 894 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2C for RDS

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB44_2C for RDS		RBB44_2C for RDS	
		Downlink	Uplink	Downlink	Uplink
Any combination of two radios on the same FDD band: RD 2242 + IRU 2242 RD 2243 + IRU 2242 RD 4442 + IRU 2242 RD 4453 + IRU 2242 Any combination of two radios on the same TDD band: RD 2243 + IRU 2242 RD 2253 + IRU 2242 RD 4442 + IRU 2242 Two radios on the same TDD band: RD 2242 + IRU 2242	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8. Supported with Baseband only.	2- or 4-WRXD
		Baseband capacity applies. CPRI capacity applies.			

39.1.7.61 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2M

Table 895 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2M

Radio Type	From SW Release	LTE Operator 1				LTE Operator 2					
		RBB44_2M				RBB44_2M					
		Downlink				Uplink	Downlink				Uplink
		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/ RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B13 ⁽¹⁾	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.									

(1) High output power mode.



39.1.7.62 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2N

Table 896 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2N

Radio Type	From SW Release	LTE Operator 1				LTE Operator 2					
		RBB44_2N				RBB44_2N					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.											

(1) High output power mode.

39.1.7.63 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2P

Table 897 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2P

Radio Type	From SW Release	LTE Operator 1				LTE Operator 2					
		RBB44_2P				RBB44_2P					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 8843 + Radio 8843 ⁽¹⁾	18.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 31 or DUS 41.											

(1) High output power mode.



39.1.7.64 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2R

Table 898 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2R

Radio Type	From SW Release	LTE Operator 1				LTE Operator 2					
		RBB44_2R				RBB44_2R					
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Radio 4449 B5 B12A + Radio 4449 B5 B12A ⁽¹⁾	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.											

(1) High output power mode.

39.1.7.65 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2S

Table 899 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2S for RDS

Radio Type	From SW Release	LTE Operator 1					LTE Operator 2				
		RBB44_2S for RDS					RBB44_2S for RDS				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.											

(1) RBB used for the first band in the Dot product name.



39.1.7.66 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2T

Table 900 LTE + LTE Star Configurations: Carrier Allocation for RBB44_2T for RDS

Radio Type	From SW Release	LTE Operator 1					LTE Operator 2				
		RBB44_2T for RDS					RBB44_2T for RDS				
		Downlink				Uplink	Downlink				Uplink
		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D		TX A/RX A	TX B/RX B	TX C/RX C	TX D/RX D	
Two in any combination of: Dot 2272 or Dot 2282 + IRU 8844 or IRU 8884 ⁽¹⁾	19.Q1	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.				4-WRXD
Baseband capacity applies. CPRI capacity applies.											

(1) RBB used for the second band in the Dot product name.

39.1.7.67 LTE + LTE Star Configurations: Carrier Allocation for RBB88_1A

Table 901 LTE + LTE Star Configurations: Carrier Allocation for RBB88_1A

Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB88_1A		RBB88_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A-H/RX A-H		TX A-H/RX A-H	
Radio 8808	17.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.			
Radio 8818	18.Q2	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.			



Radio Type	From SW Release	LTE Operator 1		LTE Operator 2	
		RBB88_1A		RBB88_1A	
		Downlink	Uplink	Downlink	Uplink
		TX A-H/RX A-H		TX A-H/RX A-H	
Radio 8823	18.Q3	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.			
Radio 8836	18.Q4	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD	For number of carriers, see LTE RBB Summary for External Radios, Internal Radios, and RBS 6501 on page 271. For total bandwidth, see Supported Radio Frequencies on page 8.	8-WRXD
		DU or Baseband capacity applies. CPRI capacity applies. Equal number of radio resources available for both operators if any of them uses DUS 41.			

39.2 Cascade Configurations for Multi-Operator RAN LTE + LTE

This section describes Multi-Operator RAN LTE + LTE configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for both LTE + LTE star configuration and single mode LTE cascade configuration applies.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

For mixed mode LTE + LTE star configurations, see [Star Configurations for Multi-Operator RAN LTE + LTE](#) on page 999.

For single mode LTE configurations, see [Radio Configurations for LTE](#) on page 271.

For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.



40 Radio Configurations for Multi-Operator RAN NR + NR

This section describes Multi-Operator RAN NR + NR configurations:

[Star Configurations for Multi-Operator RAN NR + NR](#) on page 1076 describes Multi-Operator RAN NR + NR star configurations.

40.1 Star Configurations for Multi-Operator RAN NR + NR

This section describes Multi-Operator RAN NR + NR star configurations without CPRI sharing:

The following rules apply to Multi-Operator RAN NR + NR star configurations:

- Different RBBs can be chosen for different sectors to create asymmetric configurations.
- Unused Baseband CPRI ports in a mixed mode configuration can be used for single mode sectors according to the single mode configuration tables.

Table 902 Baseband Support for Multi-Operator RAN NR FDD + NR FDD Configurations

Baseband Node	NR FDD
	Software Release
Baseband 5212	-
Baseband 5216	-
Baseband 6303	-
Baseband 6318	-
Baseband 6502	-
Baseband 6620	-
Baseband 6630	20.Q1
IDU 5205	-
IDU 5209	-

Table 903 DU and Baseband Support for Multi-Operator RAN NR TDD + NR TDD Configurations

Baseband Node	NR TDD
	Software Release
Baseband 5212	-
Baseband 5216	-



Baseband Node	NR TDD
	Software Release
Baseband 6303	-
Baseband 6318	-
Baseband 6502	-
Baseband 6620	-
Baseband 6630	20.Q1
IDU 5205	-
IDU 5209	-

40.1.1 Multi-Operator RAN NR FDD + NR FDD Configurations with Two Baseband Radio Nodes

Table 904 Supported RBB Combinations for NR FDD + NR FDD Configurations with Two Baseband Radio Nodes

NR FDD		NR FDD		From Software Version
Baseband 6630	RBB	Baseband 6630	RBB	
X	RBB22_1B	X	RBB22_1B	20.Q1
X	RBB22_1B	X	RBB44_1B	20.Q1
X	RBB22_1B	X	RBB44_2C	20.Q1
X	RBB22_1F	X	RBB22_1F	20.Q1
X	RBB22_1G	X	RBB22_1G	20.Q1
X	RBB22_1H	X	RBB22_1H	20.Q1
X	RBB22_1J	X	RBB22_1J	20.Q1
X	RBB22_1K	X	RBB22_1K	20.Q1
X	RBB22_1K	X	RBB44_1H	20.Q1
X	RBB22_1K	X	RBB44_2M	20.Q1
X	RBB22_1L	X	RBB22_1L	20.Q1
X	RBB22_1L	X	RBB44_1J	20.Q1
X	RBB22_1L	X	RBB44_2N	20.Q1
X	RBB22_1M	X	RBB22_1M	20.Q1
X	RBB22_1M	X	RBB44_1K	20.Q1
X	RBB22_1M	X	RBB44_2P	20.Q1
X	RBB22_1N	X	RBB22_1N	20.Q1
X	RBB22_1N	X	RBB44_1M	20.Q1
X	RBB22_1N	X	RBB44_2R	20.Q1
X	RBB22_2E	X	RBB22_2E	20.Q1
X	RBB24_1C	X	RBB24_1C	20.Q1
X	RBB44_1B	X	RBB22_1B	20.Q1
X	RBB44_1D	X	RBB44_1D	20.Q1
X	RBB44_1E	X	RBB44_1E	20.Q1
X	RBB44_1E	X	RBB88_1A	20.Q1
X	RBB44_1F	X	RBB44_1F	20.Q1



NR FDD		NR FDD		From Software Version
Baseband 6630	RBB	Baseband 6630	RBB	
X	RBB44_1F	X	RBB88_1A	20.Q1
X	RBB44_1H	X	RBB22_1K	20.Q1
X	RBB44_1J	X	RBB22_1L	20.Q1
X	RBB44_1K	X	RBB22_1M	20.Q1
X	RBB44_1M	X	RBB22_1N	20.Q1
X	RBB44_2C	X	RBB22_1B	20.Q1
X	RBB44_2C	X	RBB44_2C	20.Q1
X	RBB44_2M	X	RBB22_1K	20.Q1
X	RBB44_2M	X	RBB44_2M	20.Q1
X	RBB44_2N	X	RBB22_1L	20.Q1
X	RBB44_2N	X	RBB44_2N	20.Q1
X	RBB44_2P	X	RBB22_1M	20.Q1
X	RBB44_2P	X	RBB44_2P	20.Q1
X	RBB44_2R	X	RBB22_1N	20.Q1
X	RBB44_2R	X	RBB44_2R	20.Q1
X	RBB88_1A	X	RBB44_1E	20.Q1
X	RBB88_1A	X	RBB44_1F	20.Q1
X	RBB88_1A	X	RBB88_1A	20.Q1

40.1.2 Multi-Operator RAN NR TDD + NR TDD Configurations with Two Baseband Radio Nodes

Table 905 Supported RBB Combinations for NR TDD + NR TDD Configurations with Two Baseband Radio Nodes

NR TDD		NR TDD		From Software Version
Baseband 6630	RBB	Baseband 6630	RBB	
X	RBB22_1B	X	RBB22_1B	20.Q1
X	RBB22_1B	X	RBB44_1B	20.Q1
X	RBB22_1B	X	RBB44_2C	20.Q1
X	RBB22_1F	X	RBB22_1F	20.Q1
X	RBB22_1G	X	RBB22_1G	20.Q1
X	RBB44_1B	X	RBB22_1B	20.Q1
X	RBB44_1D	X	RBB44_1D	20.Q1
X	RBB44_1E	X	RBB44_1E	20.Q2
X	RBB44_1F	X	RBB44_1F	20.Q2
X	RBB44_2C	X	RBB22_1B	20.Q1
X	RBB44_2C	X	RBB44_2C	20.Q1
X	RBB88_1A	X	RBB88_1A	20.Q2



40.2 Cascade Configurations for Multi-Operator RAN NR + NR

This section describes Multi-Operator RAN NR + NR configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for both NR + NR star configuration and single mode NR cascade configuration applies.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

For mixed mode NR + NR star configurations, see [Star Configurations for Multi-Operator RAN NR + NR](#) on page 1076.

For single mode NR configurations, see [Radio Configurations for NR](#) on page 479.

For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.



41 Radio Configurations for Multi-Operator RAN ESS + ESS

This section describes Multi-Operator RAN ESS + ESS configurations:

[Star Configurations for Multi-Operator RAN ESS + ESS](#) on page 1080 describes Multi-Operator RAN ESS + ESS star configurations.

41.1 Star Configurations for Multi-Operator RAN ESS + ESS

This section describes Multi-Operator RAN ESS + ESS star configurations without CPRI sharing:

Table 906 Baseband Support for Multi-Operator RAN ESS + ESS Configurations

Baseband Node	ESS
	Software Release
Baseband 5212	-
Baseband 5216	-
Baseband 6303	-
Baseband 6318	-
Baseband 6502	-
Baseband 6620	-
Baseband 6630 ⁽¹⁾	20.Q1
IDU 5205	-
IDU 5209	-

(1) In mixed mode LTE + NR configuration.

41.1.1 Multi-Operator RAN ESS + ESS Configurations with Two Baseband Radio Nodes

Table 907 Supported RBB Combinations for ESS + ESS Configurations with Two Baseband Radio Nodes

From Software Version	ESS		ESS	
	Baseband 6630	RBB	Baseband 6630	RBB
20.Q1	X	RBB22_1B	X	RBB22_1B
20.Q1	X	RBB22_1B	X	RBB44_1B
20.Q1	X	RBB22_1B	X	RBB44_2C
20.Q1	X	RBB22_1F	X	RBB22_1F
20.Q1	X	RBB22_1G	X	RBB22_1G



From Software Version	ESS		ESS	
	Baseband 6630	RBB	Baseband 6630	RBB
-	X	RBB22_1H	X	RBB22_1H
-	X	RBB22_1J	X	RBB22_1J
20.Q1	X	RBB22_1K	X	RBB22_1K
20.Q1	X	RBB22_1K	X	RBB44_1H
20.Q1	X	RBB22_1K	X	RBB44_2M
-	X	RBB22_1L	X	RBB22_1L
-	X	RBB22_1L	X	RBB44_1J
-	X	RBB22_1L	X	RBB44_2N
-	X	RBB22_1M	X	RBB22_1M
-	X	RBB22_1M	X	RBB44_1K
-	X	RBB22_1M	X	RBB44_2P
20.Q1	X	RBB22_1N	X	RBB22_1N
20.Q1	X	RBB22_1N	X	RBB44_1M
20.Q1	X	RBB22_1N	X	RBB44_2R
20.Q1	X	RBB22_2E	X	RBB22_2E
-	X	RBB24_1C	X	RBB24_1C
20.Q1	X	RBB44_1B	X	RBB22_1B
20.Q1	X	RBB44_1D	X	RBB44_1D
-	X	RBB44_1E	X	RBB44_1E
-	X	RBB44_1E	X	RBB88_1A
-	X	RBB44_1F	X	RBB44_1F
-	X	RBB44_1F	X	RBB88_1A
20.Q1	X	RBB44_1H	X	RBB22_1K
-	X	RBB44_1J	X	RBB22_1L
-	X	RBB44_1K	X	RBB22_1M
20.Q1	X	RBB44_1M	X	RBB22_1N
20.Q1	X	RBB44_2C	X	RBB22_1B
20.Q1	X	RBB44_2C	X	RBB44_2C
20.Q1	X	RBB44_2M	X	RBB22_1K
20.Q1	X	RBB44_2M	X	RBB44_2M
-	X	RBB44_2N	X	RBB22_1L
-	X	RBB44_2N	X	RBB44_2N
-	X	RBB44_2P	X	RBB22_1M
-	X	RBB44_2P	X	RBB44_2P
20.Q1	X	RBB44_2R	X	RBB22_1N
20.Q1	X	RBB44_2R	X	RBB44_2R
-	X	RBB88_1A	X	RBB44_1E
-	X	RBB88_1A	X	RBB44_1F
-	X	RBB88_1A	X	RBB88_1A



41.2 Cascade Configurations for Multi-Operator RAN ESS + ESS

This section describes Multi-Operator RAN ESS + ESS configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for both ESS + ESS star configuration and single mode ESS cascade configuration applies.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

For mixed mode ESS + ESS star configurations, see [Star Configurations for Multi-Operator RAN ESS + ESS](#) on page 1080.

For single mode ESS configurations, see [Radio Configurations for ESS](#) on page 498.

For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.



42 Radio Configurations for Single Standard Mixed Mode GSM + GSM

Radio units supporting single mode GSM are also supported for GSM + GSM with Dual DUG Sharing.

Carriers are allocated freely in GSM + GSM star configurations with Dual DUG Sharing.

[Star Configurations for SSMM GSM + GSM](#) on page 1083 describes SSMM GSM + GSM star configurations.

42.1 Star Configurations for SSMM GSM + GSM

This section describes the supported star configurations for SSMM GSM + GSM.

42.1.1 GSM + GSM SSMM Configurations with DUG

Table 908 GSM + GSM SSMM Configurations with DUG

Supported RBBs		Software Release
DUG	DUG	
RBB11_1A	RBB11_1A	17.Q3
RBB11_1A for AIR 11 ⁽¹⁾	RBB11_1A for AIR 11 ⁽¹⁾	17.Q3
RBB12_1A	RBB12_1A	17.Q3
RBB12_1A for AIR 21 ⁽¹⁾	RBB12_1A for AIR 21 ⁽¹⁾	17.Q3
RBB12_1E	RBB12_1E	17.Q3
RBB12_1F	RBB12_1F	17.Q3
RBB22_1B	RBB22_1B	17.Q3
RBB22_1F	RBB22_1F	17.Q3
RBB22_1G	RBB22_1G	17.Q3
RBB22_2B	RBB22_2B	17.Q3
RBB24_1C	RBB24_1C	17.Q3
RBB24_2A	RBB24_2A	17.Q3
RBB32_3A	RBB32_3A	17.Q3
RBB32_3B	RBB32_3B	17.Q3
RBB42_2D	RBB42_2D	17.Q3
RBB43_4A	RBB43_4A	17.Q3
RBB44_1D	RBB44_1D	17.Q3
RBB44_2C	RBB44_2C	17.Q3

(1) Separate Radio parts used for the two nodes.



42.2 Cascade Configurations for Multi-Operator RAN GSM + GSM

This section describes Multi-Operator RAN GSM + GSM configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for both GSM + GSM star configuration and single mode GSM cascade configuration applies.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

For mixed mode GSM + GSM star configurations, see [Star Configurations for SSMM GSM + GSM](#) on page 1083.

For single mode GSM configurations, see [Radio Configurations for GSM](#) on page 105.

For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.



43 Radio Configurations for Single Standard Mixed Mode WCDMA + WCDMA

This section describes SSMM WCDMA + WCDMA configurations.

[Star Configurations for SSMM WCDMA + WCDMA](#) on page 1085 describes SSMM WCDMA + WCDMA star configurations.

43.1 Star Configurations for SSMM WCDMA + WCDMA

This section describes SSMM WCDMA + WCDMA star configurations without CPRI sharing.

Supported DBBs and carrier allocation is covered by single mode WCDMA, see [Carrier Allocation for WCDMA](#) on page 218.

The following rules apply to SSMM WCDMA + WCDMA star configurations:

- Radios supported by single mode WCDMA are also supported in WCDMA + WCDMA star configurations.
- Carriers are allocated freely in WCDMA + WCDMA star configurations.

Table 909 DU and Baseband Support for WCDMA + WCDMA SSMM Configurations

DU or Baseband Node	WCDMA
	From Software Release
Baseband 5212	17.Q3
Baseband 5216	17.Q3
Baseband 6303	17.Q3
Baseband 6318	18.Q2
Baseband 6502	17.Q3
Baseband 6620	17.Q3
Baseband 6630	17.Q3
DUW 10	17.Q3
DUW 20	17.Q3
DUW 30	17.Q3
DUW 11	17.Q3
DUW 31	17.Q3
DUW 41	17.Q3



DU or Baseband Node	WCDMA
	From Software Release
2 × DUW 10 2 × DUW 20 2 × DUW 30	17.Q3
2 × DUW 11 2 × DUW 31 2 × DUW 41	17.Q3
IDU 5205	17.Q3
IDU 5209	17.Q3

43.1.1 WCDMA + WCDMA SSMM Configurations with DU Radio Node and Baseband Radio Node

Table 910 WCDMA + WCDMA SSMM Configurations with One DU Radio Node and One Baseband Radio Node

Supported RBBs						Software Version
WCDMA (DU)		WCDMA (Baseband)				
RBB	DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 (min 18.Q2) Baseband 6620 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209	
RBB10_1A	X	RBB10_1A	X	-	-	17.Q3
RBB10_1A	X	RBB20_2A	X	-	-	17.Q3
RBB11_1A	X	RBB11_1A	X	-	-	17.Q3
RBB11_1A	X	RBB22_1A	X	-	-	17.Q3
RBB11_1A	X	RBB22_2B	X	-	-	17.Q3
RBB11_1A	X	RBB32_1A	X	-	-	17.Q3
RBB11_1A	X	RBB32_1B	X	-	-	17.Q3
RBB12_1A	X	RBB12_1A	X	-	-	17.Q3
RBB12_1A	X	RBB14_1A	X	-	-	17.Q3
RBB12_1A	X	RBB14_2A	X	-	-	17.Q3
RBB12_1A	X	RBB22_1C	X	-	-	17.Q3
RBB12_1A	X	RBB24_1A	X	-	-	17.Q3
RBB12_1A for AIR 21	X	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB12_1A	X	RBB24_2A	X	-	-	17.Q3
RBB12_1E	X	RBB12_1E	X	-	-	18.Q1
RBB12_1E	X	RBB22_1P	X	-	-	18.Q4
RBB12_1F	X	RBB12_1F	X	-	-	18.Q1
RBB12_1F	X	RBB22_1Q	X	-	-	18.Q4
RBB12_2B	X	RBB11_1C	X	-	-	17.Q3
RBB12_2B	X	RBB12_2B	X	-	-	17.Q3



Supported RBBs						Software Version
WCDMA (DU)		WCDMA (Baseband)				
RBB	DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 (min 18.Q2) Baseband 6620 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209	
RBB12_2C	X	RBB11_1D	X	-	-	17.Q3
RBB12_2C	X	RBB12_2C	X	-	-	17.Q3
RBB14_2A	X	RBB12_1A	X	-	-	17.Q3
RBB14_2A	X	RBB14_2A	X	-	-	17.Q3
RBB22_1A	X	RBB11_1A	X	-	-	17.Q3
RBB22_1B	X	RBB22_1B	X	X	-	17.Q3
RBB22_1B for RDS	X ⁽¹⁾	RBB22_1B for RDS	X	X	X	17.Q3
RBB22_1B	X	RBB24_1B	X	-	-	17.Q3
RBB22_1B	X	RBB24_2B	X	-	-	17.Q3
RBB22_1B	X	RBB44_1B	X	X	-	17.Q3
RBB22_1B for RDS	X ⁽¹⁾	RBB44_1B for RDS	X	X	X	18.Q3
RBB22_1B	X	RBB44_2C	X	X	-	17.Q3
RBB22_1B for RDS	X ⁽¹⁾	RBB44_1B for RDS	X	X	X	18.Q3
RBB22_1C	X	RBB11_1C	X	-	-	17.Q3
RBB22_1C for AIR 21	X	RBB11_1C for AIR 21	X	-	-	17.Q3
RBB22_1C for AIR 21	X	RBB12_1A for AIR 21	X	-	-	17.Q3
RBB22_1F	X	RBB22_1F	X	19.Q3	-	17.Q3
RBB22_1G	X	RBB22_1G	X	19.Q3	-	17.Q3
RBB22_2A	X	RBB11_1C	X	-	-	17.Q3
RBB22_2A	X	RBB22_2A	X	-	-	17.Q3
RBB22_2B	X	RBB11_1A	X	-	-	17.Q3
RBB22_2B	X	RBB22_2B	X	-	-	17.Q3
RBB22_2E	X	RBB11_1C	X	X	-	17.Q3
RBB22_2E	X	RBB11_1D	X	X	-	17.Q3
RBB22_2E	X	RBB22_2E	X	X	-	17.Q3
RBB24_1A	X	RBB12_1A	X	-	-	17.Q3
RBB24_1A for AIR 21	X	RBB12_1A for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB24_1C	X	RBB24_1C	X	-	-	17.Q3
RBB24_1C	X	RBB44_1D	X	-	-	18.Q4
RBB24_2B	X	RBB22_1B	X	-	-	17.Q3
RBB24_2B	X	RBB24_2B	X	-	-	17.Q3
RBB32_1A	X	RBB10_1A	X	-	-	17.Q3



Supported RBBs						Software Version
WCDMA (DU)		WCDMA (Baseband)				
RBB	DUW 10 DUW 20 DUW 30 DUW 11 DUW 31 DUW 41	RBB	Baseband 5212 Baseband 5216 Baseband 6303 Baseband 6318 (min 18.Q2) Baseband 6620 Baseband 6630	Baseband 6502	IDU 5205 IDU 5209	
RBB42_2D	X	RBB42_2D	X	-	-	17.Q3
RBB44_1B	X	RBB22_1B	X	X	-	17.Q3
RBB44_1D	X	RBB44_1D	X	19.Q3	-	17.Q3
RBB44_2C	X	RBB22_1B	X	X	-	17.Q3
RBB44_2C	X	RBB44_2C	X	X	-	17.Q3

(1) Not supported from DUW 10, DUW 20 or DUW 30.

43.1.2 WCDMA + WCDMA SSMM Configurations with Two Baseband Radio Nodes

Table 911 WCDMA + WCDMA SSMM Configurations with Two Baseband Radio Nodes

Supported RBBs								Software Release
WCDMA				WCDMA				
RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	
RBB10_1A	X	-	-	RBB10_1A	X	-	-	17.Q3
RBB10_1A	X	-	-	RBB20_2A	X	-	-	17.Q3
RBB10_1A	X	-	-	RBB32_1A	X	-	-	17.Q3
RBB10_1A	X	-	-	RBB32_1B	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB22_1A	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB22_2B	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB32_1A	X	-	-	17.Q3
RBB11_1A	X	-	-	RBB32_1B	X	-	-	17.Q3
RBB11_1C	X	X	-	RBB11_1C	X	X	-	17.Q3
RBB11_1C	X	-	-	RBB12_1C	X	-	-	17.Q3
RBB11_1C	X	-	-	RBB12_2B	X	-	-	17.Q3
RBB11_1C	X	-	-	RBB22_1C	X	-	-	17.Q3
RBB11_1C for AIR	X	-	-	RBB22_1C for AIR	X	-	-	17.Q3
RBB11_1C	X	-	-	RBB22_2A	X	-	-	17.Q3
RBB11_1C	X	X	-	RBB22_2E	X	X	-	17.Q3
RBB11_1D	X	X	-	RBB11_1D	X	X	-	17.Q3
RBB11_1D	X	-	-	RBB12_1D	X	-	-	17.Q3



Supported RBBs								Software Release
WCDMA				WCDMA				
RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	
RBB11_1D	X	-	-	RBB12_2C	X	-	-	17.Q3
RBB11_1D	X	X	-	RBB22_2E	X	X	-	17.Q3
RBB12_1A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB14_1A	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB14_2A	X	-	-	17.Q3
RBB12_1A for AIR 21	X	-	-	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB24_1A	X	-	-	17.Q3
RBB12_1A for AIR 21	X	-	-	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB12_1A	X	-	-	RBB24_2A	X	-	-	17.Q3
RBB12_1C	X	-	-	RBB11_1C	X	-	-	17.Q3
RBB12_1D	X	-	-	RBB11_1D	X	-	-	17.Q3
RBB12_1E	X	-	-	RBB12_1E	X	-	-	18.Q1
RBB12_1F	X	-	-	RBB12_1F	X	-	-	18.Q1
RBB12_2B	X	-	-	RBB11_1C	X	-	-	17.Q3
RBB12_2B	X	-	-	RBB12_2B	X	-	-	17.Q3
RBB12_2C	X	-	-	RBB11_1D	X	-	-	17.Q3
RBB12_2C	X	-	-	RBB12_2C	X	-	-	17.Q3
RBB14_1A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB14_2A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB14_2A	X	-	-	RBB14_2A	X	-	-	17.Q3
RBB20_1A	X	-	-	RBB20_1A	X	-	-	17.Q3
RBB20_2A	X	-	-	RBB10_1A	X	-	-	17.Q3
RBB20_2A	X	-	-	RBB20_2A	X	-	-	17.Q3
RBB22_1A	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB22_1B	X	X	-	RBB22_1B	X	X	-	17.Q3
RBB22_1B for RDS	X	X	X	RBB22_1B for RDS	X	X	X	17.Q3
RBB22_1B	X	-	-	RBB24_1B	X	-	-	17.Q3
RBB22_1B	X	-	-	RBB24_2B	X	-	-	17.Q3
RBB22_1B	X	X	-	RBB44_1B	X	X	-	17.Q3
RBB22_1B for RDS	X	X	X	RBB44_1B for RDS	X	X	X	18.Q3
RBB22_1B	X	X	-	RBB44_2C	X	X	-	17.Q3
RBB22_1B for RDS	X	X	X	RBB44_2C for RDS	X	X	X	18.Q3
RBB22_1C	X	-	-	RBB11_1C	X	-	-	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB11_1C for AIR 21	X	-	-	17.Q3



Supported RBBs								Software Release
WCDMA				WCDMA				
RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	
RBB22_1C for AIR 21	X	-	-	RBB12_1A for AIR 21	X	-	-	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB22_1C for AIR 21	X	-	-	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB22_1F	X	19.Q3	-	RBB22_1F	X	19.Q3	-	17.Q3
RBB22_1F for RDS	X	X	X	RBB22_1F for RDS	X	X	X	19.Q2
RBB22_1F for RDS	X	X	X	RBB44_1N for RDS	X	X	X	19.Q2
RBB22_1F for RDS	X	X	X	RBB44_2S for RDS	X	X	X	19.Q2
RBB22_1G	X	19.Q3	-	RBB22_1G	X	19.Q3	-	17.Q3
RBB22_1P	X	-	-	RBB22_1P	X	-	-	18.Q4
RBB22_1Q	X	-	-	RBB22_1Q	X	-	-	18.Q4
RBB22_2A	X	-	-	RBB11_1C	X	-	-	17.Q3
RBB22_2A	X	-	-	RBB22_2A	X	-	-	17.Q3
RBB22_2B	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB22_2B	X	-	-	RBB22_2B	X	-	-	17.Q3
RBB22_2E	X	X	-	RBB11_1C	X	X	-	17.Q3
RBB22_2E	X	X	-	RBB11_1D	X	X	-	17.Q3
RBB22_2E	X	X	-	RBB22_2E	X	X	-	17.Q3
RBB24_1A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB12_1A for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB22_1C for AIR 21	X	-	-	17.Q3
RBB24_1A for AIR 21	X	-	-	RBB24_1A for AIR 21	X	-	-	17.Q3
RBB24_1B	X	-	-	RBB 22 1B	X	-	-	17.Q3
RBB24_1C	X	-	-	RBB24_1C	X	-	-	17.Q3
RBB24_2A	X	-	-	RBB12_1A	X	-	-	17.Q3
RBB24_2A	X	-	-	RBB24_2A	X	-	-	17.Q3
RBB24_2B	X	-	-	RBB22_1B	X	-	-	17.Q3
RBB24_2B	X	-	-	RBB24_2B	X	-	-	17.Q3
RBB32_1A	X	-	-	RBB10_1A	X	-	-	17.Q3
RBB32_1A	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB32_1B	X	-	-	RBB10_1A	X	-	-	17.Q3
RBB32_1B	X	-	-	RBB11_1A	X	-	-	17.Q3
RBB42_2D	X	-	-	RBB42_2D	X	-	-	17.Q3
RBB44_1B	X	X	-	RBB22_1B	X	X	-	17.Q3



Supported RBBs								Software Release
WCDMA				WCDMA				
RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	RBB	Baseband 5212 5216 6303 6318 (min 18.Q2) 6620 6630	Baseband 6502	IDU 5205 IDU 5209	
RBB44_1B for RDS	X	X	X	RBB22_1B for RDS	X	X	X	18.Q3
RBB44_1D	X	19.Q3	-	RBB44_1D	X	19.Q3	-	17.Q3
RBB44_1N for RDS	X	X	X	RBB22_1F for RDS	X	X	X	19.Q2
RBB44_2C	X	X	-	RBB22_1B	X	X	-	17.Q3
RBB44_2C for RDS	X	X	X	RBB22_1B for RDS	X	X	X	18.Q3
RBB44_2C	X	X	-	RBB44_2C	X	X	-	17.Q3
RBB44_2C for RDS	X	X	X	RBB44_2C for RDS	X	X	X	18.Q3
RBB44_2S for RDS	X	X	X	RBB22_1F for RDS	X	X	X	19.Q2
RBB44_2S for RDS	X	X	X	RBB44_2S for RDS	X	X	X	19.Q2

43.2 Cascade Configurations for Multi-Operator RAN WCDMA + WCDMA

This section describes Multi-Operator RAN WCDMA + WCDMA configurations when cascading from a single mode sector to a multistandard mixed mode sector within one node.

Information and rules for both WCDMA + WCDMA star configuration and single mode WCDMA cascade configuration applies.

[Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.

For mixed mode WCDMA + WCDMA star configurations, see [Star Configurations for SSMM WCDMA + WCDMA](#) on page 1085.

For single mode WCDMA configurations, see [Radio Configurations for WCDMA](#) on page 182.

For capacity in mixed mode cascade configurations, see [Baseband Support and Configuration for Mixed Mode Baseband](#) on page 531.

For rules when synchronizing DU or Baseband Radio Nodes through radio cascading chains, see [Mixed Mode Synchronization](#) on page 513.



44 Radio Configurations for Dual MSMM

This section describes the dual MSMM standard combinations and configurations.

See [Supported Radio Frequencies](#) on page 8 for supported radio frequencies in MSMM configurations, and see [Sector Configuration for MSMM](#) on page 615 for supported RBBs.

[Table 912](#) lists the supported Dual MSMM configurations WCDMA + GSM and LTE + GSM.

Table 912 Dual MSMM Configurations

Dual MSMM Standard Combinations	DBB			Supported RBS Type
	WCDMA	GSM	LTE	
WCDMA + GSM LTE + GSM	DBB10_01 ⁽¹⁾ DBB10_02 ⁽¹⁾ DBB10_99 DBB21_01 DBB21_02 DBB21_99 DBB22_01 DBB22_02 DBB22_99	DBB10_01 ⁽²⁾ DBB10_02 ⁽²⁾	DBB10_81 DBB20_81 DBB21_81	6101 6102 6110 6120 6201 6202 6301 6320 6601 ⁽³⁾

(1) DBB10_01 and DBB10_02 supported when using GPS Out Splitter.

(2) This configuration uses only one DUG, which is shared between the two MSMM configurations.

(3) Dual MSMM is supported using three (for DUW 10, 20, 30, 31, and 41) or two (for DUW 11) RBS 6601 support systems. For three RBS 6601 support systems, the core DUW is installed in the first support system, and the extension DUW is installed in the second support system. A DUL and a DUG are installed in the third RBS 6601 support system. For two RBS 6601 support systems, the two DUWs are installed in the first support system, and a DUL and a DUG are installed in the second RBS 6601 support system.



45 Radio Cascade Configuration Rules

The following rules apply to Fronthaul cascade configurations:

- Dual CPRI towards one radio unit is not supported in cascade configurations, for example, ring configuration, see C and D in [Figure 34](#), except with:
 - Multiple radio units with DUG 20, see [GSM Configurations for Baseband and DUG](#) on page 119.
 - Dual CPRI from a radio unit with one CPRI towards Baseband R503 and one CPRI towards DU or Baseband is supported, see [Baseband R503](#) on page 1293 and G in [Figure 34](#).
 - Dual CPRI from a radio with both CPRI towards Baseband R503 only supported when connected to the same splitter block in the same Baseband R503, see [Baseband R503](#) on page 1293.
- For maximum number of units (radio units and Baseband R503) in one cascade chain, see respective DU or Baseband capacity tables.
- Baseband P614 supports two levels of cascading with radio units only and three levels of cascading with radio units and Baseband R503, see [Figure 35](#) and [Baseband R503](#) on page 1293 and [Baseband P614](#) on page 1288.
- CDMA supports up to two cascade levels.
- Radios shared between two radio nodes has to be counted in both cascade chains from respective DU or Baseband.
- GSM with DUG 20 do not support radio cascading to a mixed mode sector, see [GSM Configurations for Baseband and DUG](#) on page 119.
- Cascaded radios can belong to the same or to different RBBs, see D and E in [Figure 34](#).
- Radios in separate cascade chains belonging to the same RBB can be used up to the second cascade level from the same DU, Baseband, or Baseband R503, see D in [Figure 34](#) and examples in [Figure 36](#).
- CPRI capacity has to be considered as a limitation for number of radios in cascade, see [CPRI and eCPRI Capacity](#).
- For limitations with Node Group Synchronization, see [Mixed Mode Synchronization](#) on page 513.
- For limitations with GPS Synchronization, see [Mixed Mode Synchronization Using GPS Out](#) on page 515.
- For limitations with Fronthaul products, see [Fronthaul](#) on page 1304.



- For limitations with Baseband R503, see [Baseband R503](#) on page 1293.
- For limitations with Baseband P614, see [Baseband P614](#) on page 1288.

The following rules apply to radio unit cascade configurations:

- External radio units can be used in cascade configurations.
- Internal radio units can be used in cascade configurations.
- Mix of internal radio units and external radio units in one cascade chain is not supported with the exception of:
 - IRU 2242 can be used in cascade configurations with other IRU 2242, internal radio units or external radio units (as the IRU 2242 is cabinet mounted, supporting both electrical and optical CPRI interfaces).
- All Group 5 radio units supporting cascading must be placed last in the cascade chain, but the order between these radio units is irrelevant, see [Radio Groups](#) on page 101.
- AIR 11 and AIR 21 with two internal radio boards is handled as two radio units.

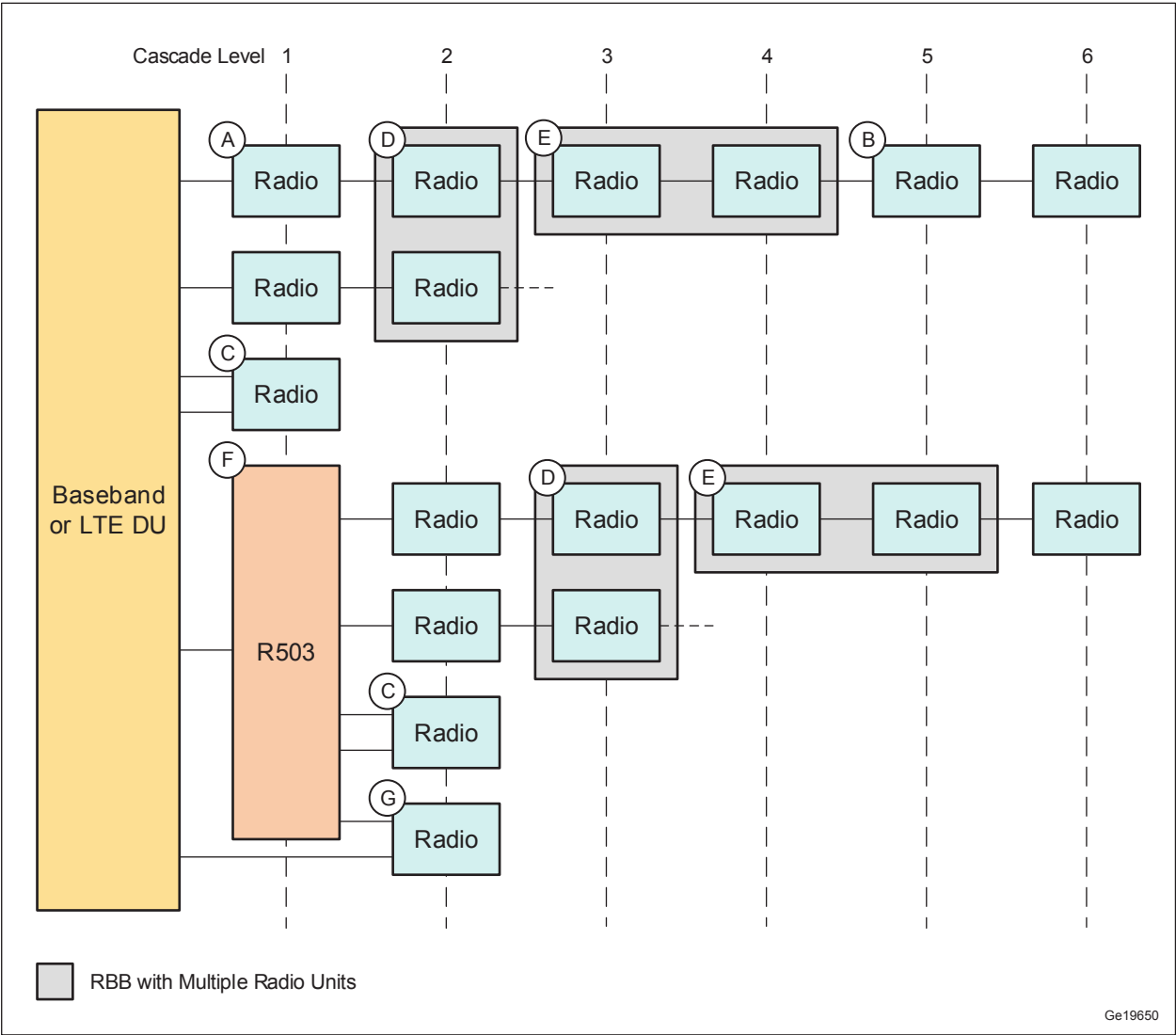


Figure 34 Radio Cascade Configuration with Baseband R503

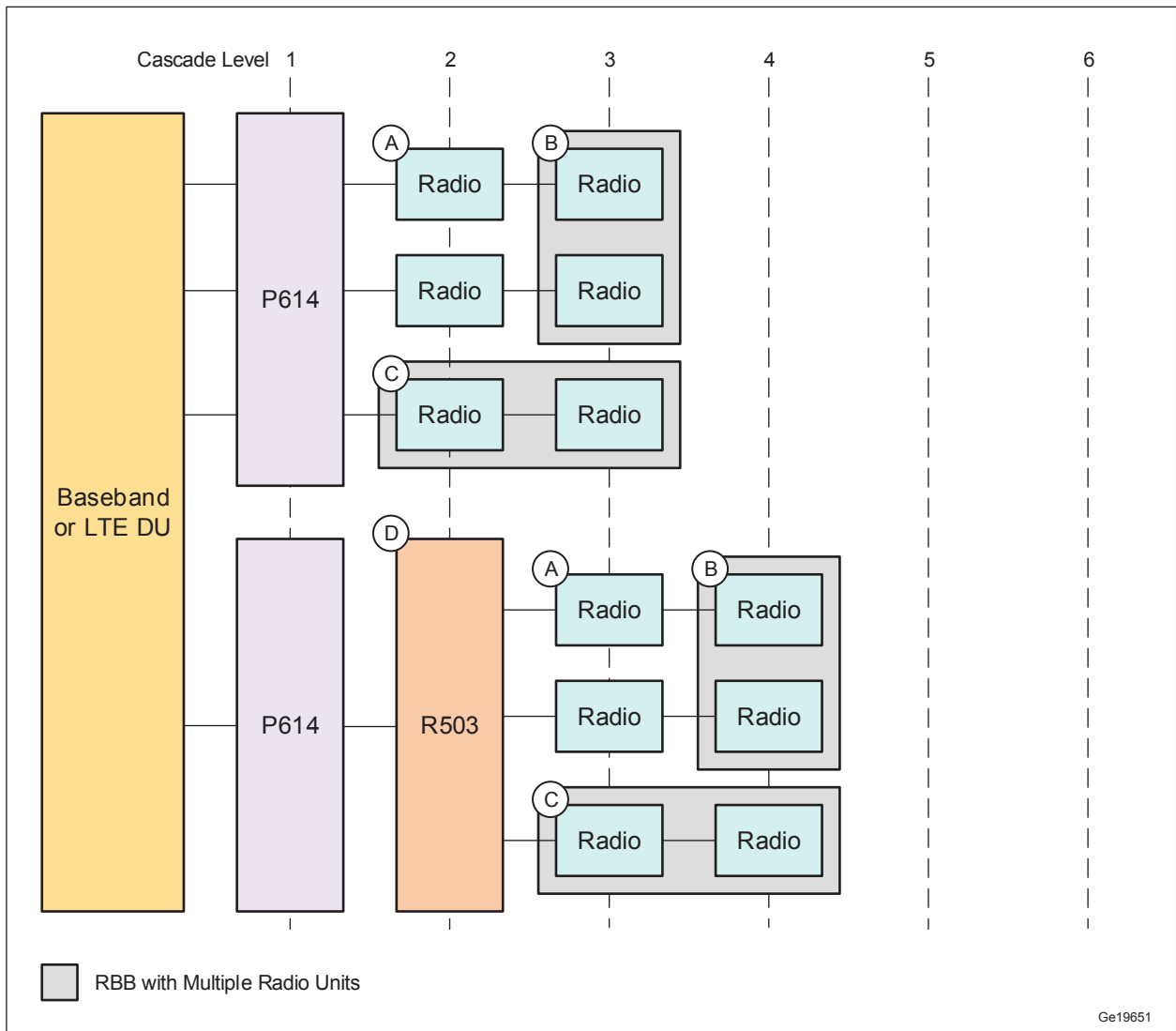


Figure 35 Radio Cascade Configuration with Baseband P614

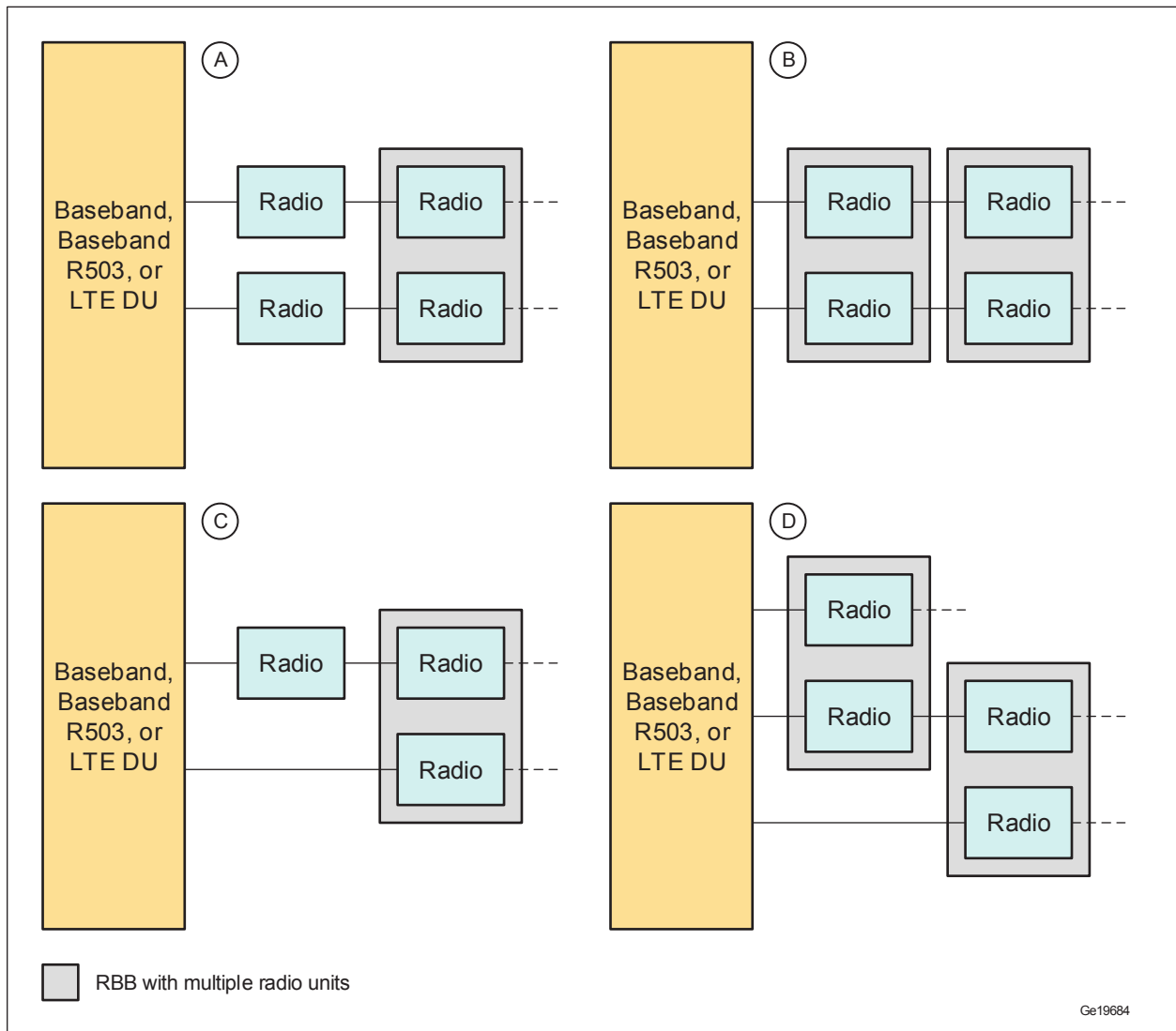


Figure 36 Examples of Multiple Radio in Different Cascade Chains Using Same RBB

Recommendations:

- As a general rule, CPRI connections between radio units should always be between Data 1 of a radio to Data 2 of another radio unit, see examples in [Figure 37](#)
- Radio units supporting highest line rates of the radio units in the cascade chain should be placed closest to the DU or Baseband unit.

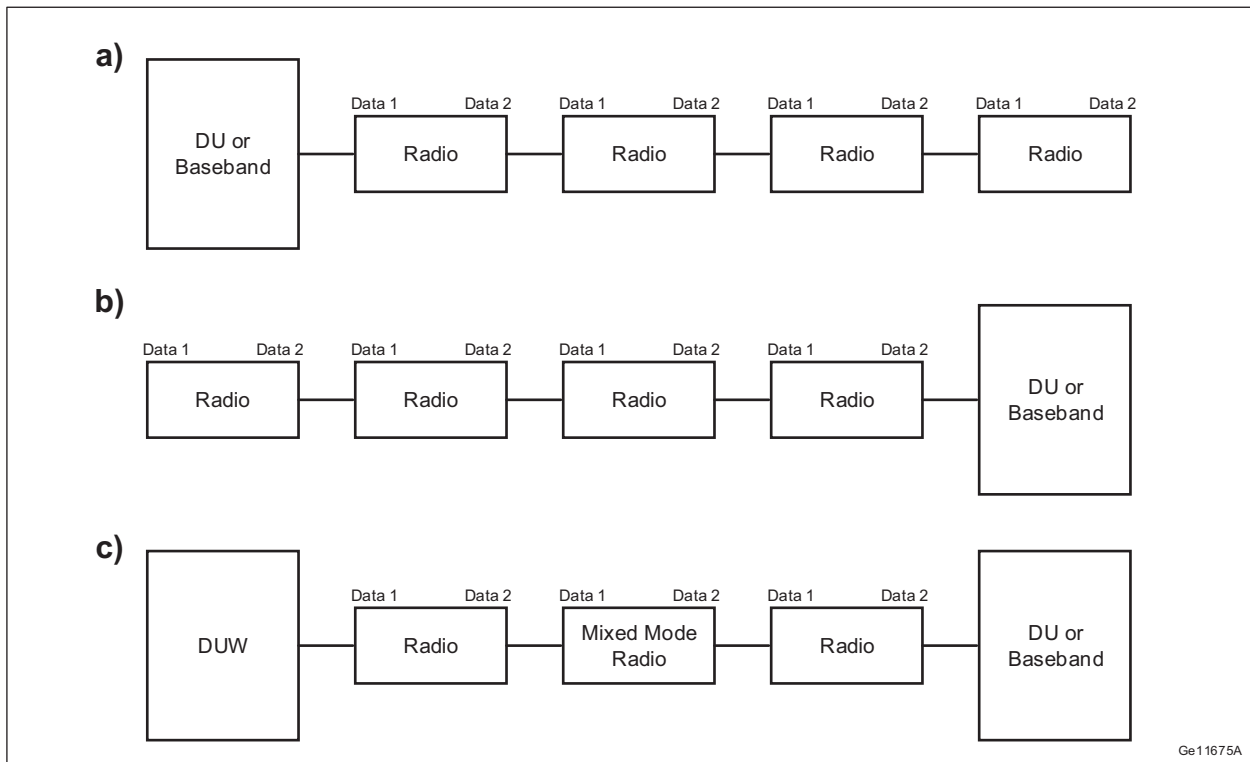


Figure 37 Examples of CPRI Connections in Radio Cascade Chain



46 Building Blocks

This section describes all building blocks used in radio configurations. For information on which building blocks are supported for specific radio standards and specific RBS types, see the following sections:

- Multistandard, [Radio Configurations for Multistandard and Single Standard Mixed Mode](#) on page 505
- GSM, [Radio Configurations for GSM](#) on page 105
- WCDMA, [Radio Configurations for WCDMA](#) on page 182
- LTE, [Radio Configurations for LTE](#) on page 271
- CDMA, [Radio Configurations for CDMA](#) on page 172

46.1 DBBs

Each DBB defines a unique way of combining DUs or Baseband units in one node with connections to radios.

DBBs are named as follows: *DBB[X][Y][ZZ]*, where:

X	Number of DUs or Baseband units
Y	Number of CPRI links for DU or Baseband interconnection
ZZ	Number that represents the CPRI port configuration or a set of rules for how to configure the ports.

Example: DBB21_01

- Two DUs
- One CPRI link between DUs
- CPRI port configuration number 01

For RBBs with more than one CPRI connection, the ports in the RBB are used from top to bottom as seen in the block diagrams in [RBBs](#) on page 1133.

For DBBs with more than one CPRI connection to each sector, DU and Baseband ports are used in alphabetical order.

In configurations where DUW 30 is used, the ODW 30 digital unit can also be used.



In configurations where DUS 41 is used, the ODS 41 digital unit can also be used.

Refer to the following sections for configuration rules and port assignment:

DBB10_81:	DBB10_81 on page 1100
DBB10_99:	DBB10_99 on page 1102
DBB10_xx:	DBB10_xx on page 1103
DBB11_99:	DBB11_99 on page 1105
DBB11_xx:	DBB11_xx on page 1107
DBB12_99:	DBB12_99 on page 1109
DBB12_xx:	DBB12_xx on page 1110
DBB20_81:	DBB20_81 on page 1112
DBB20_xx:	DBB20_xx on page 1114
DBB21_81:	DBB21_81 on page 1116
DBB21_99:	DBB21_99 on page 1119
DBB21_xx:	DBB21_xx on page 1121
DBB22_99:	DBB22_99 on page 1123
DBB22_xx:	DBB22_xx on page 1125
DBB31_81:	DBB31_81 on page 1127
DBB32_81:	DBB32_81 on page 1130

46.1.1 DBB10_81

This sections describes DBB10_81, which has support for Baseband R503 and Baseband P614.

For DU, Baseband, and software dependencies related to Baseband P614, see [Baseband P614](#) on page 1288.

For DU, Baseband, and software dependencies related to Baseband R503, see [Baseband R503](#) on page 1293.

[Figure 38](#) shows the DBB10_81 block diagram.

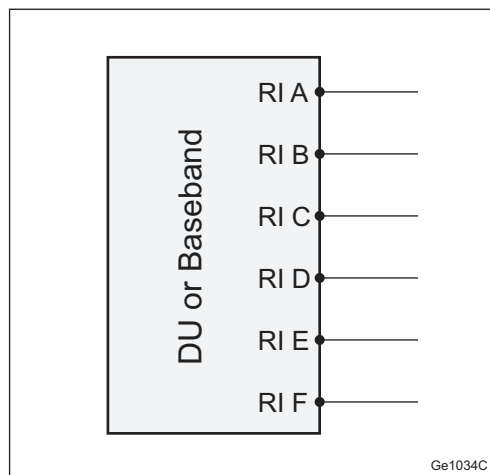


Figure 38 DBB10_81 Block Diagram

The following rules apply to configurations with DBB10_81:

- All available RI ports can be used for radio connections.
- Each RI port can connect to one radio or one cascade chain (up to four radios). For more information on CPRI dependencies and cascading, see [DBB10_81 Configurations](#) on page 1101
- Normally one RBB is only connected to one DU or Baseband.
- The supported sectors, radios, and cells must not exceed the capacity of one node.
- All connected RBBs must not use more than the supported capacity of the specified DU or Baseband.

46.1.1.1 DBB10_81 Configurations

DBB10_81 configurations must follow the following connection rules:

- DBB10_81 is used for:
 - CDMA, LTE FDD, CDMA + LTE FDD with DUL 20.
 - CDMA, LTE FDD, LTE TDD, CDMA + LTE FDD, LTE FDD + LTE TDD node configurations with one DUS 31, DUS 41, ODS 41.
 - GSM, WCDMA, LTE FDD, LTE TDD, LTE FDD + LTE TDD, NR, single and mixed mode Baseband node configurations with Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6318, Baseband 6620 and Baseband 6630.
 - LTE FDD with RBs 6501
 - WCDMA, LTE FDD with Baseband 6502, IDU 5205, and IDU 5209

- Mixed mode IDU node configurations with IDU 5209
- Supports all RBBs supported in GSM, WCDMA, LTE and NR configurations.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Baseband R503 used with a cascading chain is considered to be the first unit in the chain. These defined RBBs can be connected to Baseband R503 and for the maximum number of units in the cascading chain (counting both radios and Baseband R503), see [Baseband R503](#) on page 1293

For Baseband R503 connections to DU or Baseband and to radios, see [Baseband R503](#) on page 1293.

46.1.2

DBB10_99

This sections describes DBB10_99, used for GSM and WCDMA configurations.

[Figure 39](#) shows the DBB10_99 block diagram.

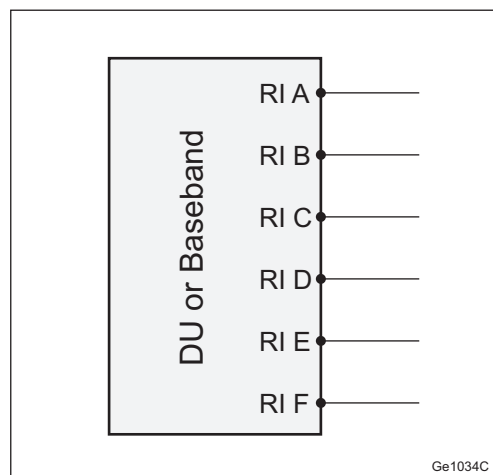


Figure 39 DBB10_99 Block Diagram

The following rules apply to configurations with DBB10_99:

- DBB10_99 is used only for GSM and WCDMA.
- All available RI ports can be used for radio connections.
- Each RI port can connect to one radio or one cascade chain (up to six radios). For more information on CPRI dependencies and cascading, see [DBB10_99 Configurations](#) on page 1103.
- The supported sectors, radios, and cells must not exceed the capacity of one node.



- All connected RBBs must not use more than the supported capacity of the specified DU or Baseband.

46.1.2.1 DBB10_99 Configurations

DBB10_99 configurations must follow the following connection rules:

- DBB10_99 is only used by GSM configurations with DUG 20 and WCDMA configurations with DUW 01, DUW 11, DUW 20, DUW 30, DUW 31, DUW 41, RBS 6501, ODW 30.
- DBB10_99 shall use one DU unit.
- DBB10_99 is possible to use all available RI ports to connect to radios.
- Each RI port shall be possible to connect to one radio or one cascaded radio chain which supports GSM and WCDMA configurations.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- DBB10_99 shall support all RBBs, which support GSM and WCDMA single mode star and cascade configurations.
- DBB10_99 shall not support GSM with mixed mode radios or ring configurations.

46.1.3 DBB10_xx

This section describes DBBs with one DU, DBB10_xx. For a description of DBB10_81, see [DBB10_81](#) on page 1100. For a description of DBB10_99, see [DBB10_99](#) on page 1102

[Figure 40](#) shows the DBB10_xx block diagram.

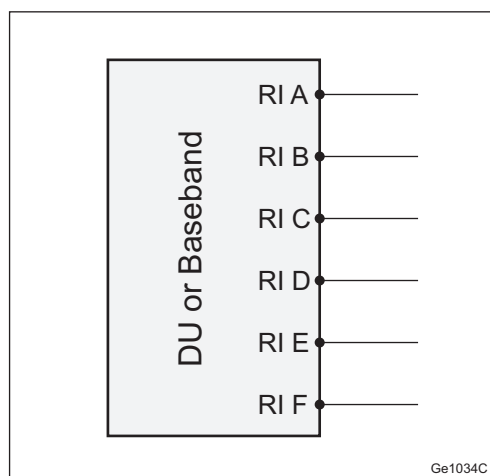


Figure 40 DBB10_xx Block Diagram



Table 913 through Table 916 list the DBB10_xx variants and their connections between DUs or Baseband units and sectors. Each sector is denoted Sx, where x is the number of the sector. Split configurations are indicated by the use of a forward slash. For example S1/S2 indicates that the connection to DU or Baseband is shared between two RBBs that are configured on the same radio. Cascaded configurations are indicated by the use of a comma. For example, S1, S2, S3 indicates that the RBBs for sector 1, sector 2 and sector 3 are cascaded and therefore connected to DU or Baseband using the same CPRI connection.

Table 913 DBB10_xx

Connection from DU or Baseband Port	Connection to Sector									
	DBB10_01	DBB10_02	DBB10_03	DBB10_04	DBB10_05	DBB10_06	DBB10_07	DBB10_08	DBB10_09	DBB10_10
RI A	S1	S1	S1/S2	S1/S2	S1/S2	S1/S2	S1/S2	S1/S2	S1/S2	S1
RI B	S2	S2	S2/S1	S2/S3	S2/S3	S2/S3	S2/S3	S2/S3	S3/S4	S2/S3
RI C	S3	S3	-	S3/S1	S3/S4	S3/S4	S3/S4	S3/S1	S5/S6	S4
RI D	S1	S4	-	-	S4/S1	S4/S5	S4/S5	S4/S5	S7/S8	S5/S6
RI E	S2	S5	-	-	-	S5/S1	S5/S6	S5/S6	S9/S10	S7
RI F	S3	S6	-	-	-	-	S6/S1	S6/S4	S11/S12	S8/S9

Table 914 DBB10_xx (Continued)

Connection from DU or Baseband Port	Connection to Sector									
	DBB10_11	DBB10_12	DBB10_13	DBB10_14	DBB10_15	DBB10_21	DBB10_22	DBB10_23	DBB10_24	DBB10_25
RI A	S1/S2/S3/S4	S1, S2	S1, S2, S3, S4	S1/S2	S1/S2/S3/S4	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2	S1, S4	-
RI B	S1/S2/S3/S4	S3, S4	S5, S6, S7, S8	S1/S2	S5/S6/S7/S8	-	S4, S5, S6	S3, S4	S2, S5	-
RI C	S9, S10, S11, S12	S5, S6	S9, S10, S11, S12	S3/S4	S9/S10/S11/S12	-	-	S5, S6	S3, S6	S1
RI D	S5/S6/S7/S8	-	S1, S2, S3, S4	S3/S4	S13/S14/S15/S16	-	-	-	-	S2, S3
RI E	S9/S10/S11/S12	-	S5, S6, S7, S8	S5/S6	S17/S18/S19/S20	-	-	-	-	-
RI F	S9/S10/S11/S12	-	S9, S10, S11, S12	S5/S6	S21/S22/S23/S24	-	-	-	-	-



Table 915 DBB10_xx (Continued)

Connection from DU or Baseband Port	Connection to Sector									
	DBB10_26	DBB10_27	DBB10_28	DBB10_29	DBB10_30	DBB10_31	DBB10_32	DBB10_33	DBB10_34	DBB10_35
RI A	S1, S2, S3, S4	S1/S2, S3/S4	S1/S2, S3/S4, S5/S6	S1, S2	S1, S2, S3	S1/S2, S3/S4, S5/S6, S7/S8	S1, S2	-	S1, S3	S1, S2
RI B	S5, S6, S7, S8	S5/S6, S7/S8	S7/S8, S9/S10, S11/S12	S3, S4	S4, S5, S6	S9/S10, S11/S12	S3, S4	-	S2, S3	S1, S3
RI C	S9, S10, S11, S12	S9/S10, S11/S12	-	S5, S6	S7, S8, S9	-	S5, S6	S1	S4, S6	S4, S5
RI D	-	-	-	S7, S8	S10, S11, S12	-	S2	S2/S3	S5, S6	S4, S6
RI E	-	-	-	S9, S10	-	-	S4	-	S7, S9	S7, S8
RI F	-	-	-	S11, S12	-	-	S6	-	S8, S9	S7, S9

Table 916 DBB10_xx (continued)

Connection from DU or Baseband Port	Connection to Sector						
	DBB10_41	DBB10_42	DBB10_44	DBB10_45	DBB10_50	DBB10_51	DBB10_52
RI A	S1	S1	S1	S1	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2
RI B	S1	S1	S1	S1	S6, S5, S4, S3, S2, S1	S4, S5, S6	S3, S4
RI C	S2	S2	S1	S1	-	S3, S2, S1	S5, S6
RI D	S3	S2	S2	S1	-	S6, S5, S4	S2, S1
RI E	S4	S3	S2	S2	-	-	S4, S3
RI F	S5	S4	S2	S2	-	-	S6, S5

46.1.4 DBB11_99

This sections describes DBB11_99, used for GSM configurations.

[Figure 41](#) shows the DBB11_99 block diagram.

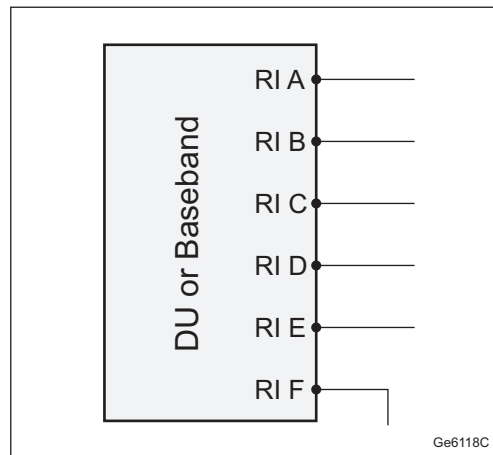


Figure 41 DBB11_99 Block Diagram

The following rules apply to configurations with DBB11_99:

- DBB11_99 is used only for GSM.
- Port RI F is used for synchronization between DUs.
- Ports RI A, RI B, RI C, RI D, and RI E can be used for radio connections.
- Each RI port can connect to one radio or one cascade chain (up to six radios). For more information on CPRI dependencies and cascading, see [DBB11_99 Configurations](#) on page 1106.
- The supported sectors, radios, and cells must not exceed the capacity of one node.
- All connected RBBs must not use more than the supported capacity of the specified DU or Baseband.

46.1.4.1

DBB11_99 Configurations

DBB11_99 configurations must follow the following connection rules:

- DBB11_99 is only used by GSM configurations with DUG 20.
- DBB11_99 shall use one DU unit.
- DBB11_99 shall use port RI F for synchronization between DUs.
- DBB11_99 can use ports RI A, RI B, RI C, RI D, and RI E to connect to radios.
- Each RI port can connect to one radio or one cascaded radio chain which supports GSM configurations.
- DBB11_99 shall support all RBBs, which support GSM single mode star and cascade configurations.



- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- DBB11_99 shall not support mixed mode radios or ring configurations.
- All radio units and connected RBBs shall not use more than the capacity of the DU.

46.1.5

DBB11_xx

This section describes DBBs with one DU or Baseband and one IDL2 link to another DBB through a CPRI connection.

[Figure 42](#) shows the DBB11_xx block diagram. [Figure 43](#) shows an example of a DBB11_xx connected to another DBB.

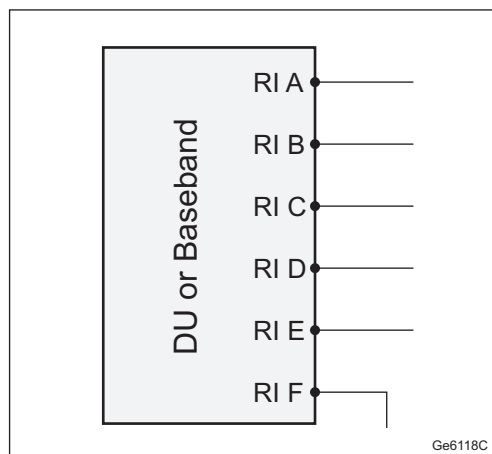


Figure 42 DBB11_xx Block Diagram

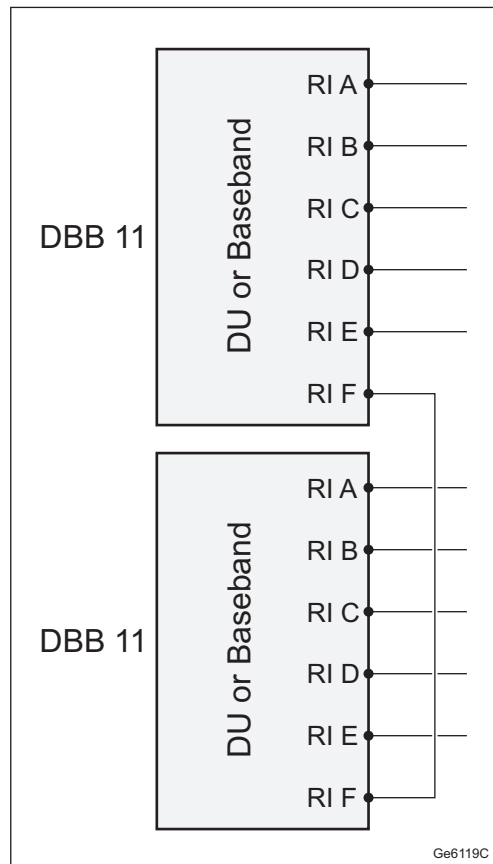


Figure 43 Block Diagram for Two Interconnected DBB11_xx

Table 917 lists the DBB11_xx variants and their connections from DU or Baseband to sectors and other DBBs.

Each sector is denoted Sx, where x is the number of the sector. Cascaded configurations are indicated by the use of a comma. For example, S1, S2, S3 indicates that the RBBs for sector 1, sector 2 and sector 3 are cascaded and therefore connected to DU or Baseband using the same CPRI connection

Table 917 DBB11_xx

Connection from DU or Baseband Port	Connection to Sector, DU or Baseband										
	DBB11_01	DBB11_02	DBB11_03	DBB11_04	DBB11_21	DBB11_22	DBB11_23	DBB11_24	DBB11_25	DBB11_26	DBB11_99
RI A	S1	S1	S1	S1	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2	User defined
RI B	S2	S2	S1	S1	-	S4, S5, S6	S3, S4	S6, S5, S4, S3, S2, S1	S4, S5, S6	S3, S4	User defined
RI C	S3	S3	S1	S1	-	-	S5, S6	-	S3, S2, S1	S2, S1	User defined
RI D	S4	S1	S2	S1	-	-	-	-	S6, S5, S4	S4, S3	User defined



Connection from DU or Baseband Port	Connection to Sector, DU or Baseband										
	DBB11_01	DBB11_02	DBB11_03	DBB11_04	DBB11_21	DBB11_22	DBB11_23	DBB11_24	DBB11_25	DBB11_26	DBB11_99
RI E	S5	S2	S2	S2	-	-	-	-	-	-	User defined
RI F	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB

46.1.6 DBB12_99

This section describes DBB12_99, used for GSM configurations.

Figure 44 shows the DBB12_99 block diagram.

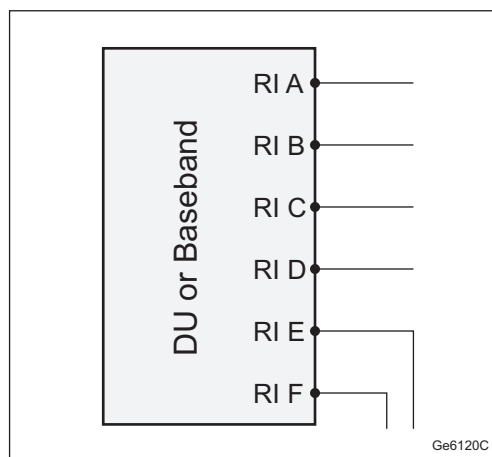


Figure 44 DBB12_99 Block Diagram

The following rules apply to configurations with DBB12_99:

- DBB12_99 is used only for GSM.
- Ports RI E and RI F are used for synchronization between DUs.
- Ports RI A, RI B, RI C, and RI D can be used for radio connections.
- Each RI port can connect to one radio or one cascade chain (up to six radios). For more information on CPRI dependencies and cascading, see [DBB12_99 Configurations](#) on page 1109.
- The supported sectors, radios, and cells must not exceed the capacity of one node.
- All connected RBBs must not use more than the supported capacity of the specified DU or Baseband.

46.1.6.1 DBB12_99 Configurations

DBB12_99 configurations must follow the following connection rules:

- DBB12_99 is only used by GSM configurations with DUG 20.
- DBB12_99 shall use one DU unit.
- DBB12_99 shall use ports RI E and RI F for synchronization between DUs.
- DBB12_99 can use ports RI A, RI B, RI C, and RI D to connect to radios.
- Each RI port can connect to one radio or one cascaded radio chain which supports GSM configurations.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- DBB12_99 shall support all RBBs, which support GSM single mode star and cascade configurations.
- DBB12_99 shall not support mixed mode radios or ring configurations.
- All radio units and connected RBBs shall not use more than the capacity of the DU.

46.1.7 DBB12_xx

This section describes DBBs with one DU or Baseband and two IDL2 links to other DBBs through CPRI connections.

[Figure 45](#) shows the DBB12_xx block diagram. [Figure 46](#) shows an example of DBB12_xx connected to two other DBBs.

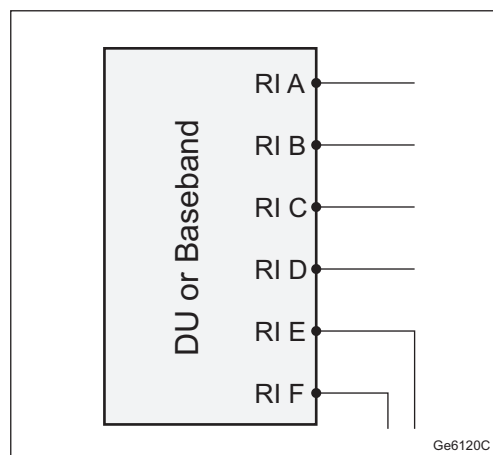


Figure 45 DBB12_xx Block Diagram

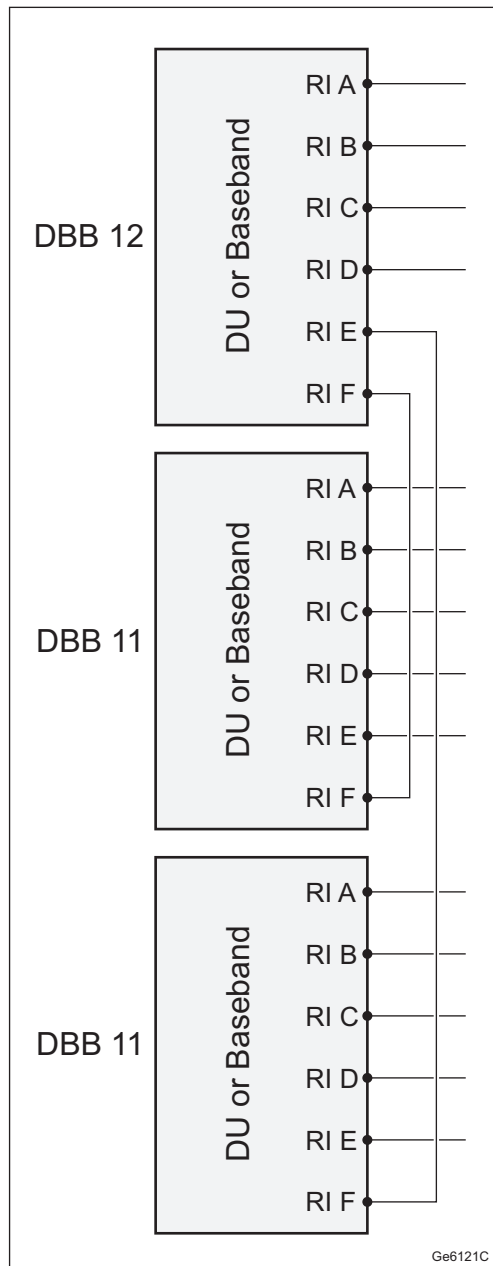


Figure 46 Block Diagram for DBB12_xx Connected to Two DBB11_xx.

[Table 918](#) lists the DBB12_xx variants and their connections from DU or Baseband to sectors and other DBBs. Each sector is denoted Sx, where x is the number of the sector. Cascaded configurations are indicated by the use of a comma. For example, S1, S2, S3 indicates that the RBBs for sector 1, sector 2 and sector 3 are cascaded and therefore connected to DU or Baseband using the same CPRI connection



Table 918 DBB12_xx

Connection from DU or Baseband Port	Connection to Sector, DU or Baseband											
	DBB12_01	DBB12_02	DBB12_03	DBB12_04	DBB12_05	DBB12_21	DBB12_22	DBB12_23	DBB21_24	DBB12_25	DBB12_26	DBB12_99
RI A	S1	S1	S1	S1	S1	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2	User defined
RI B	S2	S2	S1	S1	S2	-	S4, S5, S6	S3, S4	S6, S5, S4, S3, S2, S1	S4, S5, S6	S3, S4	User defined
RI C	S3	S3	S1	S1	S1	-	-	S5, S6	-	S3, S2, S1	S2, S1	User defined
RI D	S4	S1	S2	S1	S2	-	-	-	-	S6, S5, S4	S4, S3	User defined
RI E	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB
RI F	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB	DUBB

46.1.8 DBB20_81

This section describes DBB20_81, which has the following:

- Two DUs or Baseband units and one IDL1 link for DU or IDLe link for Baseband interconnection.
- Support for Baseband R503.

For DU, Baseband, and software dependencies related to Baseband R503, see [Baseband R503](#) on page 1293.

[Figure 47](#) shows the DBB20_81 block diagram.

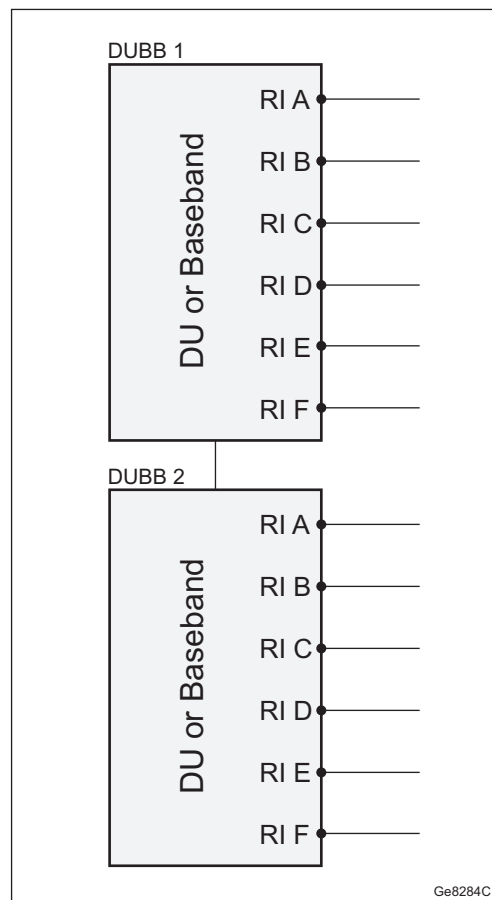


Figure 47 DBB20_81 Block Diagram

The following rules apply to configurations with DBB20_81:

- The two DUs or Baseband units must be of the same type.
- All available RI ports can be used for radio connections.
- Each RI port can connect to one radio or one cascade chain (up to four radios).
- Any single DU or Baseband in DBB20_81 can be connected to RBBs supported in DBB10_81 following the same placement rules. For more information on CPRI dependencies and cascading, see DBB10_81, [DBB10_81 Configurations](#) on page 1101
- Normally one RBB is only connected to one DU or Baseband.
- The following RBBs with two CPRI links can be connected to two DUs or Baseband units (one CPRI is connected to the first DU or Baseband and another CPRI is connected to the second DU or Baseband, but no Carrier aggregation between DUs or Baseband units): RBB11_2A, RBB11_2B, RBB22_2C and RBB88_2A.

- Any single DU or Baseband in DBB20_81 must support the same node capacity as in DBB10_81.
- The supported sectors, radios, and cells must not exceed the capacity of one node.
- All connected RBBs must not use more than the supported capacity of the specified DU or Baseband.

For Baseband R503 connections to DU or Baseband and to radios, see [Baseband R503](#) on page 1293.

46.1.9

DBB20_xx

This section describes DBBs with two DUs or Baseband units, DBB20_xx. For a description of DBB20_81, see [DBB20_81](#) on page 1112.

[Figure 48](#) shows the DBB20_xx block diagram.

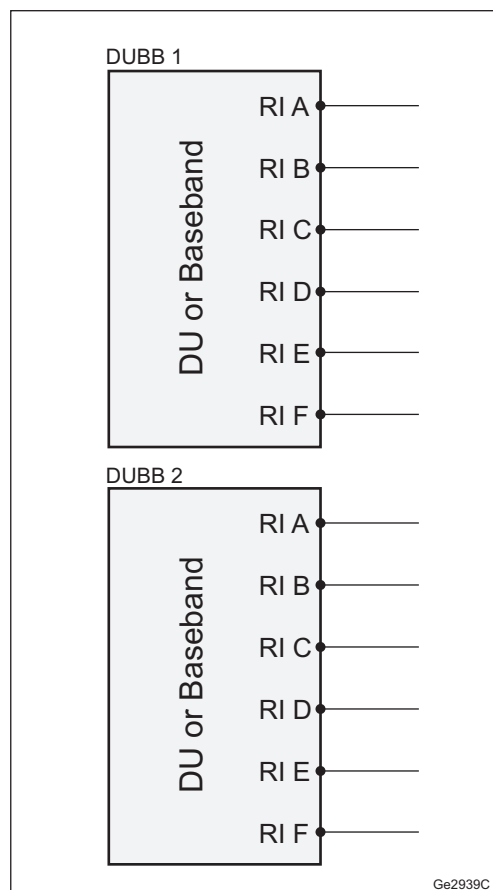


Figure 48 DBB20_xx Block Diagram

[Table 919](#) and [Table 920](#) list the DBB20_xx variants and their connections from DU or Baseband to the sectors.



Table 919 DBB20_xx

Connection from DU or Baseband Port		Connection to Sector									
		DBB20_01	DBB20_02	DBB20_03	DBB20_04	DBB20_05	DBB20_07	DBB20_08	DBB20_09	DBB20_10	DBB20_11
DUBB 1	RI A	S1	S1	S1	S1/S2/S3/S4	S1/S2/S3/S4	S1	S1	S1	S1	S1/S2
	RI B	S1	S2	S2	S1/S2/S3/S4	S9/S10/S11/S12	S2	S2	S3	S2	S1/S2
	RI C	S3	S3	S3	S9/S10/S11/S12	S17/S18/S19/S20	S3	S3	S5	S5	S5/S6
	RI D	S3	S1	-	S9/S10/S11/S12	-	S4	S4	S7	S6	S5/S6
	RI E	S5	S2	-	S17/S18/S19/S20	-	S5	S5	S9	S9	S9/S10
	RI F	S5	S3	-	S17/S18/S19/S20	-	S6	S6	S11	S10	S9/S10
DUBB 2	RI A	S2	S4	S1	S5/S6/S7/S8	S5/S6/S7/S8	S1	S7	S2	S3	S3/S4
	RI B	S2	S5	S2	S5/S6/S7/S8	S13/S14/S15/S16	S2	S8	S4	S4	S3/S4
	RI C	S4	S6	S3	S13/S14/S15/S16	S21/S22/S23/S24	S3	S9	S6	S7	S7/S8
	RI D	S4	S4	-	S13/S14/S15/S16	-	S4	S10	S8	S8	S7/S8
	RI E	S6	S5	-	S21/S22/S23/S24	-	S5	S11	S10	S11	S11/S12
	RI F	S6	S6	-	S21/S22/S23/S24	-	S6	S12	S12	S12	S11/S12

Table 920 DBB20_xx (Continued)

Connection from DU or Baseband Port		Connection to Sector									
		DBB20_13	DBB20_14	DBB20_15	DBB20_21	DBB20_22	DBB20_23	DBB20_24	DBB20_27	DBB20_28	DBB20_29
DUBB 1	RI A	S1/S2	S1	S1, S2, S3, S4	S1, S2, S3	S1, S2	S1, S2, S3	S1, S2	S1, S3, S5	S1, S3	S1, S2, S3, S4
	RI B	S5/S6	S1	S1, S2, S3, S4	S4, S5, S6	S3, S4	S7, S8, S9	S5, S6	S7, S9, S11	S5, S7	S9, S10
	RI C	S9/S10	-	-	-	S5, S6	-	S9, S10	-	S9, S11	-
	RI D	S13/S14	-	-	-	S1, S2	-	S1, S2	-	S1, S3	-
	RI E	S17/S18	-	-	-	S3, S4	-	S5, S6	-	S5, S7	-
	RI F	S21/S22	-	-	-	S5, S6	-	S9, S10	-	S9, S11	-
DUBB 2	RI A	S3, S4	S2	S5, S6, S7, S8	S7, S8, S9	S7, S8	S4, S5, S6	S3, S4	S2, S4, S6	S2, S4	S5, S6, S7, S8
	RI B	S7/S8	S2	S5, S6, S7, S8	S10, S11, S12	S9, S10	S10, S11, S12	S7, S8	S8, S10, S12	S6, S8	S11, S12



Connection from DU or Baseband Port		Connection to Sector									
		DBB20_ 13	DBB20_ 14	DBB20_ 15	DBB20_ 21	DBB20_ 22	DBB20_ 23	DBB20_ 24	DBB20_ 27	DBB20_ 28	DBB20_ 29
	RI C	S11/S12	-	-	-	S11, S12	-	S11, S12	-	S10, S12	-
	RI D	S15/S16	-	-	-	S7, S8	-	S3, S4	-	S2, S4	-
	RI E	S19/S20	-	-	-	S9, S10	-	S7, S8	-	S6, S8	-
	RI F	S23/S24	-	-	-	S11, S12	-	S11, S12	-	S10, S12	-

46.1.10 DBB21_81

This section describes DBB21_81, used for LTE configurations, which contains the following:

- Two DUs or Baseband units and one IDL2 link for DU or Baseband interconnection
- Support for Baseband R503

For DU, Baseband, and software dependencies related to Baseband R503, see [Baseband R503](#) on page 1293.

[Figure 49](#) shows the DBB21_81 block diagram. One DU or Baseband is configured as the core DU or Baseband for the node and the other one is configured as the extension DU or Baseband .

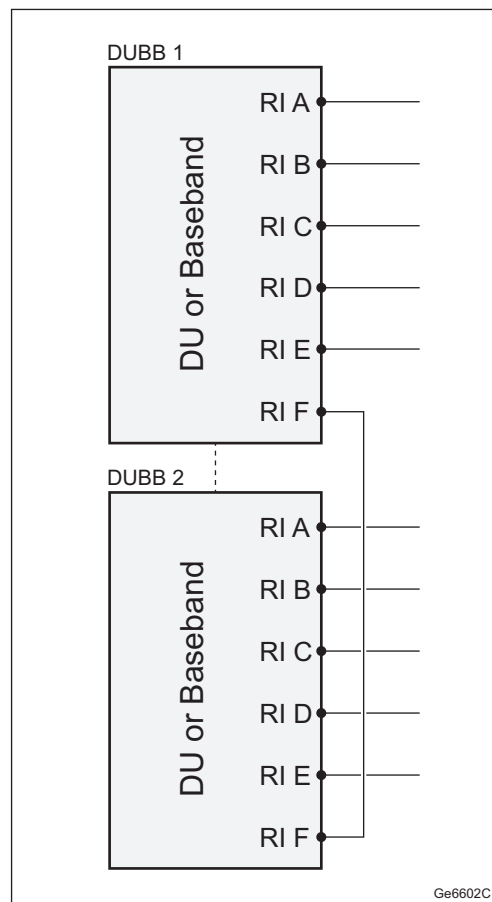


Figure 49 DBB21_81 Block Diagram

The following apply for DU or Baseband interconnections for DBB21_81:

- Any of the ports RI C, RI D, RI E and RI F on both DUs or Baseband units can be used for the IDL2 link. The default connection is between the RI F ports.
- DUS 31 and DUS 41 must not be mixed in the DBB.
- If the extension DU is a DUS 31 01 or a DUS 41 01, then the IDL1 link (dotted line in the block diagram) between the core DU and extension DU is required.
- If the extension DU is a DUS 31 02 or a DUS 41 02, then the IDL1 link (dotted line in the block diagram) between the core DU and extension DU is optional, but recommended.

See [Table 921](#) for IDL1 configuration with DBB21_81

Table 921 IDL1 Support with DUS 31 and DUS 41 for DBB21_81

DU 1 (Core)	DU 2 (Extension)	IDL1 Use
DUS 31 01	DUS 31 01	Required



DU 1 (Core)	DU 2 (Extension)	IDL1 Use
DUS 31 01	DUS 31 02	Optional
DUS 31 02	DUS 31 01	Required
DUS 31 02	DUS 31 02	Optional
DUS 41 01	DUS 41 01	Required
DUS 41 01	DUS 41 02	Optional
DUS 41 02	DUS 41 01	Required
DUS 41 02	DUS 41 02	Optional

The following rules apply to configurations with DBB21_81:

- DBB21_81 is used only for LTE, with support for FDD, TDD or a mix of FDD and TDD configurations.
- Two of the available RI ports, one port per DU or Baseband, are unavailable for connections to RBBs.
- RBBs can be connected to any RI ports on DU or Baseband that not are used for the IDL2 link or Baseband R503.
- Each RI port can connect to one radio or one cascade chain.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Any single DU or Baseband in DBB21_81 can be connected to RBBs supported in DBB10_81 following the same placement rules. For more information on CPRI dependencies and cascading, see DBB10_81, [DBB10_81 Configurations](#) on page 1101
- Normally one RBB is only connected to one DU or Baseband
- The following RBBs with two CPRI links can be connected to two DUs or Baseband units (one CPRI is connected to the first DU or Baseband and another CPRI is connected to the second DU or Baseband, but no Carrier aggregation between DUs or Baseband units): RBB11_2A, RBB11_2B, RBB22_2C and RBB88_2A.
- Any single DU or Baseband in DBB21_81 must support the same node capacity as in DBB10_81.
- The supported sectors, radios, and cells must not exceed the capacity of one node.

For Baseband R503 connections to DU or Baseband and to radios, see [Baseband R503](#) on page 1293.



46.1.11

DBB21_99

This section describes DBB21_99, used for WCDMA configurations, which contains the following:

- Two DUs or Baseband units and one CPRI link for interconnecting these

Figure 49 shows the DBB21_99 block diagram. One DU or Baseband is configured as the core DU or Baseband for the node and the other one is configured as the extension DU or Baseband.

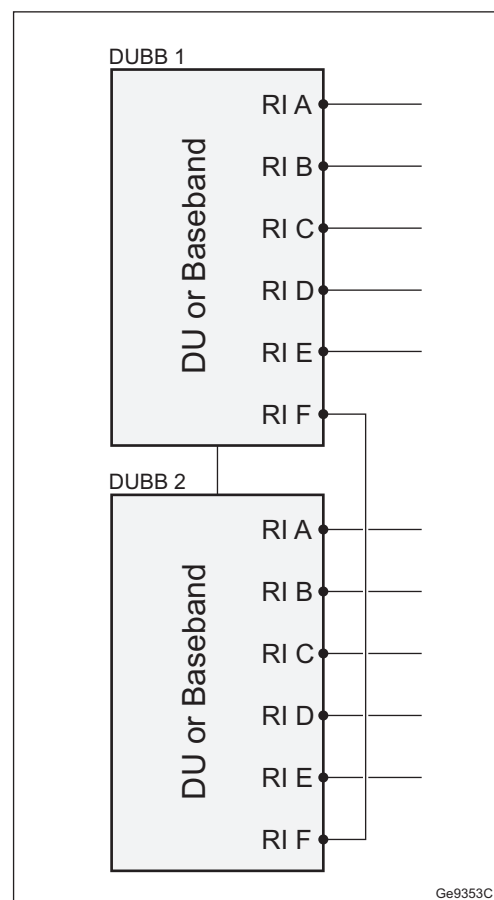


Figure 50 DBB21_99 Block Diagram

The DU or Baseband interconnections for DBB21_99 are described below:

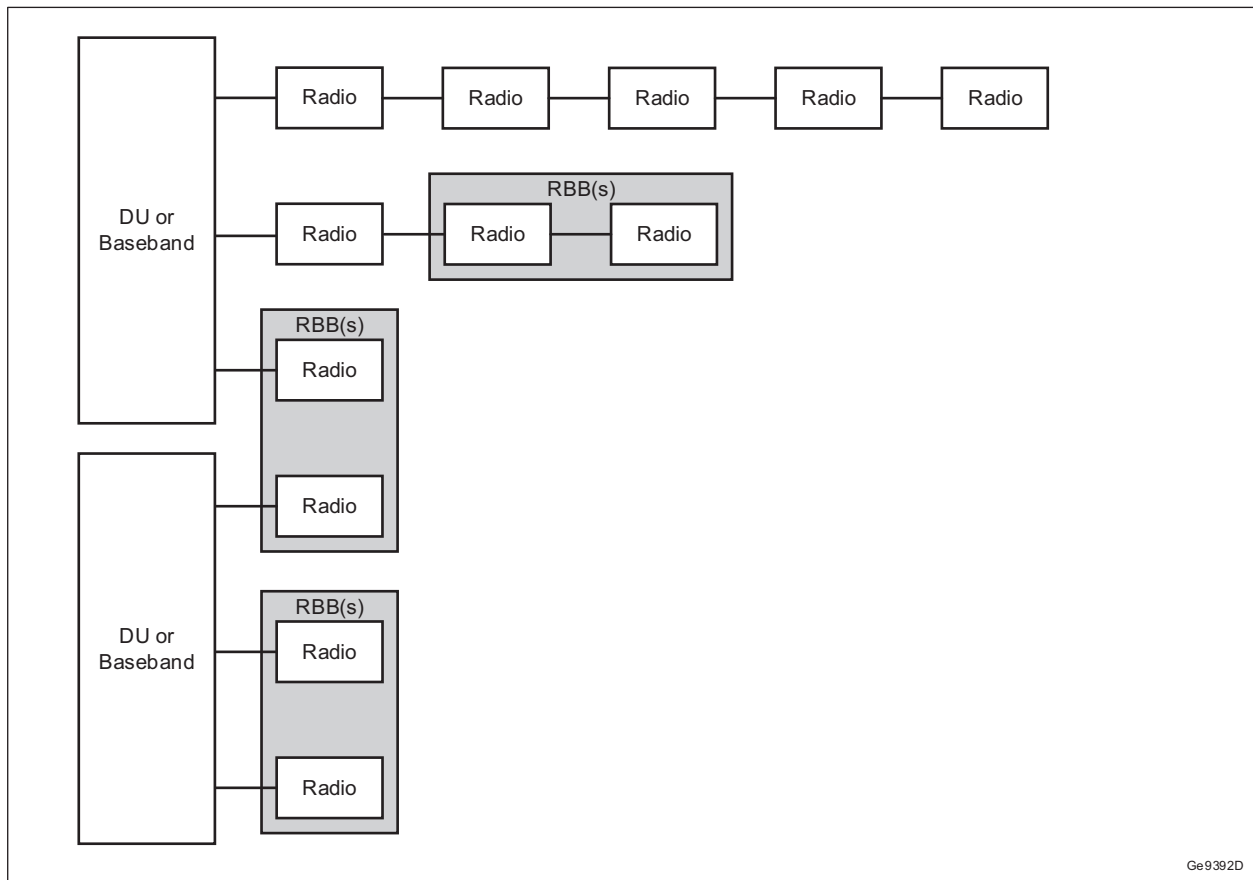
- The two DUs or Baseband units are connected by a CPRI link between the RI F ports.

