MOTOTRBO™ System Release Notes
Professional Commercial Radios (PCR)

Version: M2023.01.07

January 11, 2024

North America Region

Contents

What's new in the Release

Radio New Features

Increasing Enhanced Privacy Key Storage from 16 to 32
Allow user to configure 32 privacy keys in Enhanced Privacy

Randomized Enhanced Privacy Key Selection
Allow users to configure the <Random> option in Enhanced Privacy which enables the radio to randomly select a privacy key for use for the duration of the call.

RM/CPS New Features

Hidden Encryption Key Values
The CPS / Radio Management software hides the encryption key value. Once programmed into the radio, the keys cannot be retrieved.

Applicable Products to both Radio and RM/CPS new features:

Region	Radios
NA	MOTOTRBO R2 MOTOTRBO R7 SL 3500e XPR 2500 XPR 3000e series XPR 7000e series XPR 7000e IS series XPR 5000e series

Infrastructure/System New Features

No new features introduced.

Feature Deprecation Notice

1.Codeplug Password
Starting with the M2021.01 release, Codeplug Password feature is deprecated for the radio and repeater Codeplug Password for the selected radios and repeaters listed on the table below. However, Codeplug Password feature remained active for the archived file Codeplug Password.

You are recommended to use the TLS-PSK Authentication feature for these radios and repeaters. The Codeplug Password functionality will not be removed to facilitate migration/transition to TLS-PSK but Motorola Solutions will no longer be providing support for the feature. This feature could be removed in a future release. The deprecation affects you if you are using Codeplug Password to set password for

the current radio or repeater codeplug.

TLS-PSK Authentication feature was introduced in the R2.10.05 software release and is available on the selected radios and repeaters listed on the following table. This feature ensures an enhanced security communication between radio or repeater and customer programming tools.
For more information, refer to New Features for MOTOTRBO Release 2.10.5 training service.

Region	Radios	
NA	XPR 7000/7000e series XPR 7000/7000e IS series XPR 5000/5000e series SL 7000/7000e series XPR 3000/3000e series	SL3500e XPR 2500 MOTOTRBO R2 MOTOTRBO R7

2.Bluetooth Permanent Discoverable Mode
Belize Refresh and Andorra Refresh radios manufactured after March 2022 do not have Bluetooth Permanent Discoverable support.

Product Versions

Listed below are all MOTOTRBO Product types with a reference to the released version of software:

Notes: From M2020.01 onwards, only products (i.e. MOTOTRBO radios, repeaters and CMSS) which are either in warranty or under a service contract are entitled to software update.
Software Update Management (SUM) was introduced with the R2.10 system release and provides products with built-in intelligence to determine if they are eligible to accept a software update. Products on prior releases must therefore be upgraded to an R2.10 system release and be eligible to accept a software update before they can be upgraded to M2020.01 onwards.

Canceled products that are still under a service contract at time of cancellation will be entitled to the software update in line with the Motorola Solutions Software Support Policy. Following cancellation only critical bug fixes will be tested for these products.

MOTOTRBO Product	Version Supported in Release
MOTOTRBO 2.0, 2.5 (excl SL Series) - XPR 7000e Series, XPR 3000e Series, XPR 5000e Series, XPR 2500 series, MOTOTRBO R7, MOTOTRBO R2	R02.23.01.7000 (NEW)
MOTOTRBO - Commercial Devices	Not supported.
MOTOTRBO - XPR 4000/6000 Series	Canceled.
Option Board – MOTOTRBO 2.0 (incl SL Series) Option Board – MOTOTRBO - XPR 4000/6000 Series	Canceled. Canceled.
Repeater - XPR 8380 / XPR 8400 Repeater - MTR 3000 Repeater - SLR 1000, SLR 5000, SLR 8000	R20.23.01.05 R20.23.01.05 R20.23.01.06

