



MOTOTRBO® System Release Notes

Professional Commercial Radios (PCR) & Accessories

Version: M2022.02

October 24, 2022

North America Region

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What's New in the Release

New Radio Features

R7 Package 3 offering 3rd party accessory (offering via ADP program)

After M2022.02, 3rd party developers can start to purchase a Package 3 license via the ADP Program in order for them to build 3rd party audio accessories that have PTT, microphone, 2W high power speaker and current limit less than 100mA, which can be recognized and authenticated by the R7 portable.

The programmable buttons and the emergency button can be configured via the RM/CPS application. This is a standard feature.

Configurable automatic Transmit Time in DMR Tier III

This feature allows users to configure automatic transmit timers as low as 0.5 seconds, instead of being locked to one single value which is 4 seconds. This feature only applies only in Open Mode. This would increase worker safety for instance in a shunting area, as the group will not be blocked for long whenever someone in the group accidentally presses PTT. This feature applies to both XPR 5000e series mobile and XPR 7000e series, R7 portable radio in the CapMax system or DMR Tier III system.

New R7 portable frequency band

Support for R7 800/900 MHz models shipping Dec. 2022.

XPR 5000e series mobile

VHF and UHF2 bands product updates.

Infrastructure New Features

None.

Feature Deprecation Notice

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.

Bluetooth Permanent Discoverable Notice

XPR 7000e and XPR 3000e radios manufactured after March 2022 do not support Bluetooth Permanent Discoverable mode.

Region	Radios		Repeaters
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 R7 series	SLR 1000 Series SLR 5700 Series SLR 8000 Series

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 (incl SL Series) - XPR 7000/5000/3000 Series, XPR 7000e/5000e/3000e Series, SL 7000/7000e Series, XPR 2500, SL3500e, R7	R02.22.02.3001 (NEW)
MOTOTRBO - CP100d, CP200d, CM200d, CM300d, SL300	R01.22.01.0004
MOTOTRBO - XPR 4000/6000 Series	Canceled
Repeater - XPR 8300/XPR 8400 Repeater - MTR 3000 Repeater - SLR 1000, SLR 5700, SLR 8000	R20.22.01.02_R21.01.03 R20.22.01.02_R21.01.03 R20.22.01.02_R21.61.05
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
Capacity Max Bridge (CMB)	R20.22.01.2072_1195
CPCPS	Canceled
Radio Management / CPS 2.0	2.128.144.0 (NEW)
CPS	CPS V16.0 Build 828
Tuner	V22.2 Build 8 (NEW)
RDAC	V10.0 Build 109
AirTracer	V11.0 Build 39
Device Discovery and Mobility Service (DDMS)	R22.01.0005
Multi Channel Device Driver (MCDD)	R2.1.3
MNIS Data Gateway	R22.01.0030
MNIS Voice and Radio Command (VRC) Gateway	vrcgw-upgrade-2022.01.00.00.21.iso
MNIS Status Agent	R22.1.2
MOTOTRBO Motopatch	M2022.01 (cmss_upgrade_motopatch_M2022.01.1_2022 0518.iso)
Capacity Max ESU	DESU-PCR-21.04.12.00-94.iso
Capacity Max Trunk Controller	cmxtc-pcr-20.21.04.00-26.iso
Capacity Max System Advisor	UEM-PCR-20.22.01.11-00.iso
Capacity Max ESU Launchpad	DESU_LP-M2022.01.R17.18.10-16-01.rhel
Capacity Max System Server One-Click Upgrade	CVN7293G.zip
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	4.15.4.27
Avtec Scout Console/Scout Manager	4.15.4.19
Avtec VPGate Advanced Radio Support w/Encryption	4.15.3.8
Avtec Data Management Services - Scout Central Distributor	4.15.4.7
HP Firmware Install Media	KC435V0HF000202005.iso
SmartPTT PLUS	SmartPTT_Plus_9.11.0.1449.zip
TRBOnet PLUS	TRBOnet.Plus_6.0.0.5786.zip
VMware vSphere 6.x Configuration Media	mot-csr-vsphere-cfg-20.01.23.10-27.iso
VMware vSphere Install Media	VMware-ESXi-6.7.0-Update3-17499825-MOT-670.U3.10.6.3.8-Jan2021-01.iso

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 ~ 1.9.2

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) T8853A, MOTOTRBO M2022.01 Capacity Max System Server SW Upgrade which contains the CVN7293E.zip file loaded on a USB drive.
 - b. Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8854A, MOTOTRBO M2022.01 Capacity Max System Server SW Upgrade where you will receive an e-mail with a unique link to access/download the CVN7293G.zip

file from the MyView portal. The T8854A will require an e-mail address at the time of order.

