

MINI-LINK RADIO SW

Release Note

Product area/family: MINI-LINK, FGB 101 474

Product name/number: MINI-LINK 6363 SW-FW
CXP 901 3640

Type of product: SW



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Furthermore, the contents of this document are subject to revision without notice due to continued progress in methodology, design, and manufacturing



1 Introduction

This document contains notes on the MINI-LINK 6363 SW-FW; CXP 901 3640.

2 New feature support

2.1 MINI-LINK 6363 SW-FW; CXP 901 3640, R1A06

New product supporting features in MINI-LINK 6363 HW = R1A

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.2 MINI-LINK 6363 SW-FW; CXP 901 3640, R1B05

Including support for CS112 MHz

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.3 MINI-LINK 6363 SW-FW; CXP 901 3640, R1C03

- Support for MINI-LINK 6363 including GaN technology.
- Changed Transmitter IF Input alarm behavior.
Traffic not restored when transmitter IF input alarm is recovered. The behavior is changed for improved compatibility according RAU2 X.

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.4 MINI-LINK 6363 SW-FW; CXP 901 3640, R1D05

- Improved handling for MINI-LINK 6363 including GaN technology.
- Introduction of enhanced power saving mode for MINI-LINK 6363.

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"



2.5 MINI-LINK 6363 SW-FW; CXP 901 3640, R1E04

- Support for MINI-LINK 6363 80
- Introduced protection for possible incorrect presentation of receiver strength level indication.

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.6 MINI-LINK 6363 SW-FW; CXP 901 3640, R1F04

Support for new frequency variants in ML6363 platform.

MINI-LINK 6363 6L
MINI-LINK 6363 6U
MINI-LINK 6363 8

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.7 MINI-LINK 6363 SW-FW; CXP 901 3640, R1G05

This release include support for the MINI-LINK 6363/2 product platform and Remote IF-cable Monitoring.

MINI-LINK 6363/2 radio platform will be available in 13, 15, 18, 23 and 38 GHz frequency bands and is optimized for lowest power consumption.

The Remote IF-cable Monitoring feature is designed to provide Performance Monitoring (PM) information on the quality of the cable between MMU and RAU/TRX.

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.8 MINI-LINK 6363 SW-FW; CXP 901 3640, R1H04

This release includes important updates for the MINI-LINK 6363/2 product platform.

MINI-LINK 6363/2 radio platform will be available in 13, 15, 18, 23 and 38 GHz frequency bands and is optimized for lowest power consumption.

Note: For compatibility information
1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"



2.9 MINI-LINK 6363 SW-FW; CXP 901 3640, R1J04

No new feature or functionality is introduced in this release.

Note: For compatibility information

1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.10 MINI-LINK 6363 SW-FW; CXP 901 3640, R1L02

- Default deactivated SW log routine (instead of default active).
- Changed transmitter ON/OFF handling for MINI-LINK 6363 28 - 42GHz
 - o It has been reported that the output power of the MINI-LINK 6363 was reduced after some days or weeks.
 - o The trigger to the problem was that the output power was turned off (and kept off for some time) while the radio was still in operation.
 - o The reason for the reduced output power was that the control signals to one component did not have the correct levels, which could result in a component performance degradation over time.
 - o This is only valid for MINI-LINK 6363 28, 32, 38 and 42 GHz.

This is corrected with new transmitter ON/OFF handling

- o Units not reported faulty were still working with the expected performance and will continue to work with expected performance.
- o It is highly recommended to not turn off the output power on MINI-LINK 6363 28, 32, 38 and 42 GHz radios working with SW CXP 901 3640 R-state < R1L, since this increases the stress on the component. However, to power off radios by power supply can be done without risk.
- o Already installed MINI-LINK 6363 28, 32, 38 and 42 GHz running SW CXP 901 3640 R-state < R1L shall be upgraded to R1L.
- o For all new installations of MINI-LINK 6363 28, 32, 38 and 42 GHz the SW shall be upgraded to CXP 901 3640 R-state R1L before installation.
- o The SW upgrade is not traffic impacting.

Note: For compatibility information

1/221 02-COH 901 536/1 "MINI-LINK Radio Unit Compatibility"

2.11 MINI-LINK 6363 SW-FW; CXP 901 3640, R1M01

- No new features in R1M01



2.12 MINI-LINK 6363 SW-FW; CXP 901 3640, R1N05

- Support for MINI-LINK 6363/4 product platform including 11, 15 and 18GHz frequency bands.
- Support for MINI-LINK 6363/2 product platform updates.

2.13 MINI-LINK 6363 SW-FW; CXP 901 3640, R1S01

- No new features in R1S01

2.14 MINI-LINK 6363 SW-FW; CXP 901 3640, R1T05

- This release include support for MINI-LINK 6363/4.

2.15 MINI-LINK 6363 SW-FW; CXP 901 3640, R2A01

This release enables support for 8kQAM for radio HW prepared for this modulation.

Note: 8kQAM modulation require also node support.

For compatibility information see MINI-LINK Radio Unit Compatibility, 1/221 02-COH 901 536/1

2.16 MINI-LINK 6363 SW-FW; CXP 901 3640, R2B08

ECO mode fine-tuned for HW \geq R4A.