XRC 9000 / 9100 Controller	R02.100.05.1036_1695
XRT 9000 / 9100 Gateway	R02.100.05.1036_1695
XRI 9100 Interconnect	R02.100.05.1030
Network Manager (merged with XRC / XRI packages)	R02.100.05.1030
Network Manager Connection Tool	R02.100.05.1030
XRT Configuration Tool	R02.100.05.1030
CPCPS	Canceled.
CPS 2.0	2.138.245.0 (NEW)
Radio Management	2.138.245.0 (NEW)
RadioCentral Client	2.138.176.0 (NEW)
CPS	CPS V16.0 Build 828
Tuner	V23.1 Build 19
RDAC	V23.1 Build 10
AirTracer	V11.0 Build 39
Device Discovery and Mobility Service (DDMS)	R23.01.0003
Multi Channel Device Driver (MCDD)	Canceled
MNIS Data Gateway	R23.01.0027
MNIS Status Agent	R22.03.01
MOTOTRBO Motopatch	Canceled
Capacity Max ESU Launchpad	DESU_LP-R17.18.10.56-01.rhel.iso
Capacity Max System Server Installer Software Image	CVN7293I.iso
System Design Tools	Version 06.08
Sensor Management Tool	R01.00.01

3rd Party Applications	Version Supported in Release
GW3-TRBO	2.17.3.73
Avtec VP Gate	5.3.0.41
Avtec Scout Console/Scout Manager	5.3.0.54
Avtec VPGate Advanced Radio Support w/Encryption	5.3.0.16
Avtec Data Management Services - Scout Central Distributor	5.3.0.20
SmartPTT PLUS	SmartPTT-PLUS-9.13.0.895.zip
TRBOnet PLUS	TRBOnet.Plus_6.2.0.7263.zip

ETSI DMR Specification	Version Supported in Release
TS 102 361-1: the DMR air interface protocol	v2.5.1
TS 102 361-2: the DMR voice and generic services and facilities	v2.4.1
TS 102 361-3: the DMR data protocol	v1.3.1
TS 102 361-4: the DMR trunking protocol	v1.7.1 ~ 1.11.1

1. The feature sets supported in the release are compliant with the versions of ETSI DMR standard specifications listed above. Though in DMR Tier 3 there have been some things changed to existing features that are not backwards compatible, Capacity Max complies to the newer versions so may not always work with other manufacturer's infrastructure on older versions.

2. The Capacity Max System Advisor (SA) client is not accessible for the System View, Grid View and Alarm Details view if the Java version 8u211 or newer is used on the PC where SA client resides in. Downgrading the Java to any version between and including 8u181 and 8u201 will work fine.

3. USB 3.0 port is not supported for the repeater upgrade. With R2.8.0 and newer repeater release, the recommendation is to use USB 2.0 port on the PC or connect repeater via USB 2.0 hub when upgrading the repeater via USB.

4. For each CMSS (Capacity Max System Server),
    a. Order (1) T8911A, MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade on USB flash drive.
    b. Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8912A, MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade as software iso image where you will receive an e-mail with a unique link to access/download the iso file from the MyView portal. The T8912A will require an e-mail address at the time of order.
    c. NOTICE: The USB drive (T8911A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8912A) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade.

5. For the PC used for CMSS upgrade,
    a. Order (1) T8486A, MOTOTRBO Capacity Max System Server SW Update Launch Pad which contains the ESU LP software files on a DVD. (The M2023.01 upgrade requires this new ESU LP version).
    b. Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8483B, MOTOTRBO Capacity Max System Server SW Update Launch Pad where you will receive an e-mail with a unique link to access/download the ESU LP application files from the MyView portal. The T8483B will require an e-mail address at time of order.
    c. Please refer to the section “Capacity Max System Upgrade from M2022.01 or M2022.03 to M2023.01” of Capacity Max System Release Upgrade Guide for additional details. It is available on Learning Experience Portal (LXP) and the Upgrade Guide applies for the patch upgrade as well.
    d. NOTICE: The DVD (T8486A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8483B) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade
    e. The ESU Launchpad About page describes the target CMSS versions that it supports to ensure the appropriate ESU Launchpad version is ordered along with the CMSS upgrade installation files.

