



**MOTOROLA SOLUTIONS**

Motorola Solutions

**MOTOTRBO® System Release Notes**  
**Professional Commercial Radios (PCR)**

Version: M2022.03.01 v01

Date: 7<sup>th</sup> February 2023

**System Release M2022.03.01**

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## Scope

These MOTOTRBO System Release Notes cover the following MOTOTRBO products:

- DP540, DP1400, SL1600, DP2000 Series, SL2600, DP3441, DP4000 Series, DP4000Ex Series, DP4000Ex Ma Series and SL4000 Series Portables
- DP2000e Series, DP3000e Series, DP4000e Series and SL4000e Series Portables
- DM1000 Series, DM2600 and DM4000 Series Mobiles
- DM4000e Series Mobiles
- DR 3000, MTR3000, SLR 1000, SLR 5500 and SLR8000 Repeaters
- Radio Management
- CPS
- CPS 2.0
- Air Tracer
- Tuner
- RDAC
- Multi Channel Device Driver (MCDD)
- Device Discovery and Mobility Service (DDMS)
- MOTOTRBO Network Interface Service (MNIS) Data Gateway
- MOTOTRBO Network Interface Service (MNIS) VRC Gateway
- MNIS Status Agent
- Capacity Max Bridge
- Capacity Max ESU
- Capacity Max Trunk Controller
- System Advisor
- System Design Tools
- Sensor Management Tool
- Second generation MOTOTRBO MPT1327 GOB
- MPT1327 GOB CPS
- Second generation MOTOTRBO Connect Plus GOB
- Connect Plus GOB CPS
- Connect Plus Infrastructure (XRC 9000 / 9100 Controller, XRT 9000 / 9100 Gateway, XRI 9100 Interconnect, Network Manager, Network Manager Connection Tool, XRT Configuration Tool)

## Abbreviations

CPS	Customer Programming Software
CFS	Charge for Software
OTAP	Over The Air Programming
RM	Radio Management
OB	Option Board
RDAC	Repeater Diagnostics and Controls

## What's New in System Release M2022.03.01

### **Radio New Features**

The M2022.03.01 release addresses several issues for DM1000 Series, DP540, DP1400 and SL1600 radios.

See "Resolved Issues in Product Release" section.

### **Infrastructure/System New Features**

#### **Remote Repeater Programming Protection for DR3000 and MTR3000 Repeaters**

Repeater configuration using Remote Repeater Programming (IP Programming) can be protected with TLS-PSK protocol based on customer password. The same functionality has already been available on SLR series of repeaters. This feature should be used to protect repeater configuration from unauthorized access.

#### **SLR5500 and SLR8000 Repeaters**

M2022.03.01 is a "Motorola Factory Only" Release for SLR5500 and SLR8000 repeaters. There are no new features introduced with this release. The firmware package is available for the recovery process if required.

## What's New in System Release M2022.03

### **RM/CPS New Features**

#### **RM Access Control**

RM access control gives RM admin the ability to control an individual's access to radios and key tables in the RM with view and modify permission respectively.

#### **CPS/RM Contacts Management**

Support multi selection of the contacts for deletion.

User is able to export the contacts to a csv file for further editing and import it back into the programming tool.

### **Radio New Features**

#### **PCR Ownership Phase 1 (Self-Diagnostic QR Scan (R7 display model only), Remote Log (R7 with Wifi support))**

PCR Ownership Phase 1 in MOTOTRBO R7 is realized by remote log support and service code QR scan option feature. Remote log support shall run only on R7 with Internet connection to upload the radio log to IoTCS server. While Service Code QR scan option shall direct customers to the MSI Knowledge portal for self radio diagnosis in the field. More information on feature icons and service code can be found from the latest MOTOTRBO R7 User Guide and [LXP Learning Portal \(MOTOTRBO Radios Service Code Troubleshooting Guide\)](#) - Document ID: MN009539A01).

#### **NS 750 (new Nexus Omni Remote Speaker Microphone) support on R7**

This release will allow R7 series (R7 and R7a) to be connected to the new NS 750 Remote Speaker Microphone. CPS/RM Online help has been updated to include a new recommendation on maximum volume level setting for SAVOX headset, which acts as a secondary accessory audio (SAA). More information on the accessory will be available from MSI website early 2023.