For compatibility information see MINI-LINK Radio Unit Compatibility, 1/221 02-COH 901 536/1

3 Corrections

3.1 MINI-LINK 6363 SW-FW; CXP 901 3640, R1A06

- New product, no corrections.



3.2 MINI-LINK 6363 SW-FW; CXP 901 3640, R1B05

- No corrections.

3.3 MINI-LINK 6363 SW-FW; CXP 901 3640, R1C03

- Including correction for TR: HR49309 Traffic disturbance during Software Up/downgrade.
- Including correction for TR: HU79975 Transmitter IF Input Alarm ML6363. (See also new feature support)

3.4 MINI-LINK 6363 SW-FW; CXP 901 3640, R1D05

- Correction for possible false triggered transmitter IF input alarm.

3.5 MINI-LINK 6363 SW-FW; CXP 901 3640, R1E04

- No corrections.

3.6 MINI-LINK 6363 SW-FW; CXP 901 3640, R1F04

- Correction for possible occurrence of bit errors on active receiver during restart of passive radio in 1+1 HSB (protection mode).

3.7 MINI-LINK 6363 SW-FW; CXP 901 3640, R1G05

- Correction for LH flag handling in the TRX3 platform.
- Correction for Radio Restart handling from ML Craft.
- Correction for Output Power Alarm reset handling.

3.8 MINI-LINK 6363 SW-FW; CXP 901 3640, R1H04

Included corrections:

- TR 1747988 Not possible to configure CS 112MHz after SU. This problem is related to ML6363 SW-FW release R1F04 and R1G05.

3.9 MINI-LINK 6363 SW-FW; CXP 901 3640, R1J04

Included corrections in this release:

- Corrected initiation and set-up after a watchdog time-out.



3.10 MINI-LINK 6363 SW-FW; CXP 901 3640, R1L02

- No corrections.

3.11 MINI-LINK 6363 SW-FW; CXP 901 3640, R1M01

Included corrections in this release:

A sample number variable will overflow after roughly 5 months since this variable is not correctly restored. This overflow will lead to an exception reset in the Radio SW.

3.12 MINI-LINK 6363 SW-FW; CXP 901 3640, R1N05

- No corrections.

3.13 MINI-LINK 6363 SW-FW; CXP 901 3640, R1S01

- Improved cable monitoring logging now correct also the first 15min.
- Added modulation compensation related to cable monitoring.

3.14 MINI-LINK 6363 SW-FW; CXP 901 3640, R1T05

- Corrected Transmitter IF input alarm handling after transmitter off and node cold restart.

3.15 MINI-LINK 6363 SW-FW; CXP 901 3640, R2A01

This release includes the following corrections.

- Corrected/changed Transmitter IF level limit for radio HW versions using increased IF level.
- Corrected receiver frequency handling after RF-Loop and start-up from virgin-mode. (Valid for MINI-LINK 6363/2 and MINI-LINK 6363/4.)

3.16 MINI-LINK 6363 SW-FW; CXP 901 3640, R2B08

- No corrections.



4 New Deliverables

4.1 Radio Software

The MINI-LINK SW-FW will be delivered with the MINI-LINK 6363 HW according below table.

Overview of radio software load modules and applicable hardware (not included in the SBL)			
Applicable HW	SW Func. Des.	Prod. Number	R-state
MINI-LINK 6363 6 – 80	ML6363 SW-FW	CXP 901 3640	R2A01
MINI-LINK 6363/2 13 – 38	ML6363 SW-FW	CXP 901 3640	R2A01
MINI-LINK 6363/4 11 – 18	ML6363 SW-FW	CXP 901 3640	R2A01
TRX 3 6 - 11	ML6363 SW-FW	CXP 901 3640	R2A01

For detailed information about releases and downgrade blocking, please see ch.7.

4.2 New Optional Features

No new Optional Features are introduced in this release.

5 Availability Information

This SW is planned to be available on SW Gateway.

- Software Release R2B08 is planned to be available on Software Gateway in November 2020.
- Software Releases R1G05, R1H04, R1J04 and R1L02 is not available on Software Gateway after November 2018.

6 Radio SW upgrade procedure

Field recommendation:

Recommended procedure for MINI-LINK 6363 software upgrade:

1. Perform MINI-LINK 6363 SW upgrade
2. Perform SBL upgrade



7 Compatibility

7.1 General

For further information on compatibility and release dates, please refer to the following documents.

- “MINI-LINK TN R5 Compatibility”, 1/221 02-HRA 901 20/1-V1
- “MINI-LINK CN Compatibility”, 1/221 02-HRA 901 20/2
- “MINI-LINK CN 810 ETSI Compatibility”, 1/221 02-HRA 901 20/5
- “MINI-LINK 6600 R1 Compatibility”, 1/221 02-HRA 901 20/11
- “MINI-LINK Radio Unit Compatibility”, 1/221 02-COH 901 536/1
- “Product R-State history”, 1/1317-HRA 901 05

8 Known Limitations

No known limitations for the CXP 901 3640 R2B08 release.