Known and Resolved Issues in Product Release

Overview

This section details the known MOTOTRBO product issues which remain outstanding at the time of this release of software to the field.

Known product issues are divided into two categories:

- Known issues contained within the current release
- Resolved Issues that have now been fixed within the current release

Definitions

A known issue is a problem that is currently unresolved (open). The risk and workaround aspects are included in the release note description (Known Issues) for overall assessment of the problem.

A closed or resolved issue is one that has been repaired and no longer should occur in the product after upgrading to the new product version.

Known Issues in Product Release

Known issues are the known problems that are currently unresolved (open). Following are the issue tracking number and issue descriptions that are currently unresolved in this release.

Device Impact

None.

CPS/RM Impact

None.

Infrastructure Impact

None.

Resolved Issues in Product Release

Resolved issues are the known product problems that were reported in product releases, but have now been fixed or closed. Following are the issue tracking number and issue descriptions that have been resolved in this release.

Device Impact

Issue Number:	PCR_SUB-42646 / PBI000000043708
System/Product:	**MOTOTRBO R7, XPR 5000e series** (only certain radio versions, please see list of affected Tanapas in Addendum at pages 12-13)
Description:	Occasionally the radio may resend the same GPS coordinates in a 2 minutes interval out of the hour. The issue goes away once the device is restarted.
Issue Number:	PCR_SUB-44367 / INC000008342284
System/Product:	**MOTOTRBO R7, XPR 5000e Series, XPR 7000e Series, XPR 7000e IS Series, XPR 3000e Series, MOTOTRBO R2**
Description:	Changes to the service audio and text notifications. For further details please

refer to MTN-0172-23-MOTOTRBO_Service_And_Support_Notifications.

Infrastructure Impact

None.

CPS/RM Impact

Issue Number:	DMGMT-49245 / INC000007953389
System/Product:	**XPR 3300e Series**
Description:	Not possible to assign the Zone Toggle option to the programmable button (PB) for XPR 3300e Series.

Cybersecurity

Motorola Solutions, Inc. (MSI) has delivered a PCR MOTOTRBO 2023.01 release. MSI development and operations teams continually make security updates as needed based on evaluated threats, determine protective measures, create response capabilities, and promote compliance. MSI interacts with and participates in several US and international security organizations, such as U.S. Department of Homeland Security's National Cybersecurity & Communications Integration Center (NCCIC), National Institute of Standards and Technology (NIST), The 3rd Generation Partnership Project (3GPP), Telecommunications Industry Association (TIA), European Telecommunications Standards Institute (ETSI), Digital Mobile Radio (DMR) Security standardization, and others. Standards from the aforementioned organizations can map to security controls in international standards such as Information System Standards (ISO / IEC 27001).

The PCR MOTOTRBO 2023.01 system release includes enhancements to security based on the National Vulnerability Database and industry standards:

- Ongoing vulnerability management remediation based on network scanning security tools
- Ongoing Software Lifecycle Management improvements (3rd party software)

In addition to ongoing releases for security updates, MSI has a Bug Submission Program for external entities to disclose to MSI possible security vulnerabilities or issues. Motorola Solutions encourages researchers to use the PGP key when sending sensitive information via email. Please send all security vulnerability reports to security@motorolasolutions.com.