### **Capacity Max New Features**

#### **ION - Enabling late call entry on LMR after roaming from broadband**

This is an enhancement of the LMR-Broadband Seamless Voice feature in Capacity Max Mode. If an ION radio is listening to an ongoing group voice call and roams from BB to LMR site, that site will be added to the ongoing call and ION radio can continue listening to that call after roaming to that LMR site. In order to add the RF site to the ongoing call, the TG ID needs to be included in the radio's talk group affiliation list.

#### **CMSS Upgrade from USB**

The upgrade of the Capacity Max system is a multi-steps process. In order to simplify and stabilize the solution, the whole upgrade process is reorganized and split into backup and restore configuration, and load factory image. The ESU Launchpad application is currently responsible for the configuration backup and restores only while the USB stick attached to the Capacity Max system server will be responsible for loading the ISO image in order to reduce the upgrade failure due to instability in network connectivity. As a result, the upgrade is faster and more reliable.

#### **Certified network design for 100+ sites in Capacity Max**

The solution provides guidance and validation for Capacity Max Systems with more than 100 sites based on HP solution in star network topology.

The feature confirms usability of HPE MSR3012 and MSR3016 routers in CMSS area.

The details can be found in the system planner.

### **Infrastructure/System New Features**

## Change RAS default setting to disable for all devices/infrastructure

RAS prevents unauthorized radios from utilizing MOTOTRBO systems for their voice/data/CSBK calls. It will be turned off on all new devices and repeaters by default. It eases the burden on MSI customers that are not using RAS because no configuration changes are needed. To use RAS on all new devices customers would have to enable it using CPS/RM.

## SLR 8000 Status Tone range tuning

Enhance tuning range of Status Tone signal in SLR 8000 repeater for tuning procedure.

For details regarding Tuning the Wireline Status Tone Level see MOTOTRBO SLR 8000 Series Basic Service & Installation Manual.

## New Part Numbers

Part Number	Description	Delivered As	How to Order
GMVN6241K	CPS 2.0 / Radio Management (and Tools)	DVD	Motorola Online or Shop
GMVN5520T	RDAC Application	DVD	Motorola Online or Shop
T8878A	MOTOTRBO M2022.03 Capacity Max System Server SW Upgrade	USB	Order Management
T8879A	MOTOTRBO M2022.03 Capacity Max System Server SW Upgrade	MyView Download	Order Management

## Cybersecurity

Motorola Solutions, Inc. (MSI) has delivered a PCR MOTOTRBO 2022.03 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 2022.03 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](mailto:security@motorolasolutions.com).

## Feature Deprecation Notice

### Bluetooth Permanent Discoverable Mode

DP4000e Series and DP2000e Series radios manufactured after March 2022 do not have Bluetooth Permanent Discoverable support.

## What's New in System Release M2022.02

### Radio New Features

#### **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 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 mobile and portable radio in the CapMax system or DMR Tier III system.

#### **Disable Radio Write to IMPRES battery on DP2000e series, SL2600, DP3441e/3661e, DP4000e Series, DP4000Ex series and SL4000e series**

This release would disable the radio write to the battery's chip DS24B33 to prevent any possibility of writing a wrong value to the battery chip.

#### **R7a SKU Reduction**

A UL capable tanapa means it has the flexibility to be used in a UL model or non UL model depending on the model selection by the customer and kit number assignment in the DC. E.g. UL models will come with UL battery and UL manual whereas non UL models will have a different battery type and no UL manual.

#### **DM4000e Series VHF uprev**

Support DM4000e Series VHF uprev to address continuity of supply. No Sales Model Number change, but Radio Super Tanapa and Service Kits uprevision.

#### **DM4000e Series UHF2 uprev**

Support DM4000e Series UHF2 uprev to address continuity of supply. No Sales Model Number change, but Radio Super Tanapa and Service Kits uprevision.

### **New Part Numbers**

Part Number	Description	Delivered As	How to Order
GMVN6241J	CPS 2.0 / Radio Management (and Tools)	DVD	Motorola Online or Shop



## What's New in System Release M2022.01.01

### Radio New Features

#### **R7 radio Root Certificate Authority (CA) Update**

R7 radio shall support new Azure Root CA to continue seamless one-time radio activation in the field. The update is due to Microsoft IOT Hub Migration which will begin in February 2023.

Without this updated root CA, the user may experience following scenario after February 2023:

If the user attempt to activate R7 radio first before scheduling the job, the user may observe:

- 1) "Job Not Found in RC" string (display model), Solid RED LED, and Unprogrammed Tone.
- 2) If this happens, users need to manually turn off and back on the radio OR turn off and on Wi-Fi on the radio.