- c. **NOTICE:** The USB drive (T8853A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8854A) 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 M2022.01 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 email with a unique link to access/download the ESU LP application files from the MyView portal. The T8483B will require an email address at time of order.
- c. Please refer to the section “Capacity Max System Server Upgrade from M2021.x to M2022.01” 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 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.

Infrastructure Impact

Issue Number: UEM-6400
System/Product: System Advisor
Description: The Grid View in System Advisor does not show a high priority call (wide-area call) on the site where preemption happened. Note that this issue is strictly related to the visibility of the call in System Advisor, not to the call/voice communication itself.
Workarounds: The missing information can be visible in the System Advisor RAW view.

Issue Number: UEM-6388
System/Product: System Advisor
Description: When the operator tries to launch System Advisor after system upgrade, a TransportException error can occur.
Workarounds: Wait up to 24 hours. After that time, the System Advisor client will be launched.

Device Impact

Issue Number: DEVICES_COMMON-5955
System/Product: MOTOTRBO R7, XPR 7000e and XPR 3000e series
Description: Switching connection between radio and other Bluetooth PAN devices several times on a PC may cause the radio not able to connect to the PC back.
Workarounds: Unpair and pair the device with the PC for reconnection.

Issue Number: PCR_SUB-36742
System/Product: MOTOTRBO R7, XPR 7000e and XPR 3000e
Description: In-door location feature has been turned on on the radio. If the user simultaneously Bluetooth PTT and performs one the following such as BT connection, or BT “Find Me”, or BT “Find Device”; the user would see that

	the suspended indoor location icon continue to display although the radio has resumed scanning the iBeacon.
Workarounds:	To remove the incorrectly suspended indoor location icon; the user can either press PTT, or perform any of the following BT operations such as BT device connection, BT “Find Me”, or BT “Find Device”.
Issue Number:	DEVICES_COMMON-7019
System/Products:	MOTOTRBO R7
Description:	Radio shows Wi-Fi 1 bar user when user turns off Wi-Fi or brings away the radio from the router in the middle of MOTOTRBO R7 activation/regionalization. After about 60s, the radio will show "Update Not Available", with continuous “Unprogrammed” tone, and blinking RED LED.
Workaround:	The user needs to power cycle radio, and the radio will automatically resume the radio activation/regionalization process.

CPS/RM 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-37583
System/Product:	All MOTOTRBO radios that support the Job Ticket feature.
Description:	Radio's Job Ticket feature does not work when the “Message” menu disabled in the radio configuration.
Issue Number:	PCR_SUB-37500
System/Product:	R7 Portable
Description:	The radio regionalization process failed and caused it to display “Update In Progress” with yellow solid LED blinking (stay in this state permanently). Subsequently, if the user attempts to “Write” the radio via CPS/RM, there will be “Error 661 - Unable to enter the programming mode” while performing Write operation to the radio.

Issue Number: PCR_SUB-37455
System/Product: R7 Portable
Description: The radio regionalization process failed and caused it to display "Update Not Available" with red solid LED blinking.

Issue Number: PCR_SUB-39489
System/Product: R7 Portable
Description: No current on VBUS line on 3rd party GCAI Mini connector.

Issue Number: PCR_SUB-36975
System/Product: R7 Portable
Description: The R7 radio displays a privacy icon during a phone call. In MOTOTRBO phone calls are not encrypted.

CPS/RM Impact

Issue Number: DMGMT-38114
System/Product: RM
Description: Uninstall RM Device Programmer from Windows Control Panel.
Intermittently the empty DP folder might be left. *
*The issue remains there but it is suggested to manually remove the DP folder.

Issue Number: DMGMT-40062
System/Products: CPS/RM
Description: Whenever a customer opens an archive codeplug, a Debug log file gets created and a GPUCache folder is in the same location as where the codeplug is.

Additional Info

Cybersecurity

Motorola Solutions, Inc. (MSI) has delivered a PCR MOTOTRBO 2022.01 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 2022.01 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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