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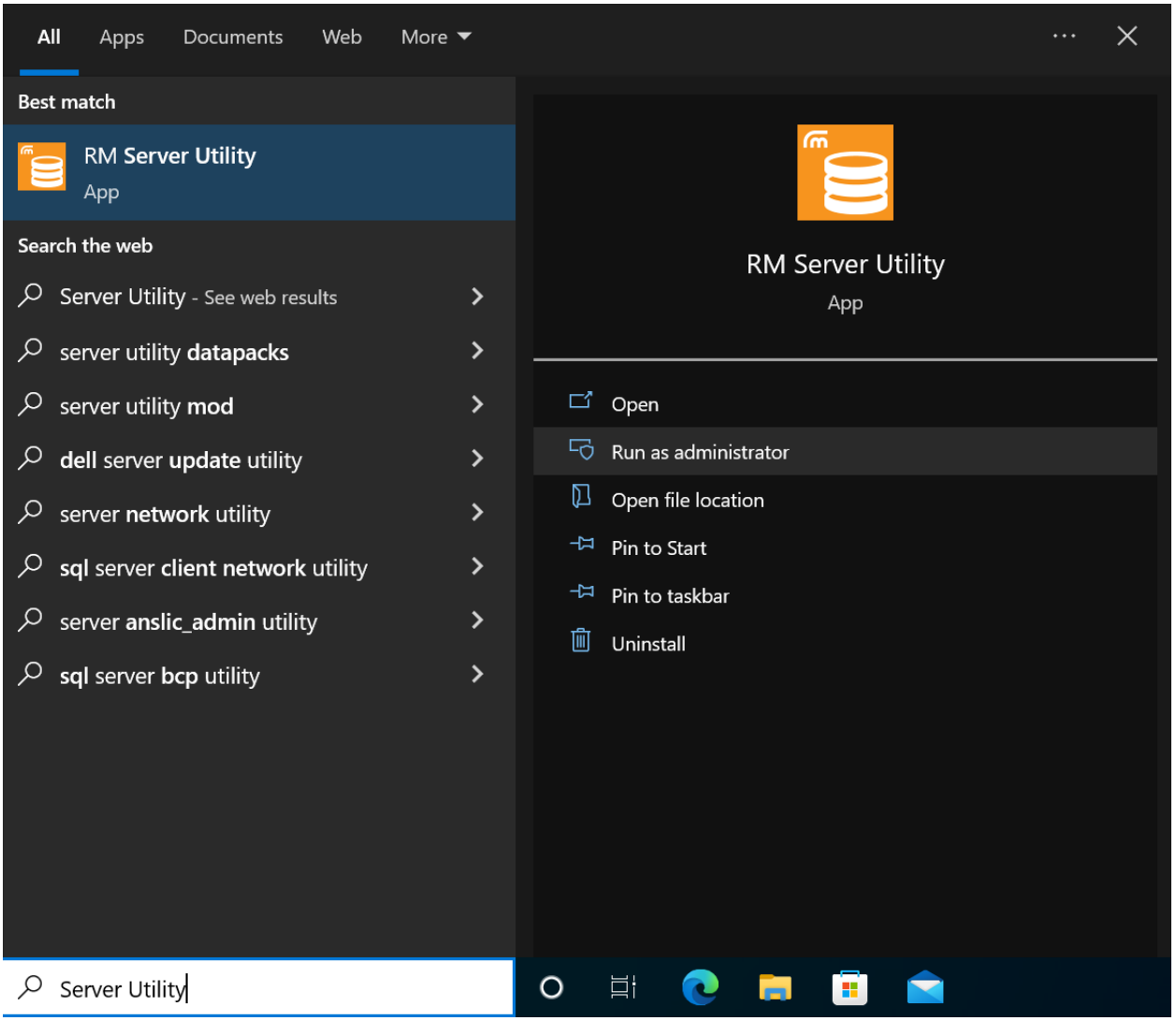
Important Note

