MOTOTRBO® System Release Notes
Professional Commercial Radios (PCR) & Accessories

Version: M2021.04
Date: February 4, 2022

North America Region

Contents

What's New in the Release

Radio New Features

Software support for MOTOTRBO R7 Portable
The new MOTOTRBO portable R7 is supported.

Connect Plus change in MOTOTRBO XPR 7000e series ENABLED Portable
The Connect Plus license is changing from "Free" to "Available for Purchase" in XPR 7000e series ENABLES radios. The Connect Plus trunking cancellation was announced in 2017 and the Connect Plus radio options and aftermarket field licenses were cancelled in Sept. 2021.

Infrastructure New Features

Transport Configurations for Linked Capacity Plus
Transport configurations for the Juniper SRX300 and SRX345 routers and EX2300-24T switch have been developed for Linked Capacity Plus systems.

SLR Repeater Webpage Refresh
The SLR repeater webpage has been refreshed with a modernized interface while still maintaining the same layout and page structure.

ION Seamless Voice
Seamless Voice allows the automatic switching of Capacity Max trunked voice and signaling operation to a broadband network during loss of LMR coverage. This feature will be supported on the Capacity Max system for the M2021.04 release.

Avtec Fault Management in System Advisor
The Avtec console now has Fault Management capabilities through System Advisor.

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 is 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		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	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.

Cancelled 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
Subscriber – MOTOTRBO R7	R02.21.04.1004
Subscriber – MOTOTRBO NA XPR 30003E/XPR 7000e variants without Bluetooth and Wi-Fi.	R02.21.01.1005
Subscriber – 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	R02.21.01.1002
Subscriber – MOTOTRBO XPR 7000e. COS (Continuity of Supply) (OnSemi NXP version)	R02.21.04.3002
Subscriber – MOTOTRBO - CP100d, CP200d, CM200d, CM300d, SL300	R01.21.03.0002
Subscriber – MOTOTRBO - XPR 4000/6000 series	Cancelled

Option Board – MOTOTRBO 2.0 (incl SL Series) - XPR 7000/7000e, XPR 5000/5000e, SL 7000/7000e Option Board – MOTOTRBO - XPR 4000/XPR 6000 series	Cancelled
Repeater - XPR 8380, XPR 8400 Repeater - MTR 3000 Repeater - SLR 1000, SLR 5000, SLR 8000	R20.21.04.02 R20.21.04.02 R20.21.04.01
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)	R20.21.04.1861_1182
CPCPS	Cancelled
Paradise MPT1327 GOB CPS (not supported on R7 Series)	R02.00.05
Radio Management / CPS 2.0	2.122.70.0
CPS	CPS V16.0 Build 828
Tuner	V21.0 Build 282
RDAC	V10.0 Build 109
AirTracer	V11.0 Build 39
Device Discovery Mobility Service (DDMS)	R03.100.5001
Multi Channel Device Driver (MCDD)	R2.1.3
MNIS Data Gateway	R21.04.0016 (new)
MNIS Voice and Radio Command (VRC) Gateway	vrcgw-upgrade-20.21.04.00.00.19.iso
MNIS Status Agent	R02.90.5000
MOTOTRBO Motopatch	M2021.04 (cmss_upgrade_motopatch_M2021.04.1_2022 0114.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-20.21.04.58-00.iso
Capacity Max ESU Launchpad	DESU_LP-M2021.04.R17.12.00.93-04.rhel
Capacity Max System Server One-Click Upgrade	CVN7293F.zip
MNIS VRC Gateway	vrcgw-upgrade-20.21.04.00.00.19
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	KC435V0HF000202003.iso
SmartPTT PLUS	SmartPTT-PLUS-9.10.0.1522.zip
TRBOnet PLUS	TRBOnet.Plus_6.0.0.5671.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) T8830A, MOTOTRBO M2021.04 Capacity Max System Server SW Upgrade which contains the CVN7293F.zip file loaded on a USB drive.**
   b. **Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8831A, MOTOTRBO M2021.04 Capacity Max System Server SW Upgrade where you will receive an e-mail with a unique link to access/download the CVN7293F.zip file from the MyView portal. The T8831A will require an e-mail address at the time of order.**
   c. **NOTICE: The USB drive (T8830A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8831A) 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 M2021.04 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 "Upgrading Capacity Max Server from M2020.x/M2021.x to M2021.04" of Capacity Max System Release Upgrade Guide for additional details. It is available on the 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).
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.
The risk and workaround aspects are included in the release note description (Known Issues) for overall assessment of the problem.

Infrastructure Impact

Issue Number: **ENG_INFRA_PCR-12103**
System/Product: MOTOTRBO Network Interface Service (MNIS)
Description: Late entry joining to the call started on broadband channel doesn't work. LMR site is not able to join if no other recipients on target talkgroup.
Workarounds: Enable the Always stream option for the involved site in the TG configuration (Talkgroup Site Association).

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 UEM client will be launched.

Issue Number: **UEM-6389**
System/Product: System Advisor
Description: When the operator tries to launch System Advisor by typing a url in the browser https://< ip >:9090, the operator is presented with a blank page in Edge and Chrome.
Workarounds: To launch, the user has to 'click' on the URL and hit the 'Enter' button again. Page refresh does not help in this scenario.