The following rules apply to configurations with DBB21_99:

- DBB21_99 is used only for WCDMA.



- Two of the available RI ports, one port per DU or Baseband, are unavailable for connections to RBBs.
- RBBs can be connected to any RI ports on the DUs or Baseband units that not are used for the CPRI DU or Baseband interconnection link.
- Each RI port can connect to one radio or one cascade chain.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Normally an RBB is only connected to one DU or Baseband.
- Any single DU or Baseband in DBB21_99 can be connected to RBBs supported in DBB10_99 following the same placement rules. For more information on CPRI dependencies and cascading, see DBB10_99, [DBB10_99 Configurations](#) on page 1103
- Any single DU or Baseband in DBB21_99 must support the same node capacity as in DBB10_99.
- The supported sectors, radios, and cells must not exceed the capacity of one node.



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Figure 51 Examples of DBB21_99 Configurations With Cascading, Single and Multiple CPRI Links per RBB

46.1.12 DBB21_xx

This section describes DBB21_xx, which has two DUs or Baseband units and one CPRI link for DU or Baseband interconnection (IDL2). DBB21_81 is described in [DBB21_81](#) on page 1116. DBB21_99 is described in [DBB21_99](#) on page 1119

[Figure 52](#) shows the DBB21_xx block diagram.

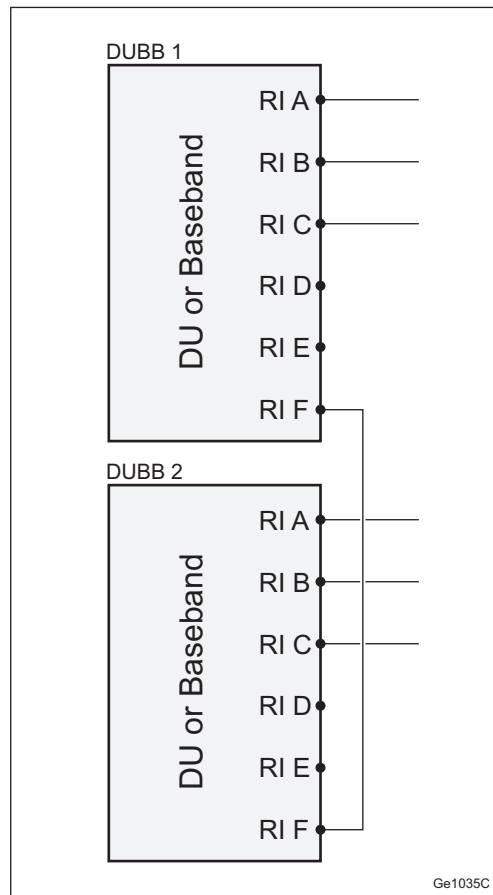


Figure 52 DBB21_xx Block Diagram

Table 922 lists the DBB21_xx variants and their connections between DUs or Baseband units and sectors. Each sector is denoted Sx, where x is the number of the sector. Split configurations are indicated by the use of a forward slash. For example S1/S2 indicates that the connection to the DU or Baseband is shared between two RBBs that are configured on the same radio. Cascaded configurations are indicated by the use of a comma. For example, S1, S2, S3 indicates that the RBBs for sector 1, sector 2 and sector 3 are cascaded and therefore connected to the DU or Baseband using the same CPRI connection.

Table 922 DBB21_xx

Connection from DU or Baseband Port		Connection to Sector, DU or Baseband											
		DBB21_01	DBB21_02	DBB21_03	DBB21_04	DBB21_05	DBB21_06	DBB21_07	DBB21_08	DBB21_21	DBB21_22	DBB21_23	DBB21_24
DUBB 1	RI A	S1	S1	S1/S2	S1/S2	S1/S2	S1/S2	S1/S2	S1/S2	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2	S1, S4
	RI B	S2	S2	S2/S1	S2/S3	S2/S1	S2/S3	S2/S3	S2/S1	-	-	S3, S4	S2, S5
	RI C	S3	S3	-	S3/S1	-	S3/S1	S3/S1	S3/S4	-	-	S5, S6	S3, S6
	RI D	-	-	-	-	-	-	-	S4/S3	-	-	-	-
	RI E	-	-	-	-	-	-	-	-	-	-	-	-



Connection from DU or Baseband Port		Connection to Sector, DU or Baseband											
		DBB21_01	DBB21_02	DBB21_03	DBB21_04	DBB21_05	DBB21_06	DBB21_07	DBB21_08	DBB21_21	DBB21_22	DBB21_23	DBB21_24
	RI F	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2	DUBB 2
DUBB 2	RI A	S4	S1	-	-	S3/S4	S4/S5	S4/S5	S5/S6	-	S4, S5, S6	-	-
	RI B	S5	S2	-	-	S4/S3	S5/S4	S5/S6	S6/S5	-	-	-	-
	RI C	S6	S3	-	-	-	-	S6/S4	-	-	-	-	-
	RI D	-	-	-	-	-	-	-	-	-	-	-	-
	RI E	-	-	-	-	-	-	-	-	-	-	-	-
	RI F	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1	DUBB 1

46.1.13 DBB22_99

This section describes DBB22_99, used for WCDMA configurations, which has:

- Two DUs or Baseband units and two CPRI links for DU or Baseband interconnection

[Figure 49](#) shows the DBB22_99 block diagram. One DU or Baseband is configured as the core DU or Baseband for the node and the other one is configured as the extension DU or Baseband.

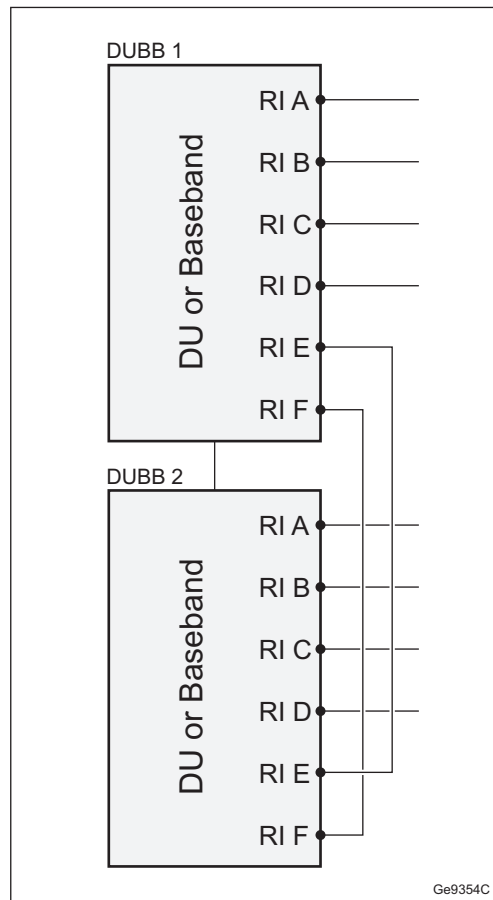


Figure 53 DBB22_99 Block Diagram

The DU or Baseband interconnections for DBB22_99 are described below:

- The two DUs or Baseband units are connected by two CPRI links between the RI E ports and between the RI F ports on both DUs or Baseband units.

The following rules apply to configurations with DBB22_99:

- DBB22_99 is used only for WCDMA.
- In total four of the available RI ports, two ports per DU or Baseband, are unavailable for connections to RBBs.
- RBBs can be connected to any RI ports on the DUs or Baseband units that not are used for the CPRI DU or Baseband interconnection links.
- Each RI port can connect to one radio or one cascade chain.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Normally an RBB is only connected to one DU or Baseband.



- Any single DU or Baseband in DBB22_99 can be connected to RBBs supported in DBB10_99 following the same placement rules. For more information on CPRI dependencies and cascading, see DBB10_99, [DBB10_99 Configurations](#) on page 1103
- Any single DU or Baseband in DBB22_99 must support the same node capacity as in DBB10_99.
- The supported sectors, radios, and cells must not exceed the capacity of one node.

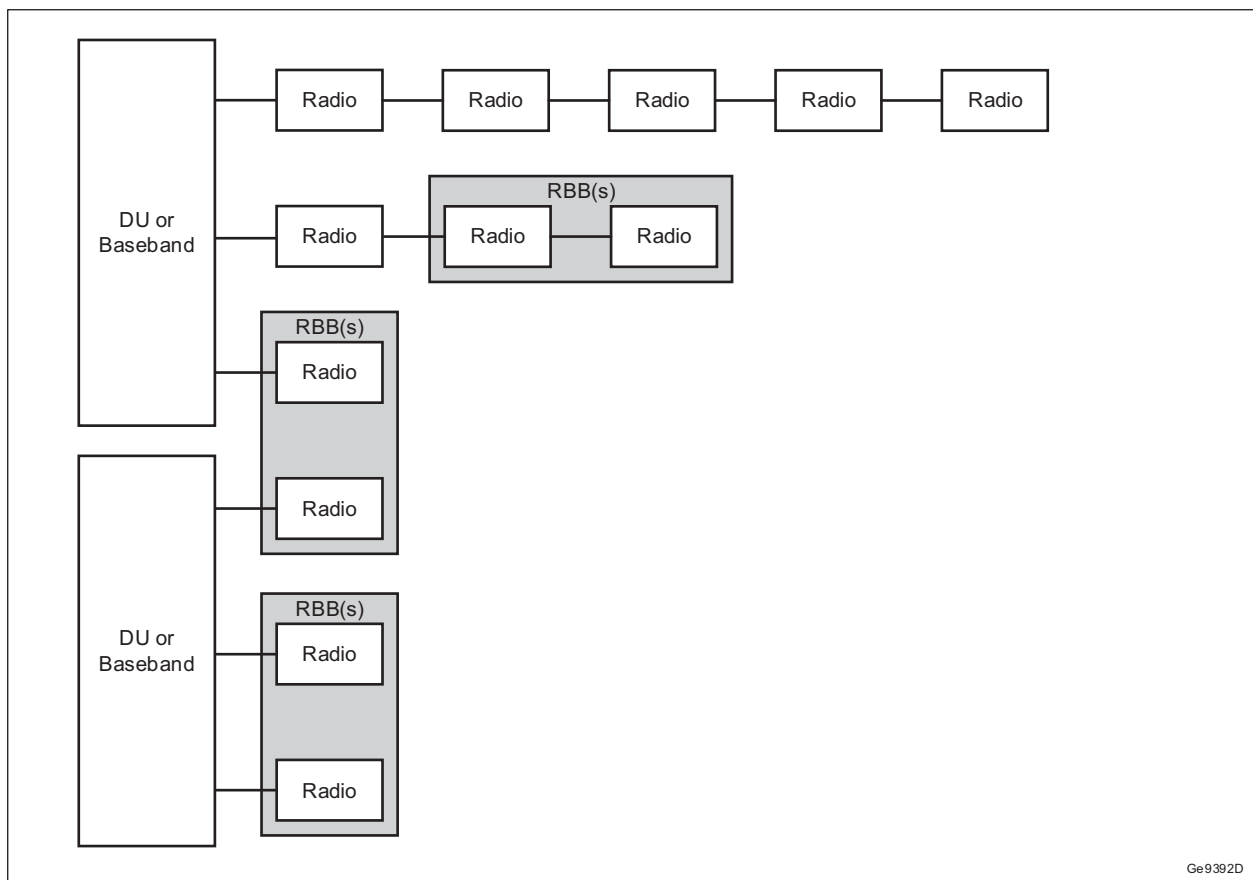


Figure 54 Examples of DBB22_99 Configurations with Cascading, Single and Multiple CPRI Links per RBB

46.1.14 DBB22_xx

This section describes DBB22_xx, which has two DUs or Baseband units and two CPRI links for DU or Baseband interconnections (IDL2) with different port configurations. DBB22_99 is described in [DBB22_99](#) on page 1123

[Figure 55](#) shows the DBB22_xx block diagram.

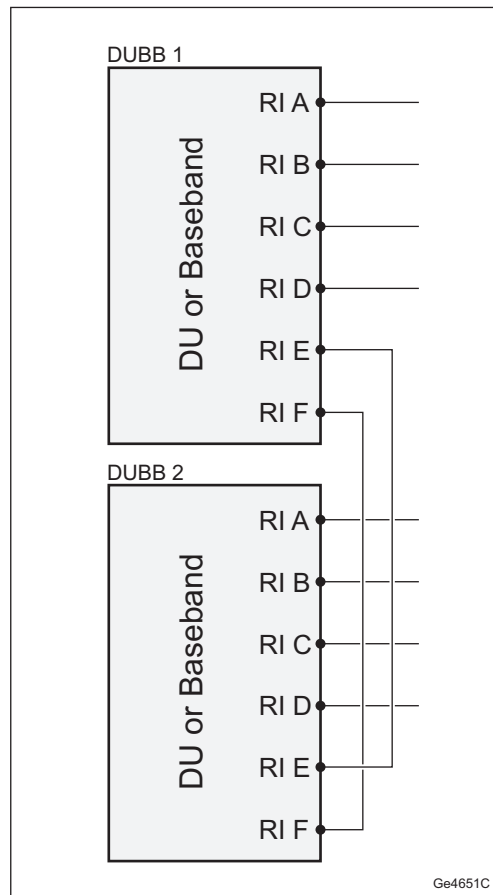


Figure 55 DBB22_xx Block Diagram

Table 923 lists the DBB22_xx variants and their connections between DUs or Baseband units and sectors. Each sector is denoted Sx, where x is the number of the sector. Split configurations are indicated by the use of a forward slash. For example S1/S2 indicates that the connection to the DU or Baseband is shared between two RBBs that are configured on the same radio. Cascaded configurations are indicated by the use of a comma. For example, S1, S2, S3 indicates that the RBBs for sector 1, sector 2 and sector 3 are cascaded and therefore connected to the DU or Baseband using the same CPRI connection.

Table 923 DBB22_xx

Connection from DU or Baseband Port		Connection to Sector, DU or Baseband											
		DBB22_01	DBB22_02	DBB22_03	DBB22_04	DBB22_05	DBB22_06	DBB22_07	DBB22_08	DBB22_2_21 ¹	DBB22_2_22	DBB22_2_23	DBB22_2_24
DUBB 1	RI A	S1	S1	S1/S2	S1/S2	S1/S2	S1/S2	S1/S2	S1/S2	S1, S2, S3, S4, S5, S6	S1, S2, S3	S1, S2	S1, S4
	RI B	S2	S2	S2/S1	S2/S3	S2/S1	S2/S3	S2/S3	S2/S1	-	-	S3, S4	S2, S5
	RI C	S3	S3	-	S3/S1	-	S3/S1	S3/S1	S3/S4	-	-	S5, S6	S3, S6
	RI D	-	-	-	-	-	-	-	S4/S3	-	-	-	-



Connection from DU or Baseband Port		Connection to Sector, DU or Baseband											
		DBB22_01	DBB22_02	DBB22_03	DBB22_04	DBB22_05	DBB22_06	DBB22_07	DBB22_08	DBB22_21 ⁽¹⁾	DBB22_22	DBB22_23	DBB22_24
	RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E	DUBB 2, RI E
	RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F	DUBB 2, RI F
DUBB 2	RI A	S4	S1	-	-	S3/S4	S4/S5	S4/S5	S5/S6	-	S4, S5, S6	-	-
	RI B	S5	S2	-	-	S4/S3	S5/S4	S5/S6	S6/S5	-	-	-	-
	RI C	S6	S3	-	-	-	-	S6/S4	-	-	-	-	-
	RI D	-	-	-	-	-	-	-	-	-	-	-	-
	RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E	DUBB 1, RI E
	RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F	DUBB 1, RI F

(1) Not used for the moment.

46.1.15 DBB31_81

This section describes DBB31_81, used for LTE configurations, which contains the following:

- Three DUs or Baseband units and two links for DU or Baseband interconnections
- Support for Baseband R503

For DU, Baseband, and software dependencies related to Baseband R503, see [Baseband R503](#) on page 1293.

[Figure 56](#) shows the DBB31_81 block diagram. DU or Baseband 1 in the block diagram is configured as the core DU or Baseband for the node. DU or Baseband 2 and DU or Baseband 3 are configured as extension DUs or Baseband units.

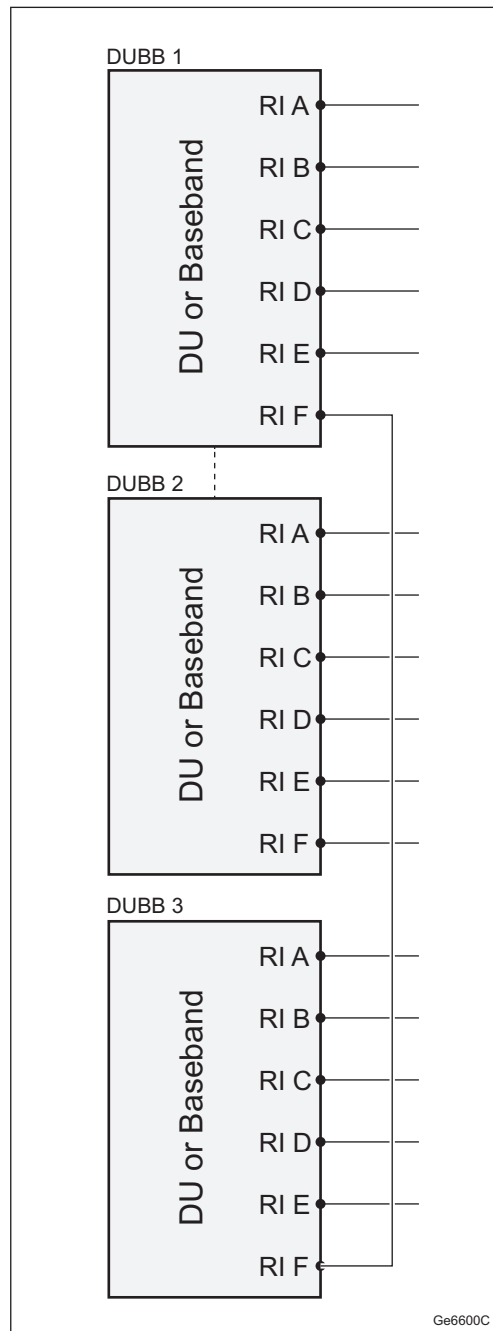


Figure 56 DBB31_81 Block Diagram Showing the Default DU or Baseband Interconnections

The DU or Baseband interconnections for DBB31_81 are described below:

- The core DU or Baseband is connected to DU or Baseband 2 (extension) through an IDL1 link.
- The core DU or Baseband is connected to DU or Baseband 3 (extension) through an IDL2 link. Any of the ports RI C, RI D, RI E or RI F on the core DU



or Baseband is connected to any of the ports RI C, RI D, RI E or RI F on the extension DU or Baseband. The default connection is between the RI F ports.

- DUS 31 and DUS 41 must not be mixed in the DBB.
- DU 3 must be a DUS 31 02 or a DUS 41 02.

See [Table 924](#) for DUS 31 and DUS 31 Configurations with DBB31_81

Table 924 DUS 31 and DUS 41 Configurations for DBB31_81

DU 1 (Core)	DU 2 (Extension)	DU 3 (Extension)	IDL1 Use
DUS 31 01	DUS 31 01	DUS 31 02	Required
DUS 31 01	DUS 31 02	DUS 31 02	Required
DUS 31 02	DUS 31 01	DUS 31 02	Required
DUS 31 02	DUS 31 02	DUS 31 02	Required
DUS 41 01	DUS 41 01	DUS 41 02	Required
DUS 41 01	DUS 41 02	DUS 41 02	Required
DUS 41 02	DUS 41 01	DUS 41 02	Required
DUS 41 02	DUS 41 02	DUS 41 02	Required

The following rules apply to configurations with DBB31_81:

- DBB31_81 is used only for LTE, with support for FDD or TDD.
- In total two of the RI ports are unavailable for connections to RBBs.
- RBBs can be connected to any RI ports on the DUs or Baseband units that not are used for the IDL2 link.
- Each RI port can connect to one radio or one cascade chain.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Any single DU or Baseband in DBB31_81 can be connected to RBBs supported in DBB10_81 following the same placement rules. For more information on CPRI dependencies and cascading, see DBB10_81, [DBB10_81 Configurations](#) on page 1101
- Each RBB is connected to only one of the DUs or Baseband units.
- Any single DU or Baseband in DBB31_81 must support the same node capacity as in DBB10_81.
- The supported sectors, radios, and cells must not exceed the capacity of one node.



For Baseband R503 connections to DU or Baseband and to radios, see [Baseband R503](#) on page 1293.

46.1.16 DBB32_81

This section describes DBB32_81, used for LTE configurations, which contains the following:

- Three DUs or Baseband units and two IDL2 links for DU or Baseband interconnection
- Support for Baseband R503

For DU, Baseband, and software dependencies related to Baseband R503, see [Baseband R503](#) on page 1293.

[Figure 57](#) shows the DBB32_81 block diagram. DU or Baseband 1 in the block diagram is configured as the core DU or Baseband for the node. DU or Baseband 2 and DU or Baseband 3 are configured as extension DUs or Baseband units.

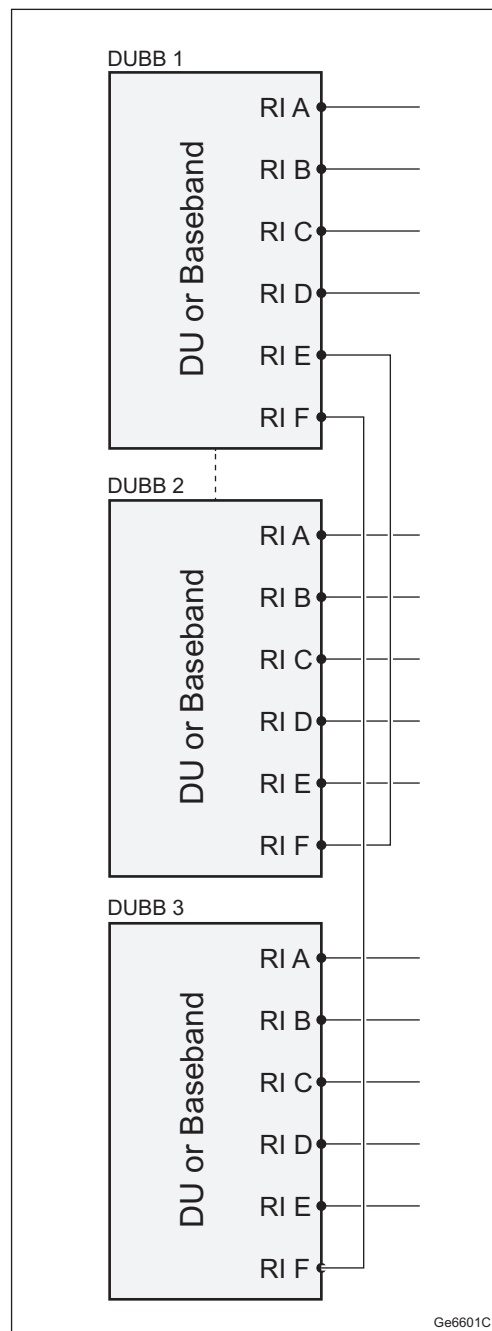


Figure 57 DBB32_81 Block Diagram Showing the Default DU or Baseband Interconnections

DU or Baseband interconnections for DBB32_81 are described below:

- The core DU or Baseband is connected to the extension DUs or Baseband units through IDL2 links. Any of the ports RI C, RI D, RI E or RI F on the core DU or Baseband is connected to any of the ports RI C, RI D, RI E or RI F on the extension DUs or Baseband units. The default connections are from the



RI E and RI F ports on the core DU or Baseband to the RI F port on each extension DU or Baseband.

- DUS 31 and DUS 41 must not be mixed in the DBB.
- Baseband 3 must be a DUS 31 02 or a DUS 41 02.
- If DU 2 is a DUS 31 01 or a DUS 41 01, then the IDL1 link (dotted line in the block diagram) between DU 1 (core) and DU 2 (extension) is required.
- If DU 2 is a DUS 31 02 or a DUS 41 02, then the IDL1 link (dotted line in the block diagram) between DU 1 (core) and DU 2 (extension) is optional, but recommended.

See [Table 925](#) for IDL1 configuration with DBB32_81

Table 925 IDL1 Support with DUS 31 and DUS 41 for DBB32_81

DU 1 (Core)	DU 2 (Extension)	DU 3 (Extension)	IDL1 Use
DUS 31 01	DUS 31 01	DUS 31 02	Required
DUS 31 01	DUS 31 02	DUS 31 02	Optional
DUS 31 02	DUS 31 01	DUS 31 02	Required
DUS 31 02	DUS 31 02	DUS 31 02	Optional
DUS 41 01	DUS 41 01	DUS 41 02	Required
DUS 41 01	DUS 41 02	DUS 41 02	Optional
DUS 41 02	DUS 41 01	DUS 41 02	Required
DUS 41 02	DUS 41 02	DUS 41 02	Optional

The following rules apply to configurations with DBB32_81

- DBB32_81 is used only for LTE, with support for FDD or TDD.
- In total four of the RI ports are unavailable for connections to RBBs.
- RBBs can be connected to any RI ports on the DU or Baseband unit that not are used for the IDL2 links.
- Each RI port can connect to one radio or one cascade chain.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Any single DU or Baseband unit in DBB32_81 can be connected to RBBs supported in DBB10_81 following the same placement rules. For more information on CPRI dependencies and cascading, see DBB10_81, [DBB10_81 Configurations](#) on page 1101



- Each RBB is connected to only one of the DUs or Baseband units.
- Any single DU or Baseband unit in DBB32_81 must support the same node capacity as in DBB10_81.
- The supported sectors, radios, and cells must not exceed the capacity of one node.

For Baseband R503 connections to DU or Baseband and to radios, see [Baseband R503](#) on page 1293.

46.2 RBBs

Each RBB defines a unique way of combining either internal radios, external radios or AIR in one sector with connections to DUs or Baseband units and the antenna system.

RBBs are named as follows: *RBB[Tx][Rx][C][V]*, where:

Tx	Number of Transmitter (TX) branches
Rx	Number of Receiver (RX) branches (excluding co-siting RX ports)
C	Number of Common Public Radio Interface (CPRI) links
V	Version

Example: RBB12_1A

- One TX branch
- Two RX branches
- One CPRI link between DU or Baseband and radio
- Version A

Note: Which ports are available, depends on the radio. All the ports shown in the RBB block diagram are not always available.

CPRI link is connected to Data 1 or Data 2 depending upon the radio standard. [CPRI Connections from DU or Baseband to Radio](#) on page 1308 lists the CPRI connections.

46.2.1 RBBs with Different Frequency Bands on Different RF Ports

Different radios in the RBB support different frequency bands, and software can allocate each carrier to the correct RF ports based on radio capabilities.



Table 926 Downlink and Uplink Support for NB-IoT Standalone for Band 111 and Band 222

Radio	Frequency Band	Downlink and Uplink Support
Radio 4415 B70	Band 222	DL on 4 ports
Radio 0208 BH	Band 111	UL on 2 ports
	Band 222	UL on 2 ports
RRUS E2 B29	Band 111	DL on 2 ports

Downlink and uplink capabilities per RF frequency branch and band for the different RBBs are shown in [Table 927](#).

Table 927 Downlink and Uplink Capabilities per RF Frequency Branch for Different RBBs

RBB	Frequency Band	RF Branch for Downlink	RF Branch for Uplink
RBB24_1D RBB24_2E RBB24_2F	Band 222	1, 2	3, 4
RBB44_1L RBB44_2Q RBB44_3C RBB44_3D	Band 111	5, 6	3, 4
	Band 222	1, 2	3, 4
RBB46_1A RBB46_2A	Band 222	1, 2, 3, 4	5, 6
RBB66_1A RBB66_3A	Band 111	7, 8	5, 6
	Band 222	1, 2, 3, 4	5, 6

46.2.2 RBB10_1A

RBB10_1A is used for sectors with one TX branch, two external RX branches, and one CPRI connection. This RBB is supported for MSMM configurations.

For mixed mode, the port Data 2 can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 58](#) shows the RBB10_1A block diagram.

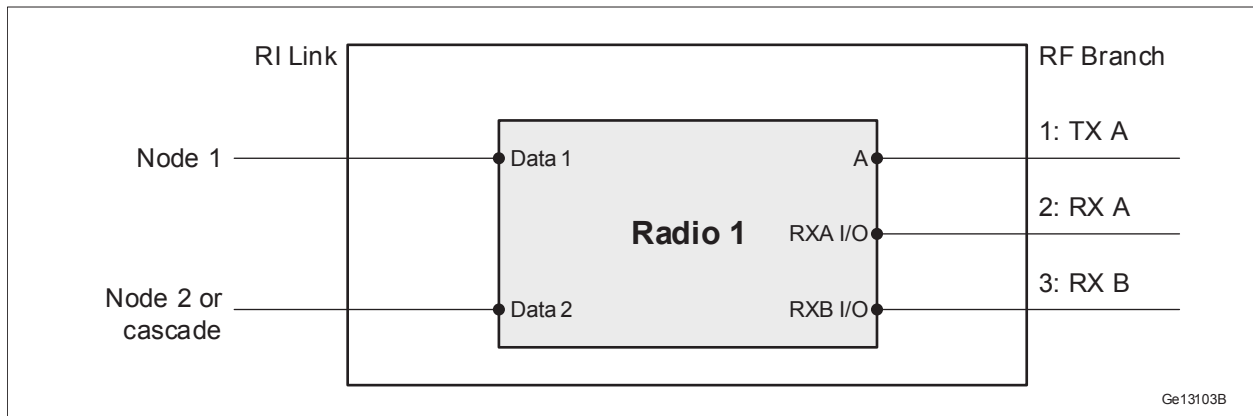


Figure 58 RBB10_1A Block Diagram

46.2.3 RBB11_1A

RBB11_1A is used for sectors with one TX branch and two RX branches, one of which is an external RX branch for antenna sharing, and one CPRI connection. This RBB is supported for MSMM configurations.

For mixed mode, the port Data 2 can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 59](#) shows the RBB11_1A block diagram.

[Figure 60](#) shows the RBB11_1A block diagram for AIR.

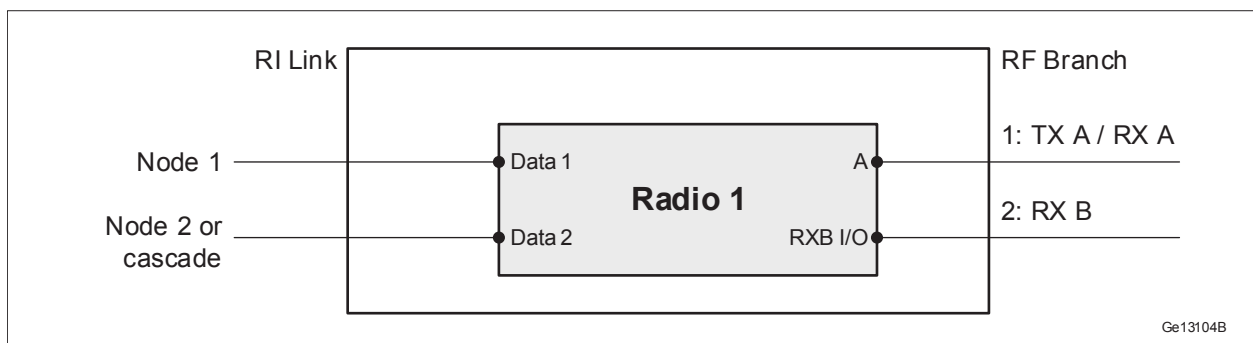


Figure 59 RBB11_1A Block Diagram

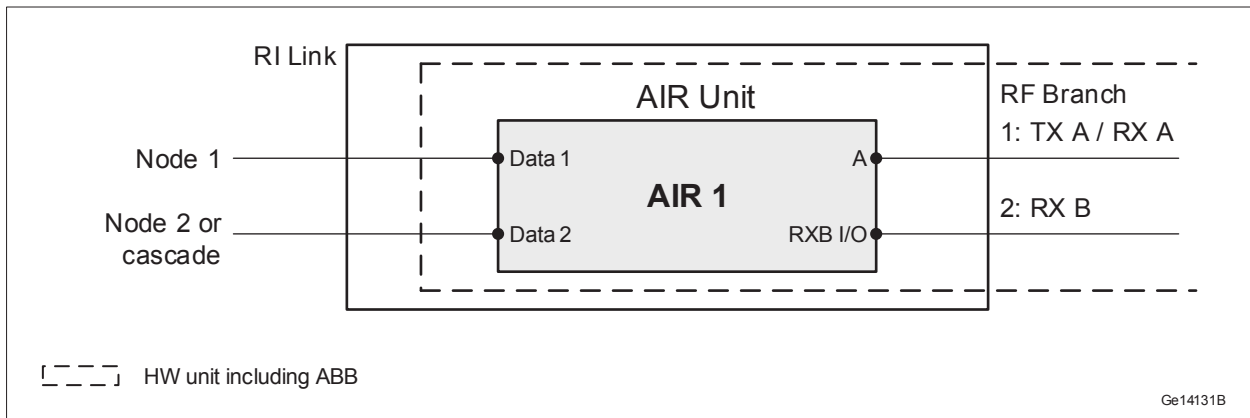


Figure 60 RBB11_1A Block Diagram for AIR

46.2.4 RBB11_1C

RBB11_1C is used for sectors with one TX branch, one RX branch, and one CPRI connection. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 61](#) shows the RBB11_1C block diagram.

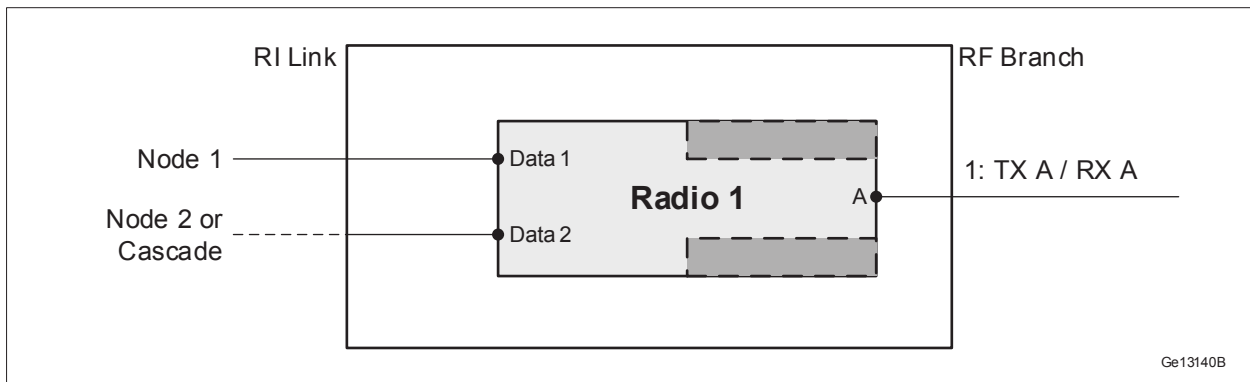


Figure 61 RBB11_1C Block Diagram

46.2.5 RBB11_1D

RBB11_1D is used for sectors with one TX branch, one RX branch, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB11_1D is used together with RBB11_1C.

[Figure 62](#) shows the RBB11_1D block diagram.

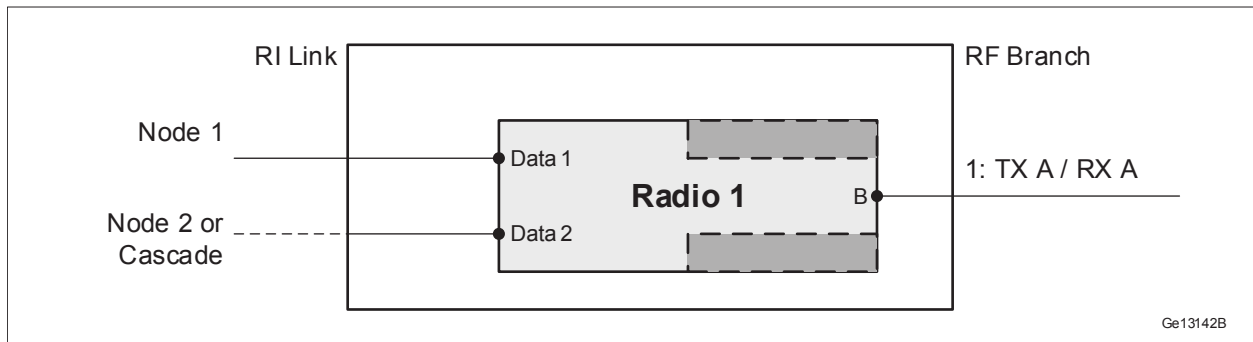


Figure 62 RBB11_1D Block Diagram

46.2.6 RBB11_2A

RBB11_2A is used for sectors with one TX branch, one RX branch, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 63](#) shows the RBB11_2A block diagram.

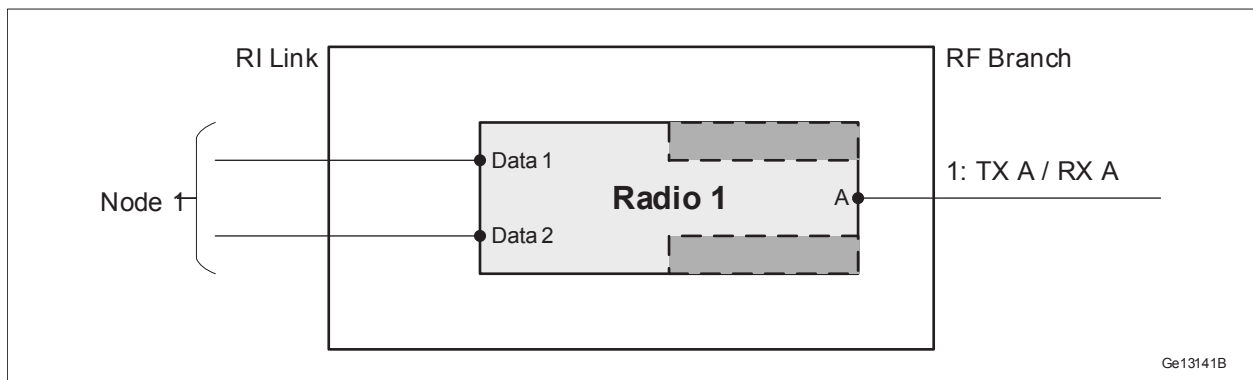


Figure 63 RBB11_2A Block Diagram

46.2.7 RBB11_2B

RBB11_2B is used for sectors with one TX branch, one RX branch, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB11_2B is used together with RBB11_2A.

[Figure 64](#) shows the RBB11_2B block diagram.

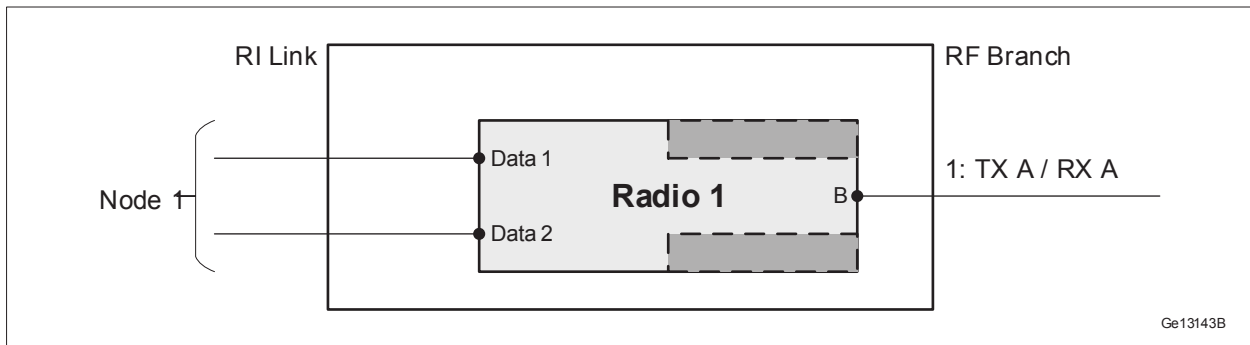


Figure 64 RBB11_2B Block Diagram

46.2.8 RBB12_1A

RBB12_1A is used for sectors with one TX branch, two RX branches, and one CPRI connection. This RBB is supported for MSMM configurations.

For mixed mode and Multi-Operator LTE + LTE configurations, the Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 65](#) shows the RBB12_1A block diagram.

[Figure 66](#) shows the RBB12_1A block diagram for AIR.

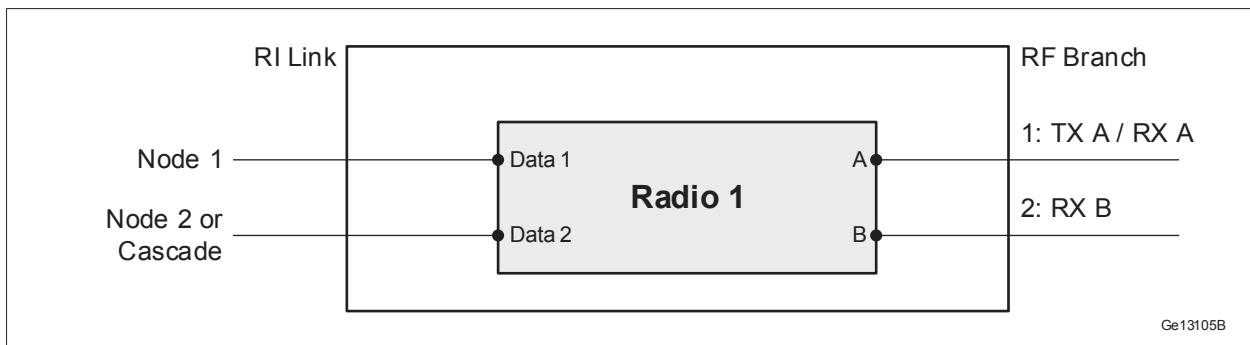


Figure 65 RBB12_1A Block Diagram

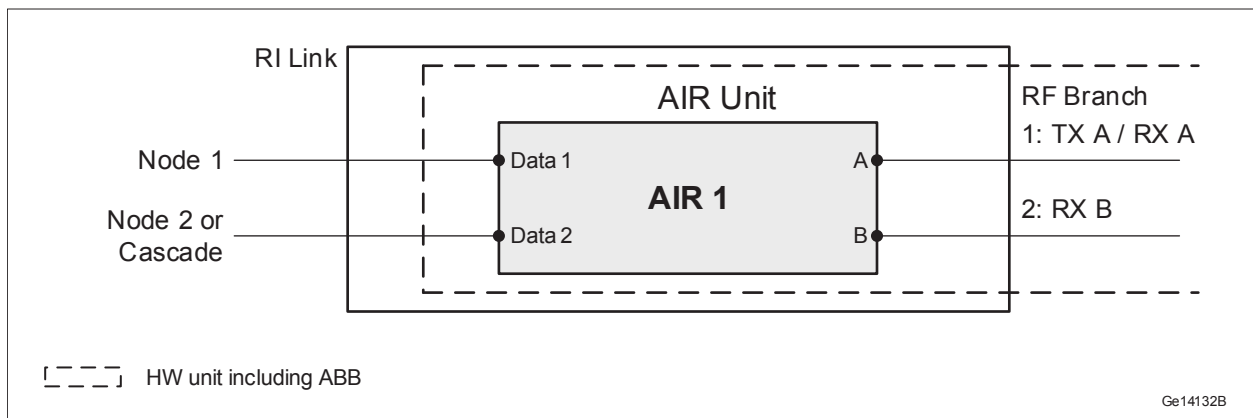


Figure 66 RBB12_1A Block Diagram for AIR

46.2.9 RBB12_1C

RBB12_1C is used for sectors with one TX branch, two RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

One of the radios in this RBB is an RX-only capable radio.

For mixed mode and Multi-Operator RAN LTE + LTE configurations, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 67](#) shows the RBB12_1C block diagram.

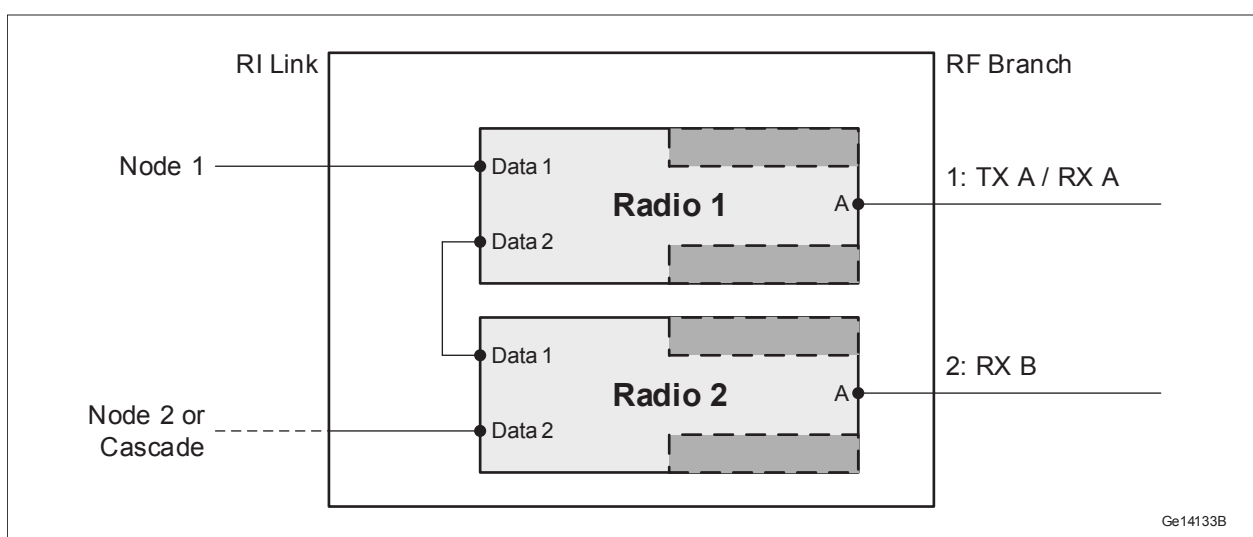


Figure 67 RBB12_1C Block Diagram

46.2.10 RBB12_1D

RBB12_1D is used for sectors with one TX branch, two RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

One of the radios in this RBB is an RX-only capable radio.

RBB12_1D is used together with RBB12_1C.

For mixed mode and Multi-Operator RAN LTE + LTE configurations, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 68](#) shows the RBB12_1D block diagram.

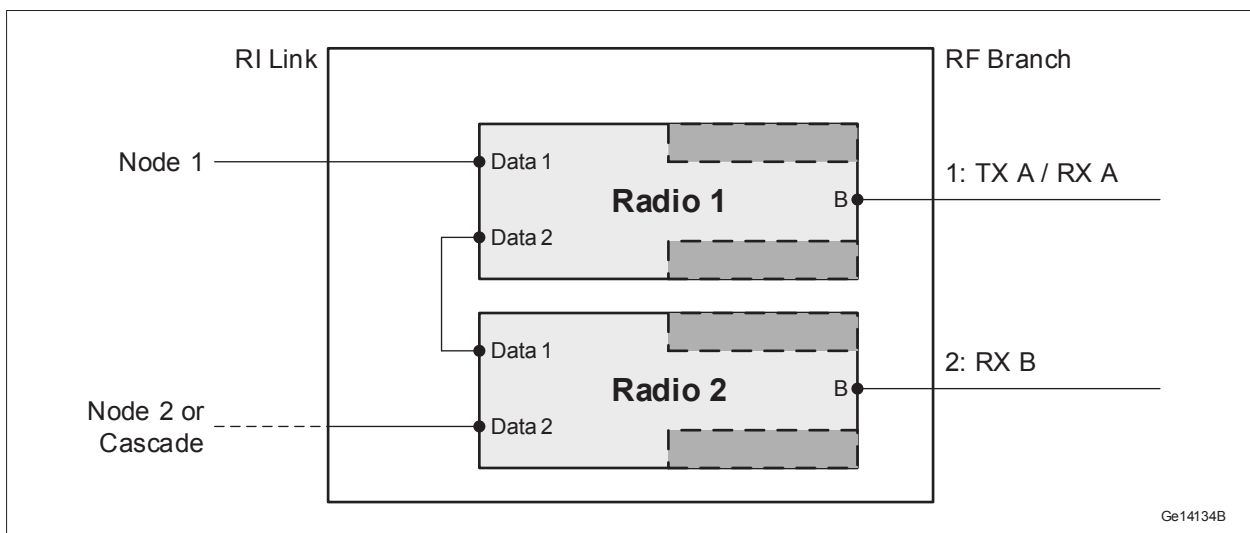


Figure 68 RBB12_1D Block Diagram

46.2.11 RBB12_1E

RBB12_1E is used for sectors with one TX branch, two RX branches, and one CPRI connection. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB12_1E is used together with RBB12_1F.

[Figure 69](#) shows the RBB12_1E block diagram.

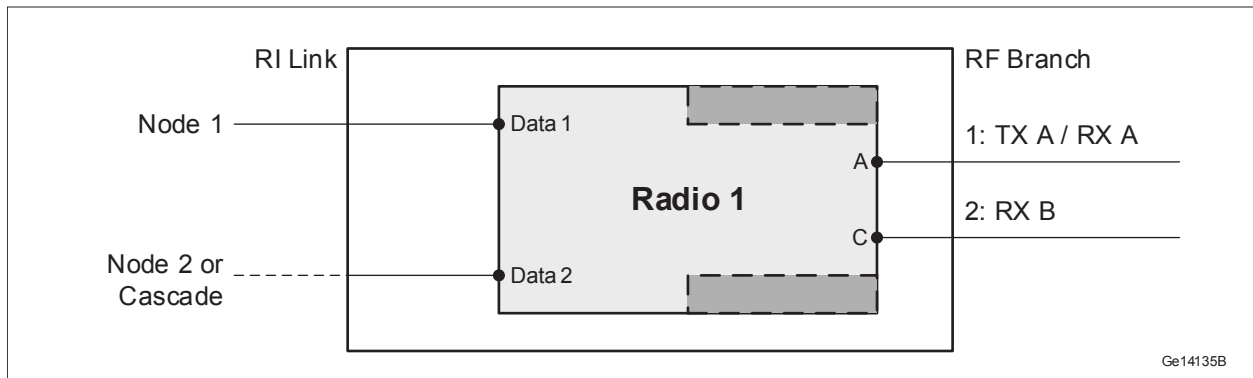


Figure 69 RBB12_1E Block Diagram

46.2.12 RBB12_1F

RBB12_1F is used for sectors with one TX branch, two RX branches, and one CPRI connection. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB12_1F is used together with RBB12_1E.

[Figure 70](#) shows the RBB12_1F block diagram.

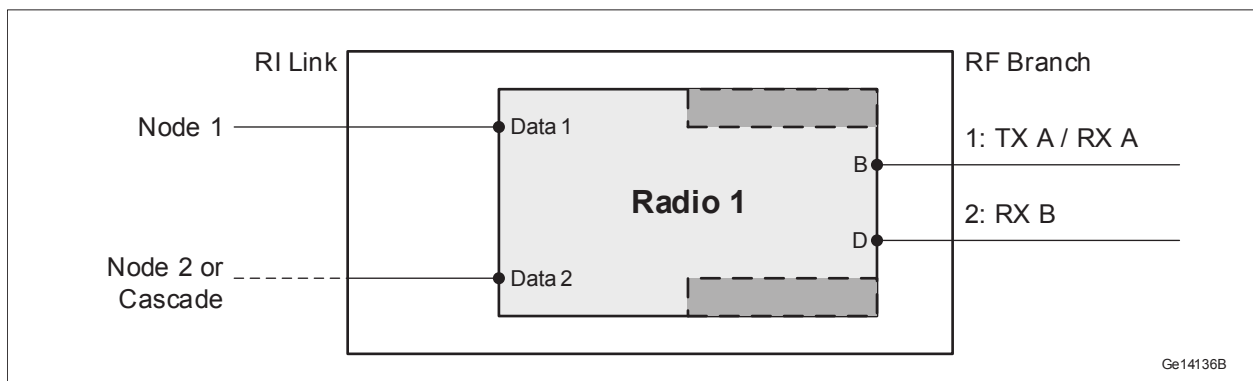


Figure 70 RBB12_1F Block Diagram

46.2.13 RBB12_2A

RBB12_2A is used for sectors with one TX branch, two RX branches, and two CPRI connections.

This RBB is used for ring topology in GSM.

[Figure 71](#) shows the RBB12_2A block diagram.

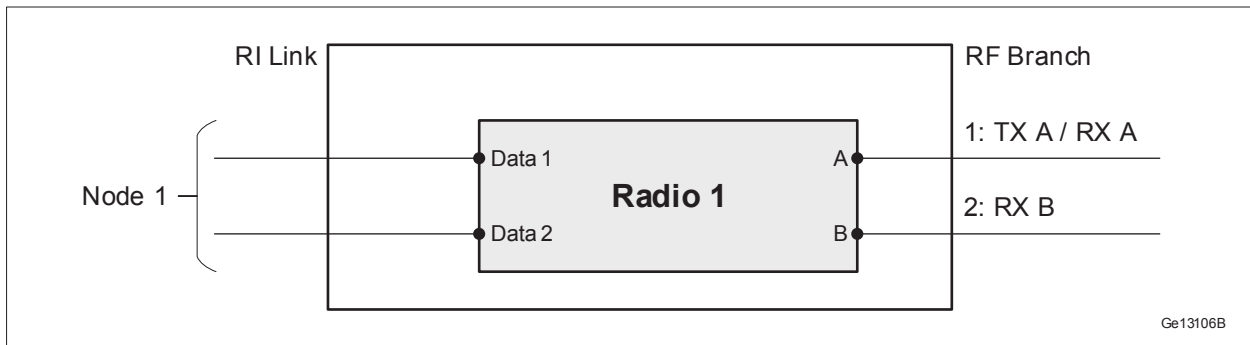


Figure 71 RBB12_2A Block Diagram

46.2.14 RBB12_2B

RBB12_2B is used for sectors with one TX branch, two RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

One of the radios in this RBB is an RX-only capable radio.

[Figure 72](#) shows the RBB12_2B block diagram.

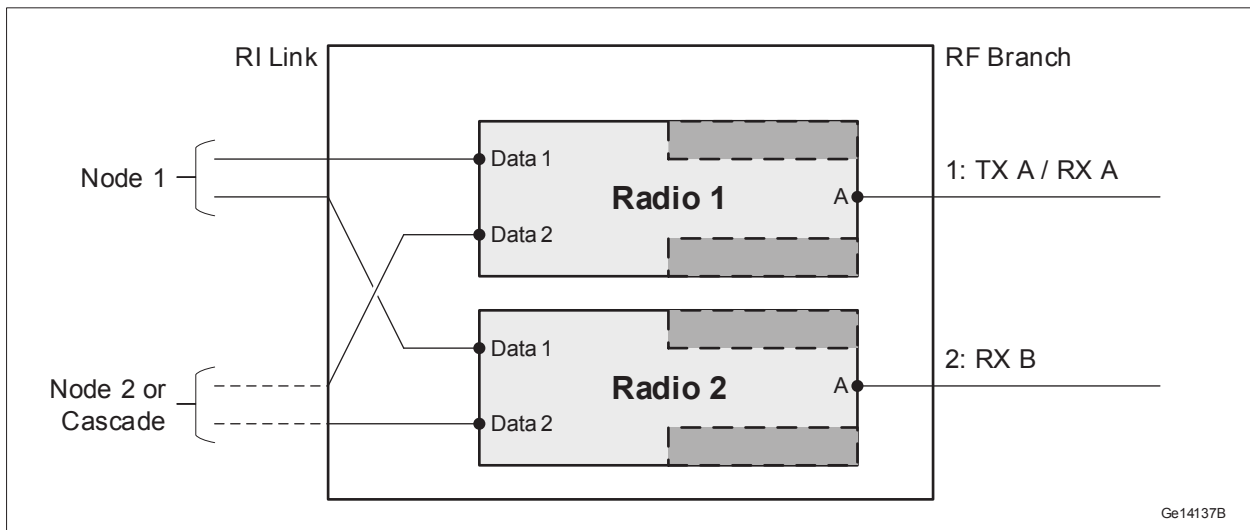


Figure 72 RBB12_2B Block Diagram

46.2.15 RBB12_2C

RBB12_2C is used for sectors with one TX branch, two RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.



This RBB can be used with the Multi-Sector Per Radio feature.

One of the radios in this RBB is an RX-only capable radio.

RBB12_2C is used together with RBB12_2B.

Figure 73 shows the RBB12_2C block diagram.

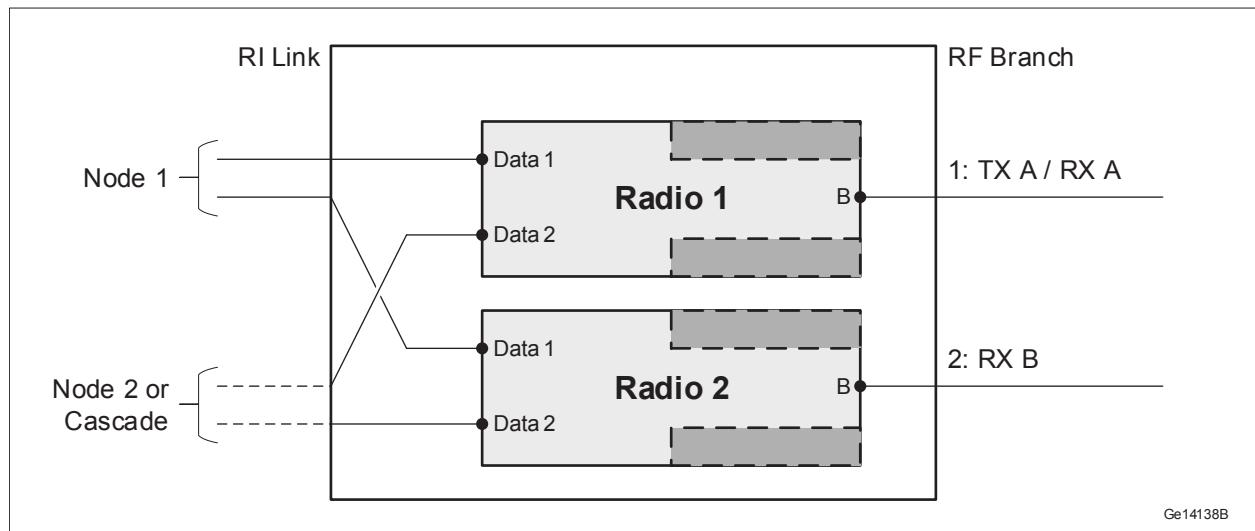


Figure 73 RBB12_2C Block Diagram

46.2.16 RBB12_2D

RBB12_2D is used for sectors with one TX branch, two RX branches, and two CPRI connections. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB12_2D is used together with RBB12_2E.

Figure 74 shows the RBB12_2D block diagram.

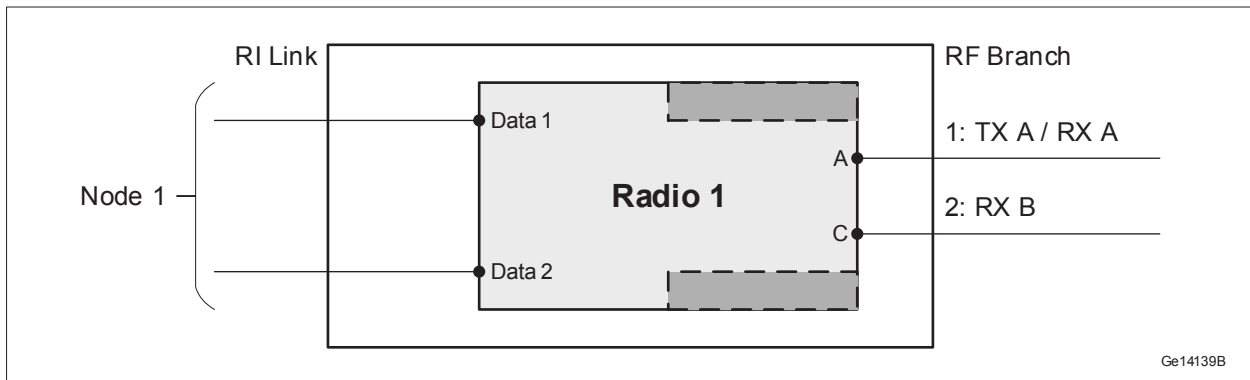


Figure 74 RBB12_2D Block Diagram

46.2.17 RBB12_2E

RBB24_2D is used for sectors with one TX branch, two RX branches, and two CPRI connections. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB12_2E is used together with RBB12_2D.

[Figure 75](#) shows the RBB12_2E block diagram.

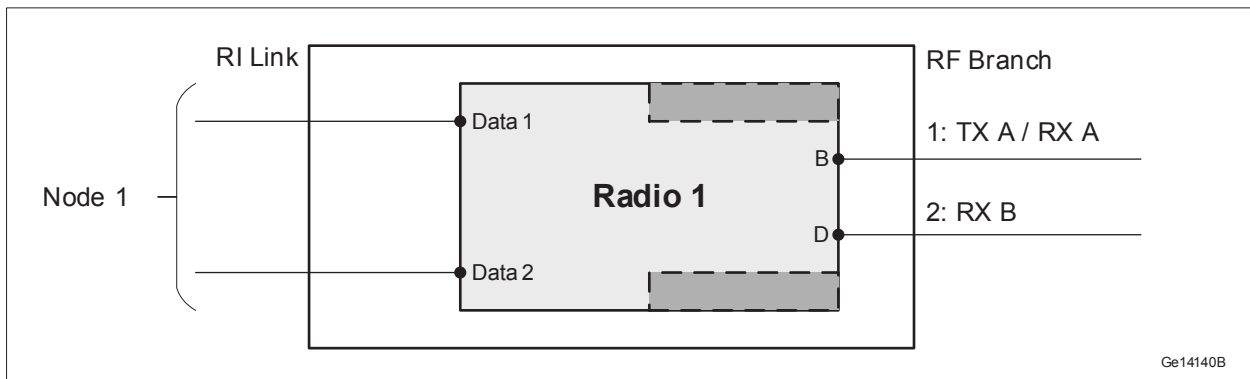


Figure 75 RBB12_2E Block Diagram

46.2.18 RBB14_1A

RBB14_1A is used for sectors with one TX branch, four RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

One of the radios in this RBB is an RX-only capable radio.

For mixed mode, the Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.



Figure 76 shows the RBB14_1A block diagram

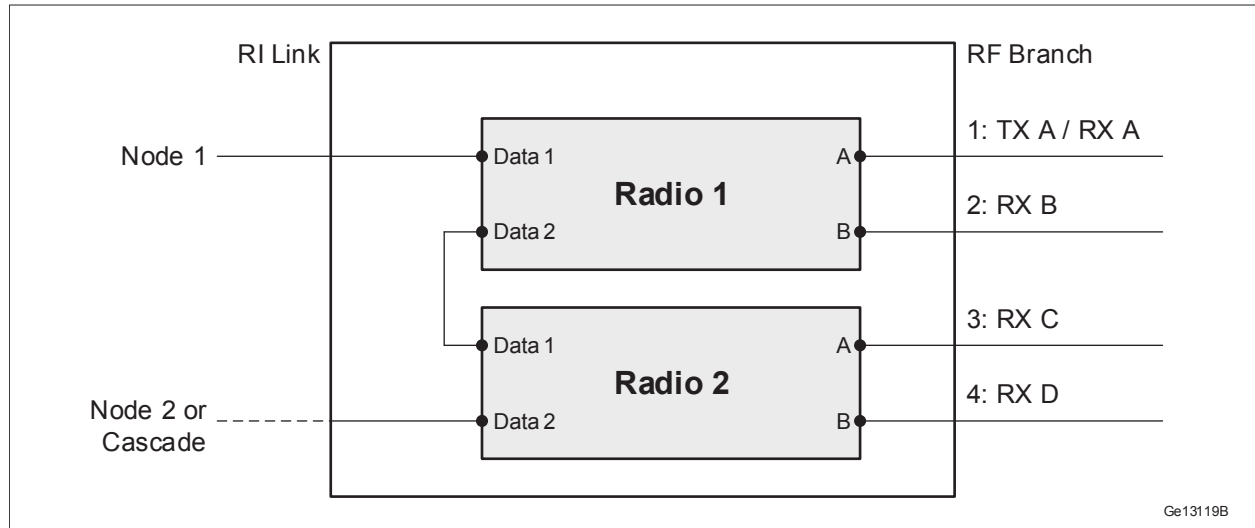


Figure 76 RBB14_1A Block Diagram

46.2.19 RBB14_2A

RBB14_2A is used for sectors with one TX branch, four RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

One of the radios in this RBB is an RX-only capable radio.

Figure 76 shows the RBB14_2A block diagram

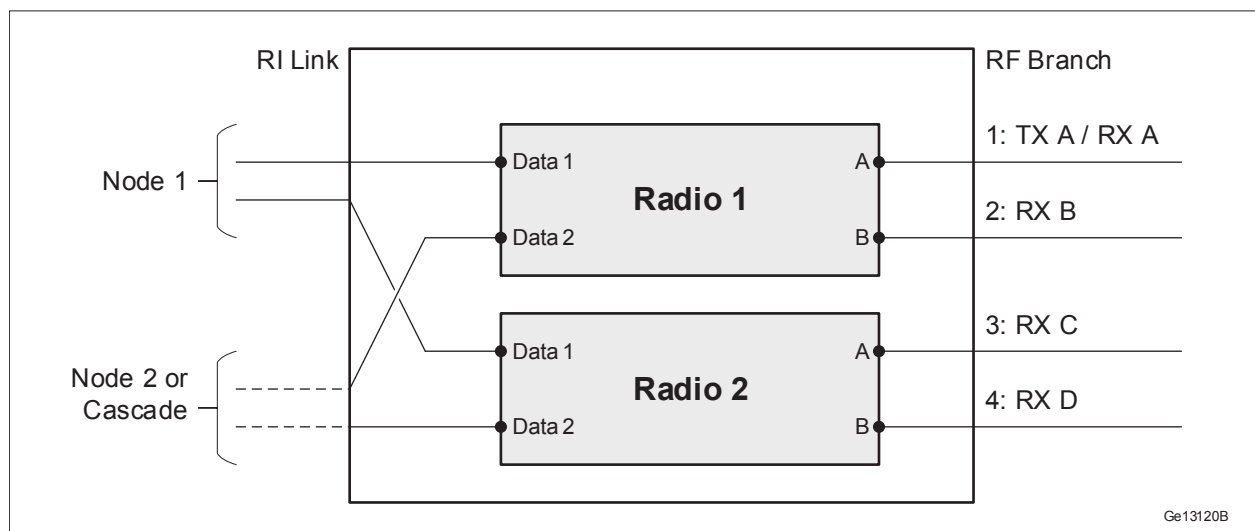


Figure 77 RBB14_2A Block Diagram

46.2.20 RBB20_1A

RBB20_1A is used for sectors with two TX branches, two external RX branches for antenna sharing, and one CPRI connection. This RBB is supported for MSMM configurations.

Figure 78 shows the RBB20_1A block diagram.

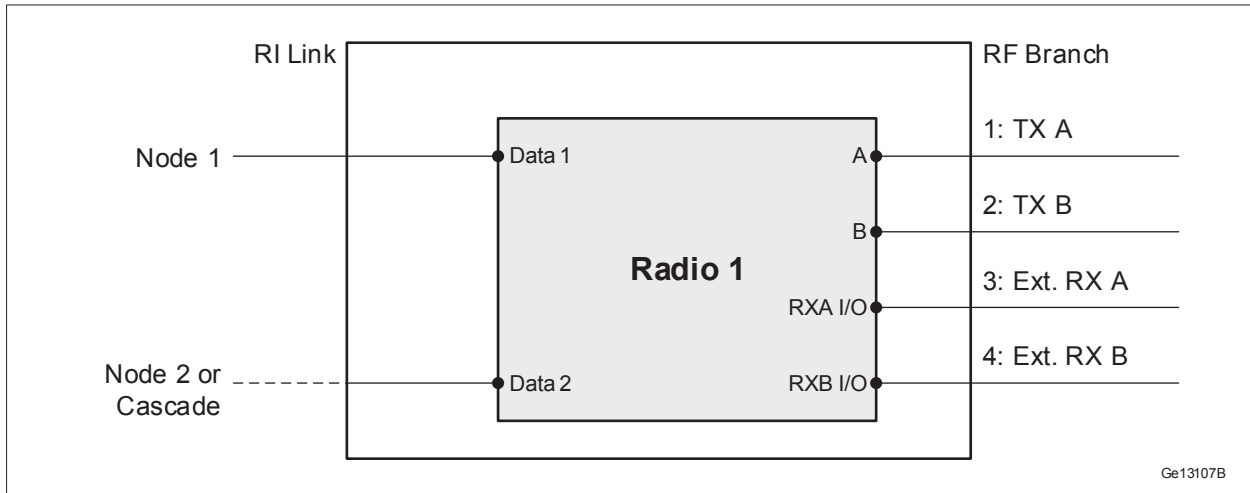


Figure 78 RBB20_1A Block Diagram

46.2.21 RBB20_1B

RBB20_1B is used for sectors with two TX branches and one CPRI connection.

Figure 79 shows the RBB20_1B block diagram.

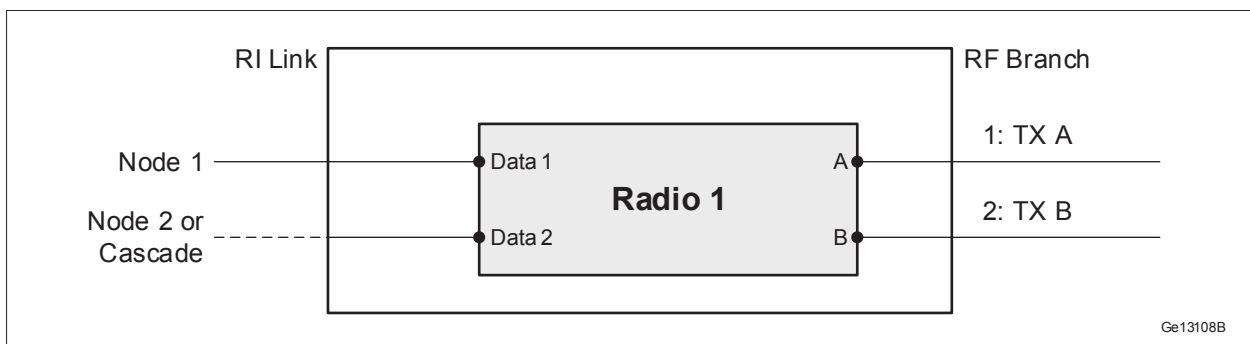


Figure 79 RBB20_1B Block Diagram

46.2.22 RBB20_2A

RBB20_2A is used for sectors with two TX branches, four external RX branches, and two CPRI connections. This RBB is supported for MSMM configurations.



Figure 80 shows the RBB20_2A block diagram.

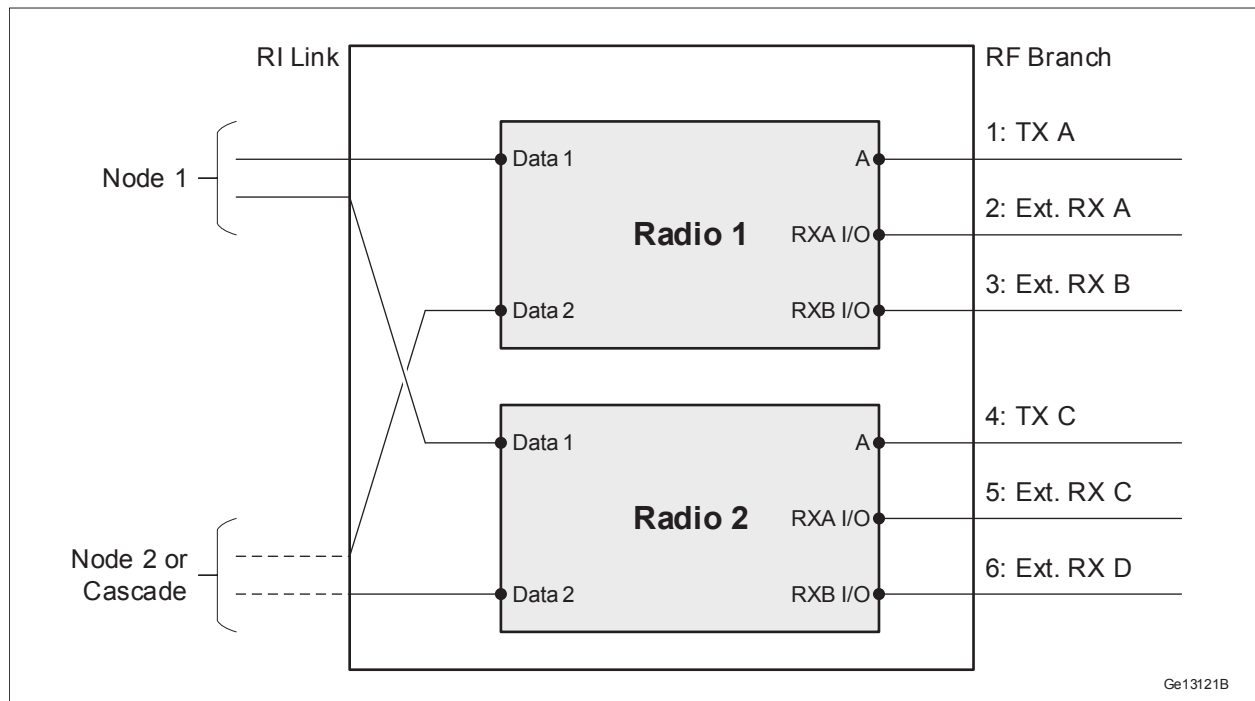


Figure 80 RBB20_2A Block Diagram

46.2.23 RBB20_2B

RBB20_2B is used for sectors with two TX branches and two CPRI connections.

Figure 81 shows the RBB20_2B block diagram.

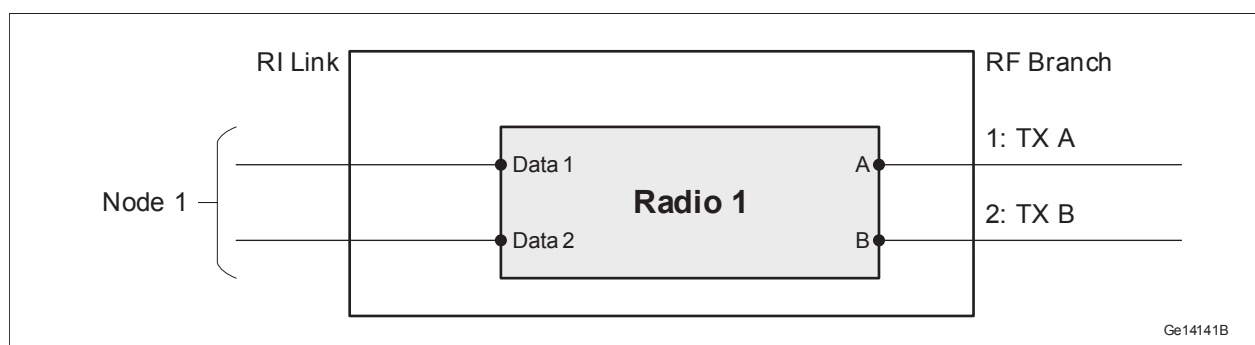


Figure 81 RBB20_2B Block Diagram

46.2.24 RBB22_1A

RBB22_1A is used for sectors with two TX branches, two RX branches, and one CPRI connection. This RBB uses an analog RX cross-connection. This RBB is supported for MSMM configurations.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

For mixed mode, the port Data 2 can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 82](#) shows the RBB22_1A block diagram.

[Figure 83](#) shows the RBB22_1A block diagram for AIR.

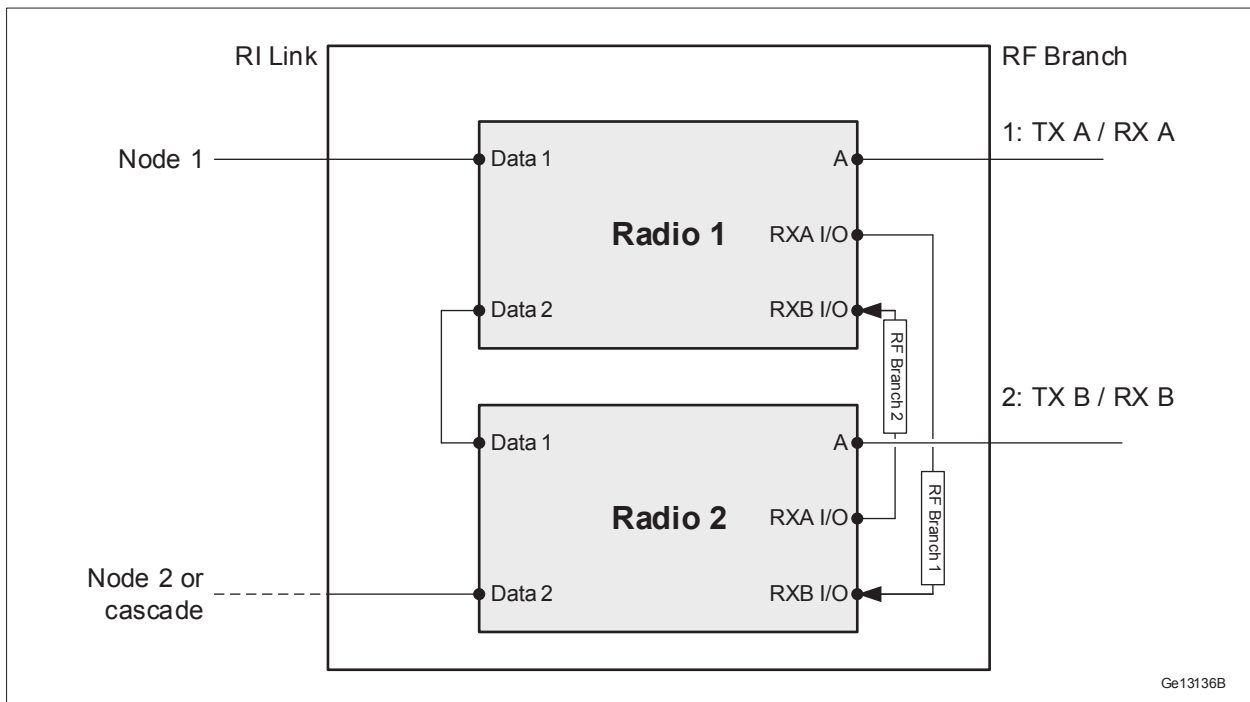


Figure 82 RBB22_1A Block Diagram

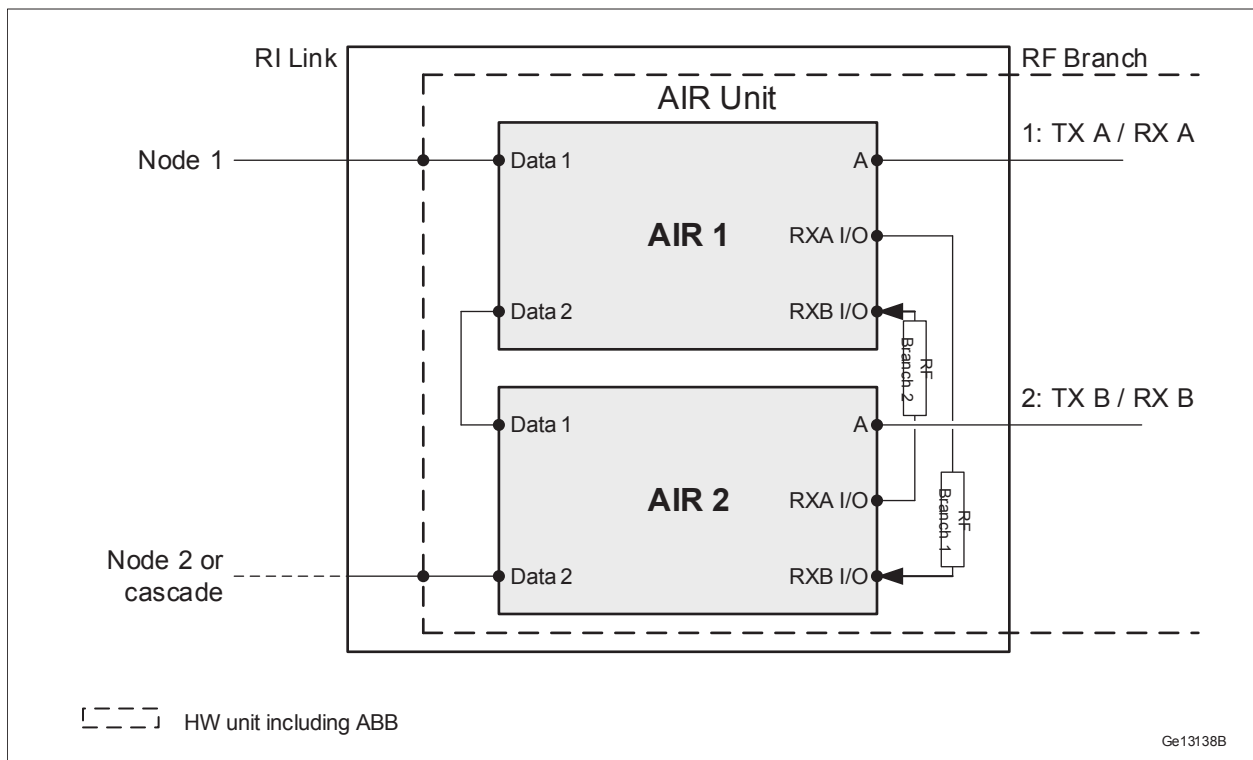


Figure 83 RBB22_1A Block Diagram for AIR

46.2.25 RBB22_1B

RBB22_1B is used for sectors with two TX branches, two RX branches, and one CPRI connection. This RBB is supported for MSMM configurations.

Note: It is also possible to use only one TX branch.

Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

From SW 18.Q3, RBB22_1B for RDS includes Multicast Antenna Branches and does not need an ABB. See [Figure 86](#).

For mixed mode and Multi-Operator RAN LTE + LTE configurations, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 84](#) shows the RBB22_1B block diagram.

[Figure 85](#) shows the RBB22_1B block diagram for RDS before SW 18.Q3.

[Figure 86](#) shows the RBB22_1B block diagram for RDS from SW 18.Q3.

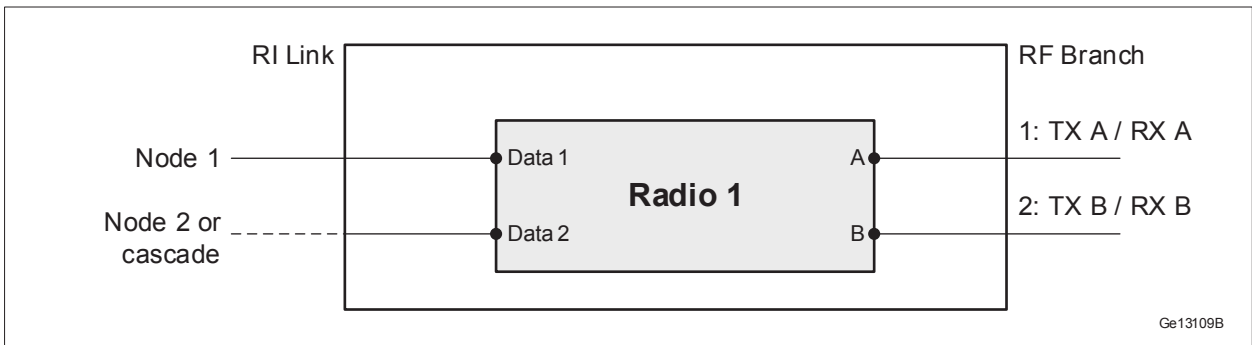


Figure 84 RBB22_1B Block Diagram

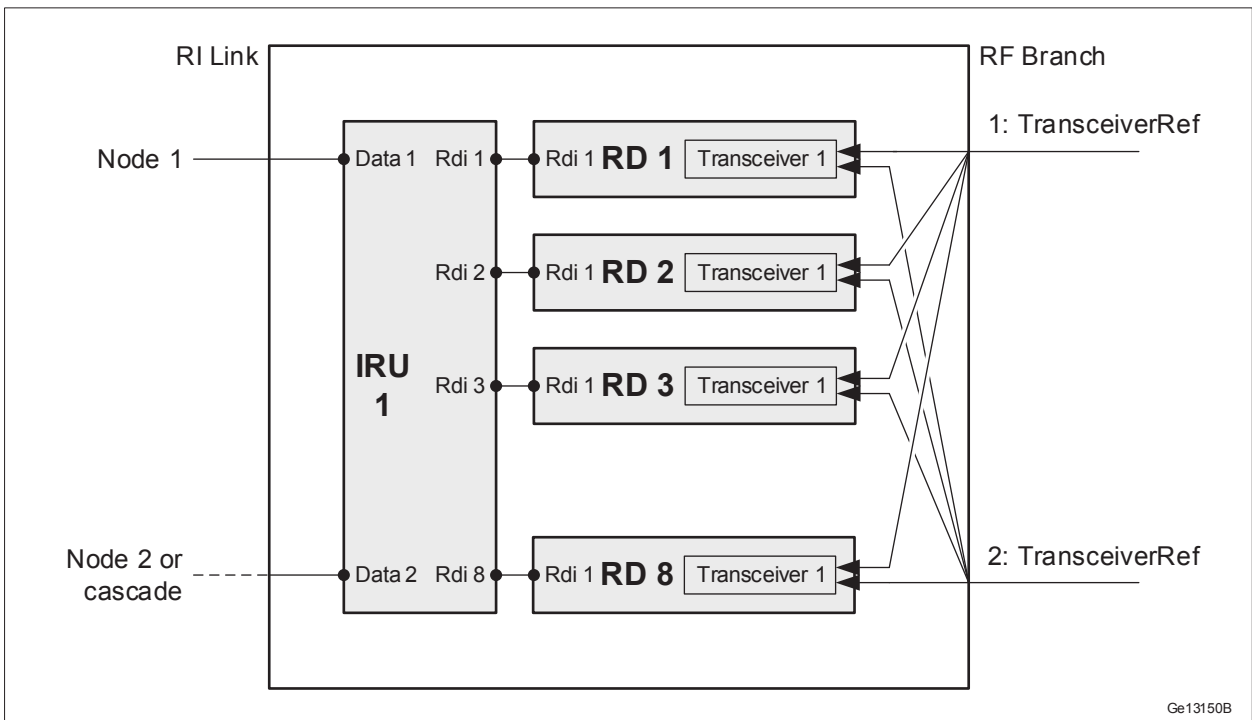


Figure 85 RBB22_1B Block Diagram for RDS (before SW 18.Q3)

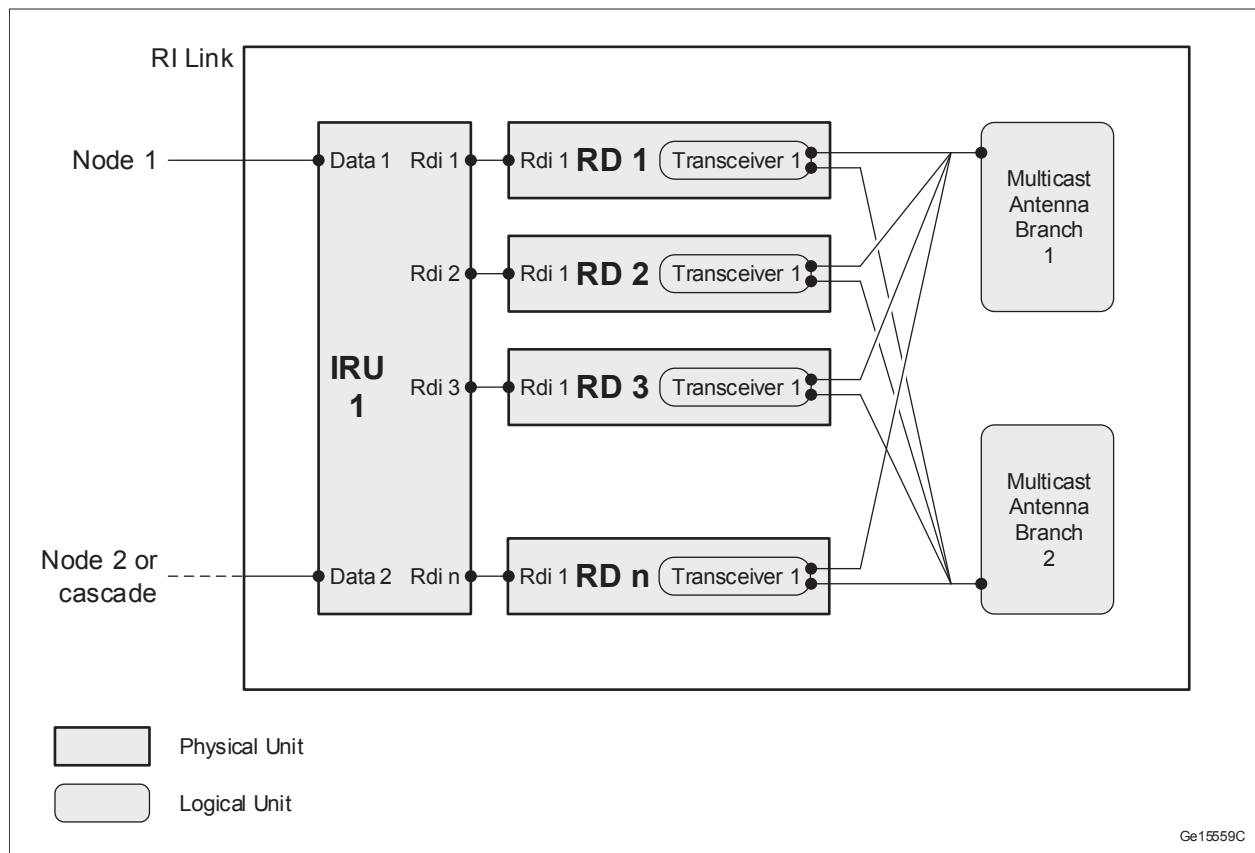


Figure 86 RBB22_1B Block Diagram for RDS (from SW 18.Q3)

46.2.26 RBB22_1C

RBB22_1C is used for sectors with two TX branches, two RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

Figure 87 shows the RBB22_1C block diagram.

Figure 88 shows the RBB22_1C block diagram for AIR.