1. Prerelease training link (Google drive)
2. New Features Training (LXP course number and link)

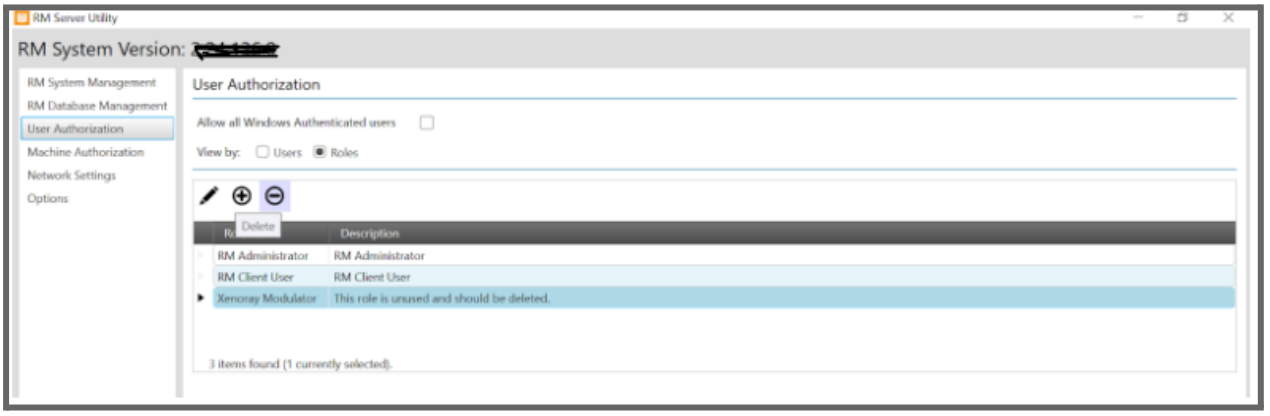
RM Access Control Feature Note

Important note for the customers who DO NOT need to use RM Access Control:
After upgrading an existing RM deployment to version 2.134.77.0 or later, there are some necessary steps to take to ensure normal operation, otherwise, users may not have access to the security keys and Radio View operations that they had prior to the upgrade.

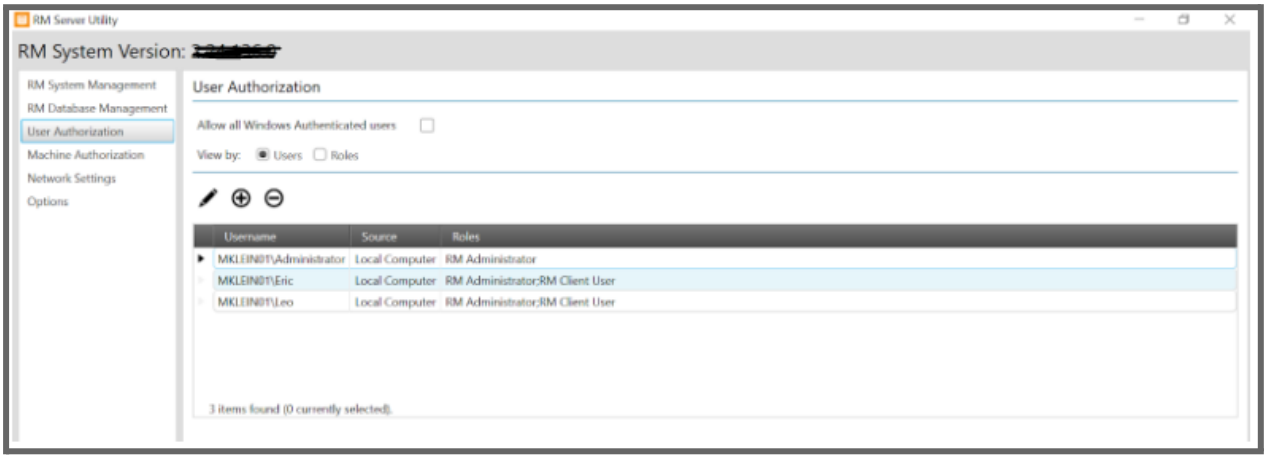
1) After performing the upgrade the user should open the RM Server Utility App on the machine that hosts the RM Server.



2) From the User Authorization tab, with the Roles radio button selected, delete any unnecessary roles that may have been created prior to the upgrade, leaving only the RM Administrator and RM Client User roles.



3) For users that do not wish to use the Access Control features at this time, select the Users radio button and ensure that each user that will be accessing RM remotely has both RM Administrator and RM Client User roles assigned to them.