#### **R7/R7a radio uprev**

Support R7 radio uprev to address continuity of supply. No Sales Model Number change, but Radio Super Tanapa uprevision.

#### **DM4000 Series uprev**

Support DM 4000 radios uprev to address continuity of supply. No Sales Model Number change, but Radio Super Tanapa uprevision for VHF.

#### **DM1000 Series UHF and VHF uprev**

Support DM1000 Series UHF and VHF uprev to address continuity of supply. No Sales Model Number change, but Radio Super Tanapa uprevision.

#### **DP1400 Radio uprev**

Support DP1400 Radio uprev to address continuity of supply. No Sales Model Number change, but Radio Super Tanapa uprevision.

### **New Part Numbers**

None

## What's New in System Release M2022.01

### Radio New Features

#### **SL1600 uprev**

Support SL1600 UHF & VHF uprev to address continuity of supply. No Sales model Number/Radio Tanapa change.

#### **DM1000/DM2000 Series uprev**

Support DM1000/DM2000 UHF and VHF uprev to address continuity of supply. No Sales Model Number change, but Radio Tanapa uprevision.

#### **DP4000Ex Series uprev**

Support DP4000Ex UHF and VHF uprev to address continuity of supply. No Sales Model Number change, but Radio Super Tanapa uprevision.

#### **DP4000e Series uprev**

Support DP4000 radios (UHF & VHF) to address continuity of supply. No Sales model Number/Radio Tanapa change.

#### **Radio Alert Enhancement**

To ensure no text messages sent from Radio Alert to radio drop , MNIS will transmit duplicate MSI text messages to MOTOTRBO radios. Radio enhancement ensures that MSI text receiving radios are able to show only one text message despite receiving duplicate messages.

#### **CPS/RM Enhancement**

Support Multiple Select/Delete/Copy of Contacts from Contact List on the tree view in the Customer Programming Software or Radio Management ( CPS/RM ) . Users can also do contacts list sorting by "Contact Name", "Call ID" and "Call Type" in the Grid.

#### **Fall Alert (Mandown) Set as Standard for EMEA R7 Capable radio respectively**

Fall Alert (Mandown) feature set as Standard for EMEA R7 Capable radio. Before, this feature was charged.

### Infrastructure New Features

#### **Fast Start for Capacity Max**

Fast Start allows for an immediate group voice call setup on a Capacity Max system even if all participants/sites are not available. This feature mimics the same Fast Start capability of a Connect Plus system. Fast Start will operate at a system/site level, but not at a talkgroup level. Additionally, it will apply to group voice calls including telephone patch calls (data calls not included).

#### **Transmit Interrupt in Broadband-Enabled Capacity Max Systems**

In a Capacity Max system, when a converged Talkgroup call is in progress and a Land Mobile Radio (LMR) or Broadband (BB) converged group member is transmitting voice, a supervisory radio user (on BB) or Transmit Interrupt enabled radio user (on LMR) can interrupt the other user's voice transmission and can talk to the group.

The Transmit Interrupt feature is currently only available in pure LMR and pure Broadband (BB) systems. With M2022.01, this feature will be available in hybrid systems (i.e. systems using a mixed fleet of LMR and BB devices).

## Channel Blocked Override in Capacity Plus Multi-Site

This feature improves the wide-area group call setup procedure in Capacity Plus Multi-Site systems. Wide-area group calls can now be set up successfully even if some of the associated sites have no available channels on all repeaters.

## Device Discovery and Mobility Service Connectivity Report

The Device Discovery and Mobility Service (DDMS) is a Motorola application that provides radio presence and mobility tracking services. DDMS interfaces to the radio system through MOTOTRBO Network Interface Service (MNIS).

In non-Capacity Max systems, DDMS receives messages containing radio presence information. Currently, there is no way for a user to detect if there is a network issue preventing DDMS from receiving these messages. This feature allows for a DDMS connectivity report to be sent to applications which shows whether DDMS is receiving radio presence information messages properly.

## Sign In / Sign Out for Capacity Max Open Mode

The Sign In / Sign Out feature provides the capability for users to sign in and out of their devices using unique IDs. Users can input their user ID where it is sent to the system for validation. The device shall show the user sign-in status permanently on the home screen, and the sign-in information shall be kept until the radio is turned off or the user signs out manually.