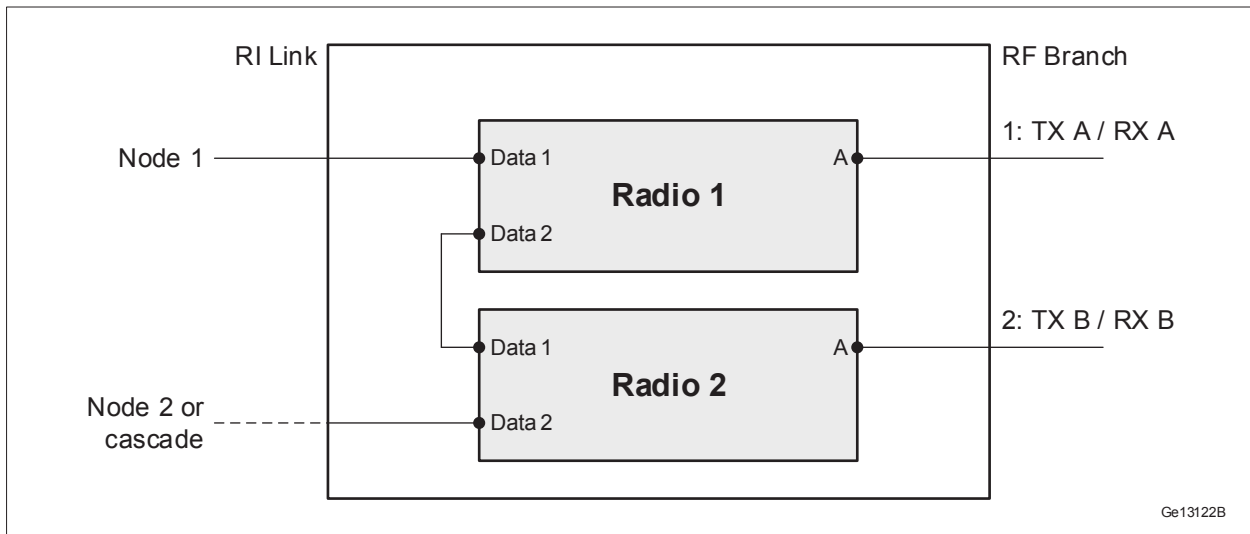


Figure 87 RBB22_1C Block Diagram

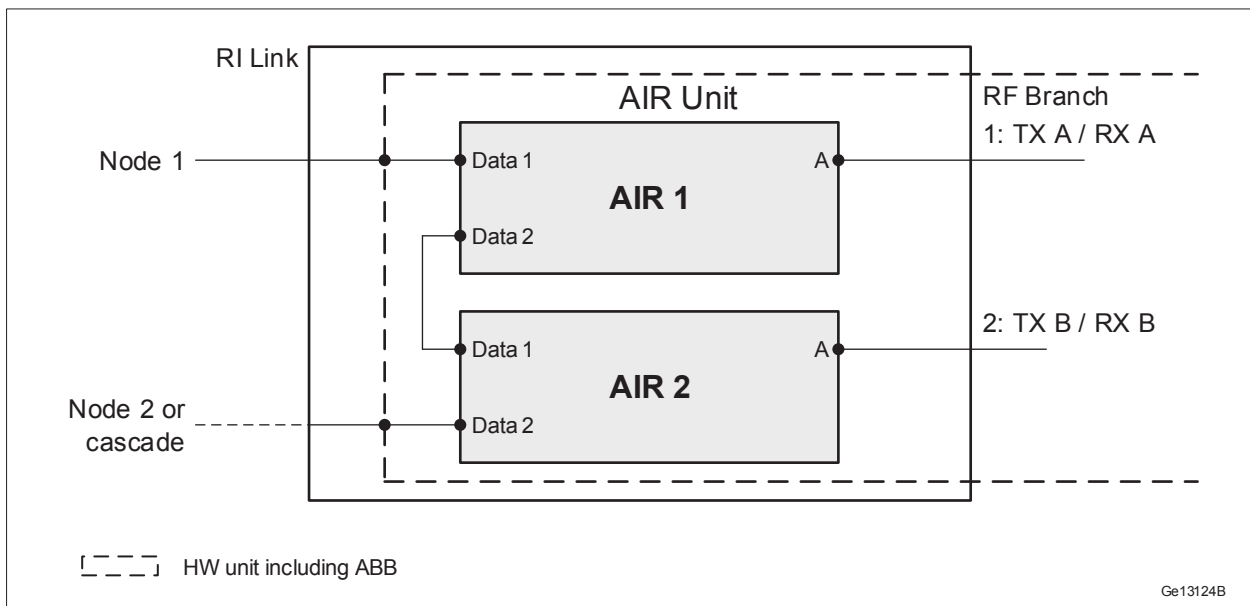


Figure 88 RBB22_1C Block Diagram for AIR

46.2.27 RBB22_1F

RBB22_1F is used for sectors with two TX branches, two RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

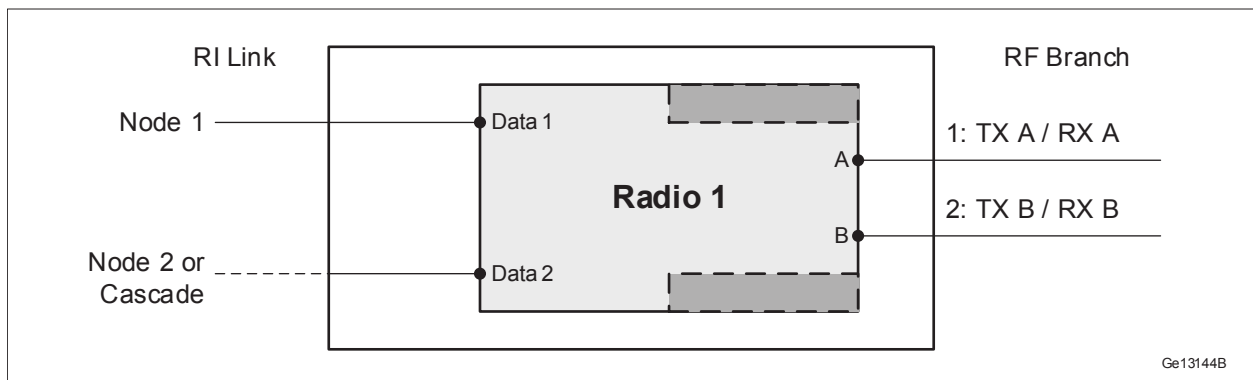


Figure 89 RBB22_1F Block Diagram

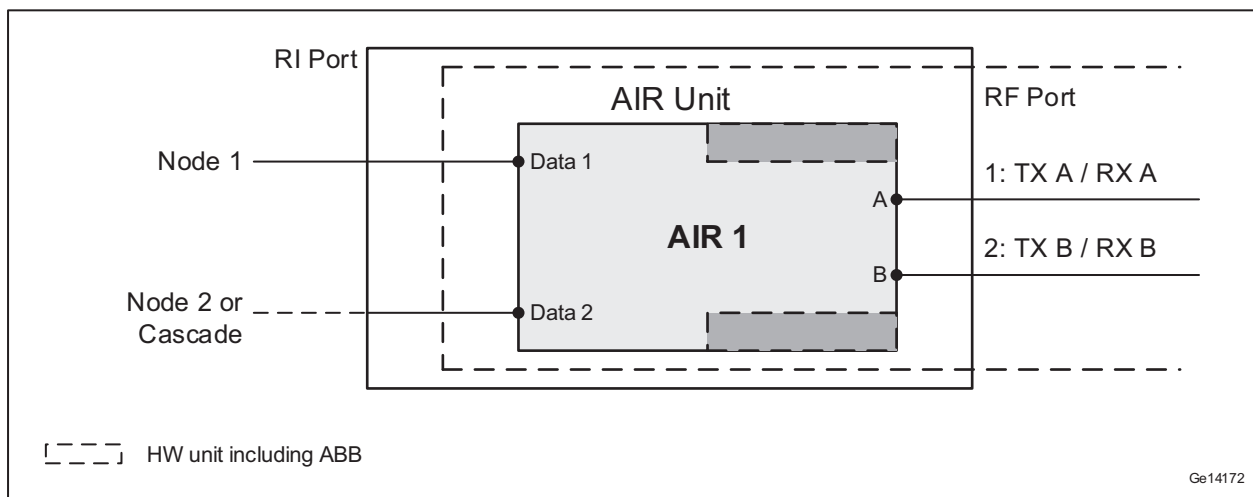


Figure 90 RBB22_1F Block Diagram for AIR

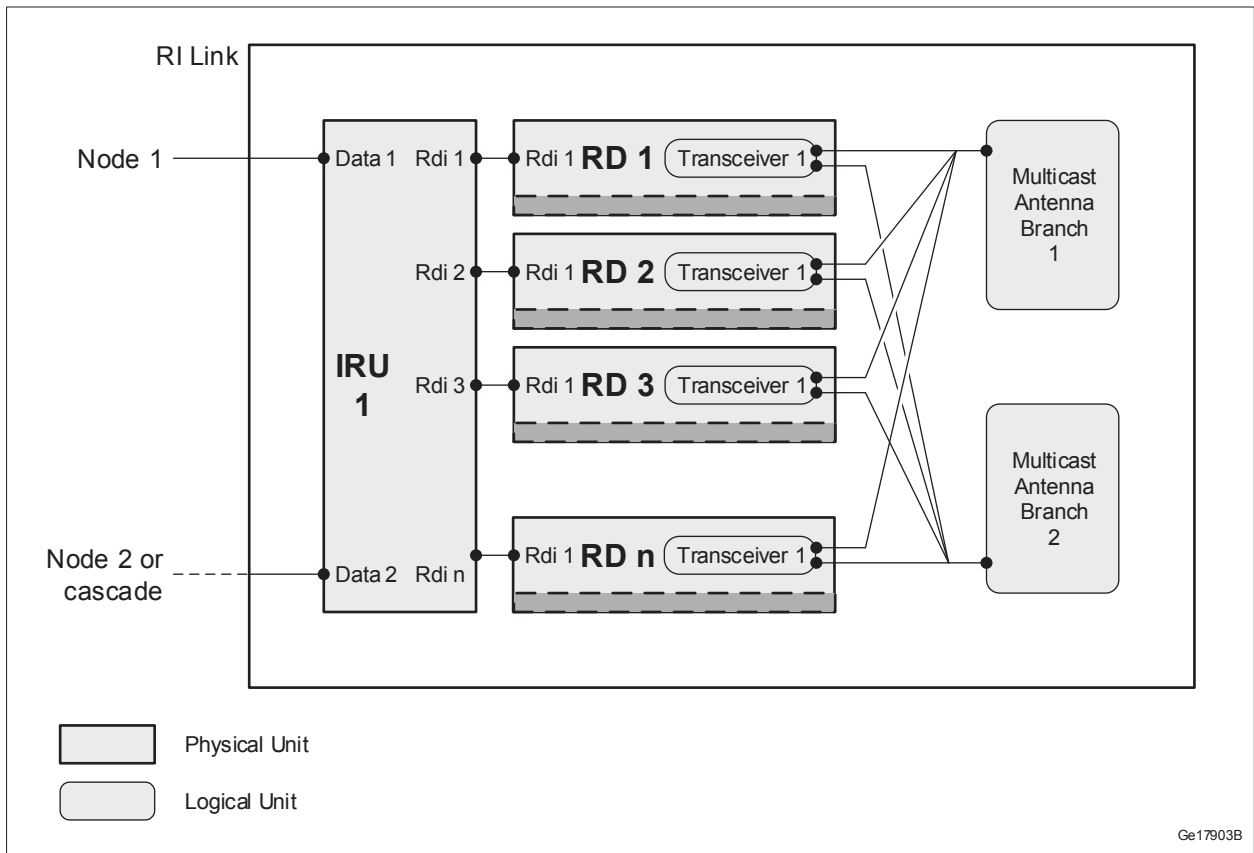


Figure 91 RBB22_1F Block Diagram for RDS

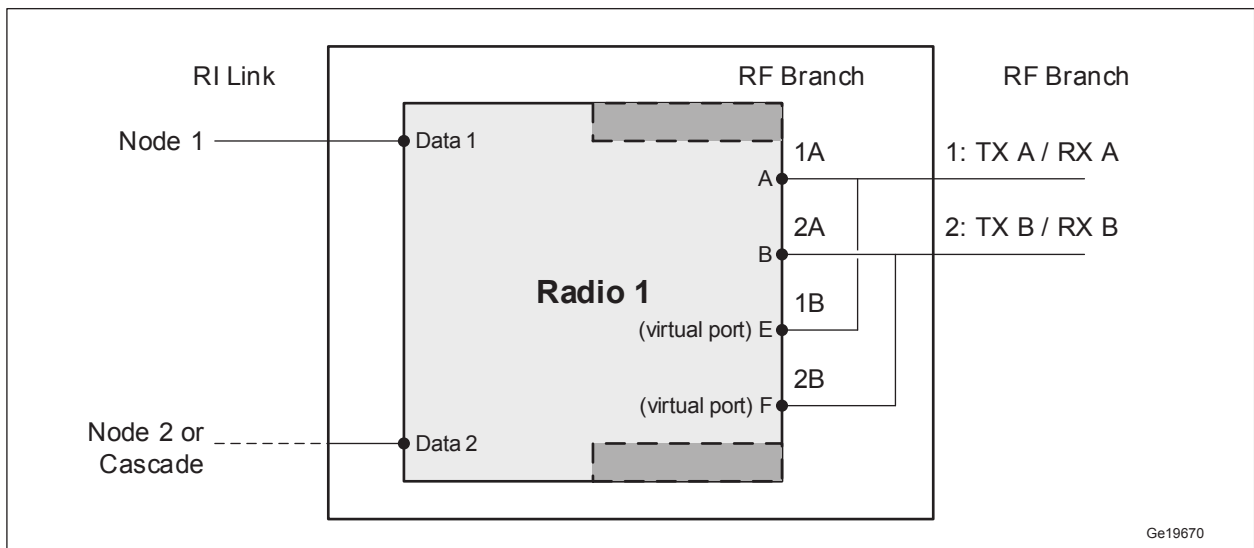


Figure 92 RBB22_1F Block Diagram for Radio 4449 B5 B13



46.2.28 RBB22_1G

RBB22_1G is used for sectors with two TX branches, two RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB22_1G is used together with RBB22_1F.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

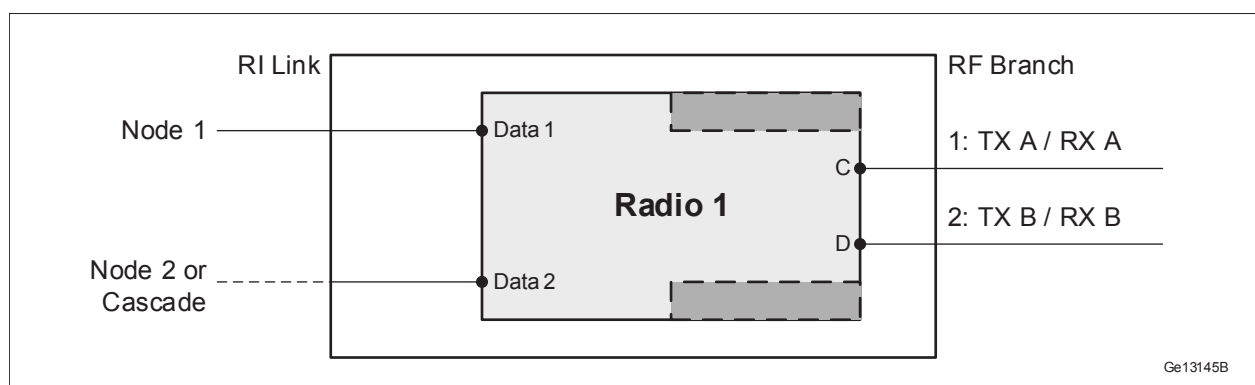


Figure 93 RBB22_1G Block Diagram

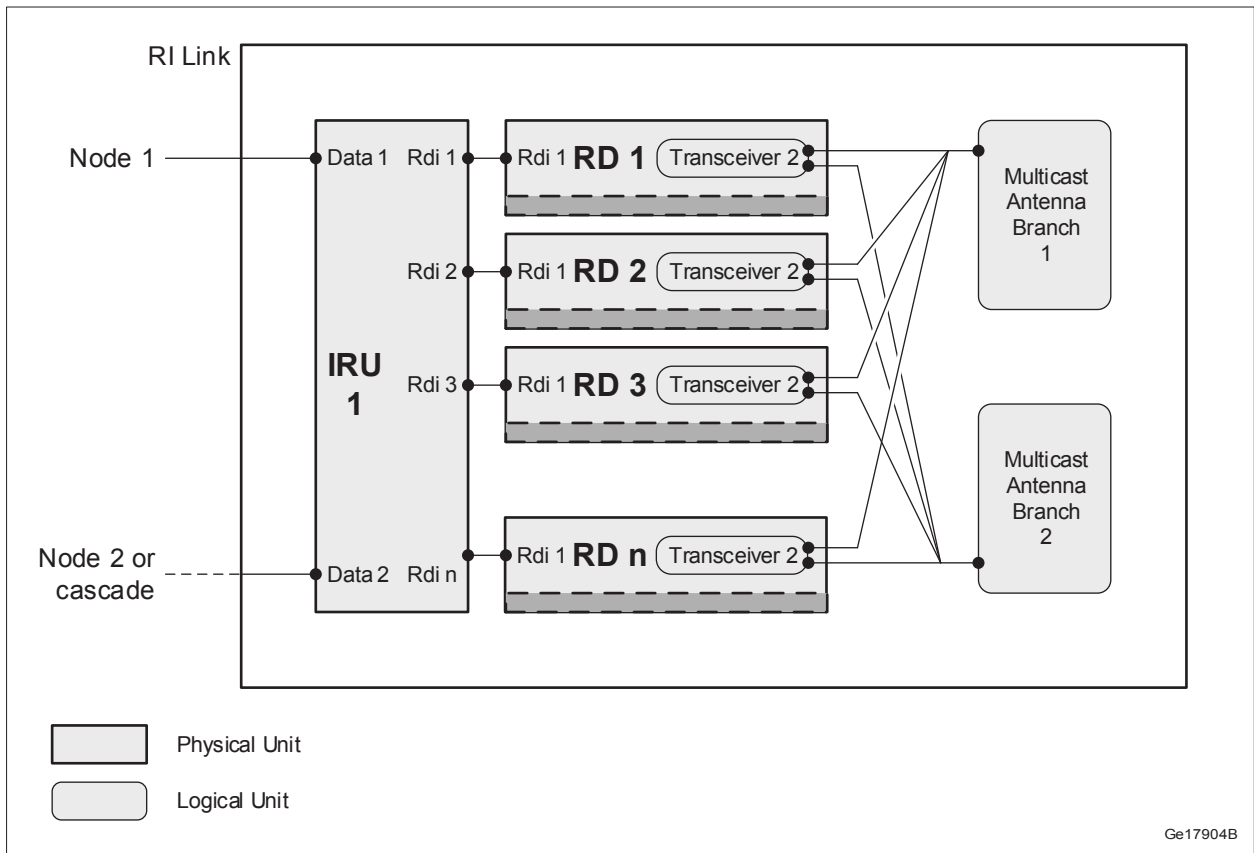


Figure 94 RBB22_1G Block Diagram for RDS

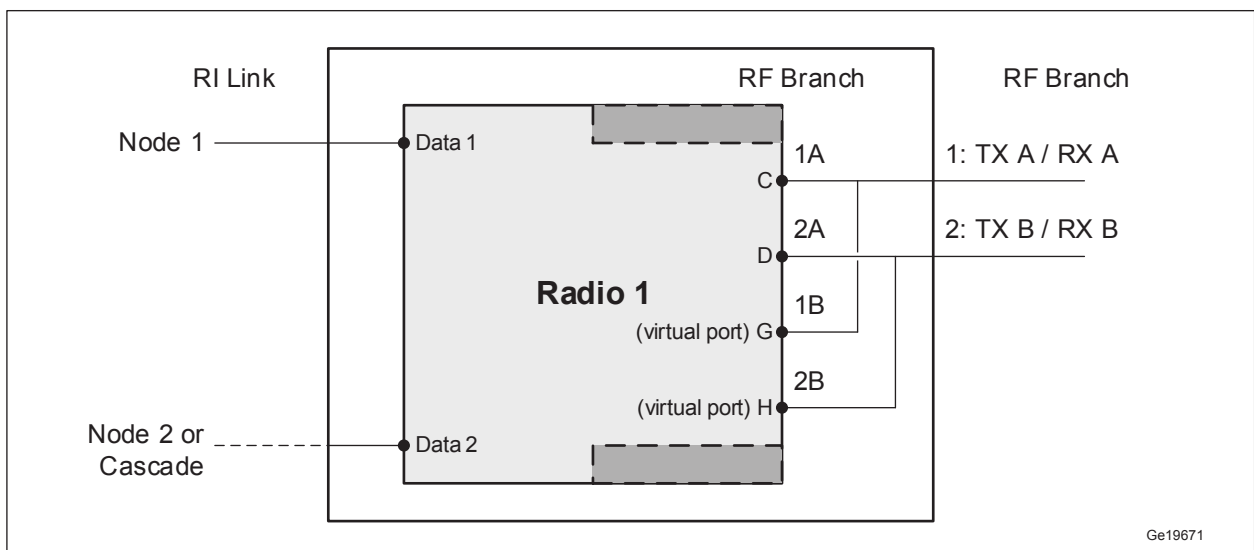


Figure 95 RBB22_1G Block Diagram for Radio 4449 B5 B13



46.2.29 RBB22_1H

RBB22_1H is used for sectors with two TX branches, two RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB22_1H is used together with RBB22_1F and RBB22_1G.

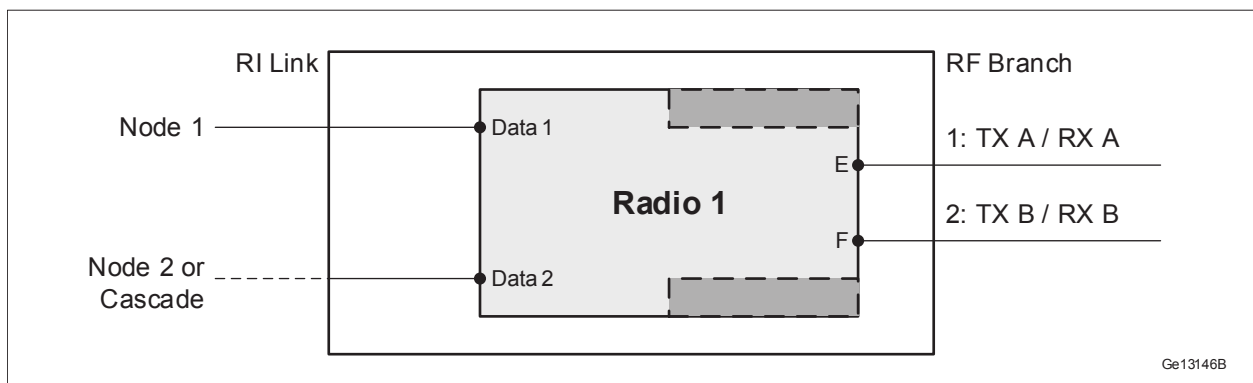


Figure 96 RBB22_1H Block Diagram

46.2.30 RBB22_1J

RBB22_1J is used for sectors with two TX branches, two RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB22_1J is used together with RBB22_1F, RBB22_1G and RBB22_1H.

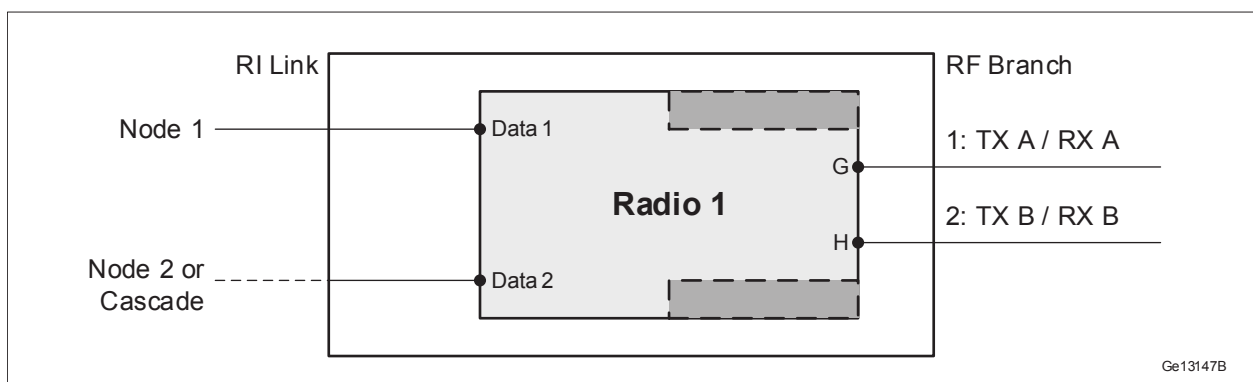


Figure 97 RBB22_1J Block Diagram

46.2.31 RBB22_1K

RBB22_1K is used for sectors with two TX branches, two RX branches, and one CPRI connection. This RBB is used for high output power mode.

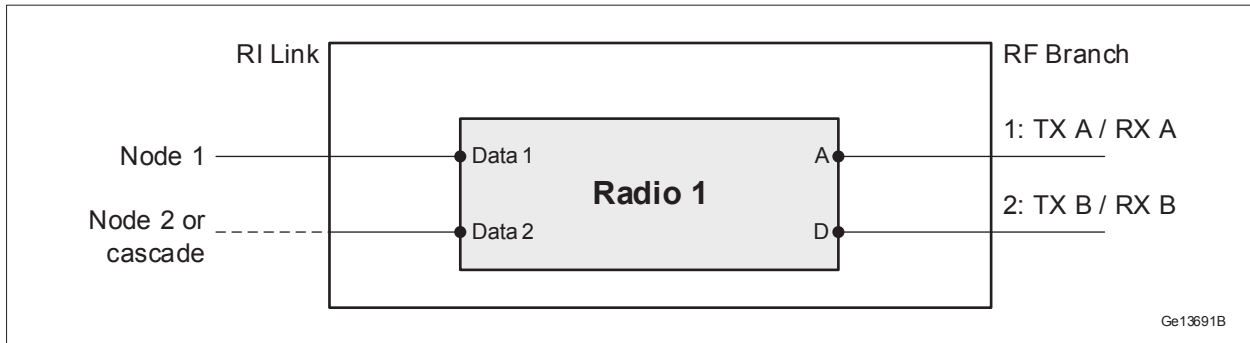


Figure 98 RBB22_1K Block Diagram

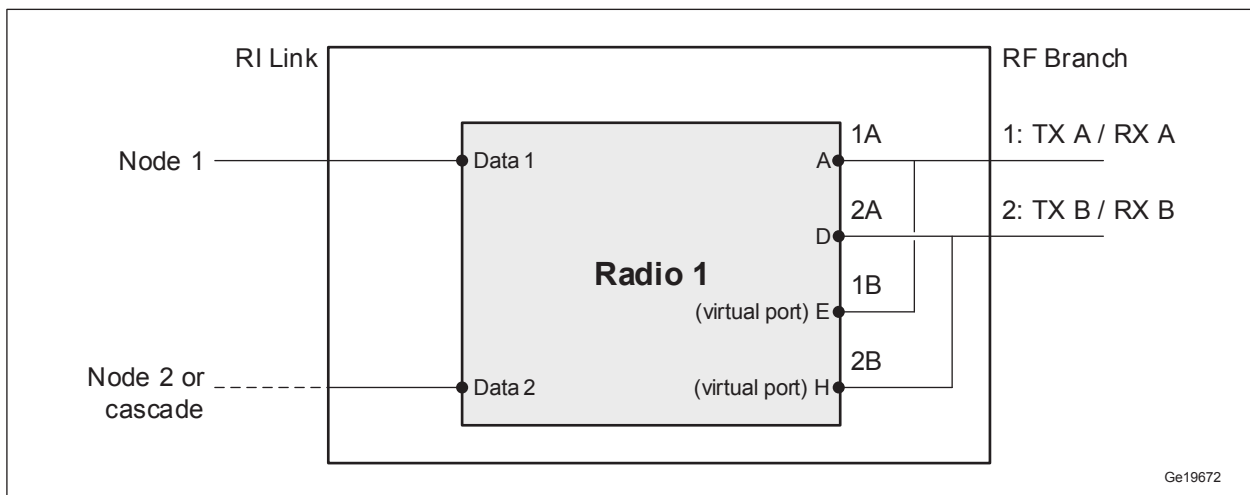


Figure 99 RBB22_1K Block Diagram for Radio 4449 B5 B13

46.2.32 RBB22_1L

RBB22_1L is used for sectors with two TX branches, two RX branches, and one CPRI connection.

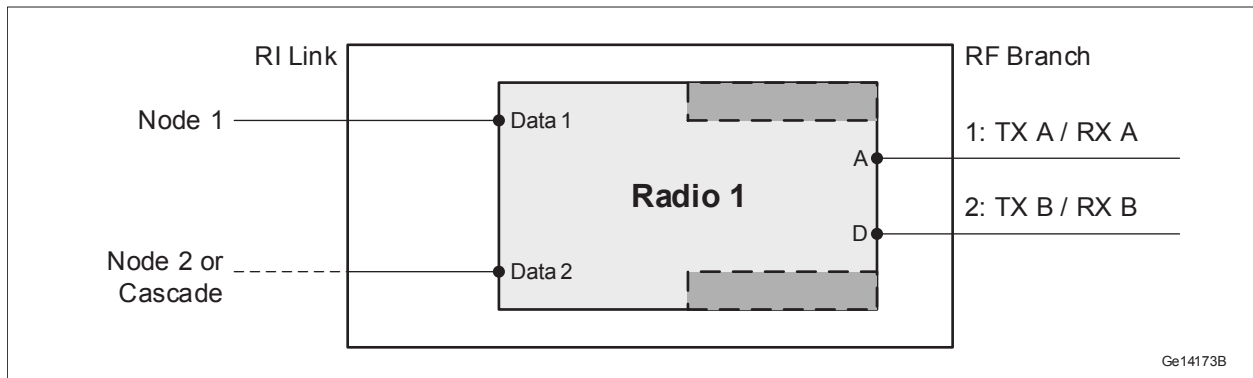


Figure 100 RBB22_1L Block Diagram

46.2.33 RBB22_1M

RBB22_1M is used for sectors with two TX branches, two RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

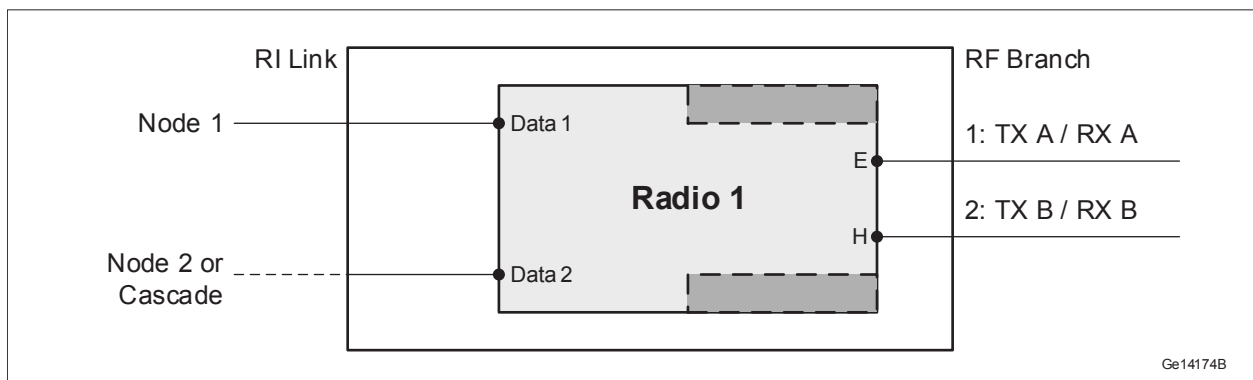


Figure 101 RBB22_1M Block Diagram

46.2.34 RBB22_1N

RBB22_1N is used for sectors with two TX branches, two RX branches, and one CPRI connection. This RBB is used for high output power mode.

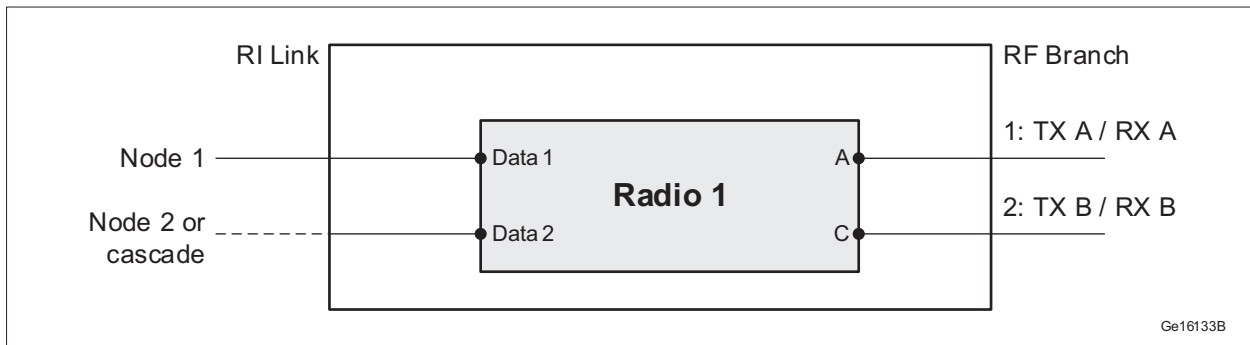


Figure 102 RBB22_1N Block Diagram

46.2.35 RBB22_1P

RBB22_1P is used for sectors with two TX branches, two RX branches, and one CPRI connection.

RF A and RF C ports are used in this RBB.

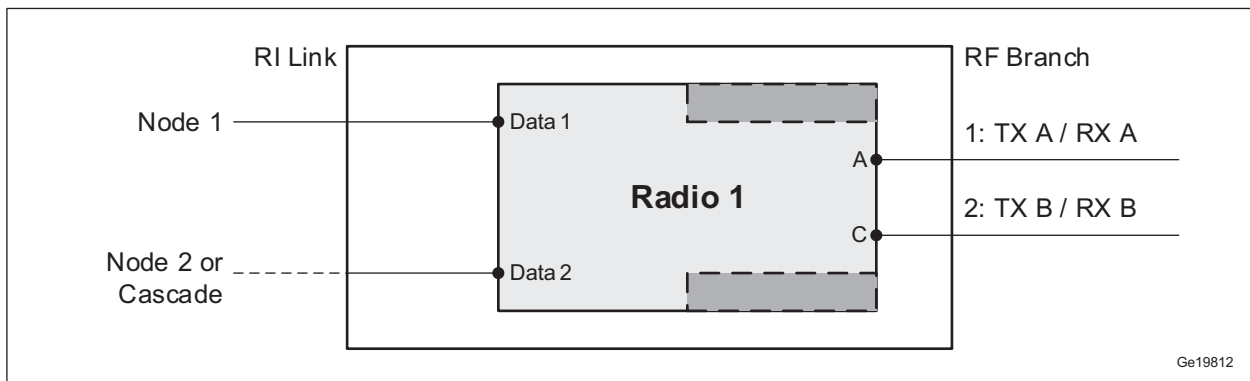


Figure 103 RBB22_1P Block Diagram

46.2.36 RBB22_1Q

RBB22_1Q is used for sectors with two TX branches, two RX branches, and one CPRI connection.

RF A and RF C ports are used in this RBB.

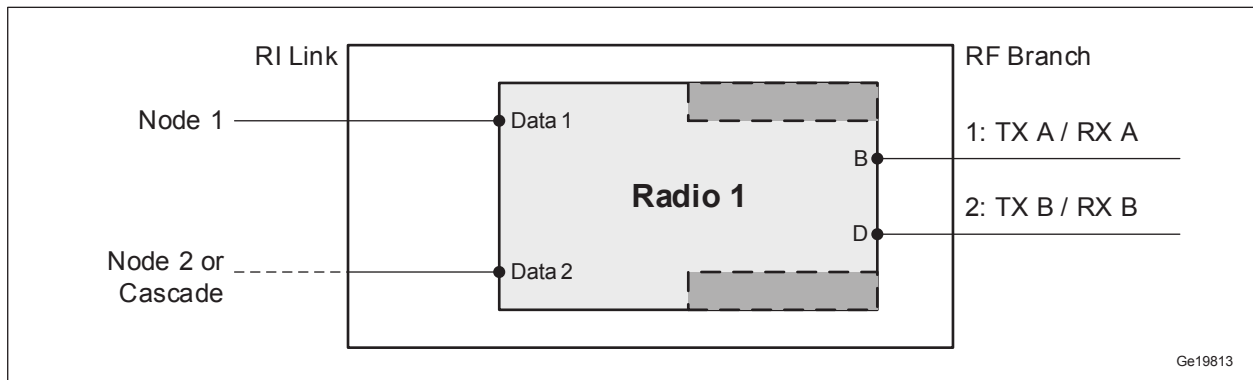


Figure 104 RBB22_1Q Block Diagram

46.2.37 RBB22_2A

RBB22_2A is used for sectors with two TX branches, two RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

Figure 105 shows the RBB22_2A block diagram.

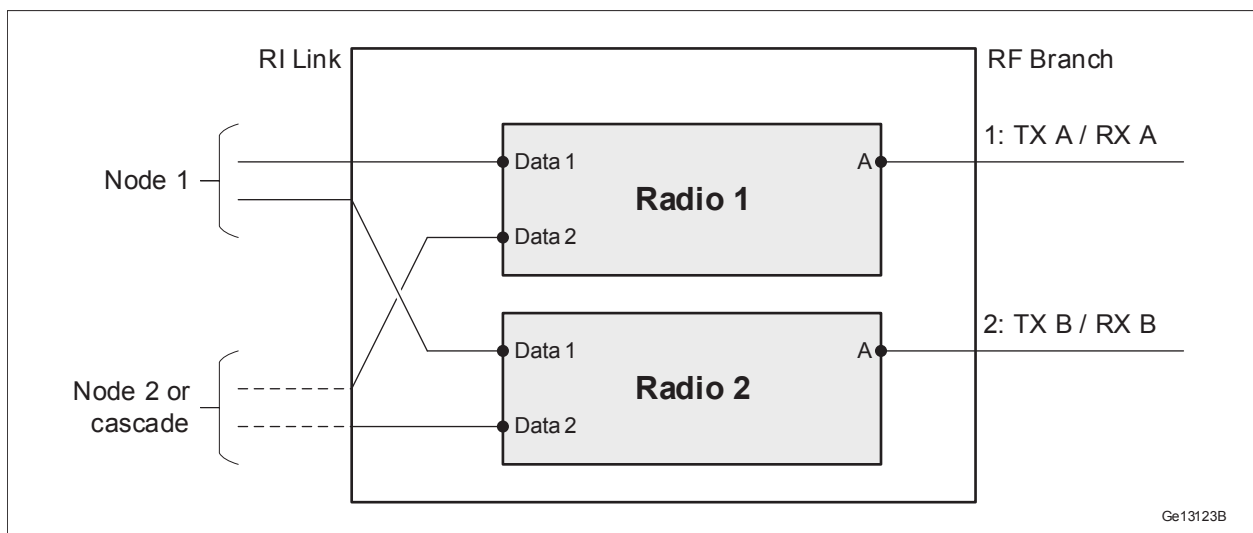


Figure 105 RBB22_2A Block Diagram

46.2.38 RBB22_2B

RBB22_2B is used for sectors with two TX branches, two RX branches, and two CPRI connections. This RBB uses an analog RX cross-connection. This RBB is supported for MSMM configurations.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

For mixed mode, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

Figure 106 shows the RBB22_2B block diagram.

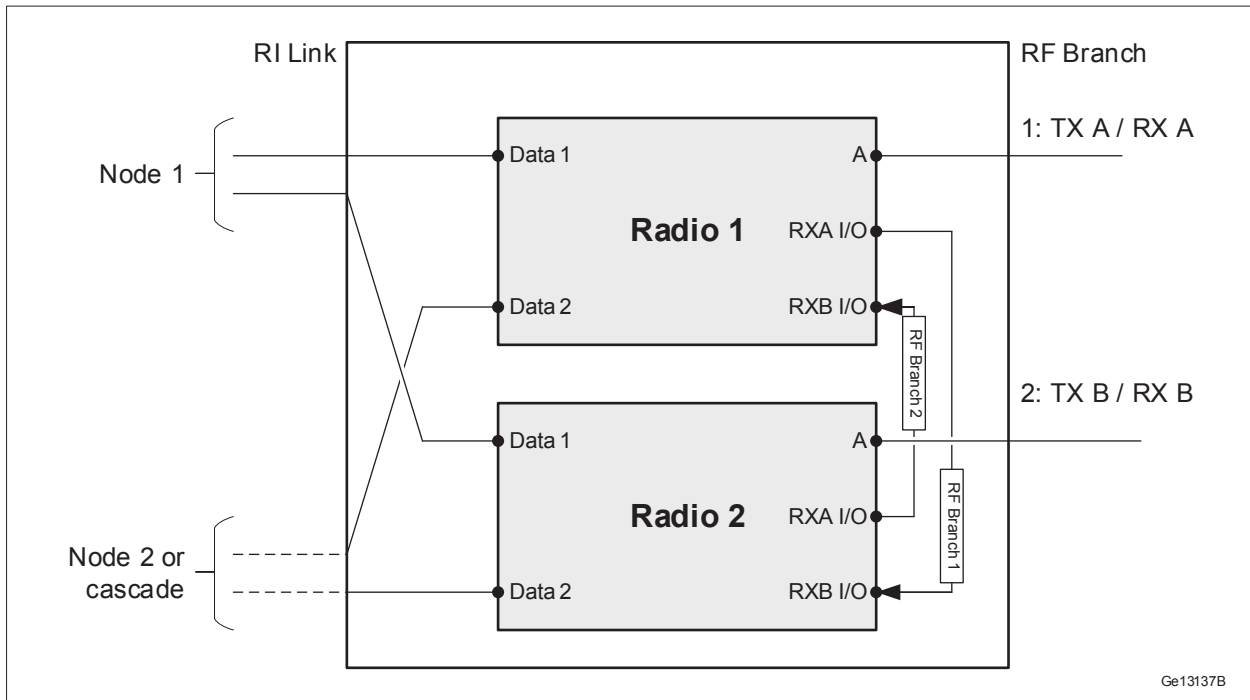


Figure 106 RBB22_2B Block Diagram

46.2.39 RBB22_2C

RBB22_2C is used for sectors with two TX branches, two RX branches, and two CPRI connections.

With DUG 20, this RBB is used for ring topology in GSM.

Figure 107 shows the RBB22_2C block diagram.

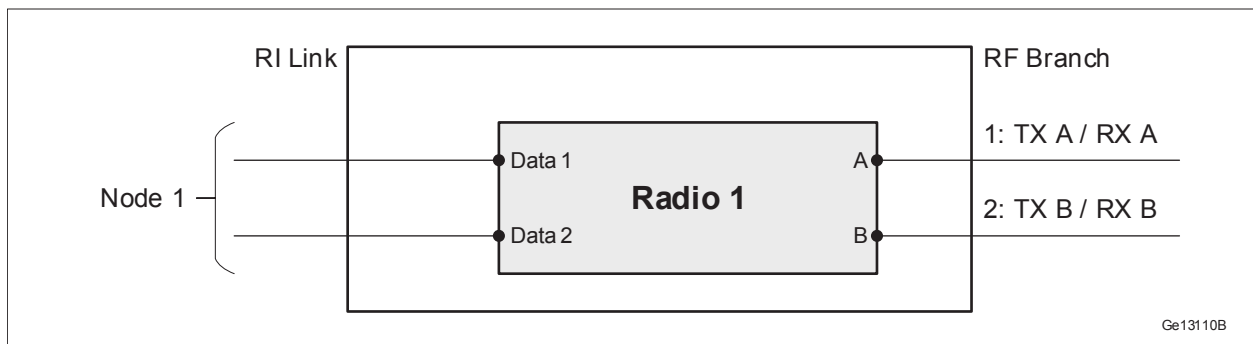


Figure 107 RBB22_2C Block Diagram

46.2.40 RBB22_2D

RBB22_2D is used for sectors with two TX branches, two RX branches, and two CPRI connections. This RBB uses an analog RX cross-connection.

This RBB is used for ring topology in GSM.

[Figure 108](#) shows the RBB22_2D block diagram.

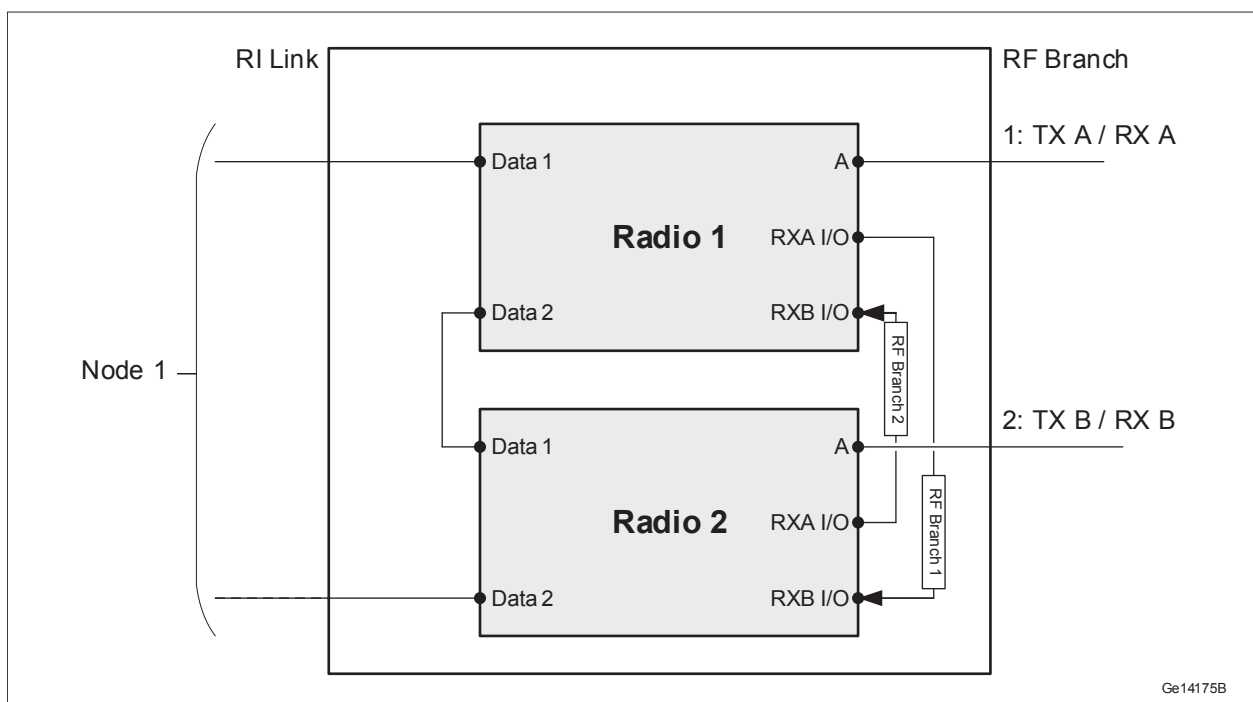


Figure 108 RBB22_2D Block Diagram

46.2.41 RBB22_2E

RBB22_2E is used for sectors with two TX branches, two RX branches, and two CPRI connections. This RBB is supported for MSMM configurations.

This RBB can be used with the Multi-Sector Per Radio feature.

This RBB is used for Cross-Sector Antenna Sharing Redundancy and cascade configurations.

For mixed mode, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 109](#) shows the RBB22_2E block diagram.

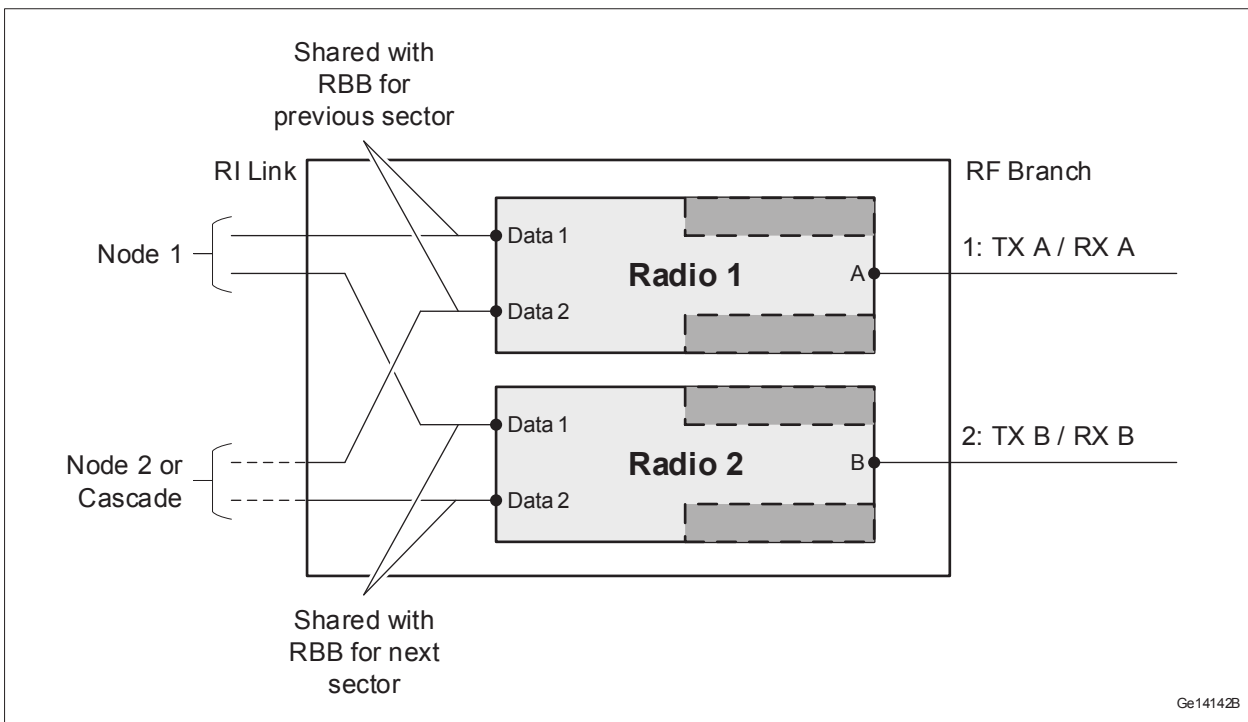


Figure 109 RBB22_2E Block Diagram

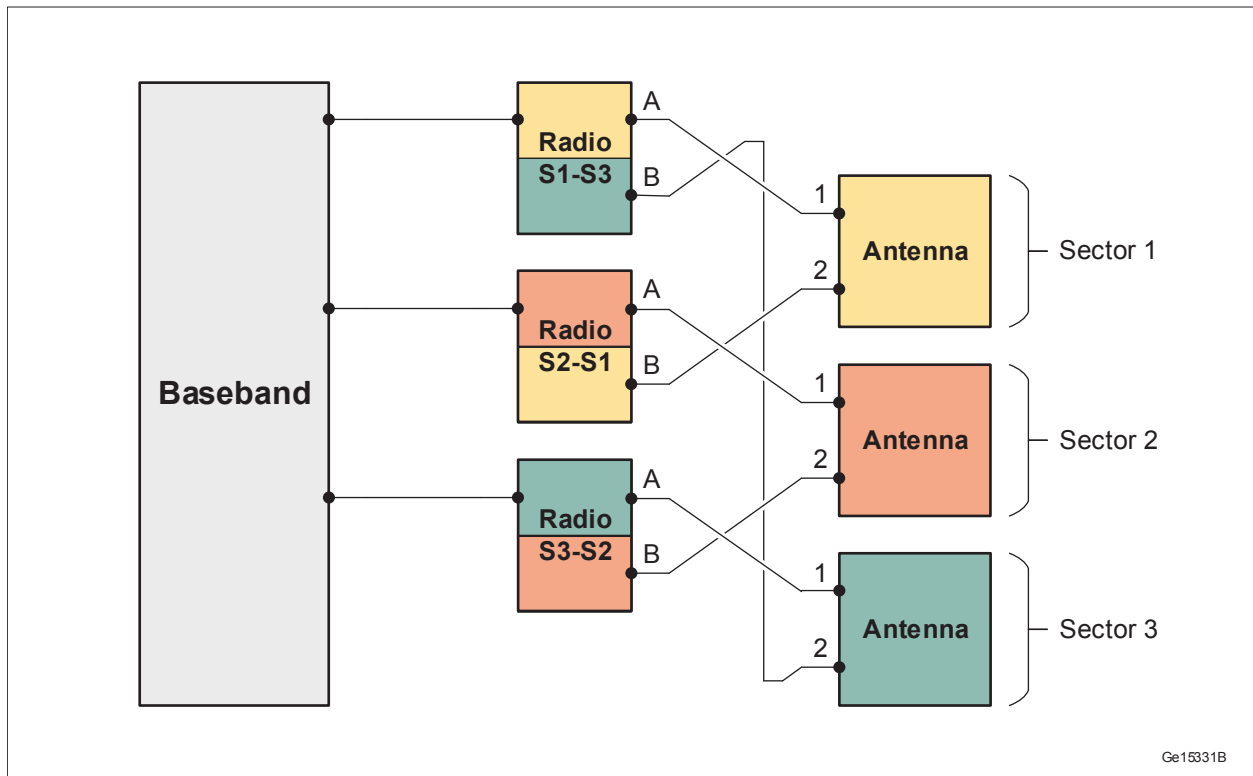


Figure 110 Configuration with three RBB22_2E

46.2.42 RBB22_2J

RBB22_2J is used for sectors with two TX branches, two RX branches, and two CPRI connections. This RBB uses an analog RX cross-connection. This RBB is supported for MSMM configurations.

[Figure 111](#) shows the RBB22_2J block diagram.

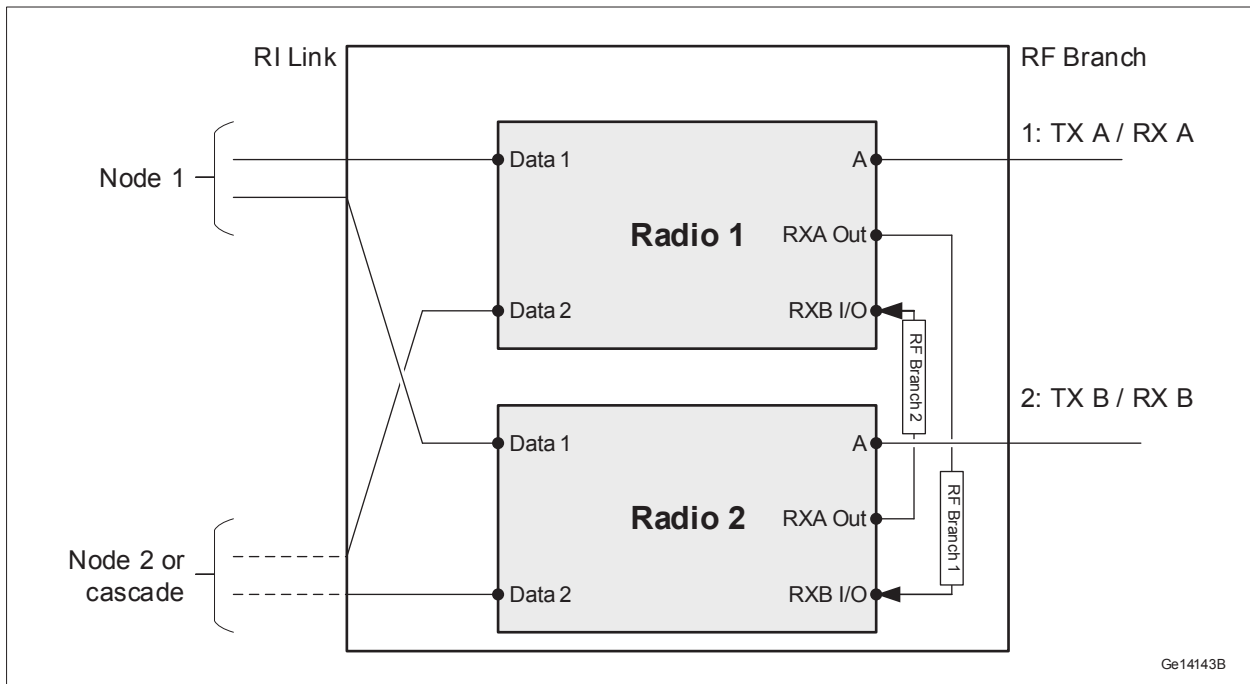


Figure 111 RBB22_2J Block Diagram

46.2.43 RBB22_2K

RBB22_2K is used for sectors with two TX branches, two RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 112](#) shows the RBB22_2K block diagram.

[Figure 113](#) shows the RBB22_2K block diagram for RDS.

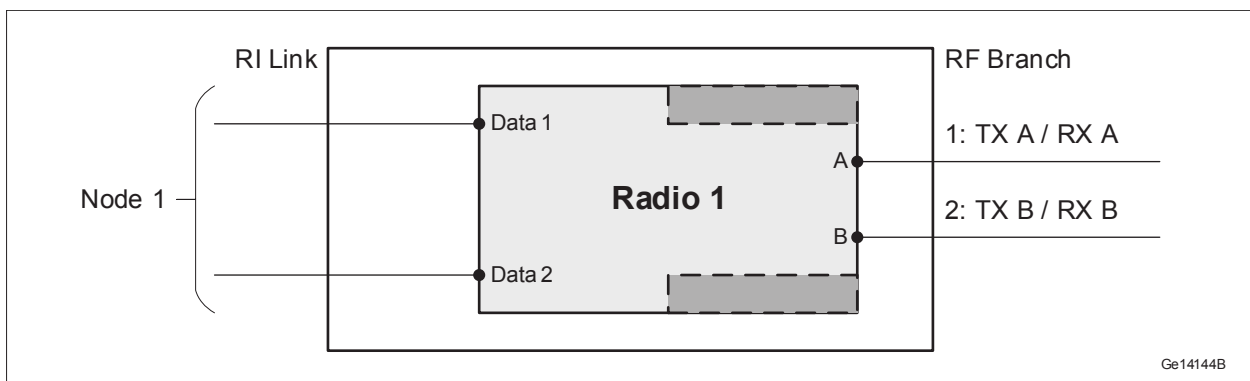


Figure 112 RBB22_2K

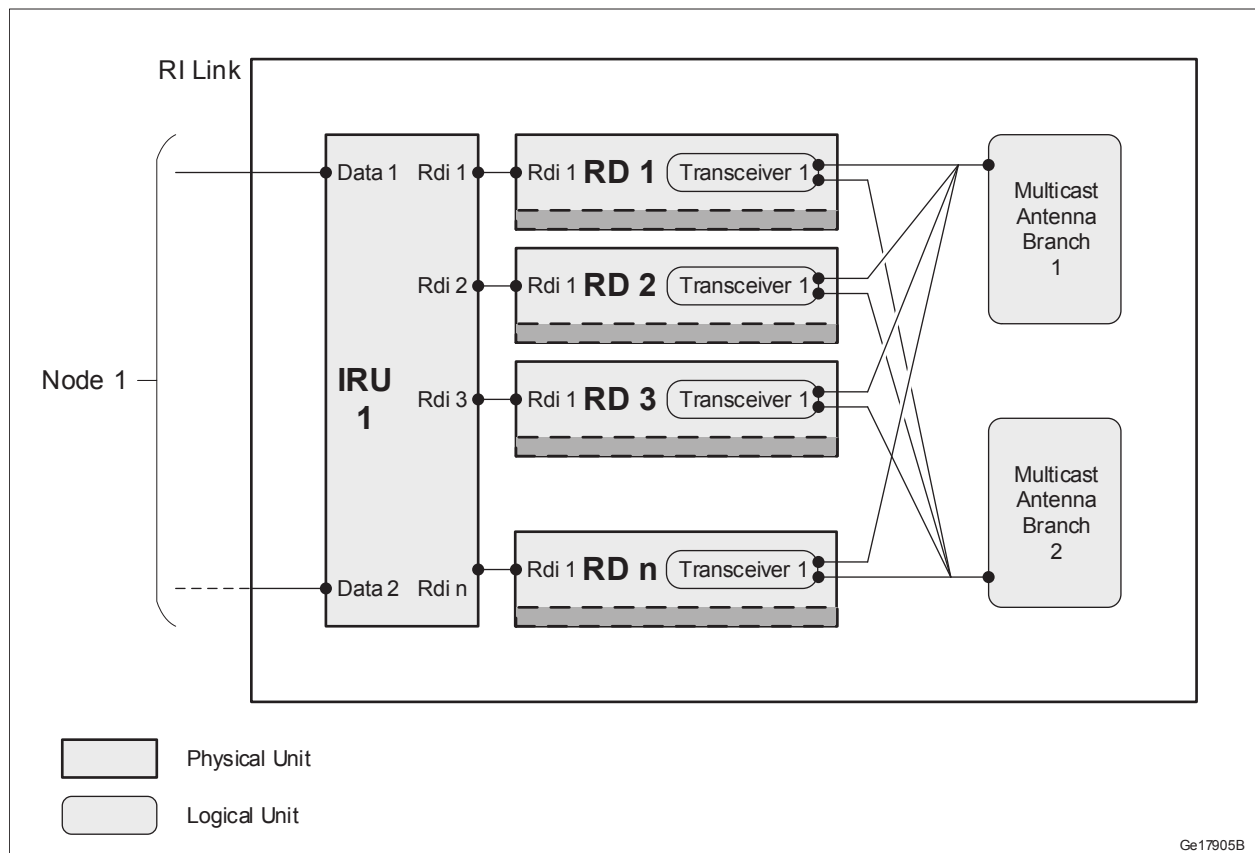


Figure 113 RBB22_2K Block Diagram for RDS

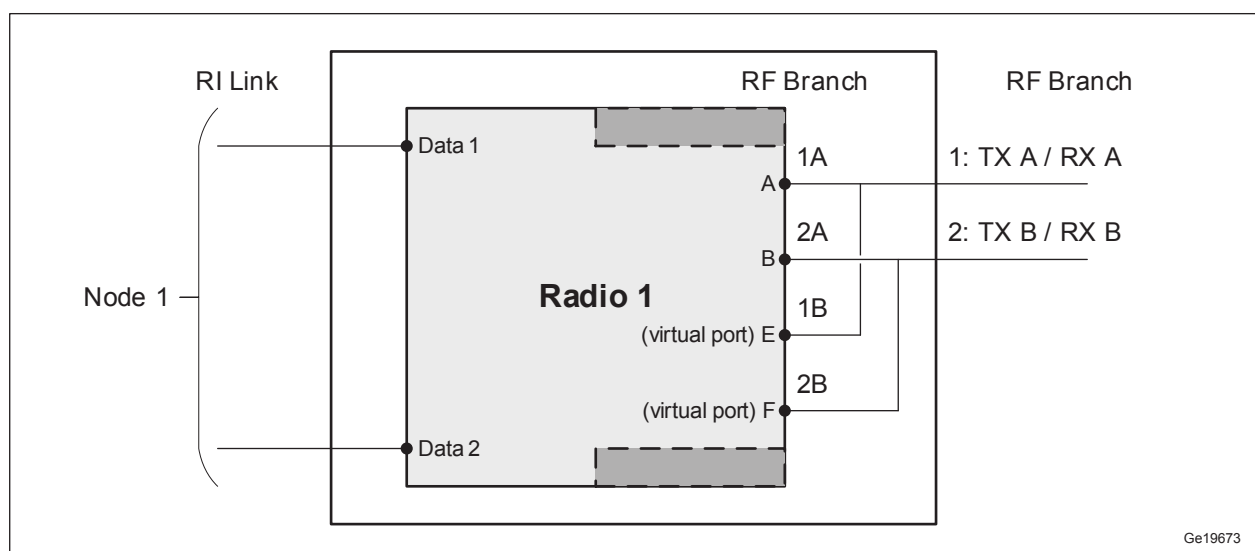


Figure 114 RBB22_2K Block Diagram for Radio 4449 B5 B13

46.2.44 RBB22_2L

RBB22_2L is used for sectors with two TX branches, two RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB22_2L is used together with RBB22_2K.

Figure 115 shows the RBB22_2L block diagram.

Figure 116 shows the RBB22_2L block diagram for RDS.

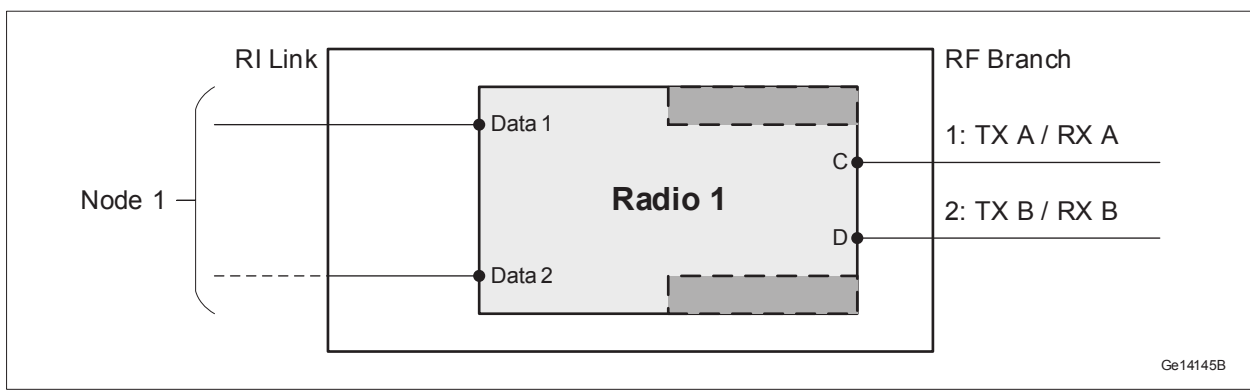


Figure 115 RBB22_2L Block Diagram

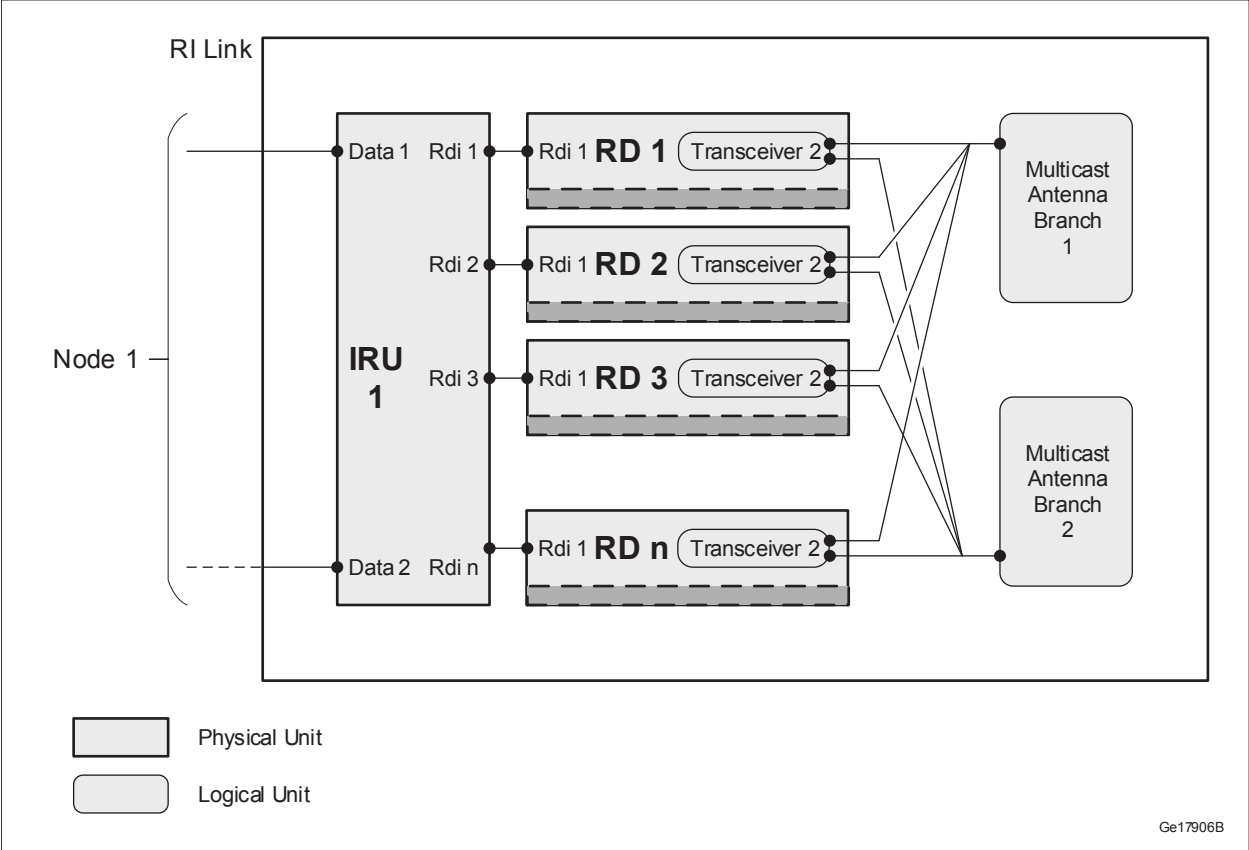


Figure 116 RBB22_2L Block Diagram for RDS

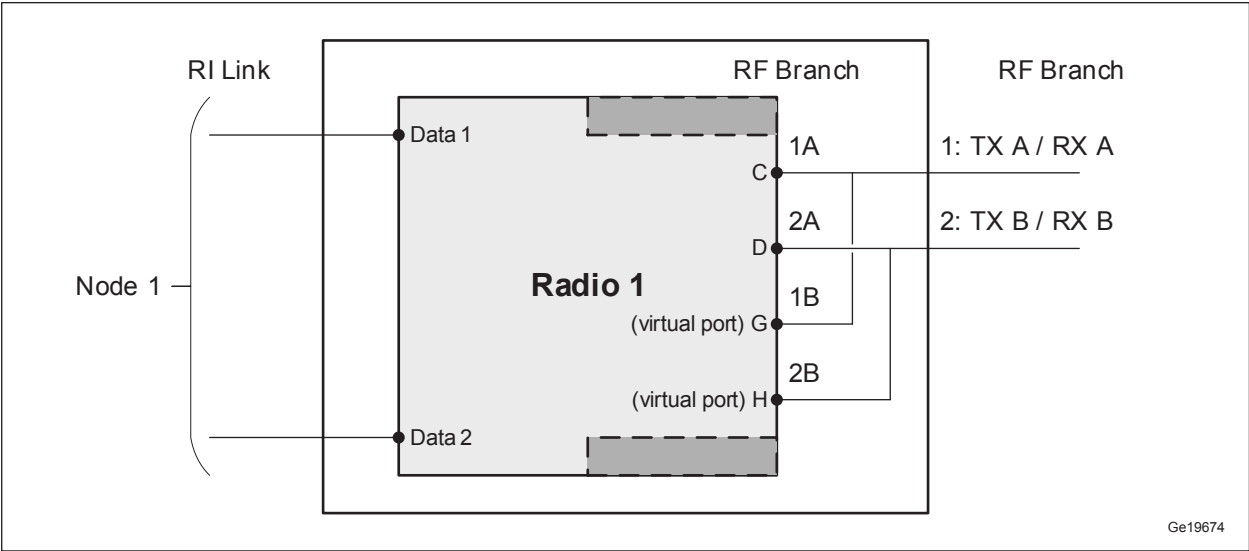


Figure 117 RBB22_2L Block Diagram for Radio 4449 B5 B13

46.2.45 RBB22_2M

RBB22_2M is used for sectors with two TX branches, two RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB22_2M is used together with RBB22_2K and RBB22_2L.

Figure 118 shows the RBB22_2M block diagram.

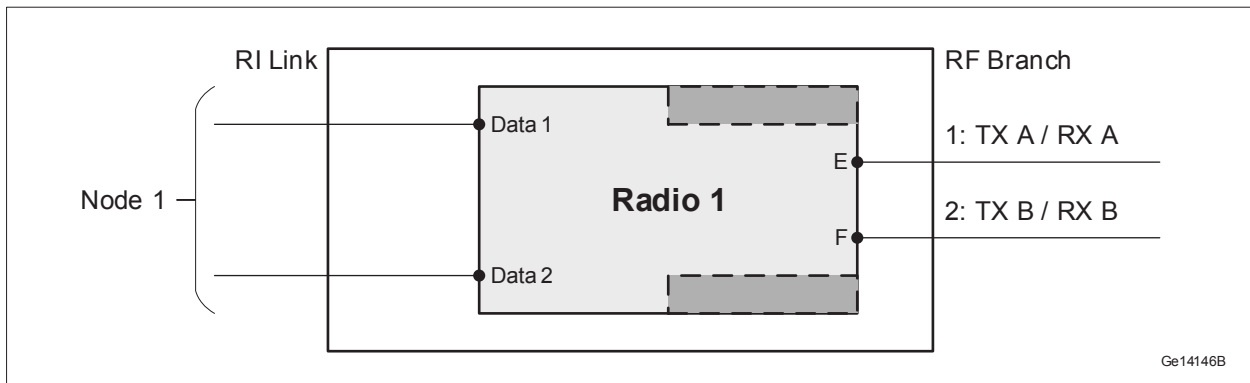


Figure 118 RBB22_2M Block Diagram

46.2.46 RBB22_2N

RBB22_2N is used for sectors with two TX branches, two RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB22_2N is used together with RBB22_2K, RBB22_2L and RBB22_2M.

Figure 119 shows the RBB22_2N block diagram.

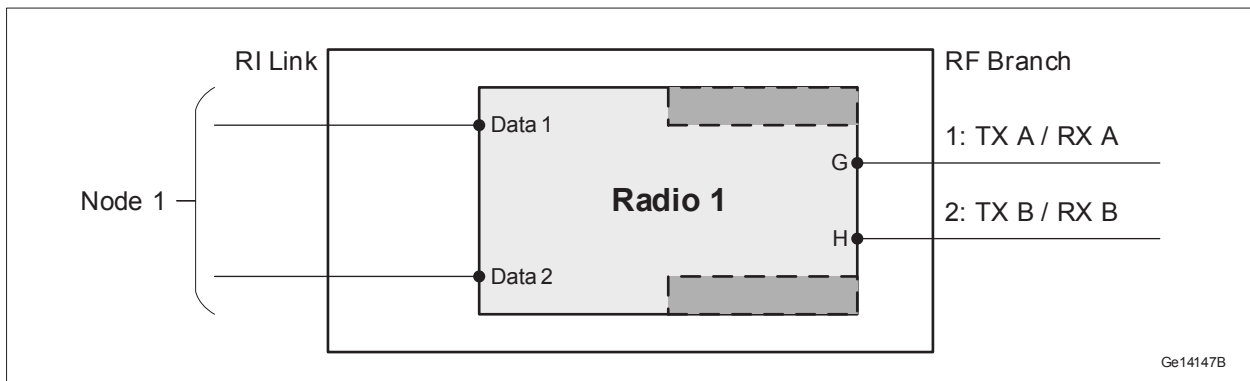


Figure 119 RBB22_2N Block Diagram



46.2.47 RBB22_2P

RBB22_2P is used for sectors with two TX branches, two RX branches, and two CPRI connections. This RBB is used for high output power mode.

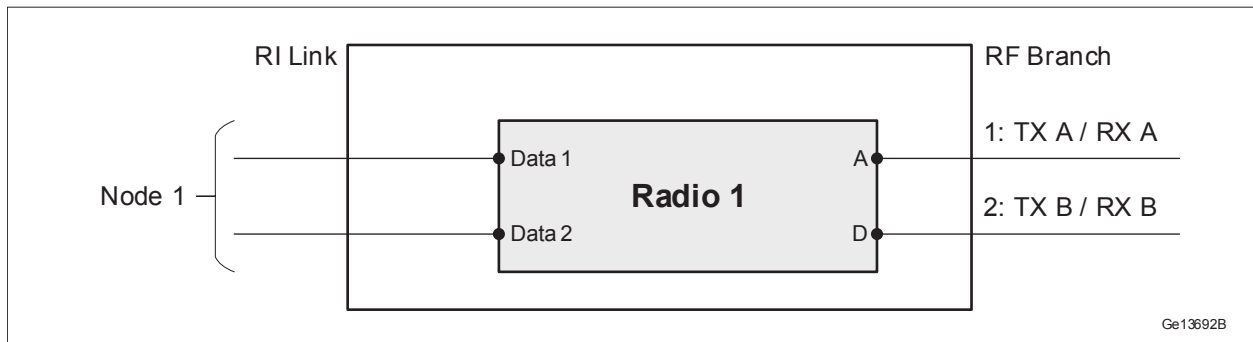


Figure 120 RBB22_2P

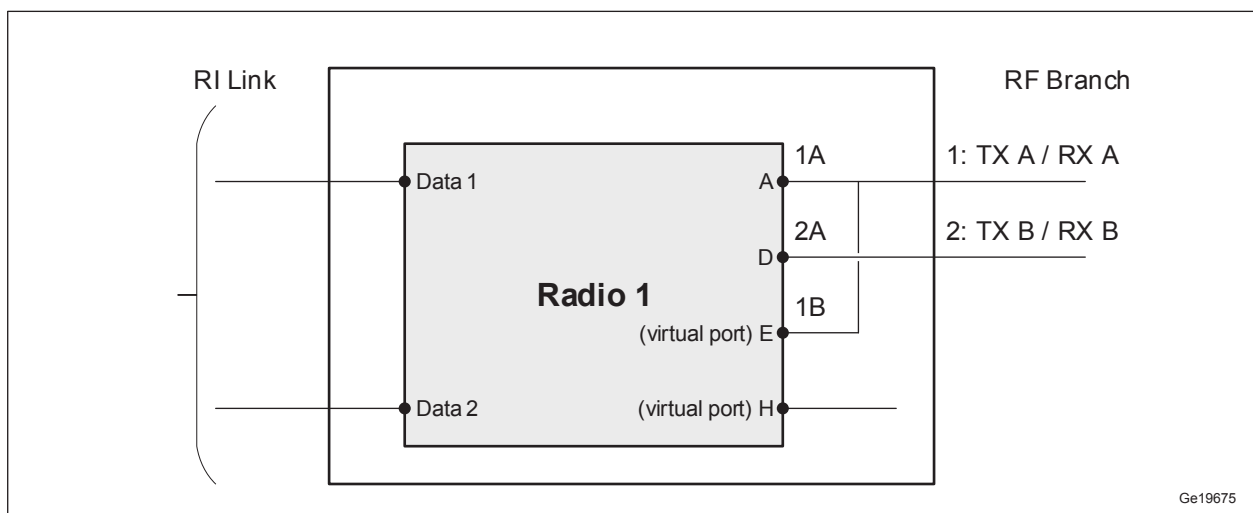


Figure 121 RBB22_2P for Radio 4449 B5 B13

46.2.48 RBB22_2Q

RBB22_2Q is used for sectors with two TX branches, two RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

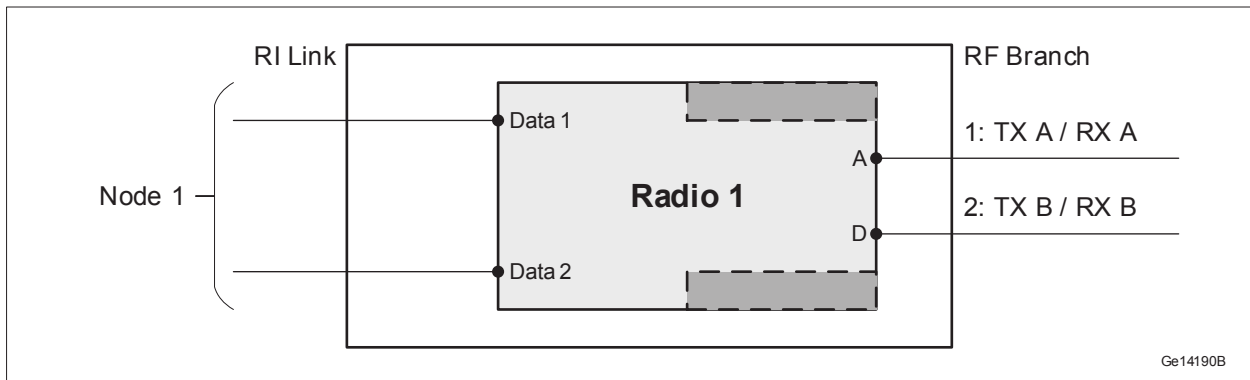


Figure 122 RBB22_2Q Block Diagram

46.2.49 RBB22_2R

RBB22_2R is used for sectors with two TX branches, two RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

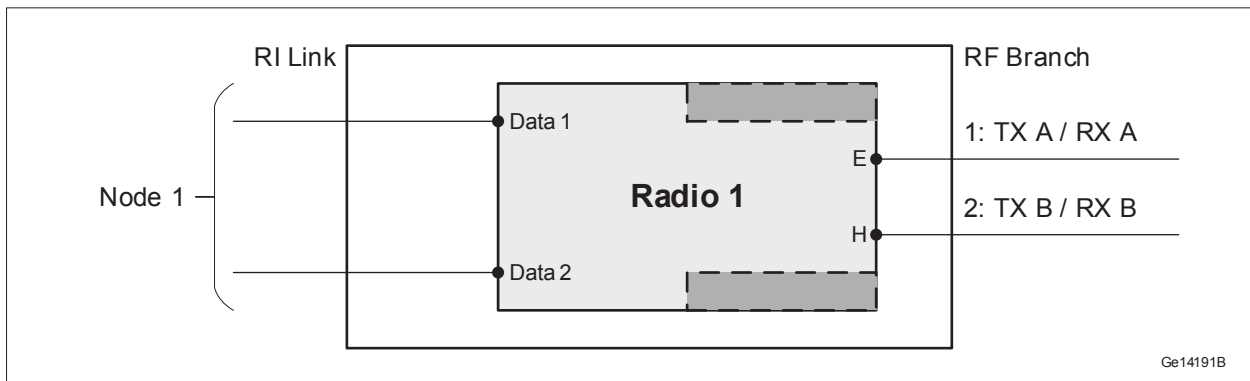


Figure 123 RBB22_2R Block Diagram

46.2.50 RBB22_2S

RBB22_2S is used for sectors with two TX branches, two RX branches, and two CPRI connections. This RBB is used for high output power mode.

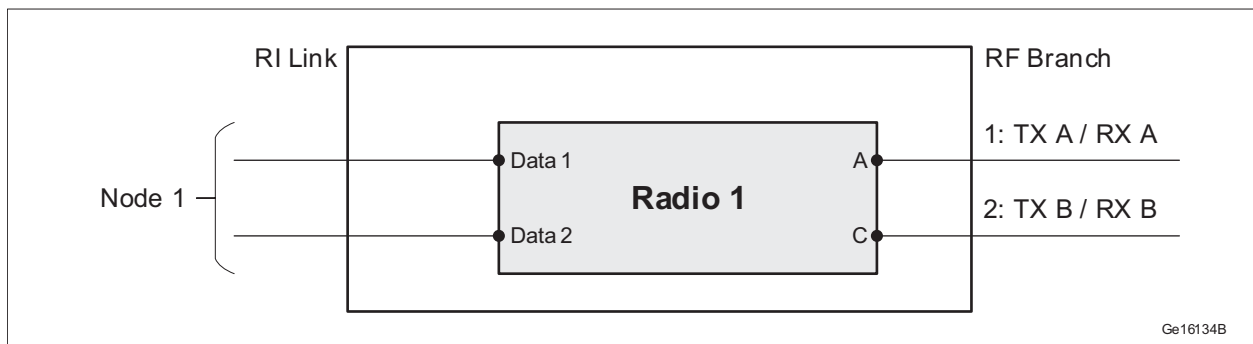


Figure 124 RBB22_2S Block Diagram

46.2.51 RBB22_2T

RBB22_2T is used for sectors with two TX branches, two RX branches, and two CPRI connections.

RF A and RF C ports are used in this RBB.

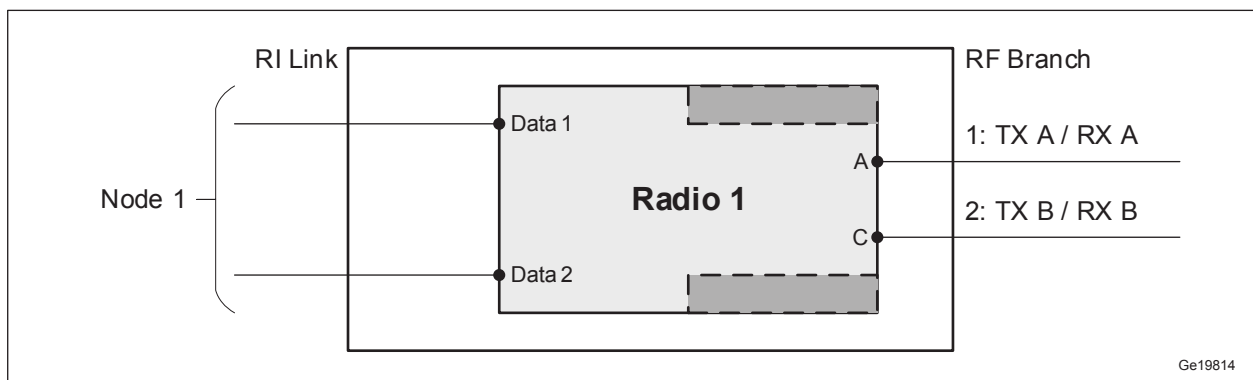


Figure 125 RBB22_2T Block Diagram

46.2.52 RBB22_2U

RBB22_2U is used for sectors with two TX branches, two RX branches, and two CPRI connections.

RF A and RF C ports are used in this RBB.

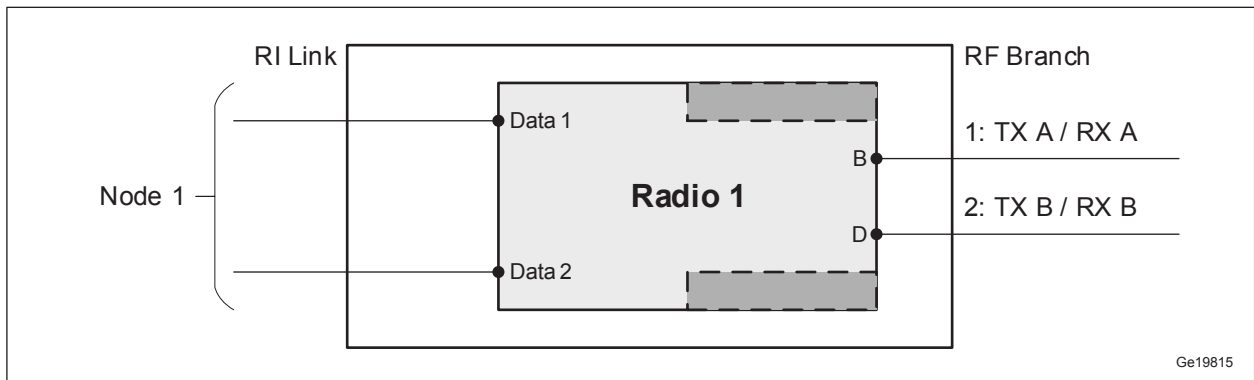


Figure 126 RBB22_2U Block Diagram

46.2.53 RBB24_1A

RBB24_1A is used for sectors with two TX branches, four RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

For mixed mode and Multi-Operator RAN LTE + LTE configurations, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 127](#) shows the RBB24_1A block diagram.

[Figure 128](#) shows the RBB24_1A block diagram for AIR.

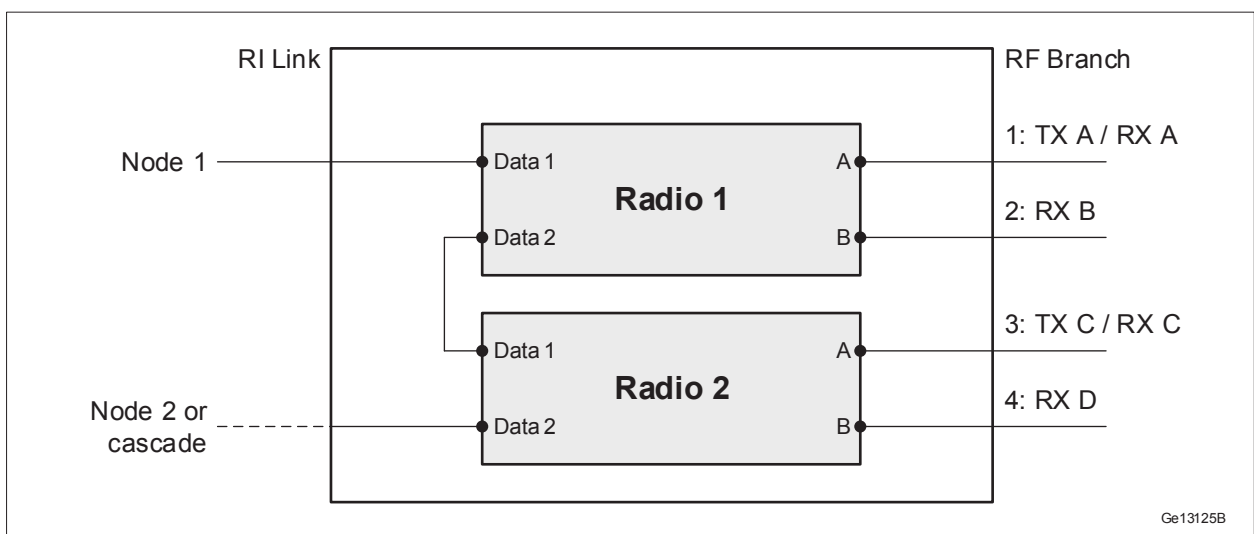


Figure 127 RBB24_1A Block Diagram

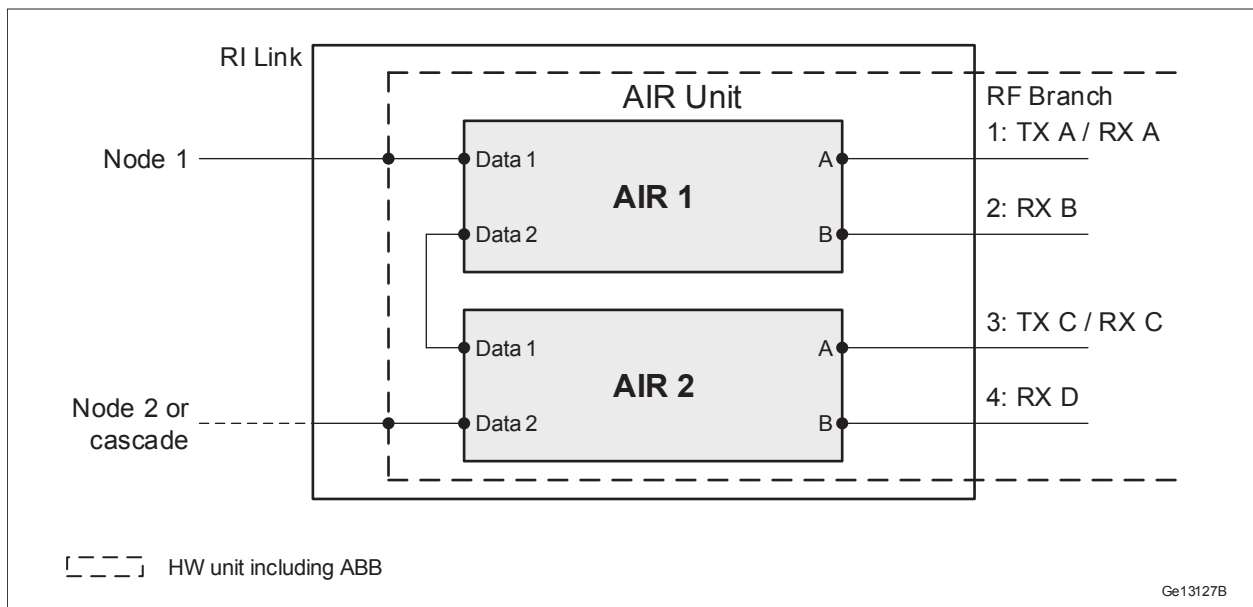


Figure 128 RBB24_1A Block Diagram for AIR

46.2.54 RBB24_1B

RBB24_1B is used for sectors with two TX branches, four RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

One of the radios in this RBB is an RX-only capable radio.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

For mixed mode and Multi-Operator RAN LTE + LTE configurations, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

[Figure 129](#) shows the RBB24_1B block diagram.