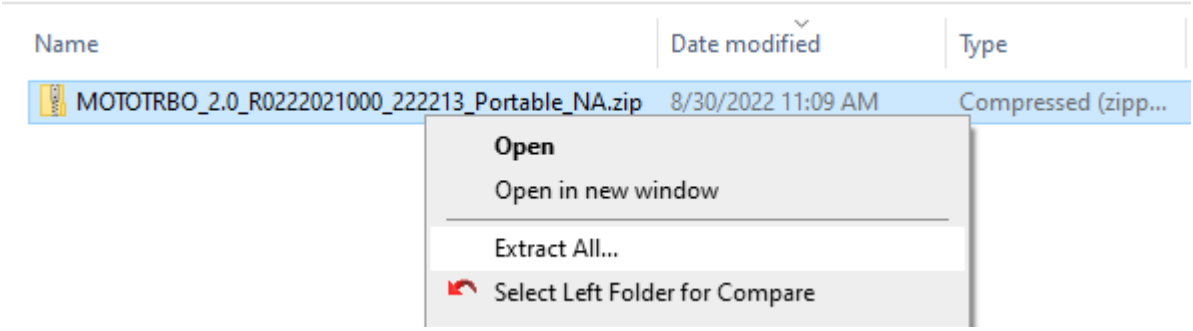


4) This completes the necessary steps for users that do not wish to use the Access Control features. The RM Server Utility can be closed at this point. Users should be able to use the RM Configuration Client to connect to the RM Server and perform normal operations.

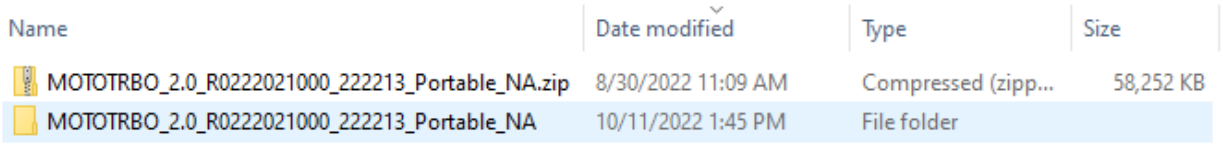
New Upgrade Package Zip Format

Starting from M2022.03, MSI will start to release the MOTOTRBO firmware upgrade package in zip format. Below are the instructions on how to install the firmware upgrade package.

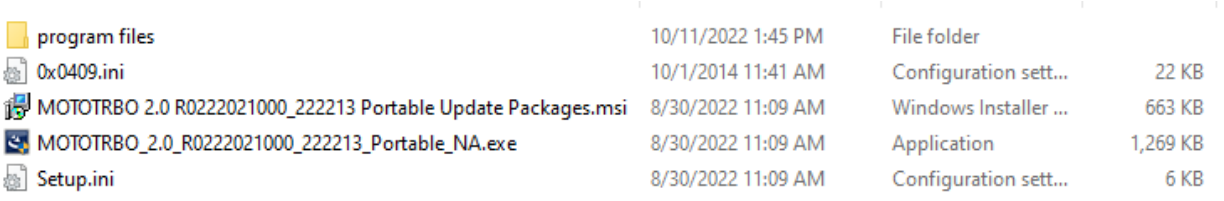
1. Create a new folder of your choice in the C:\drive. We will use “Packages” as an example.
2. Download zip file to C:\Packages
3. Extract All



4. Open Folder



5. Run the Exe



6. To save space, the folder can be deleted after successful installation

Addendum

List of GNSS receiver radios affected by the resolved issue PCR_SUB-42646 / PBI000000043708 (see further details at page 7)