Device Impact

Issue Number: **DEVICES_COMMON-5955**
System/Product: MOTOTRBO R7
Description: Switching between Bluetooth PAN devices several times on a PC may result in the R7 unable to connect.
Workarounds: Unpair and pair to reconnect the R7 radio with the PC.

Issue Number: **PCR_SUB-34893**
System/Product: MOTOTRBO R7
Description: If the user turns the volume/power knob to On position immediately after turning it in the Off position (within 2 seconds), the radio may not register the On position and continue to power off. Turn the volume/power knob to Off position again and then to On to power on the radio.
If the user turns the volume/power knob to Off position immediately after turning it in the On position (within 2 seconds), the radio may reset (power off, power on and power off again).
Workarounds: Allow the radio to power off completely before powering it on again. Allow the radio to power up completely before powering it off.

Issue Number:	**PCR_SUB-34983**
System/Product:	MOTOTRBO R7
Description:	The BT device list must be empty in order to pair a WM500 RSM with the radio. If the BT device list is not empty the radio may not remember the WM500 RSM after it goes out of range or after a power cycle.
Workarounds:	Clear the BT device list and power cycle the radio prior to pairing a WM500 RSM.

Issue Number:	**DEVICES_COMMON-6721/DEVICES_COMMON-6748**
System/Product:	XPR 7000e series (COS- latest version)

Description:nXPR 7000e series (COS - latest version) cannot connect to the OCW PTT Pod (Operations-Critical Wireless PTT pod, NNTN8191) and Zebra Scanner CS6080; and possibly other Bluetooth devices intermittently when the radio is still connected to a PAN (Personal Area Network) device.

Workarounds: Attempt again Bluetooth connection between XPR 7000e series (latest version) radios with OCW PTT device and Zebra Scanner.

Issue Number:	**PCR_SUB-35667**
System/Product:	XPR 7000e series (COS - latest version)
Description: for	XPR 7000e series (COS - latest version) stuck in the power down screen
	approximately 1 minute when the user shut down the radio shortly after the radio power up (after showing the home screen).
Workarounds:	If the user intentionally powers down the radio shortly after the radio shows the home screen, just leave the radio power down. If the user cannot wait, take off the battery to force the radio to go for complete shutdown.

Issue Number:	**PCR_SUB-35670**
System/Product:	XPR 7000e series (COS - latest version)
Description: to	XPR 7000e series (COS -latest version) connected to OCW RSM may fail
	reconnect when the RSM is out of range and brought back into range.
Workarounds:	Retry connection from the radio's Bluetooth menu or via the Bluetooth programmable button.

Notes:

- MOTOTRBO Release R02.21.04.3002 (COS) does not work with BT2.0 and below for Commercial Off The Shelf Accessories.

- MOTOTRBO Release R02.21.04.3002 (COS) does not support Permanent Bluetooth Discoverable mode.

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.

Initial release, no known issues reported in previous release.

Defect ID	Release Introduced	Product	Headline
ENG_INFRA_PCR-9959	MOTOTRBO2.8.0	Capacity Max Voice and Radio Command (VRC) Gateway	Avtec Console - Radios are missing audio when console responds to a call RFC#:
ENG_INFRA_PCR-10457	M2021.01	HP Z2 Mini Gen 5 Workstation	Dotnet3.5 is not included in the Windows 10 image RFC#: RFC_PCR-90
UEM-6316	M2021.01	System Advisor	System Advisor client does not display System View after updating Java RFC#: RFC_PCR-100
ENG_INFRA_PCR-10577	MOTOTRBO2.10.0	MTR3000	Radio Management (RM) Error 450, cannot Read/Write repeater over IP RFC#: RFC_PCR-117
ENG_INFRA_PCR-11045	M2020.02	MTR3000	Tuner Error 2143 in digital mode RFC#: RFC_PCR-113
ENG_INFRA_PCR-11117	MOTOTRBO2.6.0	Motorola Network Interface Service (MNIS)	Static Route causes unnecessary traffic to repeater system RFC#: RFC_PCR-111
ENG_INFRA_PCR-11639	M2021.01.03	ALL SLR repeaters	Issue with MOTOTRBO Link operation with firmware R20.21.01.07 or R20.21.01.08 RFC#: RFC_PCR-127
DMCI-983	M2020.02	Radio Management	RM - periodically throws error "Application has encountered an error. RFC#: RFC_PCR-57

PCR_SUB-32940	M2021.02	Radio Management	RM - OB English Language Pack does not exist RFC#: RFC_PCR-105
DMGMT-33994	M2021.01	Radio Management	RM - CapMax cannot update radios firmware / Error [#110170] RFC#: RFC_PCR-121
DMGMT-34564	R2.8.0	Tuner	Tuner fails with Error 1100 when reading data from SLR8000 repeater. RFC#: RFC_PCR-133
DMGMT-34690	M2021.01	Radio Management	RM - Cannot write to CMSS if set to French language RFC#: RFC_PCR-136
DMCI-1136	CPS2.0	CPS2.0	CPS 2.0 - Issue when cloning codeplug with Pre-shared key to XPR5550E (Error#955) RFC#:RFC_PCR-138

Additional Info

New Feature Training:

1) PCT0144NL covering R7 model

Cybersecurity

Motorola Solutions, Inc. (MSI) has delivered a PCR MOTOTRBO 2021.04 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 2021.04 system release includes enhancements to security based on the National Vulnerability Database and industry standards:
● Ongoing security development process improvements (e.g., OSS scanning improvements)

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.