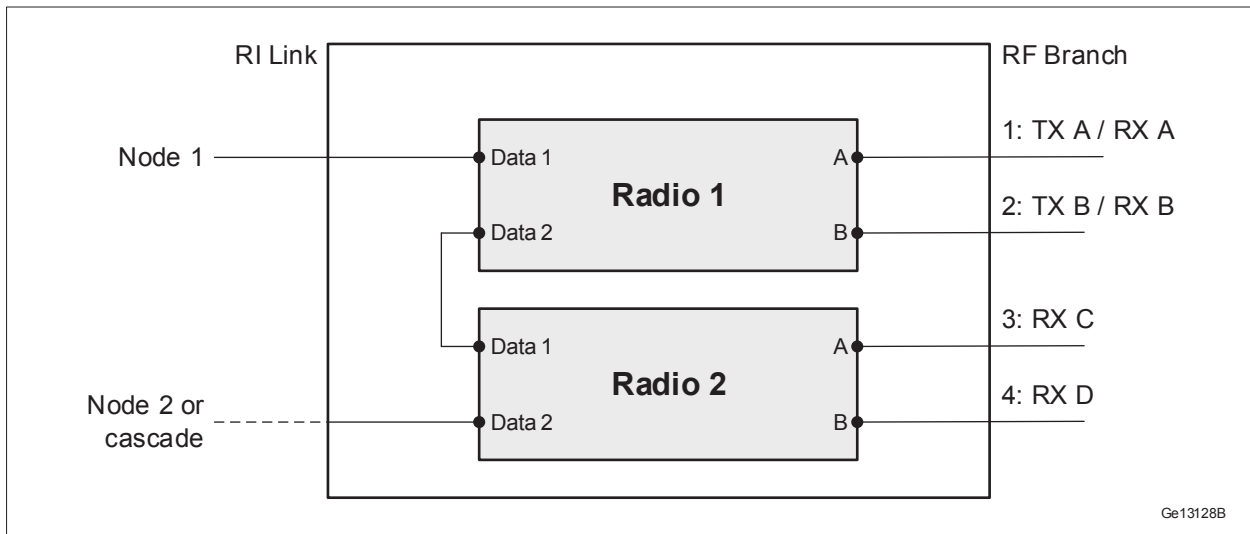


Figure 129 RBB24_1B Block Diagram

46.2.55 RBB24_1C

RBB24_1C is used for sectors with two TX branches, four RX branches, and one CPRI connection. This RBB is supported for MSMM configurations.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

Figure 130 shows the RBB24_1C block diagram.

Figure 131 shows the RBB24_1C block diagram for AIR.

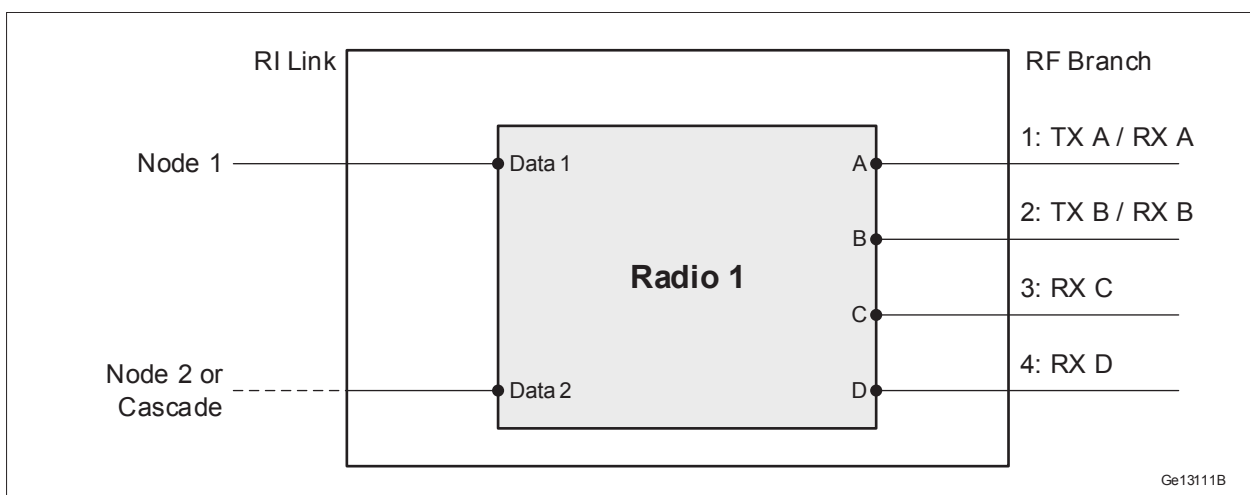


Figure 130 RBB24_1C Block Diagram

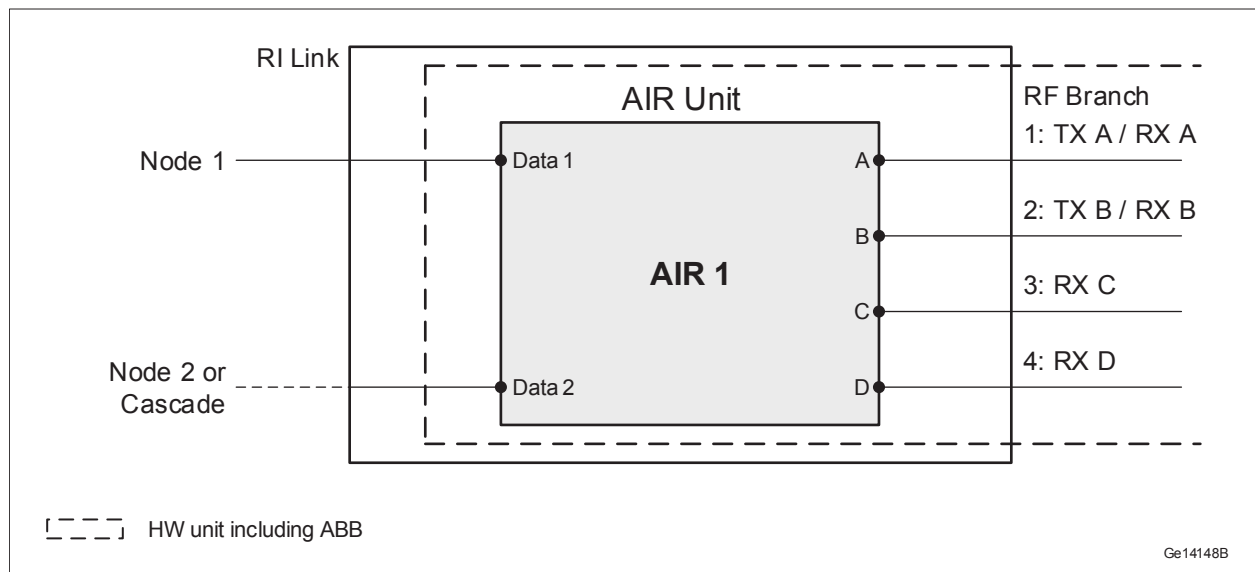


Figure 131 RBB24_1C Block Diagram for AIR

46.2.56 RBB24_1D

RBB24_1D is used for sectors with two TX branches, four RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 132](#) shows the RBB block diagram.

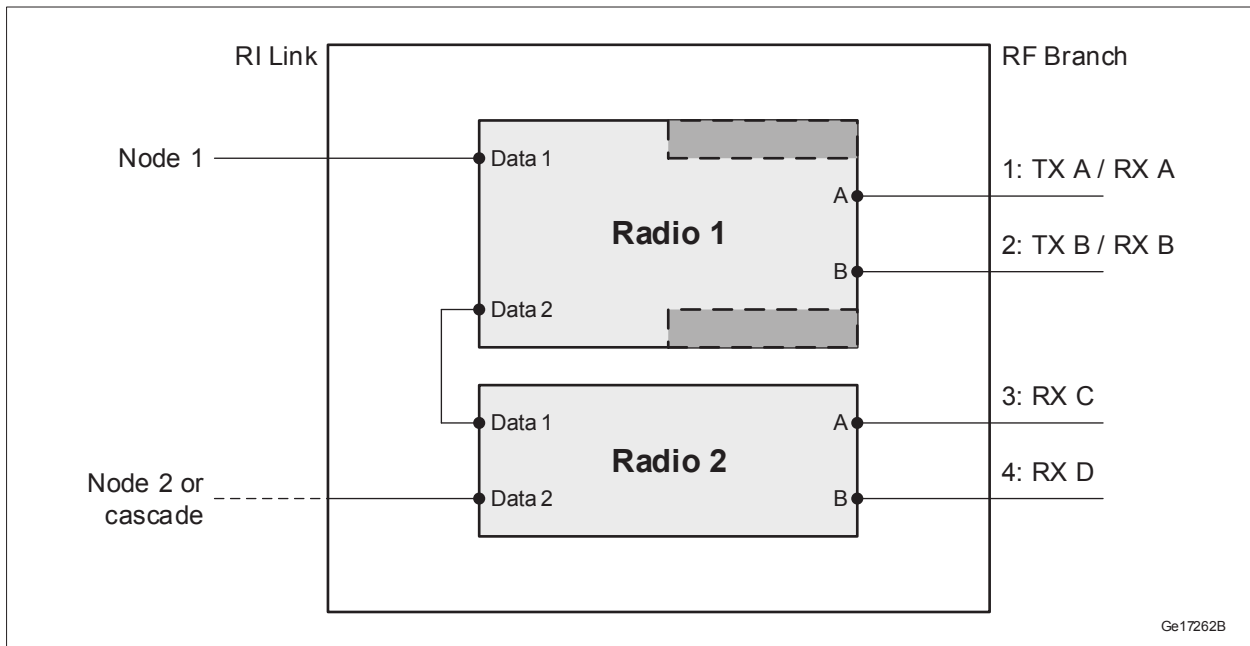


Figure 132 RBB24_1D Block Diagram

46.2.57 RBB24_2A

RBB24_2A is used for sectors with two TX branches, four RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

Figure 133 shows the RBB24_2A block diagram.

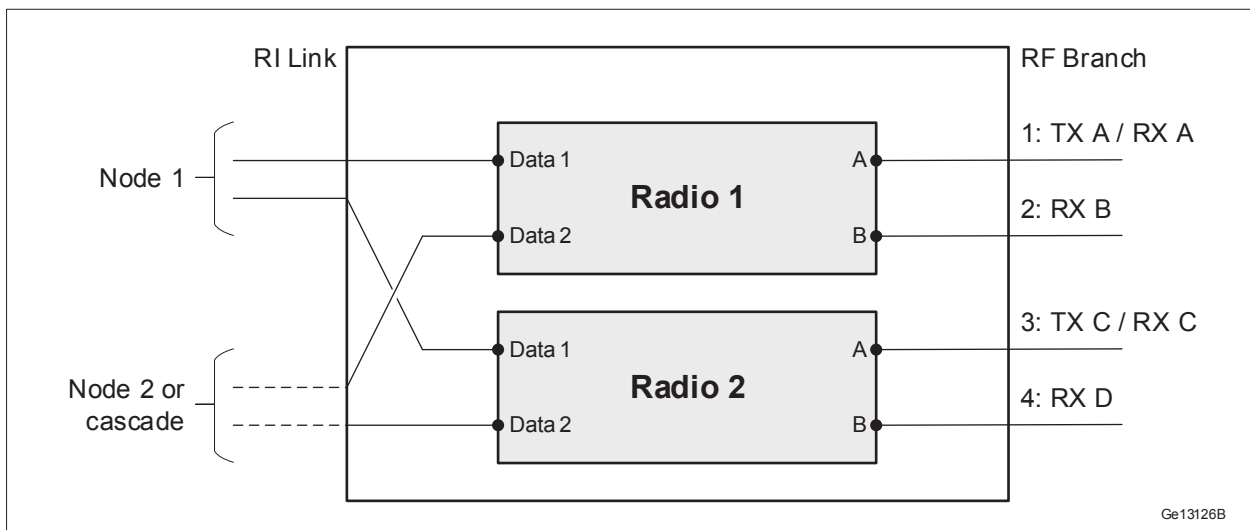


Figure 133 RBB24_2A Block Diagram



46.2.58 RBB24_2B

RBB24_2B is used for sectors with two TX branches, four RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection. This RBB is supported for MSMM configurations.

One of the radios in this RBB is an RX-only capable radio.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

Figure 134 shows the RBB24_2B block diagram.

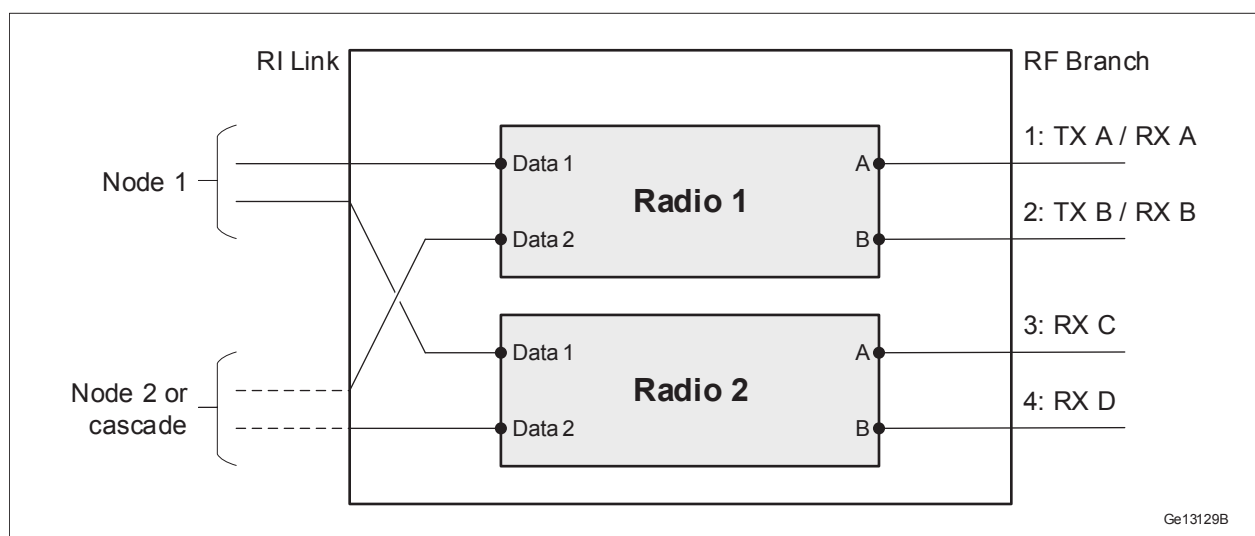


Figure 134 RBB24_2B Block Diagram

46.2.59 RBB24_2D

RBB24_2D is used for sectors with two TX branches, four RX branches, and two CPRI connections. This RBB is supported for MSMM configurations.

Figure 135 shows the RBB24_2D block diagram.

Figure 136 shows the RBB24_2D block diagram for AIR.

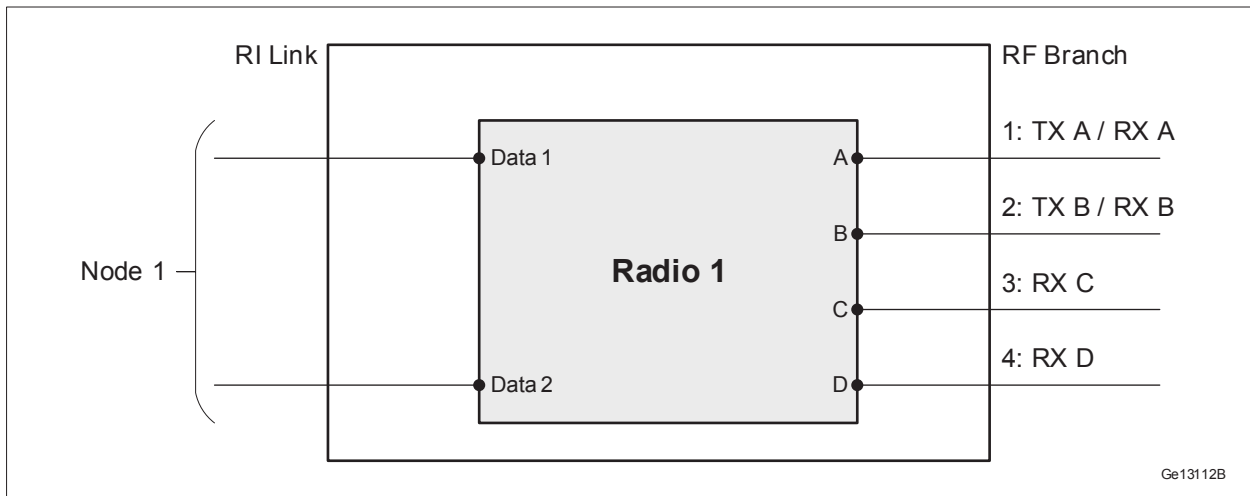


Figure 135 RBB24_2D Block Diagram

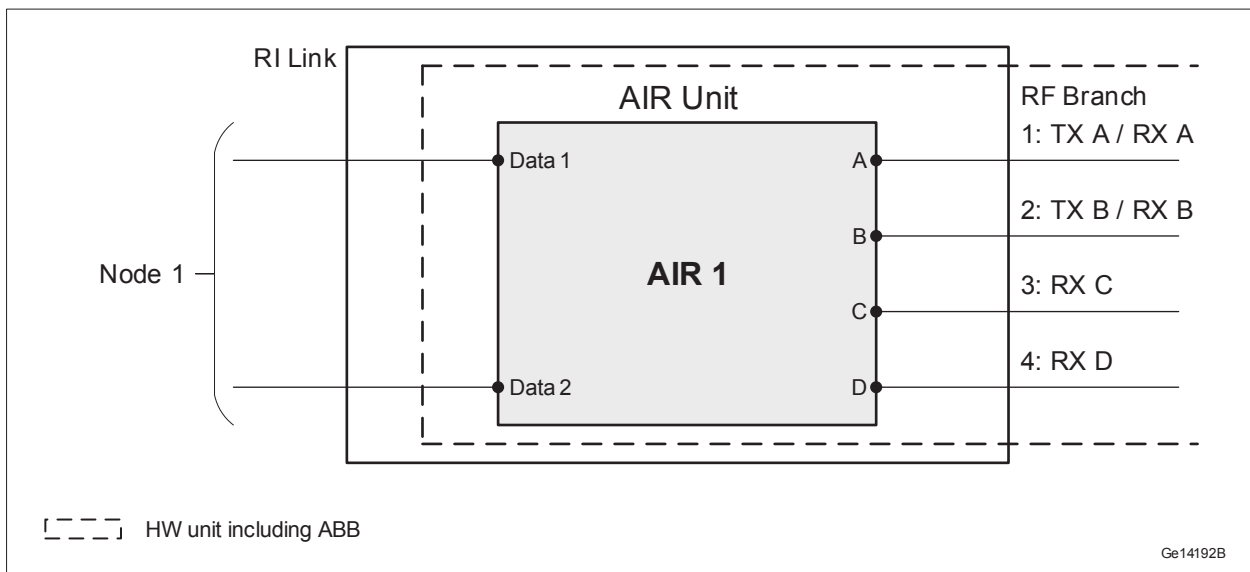


Figure 136 RBB24_2D Block Diagram for AIR

46.2.60 RBB24_2E

RBB24_2E is used for sectors with two TX branches, four RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 137](#) shows the RBB block diagram.

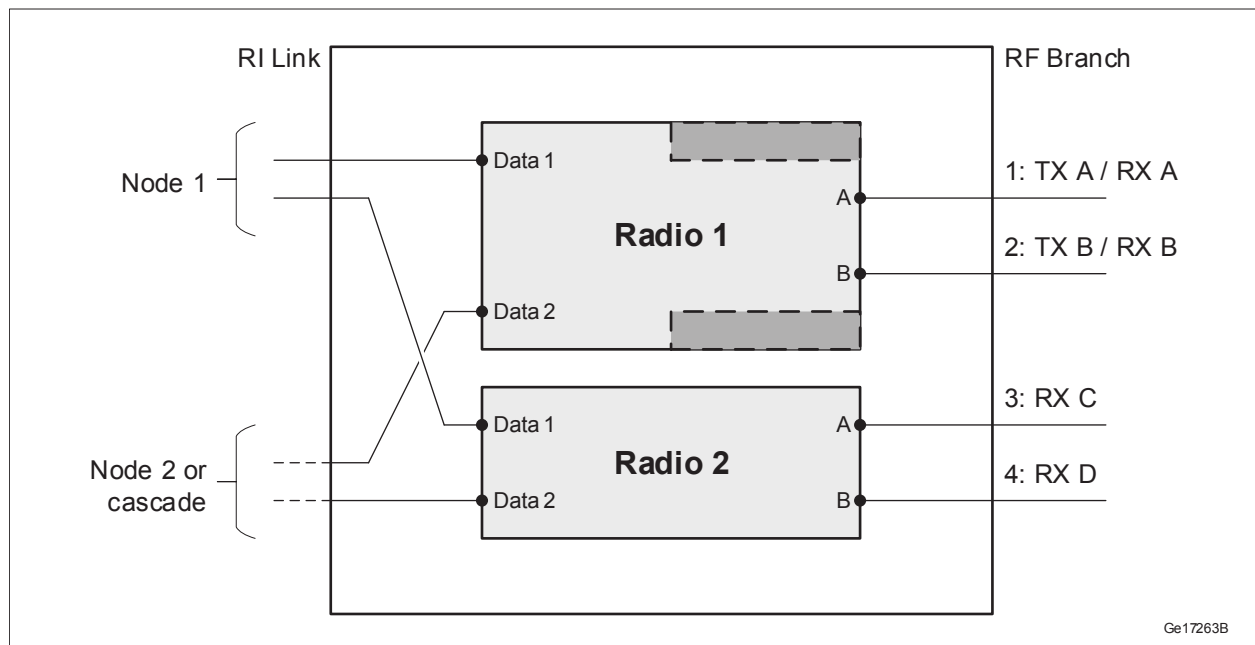


Figure 137 RBB24_2E Block Diagram

46.2.61 RBB24_2F

RBB24_2F is used for sectors with two TX branches, four RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 138](#) shows the RBB block diagram.

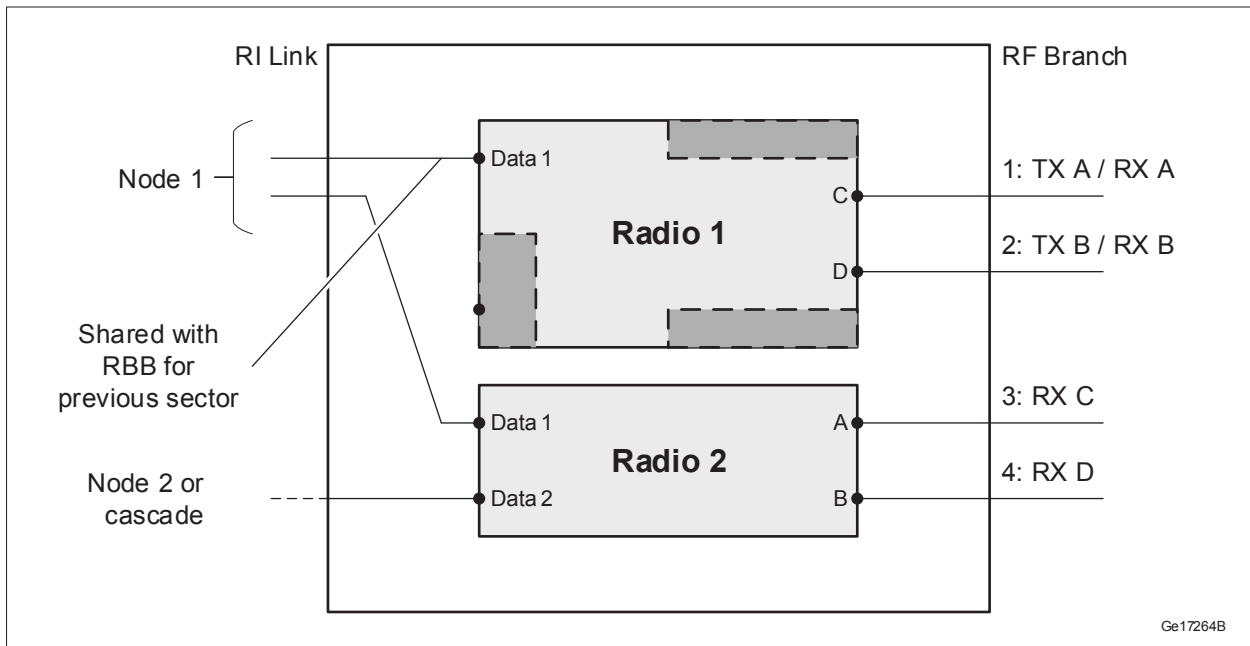


Figure 138 RBB24_2F Block Diagram

46.2.62 RBB32_1A

RBB32_1A is used for sectors with three TX branches, two RX branches, and one CPRI connection. This RBB uses an analog RX cross-connection.

[Figure 139](#) shows the RBB32_1A block diagram.

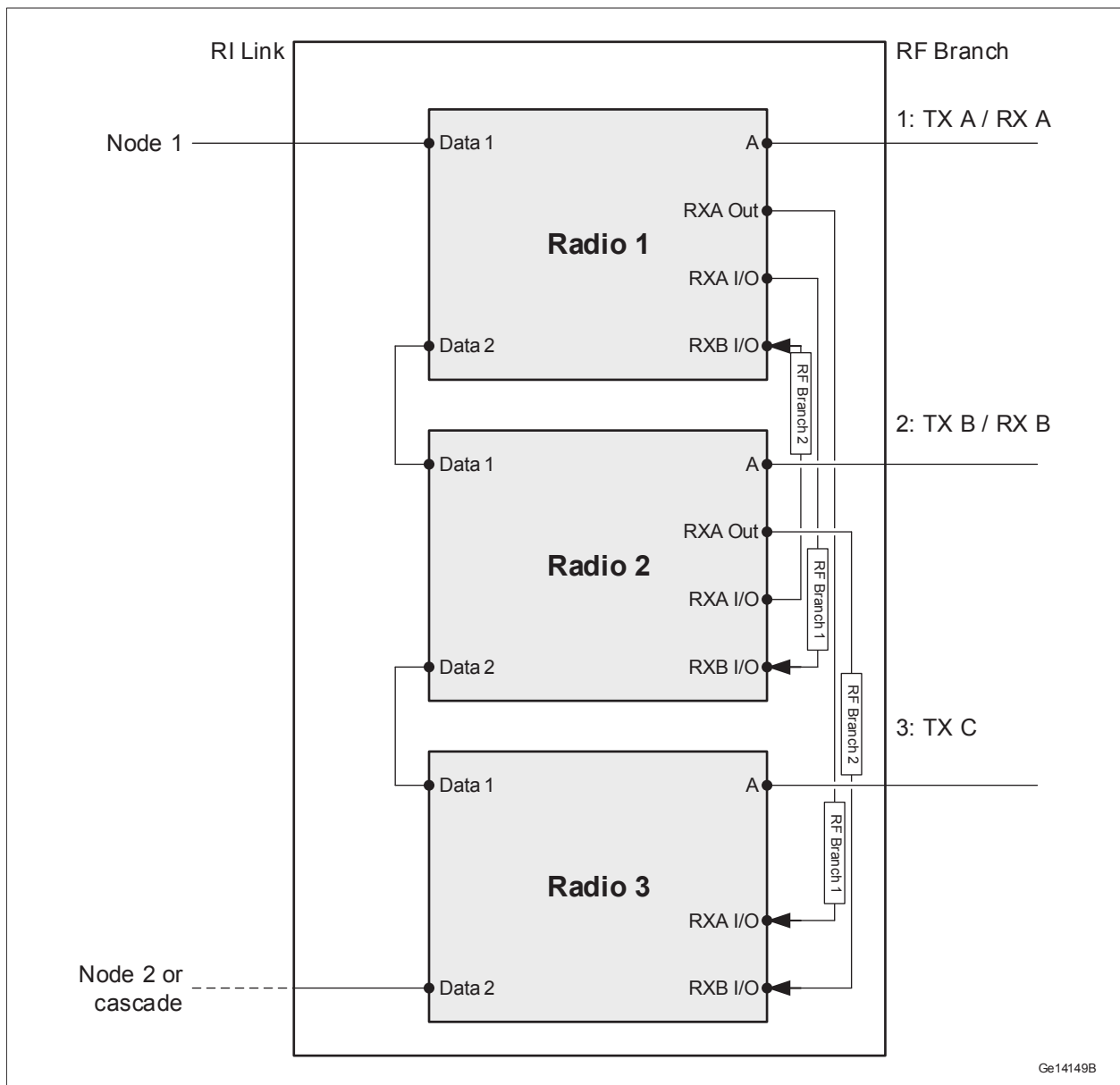


Figure 139 RBB32_1A Block Diagram

46.2.63 RBB32_1B

RBB32_1B is used for sectors with three TX branches, two RX branches and one external RX cross connection, and one CPRI connection. This RBB uses an analog RX cross-connection.

[Figure 140](#) shows the RBB32_1B block diagram.

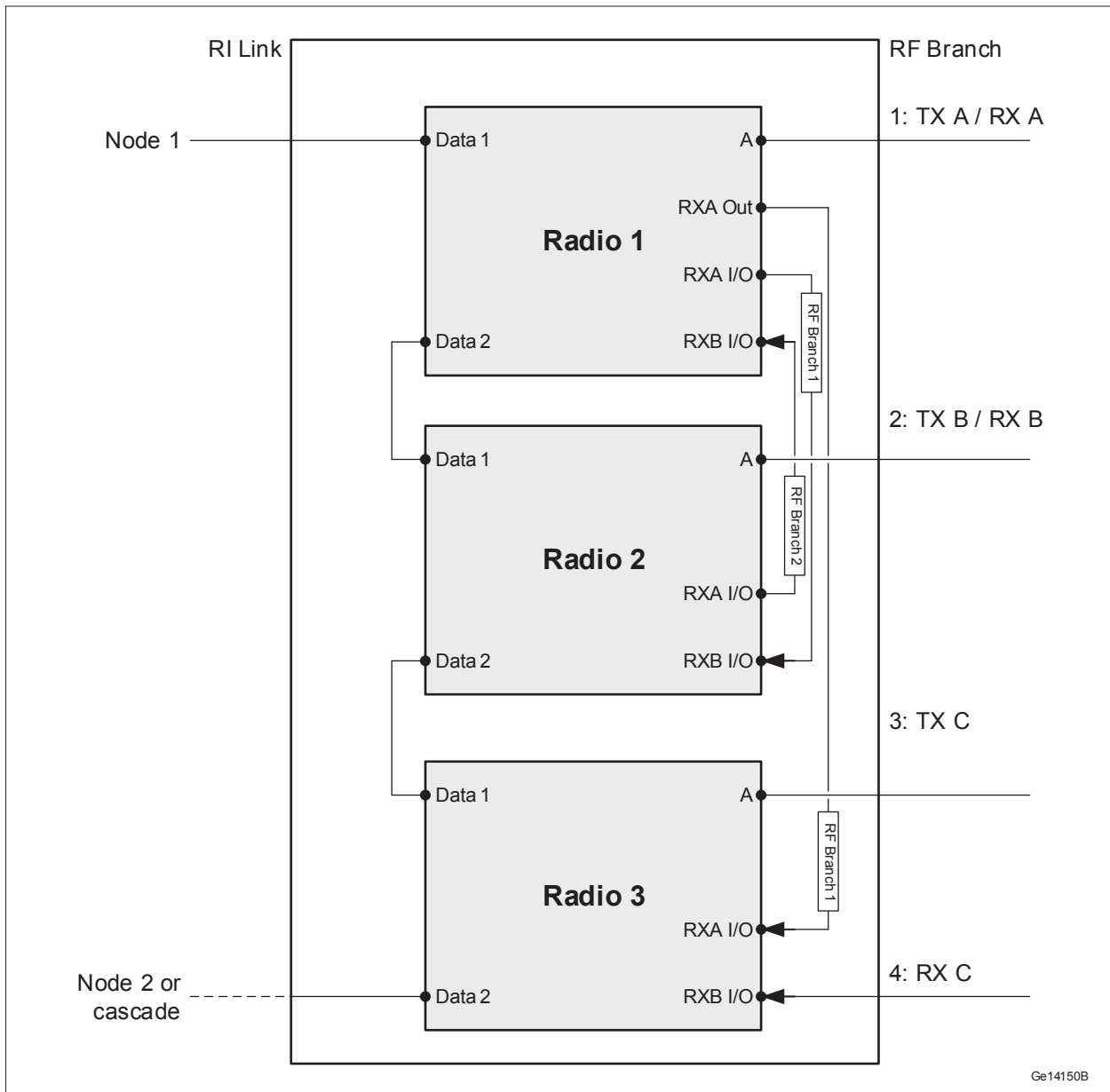


Figure 140 RBB32_1B Block Diagram

46.2.64 RBB32_3A

RBB32_3A is used for sectors with three TX branches, two RX branches, and three CPRI connections. This RBB uses an analog RX cross-connection.

[Figure 141](#) shows the RBB32_3A block diagram.

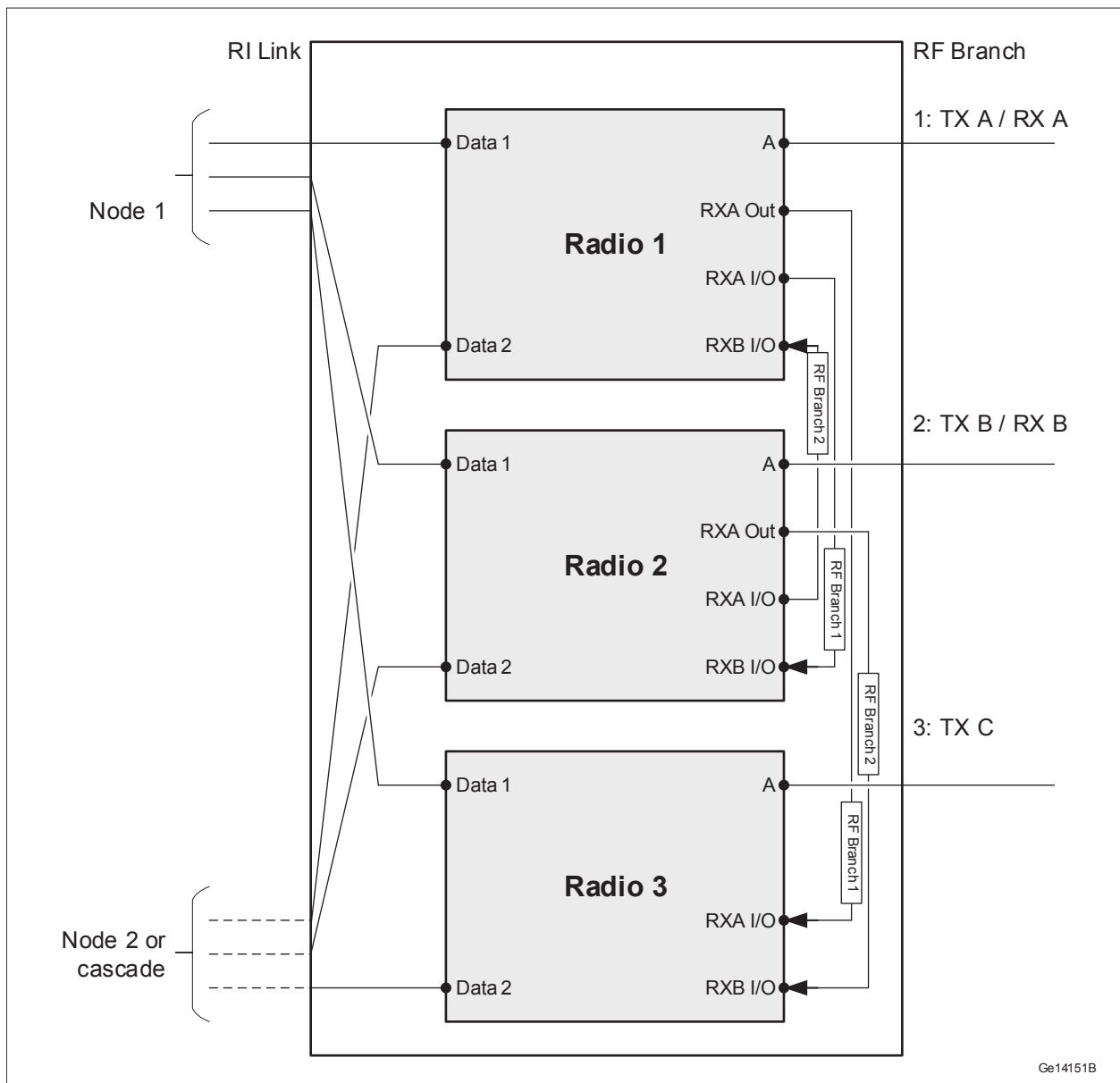


Figure 141 RBB32_3A Block Diagram

46.2.65 RBB32_3B

RBB32_3B is used for sectors with three TX branches, two RX branches and one external RX cross connection, and three CPRI connections. This RBB uses an analog RX cross-connection.

[Figure 142](#) shows the RBB32_3B block diagram.

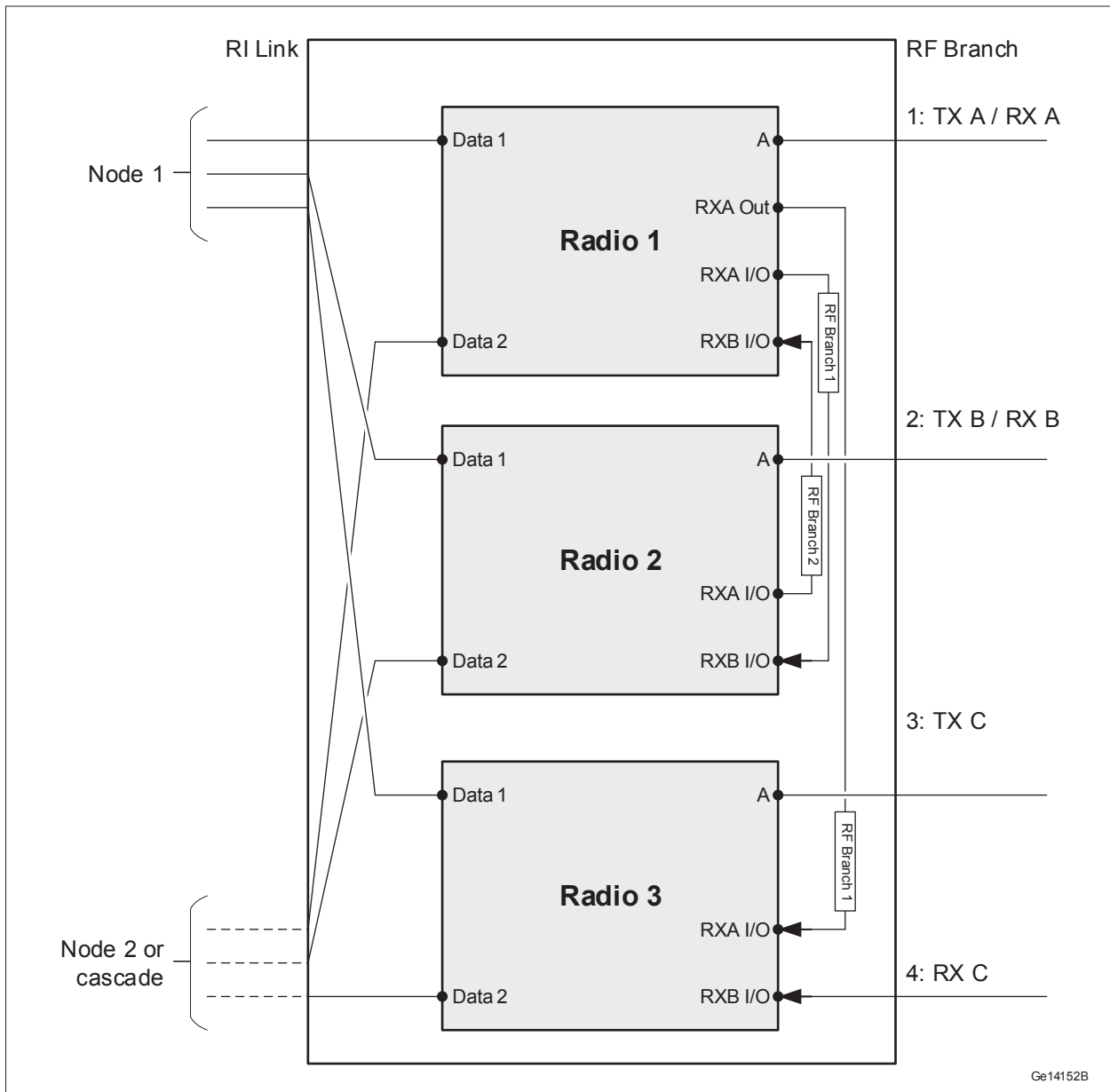


Figure 142 RBB32_3B Block Diagram

46.2.66 RBB42_1B

RBB42_1B is used for sectors with four TX branches, two RX branches, and one CPRI connection. This RBB uses an analog RX cross-connection.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

Figure 143 shows the RBB42_1B block diagram.

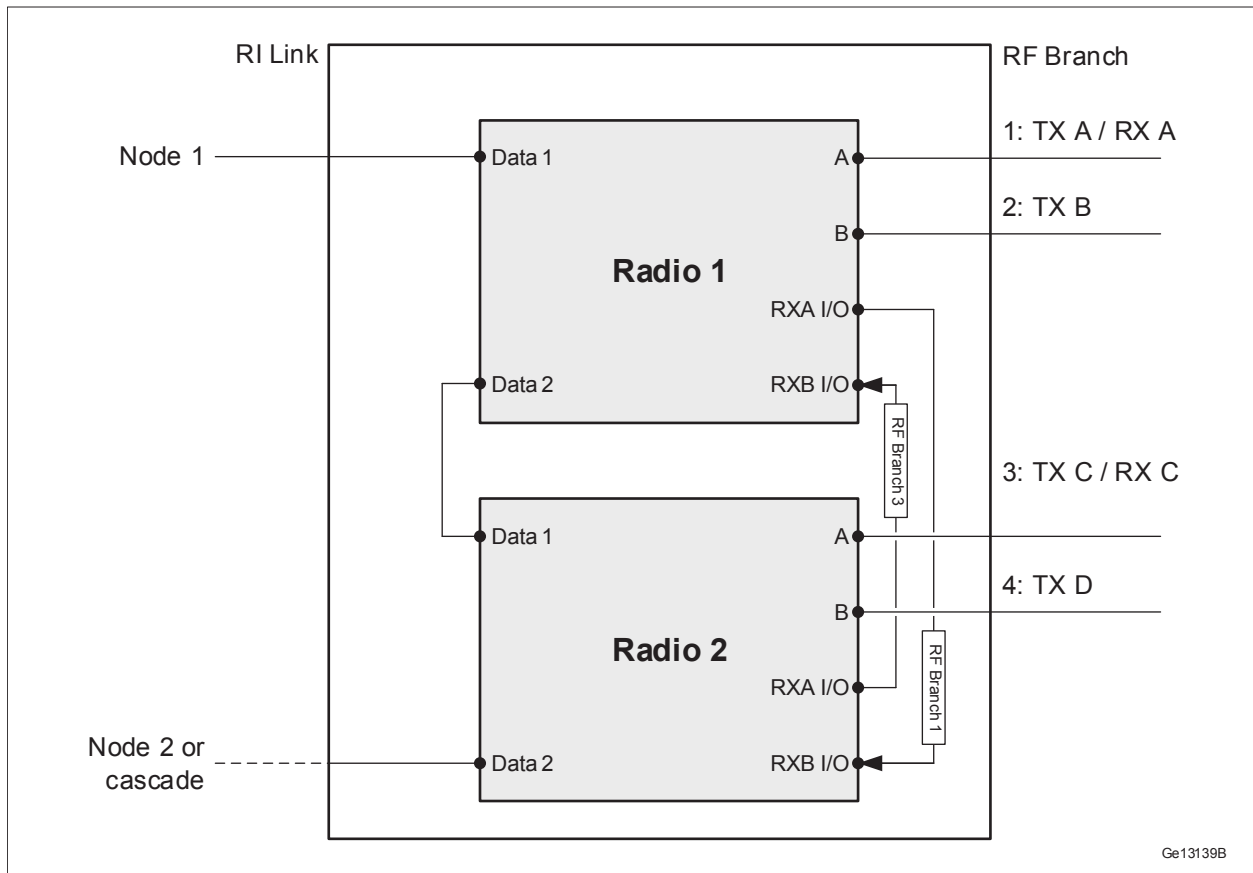


Figure 143 RBB42_1B Block Diagram

46.2.67 RBB42_2D

RBB42_2D is used for sectors with four TX branches, two RX branches and two CPRI connections. This RBB uses an analog RX cross-connection. This RBB is supported for MSMM configurations.

For mixed mode, Data 2 port can be used. For more information, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

Note: LTE can use either two or four TX branches with this RBB. When using only two TX branches it must be specified which of the four TX capable RF branches that are used by setting the `rfBranchTxRef` attribute for each `SectorCarrier` on the branch. Which two to use is freely selectable in order to utilize available power best per each port in mixed mode. For RX it is advisable to select RF A on each radio unit by using the `rfBranchRxRef` attribute for each `SectorCarrier` on the branch, or by setting the `RfBranchId` to "any_string"_N0_TX for the branches connected to RF B, as specified in the LTE MOM for Managed Object `RfBranch`.

[Figure 144](#) shows the RBB42_2D block diagram.

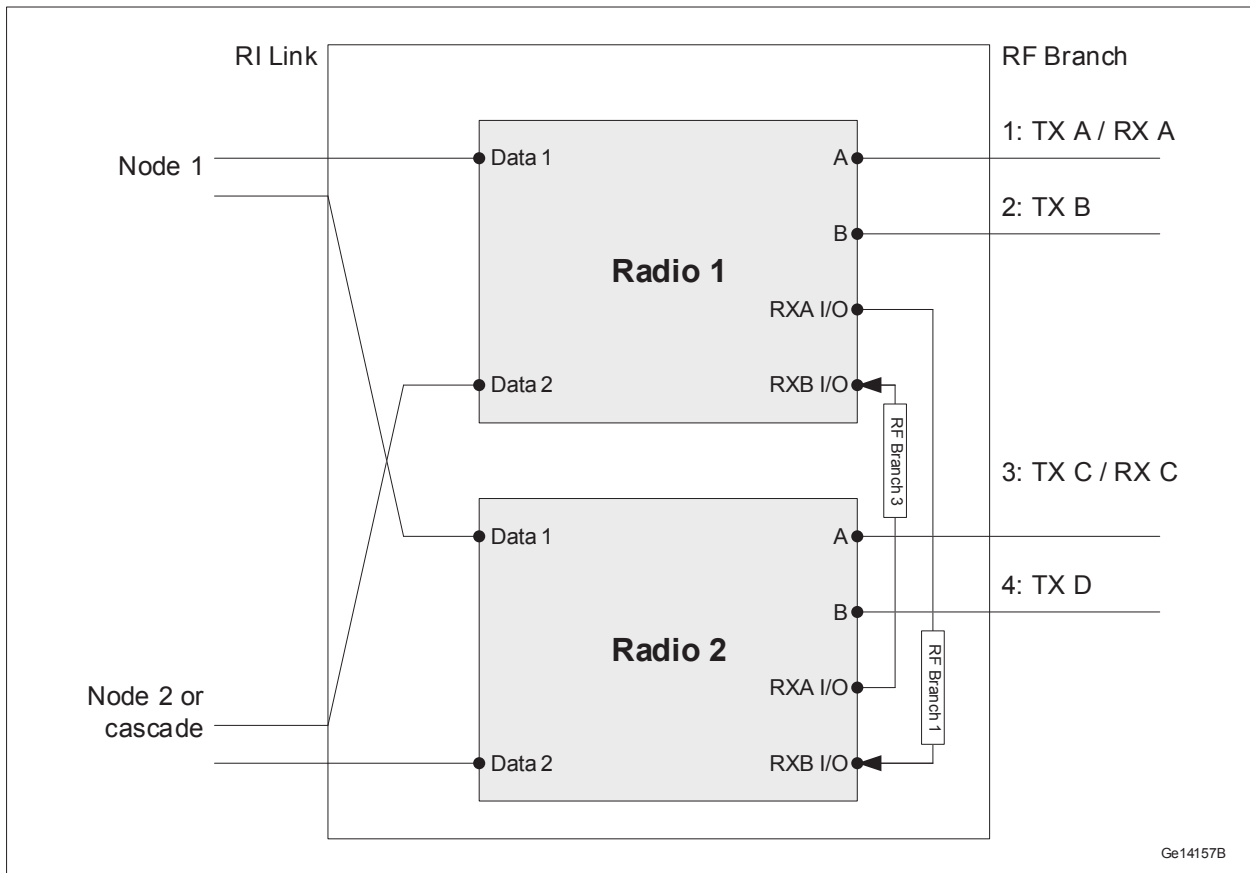


Figure 144 RBB42_2D Block Diagram

46.2.68 RBB42_2E

RBB42_2E is used for sectors with four TX branches, two RX branches, and two CPRI connections. This RBB uses an analog RX cross-connection.

This RBB is used for ring topology in GSM.

[Figure 145](#) shows the RBB42_2E block diagram.

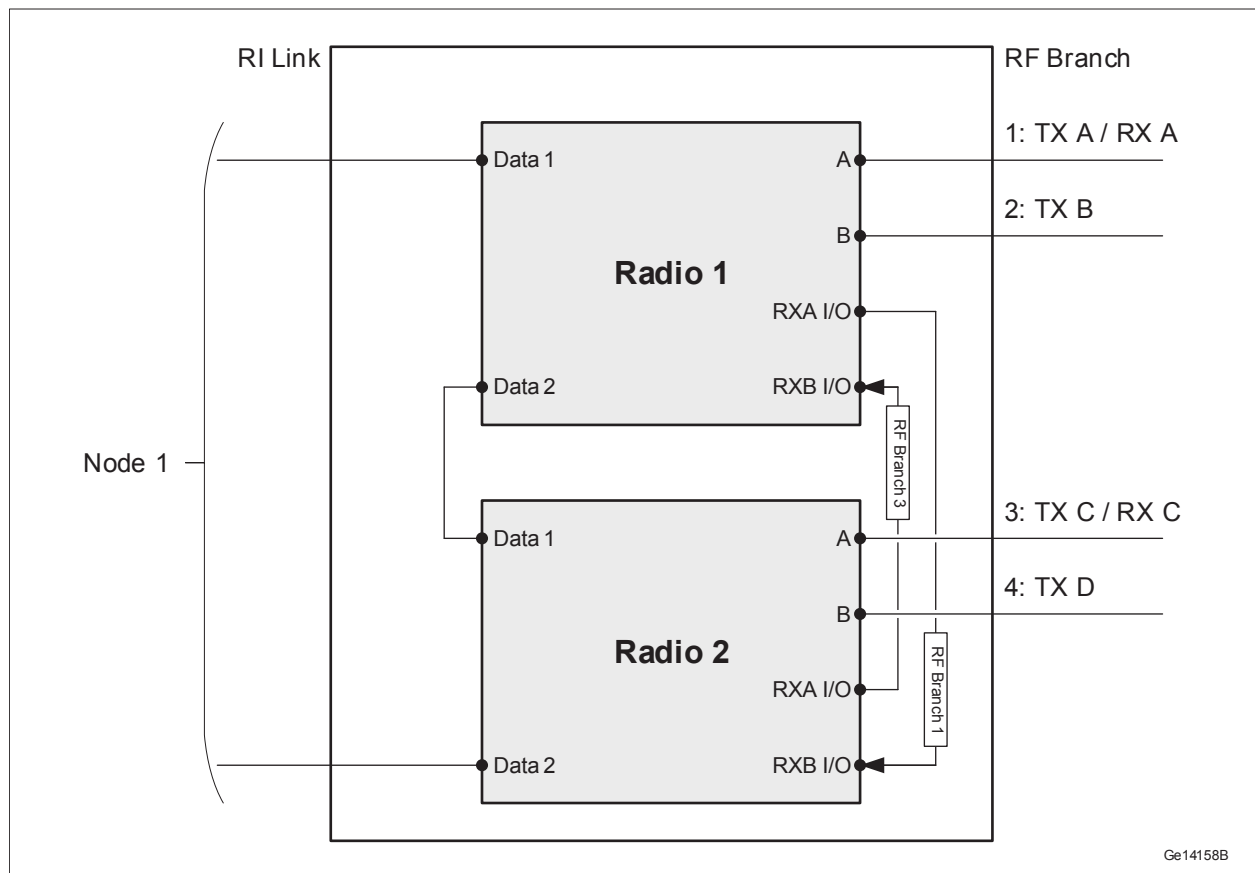


Figure 145 RBB42_2E Block Diagram

46.2.69 RBB43_1A

RBB43_1A is used for sectors with four TX branches, three RX branches, and one CPRI connection. This RBB uses an analog RX cross-connection.

[Figure 146](#) shows the RBB43_1A block diagram.

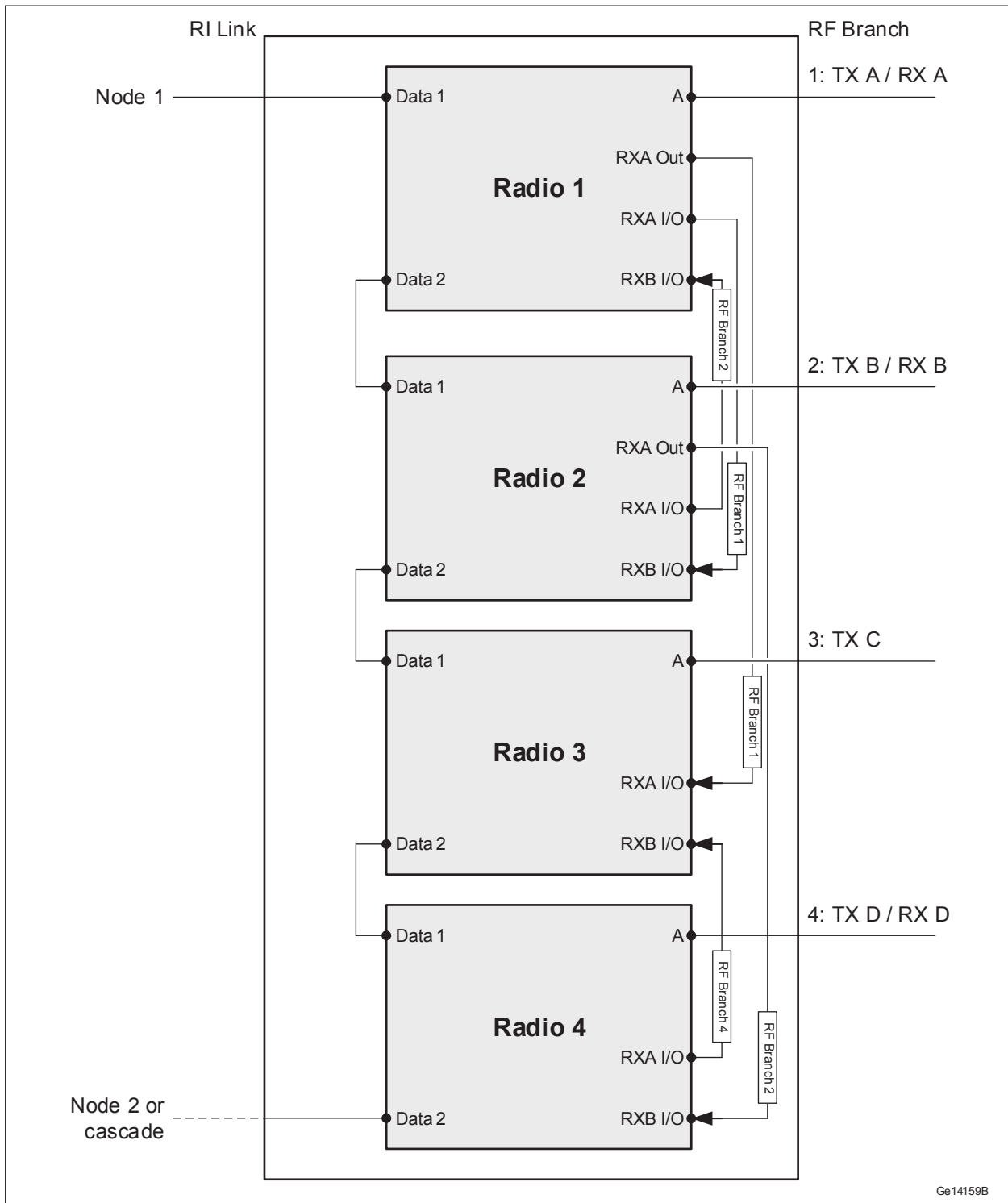


Figure 146 RBB43_1A Block Diagram



46.2.70 RBB43_4A

RBB43_4A is used for sectors with four TX branches, three RX branches, and four CPRI connections. This RBB uses an analog RX cross-connection.

[Figure 147](#) shows the RBB43_4A block diagram.

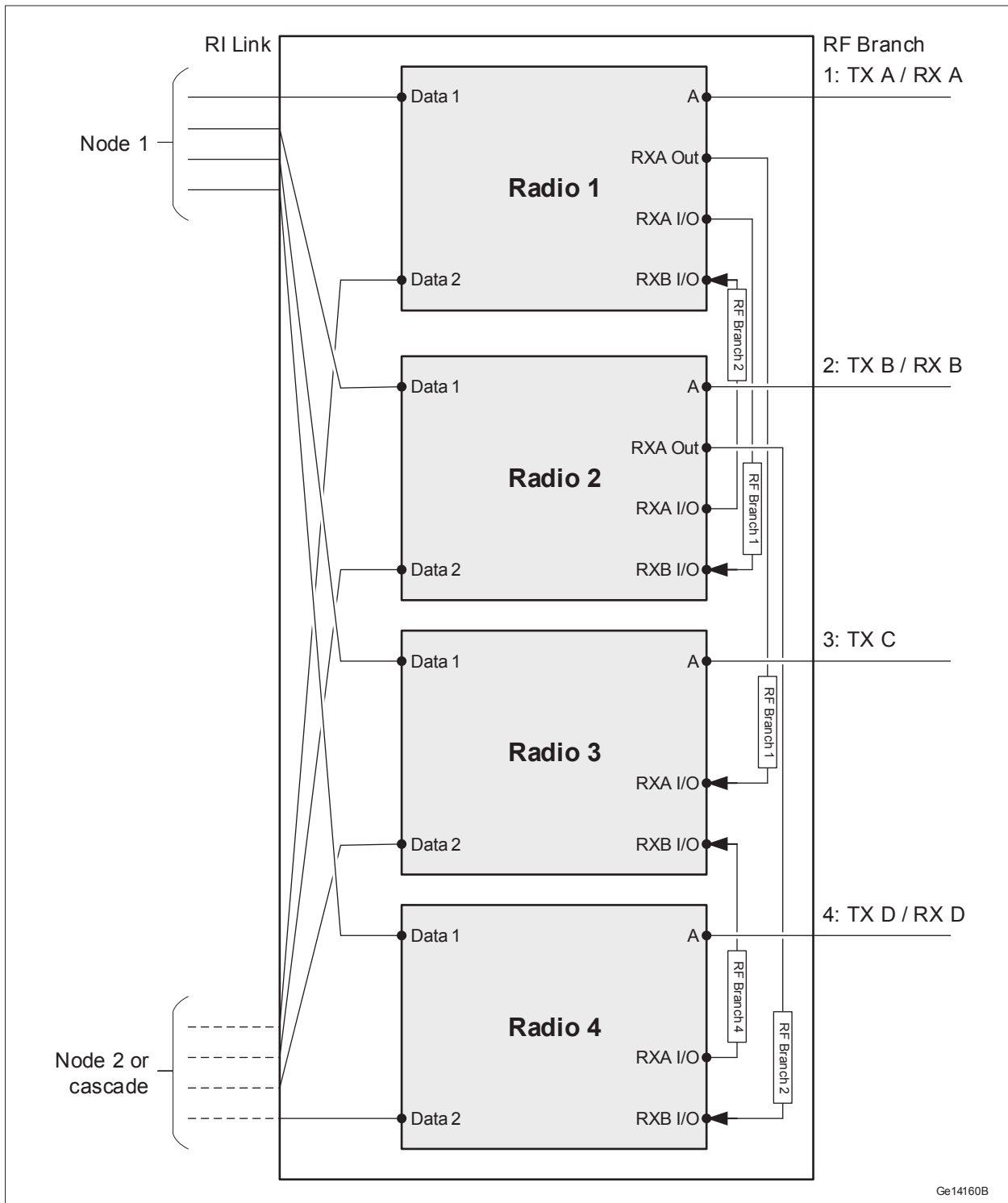


Figure 147 RBB43_4A Block Diagram



46.2.71 RBB44_1B

RBB44_1B is used for sectors with four TX branches, four RX branches, and one CPRI connection. This RBB uses digital RX cross-connection.

Figure 148 shows the RBB44_1B block diagram.

Figure 149 shows the RBB44_1B block diagram for RDS.

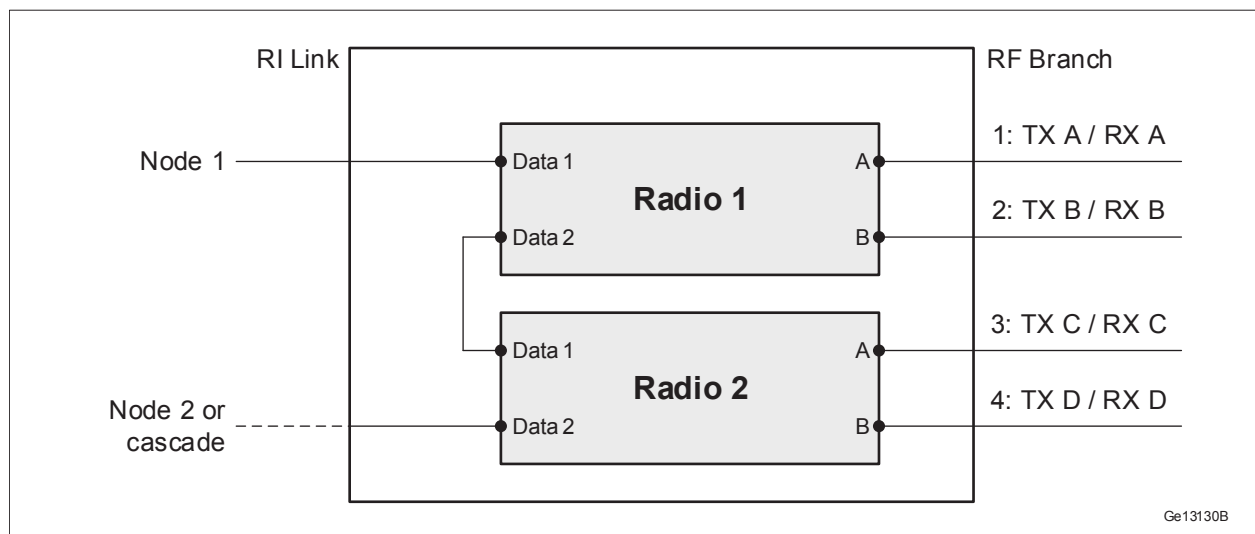


Figure 148 RBB44_1B Block Diagram

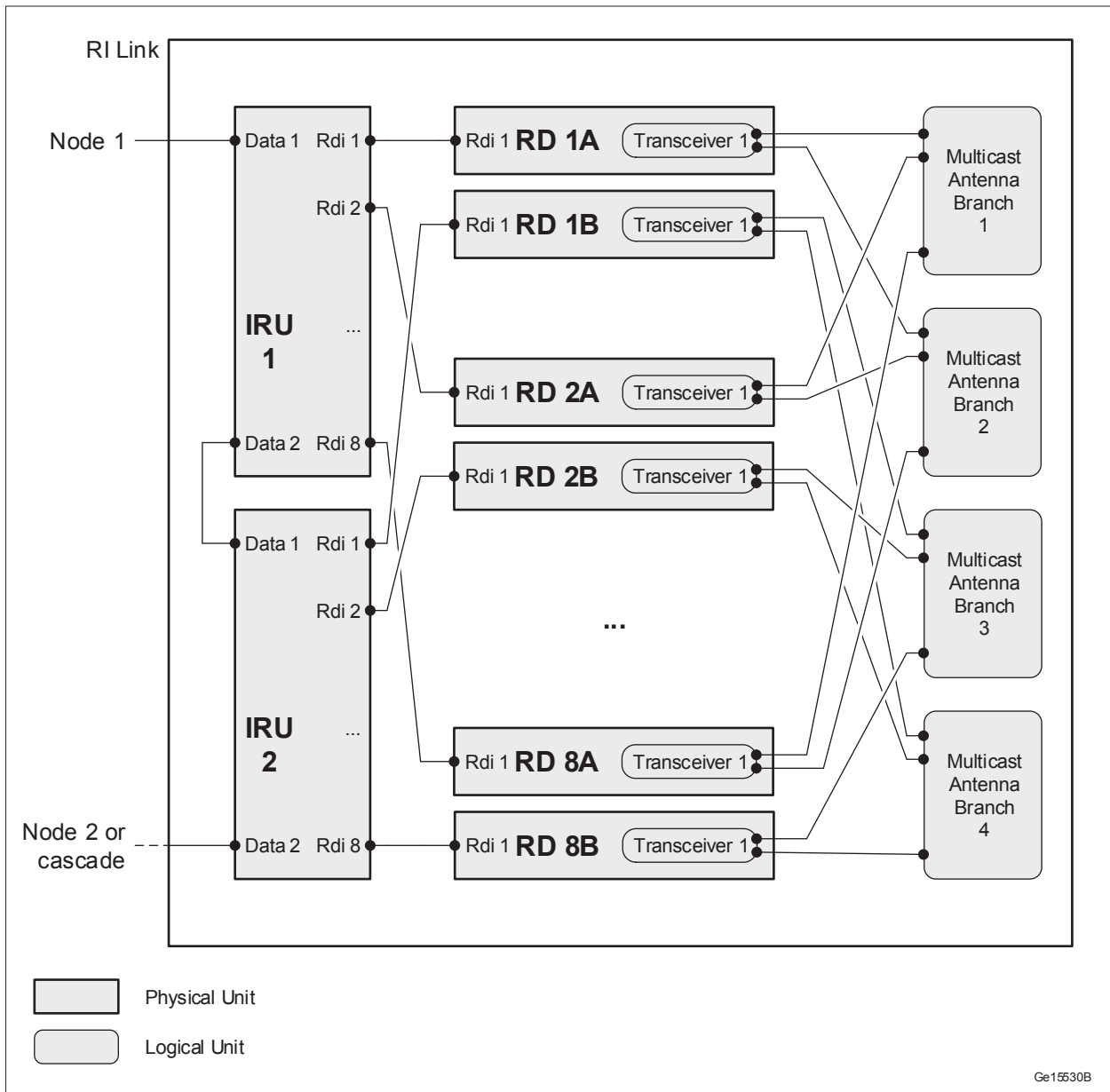


Figure 149 RBB44_1B Block Diagram for RDS

46.2.72 RBB44_1D

RBB44_1D is used for sectors with four TX branches, four RX branches, and one CPRI connection. This RBB is supported for MSMM configurations.

Note: Supports flexible carrier allocation. Carriers can be freely allocated to any TX ports.

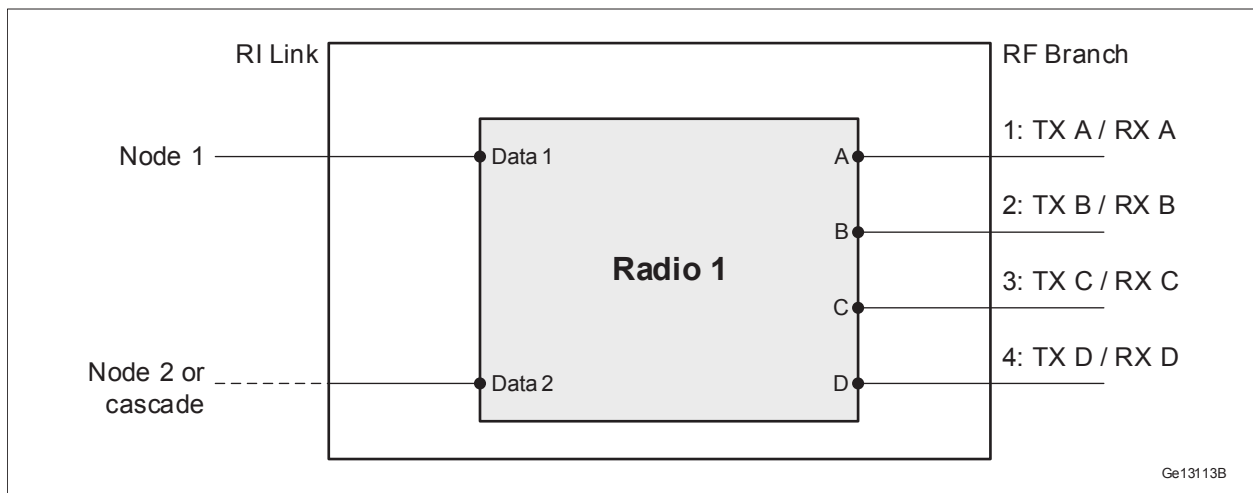


Figure 150 RBB44_1D Block Diagram

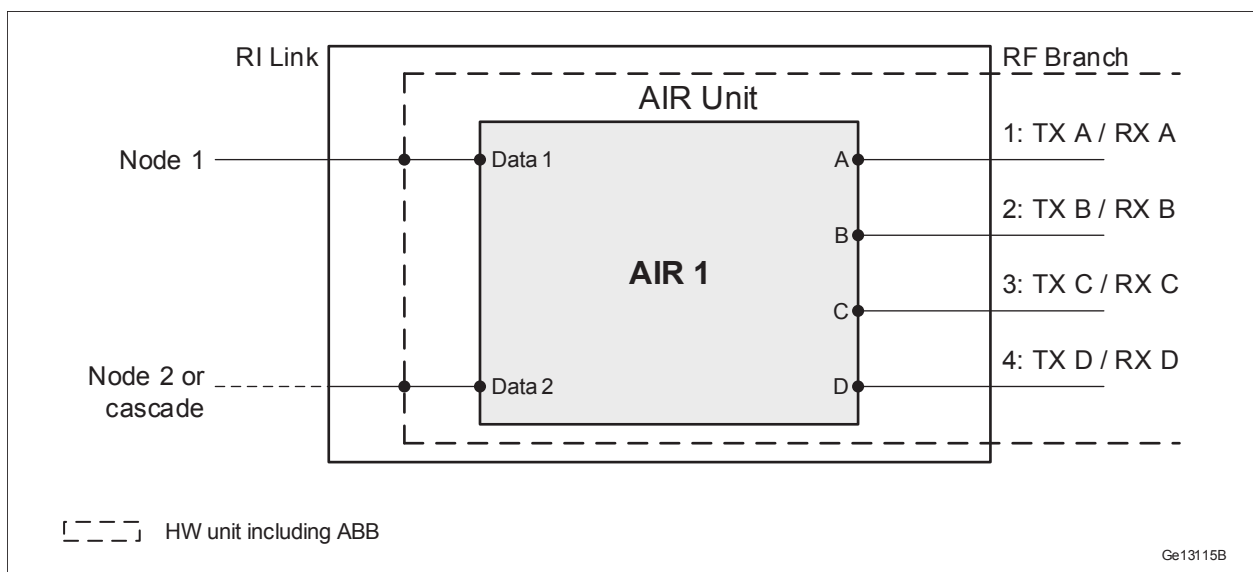


Figure 151 RBB44_1D Block Diagram for AIR

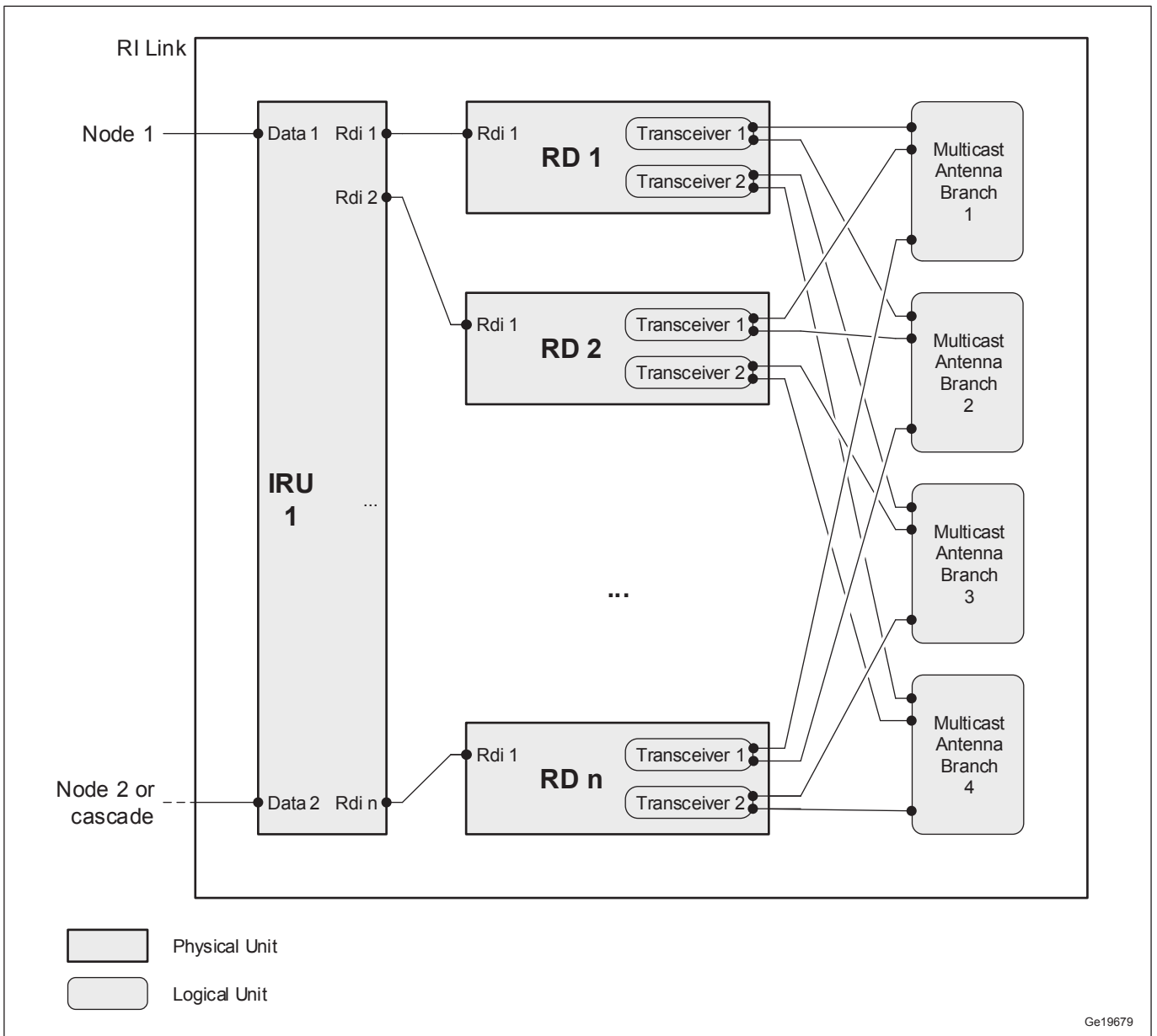


Figure 152 RBB44_1D Block Diagram for RDS

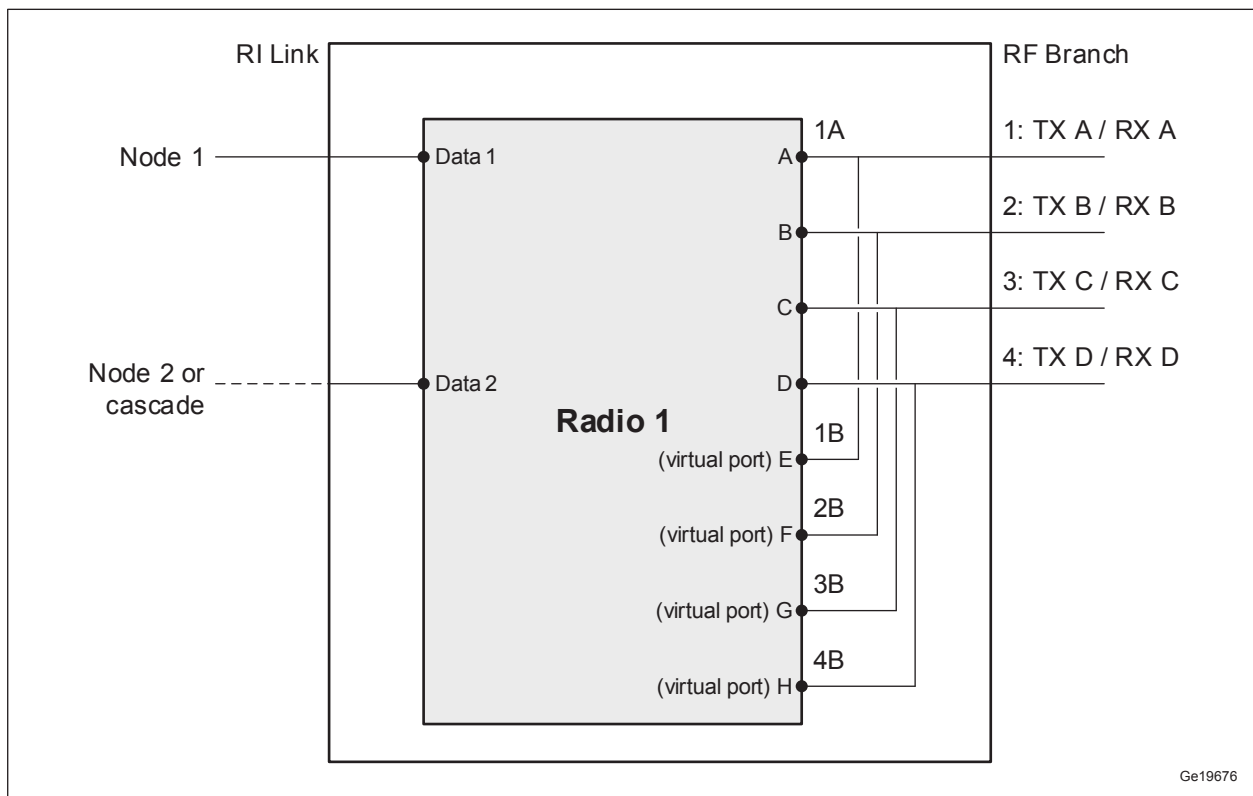


Figure 153 RBB44_1D Block Diagram for Radio 4449 B5 B13

46.2.73 RBB44_1E

RBB44_1E is used for sectors with four TX branches, four RX branches, and one CPRI connection

This RBB can be used with the Multi-Sector Per Radio feature.

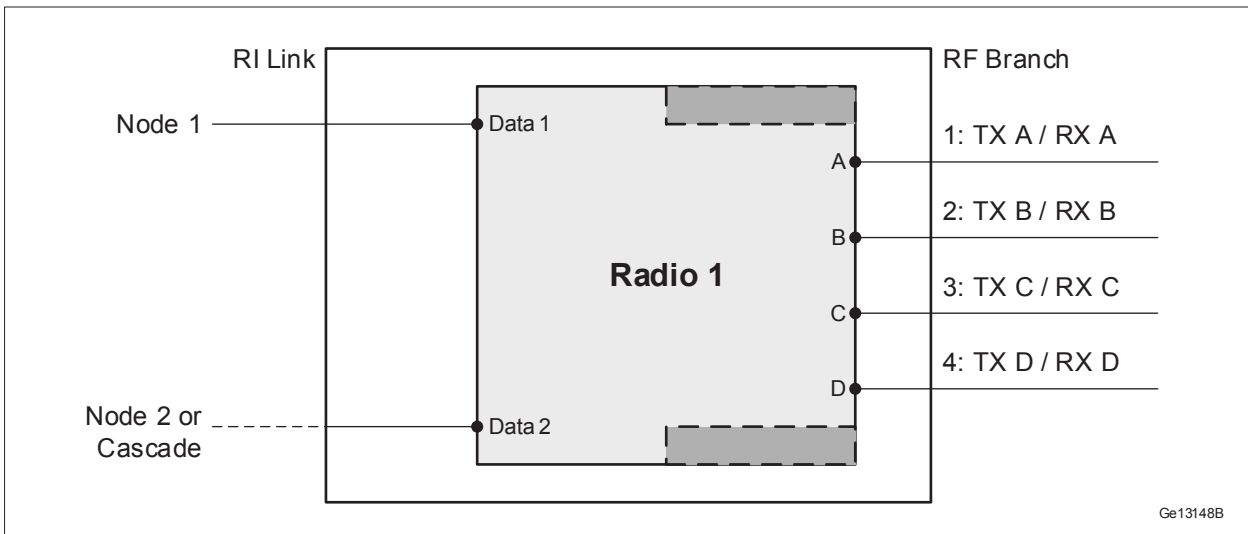


Figure 154 RBB44_1E Block Diagram

46.2.74 RBB44_1F

RBB44_1F is used for sectors with four TX branches, four RX branches, and one CPRI connection

This RBB can be used with the Multi-Sector Per Radio feature.

RBB44_1F is used together with RBB44_1E.

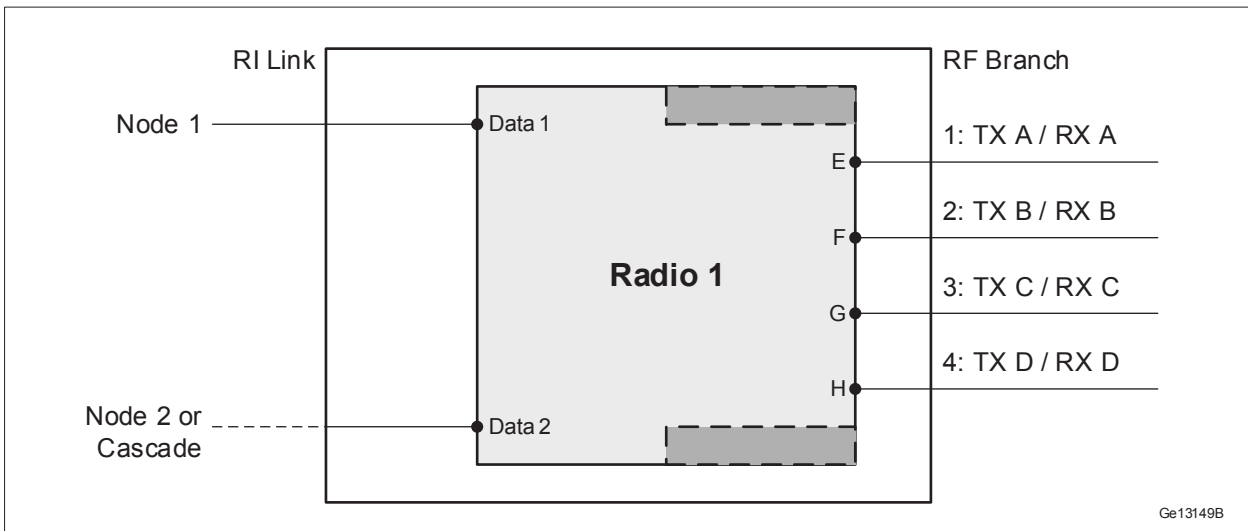


Figure 155 RBB44_1F Block Diagram



46.2.75 RBB44_1G

RBB44_1G is used for sectors with four TX branches, four RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection.

Note: Cascading order is chosen for antenna polarization and timing purposes.

Figure 156 shows the RBB44_1G block diagram.

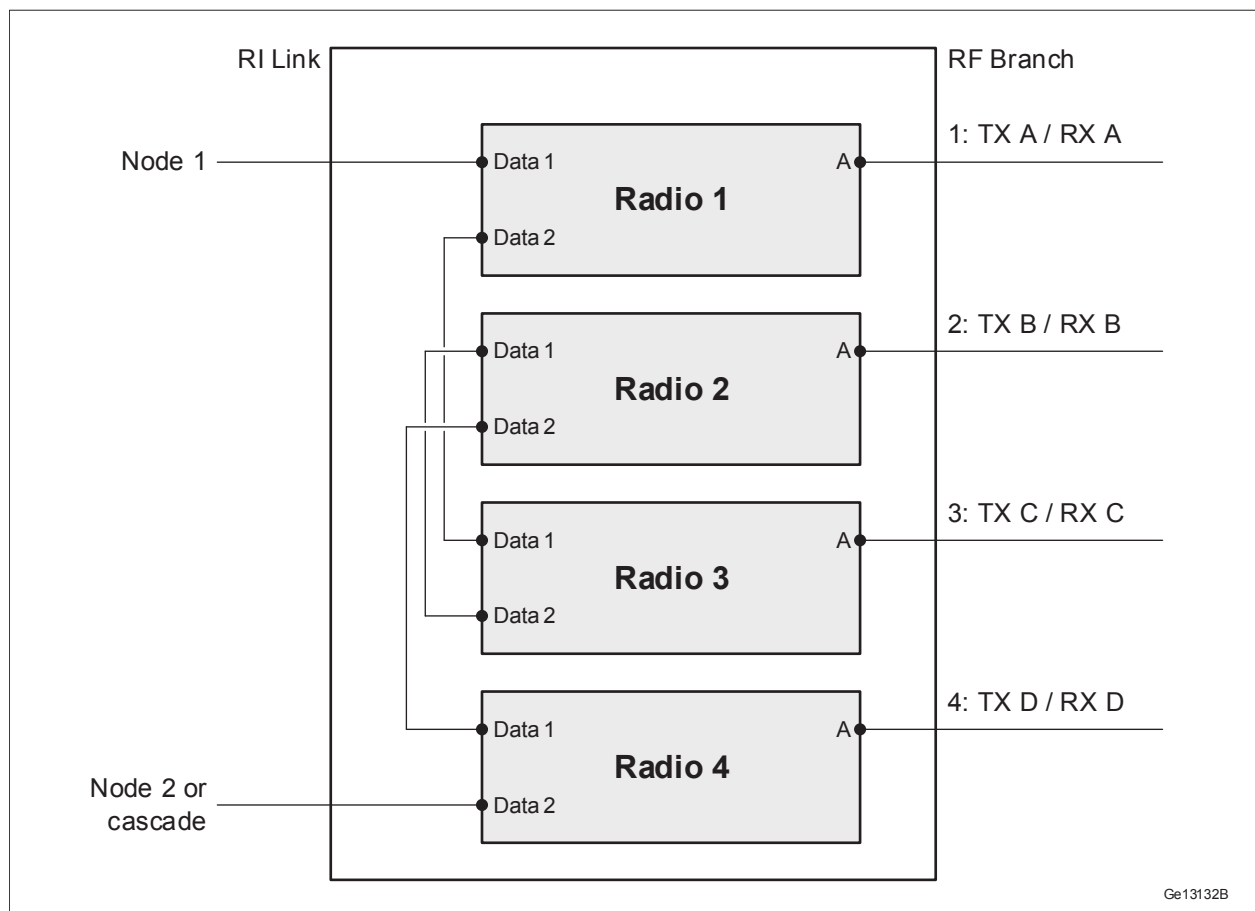


Figure 156 RBB44_1G Block Diagram

46.2.76 RBB44_1H

RBB44_1H is used for sectors with four TX branches, four RX branches, and one CPRI connection. This RBB uses a digital RX cross-connection. This RBB is used for high output power mode.