Radio	Tanapa	Description
MOTOTRBO R7	PMUE5722CAB	MOTOTRBO R7 UHF 4W FKP (ENG) GNSS BT WLAN UL
	PMUE5722CBB	MOTOTRBO R7 UHF 4W FKP (ENG) GNSS BT WLAN GOB1 UL
	PMUE5723CAA	MOTOTRBO R7 UHF 4W NKP GNSS BT WLAN UL
	PMUE5723CBA	MOTOTRBO R7 UHF 4W NKP GNSS BT WLAN GOB1 UL
	PMUE5724CAB	MOTOTRBO R7 UHF 4W FKP (ENG) GNSS BT WLAN
	PMUD3491CAB	MOTOTRBO R7 VHF 5W FKP (ENG) GNSS BT WLAN UL
	PMUD3491CBB	MOTOTRBO R7 VHF 5W FKP (ENG) GNSS BT WLAN GOB1 UL
	PMUD3492CAA	MOTOTRBO R7 VHF 5W NKP GNSS BT WLAN UL

	PMUD3492CBA	MOTOTRBO R7 VHF 5W NKP GNSS BT WLAN GOB1 UL
	PMUD3493CAB	MOTOTRBO R7 VHF 5W FKP (ENG) GNSS BT WLAN
	PMUF2001AAA	R7 8/900 2.5W NKP GNSS BT WLAN UL
	PMUF2001ABA	R7 8/900 2.5W NKP GNSS BT WLAN GOB1 UL
	PMUF2000AAB	R7 8/900 2.5W FKP (ENG) GNSS BT WLAN UL
	PMUF2000ABB	R7 8/900 2.5W FKP (ENG) GNSS BT WLAN GOB1 UL
	PMUF2002AAB	R7 8/900 2.5W FKP (ENG) GNSS BT WLAN
XPR 5000e Series	PMUF2011ABUNWA	XPR 5580E 8/900M 35W GOB GNSS CD
	PMUF2011ABUNYA	XPR 5580E 8/900M 35W GOB GNSS CFS CD
	PMUD3526ABTNWA	XPR 5350E 136-174M 25W GOB GNSS ND
	PMUD3525ABTNWA	XPR 5350E 136-174M 45W GOB GNSS ND
	PMUD3525ABUNWA	XPR 5550E 136-174M 45W GOB GNSS CD
	PMUD3525ABUNYA	XPR 5550E 136-174M 45W GOB GNSS CFS CD
	PMUF2011ABTNWA	XPR 5380E 8/900M 35W GOB GNSS ND
	PMUF1651BBMNAA	XPR 5580E 8/900M 35W GOB BT/GNSS/WIFI CD
	PMUF1651BBLNAA	XPR 5380E 8/900M 35W GOB BT/GNSS/WIFI ND
	PMUF1651BBMNKA	XPR 5580E 8/900M 35W GOB GNSS CFS BT/WIFI CD
	PMUE4140CBMNKA	XPR 5550E 450-512M 40W GOB GNSS CFS BT/WIFI CD
	PMUE4140CBLNAA	XPR 5350E 450-512M 40W GOB BT/GNSS/WIFI ND
	PMUE4140CBMNAA	XPR 5550E 450-512M 40W GOB BT/GNSS/WIFI CD
	PMUE3645CBLNAA	XPR 5350E 403-470M 25W GOB BT/GNSS/WIFI ND
	PMUE3645CBMNAA	XPR 5550E 403-470M 25W GOB BT/GNSS/WIFI CD
	PMUE3649CBMNKA	XPR 5550E 403-470M 40W GOB GNSS CFS BT/WIFI CD
	PMUE3649CBMNAA	XPR 5550E 403-470M 40W GOB BT/GNSS/WIFI CD
	PMUE3649CBLNAA	XPR 5350E 403-470M 40W GOB BT/GNSS/WIFI ND
	PMUD2566DBLNAA	XPR 5350E 136-174M 25W GOB BT/GNSS/WIFI ND
	PMUD2566DBMNAA	XPR 5550E 136-174M 25W GOB BT/GNSS/WIFICD
	PMUD2567DBMNKA	XPR 5550E 136-174M 45W GOB GNSS CFS BT/WIFI CD
	PMUD2567DBLNAA	XPR 5350E 136-174M 45W GOB BT/GNSS/WIFI ND
	PMUD2567DBMNAA	XPR 5550E 136-174M 45W GOB BT/GNSS/WIFI CD