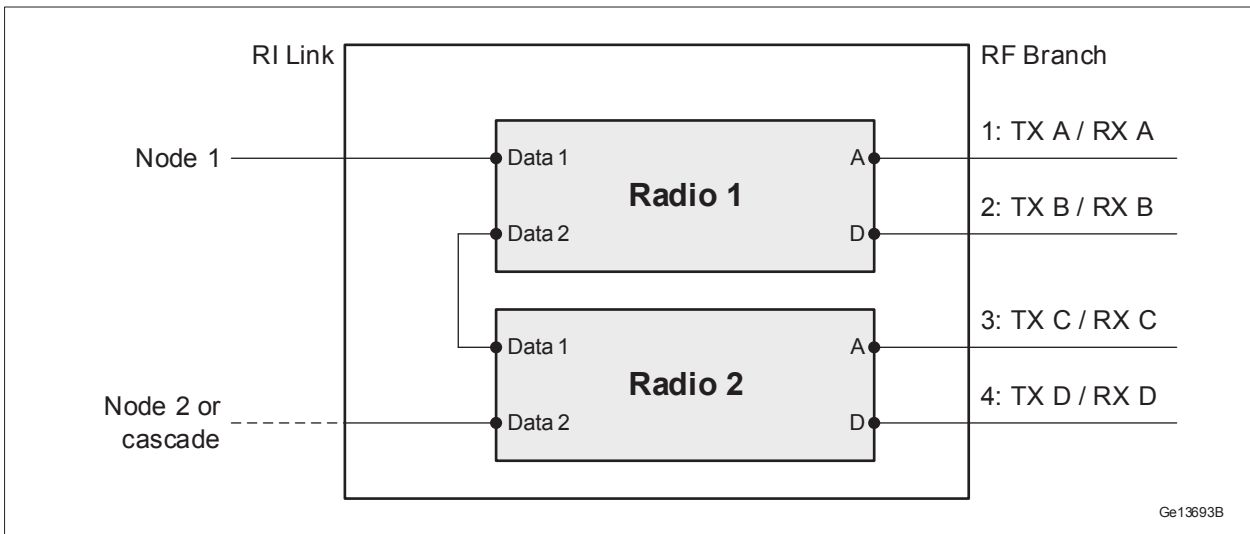


Figure 157 RBB44_1H Block Diagram

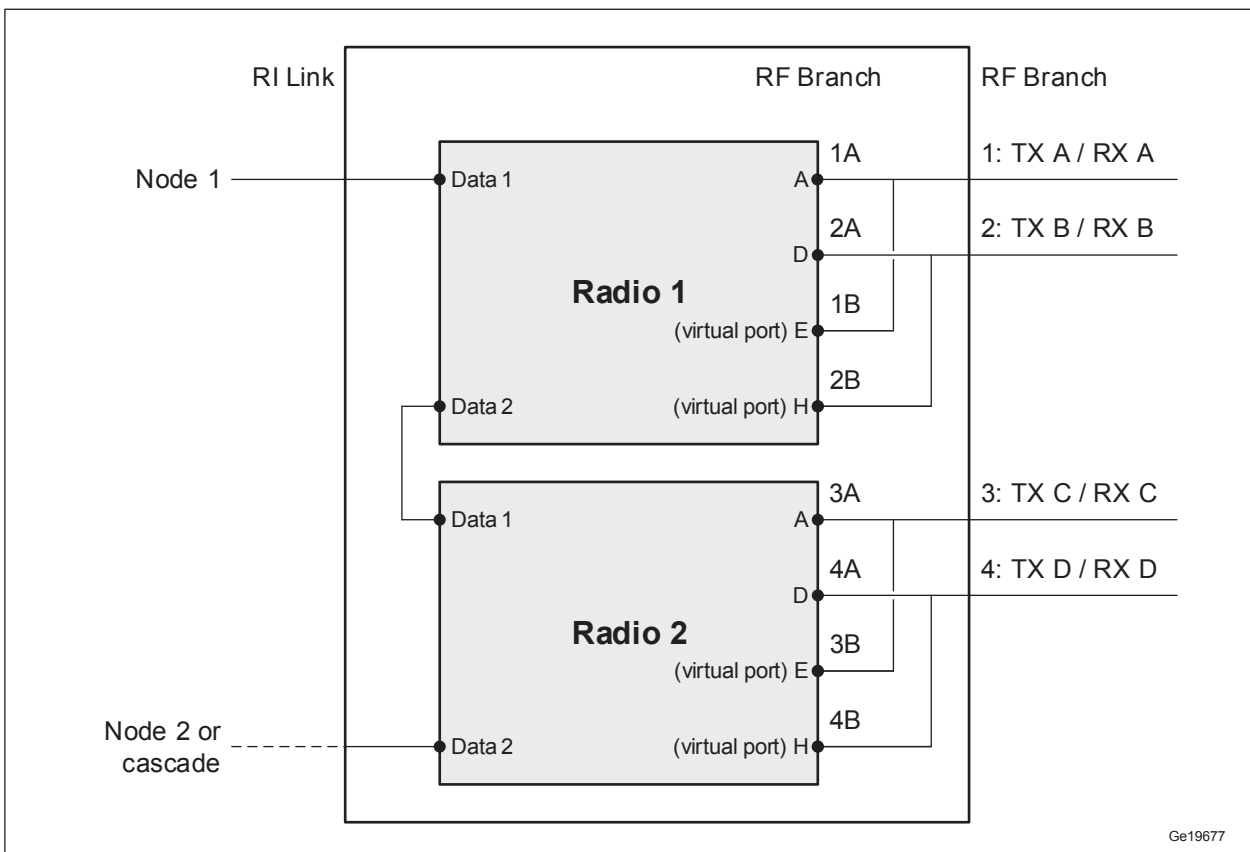


Figure 158 RBB44_1H Block Diagram for Radio 4449 B5 B13



46.2.77 RBB44_1J

RBB44_1J is used for sectors with four TX branches, four RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

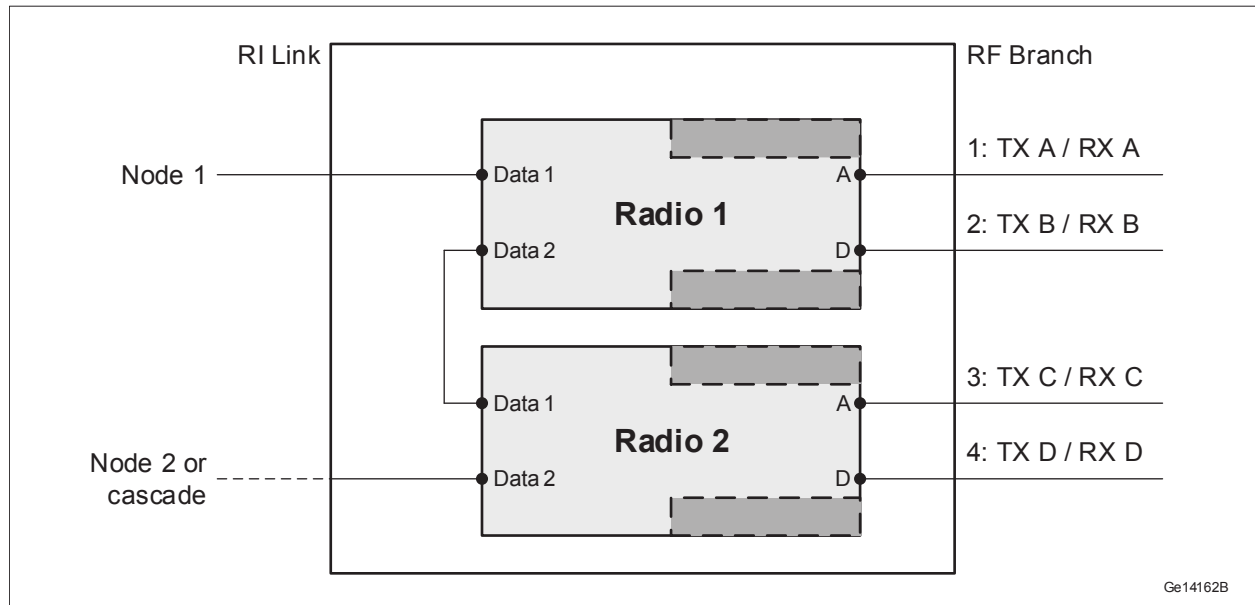


Figure 159 RBB44_1J Block Diagram

46.2.78 RBB44_1K

RBB44_1K is used for sectors with four TX branches, four RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

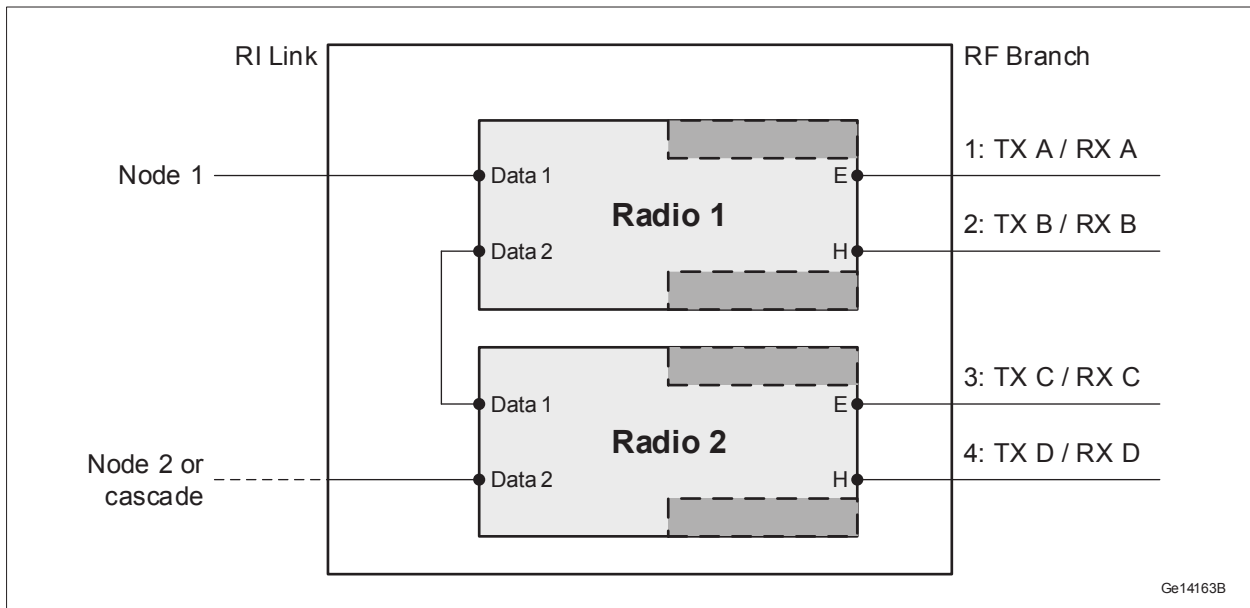


Figure 160 RBB44_1K Block Diagram

46.2.79 RBB44_1L

RBB44_1L is used for sectors with four TX branches, four RX branches, and one CPRI connection.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 161](#) shows the RBB block diagram.

RBB44_1L is intended for use together with RBB44_2Q. For an example of a three sector configuration, see [Figure 162](#).

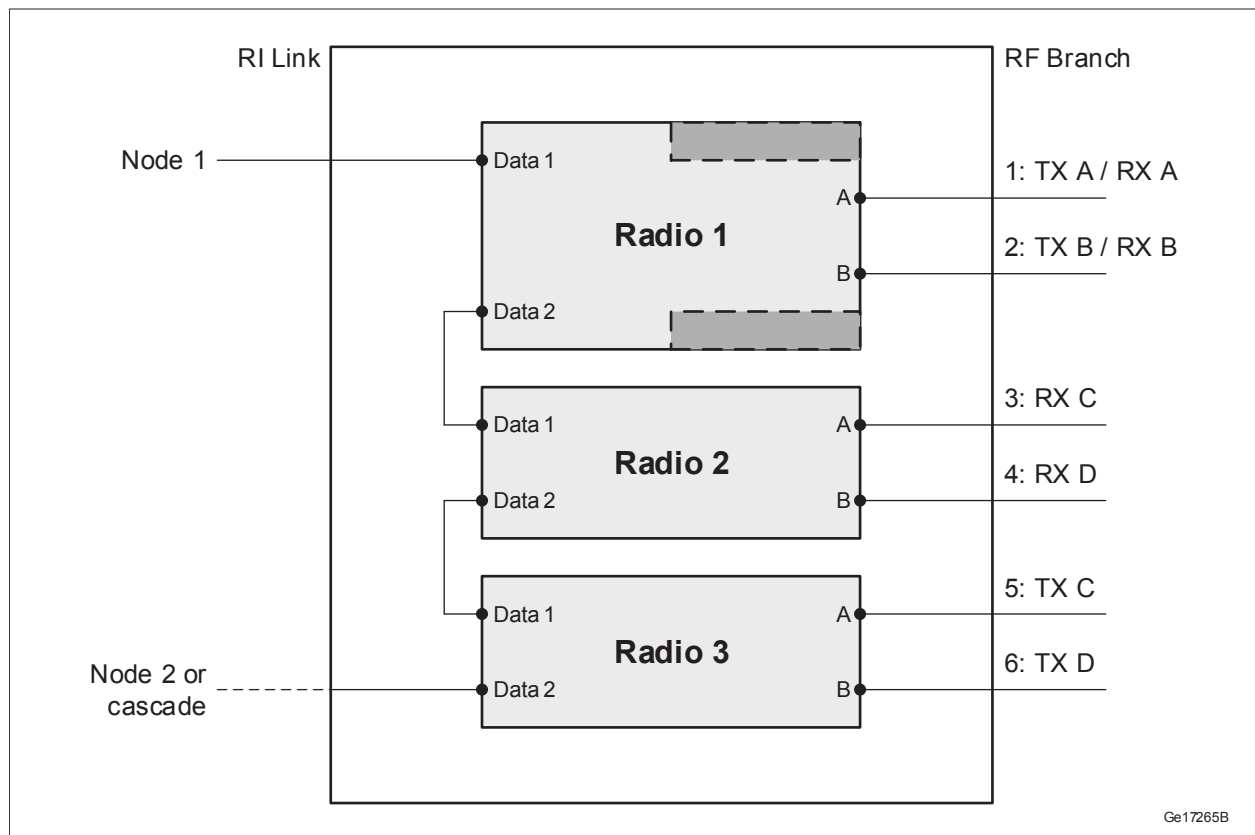


Figure 161 RBB44_1L Block Diagram

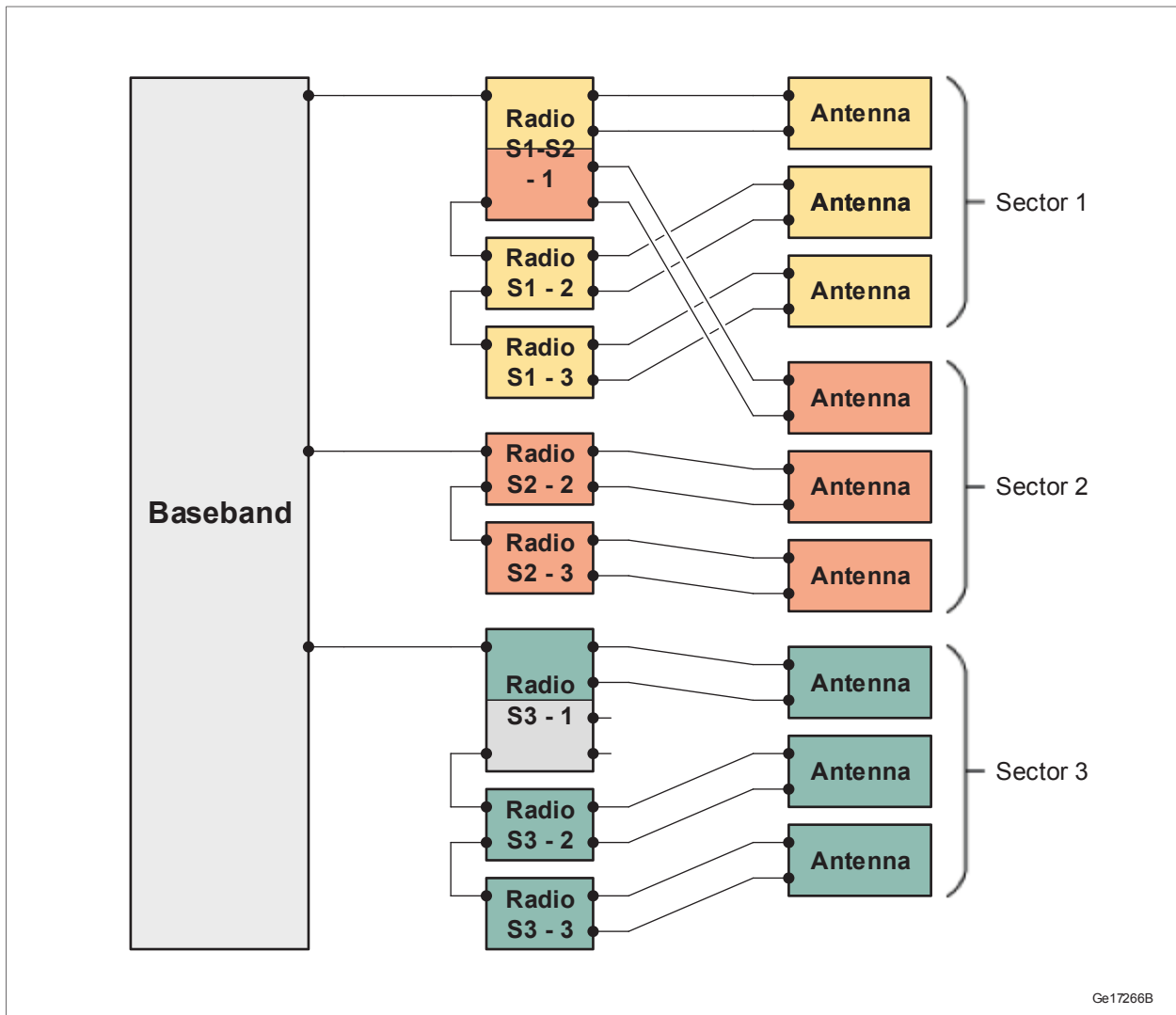


Figure 162 A Three Sector Site using RBB44_1L, RBB44_2Q, and RBB44_1L

46.2.80 RBB44_1M

RBB44_1M is used for sectors with four TX branches, four RX branches, and one CPRI connection. This RBB is used for high output power mode.

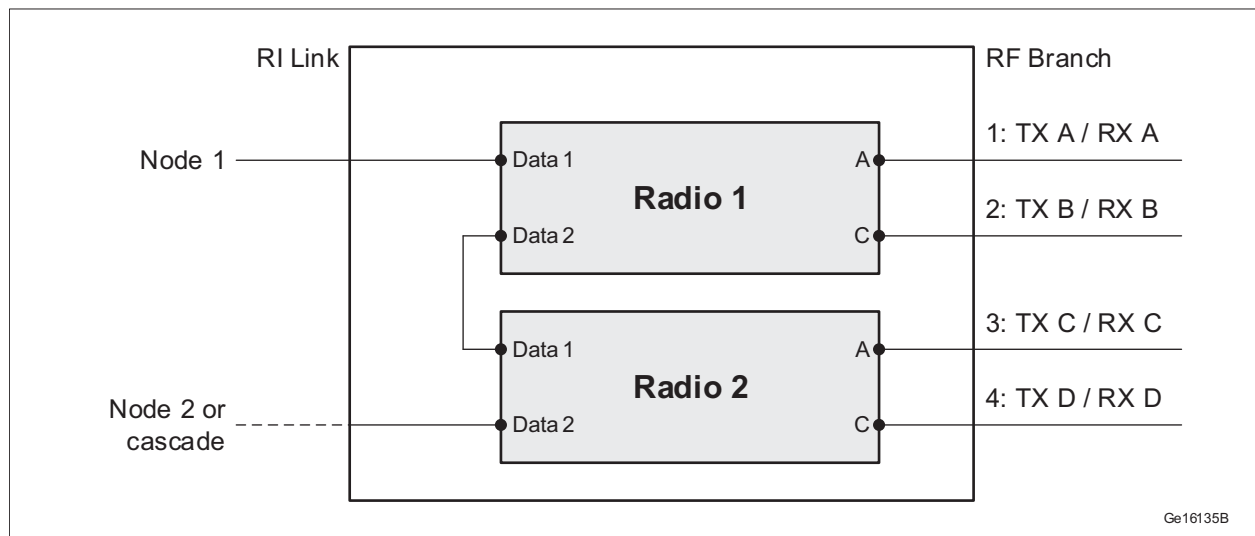


Figure 163 RBB44_1M Block Diagram

46.2.81 RBB44_1N

RBB44_1N is used for sectors with four TX branches, four RX branches, and one CPRI connections.

[Figure 164](#) shows the RBB44_1N block diagram for RDS.

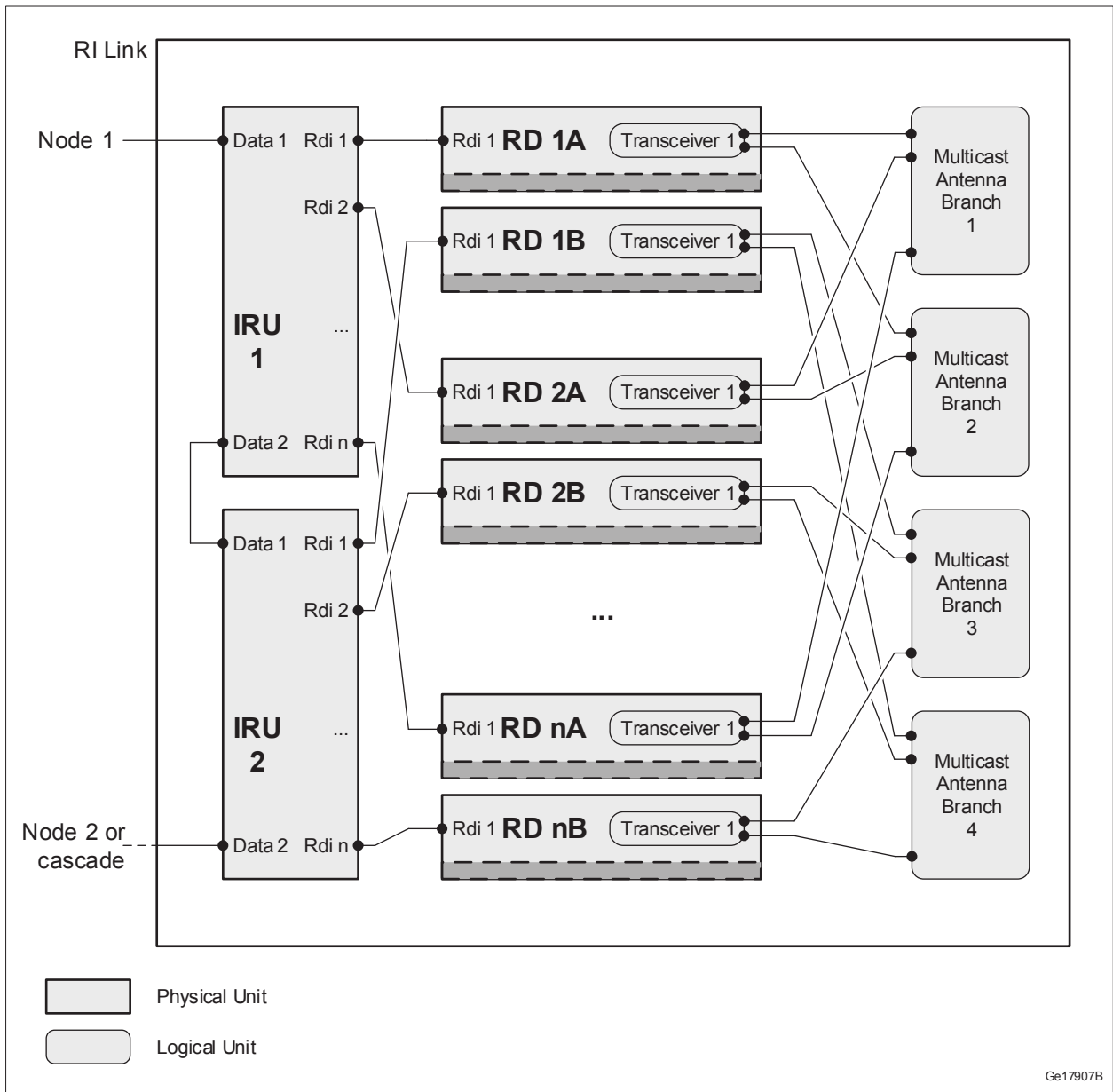


Figure 164 RBB44_1N Block Diagram for RDS

46.2.82 RBB44_1P

RBB44_1P is used for sectors with four TX branches, four RX branches, and one CPRI connections.

[Figure 165](#) shows the RBB44_1P block diagram for RDS.

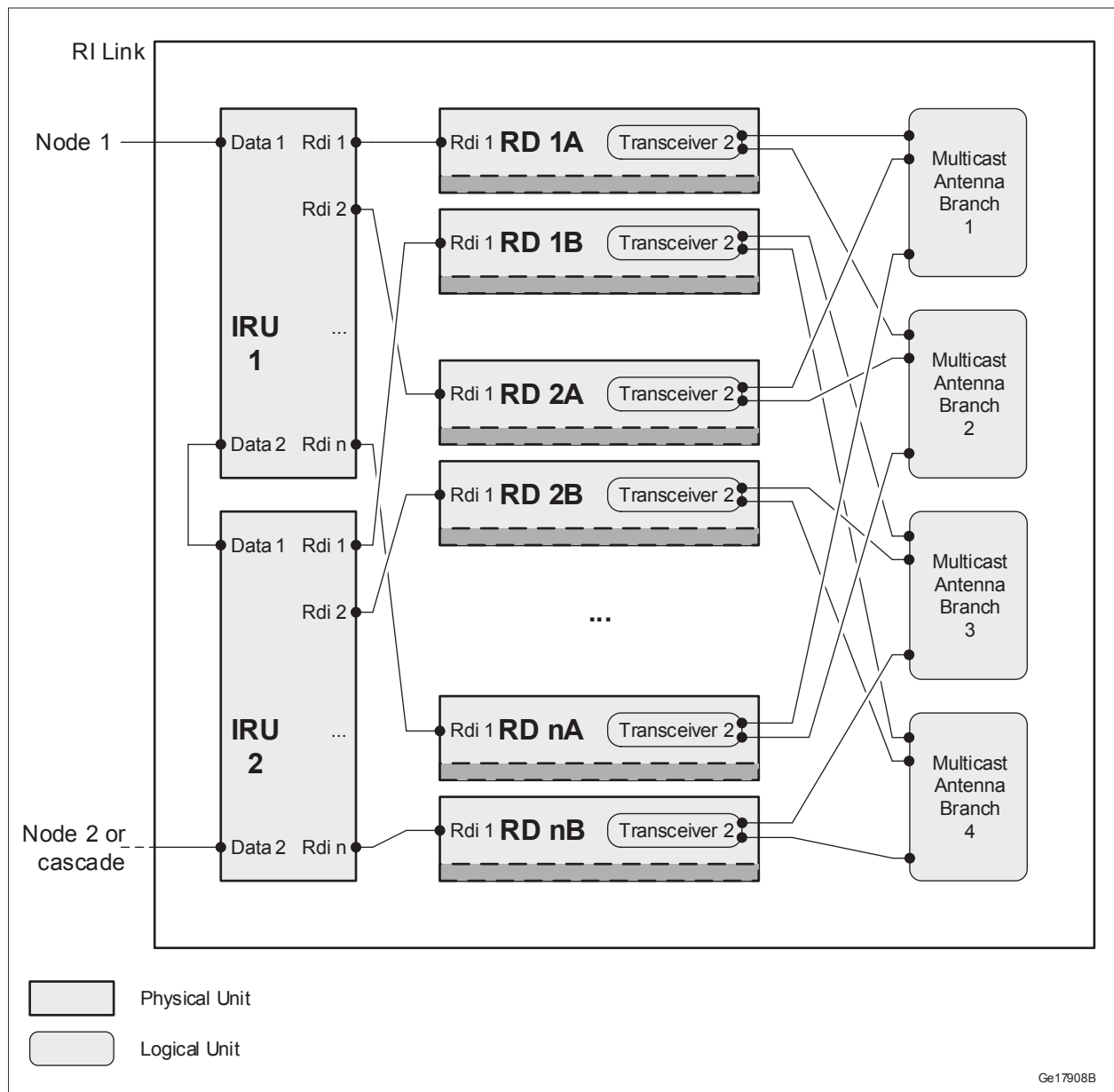


Figure 165 RBB44_1P Block Diagram for RDS

46.2.83 RBB44_2C

RBB44_2C is used for sectors with four TX branches, four RX branches, and two CPRI connections. This RBB uses digital RX cross-connection. This RBB is supported for MSMM configurations.

Figure 166 shows the RBB44_2C block diagram.

Figure 167 shows the RBB44_2C block diagram for RDS.

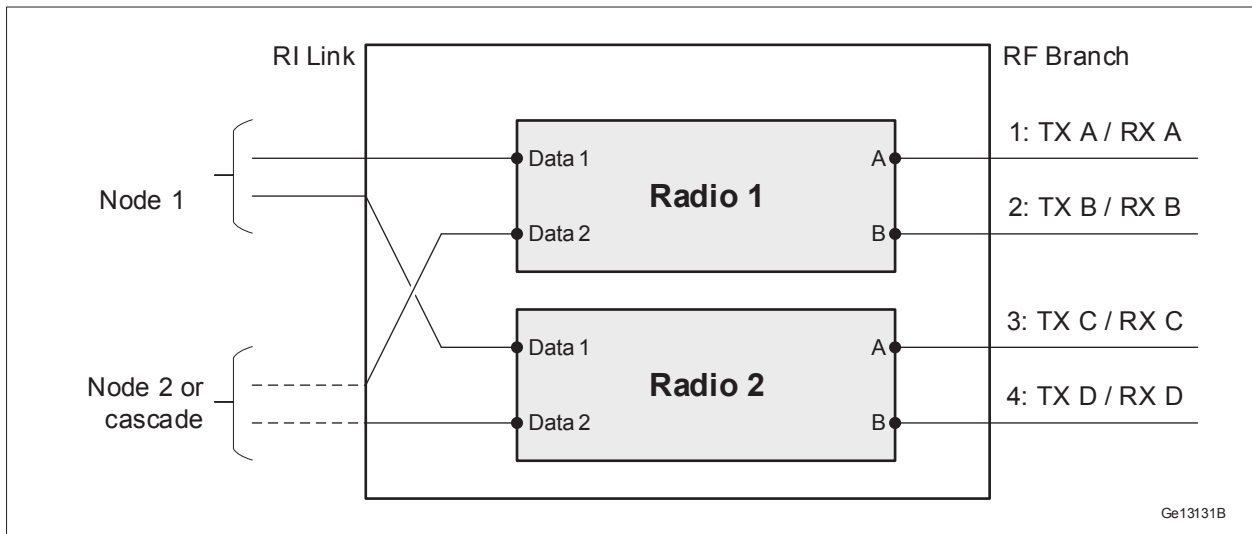


Figure 166 RBB44_2C Block Diagram

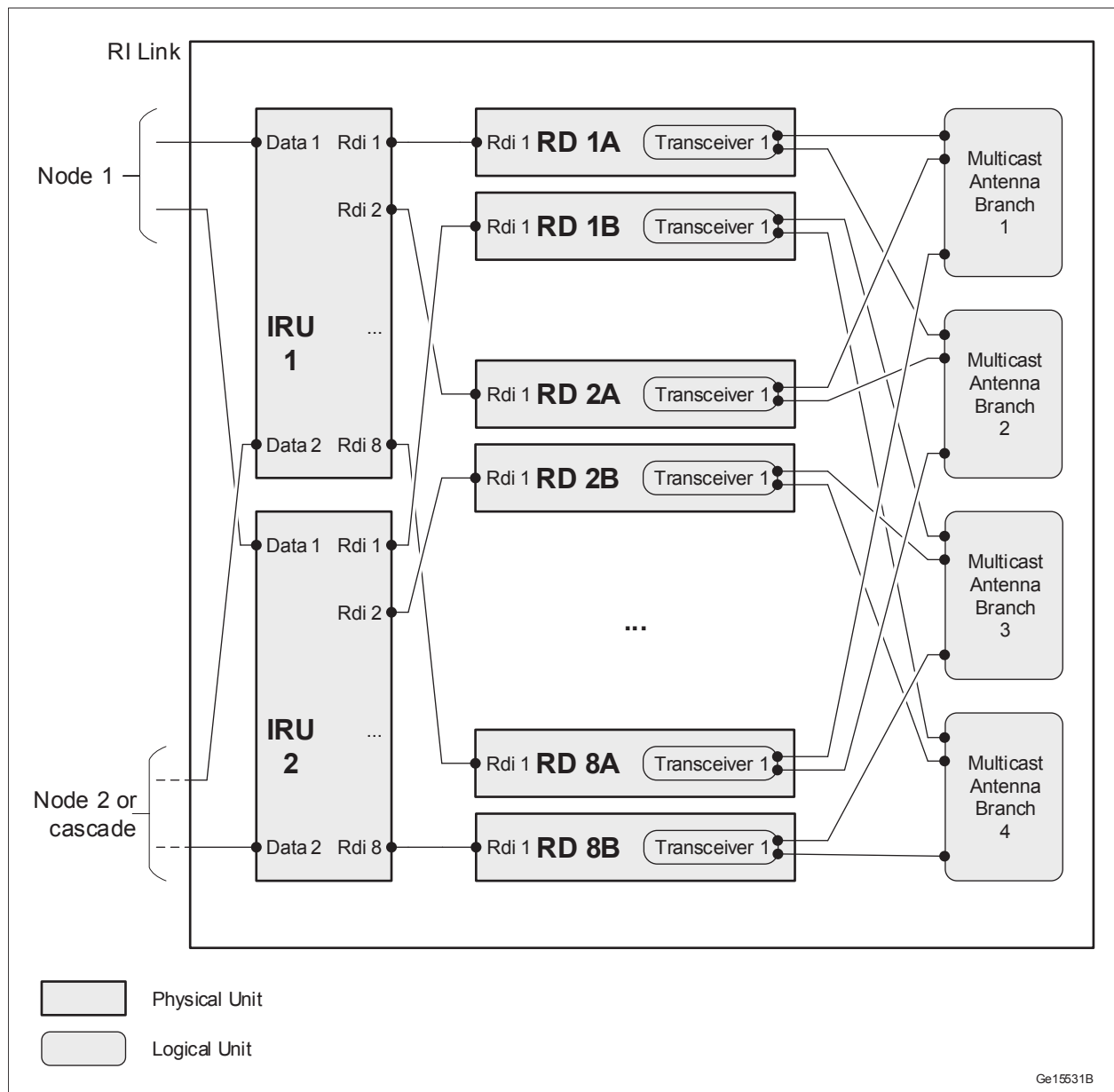


Figure 167 RBB44_2C Block Diagram for RDS

46.2.84 RBB44_2F

RBB44_2F is used for sectors with four TX branches, four RX branches, and two CPRI connections. This RBB is supported for MSMM configurations.

Figure 168 shows the RBB44_2F block diagram.

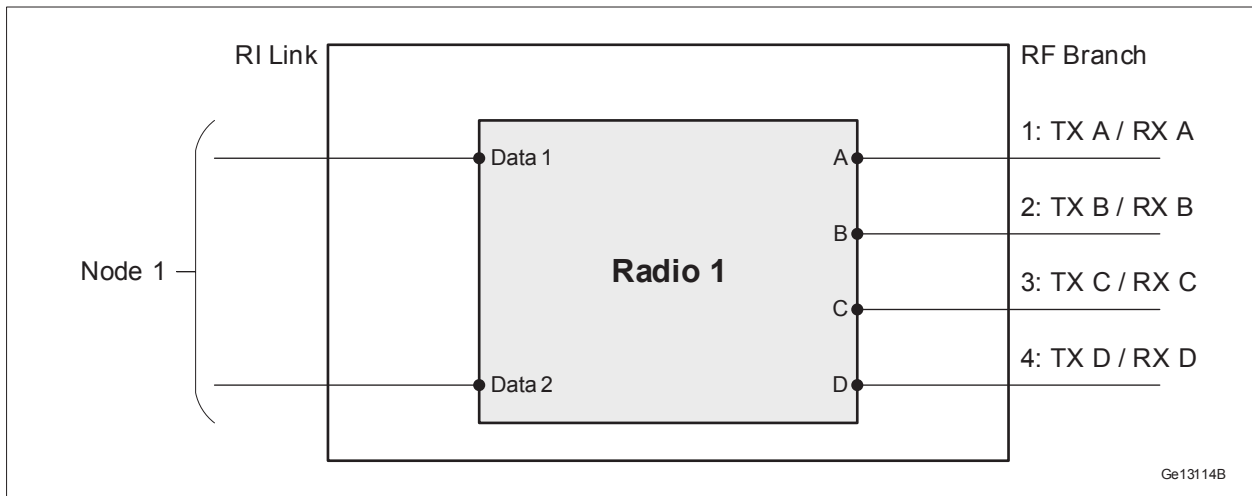
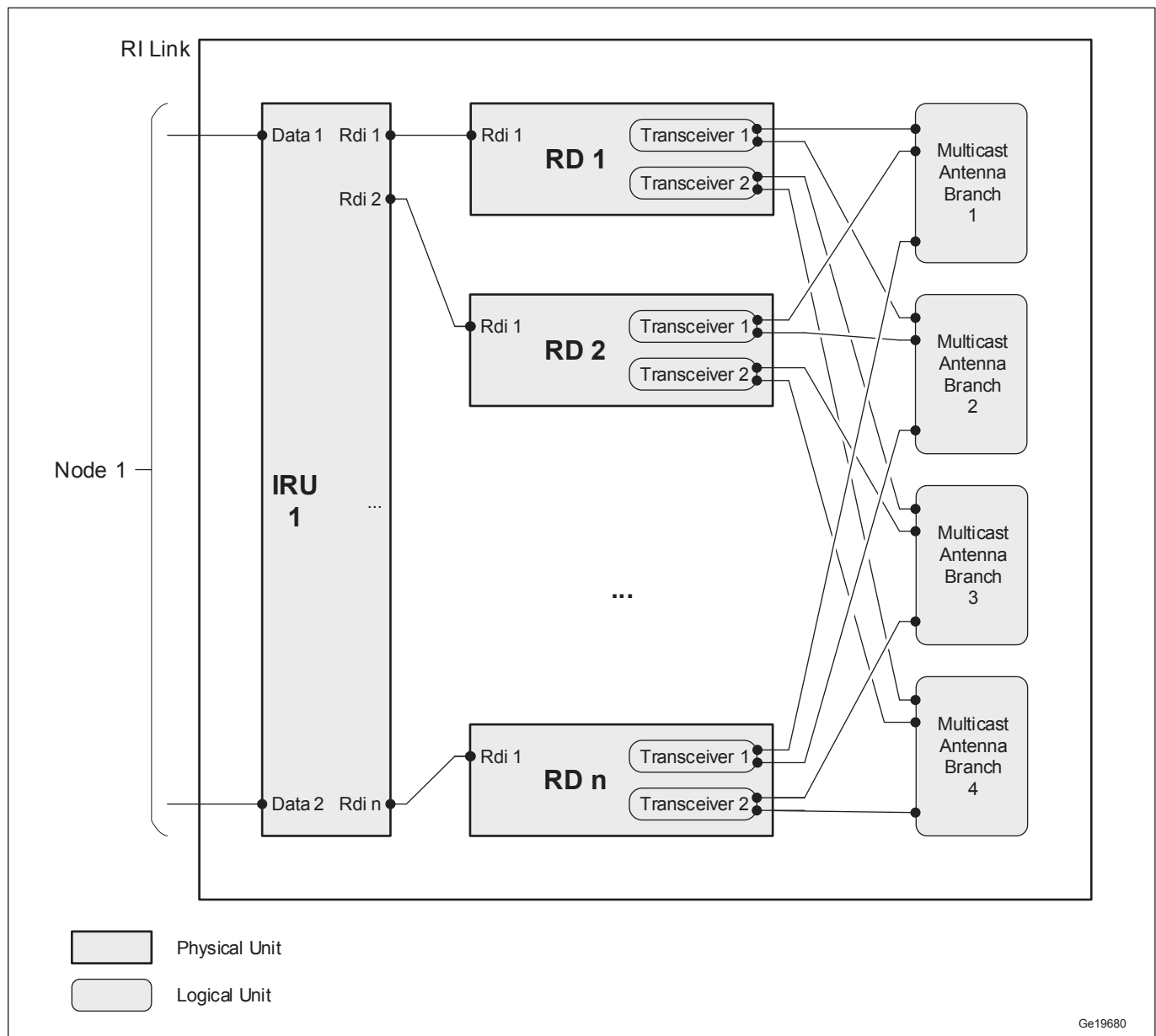


Figure 168 RBB44_2F Block Diagram



Ge19680

Figure 169 RBB44_2F Block Diagram for RDS

46.2.85 RBB44_2G

RBB44_2G is used for sectors with four TX branches, four RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

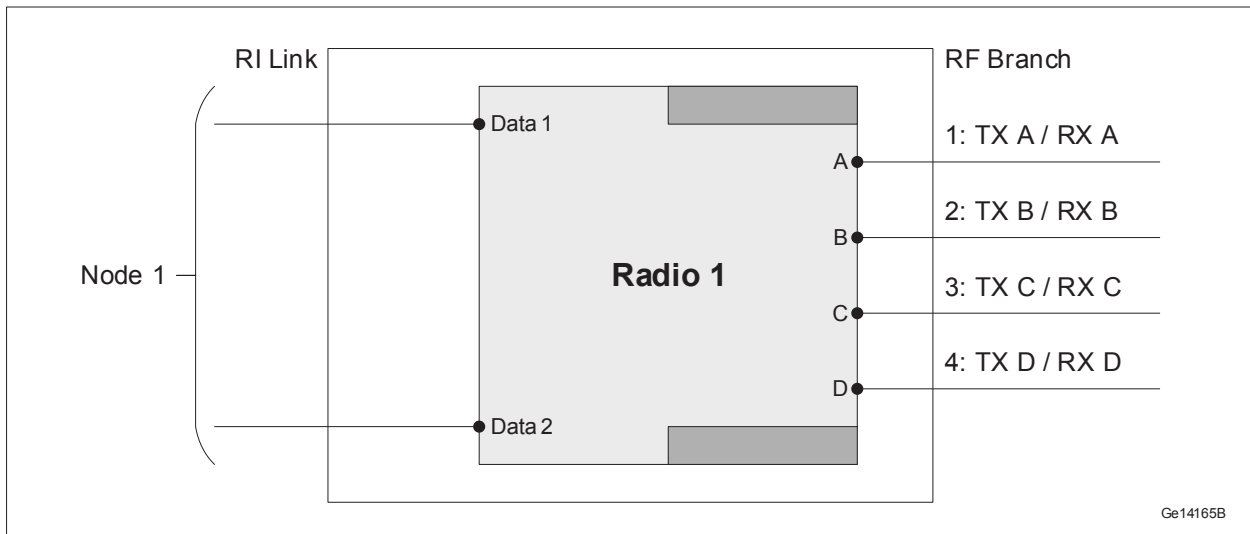


Figure 170 RBB44_2G Block Diagram

46.2.86 RBB44_2H

RBB44_2H is used for sectors with four TX branches, four RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

RBB44_2H is used together with RBB44_2G.

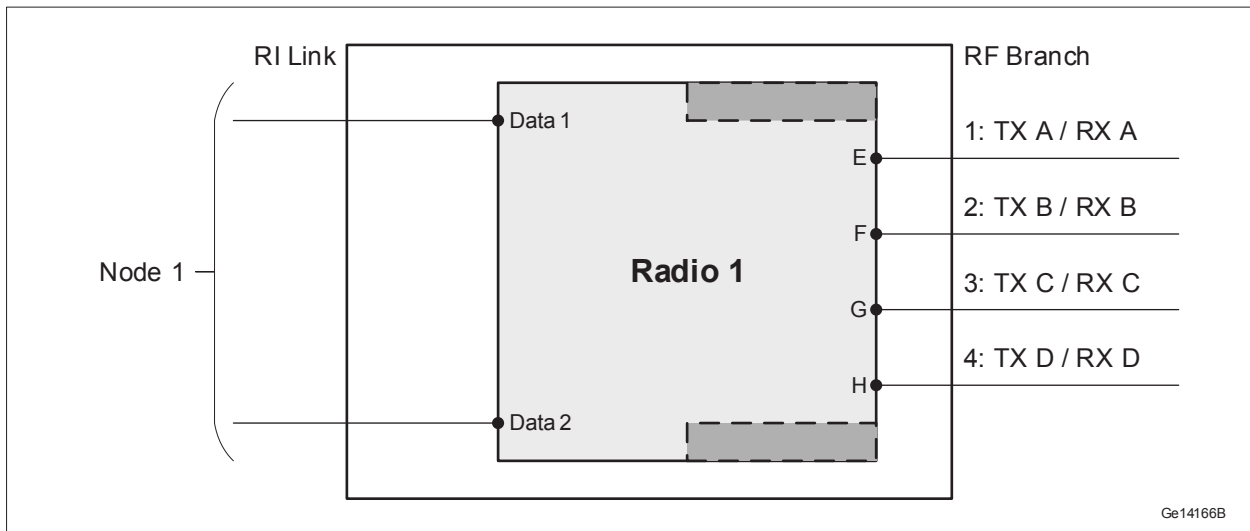


Figure 171 RBB44_2H Block Diagram



46.2.87 RBB44_2J

RBB44_2J is used for sectors with four TX branches, four RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection.

Note: Cascading order is chosen for antenna polarization and timing purposes.

Figure 172 shows the RBB44_2J block diagram.

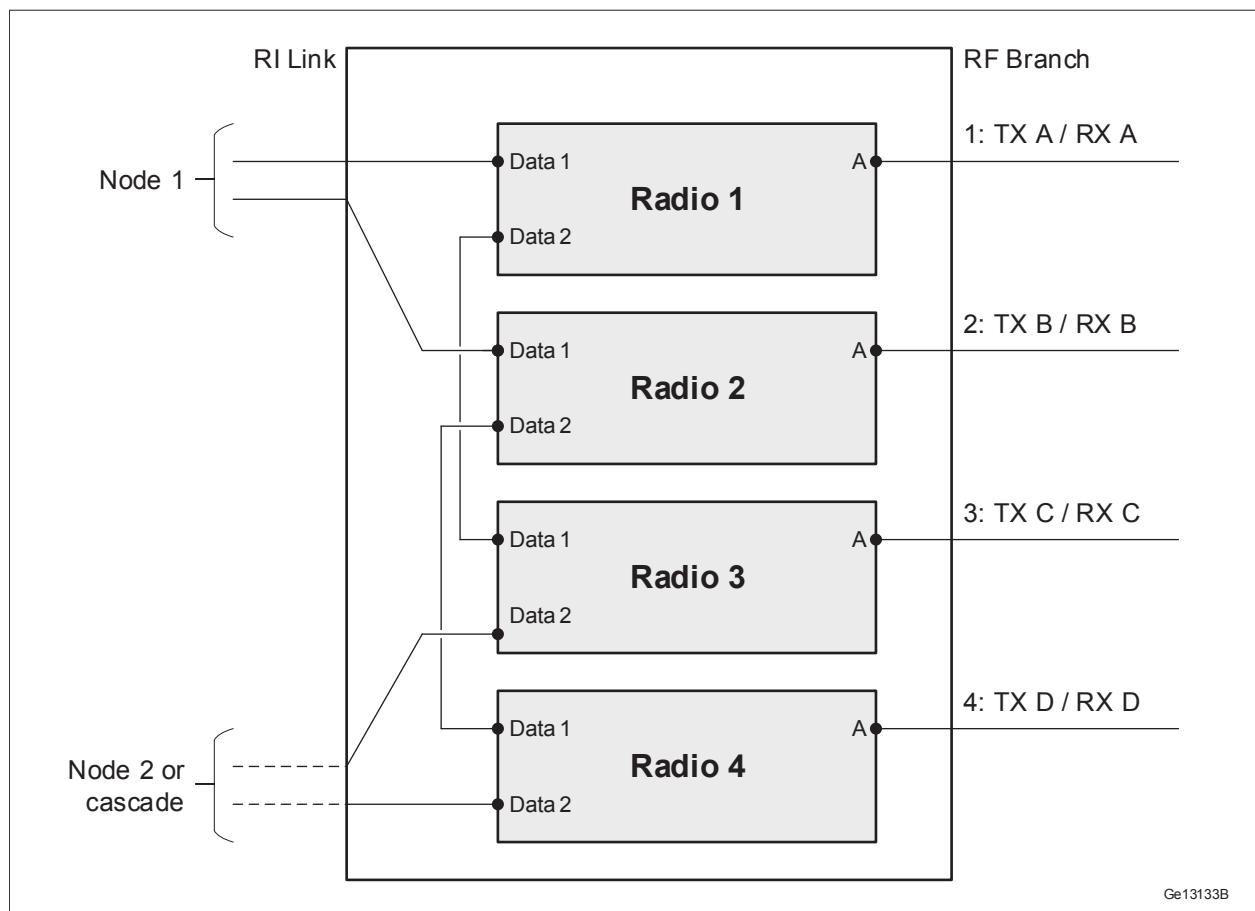


Figure 172 RBB44_2J Block Diagram

46.2.88 RBB44_2K

RBB44_2K is used for sectors with four TX branches, four RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection.

Figure 173 shows the RBB44_2K block diagram.

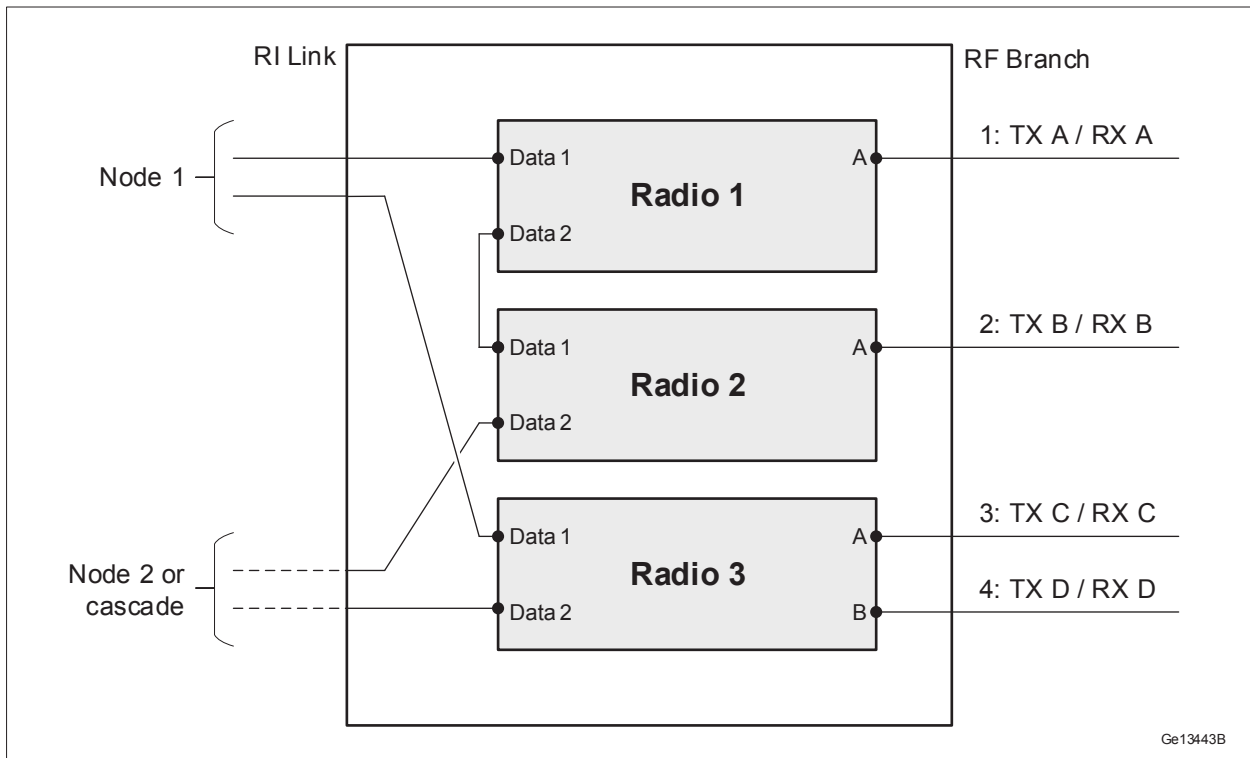


Figure 173 RBB44_2K Block Diagram

46.2.89 RBB44_2L

RBB44_2L is used for sectors with four TX branches, four RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection.

[Figure 174](#) shows the RBB44_2L block diagram.

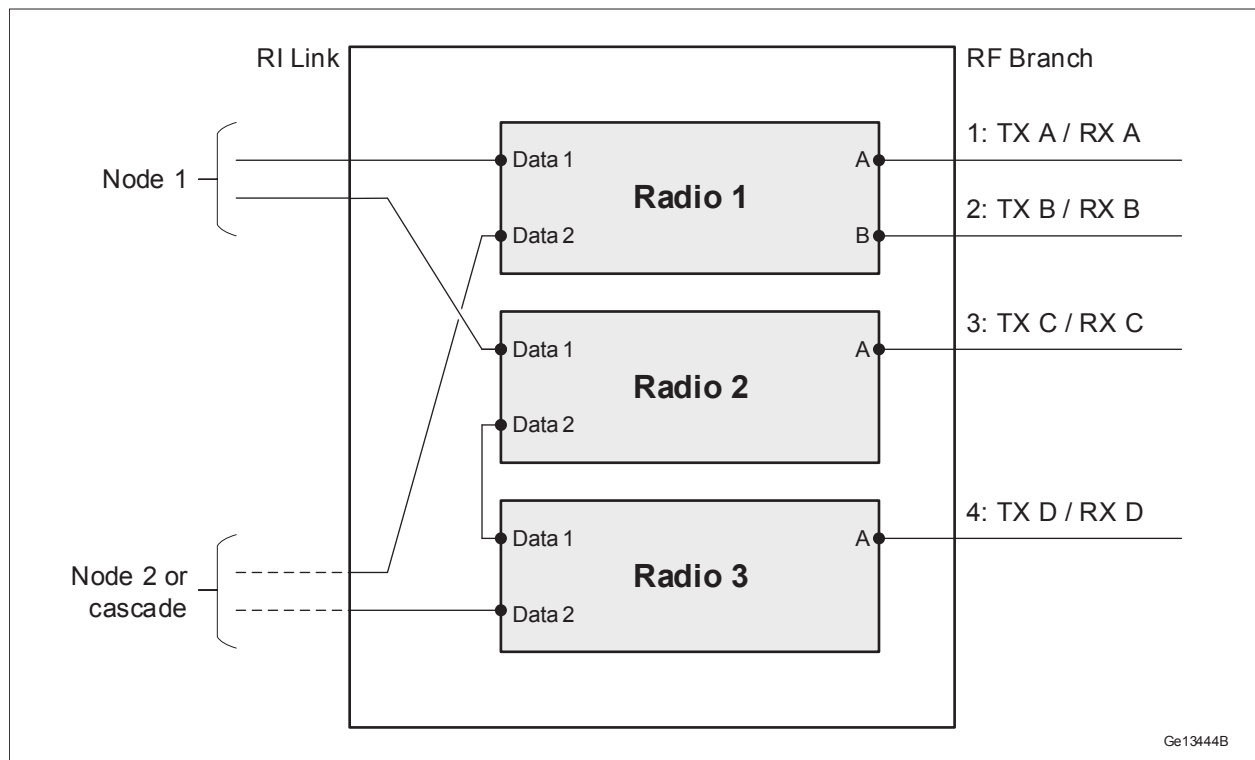


Figure 174 RBB44_2L Block Diagram

46.2.90 RBB44_2M

RBB44_2M is used for sectors with four TX branches, four RX branches, and two CPRI connections. This RBB uses a digital RX cross-connection. This RBB is used for high output power mode.

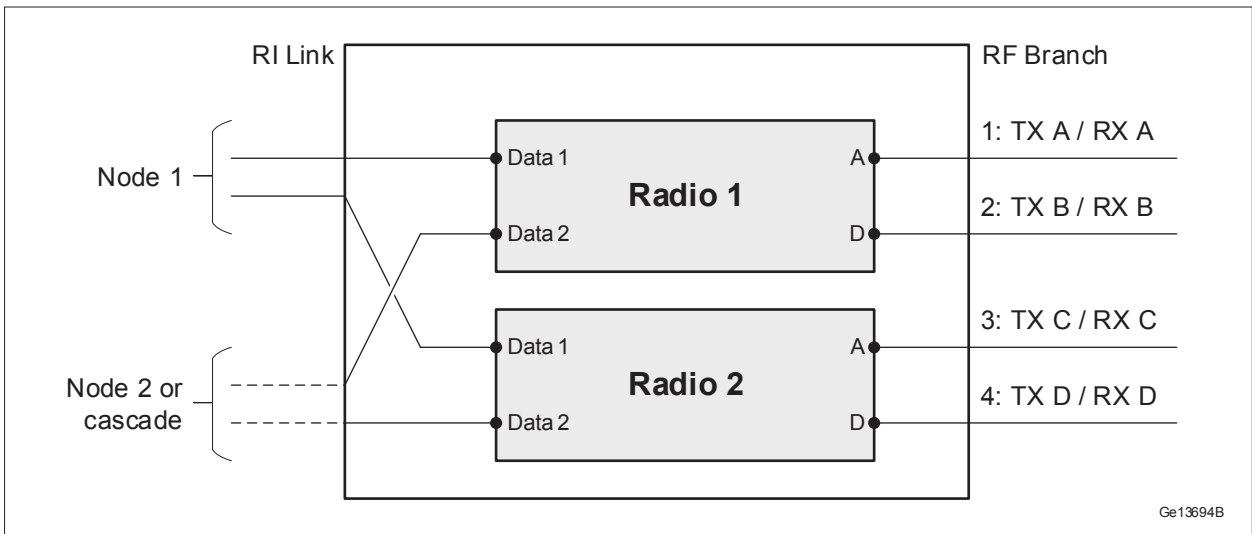


Figure 175 RBB44_2M Block Diagram

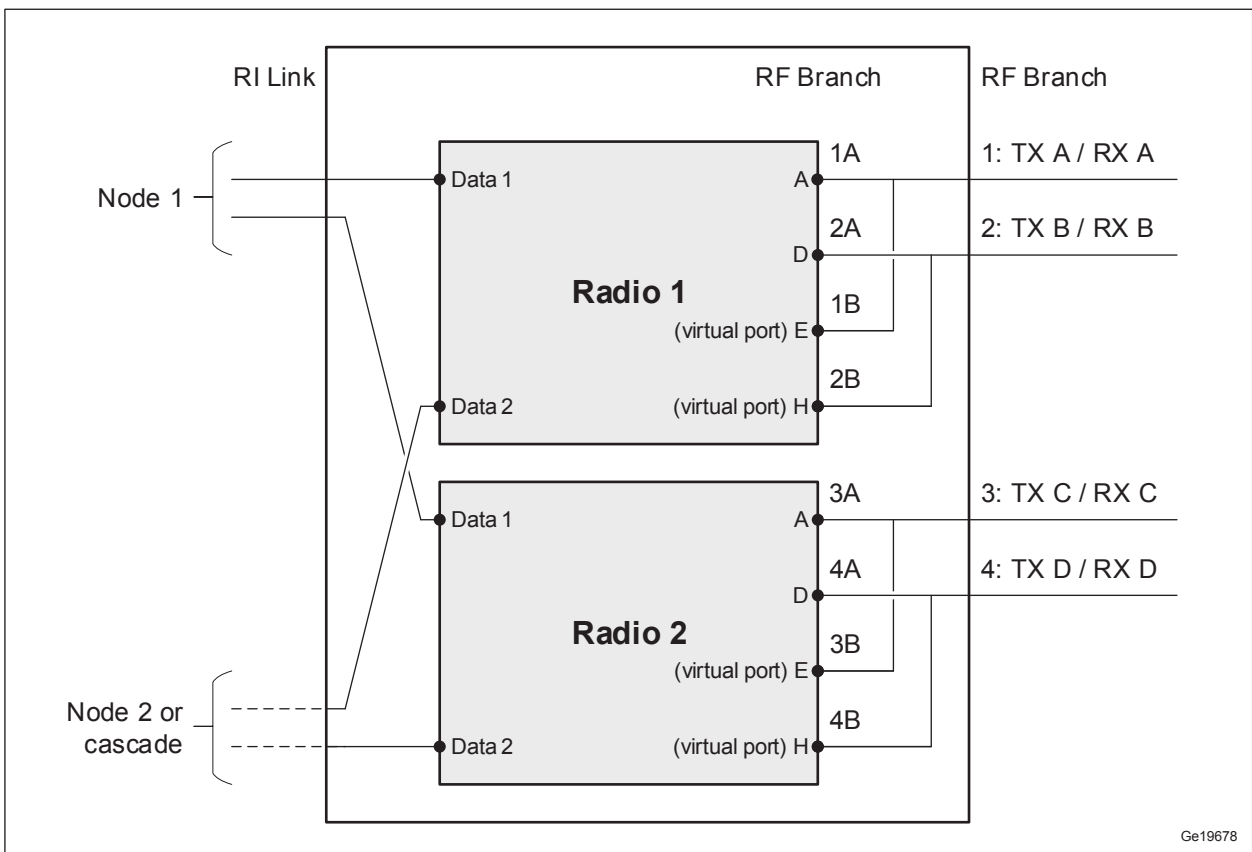


Figure 176 RBB44_2M Block Diagram for Radio 4449 B5 B13



46.2.91 RBB44_2N

RBB44_2N is used for sectors with four TX branches, four RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

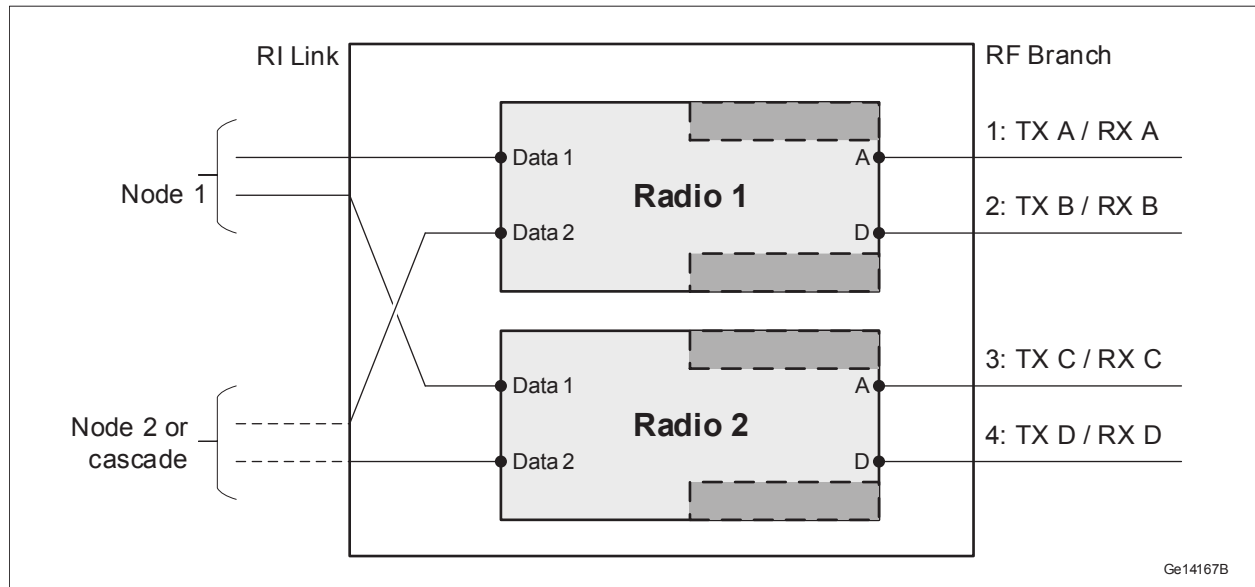


Figure 177 RBB44_2N Block Diagram

46.2.92 RBB44_2P

RBB44_2P is used for sectors with four TX branches, four RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

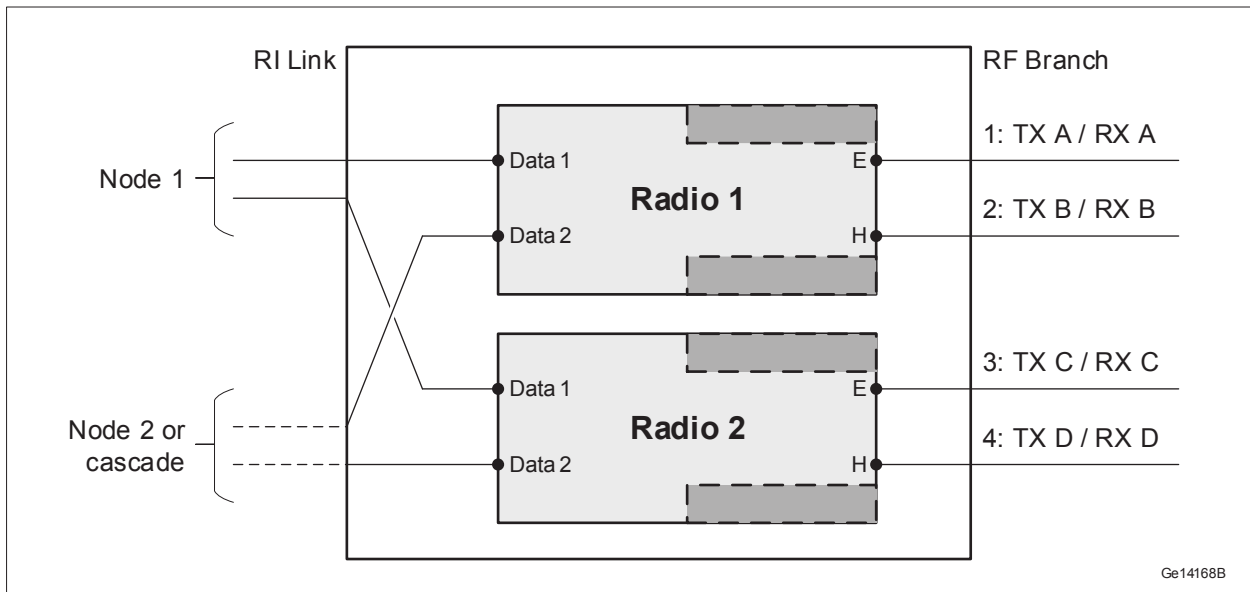


Figure 178 RBB44_2P Block Diagram

46.2.93 RBB44_2Q

RBB44_2Q is used for sectors with four TX branches, four RX branches, and two CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 179](#) shows the RBB block diagram.

RBB44_2Q is intended for use together with RBB44_1L. For an example of a three sector configuration, see [Figure 162](#).

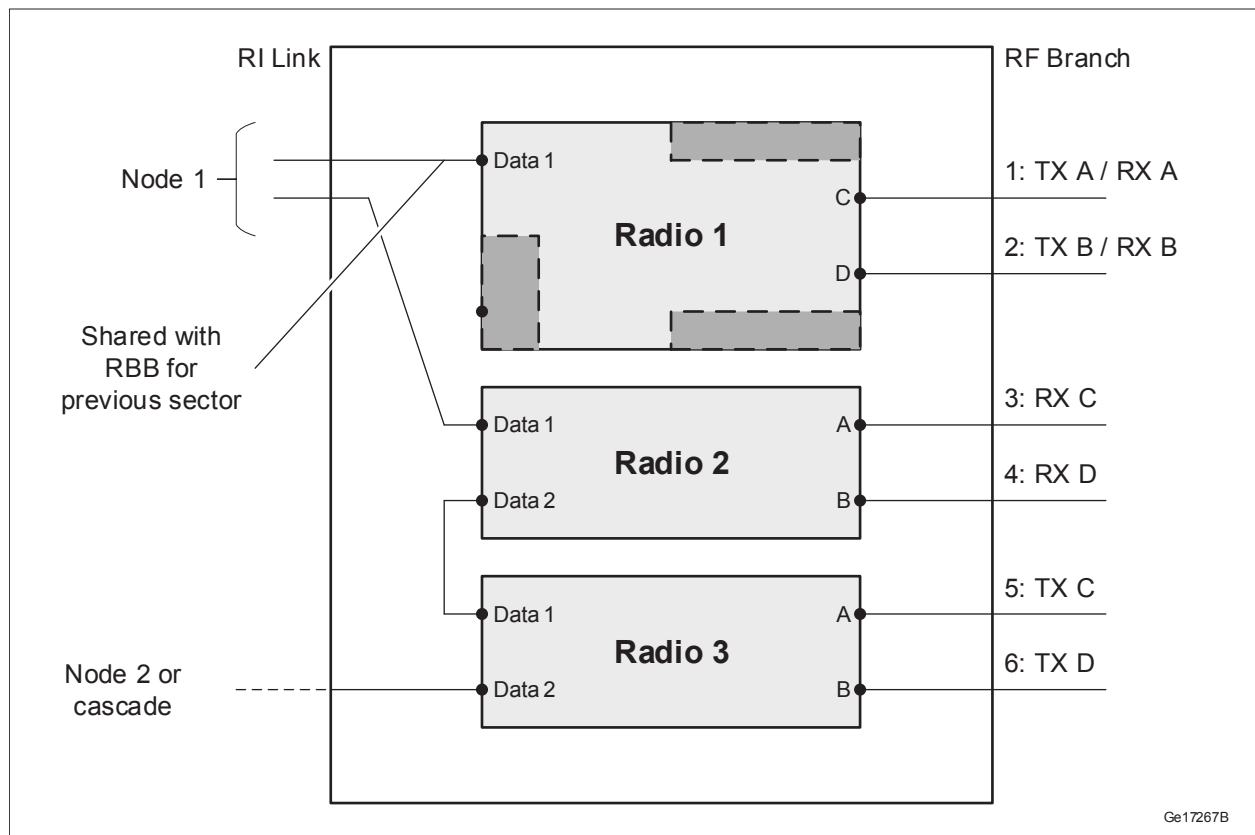


Figure 179 RBB44_2Q Block Diagram

46.2.94 RBB44_2R

RBB44_2R is used for sectors with four TX branches, four RX branches, and two CPRI connections. This RBB is used for high output power mode.

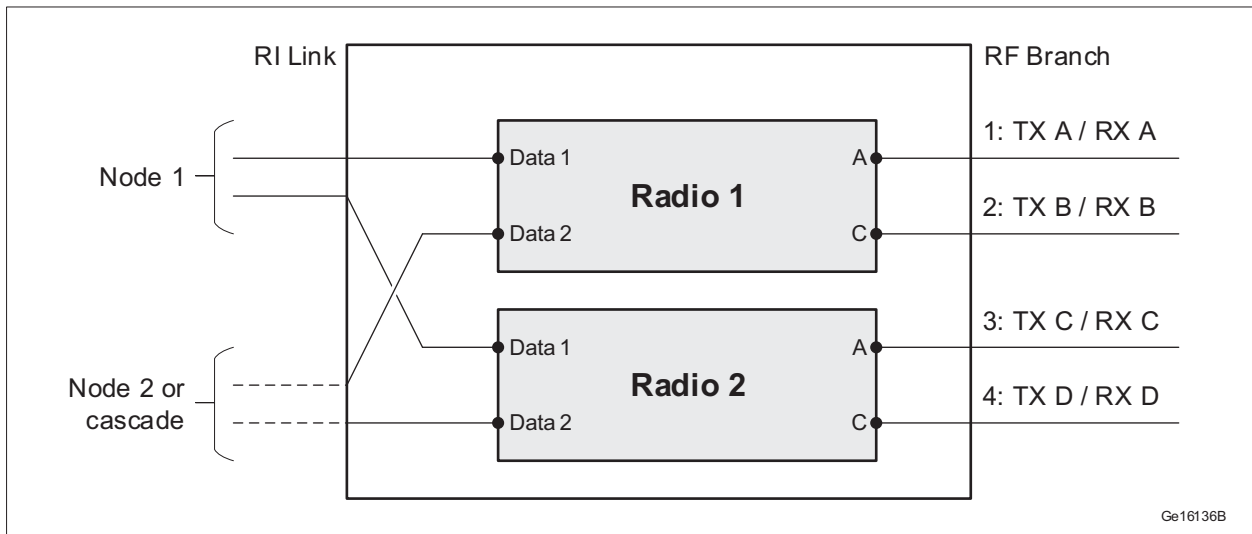


Figure 180 RBB44_2R Block Diagram

46.2.95 RBB44_2S

RBB44_2S is used for sectors with four TX branches, four RX branches, and two CPRI connections.

[Figure 181](#) shows the RBB44_2S block diagram for RDS.

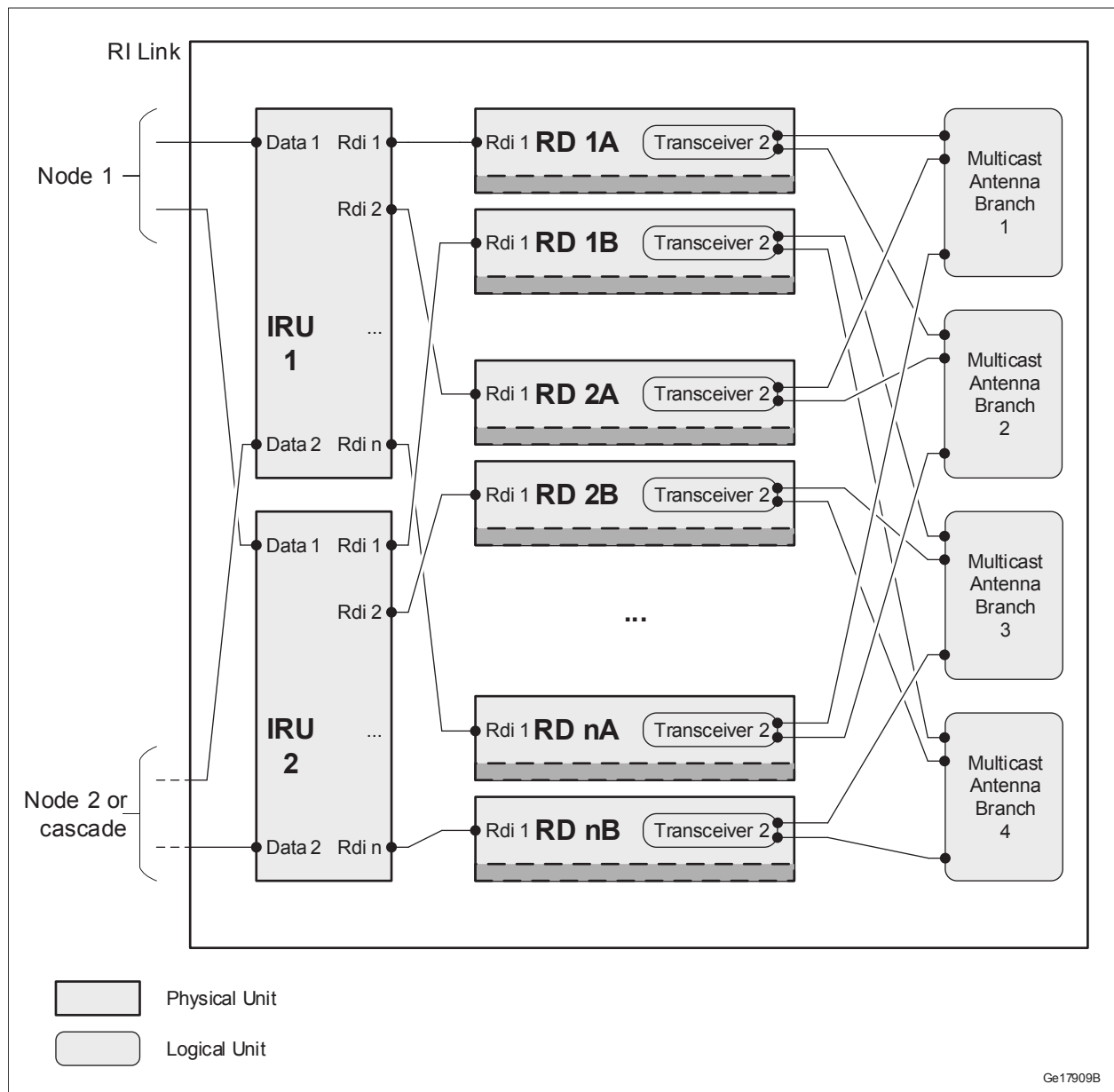


Figure 181 RBB44_2S Block Diagram for RDS

46.2.96 RBB44_2T

RBB44_2T is used for sectors with four TX branches, four RX branches, and two CPRI connections.

Figure 182 shows the RBB44_2T block diagram for RDS.

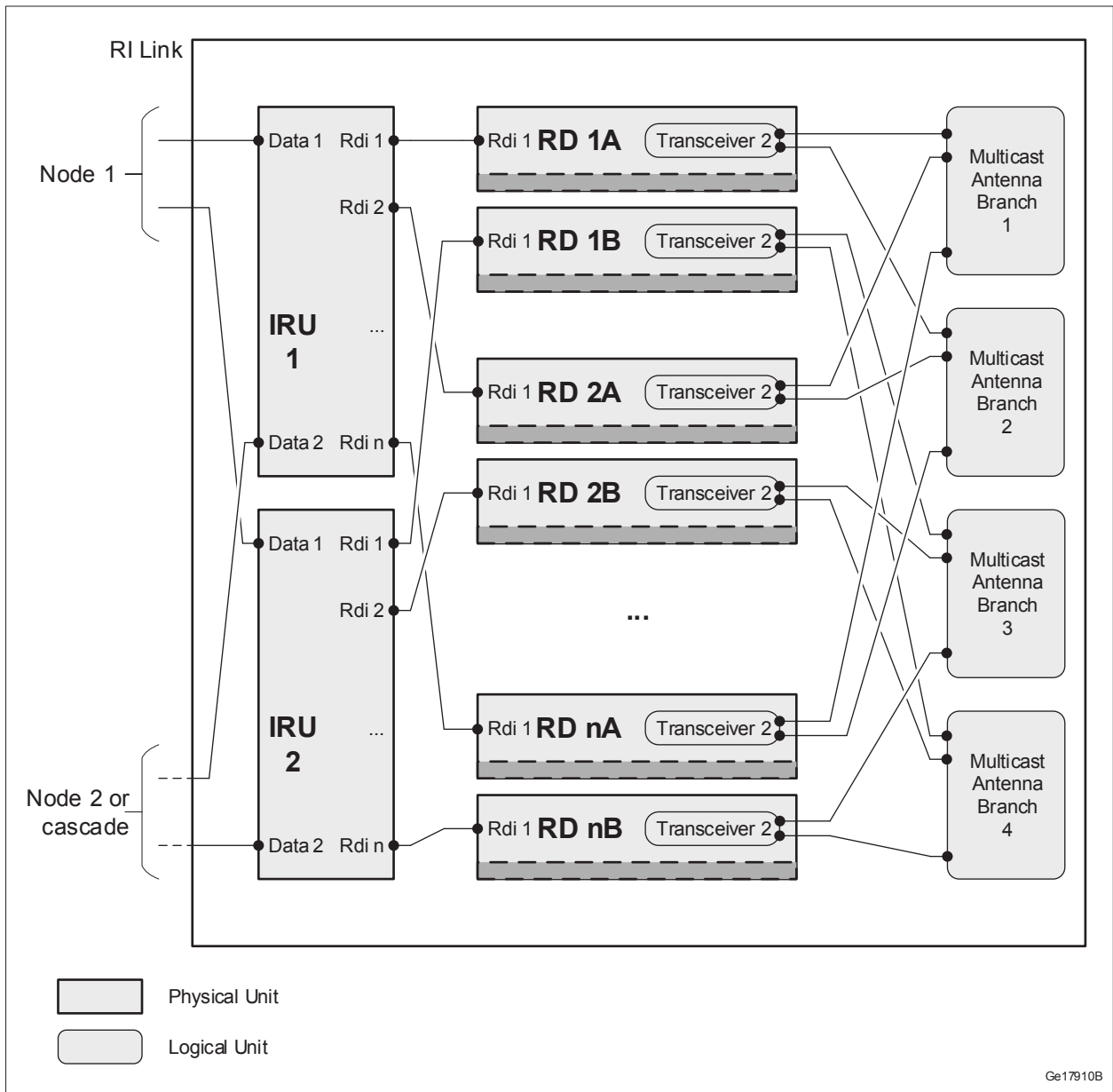


Figure 182 RBB44_2T Block Diagram for RDS

46.2.97 RBB44_3A

RBB44_3A is used for sectors with four TX branches, four RX branches, and three CPRI connections. This RBB uses a digital RX cross-connection.

[Figure 183](#) shows the RBB44_3A block diagram.

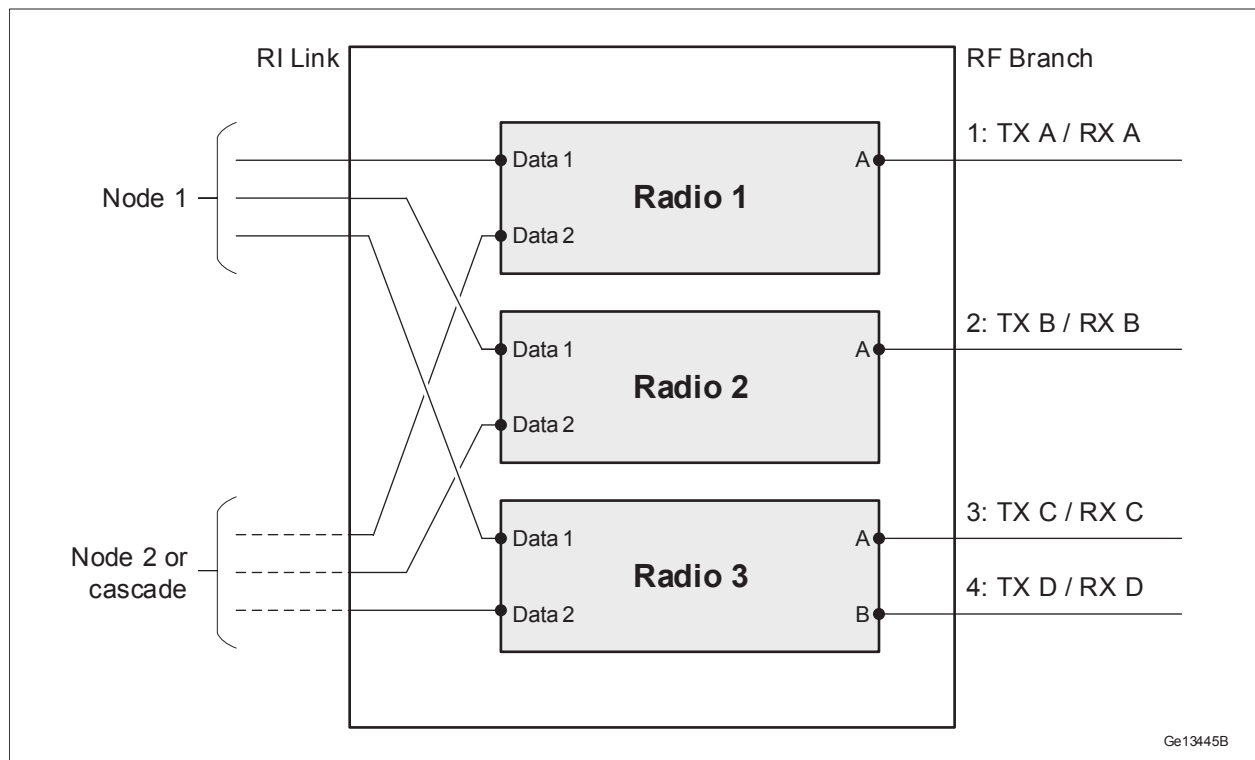


Figure 183 RBB44_3A Block Diagram

46.2.98 RBB44_3B

RBB44_3B is used for sectors with four TX branches, four RX branches, and three CPRI connections. This RBB uses a digital RX cross-connection.

[Figure 184](#) shows the RBB44_3B block diagram.

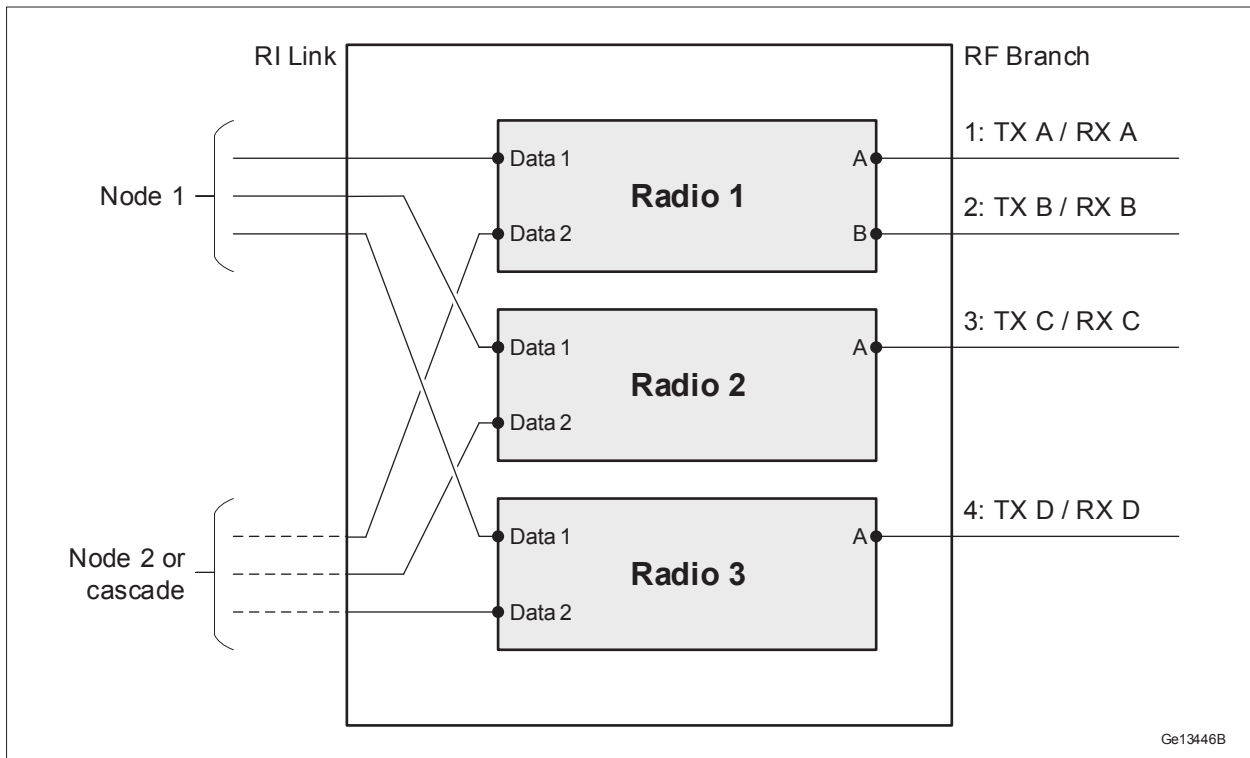


Figure 184 RBB44_3B Block Diagram

46.2.99 RBB44_3C

RBB44_3C is used for sectors with four TX branches, four RX branches, and three CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 185](#) shows the RBB block diagram.

RBB44_3C is intended for use together with RBB44_3D. For an example of a three sector configuration, see [Figure 162](#).

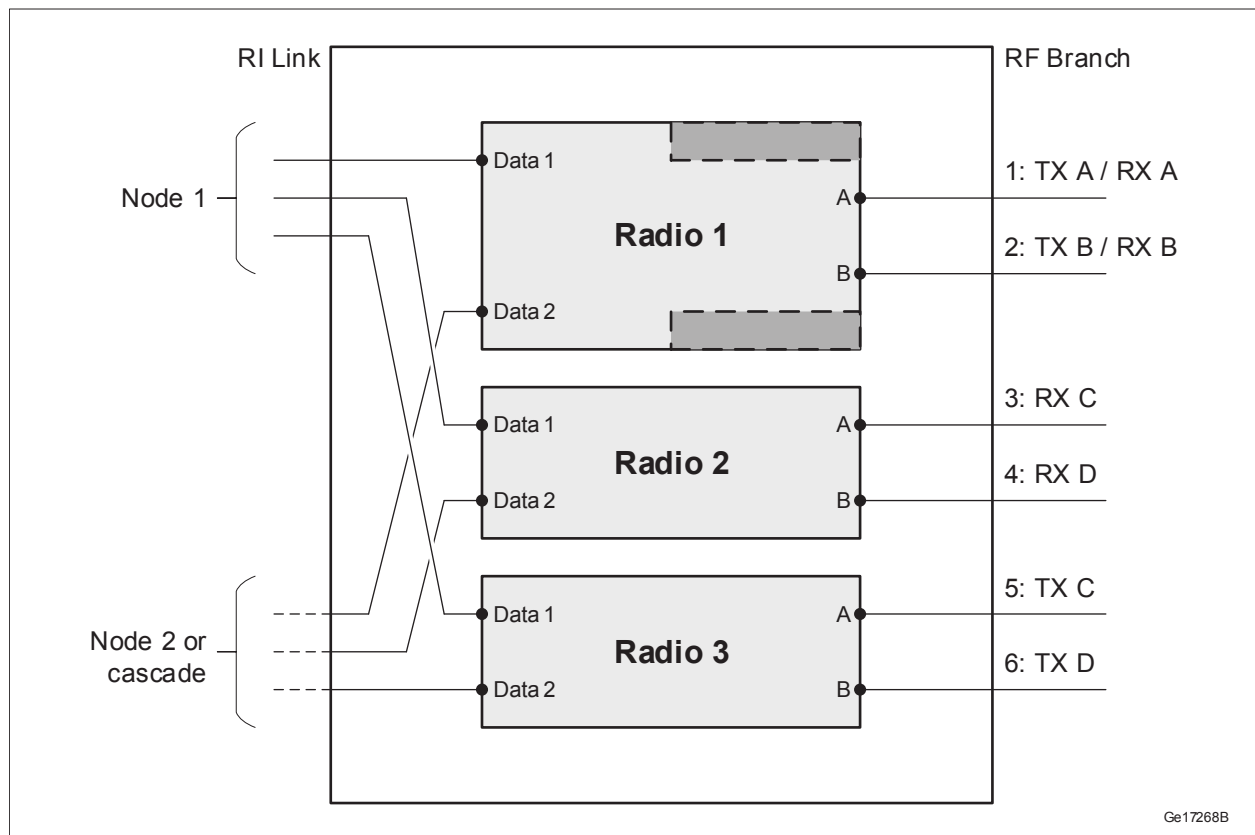


Figure 185 RBB44_3C Block Diagram

46.2.100 RBB44_3D

RBB44_3D is used for sectors with four TX branches, four RX branches, and three CPRI connections.

This RBB can be used with the Multi-Sector Per Radio feature.

[Figure 186](#) shows the RBB block diagram.

RBB44_3D is intended for use together with RBB44_3C. For an example of a three sector configuration, see [Figure 162](#).

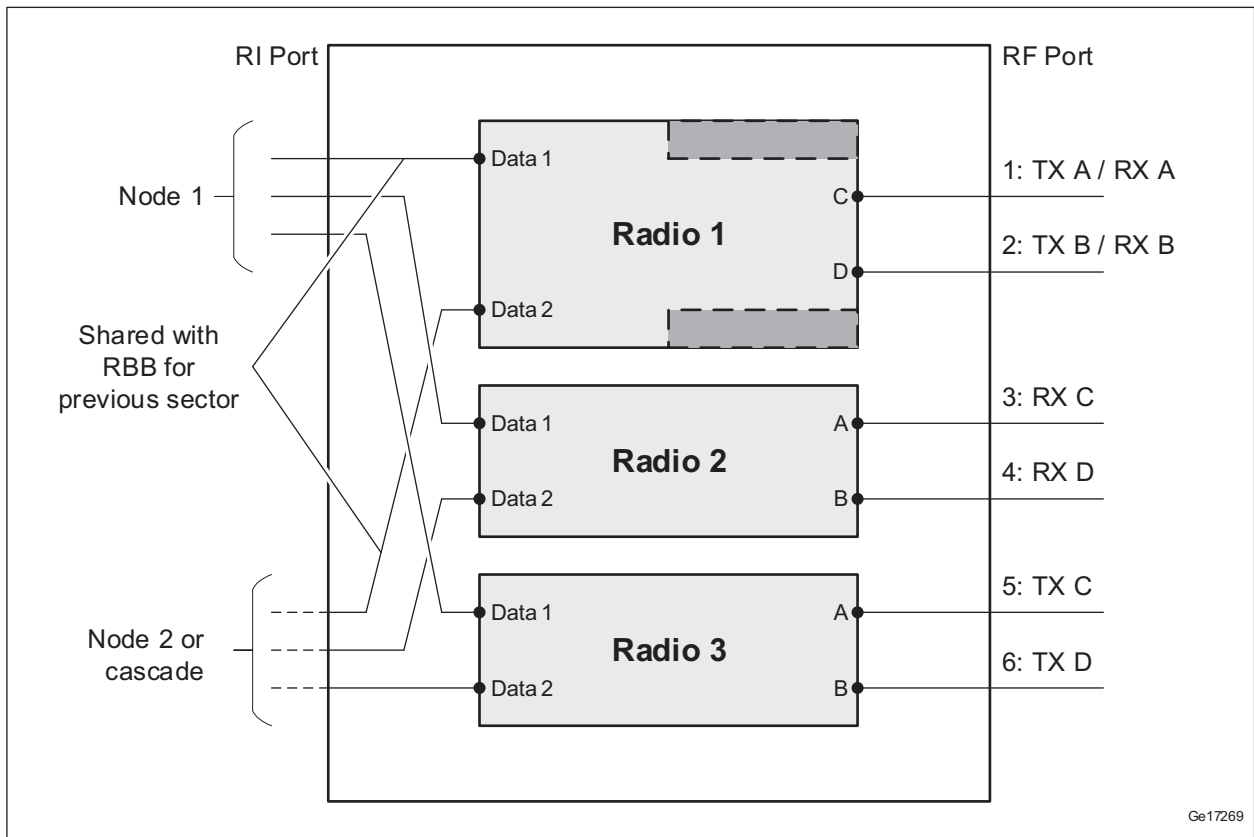


Figure 186 RBB44_3D Block Diagram

46.2.101 RBB44_4A

RBB44_4A is used for sectors with four TX branches, four RX branches, and four CPRI connections. This RBB uses a digital RX cross-connection.

[Figure 187](#) shows the RBB44_4A block diagram.

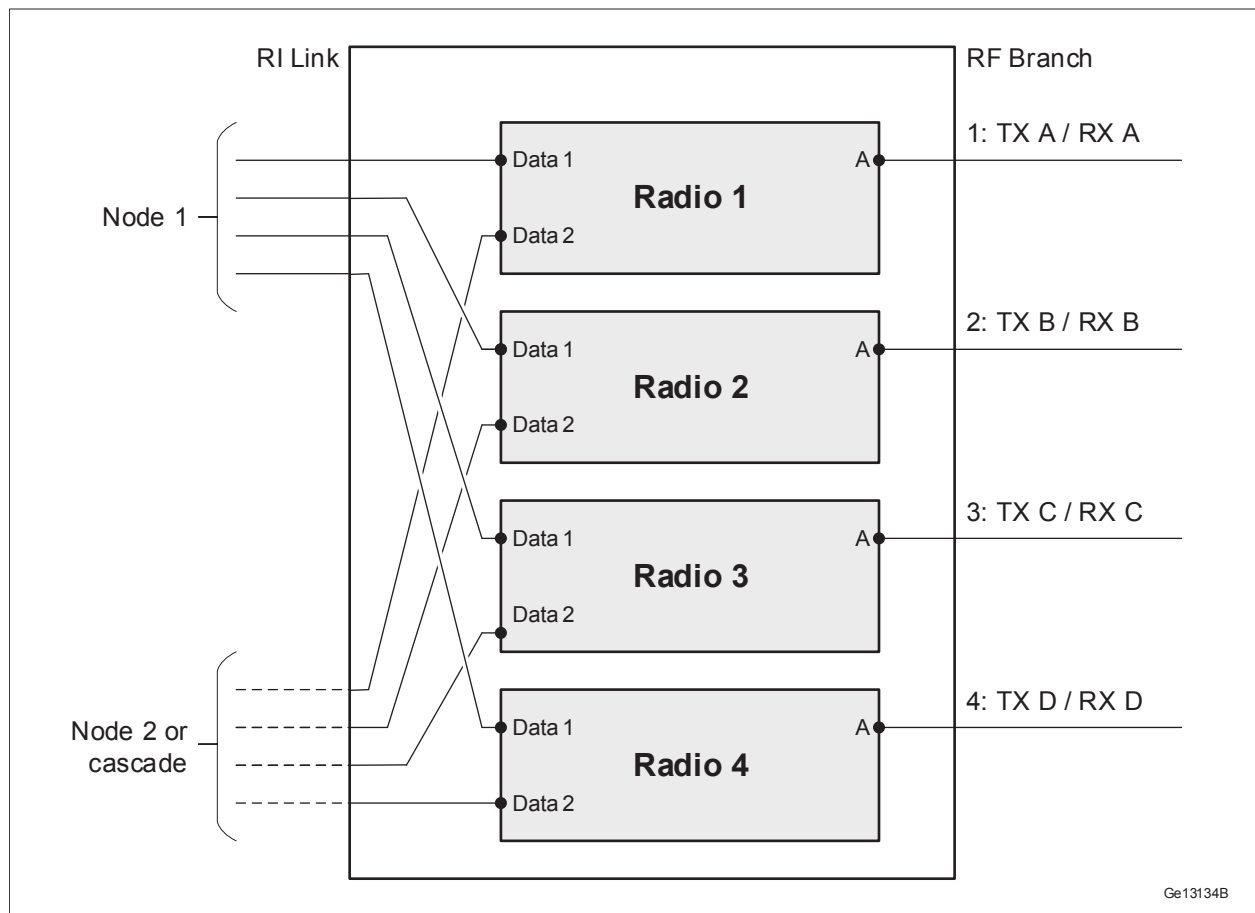


Figure 187 RBB44_4A Block Diagram

46.2.102 RBB46_1A

RBB46_1A is used for sectors with four TX branches, six RX branches, and one CPRI connection.

[Figure 188](#) shows the RBB block diagram.

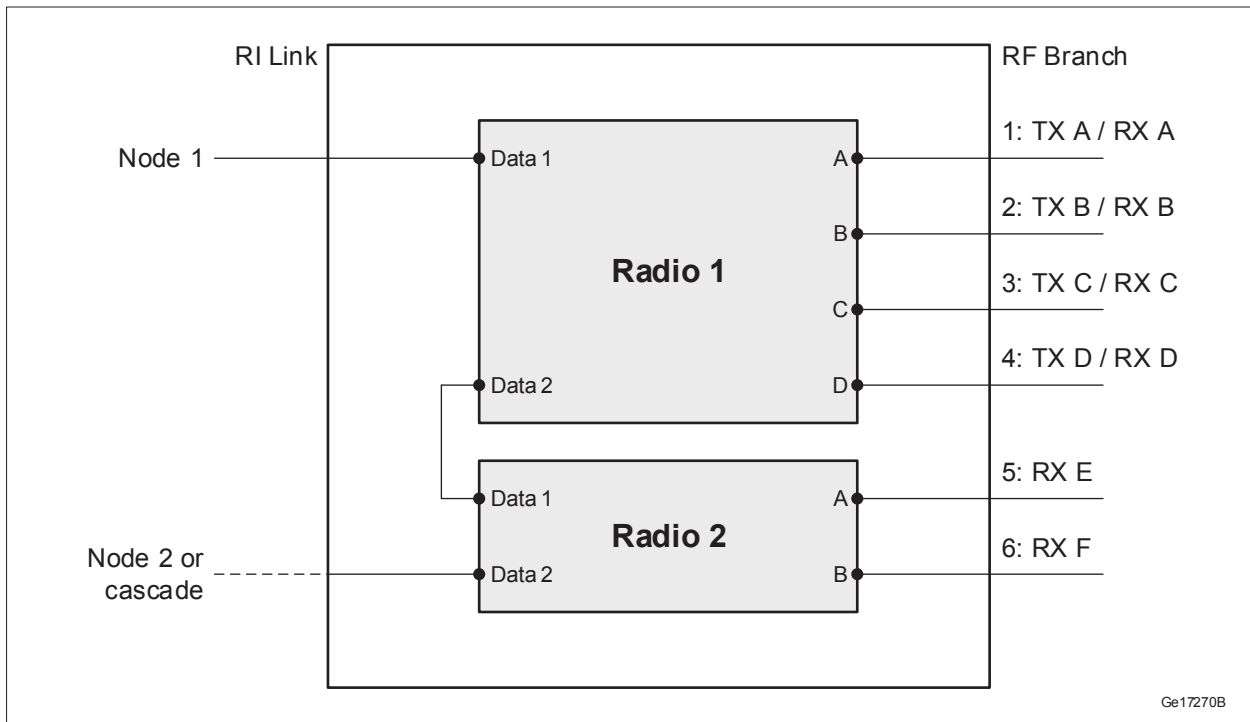


Figure 188 RBB46_1A Block Diagram

46.2.103 RBB46_2A

RBB46_2A is used for sectors with four TX branches, six RX branches, and two CPRI connections.

[Figure 189](#) shows the RBB block diagram.

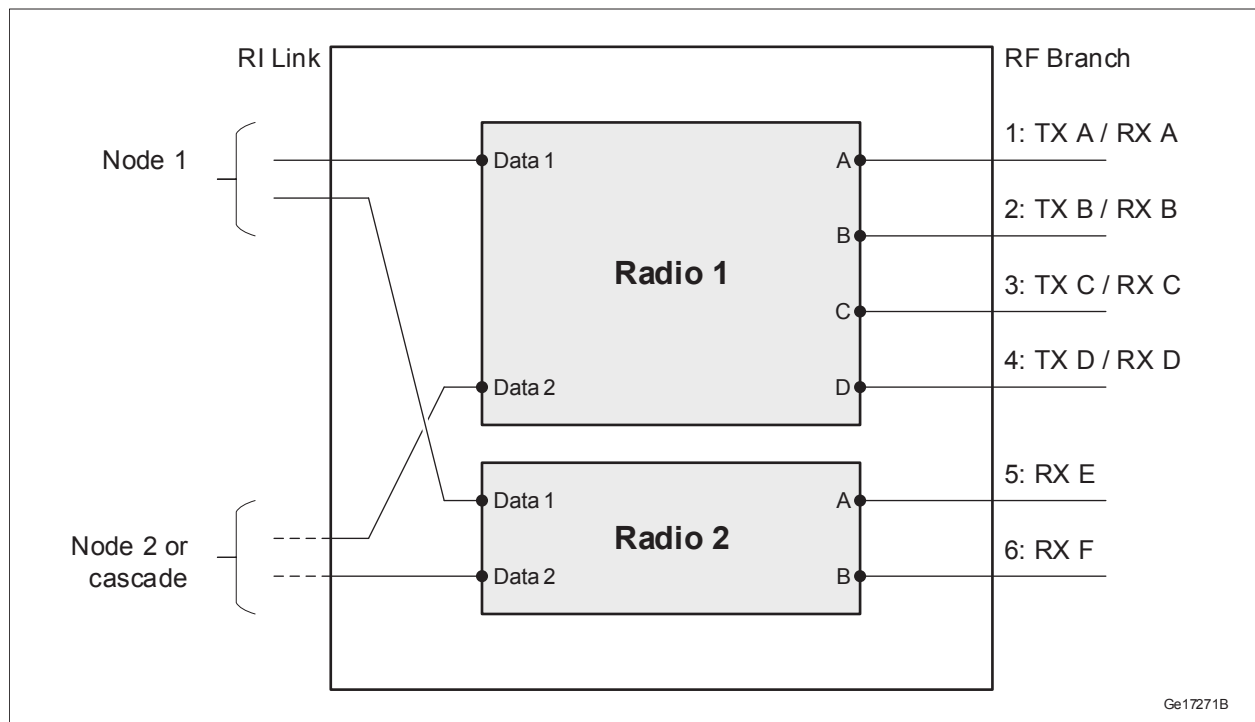


Figure 189 RBB46_2A Block Diagram

46.2.104 RBB66_1A

RBB66_1A is used for sectors with six TX branches, six RX branches, and one CPRI connection.

[Figure 190](#) shows the RBB block diagram.

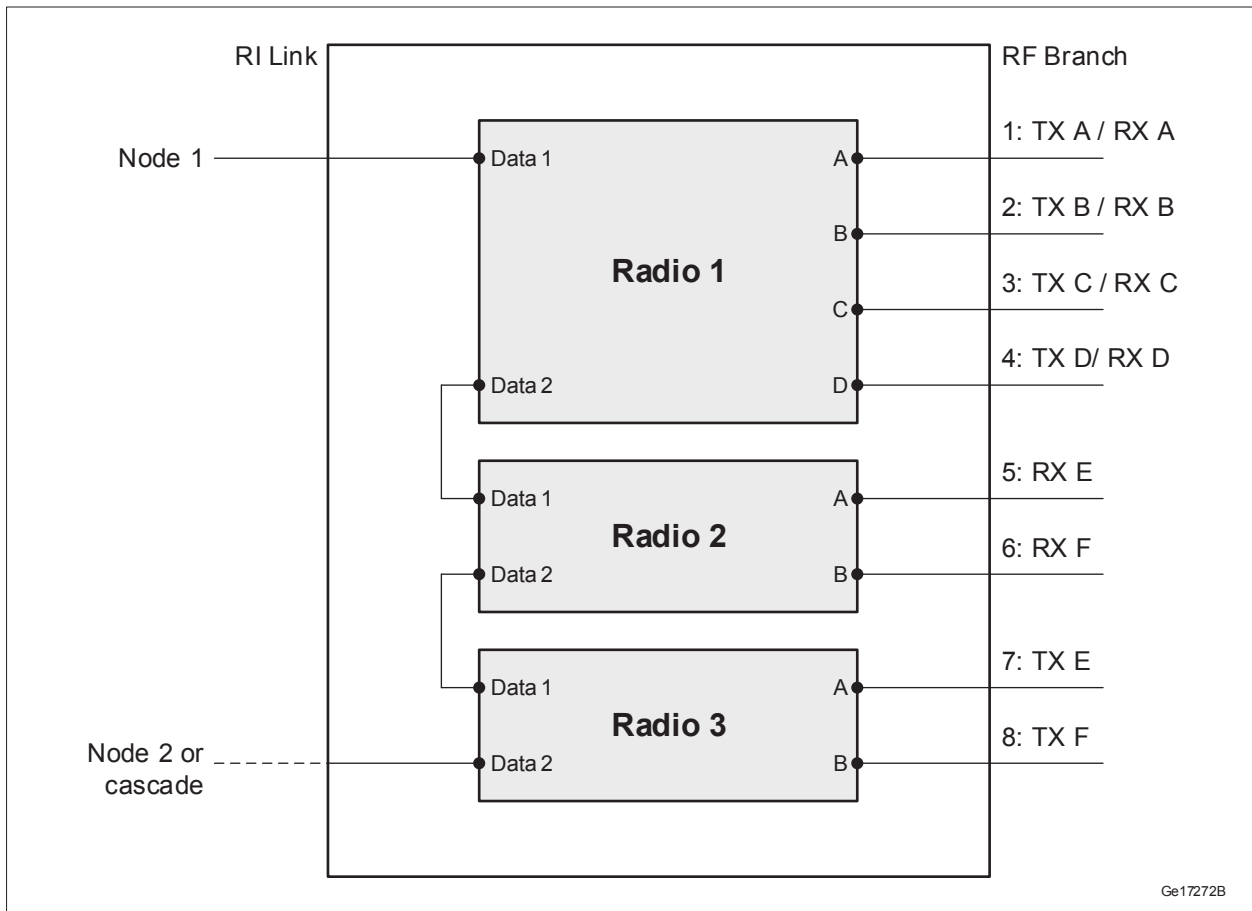


Figure 190 RBB66_1A Block Diagram

46.2.105 RBB66_3A

RBB66_3A is used for sectors with six TX branches, six RX branches, and three CPRI connections.

[Figure 191](#) shows the RBB block diagram.

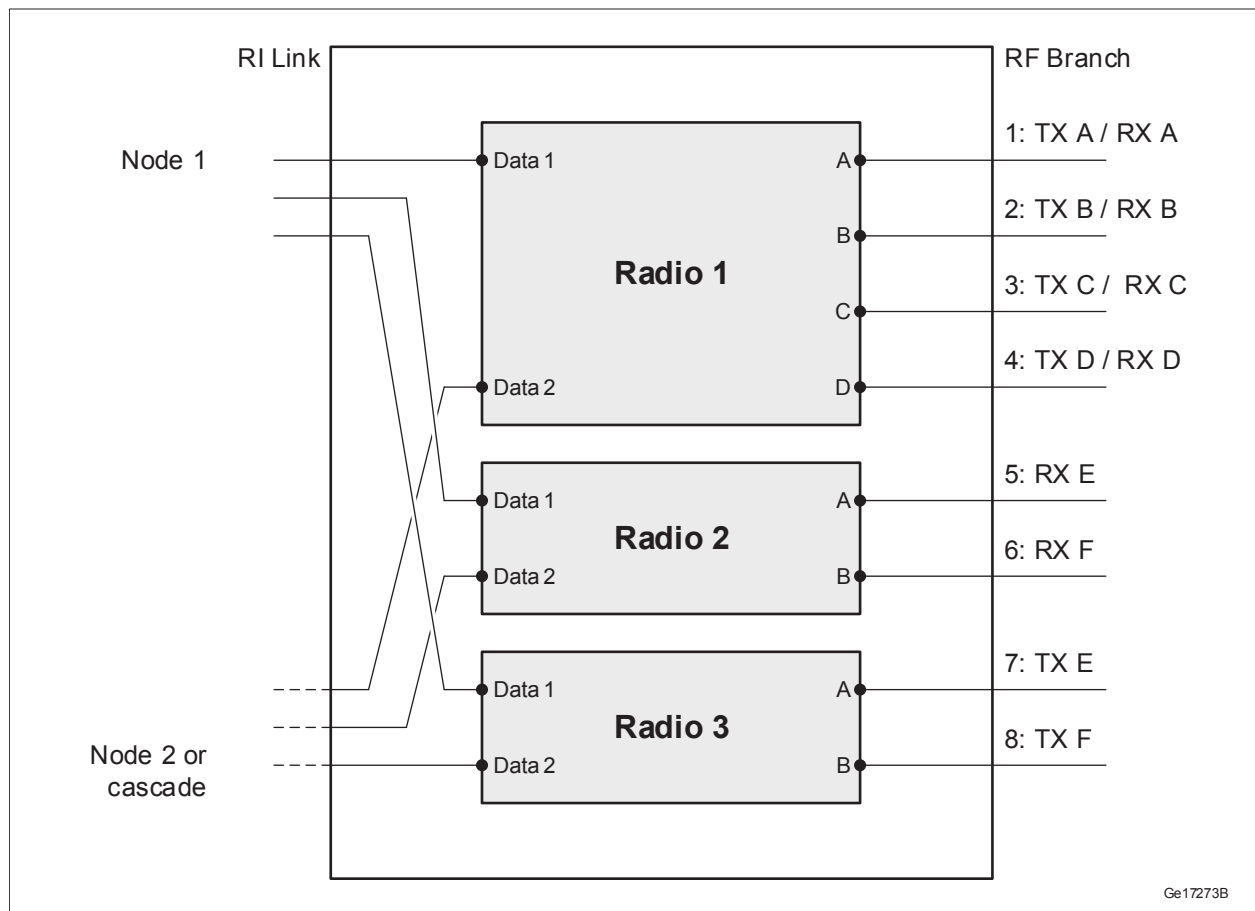


Figure 191 RBB66_3A Block Diagram

46.2.106 RBB88_1A

RBB88_1A is used for sectors with eight TX branches, eight RX branches, and one CPRI connection.

[Figure 192](#) shows the RBB88_1A block diagram.

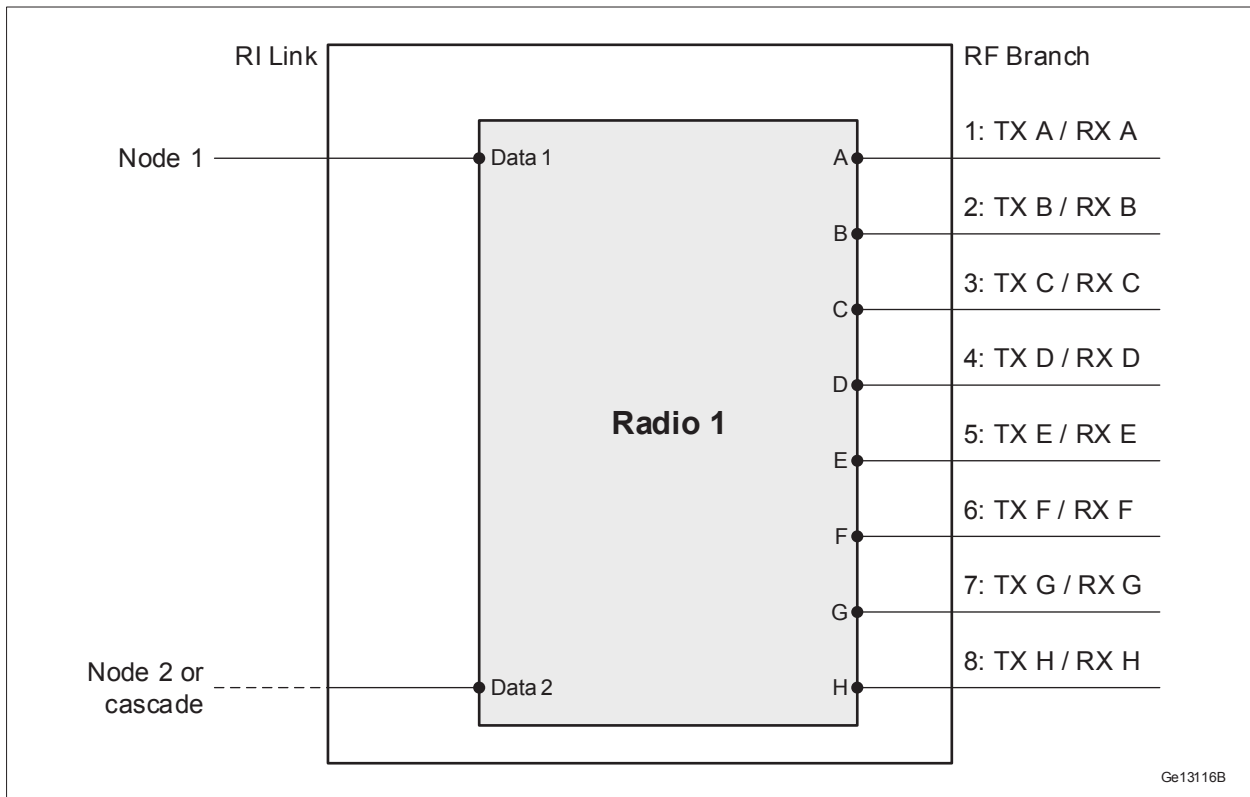


Figure 192 RBB88_1A Block Diagram

46.2.107 RBB88_2A

RBB88_2A is used for sectors with eight TX branches, eight RX branches, and two CPRI connections.

[Figure 193](#) shows the RBB88_2A block diagram.

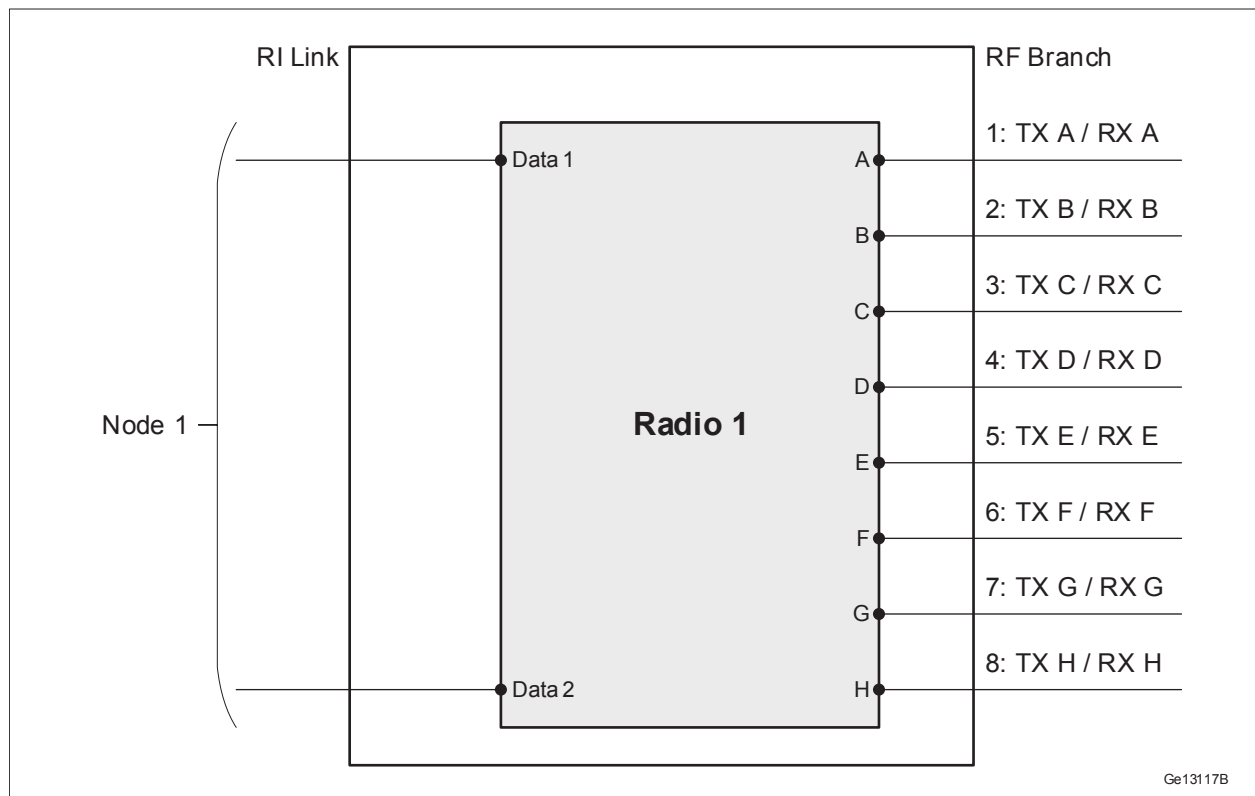


Figure 193 RBB88_2A Block Diagram

46.2.108 Deterministic Carrier Allocation

Deterministic carrier allocation is used for the following:

- GSM with Baseband
- WCDMA with Baseband
- LTE with Baseband, DUL 20, DUS 31, and DUS 41

WCDMA with DUW uses the feature flexible carrier allocation.

With deterministic carrier allocation it is possible to specify which of all the available RfBranches or CcBranches that each carrier can use by using the following:

- MO TRX for GSM Baseband node
- MO NodeBSectorCarrier for WCDMA Baseband node
- MO SectorCarrier for LTE DU or Baseband node

Note: CcBranch is used in uplink with analog cross connect.



It is possible to use different sets of branches for uplink and downlink or limit to either uplink or downlink only.

Deterministic carrier allocation is also used if the order of the branches is important to the baseband algorithm. An example is beamforming with an 8TX radio for LTE TDD, where the beamforming algorithm assumes that the first four defined RfBranches have the same polarization and the last four RfBranches have the opposite polarization.

With deterministic carrier allocation the algorithm does not try to re-allocate the carrier branches if the requested resources are unavailable or already in use.

46.2.108.1 Deterministic Carrier Allocation Example with a 4TX Radio

The following example allocates a carrier with one downlink branch on RF C and two uplink branches on RF C and RF D, on a 4TX radio using RBB44_1D with the following:

- RF A connected to RfBranch S1-1
- RF B connected to RfBranch S1-2
- RF C connected to RfBranch S1-3
- RF D connected to RfBranch S1-4

For GSM and LTE, set the following attributes in MO TRX or MO SectorCarrier:

- noOfTxAntennas=1
- noOfRxAntennas=2
- rfBranchTxRef[0]=AntennaUnitGroup=1,RfBranch=S1-3
- rfBranchRxRef[0]=AntennaUnitGroup=1,RfBranch=S1-3
- rfBranchRxRef[1]=AntennaUnitGroup=1,RfBranch=S1-4

For WCDMA, set the following attributes in MO NodeBSectorCarrier:

- numOfTxAntennas=1
- numOfRxAntennas=2
- rfBranchTxRef[0]=AntennaUnitGroup=1,RfBranch=S1-3
- rfBranchRxRef[0]=AntennaUnitGroup=1,RfBranch=S1-3
- rfBranchRxRef[1]=AntennaUnitGroup=1,RfBranch=S1-4



46.2.108.2 Deterministic Carrier Allocation Example with Analog Cross Connect

The following example allocates a carrier with one downlink branch and two uplink branches to radio 1 in a two radio analog cross connect configuration using RBB22_1A with the following:

- Radio 1, RF A connected to RfBranch S1-1
- Radio 1, RXB I/O connected to CcBranch S1-2 with signal from RfBranch S1-2 through radio 2
- Radio 2, RF A connected to RfBranch S1-2
- Radio 2, RXB I/O connected to CcBranch S1-1 with signal from RfBranch S1-1 through radio 1

For GSM, set the following attributes in MO TRX:

- `noOfTxAntennas=1`
- `noOfRxAntennas=2`
- `rfBranchTxRef[0]=AntennaUnitGroup=1,RfBranch=S1-1`
- `rfBranchRxRef[0]=AntennaUnitGroup=1,RfBranch=S1-1`
- `rfBranchRxRef[1]=AntennaUnitGroup=1,CcBranch=S1-2`

For WCDMA, set the following attributes in MO NodeBSectorCarrier:

- `numOfTxAntennas=1`
- `numOfRxAntennas=2`
- `rfBranchTxRef[0]=AntennaUnitGroup=1,RfBranch=S1-1`
- `rfBranchRxRef[0]=AntennaUnitGroup=1,RfBranch=S1-1`
- `rfBranchRxRef[1]=AntennaUnitGroup=1,CcBranch=S1-2`

46.3 RBBs for AAS

Each RBB defines a unique way of combining AIR units in one sector with connections to Baseband units.

RBBs for AAS are named as follows: *RBBAIR_[C]/[V]*, where:

C	Number of CPRI or eCPRI links
V	Version

Example: RBBAIR_2A

- Two CPRI or eCPRI links between Baseband and AIR unit
- Version A

46.3.1 RBBAIR_1A

RBBAIR_1A is used for Massive MIMO with AIR units with one CPRI or eCPRI connection.

Figure 194 shows the RBBAIR_1A block diagram.

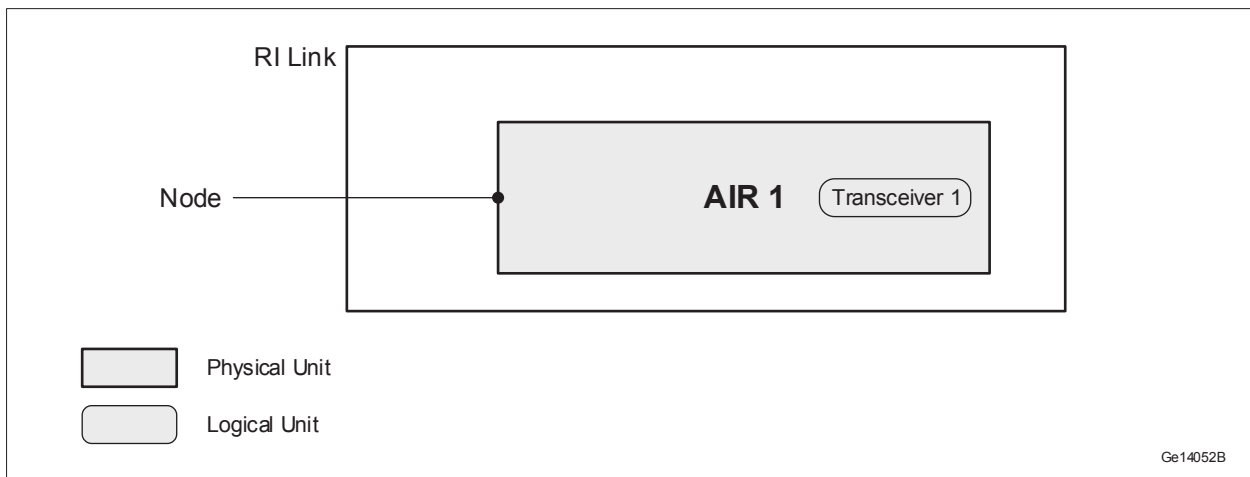


Figure 194 RBBAIR_1A Block Diagram

46.3.2 RBBAIR_2A

RBBAIR_2A is used for Massive MIMO with AIR units with two CPRI or eCPRI connections.

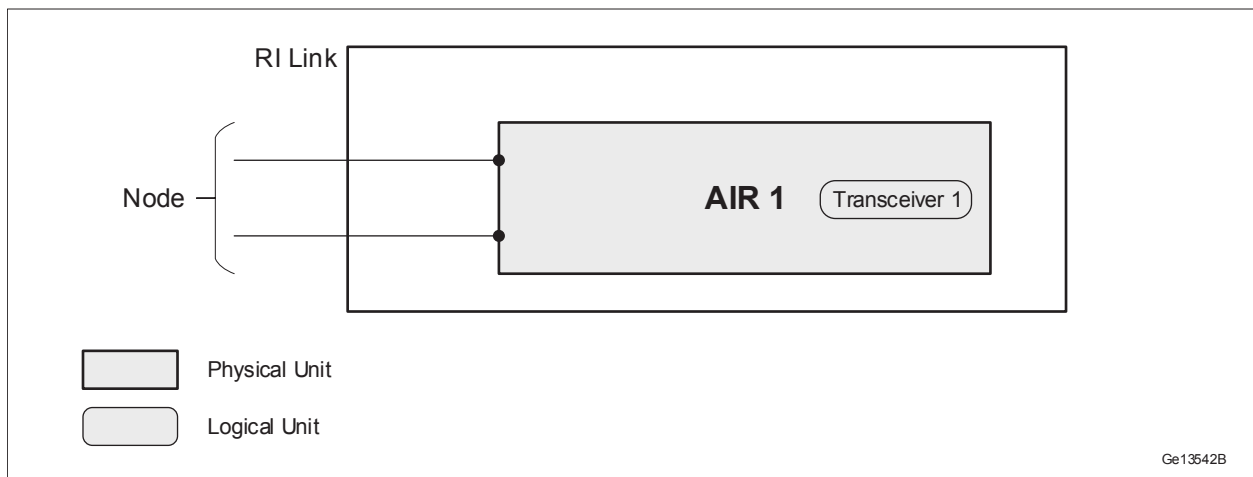


Figure 195 RBBAIR_2A Block Diagram

46.3.3 RBBAIR_3A

RBBAIR_3A is used for Massive MIMO with AIR units with three CPRI or eCPRI connections.

Figure 196 shows the RBBAIR_3A block diagram.

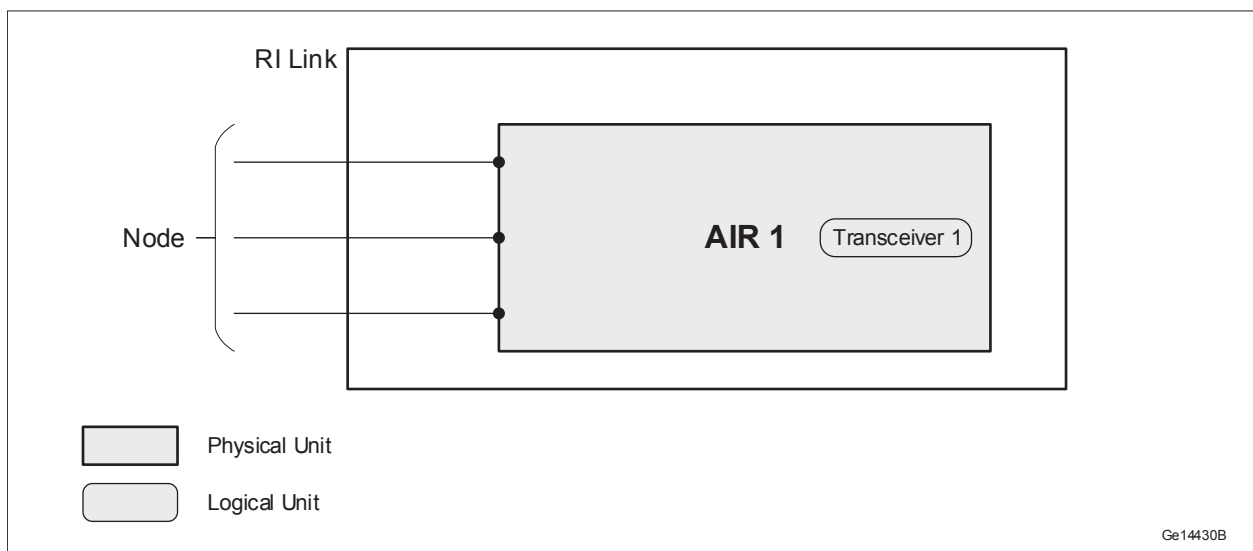


Figure 196 RBBAIR_3A Block Diagram

46.3.4 RBBAIR_4A

RBBAIR_4A is used for Massive MIMO with AIR units with three CPRI or eCPRI connections.

Figure 197 shows the RBBAIR_4A block diagram.

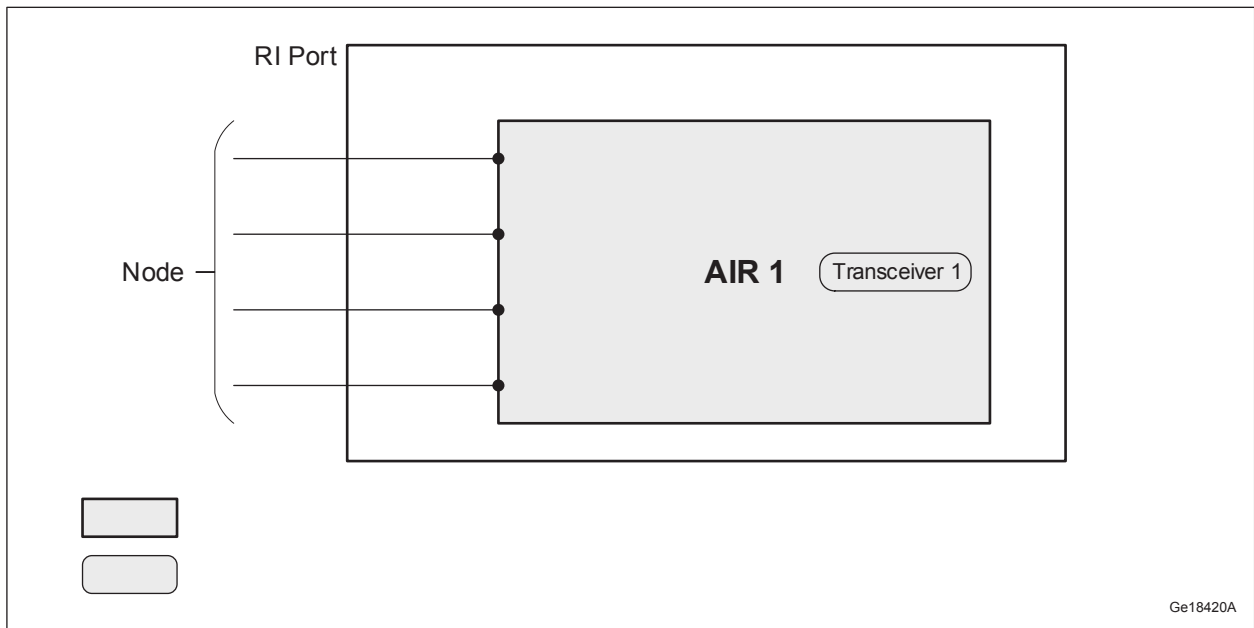


Figure 197 RBBAIR_4A Block Diagram

46.4 ABBs

Each ABB defines a unique way of combining antennas, Tower Mounted Amplifiers (TMAs), and Tower Mounted Frequency shifters (TMFs) in one sector with connections to RBBs.

ABBs are named as follows: *ABB[Rf]_[A][V]-TMA[T]TMF[F]*, where:

Rf	Number of RF branches
A	Number of antenna subunits
V	Variant
T	TMA variant (optional)
F	TMF variant (optional)

Example 1: ABB2_2A

- Two RF branches
- Two antenna subunits
- Variant A

Example 2: ABB4_1B-TMA1



- Four RF branches
- One antenna subunit
- Variant B
- With TMA variant 1

Only RF connections are included in the ABB. Connections for control and supervision are not handled by the ABB concept.

The Antenna Unit Port (AU Port) is the antenna feeder port on the antenna unit, where the antenna branch is connected.

There is one antenna subunit per frequency band in one antenna unit, as follows:

- An ABB with two antenna subunits maps to two antenna units, see [Figure 198](#).
- Two ABBs for different frequency bands can share the same dual band antenna, see [Figure 199](#).
- If dual band TMA is used, the ABB contains the part of the TMA that covers the frequency band of the ABBs sector. Two ABBs for different frequency bands can share the same TMA unit, see [Figure 200](#).

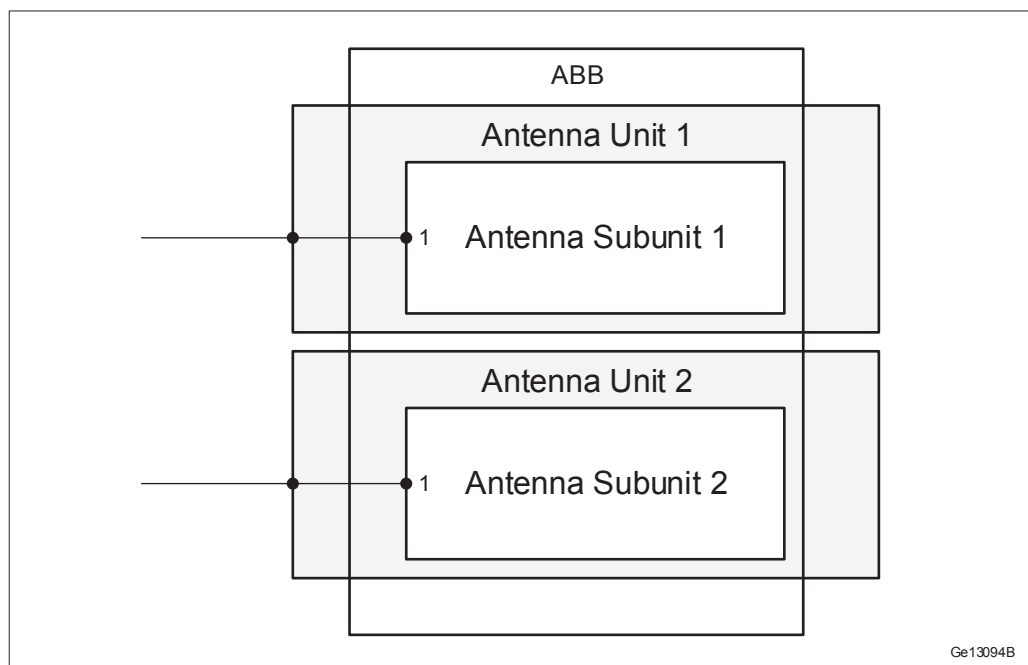


Figure 198 ABB With Two Antenna Subunits and Two Antenna Units

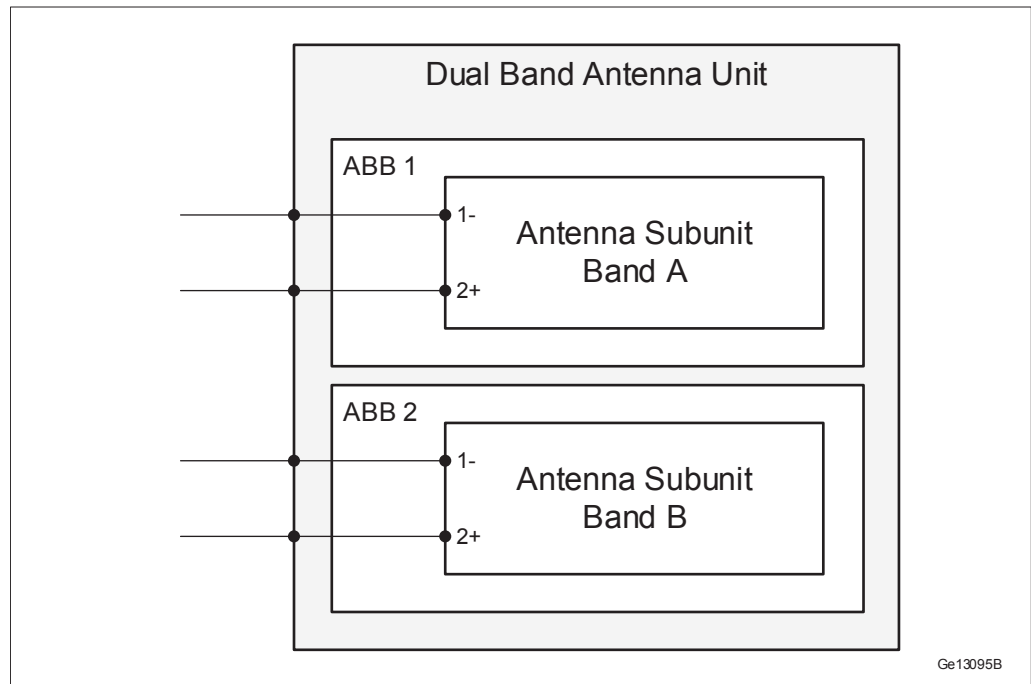


Figure 199 Two Antenna Subunits from Two ABBs in One Dual Band Antenna Unit

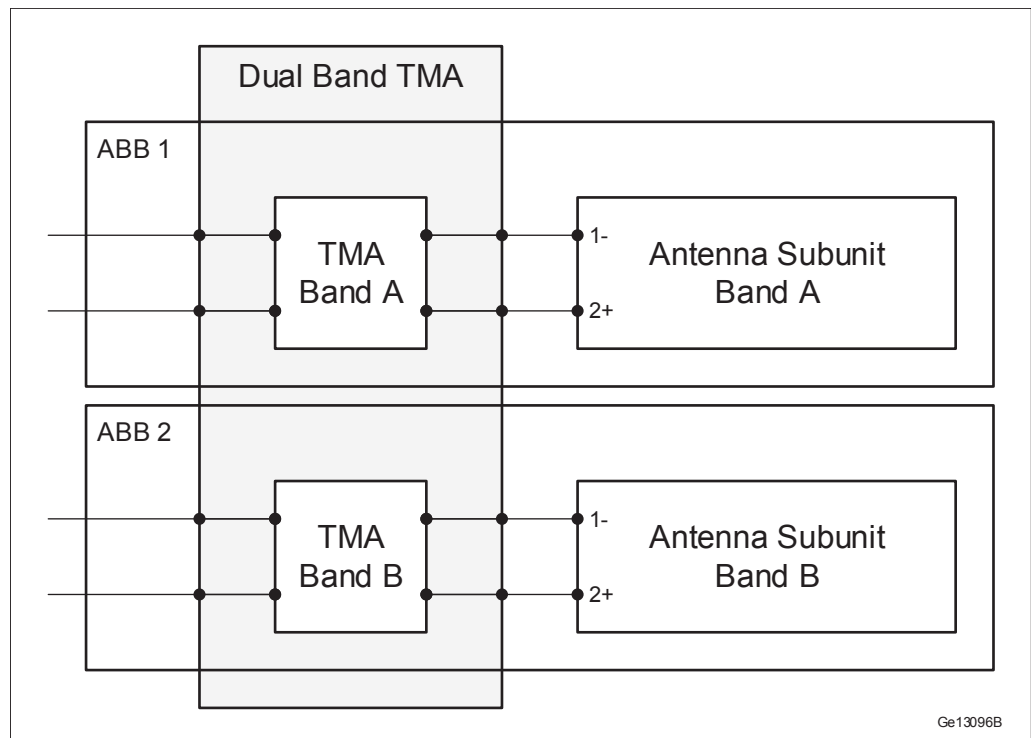


Figure 200 A Dual Band TMA for Two ABBs on Different Frequency Bands



46.4.1

ABB Support per RBB

One ABB combined with one RBB covers one sector. RBBs and ABBs are connected through corresponding RF ports, see [Figure 201](#).

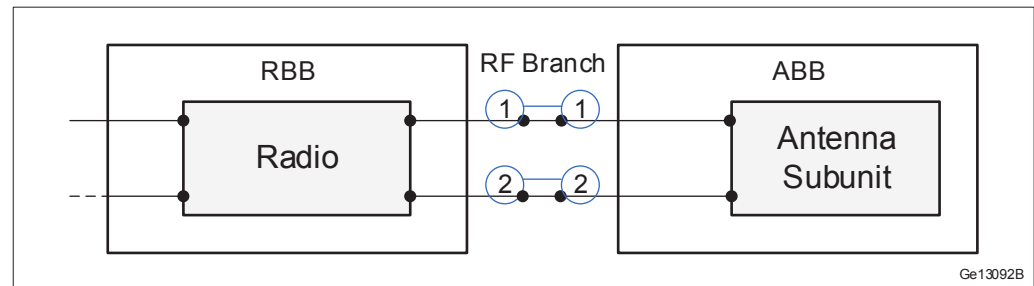


Figure 201 RBB and ABB for One Sector

RF branches are defined in the ABB and connected to radios through RF port mapping.

If analog cross connection is used, each cross connect cable is marked in the figures with a corresponding RF port. This is to show which RF branch that is supplying the RF signal for that connection. See [Figure 202](#).

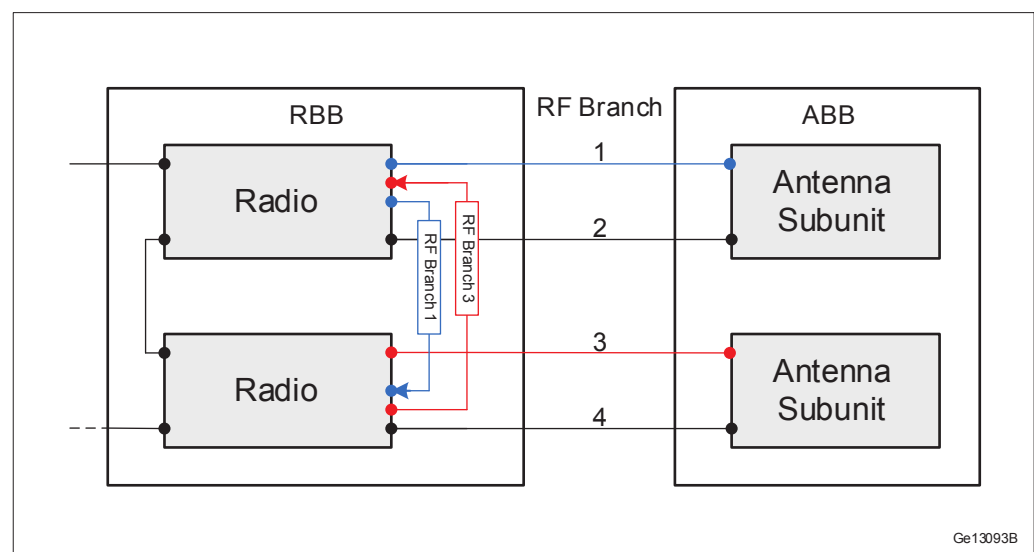


Figure 202 RBB and ABB with Analog Cross Connection

[Table 928](#) shows which ABBs that are supported for an RBB. Only combinations that are supported by the Equipment Configuration Tool (ECT) are shown. For more information on ECT, refer to [Manage Equipment Configuration Tool](#) in the Baseband Radio Node library.



Table 928 ABB Support per RBB

RBB ⁽¹⁾	ABB	ABB with TMA	ABB with TMF for Y- or ψ -Coverage
RBB10_1A	ABB3_1A ABB3_2A ABB3_3A	ABB3_1A-TMA1 ABB3_2A-TMA1 ABB3_3A-TMA1	
RBB11_1A	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB11_1A for AIR	ABB2_1A		
RBB11_1C	ABB1_1A	ABB1_1A-TMA1	
RBB11_1D	ABB1_1A	ABB1_1A-TMA1	
RBB11_2A	ABB1_1A	ABB1_1A-TMA1	
RBB11_2B	ABB1_1A	ABB1_1A-TMA1	
RBB12_1A	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB12_1A for AIR	ABB2_1A		
RBB12_1C	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB12_1D	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB12_1E	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB12_1F	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB12_2A	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB12_2B	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB12_2C	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB12_2D	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB6_3B-TMF1
RBB12_2E	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB6_3B-TMF1
RBB14_1A	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB14_2A	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB20_1A	ABB4_1A ABB4_2A	ABB4_1A-TMA2 ABB4_2A-TMA2	
RBB20_1B	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB20_2A	ABB6_1A ABB6_2A ABB6_2B ABB6_3A	ABB6_1A-TMA1 ABB6_2A-TMA1 ABB6_2B-TMA1 ABB6_3A-TMA1	
RBB20_2B	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_1A	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_1A for AIR	ABB2_1A		
RBB22_1B	ABB2_1A ABB2_2A	ABB2_2A-TMA1 ABB2_1A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1



RBB ⁽¹⁾	ABB	ABB with TMA	ABB with TMF for Y- or ψ -Coverage
RBB22_1B for dual band	ABB2_1A ABB2_2A		
RBB22_1B for RDS ⁽²⁾	ABB2_0A		
RBB22_1C	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_1C for AIR	ABB2_1A		
RBB22_1F	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_1F for AIR	ABB2_1A		
RBB22_1G	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_1H	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_1J	ABB2_1A ABB2_2A		
RBB22_1K	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_1L	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_1M	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_1N	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2A	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_2A for AIR	ABB2_1A		
RBB22_2B	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2B for AIR	ABB2_1A		
RBB22_2C	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_2D	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2E	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2J	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2K	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_2L	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	ABB4_2C-TMF1 ABB6_3B-TMF1
RBB22_2M	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2N	ABB2_1A ABB2_2A		
RBB22_2P	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2Q	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB22_2R	ABB2_1A ABB2_2A	ABB2_2A-TMA1 ABB2_1A-TMA1	



RBB ⁽¹⁾	ABB	ABB with TMA	ABB with TMF for Y- or ψ -Coverage
RBB22_2S	ABB2_1A ABB2_2A	ABB2_1A-TMA1 ABB2_2A-TMA1	
RBB24_1A	ABB4_1B ABB4_2B	ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB24_1A for AIR	ABB4_1B		
RBB24_1B	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB24_1C	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB24_1C for AIR	ABB4_1A		
RBB24_1D	ABB4_1A ABB4_2A	ABB4_1A-TMA2 ABB4_2A-TMA2	
RBB24_2A	ABB4_1B ABB4_2B	ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB24_2A for AIR	ABB4_1B		
RBB24_2B	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB24_2D	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB24_2D for AIR	ABB4_1A		
RBB24_2E	ABB44_1A ABB44_2A	ABB44_1A-TMA2 ABB4_2A-TMA2	
RBB24_2F	ABB4_1A ABB44_2A	ABB4_1A-TMA2 ABB4_2A-TMA2	
RBB32_1A	ABB3_1B ABB3_2B ABB3_3A	ABB3_1B-TMA1 ABB3_2B-TMA1 ABB3_3A-TMA2	
RBB32_3A	ABB3_1B ABB3_2B ABB3_3A	ABB3_1B-TMA1 ABB3_2B-TMA1 ABB3_3A-TMA2	
RBB40_1A	ABB4_1A ABB4_2A		
RBB40_1B	ABB4_1B ABB4_2B		
RBB40_2A	ABB4_1A ABB4_2A		
RBB40_2B	ABB4_1B ABB4_2B		
RBB42_1B	ABB4_1B ABB4_2B	ABB4_1B-TMA3 ABB4_2B-TMA3	
RBB42_2D	ABB4_1B ABB4_2B	ABB4_1B-TMA3 ABB4_2B-TMA3	
RBB42_2E	ABB4_1B ABB4_2B	ABB4_1B-TMA3 ABB4_2B-TMA3	
RBB44_1B	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	



RBB ⁽¹⁾	ABB	ABB with TMA	ABB with TMF for Y- or ψ -Coverage
RBB44_1D	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_1D for AIR	ABB4_1A		
RBB44_1E	ABB4_1A ABB4_2A		
RBB44_1F	ABB4_1A ABB4_2A		
RBB44_1F	ABB4_1A ABB4_2A		
RBB44_1G	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_1J	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB44_1K	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB44_1L	ABB6_3C	ABB6_3C-TMA1	
RBB44_1M	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB44_2C	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB44_2F	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_2G	ABB4_1A ABB4_2A		
RBB44_2H	ABB4_1A ABB4_2A		
RBB44_2J	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_2K	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_2L	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_2M	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	



RBB ⁽¹⁾	ABB	ABB with TMA	ABB with TMF for Y- or ψ -Coverage
RBB44_2N	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB44_2P	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB44_2Q	ABB6_3C	ABB6_3C-TMA1	
RBB44_2R	ABB4_1A ABB4_1B ABB4_2A ABB4_2B	ABB4_1A-TMA1 ABB4_1B-TMA1 ABB4_1B-TMA2 ABB4_2A-TMA1 ABB4_2B-TMA1 ABB4_2B-TMA2	
RBB44_3A	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_3B	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB44_3C	ABB6_3C	ABB6_3C-TMA1	
RBB44_3D	ABB6_3C	ABB6_3C-TMA1	
RBB44_4A	ABB4_1A ABB4_2A	ABB4_1A-TMA1 ABB4_2A-TMA1	
RBB46_1A	ABB6_2C ABB6_3C	ABB6_2C-TMA1 ABB6_3C-TMA2	
RBB46_2A	ABB6_2C ABB6_3C	ABB6_2C-TMA1 ABB6_3C-TMA2	
RBB66_1A	ABB8_3A ABB8_4A	ABB8_3A-TMA1 ABB8_4A-TMA1	
RBB66_3A	ABB8_3A ABB8_4A	ABB8_3A-TMA1 ABB8_4A-TMA1	
RBB88_1A	ABB8_1A		
RBB88_1A for RRUL 81	ABB8_1B		
RBB88_2A	ABB8_1A		
RBB88_2A for RRUL 81	ABB8_1B		

(1) AIR does not support ABBs with TMA.

(2) From SW 18.Q3, RBBs for RDS include multicast antenna branches so ABB2_0A is no longer used.

46.4.2

ABB1_1A

ABB1_1A has one RF branch and one antenna subunit.

[Figure 203](#) shows ABB1_1A.

[Figure 204](#) shows ABB1_1A-TMA1, with TMA.

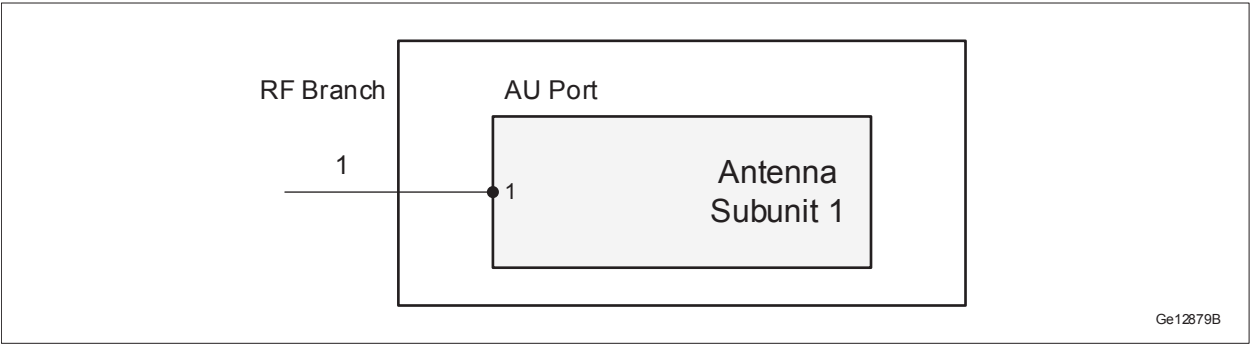


Figure 203 ABB1_1A Block Diagram

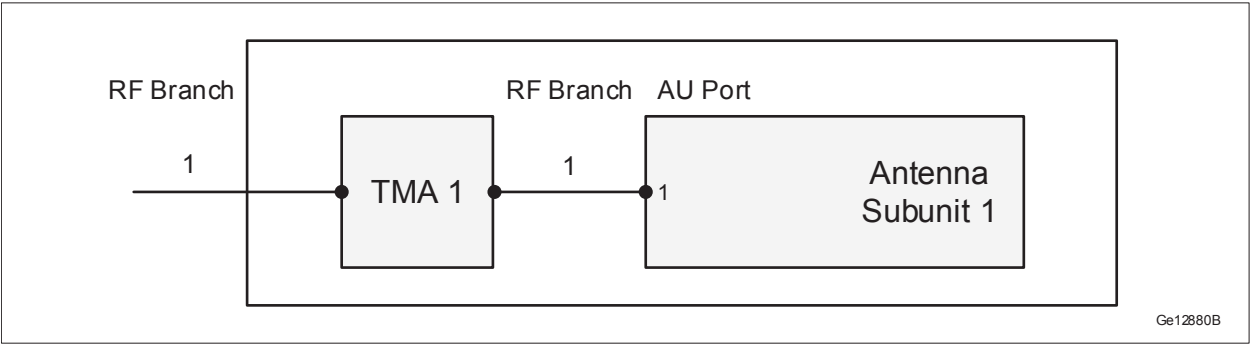


Figure 204 ABB1_1A-TMA1 Block Diagram, with TMA

46.4.3 ABB2_0A

ABB2_0A has two RF branches.

Note: From SW 18.Q3, RBBs for RDS include multicast antenna branches so ABB2_0A is no longer used.

Figure 205 shows ABB2_0A.

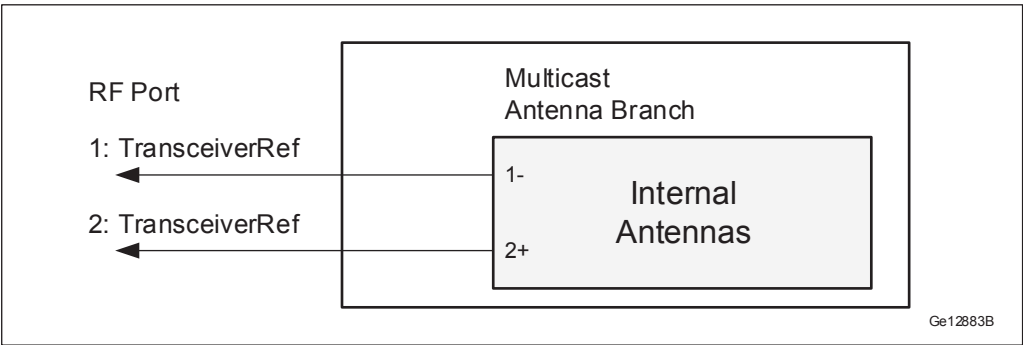


Figure 205 ABB2_0A Block Diagram

46.4.4 ABB2_1A

ABB2_1A has two RF branches and one antenna subunit.

[Figure 206](#) shows ABB2_1A.

[Figure 207](#) shows ABB2_1A-TMA1, with TMA.

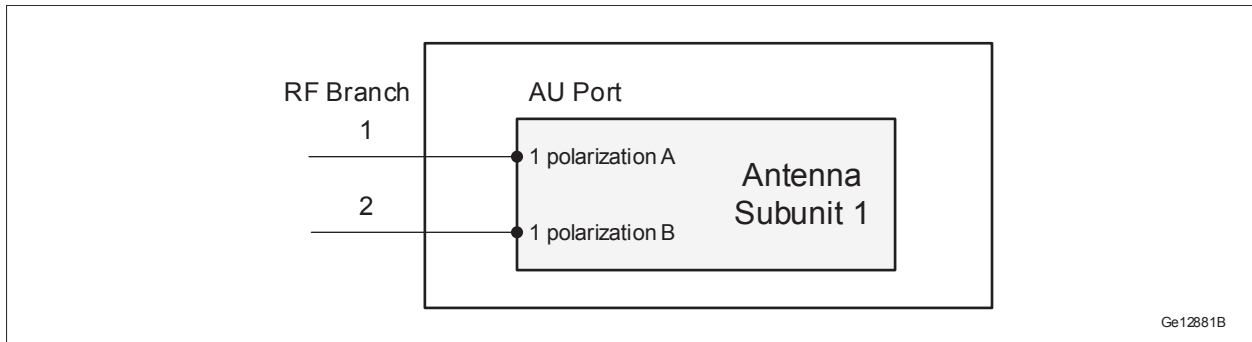


Figure 206 ABB2_1A Block Diagram

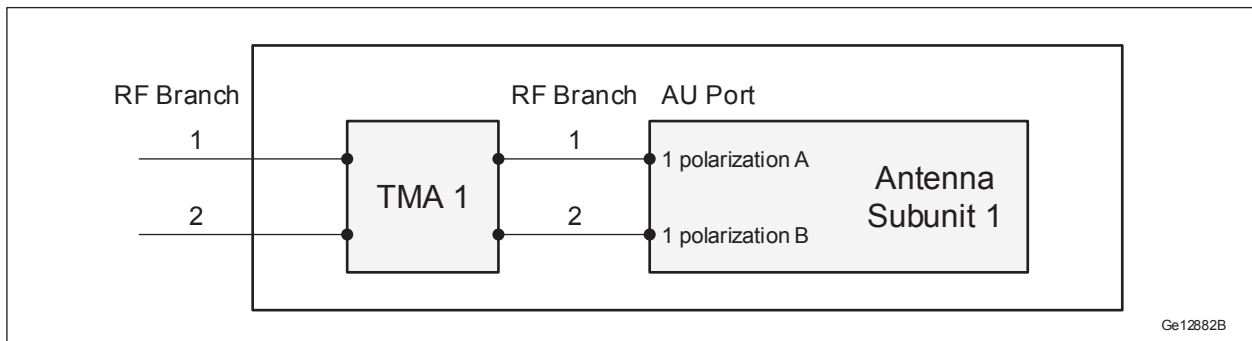


Figure 207 ABB2_1A-TMA1 Block Diagram, with TMA

46.4.5 ABB2_2A

ABB2_2A has two RF branches and two antenna subunits.

[Figure 208](#) shows ABB2_2A.

[Figure 209](#) shows ABB2_2A-TMA1, with TMA.

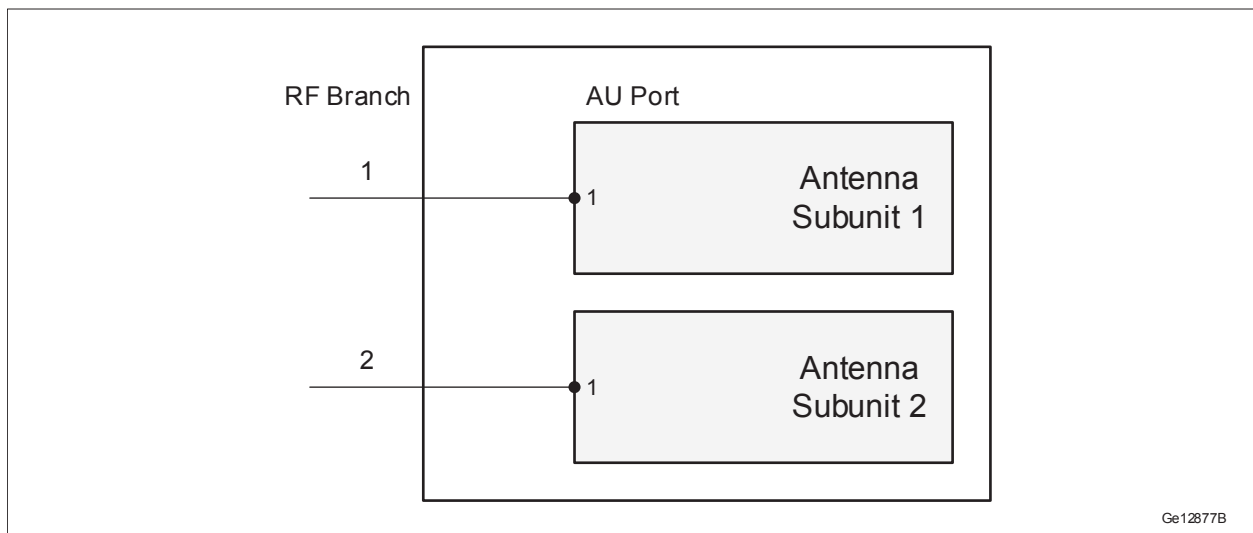


Figure 208 ABB2_2A Block Diagram

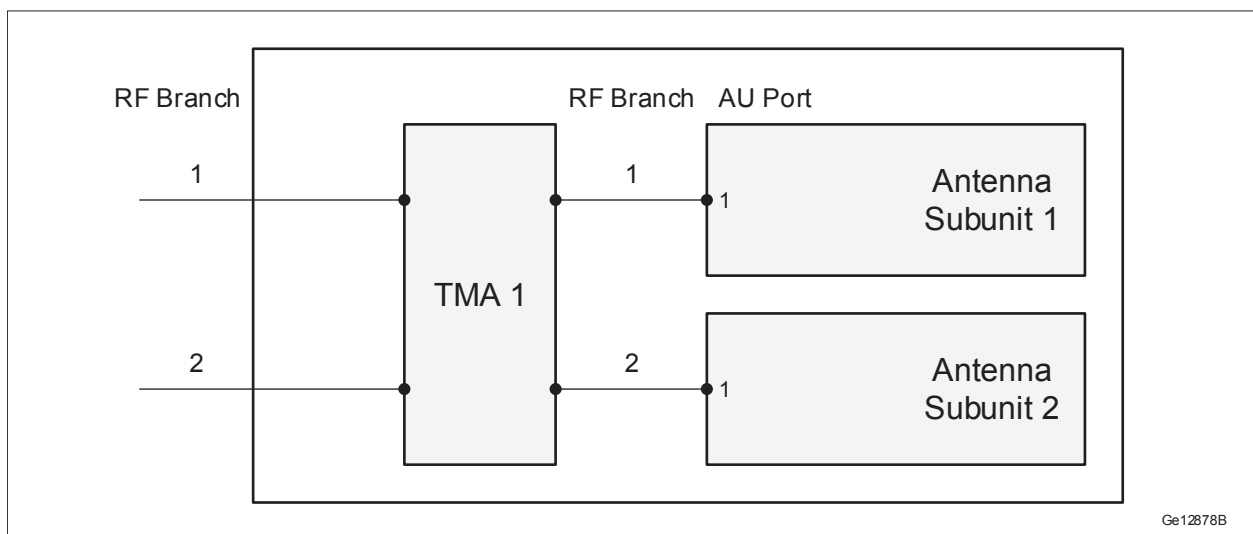


Figure 209 ABB2_2A-TMA1 Block Diagram, with TMA

46.4.6 ABB3_1A

ABB3_1A has three RF branches and one antenna subunit.

[Figure 210](#) shows ABB3_1A.

[Figure 211](#) shows ABB3_1A-TMA1, with TMA.

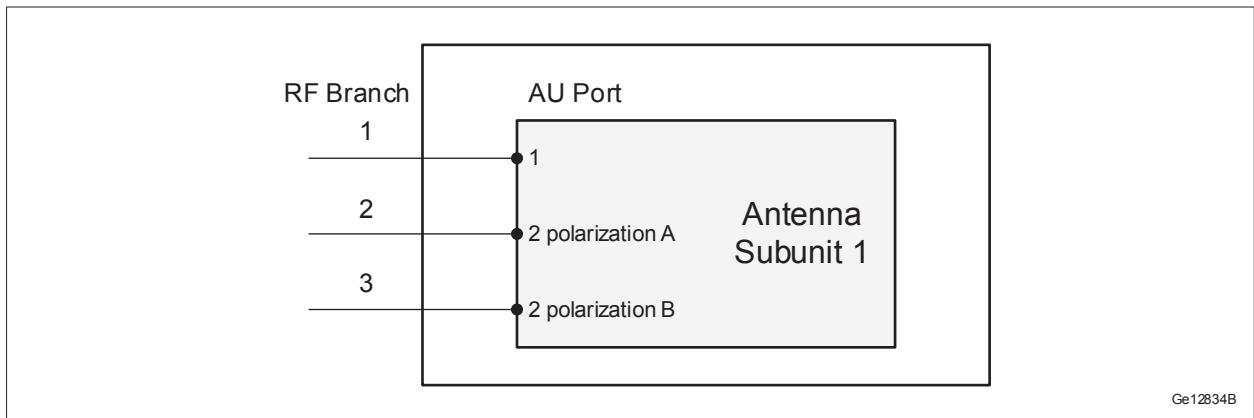


Figure 210 ABB3_1A Block Diagram

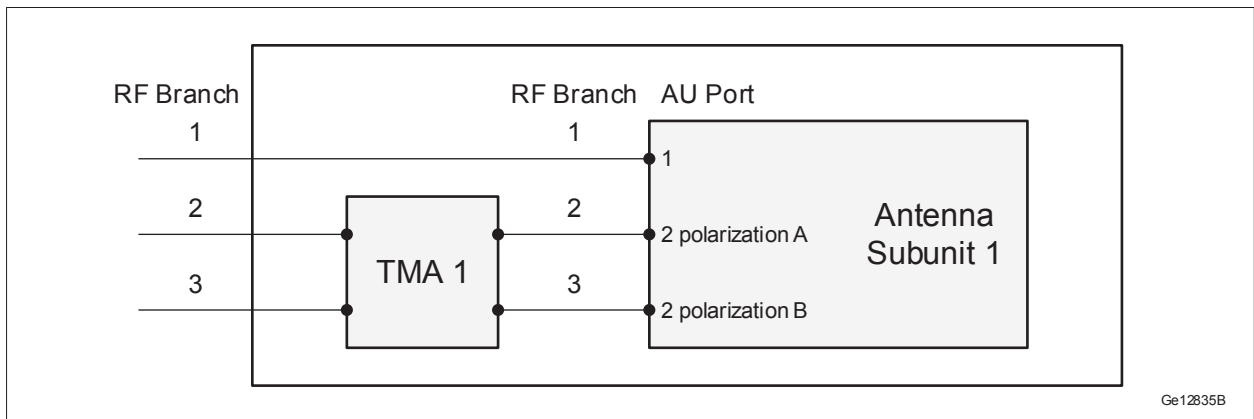


Figure 211 ABB3_1A-TMA1 Block Diagram, with TMA

46.4.7 ABB3_1B

ABB3_1B has three RF branches and one antenna subunit.

[Figure 212](#) shows ABB3_1B.

[Figure 213](#) shows ABB3_1B-TMA1, with TMA.

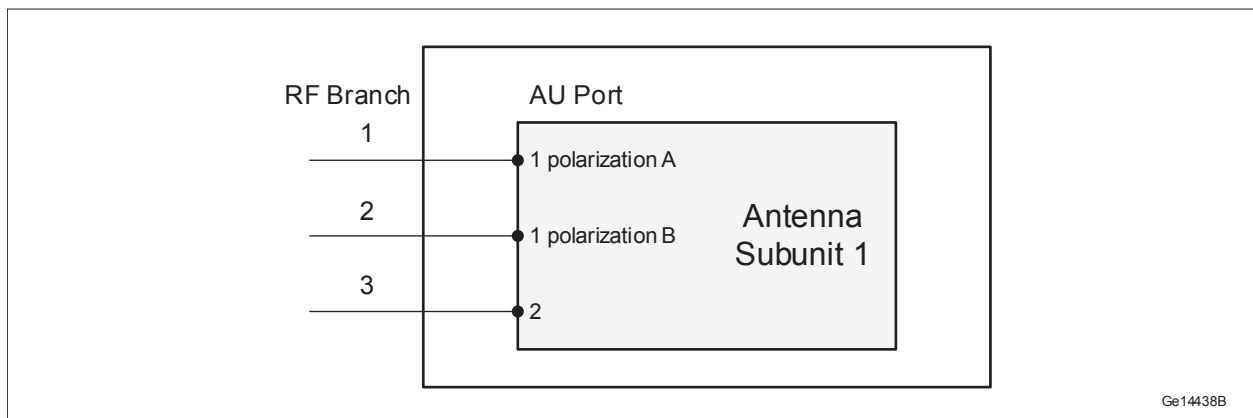


Figure 212 ABB3_1B Block Diagram

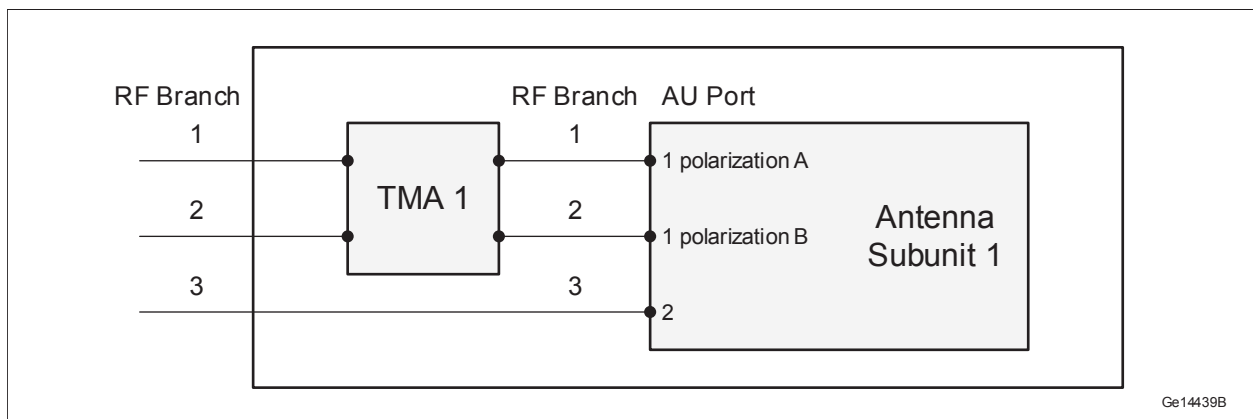


Figure 213 ABB3_1B-TMA1 Block Diagram, with TMA

46.4.8 ABB3_2A

ABB3_2A has three RF branches and two antenna subunits.

[Figure 214](#) shows ABB3_2A.

[Figure 215](#) shows ABB3_2A-TMA1, with TMA.

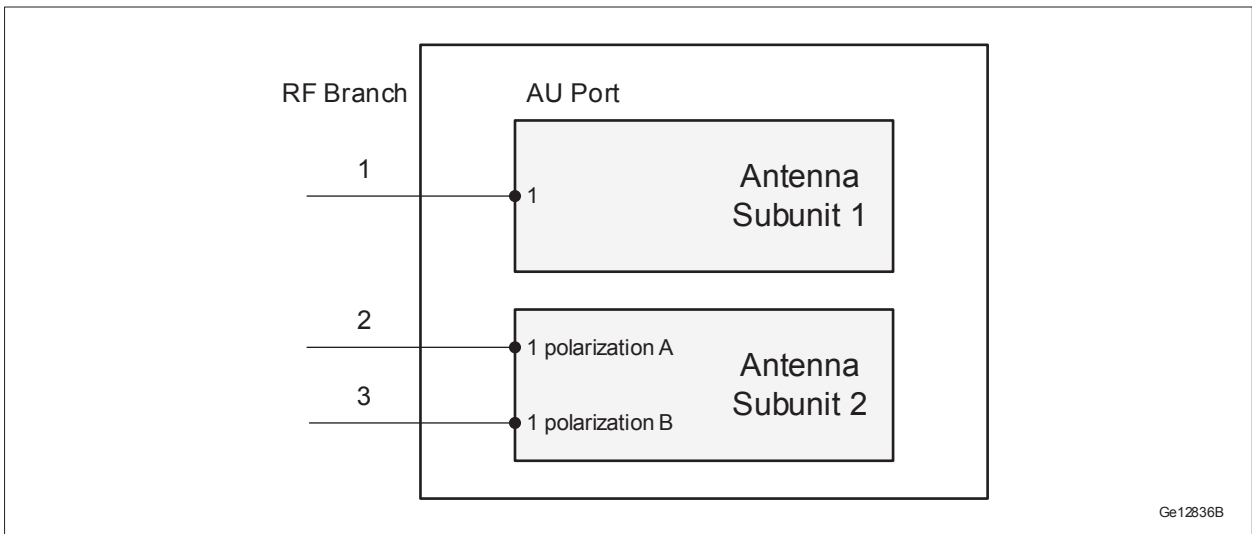


Figure 214 ABB3_2A Block Diagram

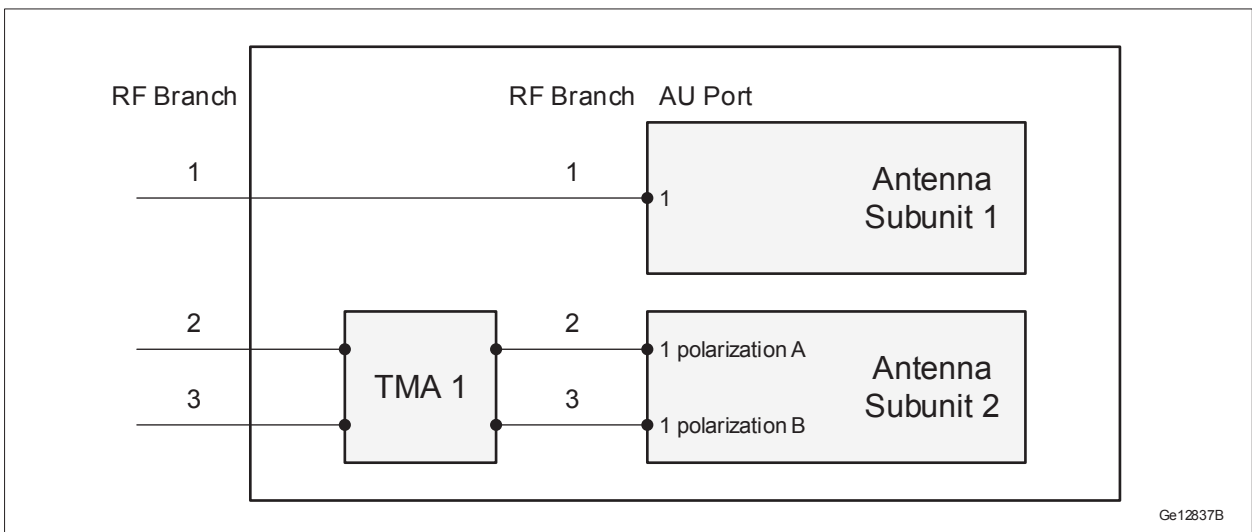


Figure 215 ABB3_2A-TMA1 Block Diagram, with TMA

46.4.9 ABB3_2B

ABB3_2B has three RF branches and two antenna subunits.

[Figure 216](#) shows ABB3_2B.

[Figure 217](#) shows ABB3_2B-TMA1, with TMA.

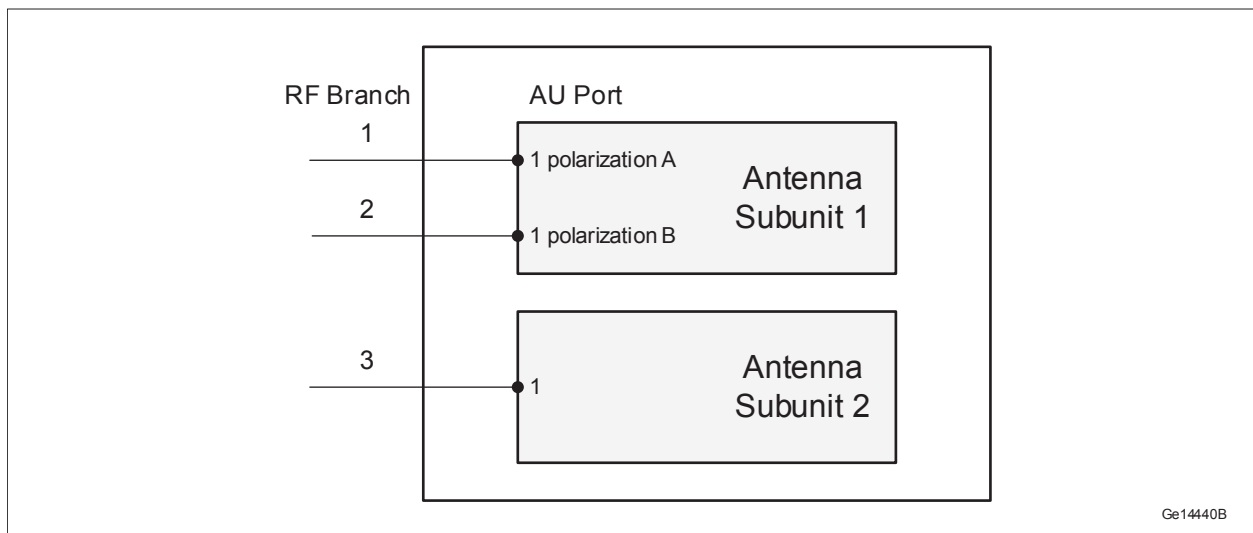


Figure 216 ABB3_2B Block Diagram

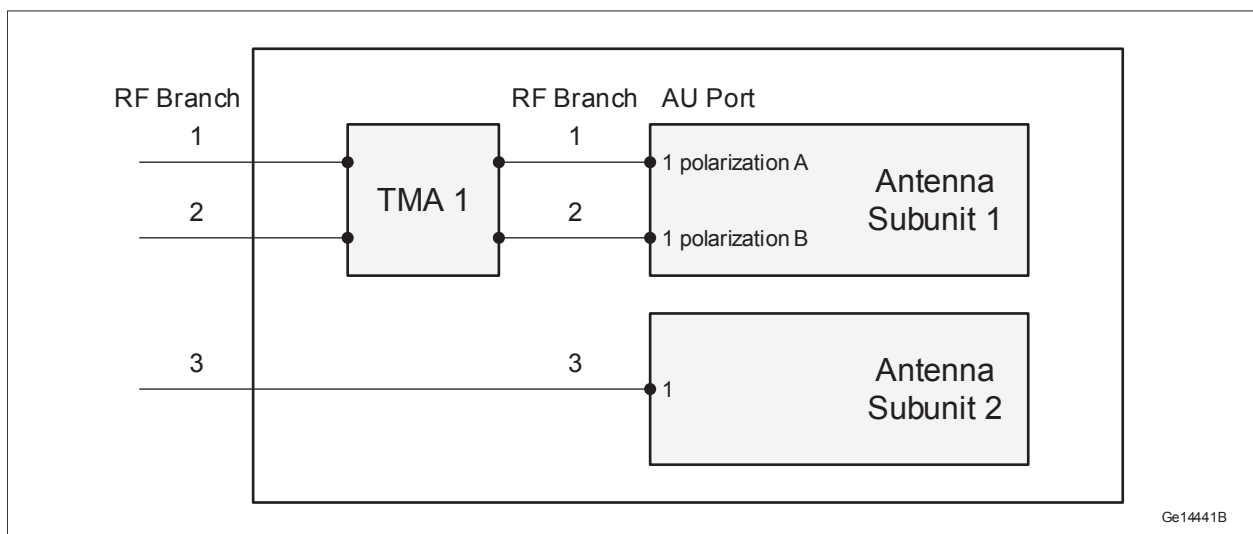


Figure 217 ABB3_2B-TMA1 Block Diagram, with TMA

46.4.10 ABB3_3A

ABB3_3A has three RF branches and three antenna subunits.

[Figure 218](#) shows ABB3_3A.

[Figure 219](#) shows ABB3_3A-TMA1, with TMA.

[Figure 220](#) shows ABB3_3A-TMA2, with TMA.

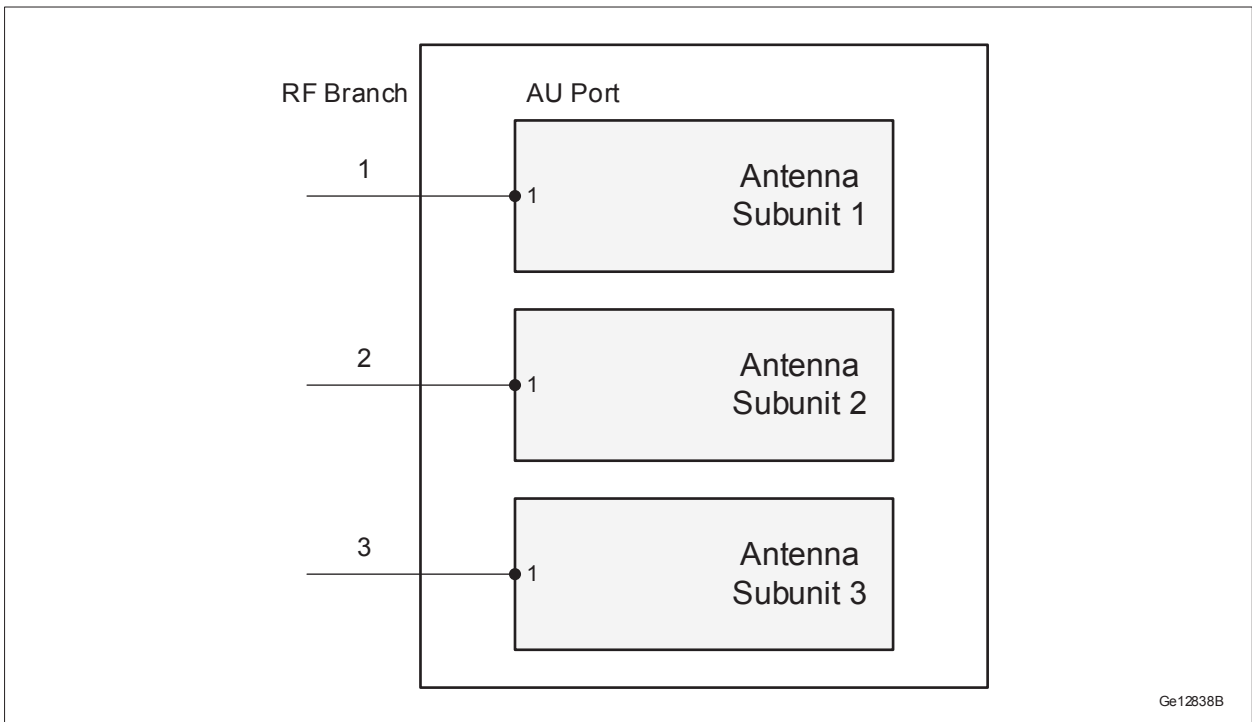


Figure 218 ABB3_3A Block Diagram

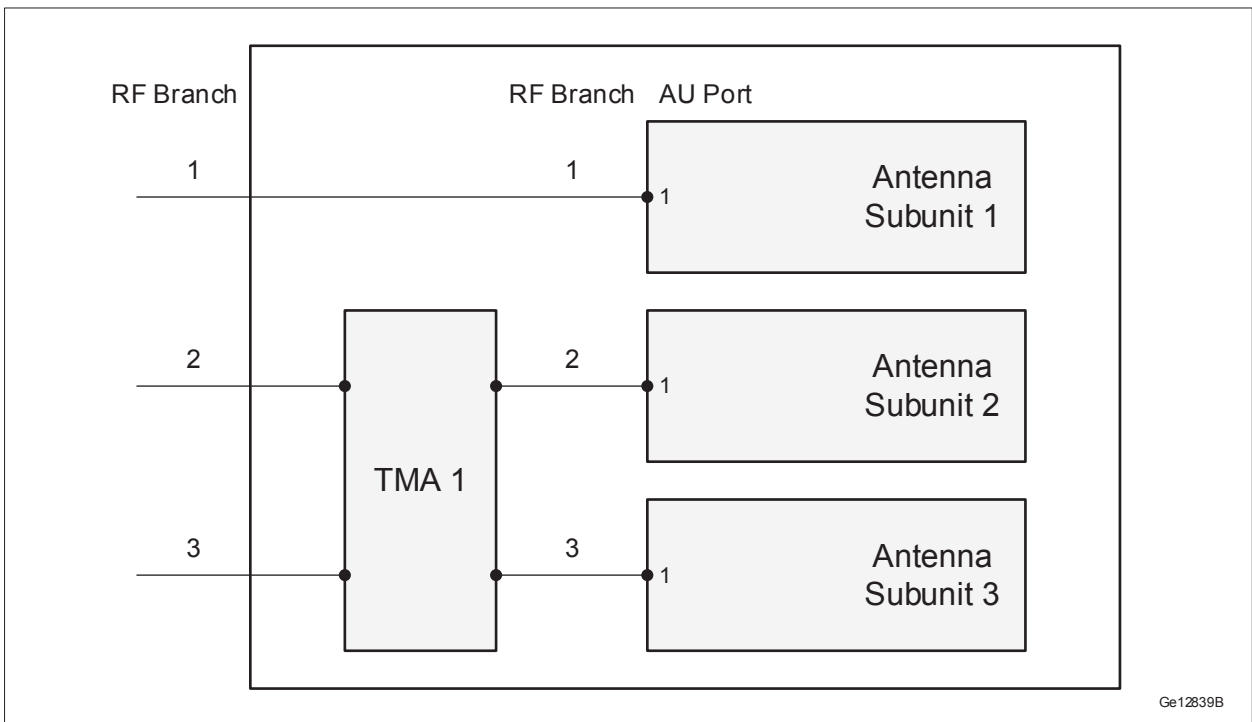


Figure 219 ABB3_3A-TMA1 Block Diagram, with TMA

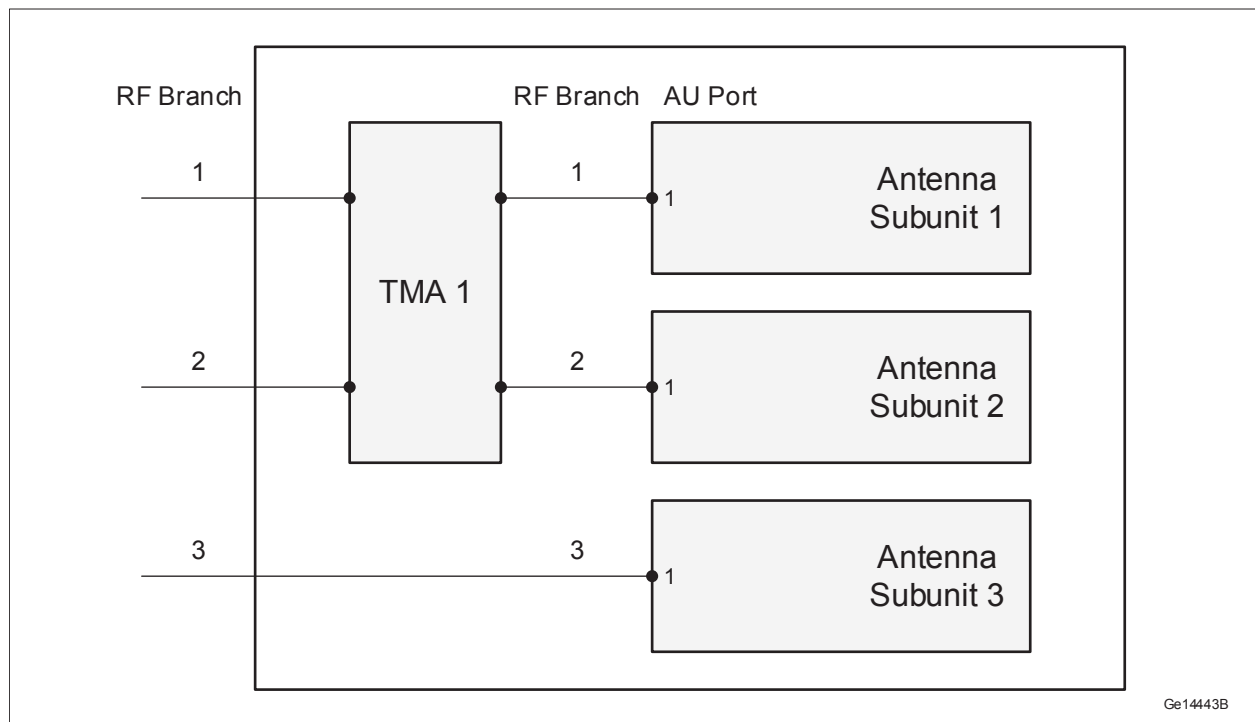


Figure 220 ABB3_3A-TMA2 Block Diagram, with TMA

46.4.11 ABB4_1A

ABB4_1A has four RF branches and one antenna subunit. RF ports 1 and 3 have one polarization, while RF ports 2 and 4 have the opposite polarization.

[Figure 221](#) shows ABB4_1A.

[Figure 222](#) shows ABB4_1A-TMA1, with TMA.

[Figure 223](#) shows ABB4_1A-TMA2, with TMA.

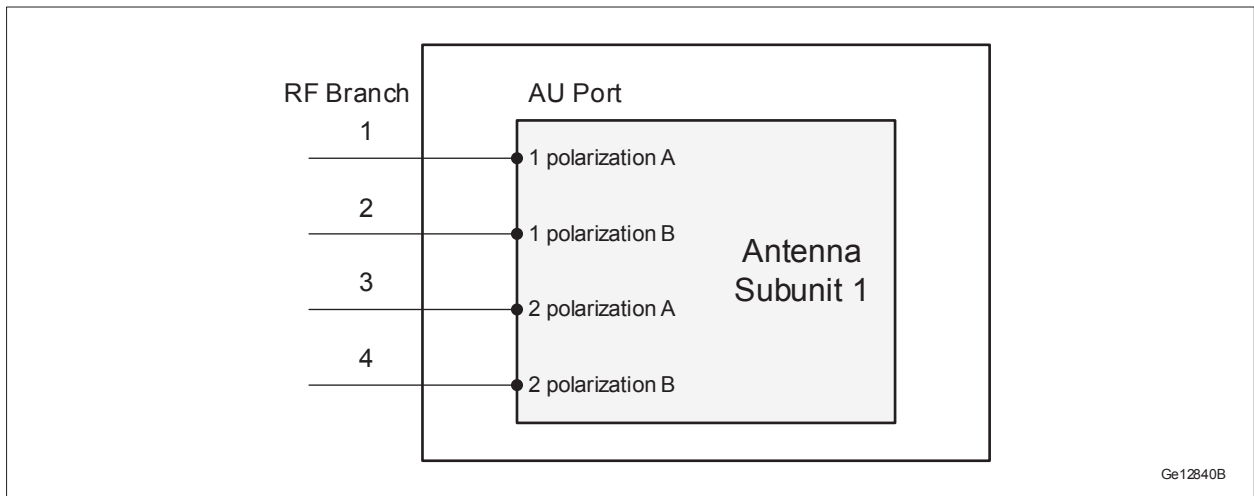


Figure 221 ABB4_1A Block Diagram

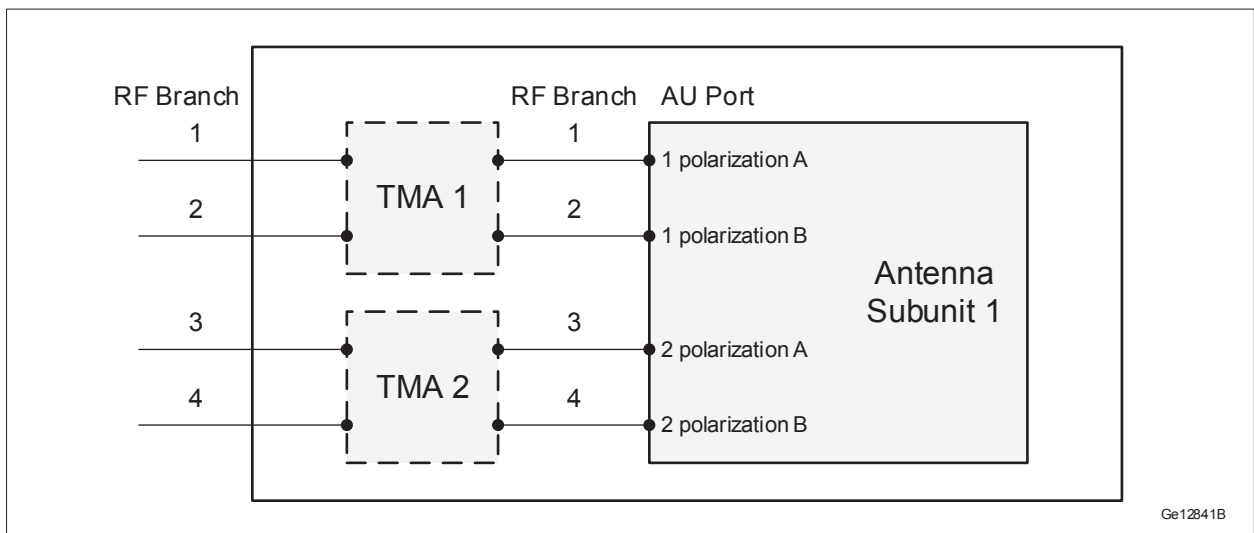
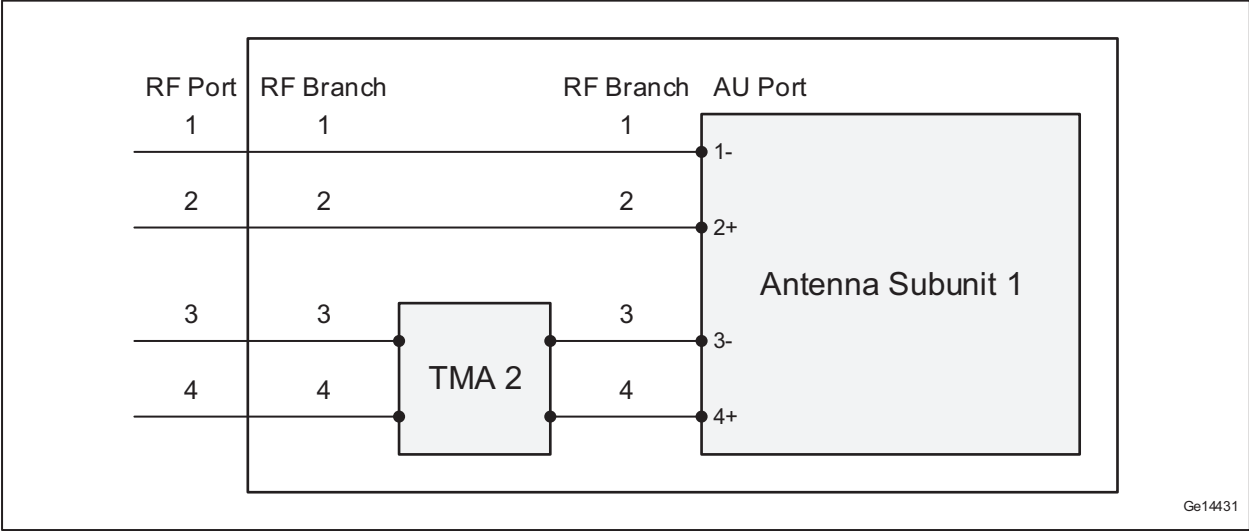


Figure 222 ABB4_1A-TMA1 Block Diagram, with TMA



46.4.12 ABB4_1B

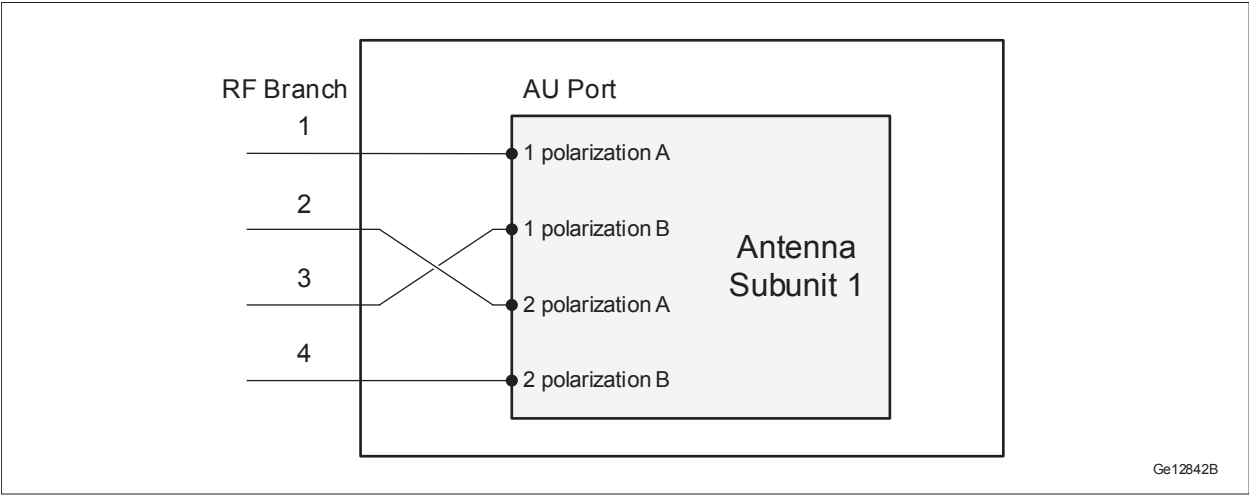
ABB4_1B has four RF branches and one antenna subunit. RF ports 1 and 3 have one polarization, while RF ports 2 and 4 have the opposite polarization.

Figure 224 shows ABB4_1B.

Figure 225 shows ABB4_1B-TMA1, with TMA.

Figure 226 shows ABB4_1B-TMA2, with TMA.

Figure 227 shows ABB4_1B-TMA3, with TMA.



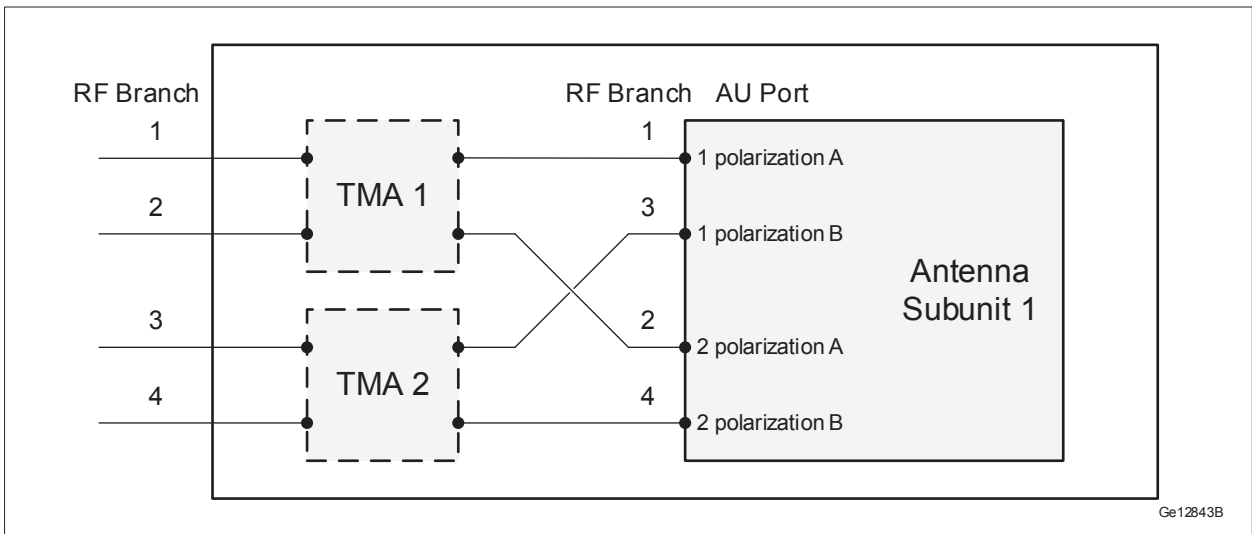


Figure 225 ABB4_1B-TMA1 Block Diagram, with TMA

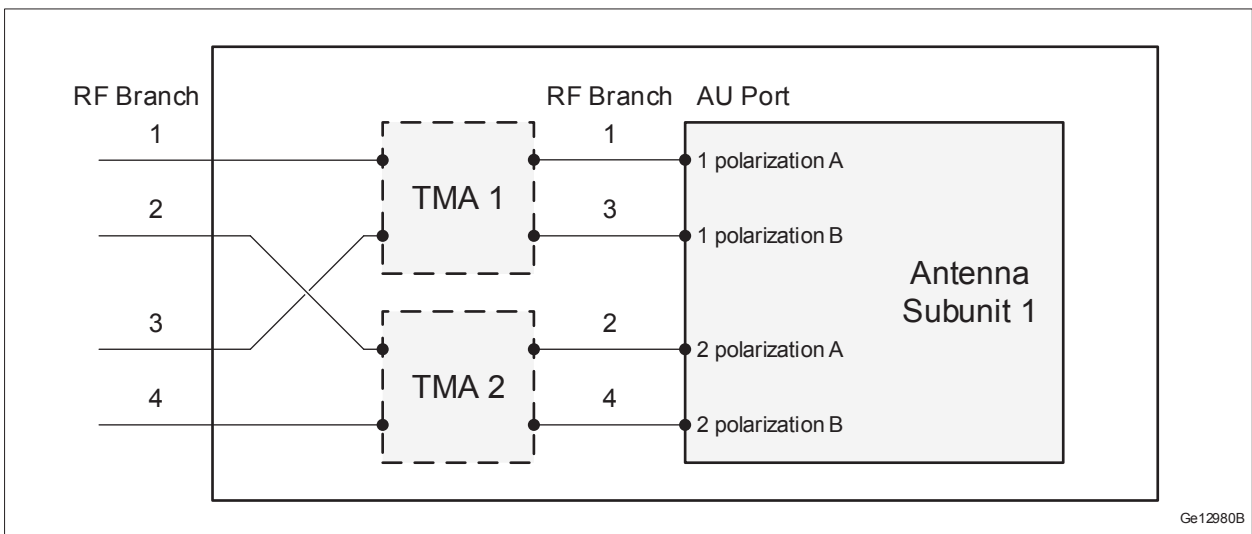


Figure 226 ABB4_1B-TMA2 Block Diagram, with TMA

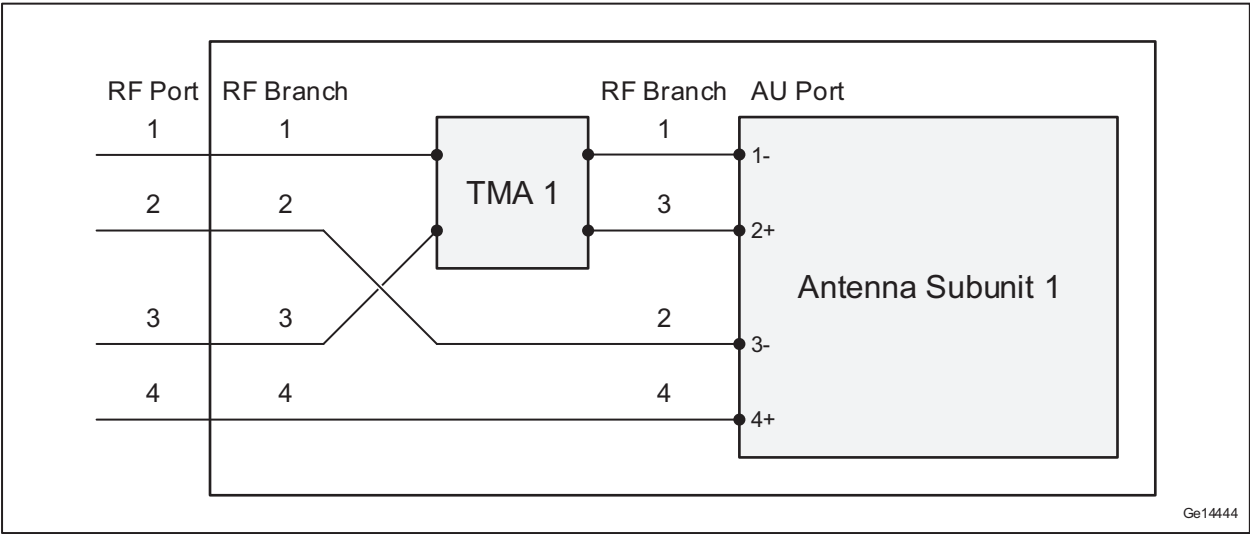


Figure 227 ABB4_1B-TMA3 Block Diagram, with TMA

46.4.13 ABB4_2A

ABB4_2A has four RF branches and two antenna subunits. RF ports 1 and 3 have one polarization, while RF ports 2 and 4 have the opposite polarization.

Figure 228 shows ABB4_2A.

Figure 229 shows ABB4_2A-TMA1, with TMA.

Figure 230 shows ABB4_2A-TMA2, with TMA.

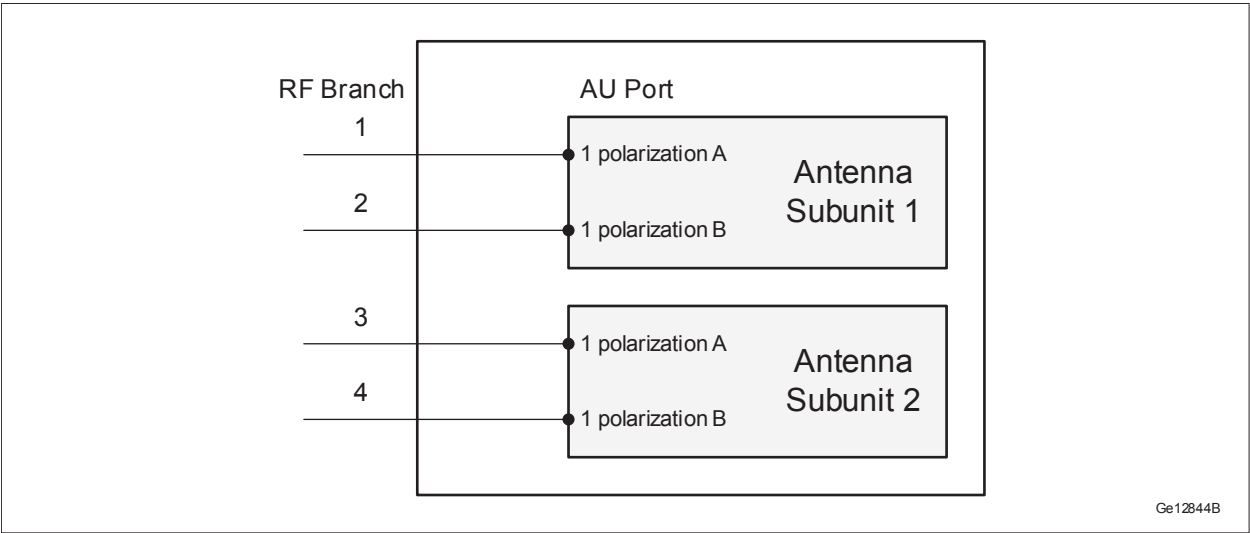


Figure 228 ABB4_2A Block Diagram

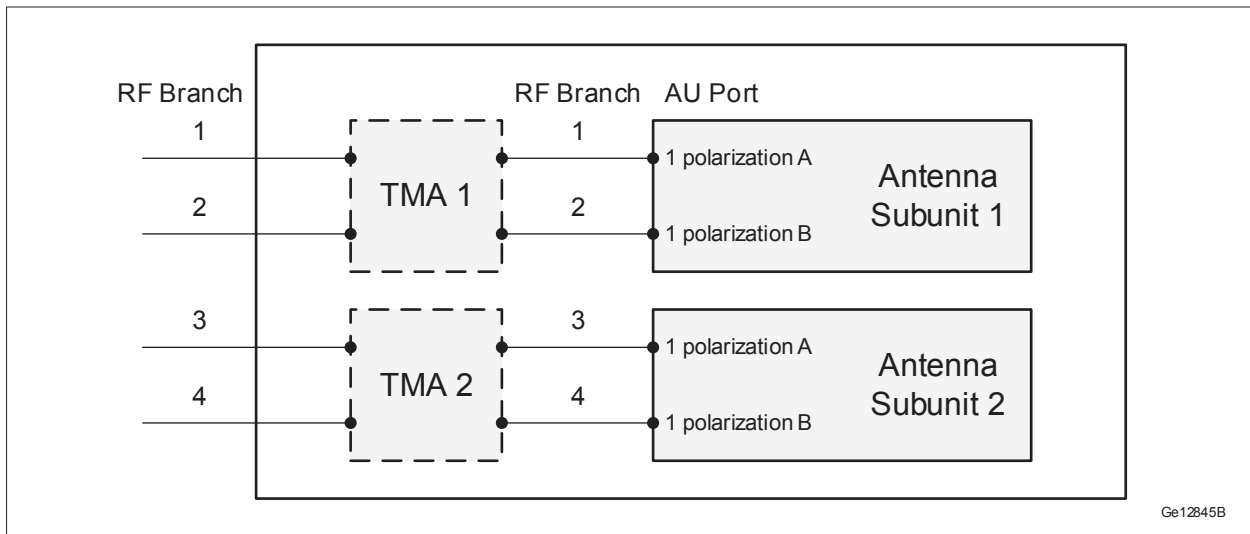


Figure 229 ABB4_2A-TMA1 Block Diagram, with TMA

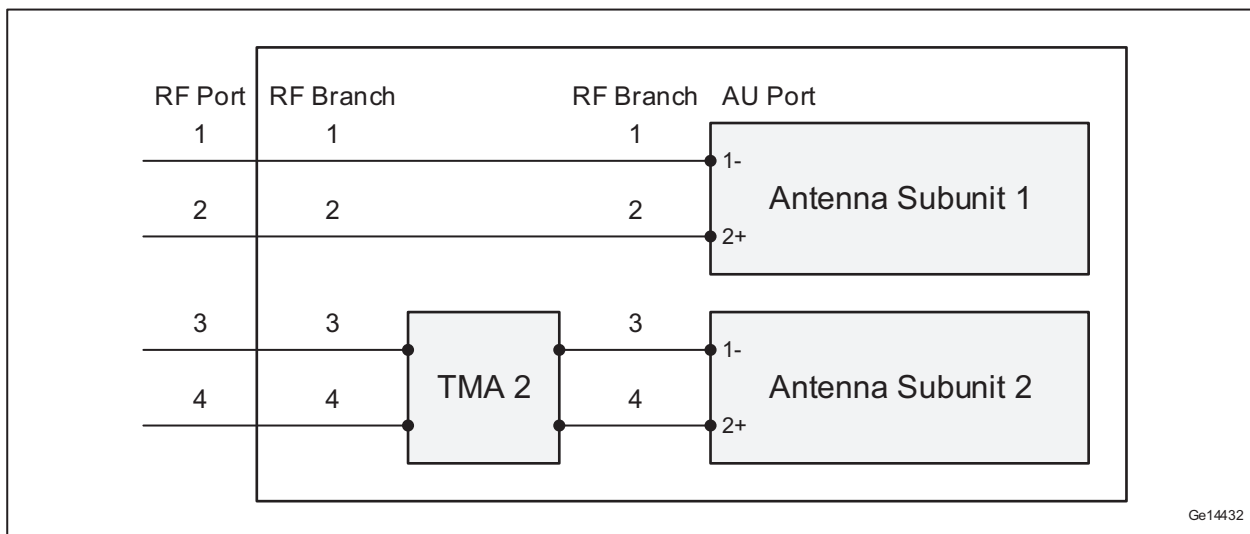


Figure 230 ABB4_2A-TMA2 Block Diagram, with TMA

46.4.14 ABB4_2B

ABB4_2B has four RF branches and two antenna subunits. RF ports 1 and 3 have one polarization, while RF ports 2 and 4 have the opposite polarization.

[Figure 231](#) shows ABB4_2B.

[Figure 232](#) shows ABB4_2B-TMA1, with TMA.

[Figure 233](#) shows ABB4_2B-TMA2, with TMA.

[Figure 234](#) shows ABB4_2B-TMA3, with TMA.

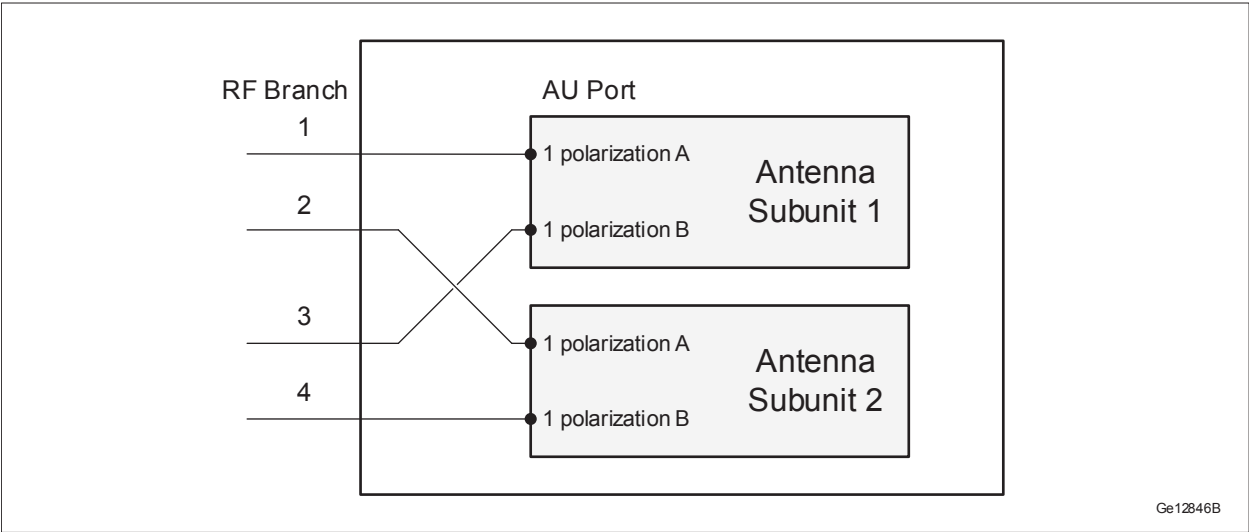


Figure 231 ABB4_2B Block Diagram

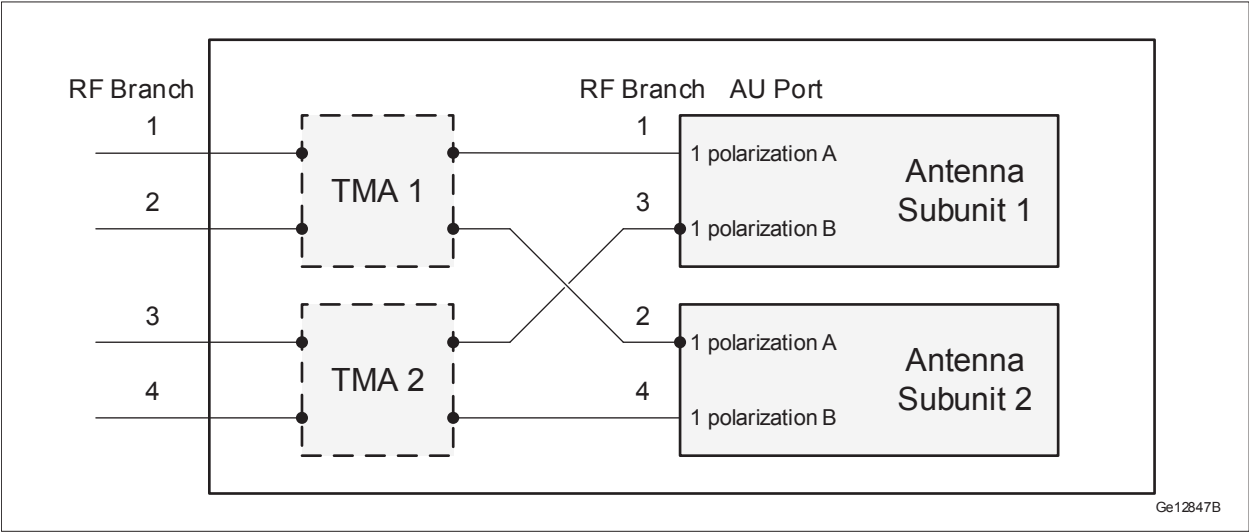


Figure 232 ABB4_2B-TMA1 Block Diagram, with TMA

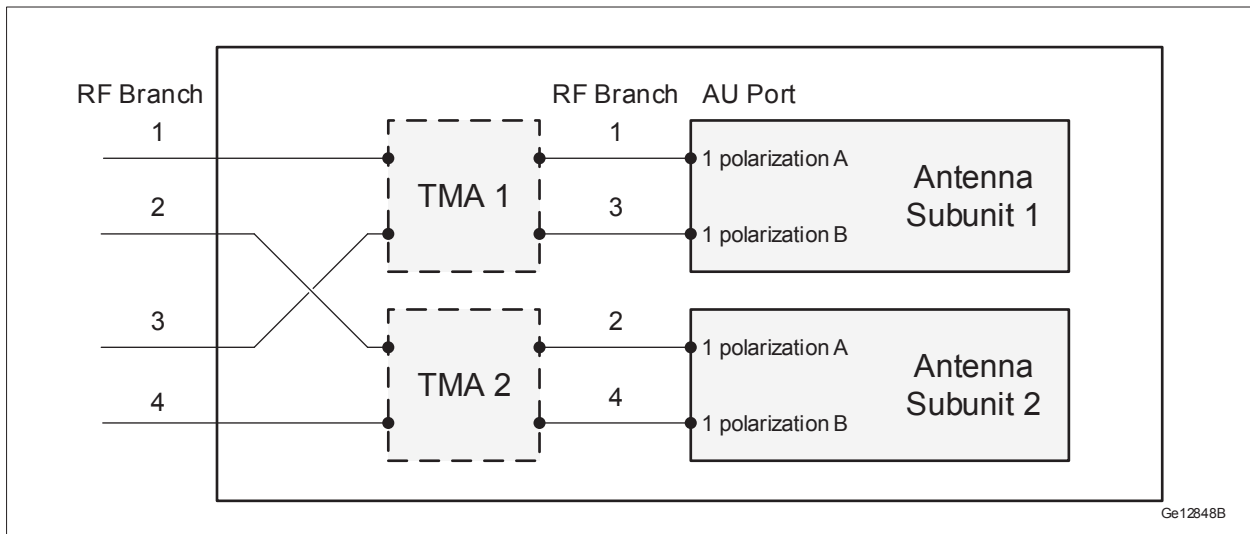


Figure 233 ABB4_2B-TMA2 Block Diagram, with TMA

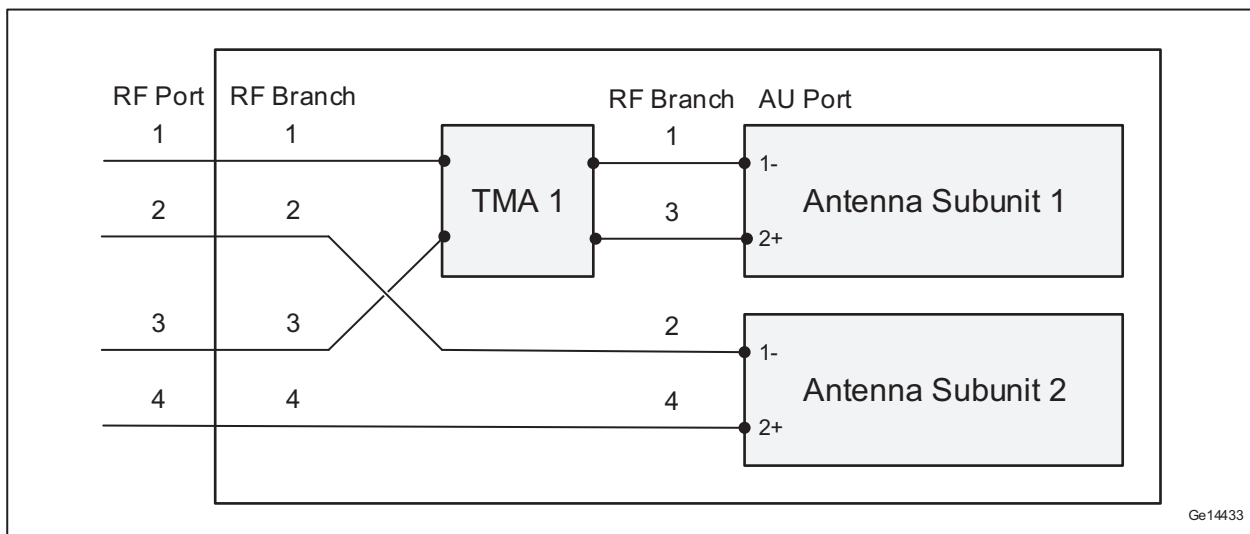


Figure 234 ABB4_2B-TMA3 Block Diagram, with TMA

46.4.15 ABB4_2C

ABB4_2C has four RF branches and two antenna subunits. RF ports 1 and 3 have one polarization, while RF ports 2 and 4 have the opposite polarization.

[Figure 235](#) shows ABB4_2C.

[Figure 236](#) shows ABB4_2C-TMA1, with TMA.

[Figure 237](#) shows ABB4_2C-TMF1, with TMF.

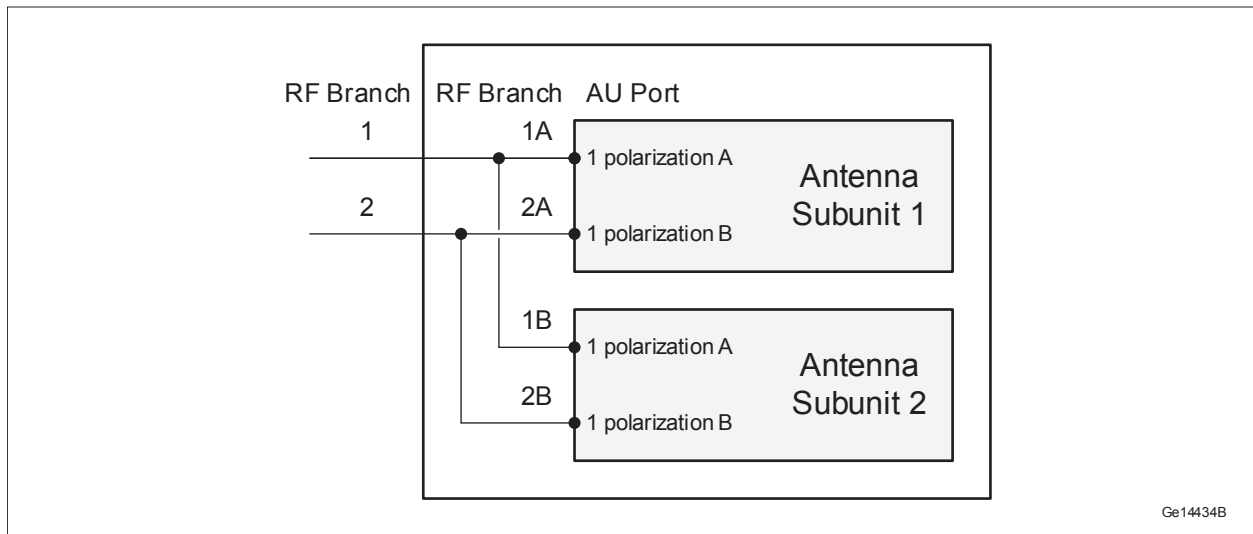


Figure 235 ABB4_2C Block Diagram

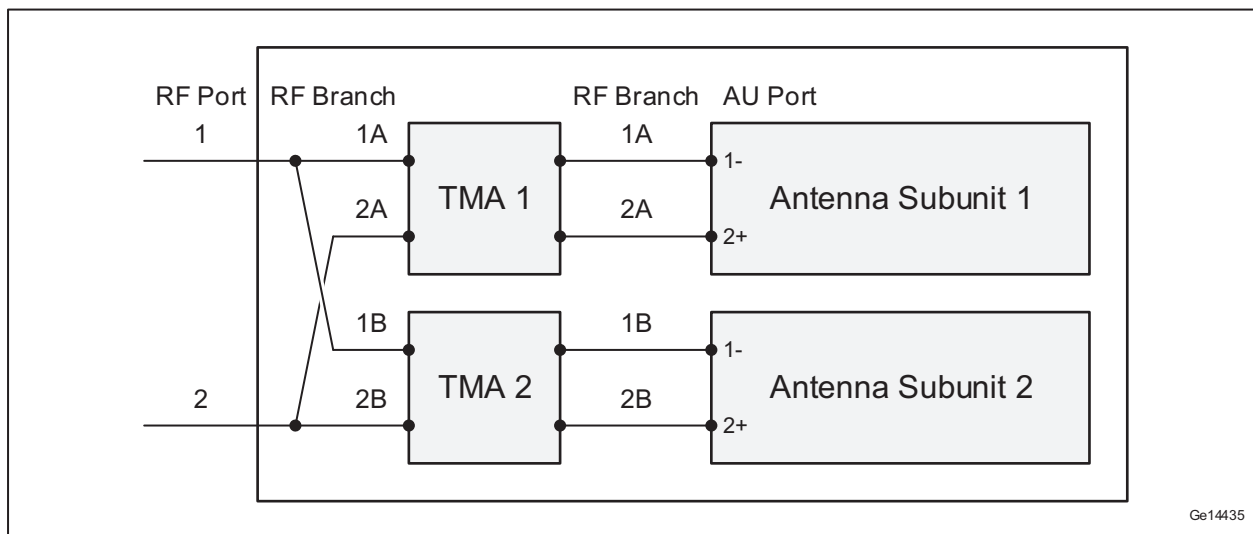


Figure 236 ABB4_2C-TMA1 Block Diagram, with TMA

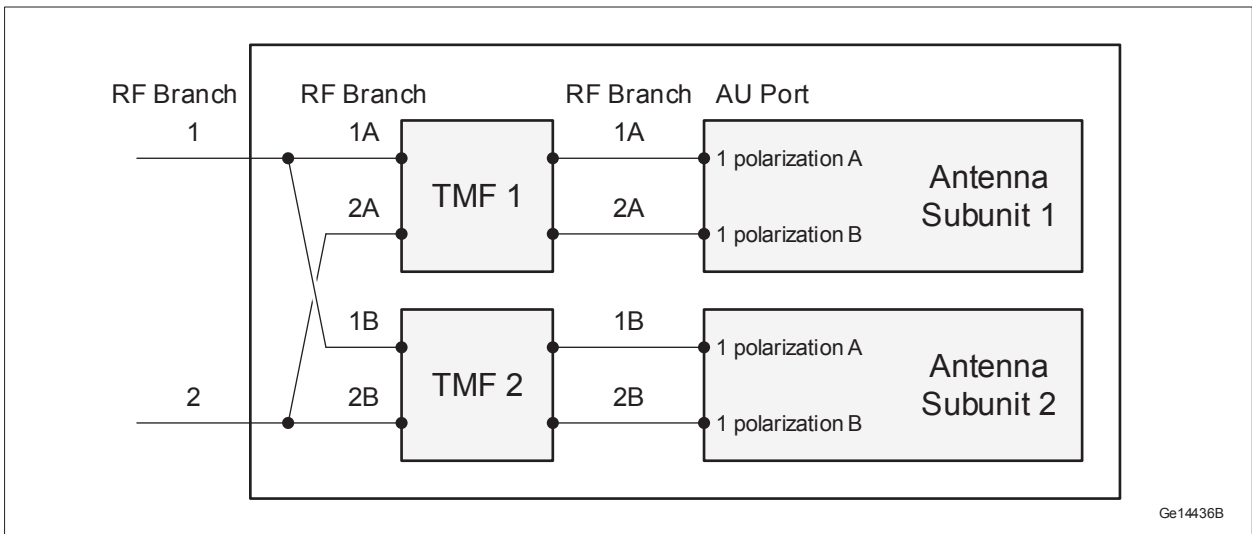


Figure 237 ABB4_2C-TMF1 Block Diagram, with TMF

46.4.16 ABB6_1A

ABB6_1A has six RF branches and one antenna subunit. RF ports 1, 3, and 5 have one polarization, while RF ports 2, 4, and 6 have the opposite polarization.

Figure 238 shows ABB6_1A.

Figure 239 shows ABB6_1A-TMA1, with TMA.

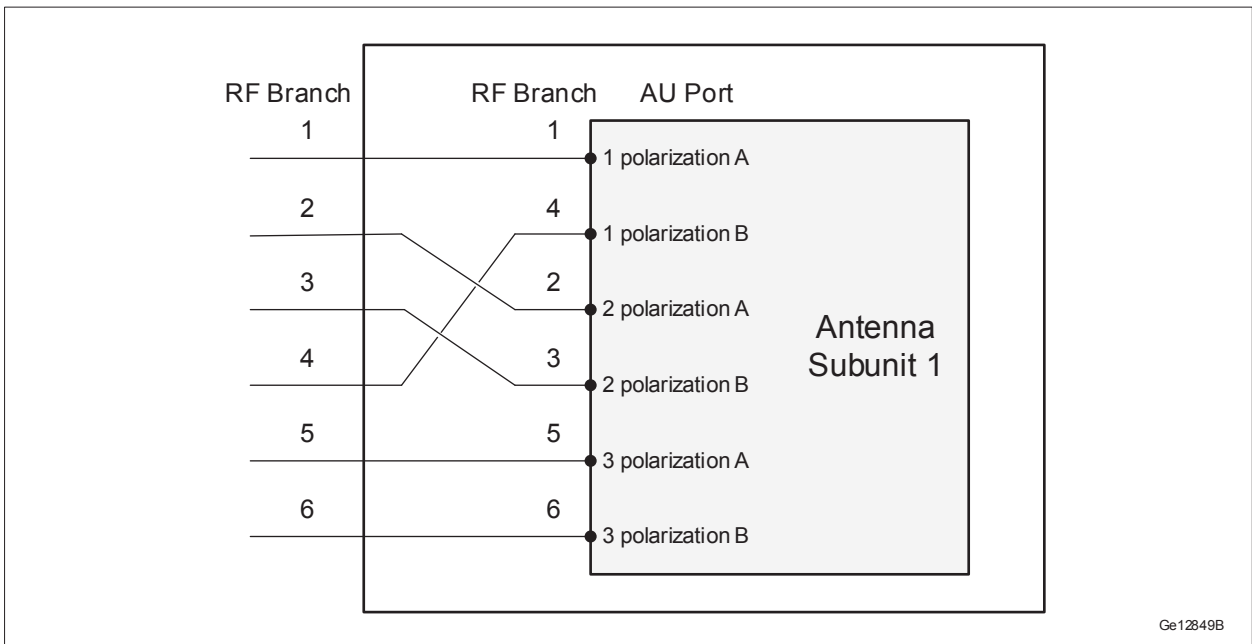


Figure 238 ABB6_1A Block Diagram

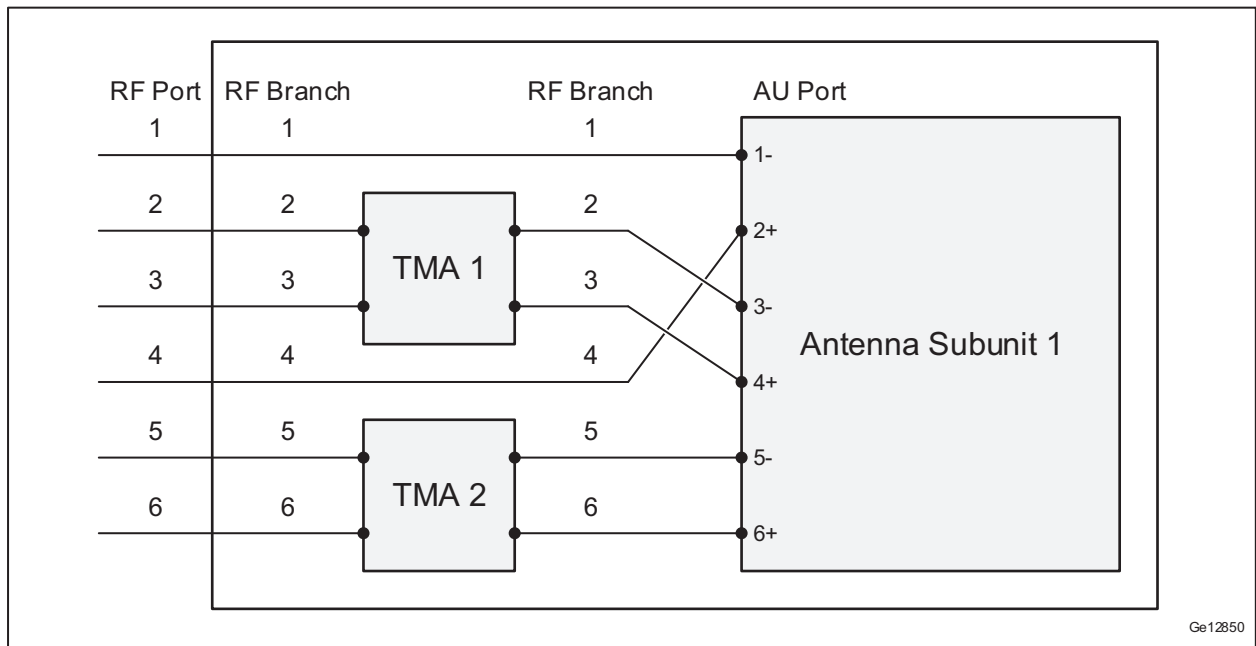


Figure 239 ABB6_1A-TMA1 Block Diagram, with TMA

46.4.17 ABB6_2A

ABB6_2A has six RF branches and two antenna subunits. RF ports 1, 3, and 5 have one polarization, while RF ports 2, 4, and 6 have the opposite polarization.

[Figure 240](#) shows ABB6_2A.

[Figure 241](#) shows ABB6_2A-TMA1, with TMA.

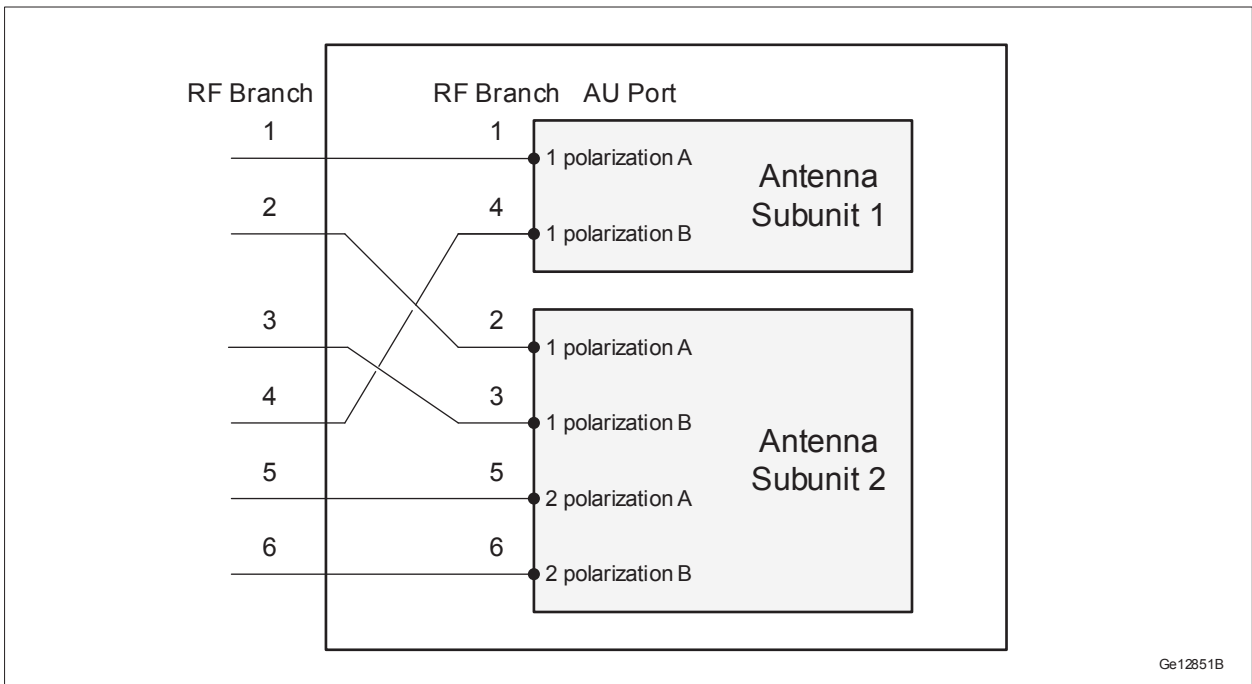


Figure 240 ABB6_2A Block Diagram

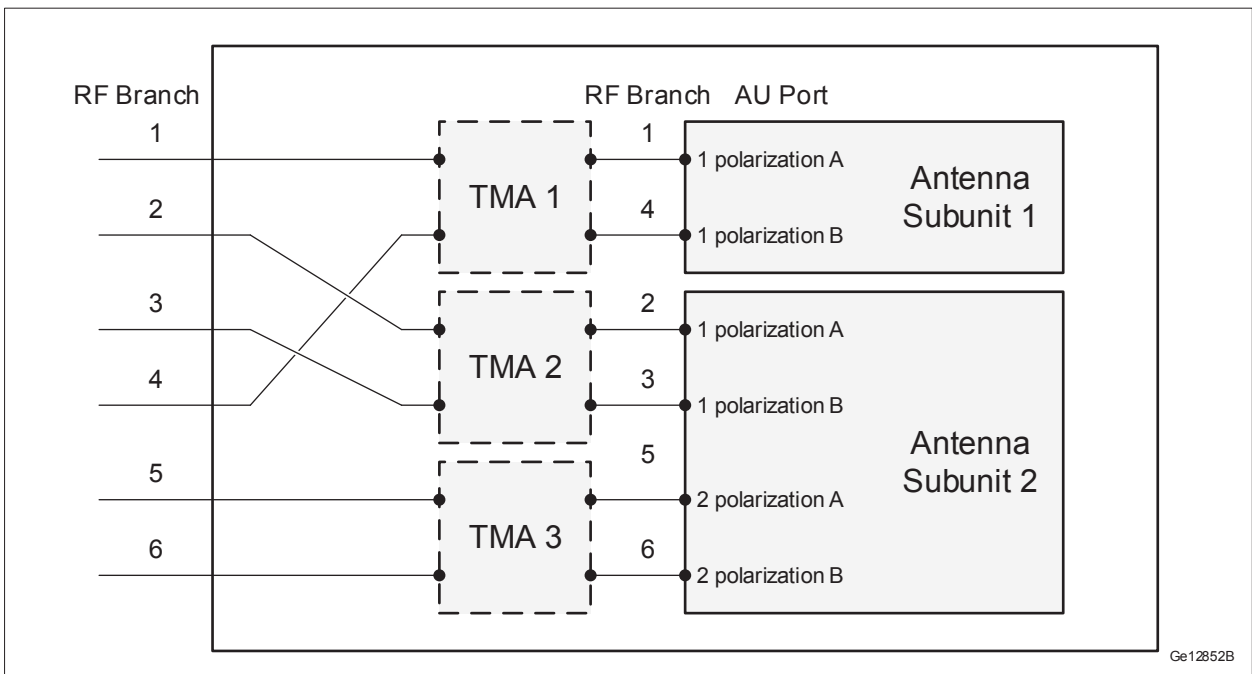


Figure 241 ABB6_2A-TMA1 Block Diagram, with TMA

46.4.18 ABB6_2B

ABB6_2B has six RF branches and two antenna subunits. RF ports 1, 3, and 5 have one polarization, while RF ports 2, 4, and 6 have the opposite polarization.

Figure 242 shows ABB6_2B.

Figure 243 shows ABB6_2B-TMA1, with TMA.

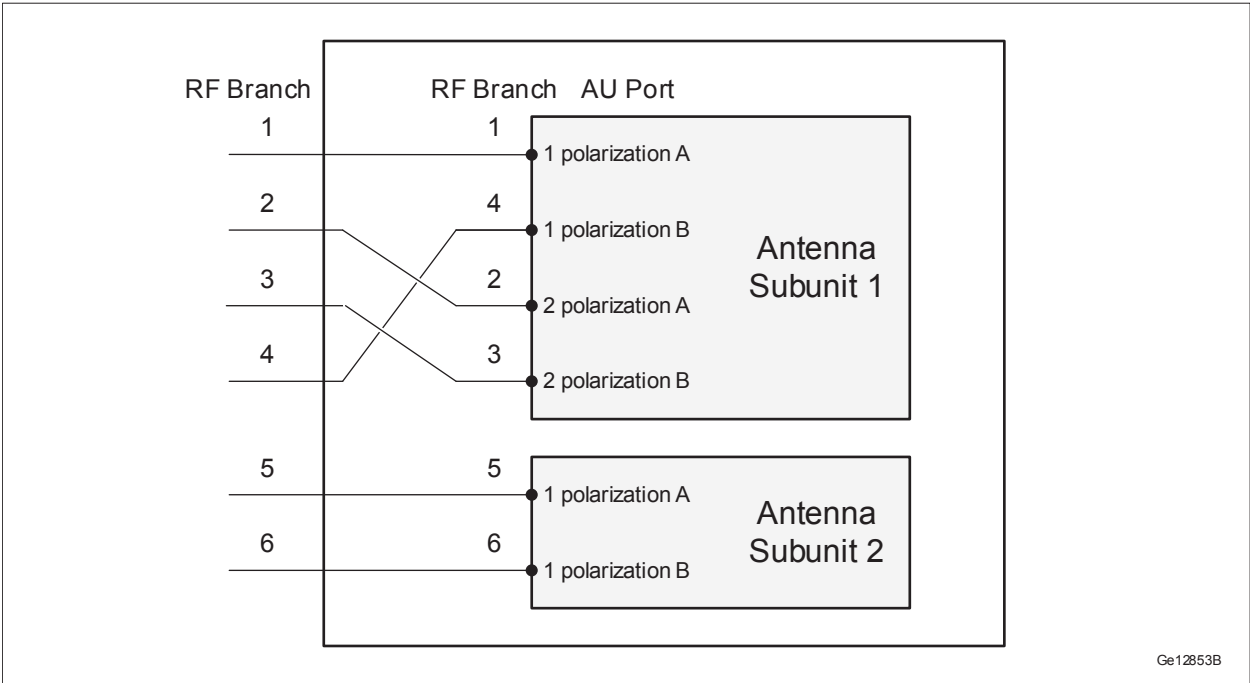


Figure 242 ABB6_2B Block Diagram

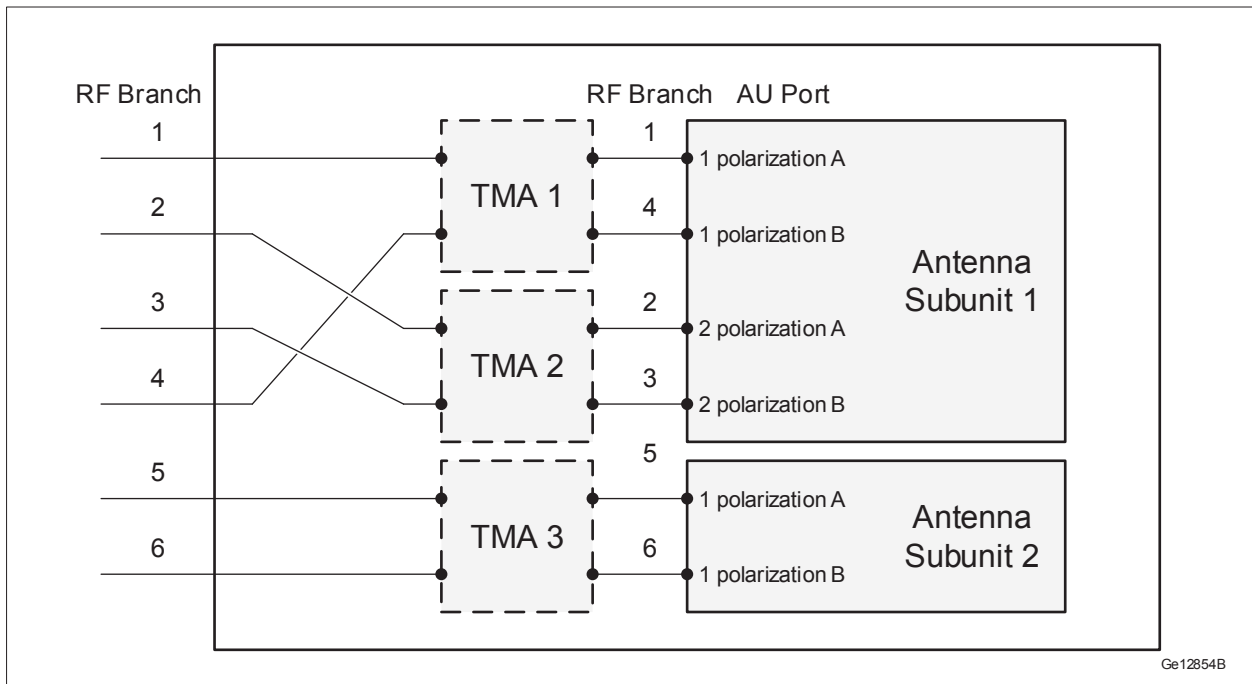


Figure 243 ABB6_2B-TMA1 Block Diagram, with TMA

46.4.19 ABB6_2C

ABB6_2C has six RF branches and two antenna subunits. RF ports 1, 3, and 5 have one polarization, while RF ports 2, 4, and 6 have the opposite polarization.

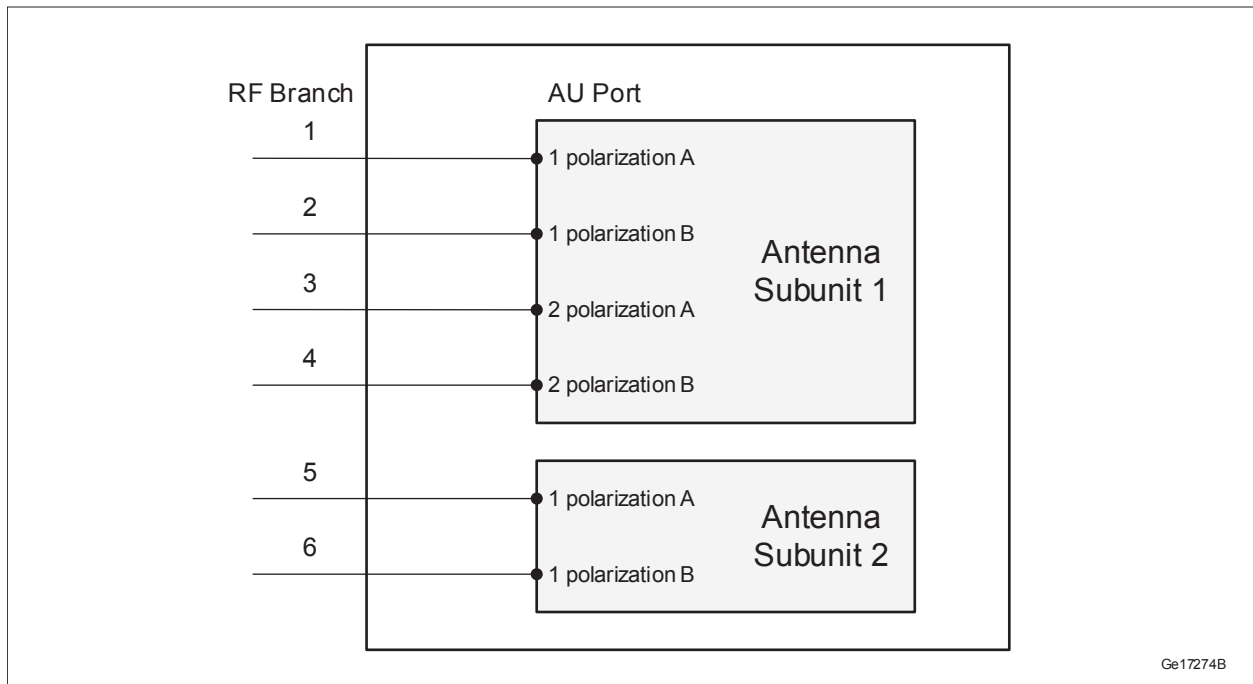


Figure 244 ABB6_2C Block Diagram

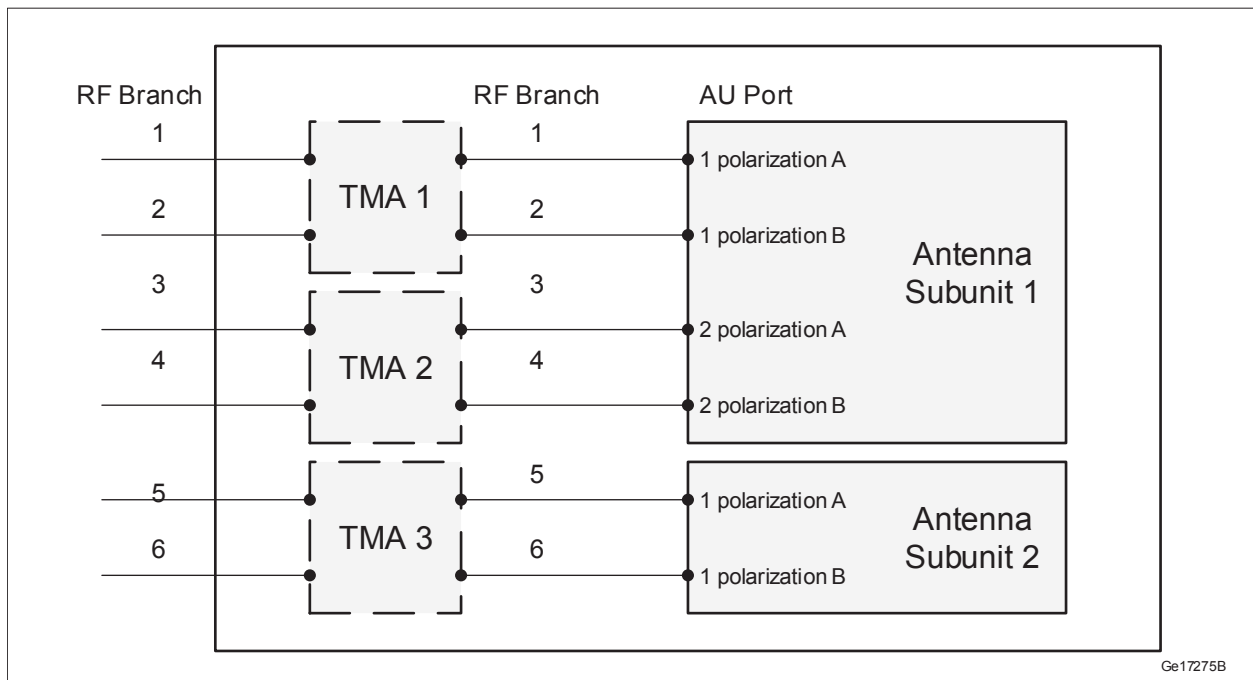


Figure 245 ABB6_2C-TMA1 Block Diagram, with TMA

46.4.20

ABB6_3A

ABB6_3A has six RF branches and three antenna subunits. RF ports 1, 3, and 5 have one polarization, while RF ports 2, 4, and 6 have the opposite polarization.

Figure 246 shows ABB6_3A.

Figure 247 shows ABB6_3A-TMA1, with TMA.

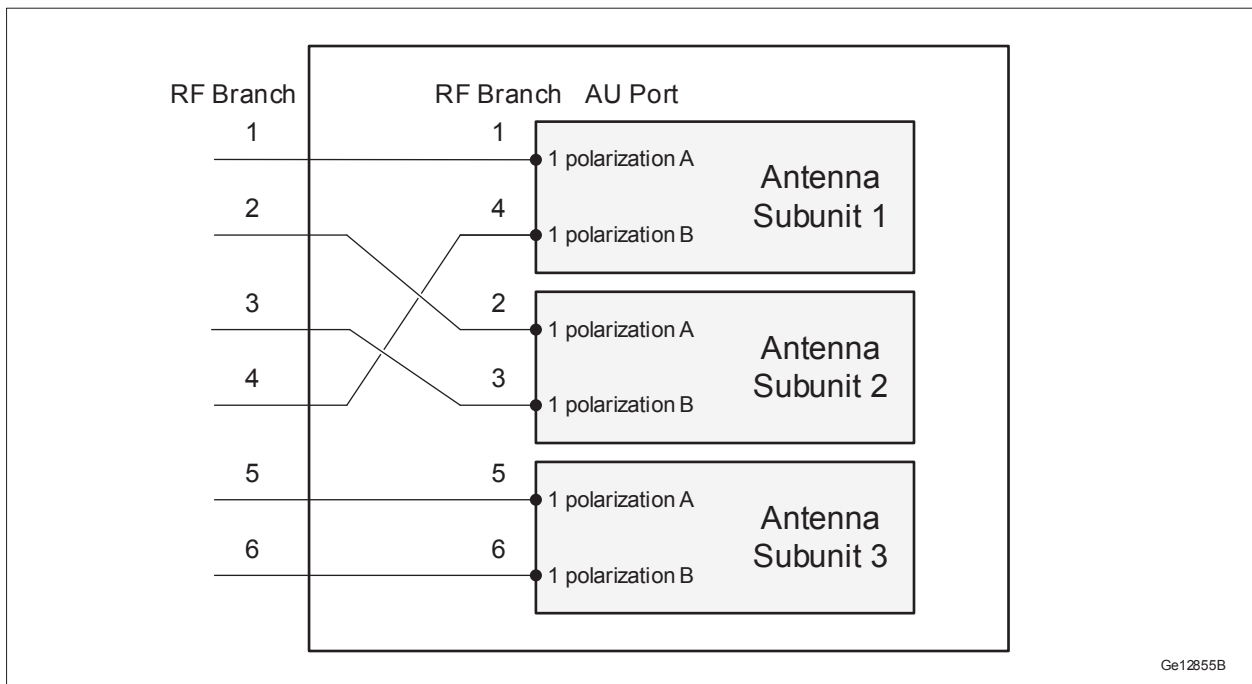


Figure 246 ABB6_3A Block Diagram

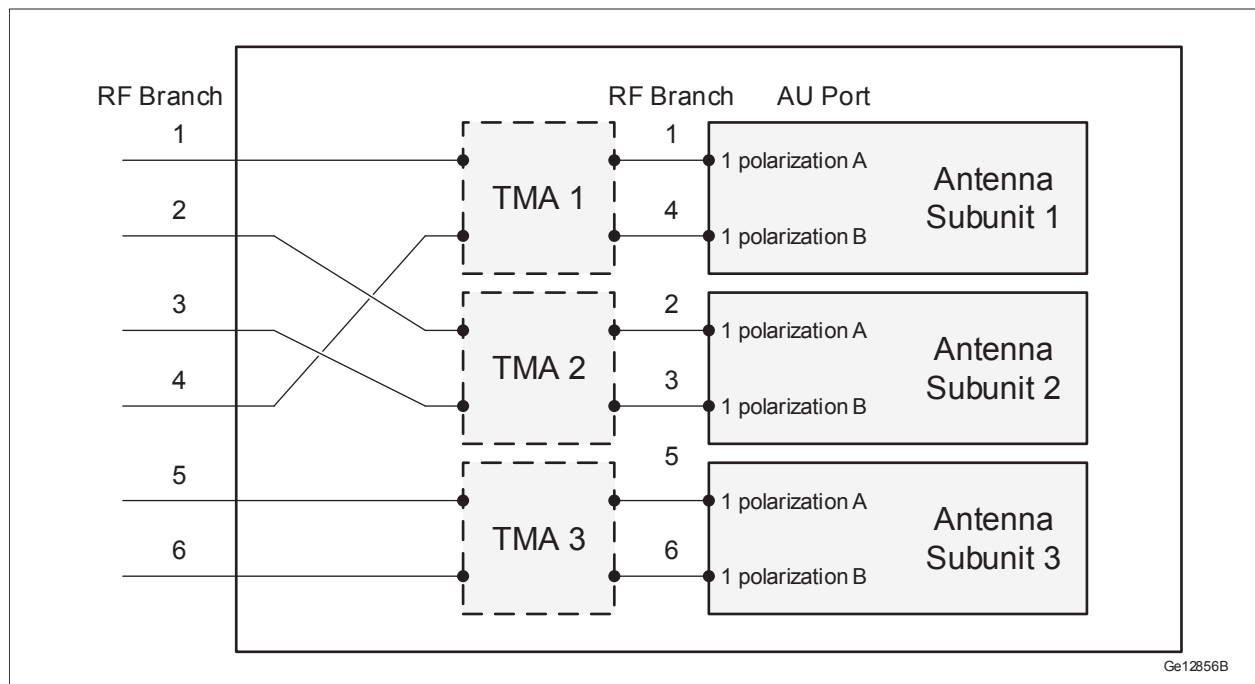


Figure 247 ABB6_3A-TMA1 Block Diagram, with TMA

46.4.21 ABB6_3B

ABB6_3B has six RF branches and three antenna subunits. RF ports 1, 3, and 5 have one polarization, while RF ports 2, 4, and 6 have the opposite polarization.

[Figure 248](#) shows ABB6_3B-TMF1, with TMF.

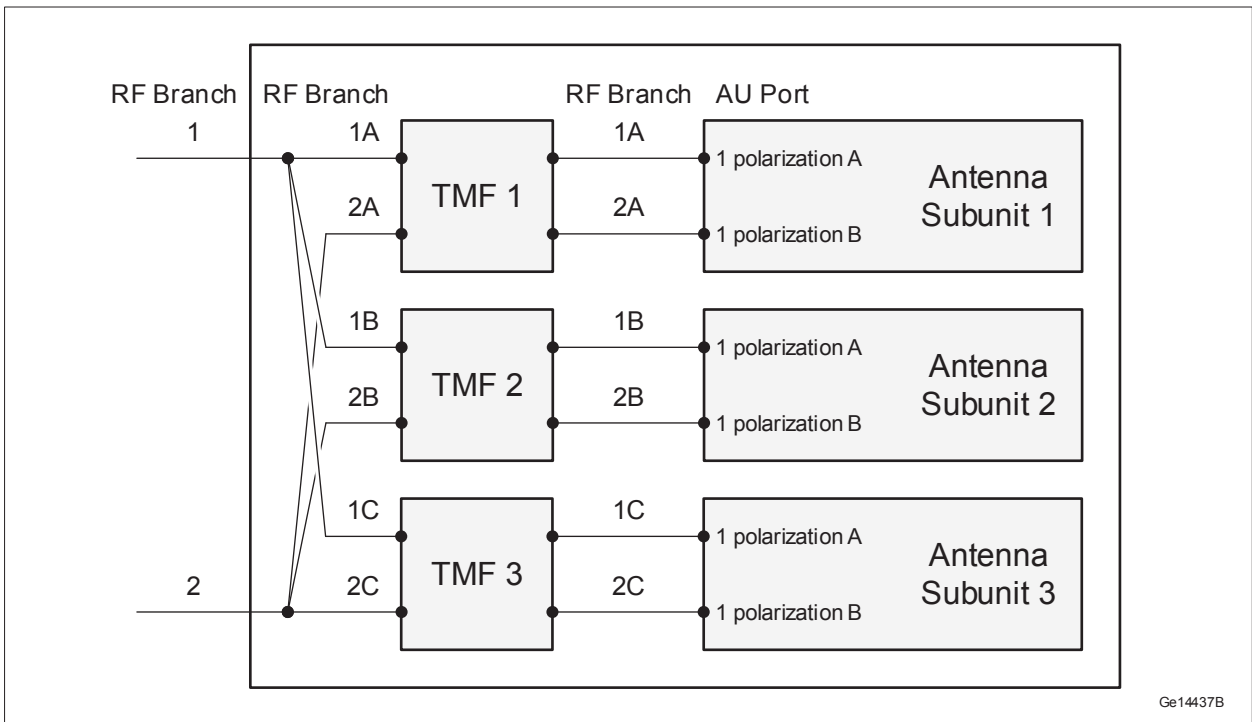


Figure 248 ABB6_3B-TMF1 Block Diagram, with TMF

46.4.22 ABB6_3C

ABB6_3C has six RF branches and three antenna subunits. RF ports 1, 3, and 5 have one polarization, while RF ports 2, 4, and 6 have the opposite polarization.

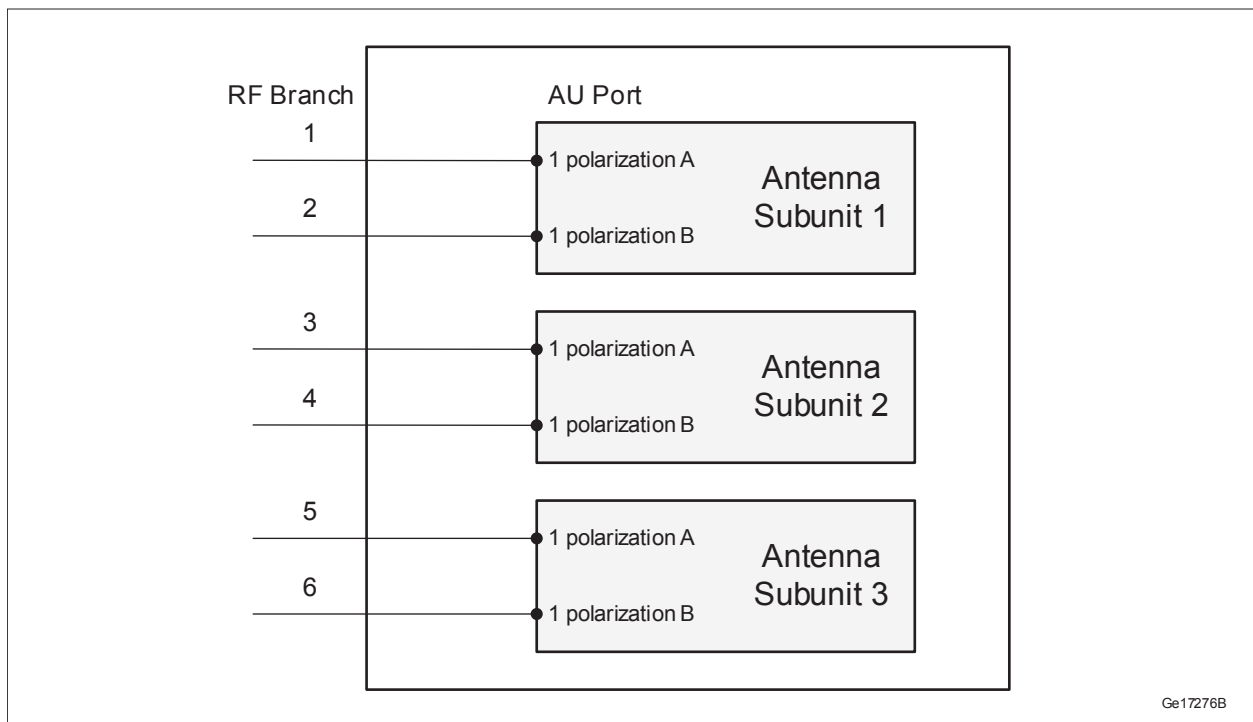


Figure 249 ABB6_3C Block Diagram

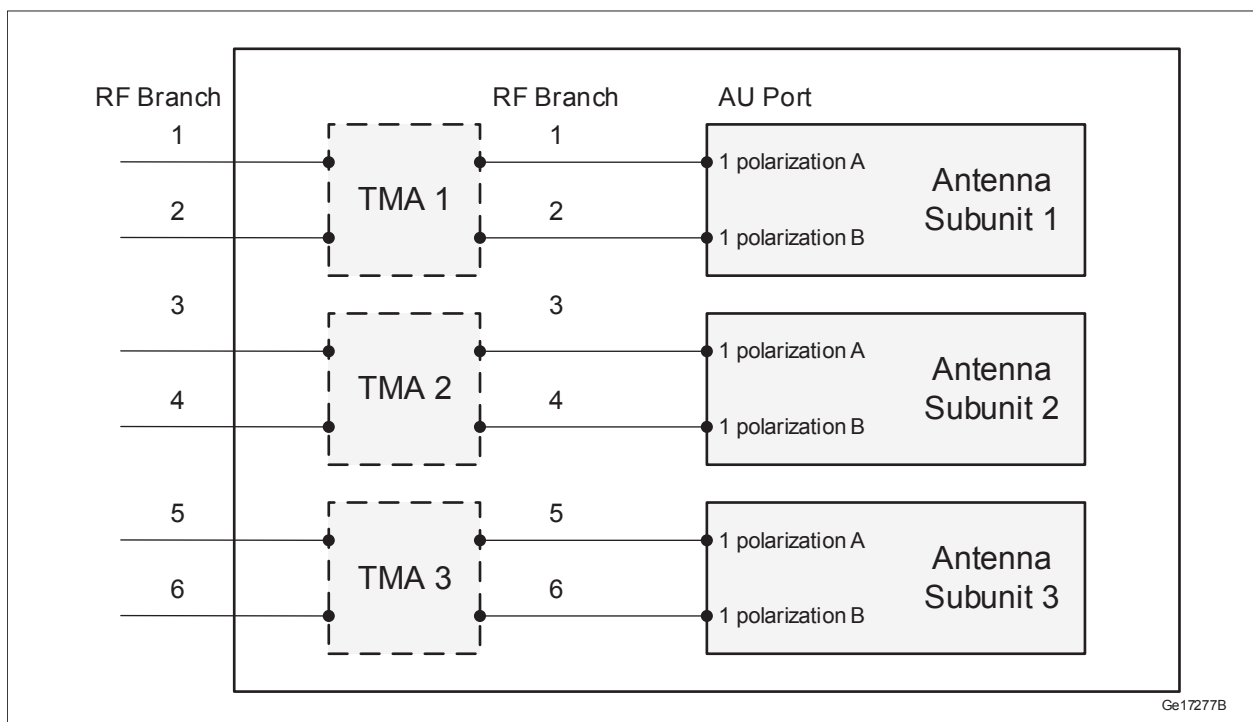


Figure 250 ABB6_3C-TMA1 Block Diagram, with TMA

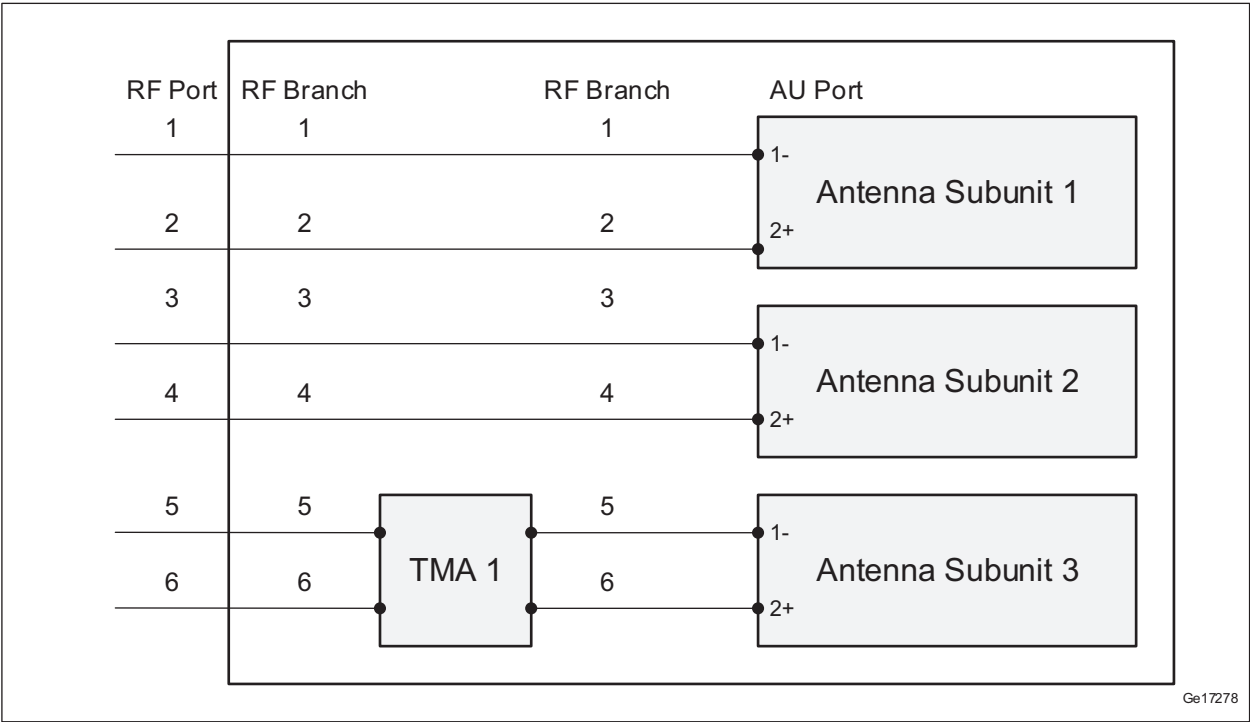


Figure 251 ABB6_3C-TMA2 Block Diagram, with TMA

46.4.23 ABB8_1A

ABB8_1A has eighth RF branches and one antenna subunit. RF ports 1, 3, 5, and 7 have one polarization, while RF ports 2, 4, 6, and 8 have the opposite polarization.

Figure 252 shows ABB8_1A.

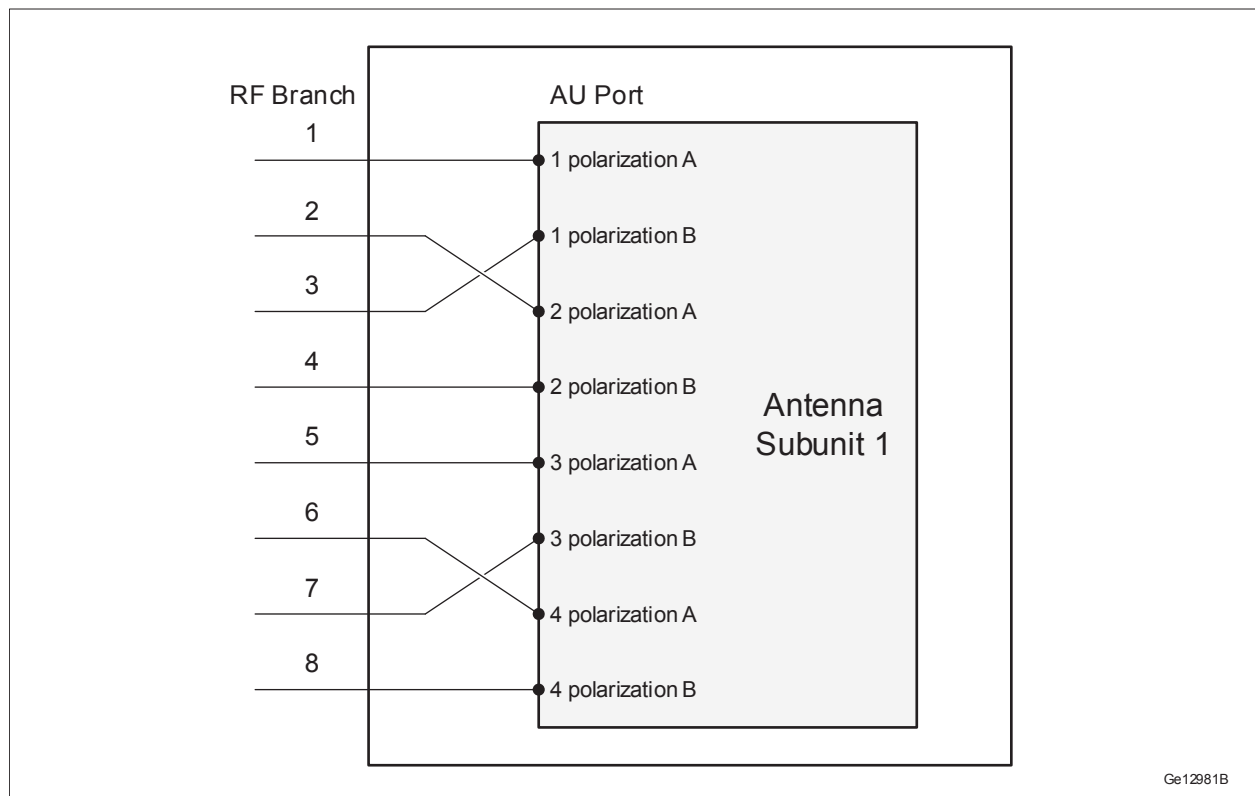


Figure 252 ABB8_1A Block Diagram

46.4.24 ABB8_2C

ABB8_2C has four RF branches and one antenna subunit.

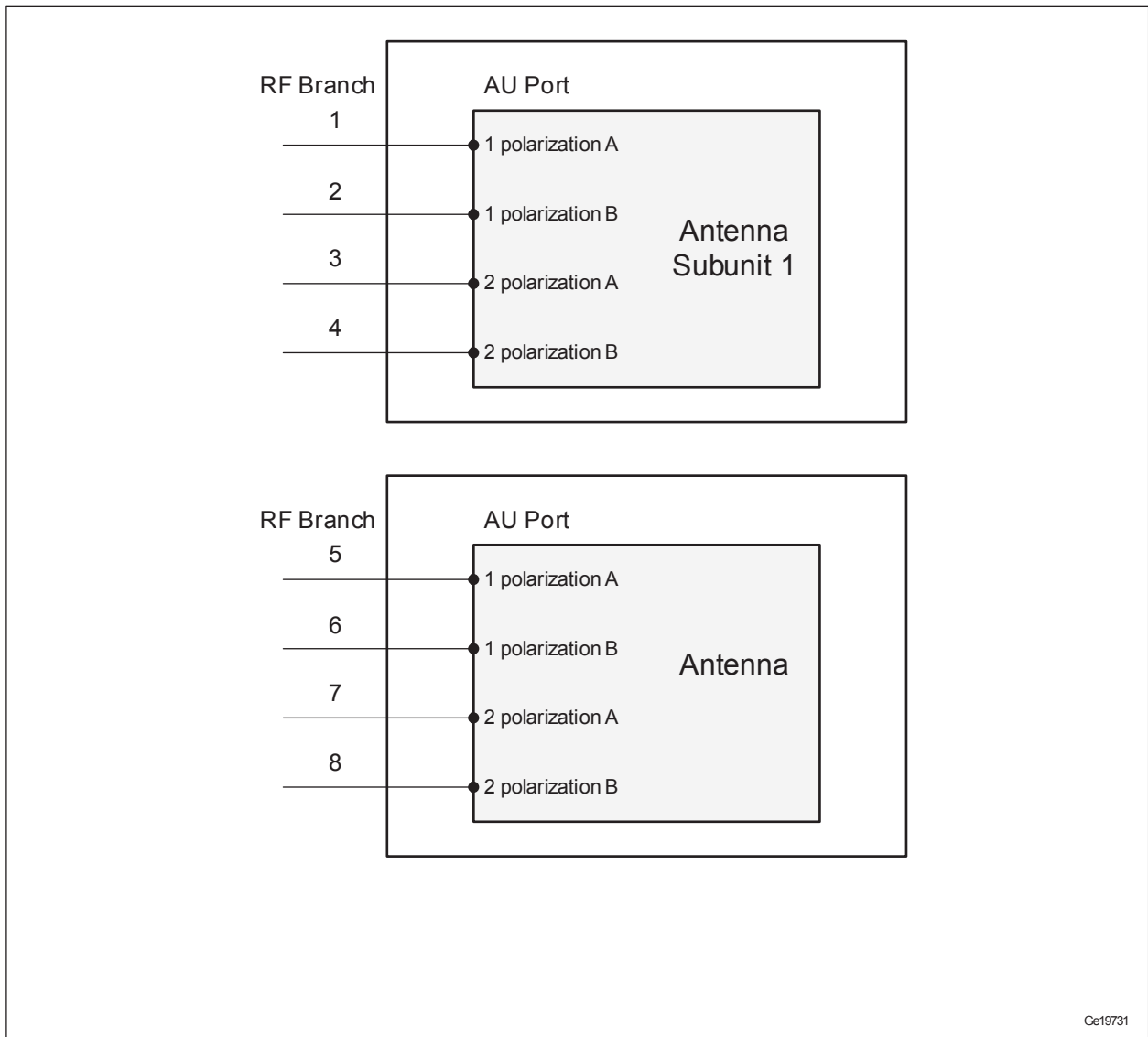


Figure 253 ABB8_2C Block Diagram

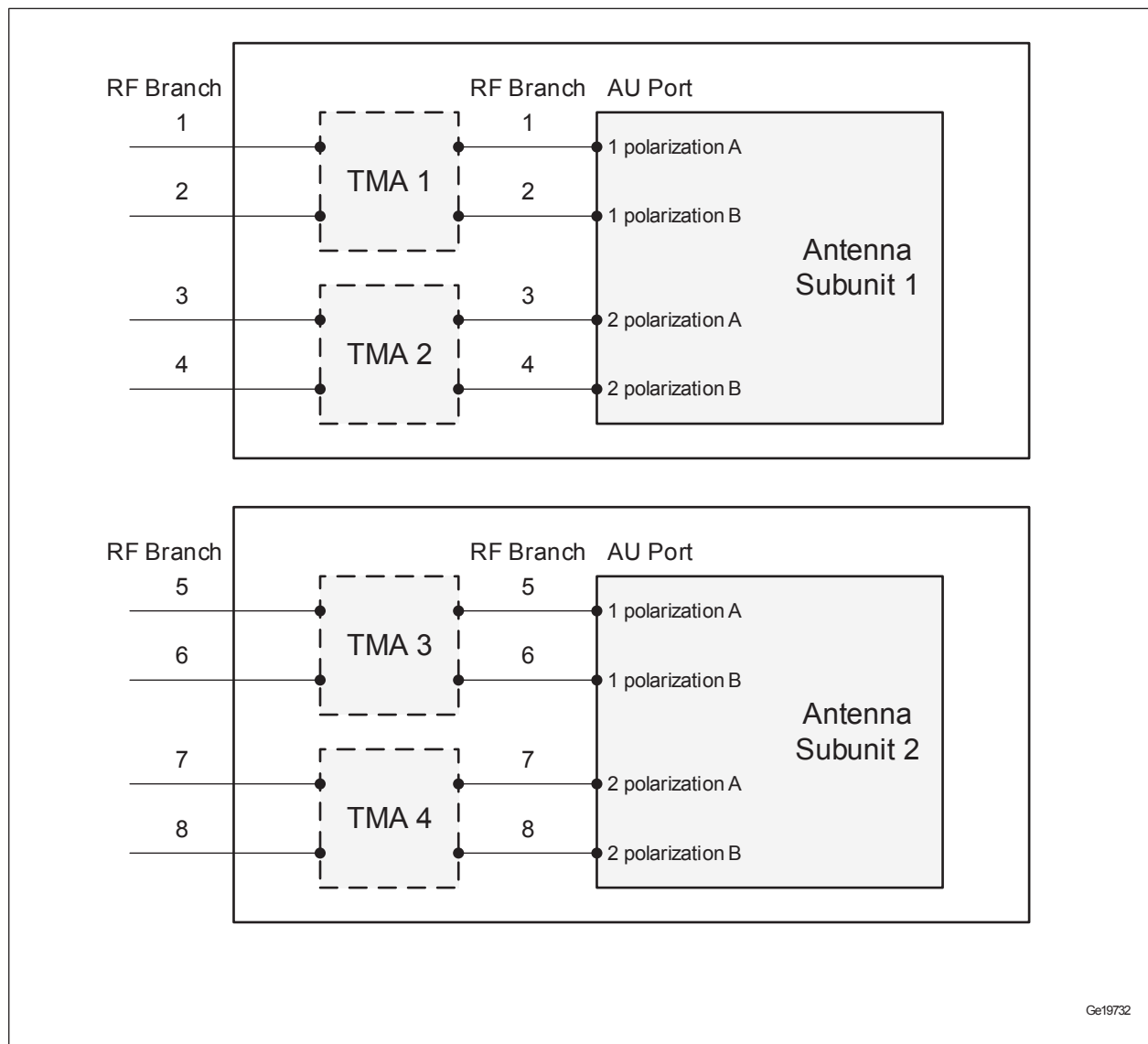


Figure 254 ABB8_2C Block Diagram with T2C

46.4.25 ABB8_3A

ABB8_3A has eight RF branches and three antenna subunits. RF ports 1, 3, 5, and 7 have one polarization, while RF ports 2, 4, 6, and 8 have the opposite polarization.

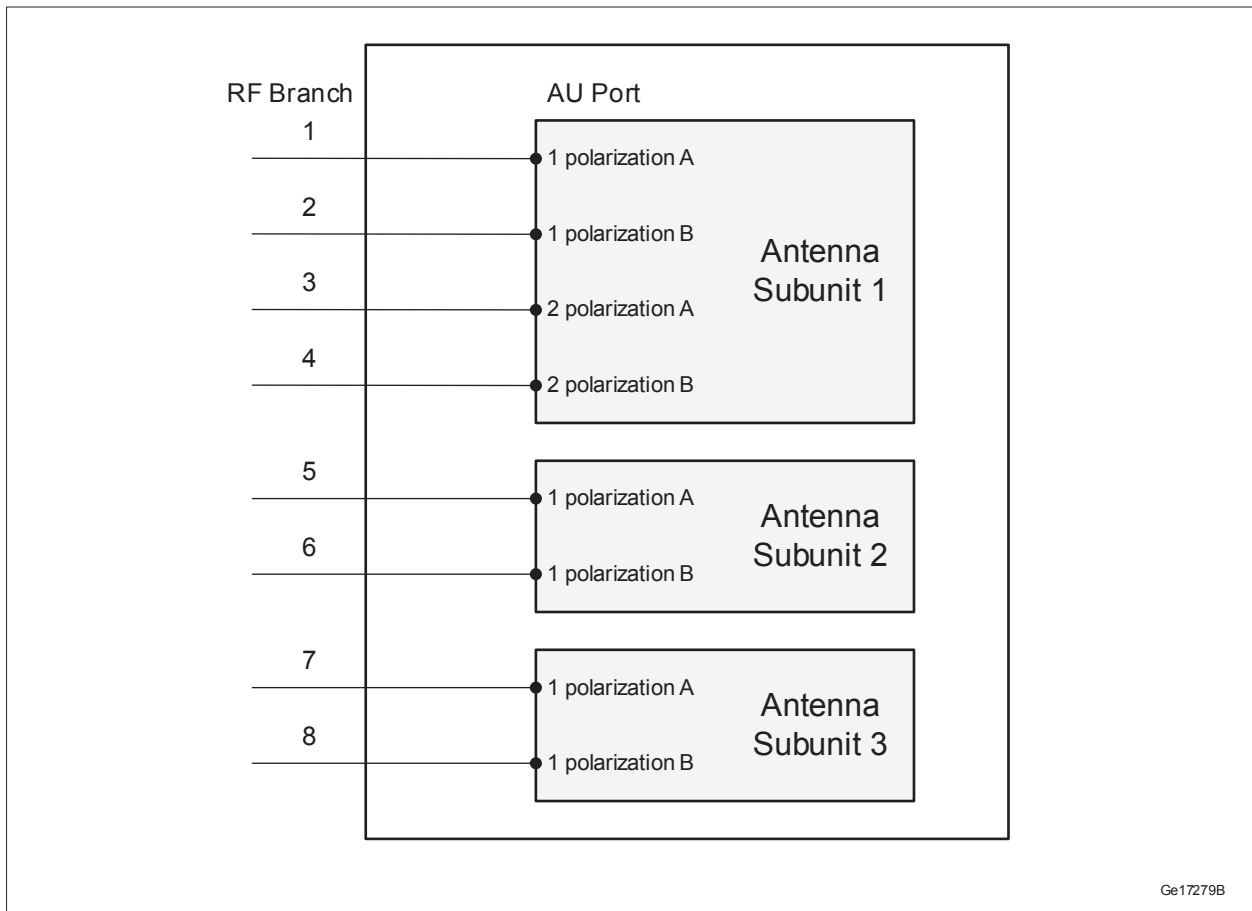


Figure 255 ABB8_3A Block Diagram

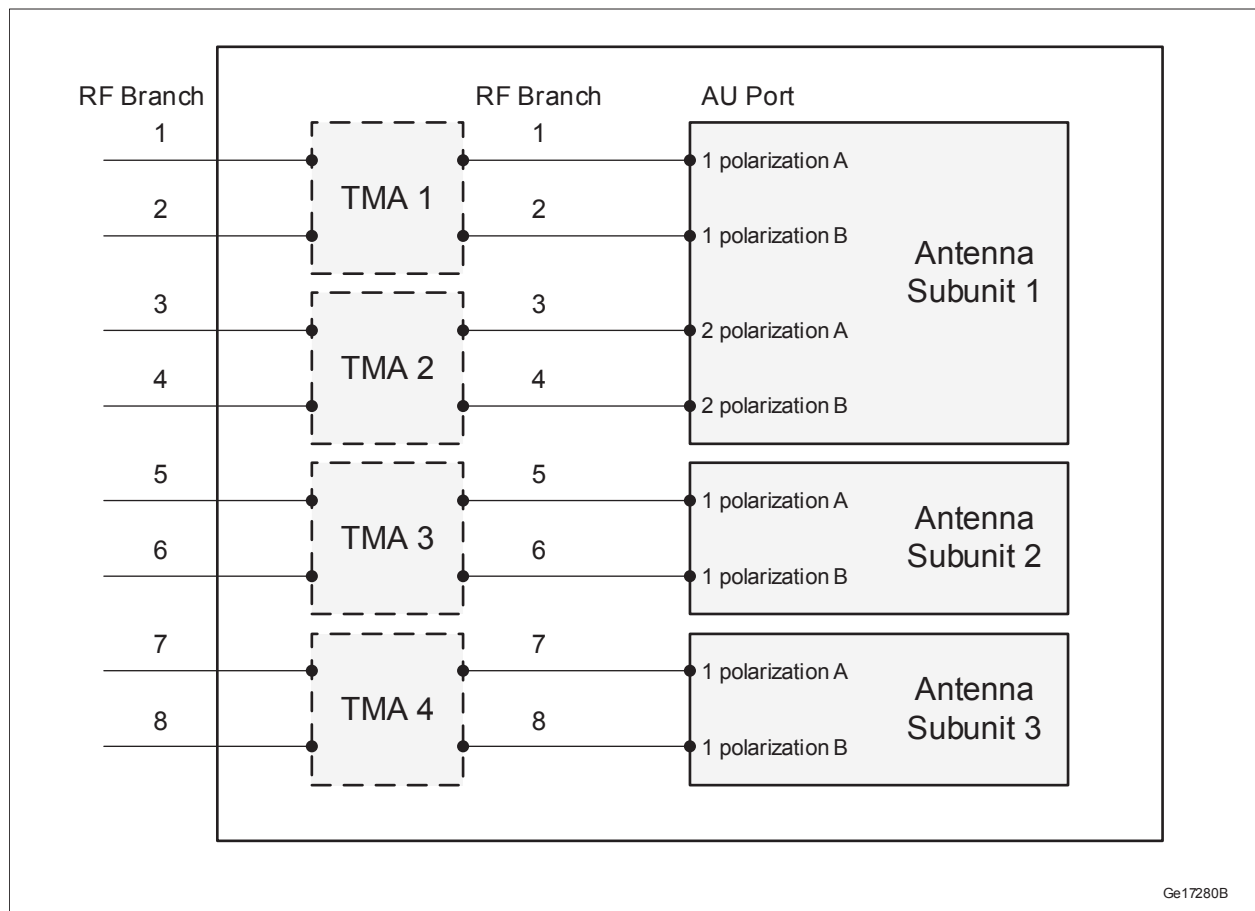


Figure 256 ABB8_3A-TMA1 Block Diagram, with TMA

46.4.26 ABB8_3B

ABB8_3B has eight RF branches and three antenna subunits.

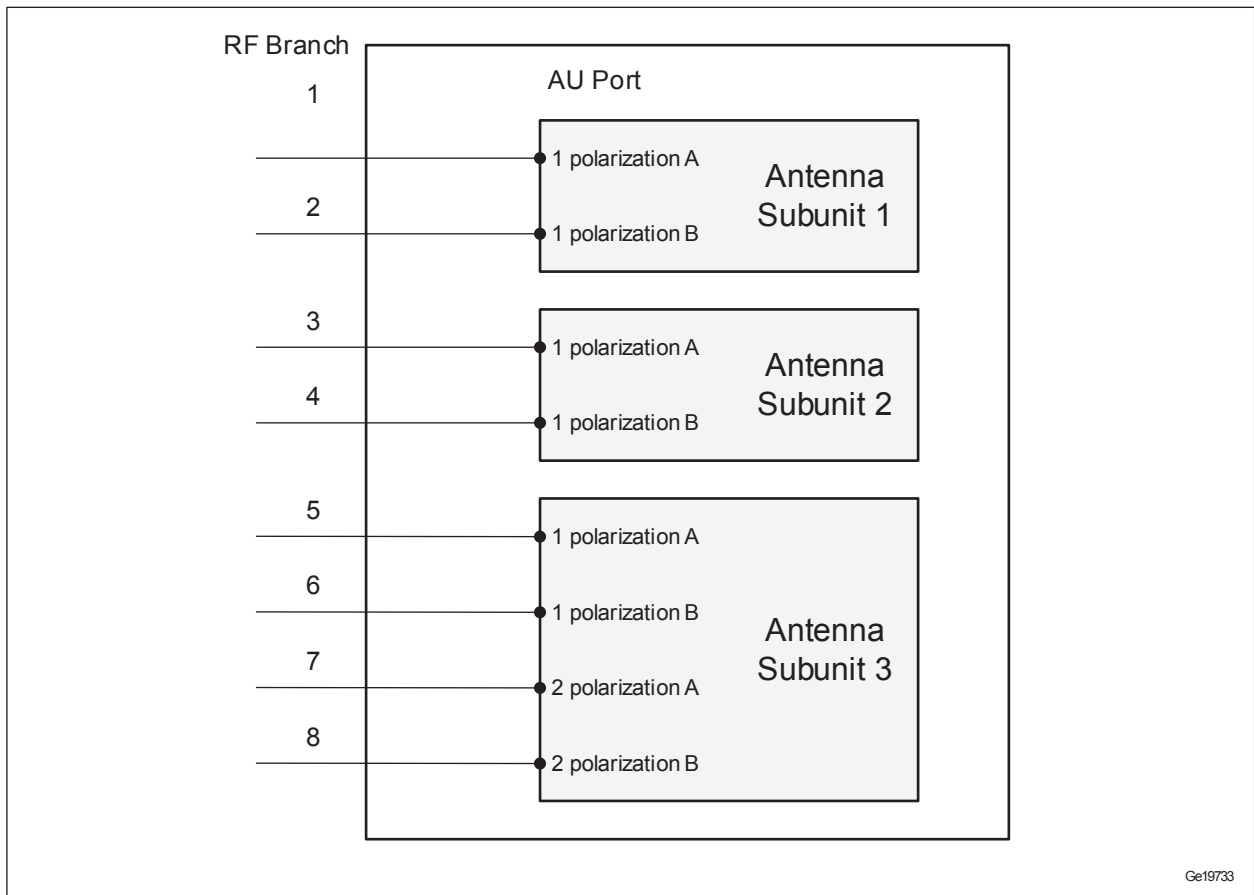


Figure 257 ABB8_3B Block Diagram

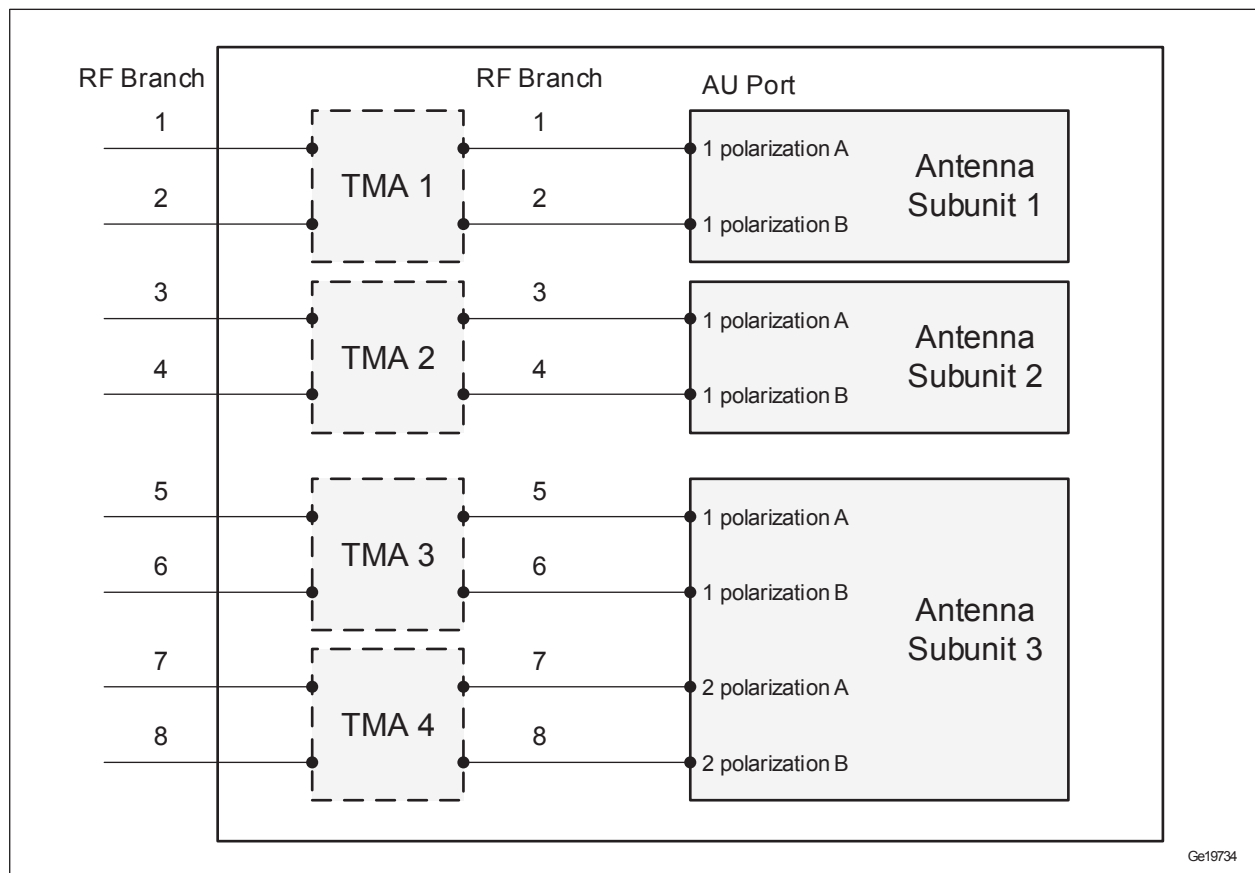


Figure 258 ABB8_3B Block Diagram with TMA

46.4.27 ABB8_4A

ABB8_4A has eight RF branches and four antenna subunits. RF ports 1, 3, 5, and 7 have one polarization, while RF ports 2, 4, 6, and 8 have the opposite polarization.

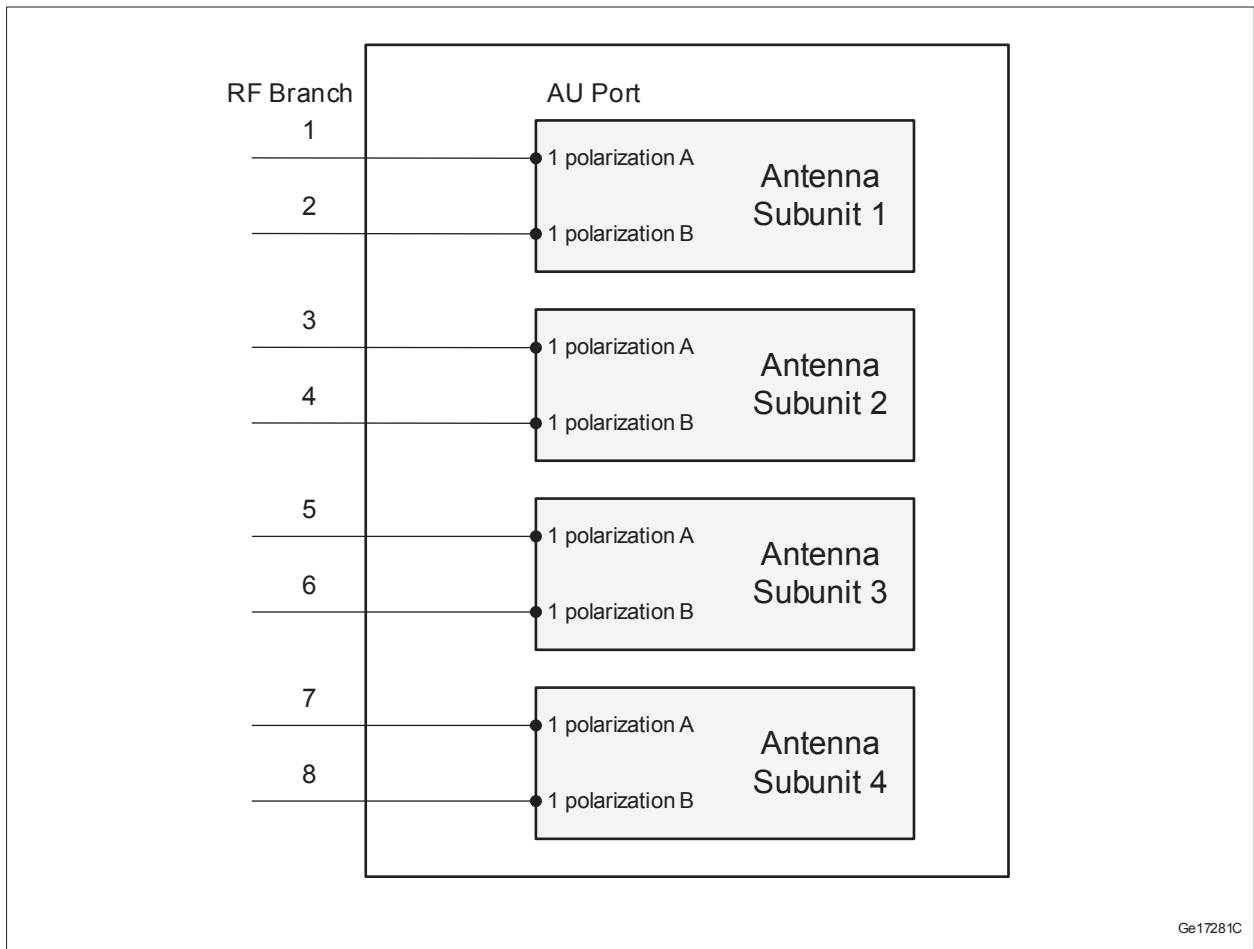


Figure 259 ABB8_4A Block Diagram

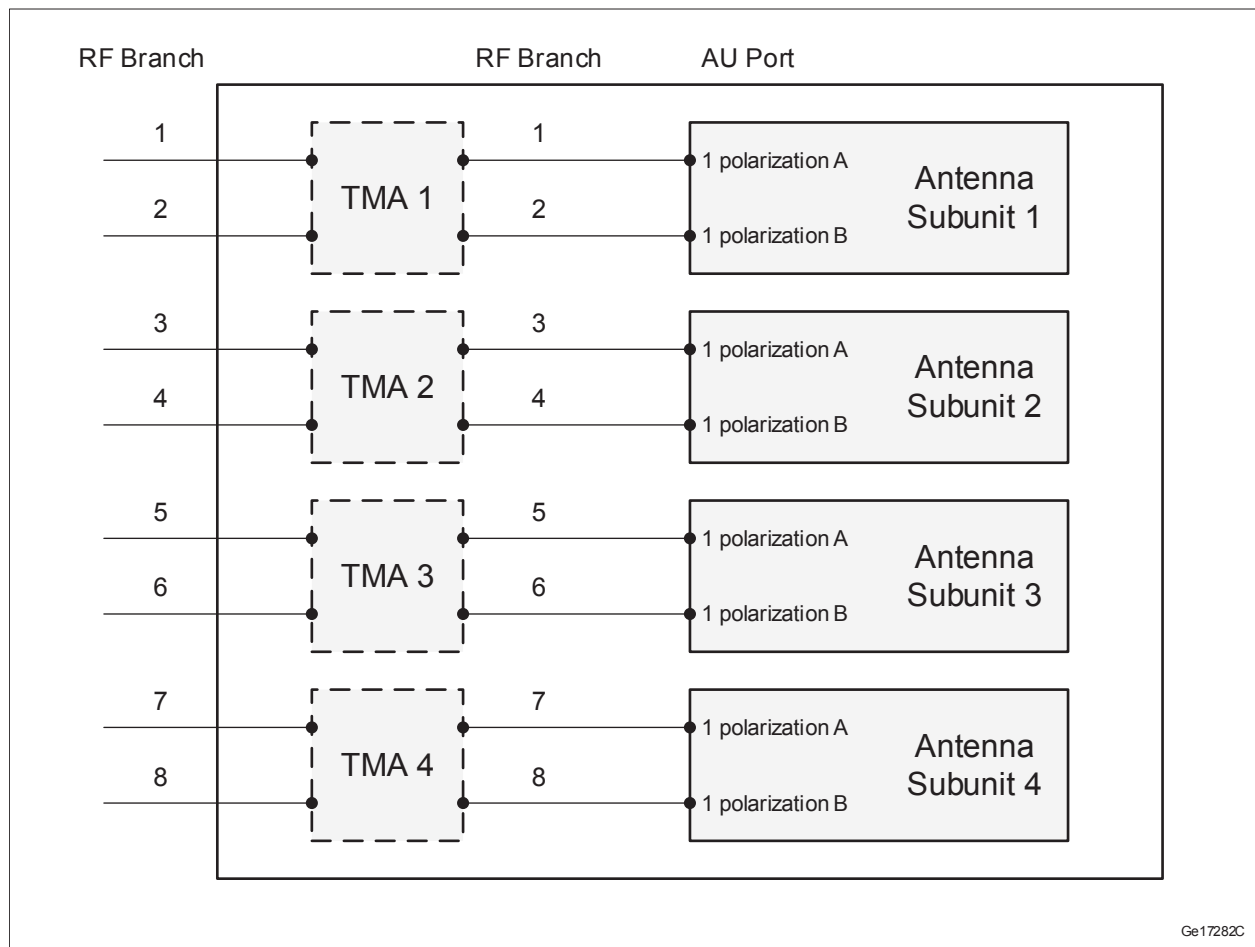


Figure 260 ABB8_4A-TMA1 Block Diagram, with TMA

46.4.28 ABB8_1B

ABB8_1B has eight RF branches and two antenna subunits. RF ports 1, 3, 5, and 7 have one polarization, while RF ports 2, 4, 6, and 8 have the opposite polarization.

Figure 261 shows ABB8_1B.

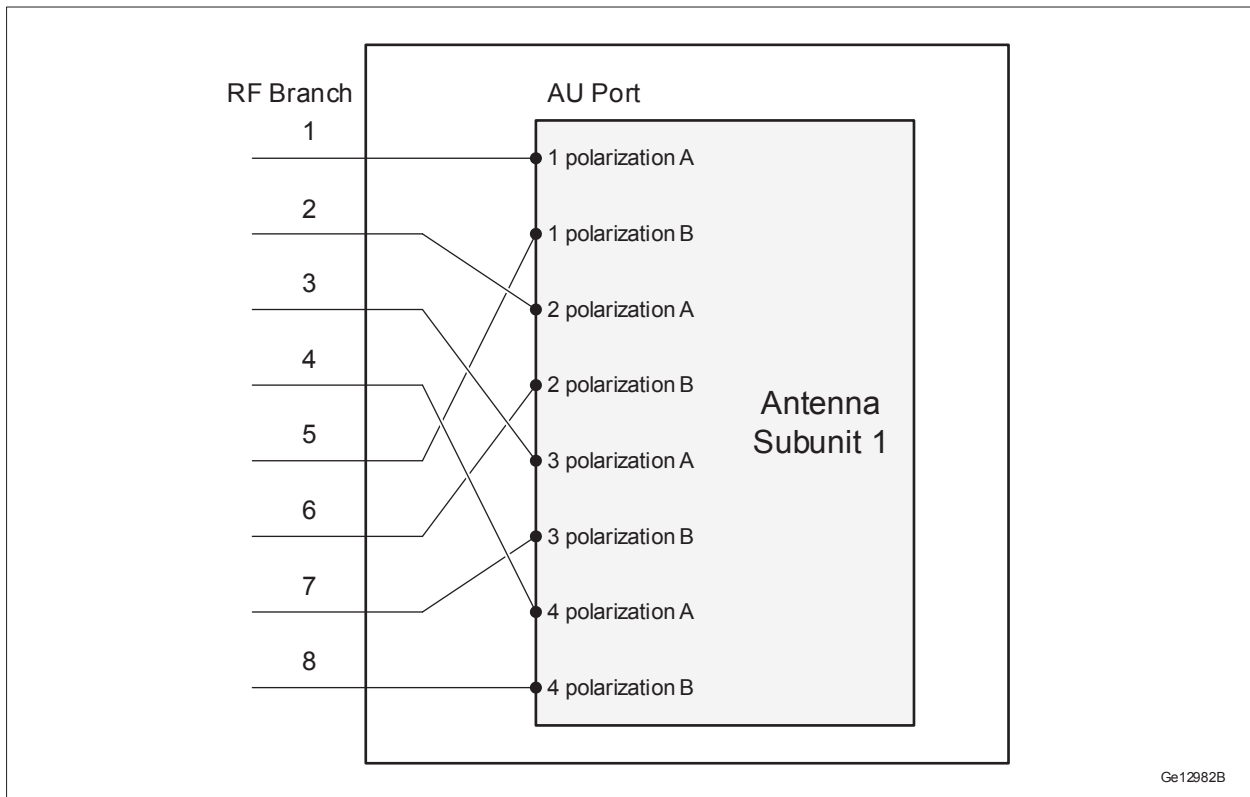


Figure 261 ABB8_1B Block Diagram

46.5 Building Blocks Used in the Equipment Configuration Tool

This section defines identity for managed objects used when creating a configuration with the Equipment Configuration Tool (ECT). For more information on ECT refer to [Manage Equipment Configuration Tool](#) in the Baseband Radio Node library.

[Figure 262](#) shows basic object identity for radio and antenna equipment.

[Figure 263](#) shows object identity for radio and antenna equipment with multiple radios, TMAs, and antennas.

[Figure 264](#) shows object identity for radio and antenna equipment where TMAs and antennas are shared between ABBs.

In the expression Sx-n, as in "S1-1", x represents the sector number covered by ABB. When manually creating configuration files the recommendation is to follow this convention, though there is no enforcement to do so.

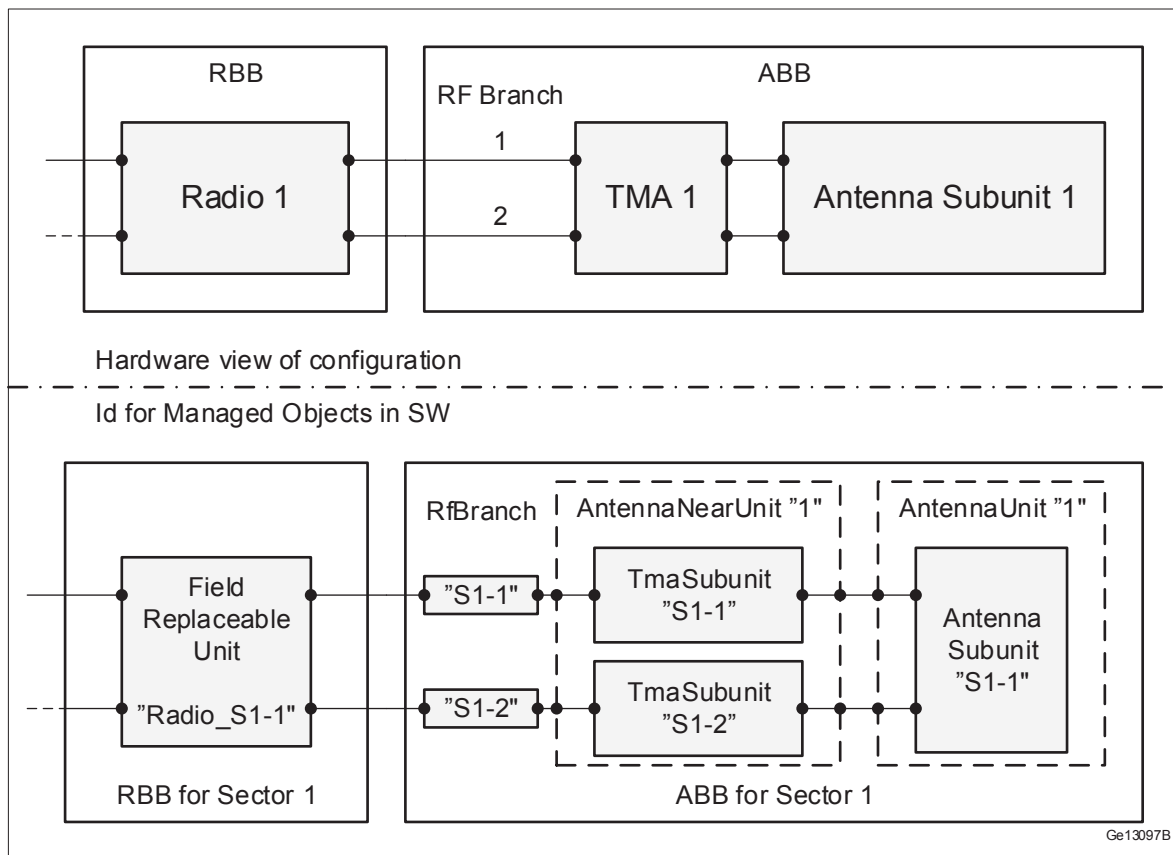


Figure 262 Object Identity for Radio and Antenna Equipment

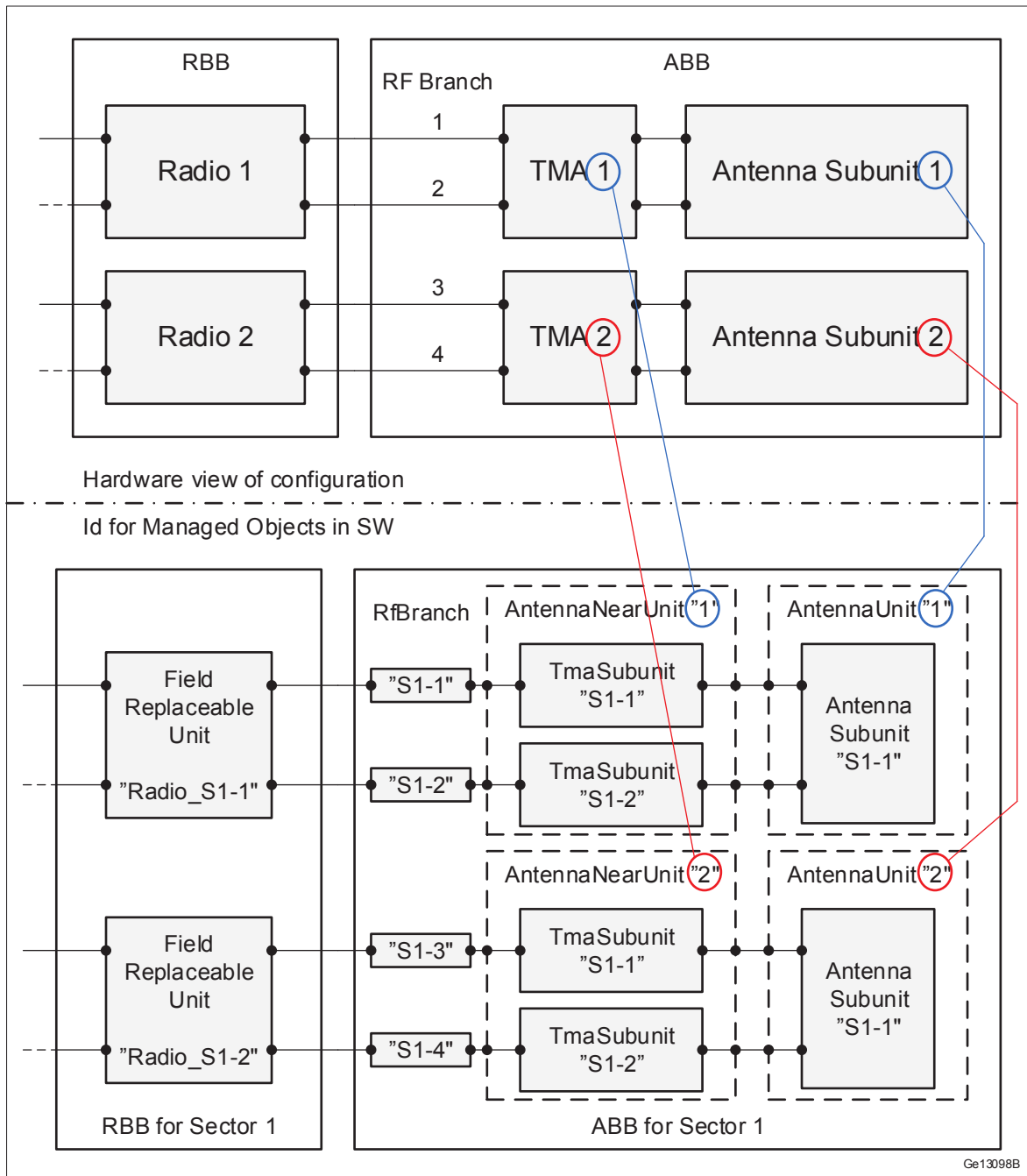


Figure 263 Object Identity for Radio and Antenna Equipment with Multiple Radios, TMAs, and Antennas

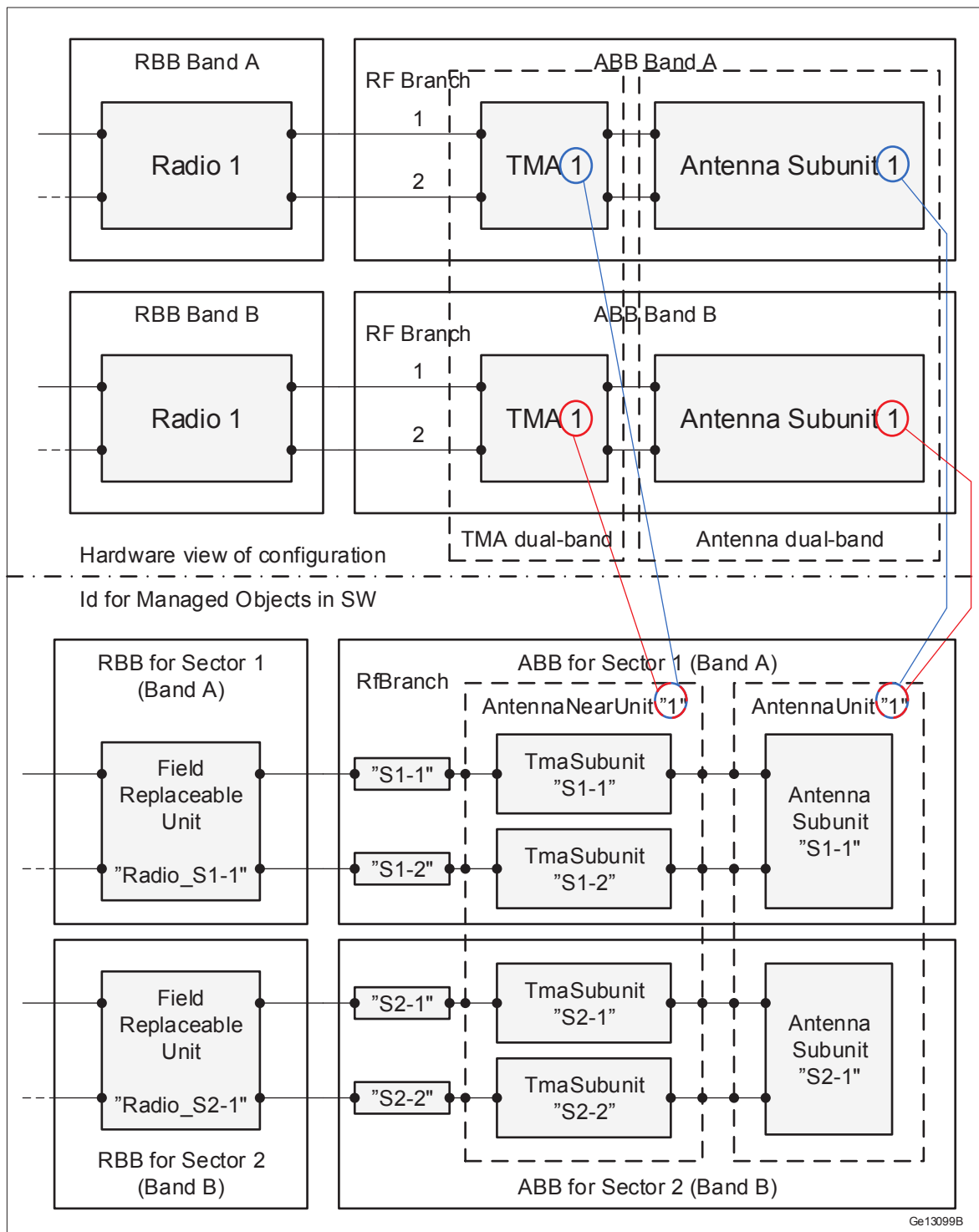


Figure 264 Object Identity for Radio and Antenna Equipment where TMAs and Antennas are Shared Between ABBs



46.6 Baseband P

46.6.1 Baseband P614

Baseband P614 reduces the impact of Passive Intermodulation (PIM). [Table 929](#) lists the supported DUs and Baseband.

Table 929 Baseband P614 Support with DUs or Baseband

DU or Baseband	Baseband P614	Standard	From Software Release
One DUS 31	-	-	-
Two DUS 31	-	-	-
Three DUS 31	-	-	-
One DUS 41	Up to three Baseband P614 to one DU Each Baseband P614 used as standalone	LTE FDD	L17.Q4
	Up to three Baseband P614 to one DU Either used as standalone or tandem; two Baseband P614 interconnected through IPL	LTE FDD	L18.Q1
Two DUS 41	-	-	-
Three DUS 41	-	-	-
Baseband 5212	Up to three Baseband P614 to one Baseband Either used as standalone or tandem; two Baseband P614 interconnected through IPL	LTE FDD	L18.Q2
Baseband 5216	Up to three Baseband P614 to one Baseband Either used as standalone or tandem; two Baseband P614 interconnected through IPL	LTE FDD	L18.Q2
Baseband 6303	Up to three Baseband P614 to one Baseband Either used as standalone or tandem; two Baseband P614 interconnected through IPL	LTE FDD	L18.Q2
Baseband 6318	Up to three Baseband P614 to one Baseband Either used as standalone or tandem; two Baseband P614 interconnected through IPL	LTE FDD	L18.Q2
Baseband 6502	-	-	-
Baseband 6620	Up to three Baseband P614 to one Baseband Either used as standalone or tandem; two Baseband P614 interconnected through IPL	LTE FDD	L18.Q2
Baseband 6630	Up to three Baseband P614 to one Baseband Either used as standalone or tandem; two Baseband P614 interconnected through IPL	LTE FDD	L18.Q2

Baseband P614 supports the following:



- Six CPRI ports to DU or Baseband and six CPRI ports to radios or Baseband R503.
- CPRI line rates 2.5, 4.9, and 9.8 Gbps.
- Up to three Baseband P614 per DU or Baseband:
 - From SW 17.Q4, configured as three single units.
 - From SW 18.Q1, configured as three single units or one tandem configuration plus one single unit.

One PIM cancellation group on Baseband P614 supports the following:

- Carriers from one sector or from different sectors (cross-sector PIM).
- 5, 10, 15, and 20 MHz carrier bandwidths.
- The following maximum configurations:
 - Maximum eight carrier branches in downlink and eight carrier branches in uplink in total for all carriers.
 - Maximum ten carrier branches in downlink and four carrier branches in uplink in total for all carriers. In this case, only one PIM cancellation group with a single Baseband P614 is supported.

Note: For sectors using radios from radio group 1, each 5 MHz part of the uplink carrier branch is counted as a separate branch, see [Radio Groups](#) on page 101.

The maximum number of downlink carrier branches transmitted from group 1 radios in one PIM cancellation group is shown in [Table 930](#).

Table 930 Maximum Number of Downlink Carrier Branches from Group 1 Radios in One PIM Cancellation Group

Carrier Bandwidth	Maximum Number of Downlink Carrier Branches Transmitted from Group 1 Radios ⁽¹⁾ in One PIM Cancellation Group
5 MHz	8
Maximum 10 MHz	4
Maximum 15 MHz	2
Maximum 20 MHz	2

(1) Applies to all carrier branches for a given carrier whenever some of the carrier branches for that carrier use a Group 1 radio.

Radio capacity with Baseband P614:



- Radios from radio group 6 have the same capacity limitations as radios from radio groups 3–4 if they are connected to a DU or Baseband with Baseband P614.
- Radios from radio group 5 behave as if LTE Combined Cell is used, if they are connected to a DU or Baseband with Baseband P614.
- CPRI Compression is disabled on radios, if they are connected to a Baseband with Baseband P614.

A configuration with a single Baseband P614 supports the following:

- Up to three PIM cancellation groups, see [Figure 265](#).
- A maximum of 24 uplink carrier branches per Baseband P614. This can be used as shown in [Table 931](#).
 - For uplink, each carrier branch can be used in one PIM cancellation group only.
 - More limitations may apply in sectors with many antennas (that is 4x4 MIMO) or where the frequency combinations will generate multiple PIM interferers in the uplink band. For examples of supported carrier configurations, see [Baseband P Resource Calculation Tool](#) in [LTE RAN CPI](#).

Table 931 Carrier Branches per PIM Cancellation Group with One Baseband P614

Number of Baseband P614	Maximum Number of PIM Cancellation Groups	Maximum Number of Carrier Branches in Each PIM Cancellation Group
1	1	10 downlink, 4 uplink
	3	8 downlink, 8 uplink

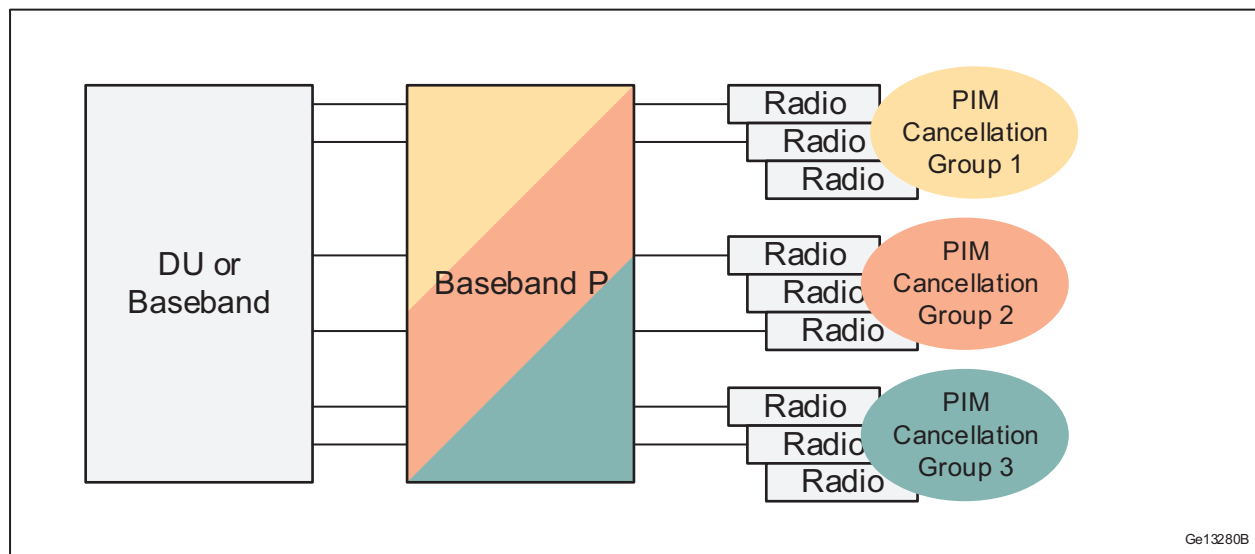


Figure 265 One Baseband P614 with Three PIM Cancellation Groups

A tandem configuration with two Baseband P614 supports the following:

- Up to three PIM cancellation groups, where any of the groups can be shared between the Baseband P614 units, see [Figure 266](#).
- A maximum of 24 uplink carrier branches, can be used as shown in [Table 932](#).
 - For uplink, each carrier branch can be used in one PIM cancellation group only.
 - More limitations may apply in sectors with many antennas (that is 4x4 MIMO) or where the frequency combinations will generate multiple PIM interferers in the uplink band. For examples of supported carrier configurations, see Baseband P Resource Calculation Tool in LTE RAN CPI.

Table 932 Carrier Branches per PIM Cancellation Group with Two Baseband P614 in Tandem

Number of Baseband P614	Maximum Number of PIM Cancellation Groups	Maximum Number of Carrier Branches in Each PIM Cancellation Group
2 in tandem	3	8 downlink, 8 uplink

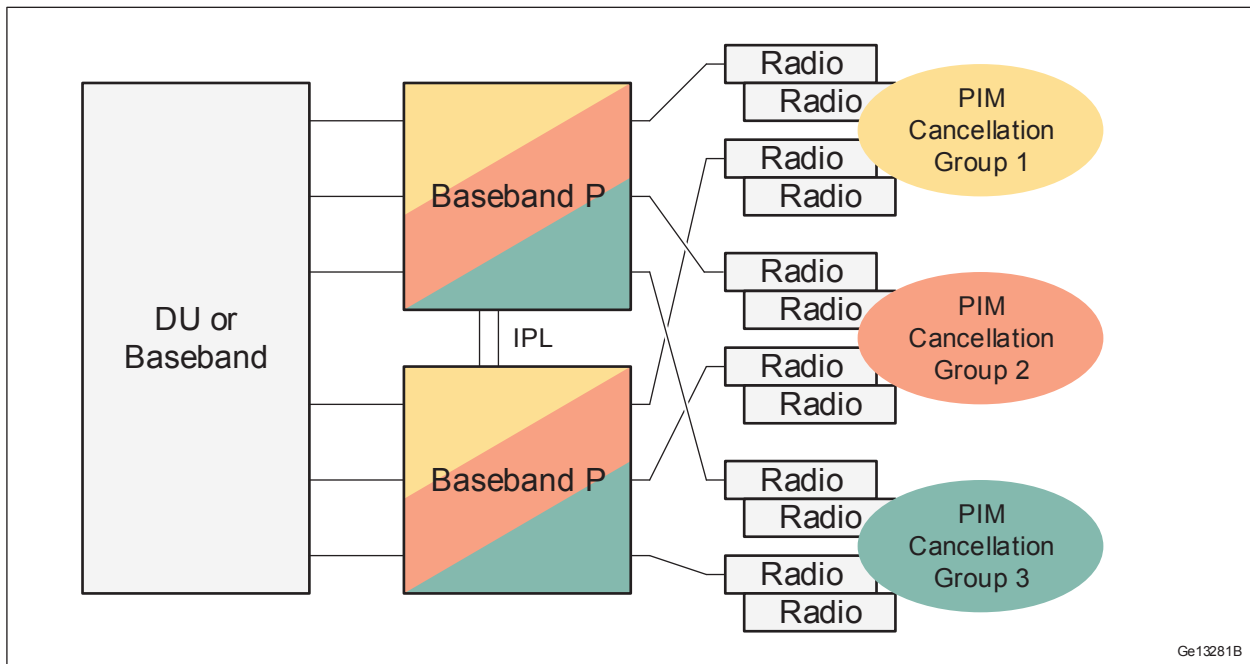
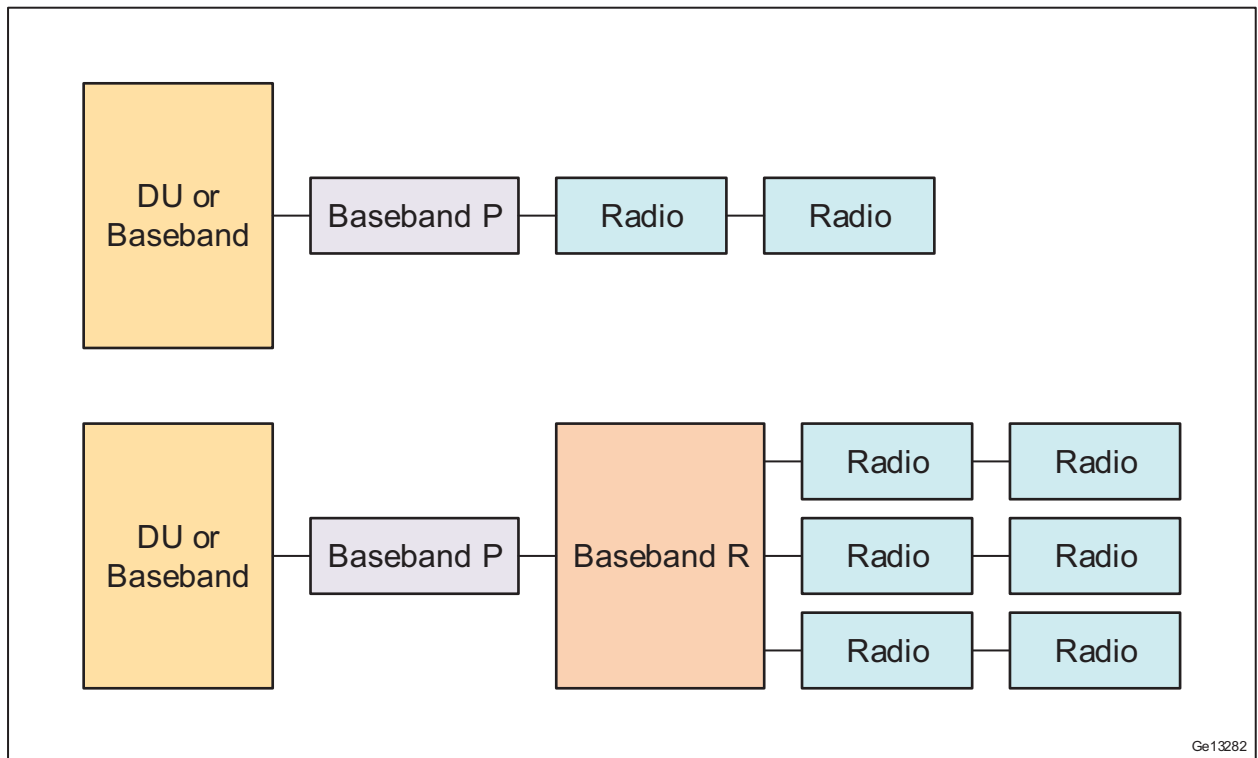


Figure 266 Two Baseband P614 with Three PIM Cancellation Groups where Each PIM Cancellation Group Can Be Shared between Two Baseband P614

The following are the supported radio configurations with Baseband P614:

- Baseband P614 must always be closest to the DU or Baseband unit, see [Figure 267](#).
- Each cascade chain can have up to two radios and optionally one Baseband R503.
- [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
- Radios with carriers participating in a PIM cancellation group can be mixed with radios that have no carriers in a PIM cancellation group, using the same Baseband P614 and in the same radio cascading chain.
- Radios with carriers participating in the same PIM cancellation group can be in any position in the same or in different radio cascading chains.



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Figure 267 Baseband P614 in Radio Cascading Chains

46.7 Baseband R

46.7.1 Baseband R503

This section describes Baseband R503 with three available splitter blocks.

[Figure 268](#) shows the three splitter block Baseband R503 block diagram.

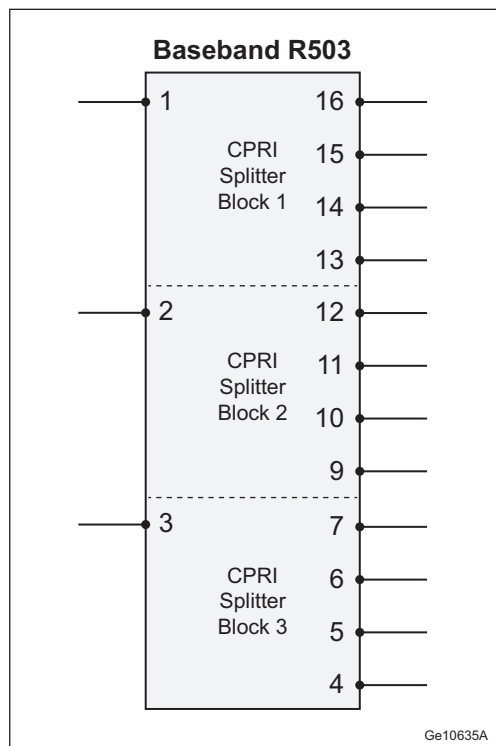


Figure 268 Baseband R503 Block Diagram

Note: The licensed feature CPRI compression is supported from 17.Q3.

Table 933 Baseband R503 support with DU or Baseband Radio Nodes

Standard	DU or Baseband	Software Version Maximum Number of Baseband R503 per DU or Baseband Node								
		17.Q2	17.Q3	17.Q4	18.Q1	18.Q2	18.Q3	18.Q4	19.Q1	19.Q2
GSM	Baseband 5212	6	6	6	6	6	6	6	6	6
	Baseband 5216	6	6	6	6	6	6	6	6	6
	Baseband 6303	3	3	3	3	3	3	3	3	3
	Baseband 6318	-	-	-	-	6	6	6	6	6
	Baseband 6620	6	6	6	6	6	6	6	6	6
	Baseband 6630	6	6	6	6	6	6	6	6	6
WCDMA	Baseband 5212	6	6	6	6	6	6	6	6	6
	Baseband 5216	6	6	6	6	6	6	6	6	6
	Baseband 6303	3	3	3	3	3	3	3	3	3
	Baseband 6318	-	-	-	-	6	6	6	6	6
	Baseband 6502	3	3	3	3	3	3	3	3	3
	Baseband 6620	6	6	6	6	6	6	6	6	6
	Baseband 6630	6	6	6	6	6	6	6	6	6
	IDU 5205	6	6	6	6	6	6	6	6	6
	IDU 5209	6	6	6	6	6	6	6	6	6



Standard	DU or Baseband	Software Version Maximum Number of Baseband R503 per DU or Baseband Node								
		17.Q2	17.Q3	17.Q4	18.Q1	18.Q2	18.Q3	18.Q4	19.Q1	19.Q2
LTE	Baseband 5212	6	6	6	6	6	6	6	6	6
	Baseband 5216	6	6	6	6	6	6	6	6	6
	Baseband 6303	3	3	3	3	3	3	3	3	3
	Baseband 6318	-	-	-	-	6	6	6	6	6
	Baseband 6502	3	3	3	3	3	3	3	3	3
	Baseband 6620	6	6	6	6	6	6	6	6	6
	Baseband 6630	6	6	6	6	6	6	6	6	6
	DUS 31	3	3	3	3	3	3	3	3	3
	2 x DUS 31 ⁽¹⁾	3	3	3	3	3	3	3	3	3
	DUS 41	3	3	3	3	3	3	3	3	3
	2 x DUS 41 ⁽¹⁾	3	3	3	3	3	3	3	3	3
	3 x DUS 41 ⁽²⁾	3	3	3	3	3	3	3	3	3
	IDU 5205	6	6	6	6	6	6	6	6	6
	IDU 5209	6	6	6	6	6	6	6	6	6
NR	Baseband 5216	-	-	-	-	-	-	-	6	6
	Baseband 6318	-	-	-	-	-	-	-	6	6
	Baseband 6630	-	-	-	-	-	-	-	6	6

(1) Each Baseband R503 can be connected to one DU or to both DUs

(2) Each Baseband R503 must be connected to one DU only

For Baseband R503 connections to DUs or Baseband units and to radios, see examples in [Figure 269](#), [Figure 270](#), [Figure 271](#), [Figure 272](#), and [Figure 273](#) below.

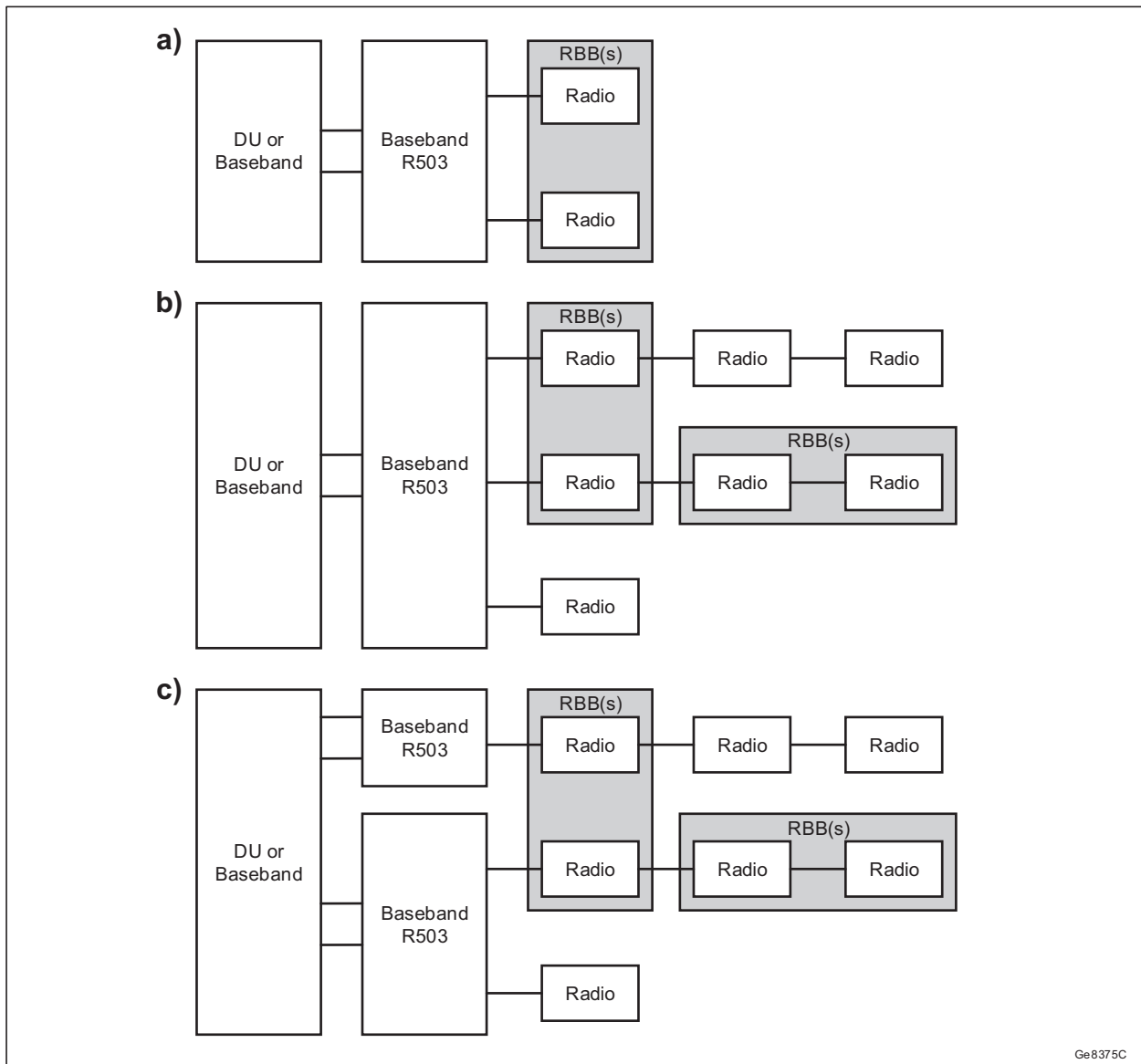


Figure 269 Examples of DBB10_81 Configurations with Baseband R503

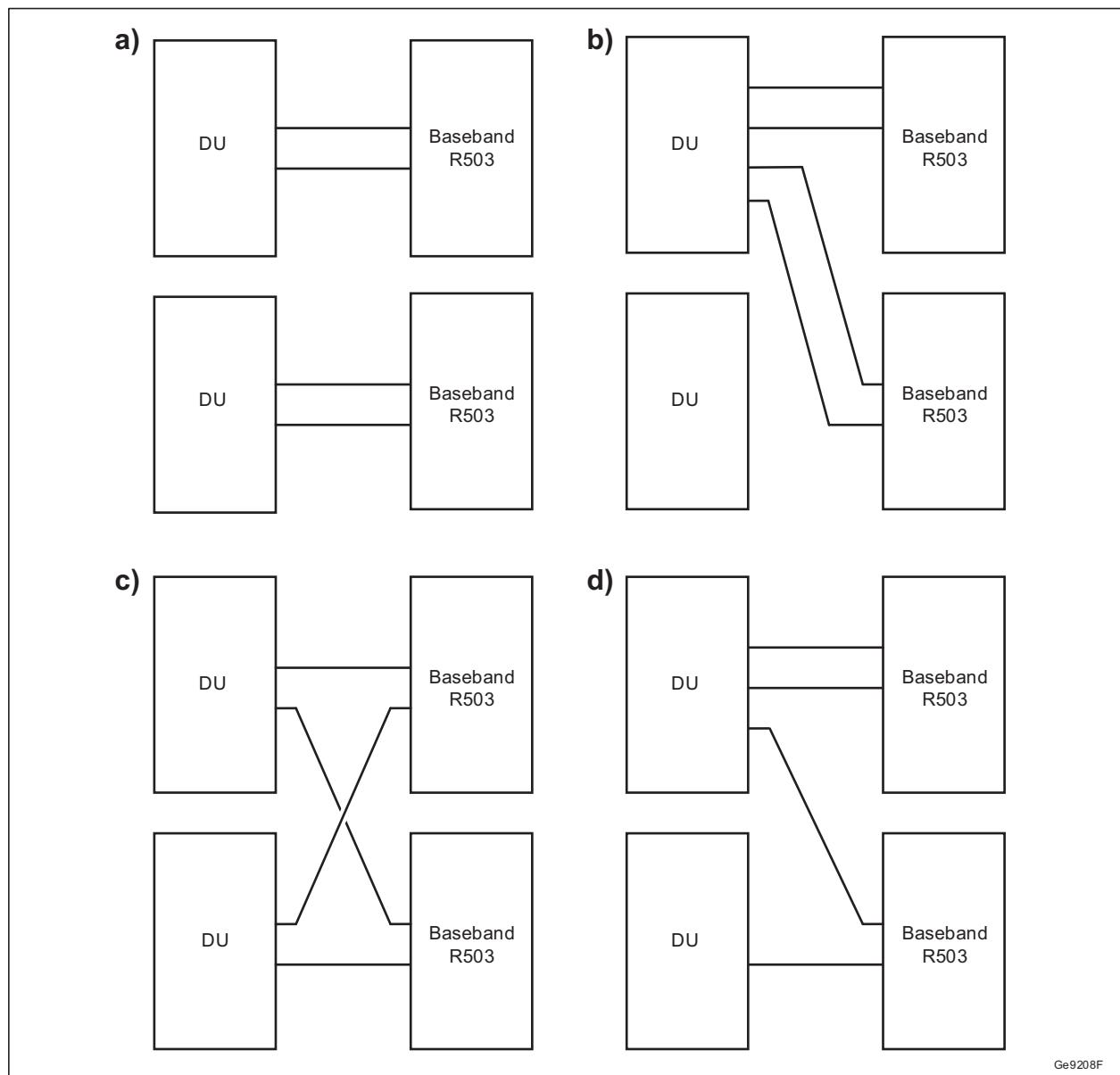


Figure 270 Examples of DBB20_81 and DBB21_81 Configurations with Two Baseband R503

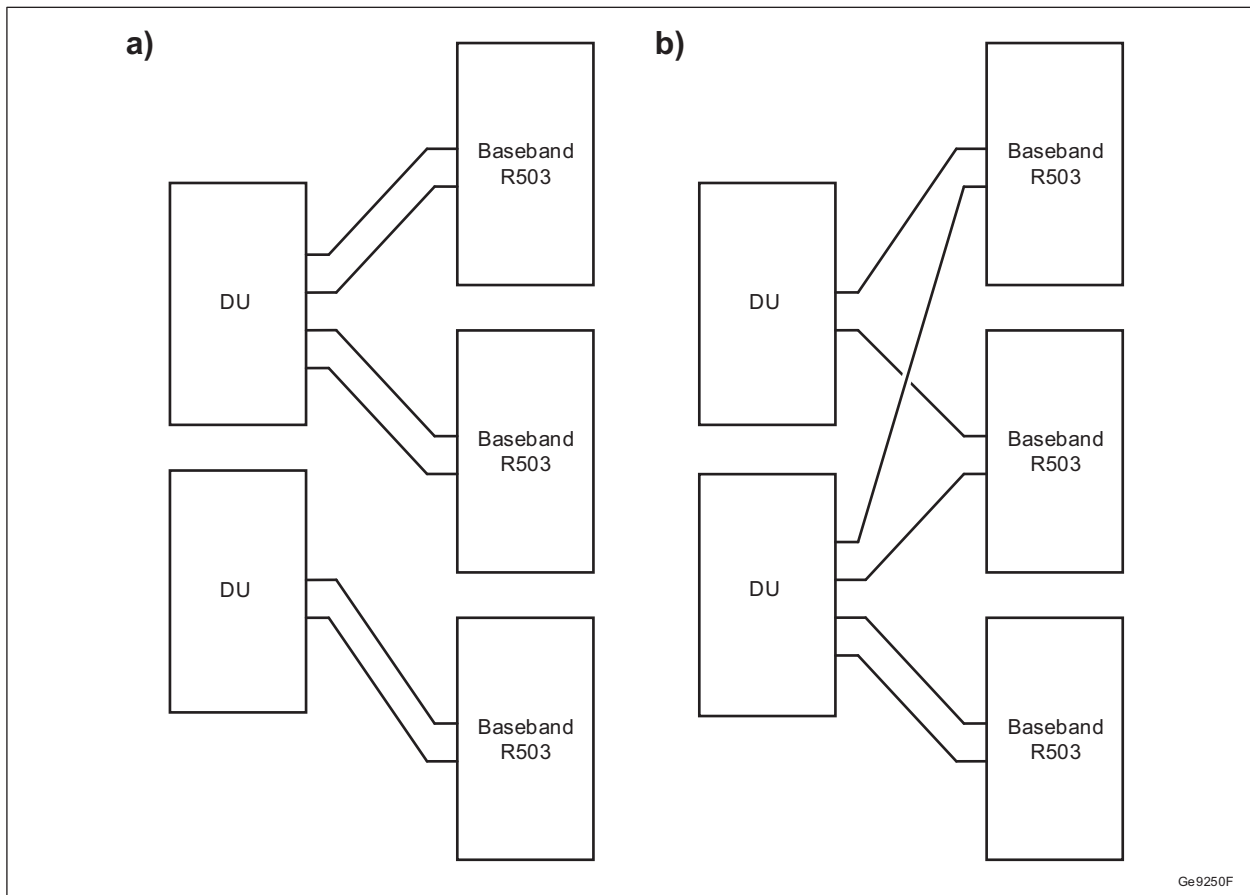


Figure 271 Examples of DBB20_81 and DBB21_81 Configurations with Three Baseband R503

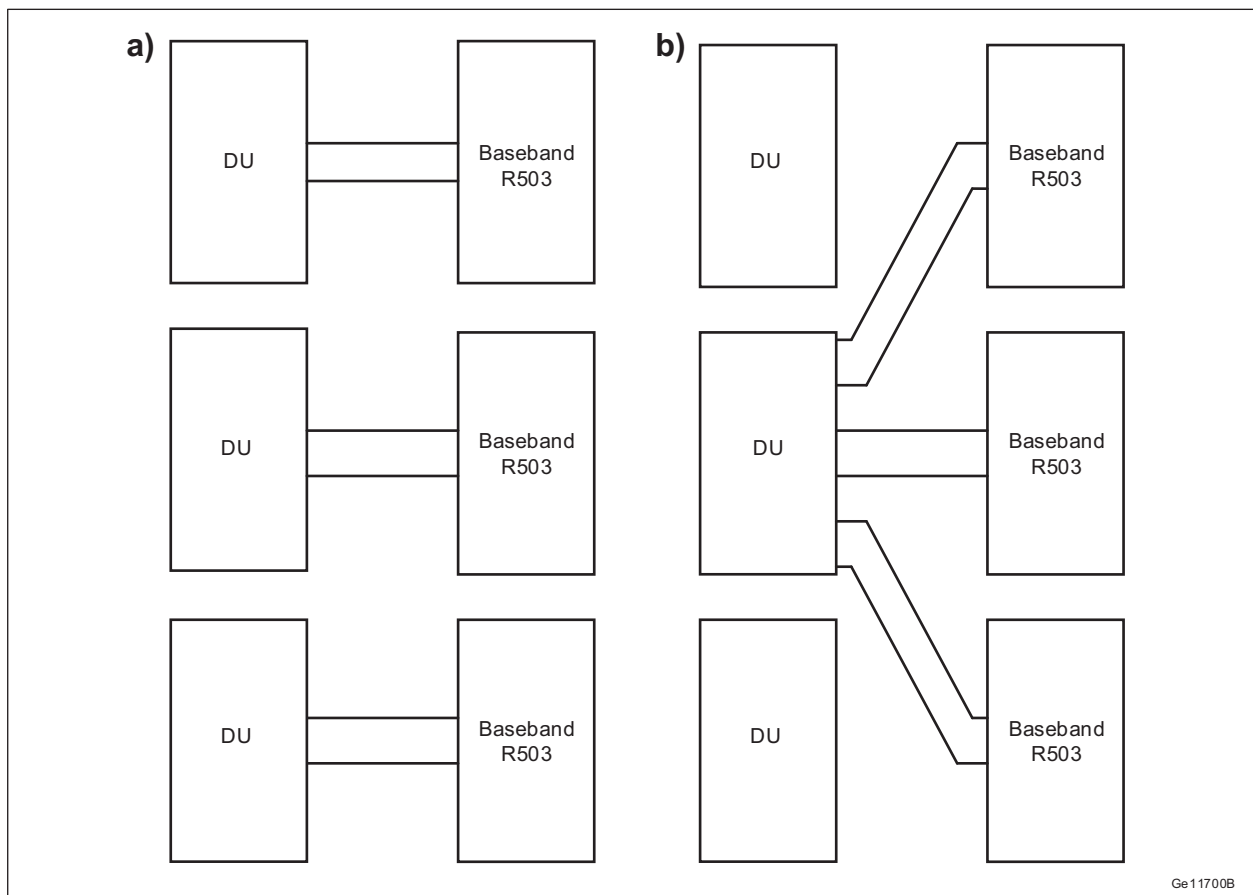
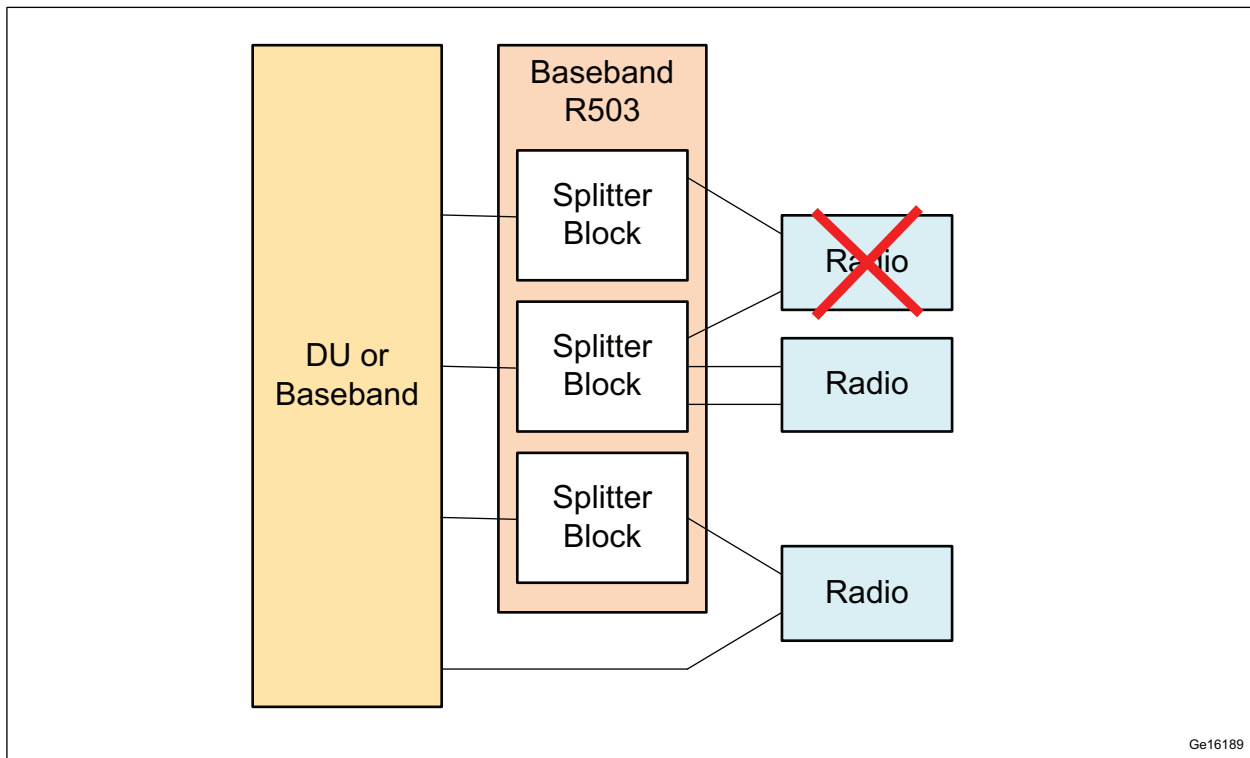


Figure 272 Examples of DBB31_81 and DBB32_81 Configurations with Three Baseband R503

Radios with dual CPRI connections are supported with Baseband R503 as follows (see [Figure 273](#)):

- Dual CPRI connections from the same splitter block in the same Baseband R503.
- One CPRI from Baseband R503 and one CPRI from DU or Baseband

Dual CPRI connections from different splitter blocks are not supported.



Ge16189

Figure 273 Supported Configurations Using Baseband R503 with Dual CPRI Radio

46.7.1.1 Baseband R503 Configurations

Baseband R503 connections are described below:

- Support for up to three splitter blocks.
- Ports on DU or Baseband unit not used for connection to Baseband R503 can be used for direct radio connection.
- Support for different CPRI line rates on each port.
- Port 8 on Baseband R503 is unused.
- Port 1 or 2 on Baseband R503 towards DU or Baseband must be connected.
- Port 1 or 2 on Baseband R503 towards DU must be connected to the core DU when shared between multiple DUs in the same eNodeB.

Multi CPRI link robustness:

- Before SW 19.Q2, multi CPRI link robustness is not supported. If the core CPRI link between DU or Baseband and Baseband R503 is lost, Baseband R503 stops.



- From SW 19.Q2, multi CPRI link robustness is supported. If the core CPRI link between Baseband and Baseband R503 is lost, Baseband R503 switches core CPRI link to an additionally available link.
- Multi CPRI link robustness is not supported with DU.
- Multi CPRI link robustness is not supported with Mixed Mode Baseband R503.

See [Table 934](#) for Baseband R503 port configuration.

Table 934 Baseband R503 Port Configuration with Three Splitter Blocks

DU or Baseband to Baseband R503		Baseband R503 to RBB	
Port on Baseband R503	Supported CPRI Line Rates (Gbps)	Port on Baseband R503	Supported CPRI Line Rates (Gbps)
1	9.8	16	2.5, 4.9, 9.8
		15	2.5, 4.9, 9.8
		14	2.5, 4.9, 9.8
		13	2.5, 4.9
2	9.8	12	2.5, 4.9, 9.8
		11	2.5, 4.9, 9.8
		10	2.5, 4.9, 9.8
		9	2.5, 4.9
3	9.8	7	2.5, 4.9, 9.8
		6	2.5, 4.9, 9.8
		5	2.5, 4.9, 9.8
		4	2.5, 4.9

46.7.1.2 Mixed Mode Baseband R503

The following rules apply to configurations with Mixed Mode Baseband R503:

- Supported from SW 18.Q1.
- Two DU or Baseband Radio Nodes can be connected in front of two splitter blocks with mixed mode radios behind them. The third splitter block can additionally be used by one of the two nodes. See [Figure 274](#).
- The unit in front of the splitter block must be a DUS or a Baseband unit. Dual and triple DU configurations are supported.
- For cascading rules with Baseband R503, see [Cascade Configurations with Baseband R503](#) on page 1303.

- Cascading between the two nodes are supported with up to one single mode radio. See [Figure 275](#).

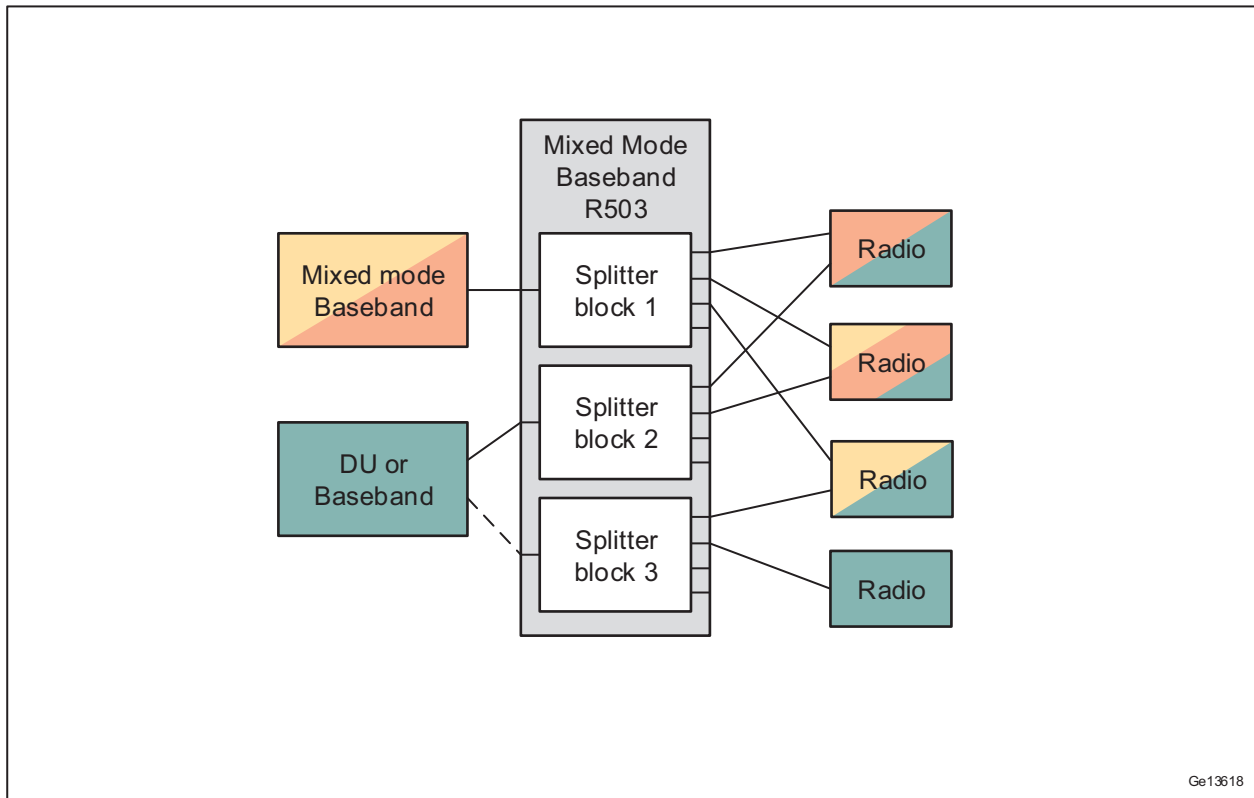


Figure 274 Mixed Mode Baseband R503 with Mixed Mode Radios Connected Between the Splitter Blocks

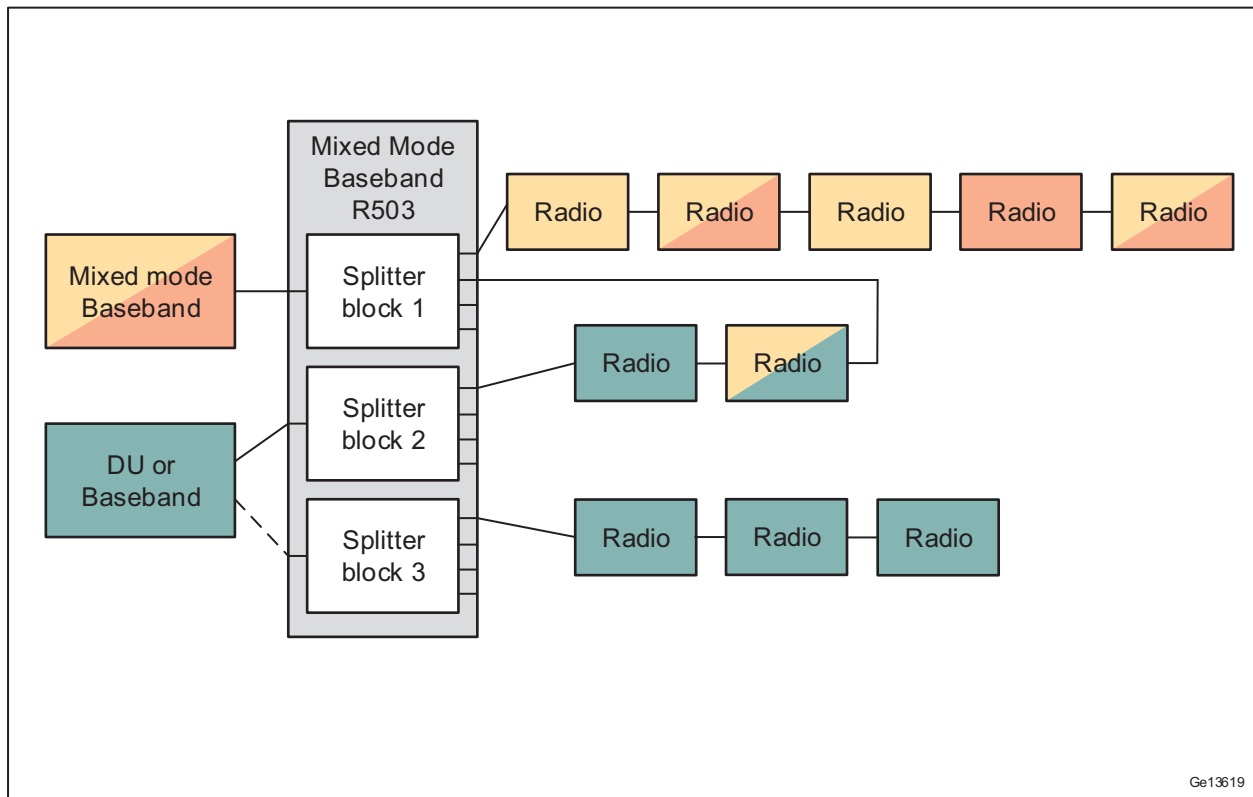


Figure 275 Cascading Behind a Mixed Mode Baseband R503

46.7.1.3 Cascade Configurations with Baseband R503

Radios can be connected to Baseband R503 in a cascade chain. Baseband R503 is treated as the first unit in that chain. [Table 935](#) lists the maximum levels of cascading behind Baseband R503 per DU or Baseband.

Table 935 Cascade Configurations with Baseband R503

DU or Baseband	Software Version Maximum Levels of Cascading Behind Baseband R503 per DU or Baseband									
	17A	17.Q 1	17.Q 2	17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1
Baseband 5212	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
Baseband 5216	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
Baseband 6303	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
Baseband 6318	-	-	-	-	-	-	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
Baseband 6502	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
Baseband 6620	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
Baseband 6630	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
DUS 31	3	3	3	3	3	3	3	3	3	3



DU or Baseband	Software Version Maximum Levels of Cascading Behind Baseband R503 per DU or Baseband									
	17A	17.Q 1	17.Q 2	17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1
DUS 41	3	3	3	3	3	3	3	3	3	3
IDU 5205	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾
IDU 5209	3	3	3	3	3	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾	5 ⁽¹⁾

(1) Maximum 16 radios per splitter block.

46.8 Fronthaul

This section describes Fronthaul capacity related to radio configurations.

See [Fronthaul 6080](#) on page 1304 for information on Fronthaul 6080.

See [Fronthaul 6392](#) on page 1305 for information on Fronthaul 6392.

46.8.1 Fronthaul 6080

The following applies to Fronthaul 6080:

- Support for 2.5, 4.9, and 9.8 Gbps CPRI line rates.
- Supported network configurations and topology:
 - DWDM in ring configuration
 - DWDM in linear configuration
 - CWDM in linear configuration
- One node only.
- Radios from radio groups 1, 3, and 6 are supported. See [Radio Groups](#) on page 101.
- Only radios connected directly to Fronthaul are supported.

Table 936 DU and Baseband Support for Fronthaul 6080

DU or Baseband		Software Version									
Type	Configuration	17A	17.Q 1	17.Q 2	17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1
DUS 31	L	X	X	X	X	X	X	X	X	X	X
DUS 41	L	X	X	X	X	X	X	X	X	X	X



DU or Baseband		Software Version									
Type	Configuration	17A	17.Q 1	17.Q 2	17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1
Baseband 5212	W					X	X	X	X	X	X
	G					X	X	X	X	X	X
	L	X	X	X	X	X	X	X	X	X	X
	W + G					X	X	X	X	X	X
Baseband 5216	W					X	X	X	X	X	X
	G					X	X	X	X	X	X
	L	X	X	X	X	X	X	X	X	X	X
	W + G					X	X	X	X	X	X
	L + G					X	X	X	X	X	X
	W + L					X	X	X	X	X	X
	W + G + L					X	X	X	X	X	X
Baseband 6303	W					X	X	X	X	X	X
	G					X	X	X	X	X	X
	L			X	X	X	X	X	X	X	X
	W + G					X	X	X	X	X	X
Baseband 6318	W							X	X	X	X
	G							X	X	X	X
	L							X	X	X	X
	W + G							X	X	X	X
	L + G							X	X	X	X
	W + L							X	X	X	X
	W + G + L							X	X	X	X
Baseband 6502	W					X	X	X	X	X	X
	L			X	X	X	X	X	X	X	X
Baseband 6620	W					X	X	X	X	X	X
	G					X	X	X	X	X	X
	L			X	X	X	X	X	X	X	X
	W + G					X	X	X	X	X	X
Baseband 6630	W					X	X	X	X	X	X
	G					X	X	X	X	X	X
	L			X	X	X	X	X	X	X	X
	W + G					X	X	X	X	X	X
	L + G					X	X	X	X	X	X
	W + L					X	X	X	X	X	X
	W + G + L					X	X	X	X	X	X

46.8.2 Fronthaul 6392

The following applies to Fronthaul 6392:

- From SW 17.Q3, supported with: DUS 31, DUS 41, Baseband 5212, Baseband 5216, Baseband 6303, Baseband 6620, Baseband 6630, and Baseband R503.



- From SW 18.Q2, supported with: Baseband 6318.
- A connected radio can be shared with another node.
- Cascading one or more radios before or after Fronthaul 6392 is not supported before SW 19.Q3.
- From SW 19.Q3, radio cascade chain has the following limitations:
 - [Radio Cascade Configuration Rules](#) on page 1093 describes radio cascade configuration rules.
 - Up to five radios in the cascade chain.
 - Maximum two fronthaul 6392 in the cascade chain.
 - The chain must be in one standard only.
 - No shared radios in the cascade chain is supported.
 - The radios in the cascade chain must have 9.8 Gbps CPRI line rate, the last radio in the cascade chain can have 2.5 Gbps.
 - Baseband R503 is supported in the cascade chain, it then consumes one cascade level.

[Table 937](#) lists supported CPRI line rates per standard.

Table 937 Fronthaul 6392 Supported CPRI Line Rates per Standard

	Standard	Software Version									
		17.Q 3	17.Q 4	18.Q 1	18.Q 2	18.Q 3	18.Q 4	19.Q 1	19.Q 2	19.Q 3	19.Q 4
Supported CPRI line rates (Gbps)	WCDMA	-	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8
	LTE	2.5	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8	2.5 9.8

For supported configurations with Fronthaul 6392 see [Figure 276](#).

- A is supported with 2.5 Gbps and 9.8 Gbps CPRI line rates.
- B and C are supported with 2.5 Gbps CPRI line rate.

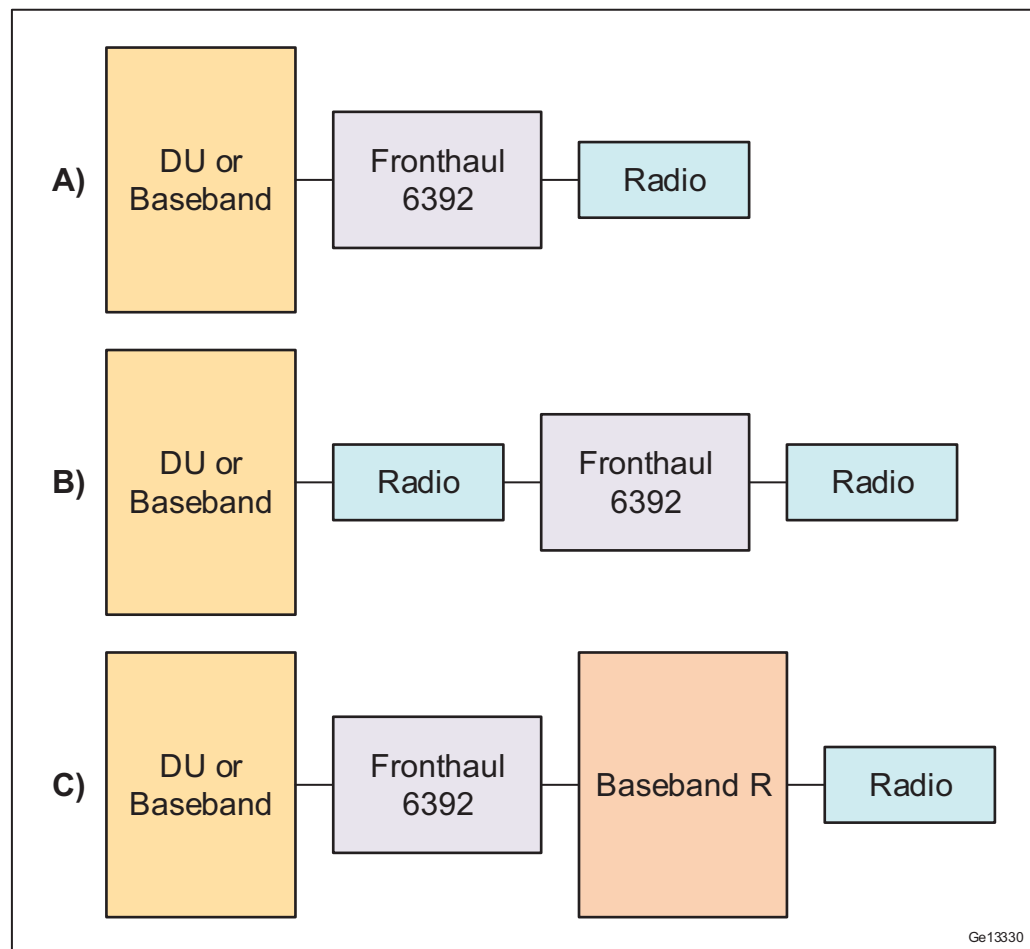


Figure 276 Supported Configurations with Fronthaul 6392

46.8.3

OPM-1-S-1 Optical Switch

The following applies from 19.Q2:

- Supports GSM, WCDMA, and LTE
- Is used together with Fronthaul 6080

For information on OPM-1-S-1 Description, see Ericsson Fronthaul 6000 library.

Table 938 Baseband Support for OPM-1-S-1 Optical Switch

Baseband	Configuration	Software Version
Baseband 5212	GSM	19.Q2
	WCDMA	
	LTE	
Baseband 5216	GSM	19.Q2



Baseband	Configuration	Software Version
Baseband 6620	WCDMA	19.Q2
	LTE	
	GSM	
Baseband 6630	WCDMA	19.Q2
	LTE	
	GSM	

46.9 CPRI

This section describes different aspects of the Common Public Radio Interface (CPRI) related to radio configurations.

For CPRI connections from DU or Baseband to radio and dependencies on radio standard, see [CPRI Connections from DU or Baseband to Radio](#) on page 1308.

For CPRI capacity when cascading radios, see [CPRI Capacity](#) on page 1309.

46.9.1 CPRI Connections from DU or Baseband to Radio

The following rules apply to the supported CPRI port connections for radios connected to one radio node and for radios connected to two radio nodes:

A radio can use Data 1, Data 2 or both ports when connected to:

- A GSM DU Radio Node with DUG, except when it is used in mixed mode with GPS-Out synchronization
- A CDMA DU Radio Node with XMU-02 connected to DUL or DUS
- An LTE or NB-IoT DU Radio Node with DUL or DUS
- A Baseband Radio Node with single mode Baseband or single mode IDU
- A Baseband Radio Node with mixed mode Baseband or mixed mode IDU
- A Baseband R503 in single mode or mixed mode

A radio can only use Data 1 towards the DU when connected to:

- A WCDMA DU Radio Node with DUW
- A WCDMA DU Radio Node with RBS 6501



A radio can use either Data 1 or Data 2 when connected to:

- An LTE DU Radio Node with RBS 6501

A radio can only use Data 2 towards the DU when connected to:

- A GSM DU Radio Node with DUG in mixed mode, using GPS-Out synchronization

For additional rules related to cascading, see [Radio Cascade Configuration Rules](#) on page 1093.

46.9.2

CPRI Capacity

In addition to DU or Baseband capacity, the available CPRI capacity in both uplink and downlink must be considered when calculating maximum number of carriers for a single radio or a number of cascaded radios, valid both for single standard and multistandard configurations. For more information, refer to document [CPRI and eCPRI Capacity](#).

Note: For LTE, the capacity is also dependent on the groups to which the radios belong to, see [Radio Groups](#) on page 101.

CPRI capacity is also dependent on the licensed feature CPRI compression.

LTE carrier combinations 15 + 5 MHz in 4TX/4RX configurations with dual CPRI and 2.5 Gbps line rates are not supported due to CPRI capacity.