The Sign In / Sign Out feature is currently only available on Capacity Max Advantage Mode. The M2022.01 release will bring this feature to Capacity Max Open Mode.

## New Part Numbers

Part Number	Description	Delivered As	How to Order
GMVN6241H	CPS 2.0 / Radio Management (and Tools)	DVD	Motorola Online
T8853A	MOTOTRBO M2022.01 Capacity Max System Server SW Upgrade	USB & DVD	Order Management
T8854A	MOTOTRBO M2022.01 Capacity Max System Server SW Upgrade	MyView Download	Order Management

## Cybersecurity

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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](mailto:security@motorolasolutions.com).

## Product Versions

Listed below are the latest available MOTOTRBO Product Versions.

(Scroll down to the next table to see MOTOTRBO Product Versions associated with the different M2022.xx system releases)

MOTOTRBO Product	Latest version	MOTOTRBO Product	Latest version	MOTOTRBO Product	Latest version
DP540 Portables	R01.22.03.0000 (CP 22.42.08)	SLR 8000 Repeaters	R20.22.03.07 (CP 22.63.05)	Capacity Max System Advisor	**
DP1400 Portables	R01.22.03.0000 (CP 22.42.08)	Radio Management	2.134.77.0	Capacity Max ESU Launchpad	DESU_LP-DES U-R17_18.10.2 0-03.rhel
SL1600 Portables	R01.22.03.0000 (CP 22.42.08)	CPS 2.0	2.134.76.0	Capacity Max System Server Installer Software Image	CVN7293H.im g
DP2000*/DP2000e Series Portables	R02.22.03.1001 (CP 22.23.06)	CPS	16.0 (Build 828)	System Design Tools	06.08
SL2600 Portables	R02.22.03.1001 (CP 22.23.06)	Air Tracer	11.0 (Build 39)	Sensor Management Tool	R01.00.01
DP3441*/DP3000e Series Portables	R02.22.03.1001 (CP 22.23.06)	Tuner	22.3 (Build 17)	R2.X MPT1327 GOB	R01.02.06
DP4000*/DP4000e Series Portables	R02.22.03.1001 (CP 22.23.06)	RDAC	22.3 (Build 7)	MPT1327 GOB CPS	R02.00.05
R7/R7a Portables	R02.22.03.5000 (CP 22.23.06)	Multi Channel Device Driver (MCDD)	R2.1.3	R2.X Connect Plus GOB	R02.07.38 (CP 1.1.19)
DP4000Ex/DP4000Ex MA Series Portables	R02.22.03.1001 (CP 22.23.06)	Device Discovery and Mobility Service (DDMS)	R22.03.0002	R2.X Connect Plus GOB CPS	R02.07.43
SL4000*/SL4000e Series Portables	R02.22.03.1001 (CP 22.23.06)	MOTOTRBO Network Interface Service (MNIS) Data Gateway	R22.03.0021	XRC 9000 / 9100 Controller	R02.100.05.10 36_1695
DM1000 Series Mobiles	R01.22.03.0000 (CP 22.42.08)	MOTOTRBO Network Interface Service (MNIS) Voice and Radio Command (VRC) Gateway	**	XRT 9000 / 9100 Gateway	R02.100.05.10 36_1695
DM2600 Mobiles	R02.22.03.1001 (CP 22.23.06)	MOTOTRBO Network Interface Service (MNIS) Status Agent	R22.3.1	XRI 9100 Interconnect	R02.100.05.10 30
DM4000*/DM4000e Series Mobiles	R02.22.03.1001 (CP 22.23.06)	Capacity Max Bridge (CMB)	R20.22.03.2240_12 48	Network Manager (merged with XRC / XRI packages)	R02.100.05.10 30
DR 3000 Repeaters	R20.22.01.02 (CP 21.01.03)	Capacity Max Bridge Configuration Tool	R20.22.03.04	Network Manager Connection Tool	R02.100.05.10 30
MTR3000 Repeaters	R20.22.01.02 (CP 21.01.03)	MOTOTRBO Motopatch	Cancelled M2022.01 (cmss_upgrade_mo topatch_M2022.01. 1_20220518.iso)	XRT Configuration Tool	R02.100.05.10 30
SLR 1000 Repeaters	R20.22.03.06 (CP 22.63.03)	Capacity Max ESU	**		
SLR 5500 Repeaters	R20.22.03.07 (CP 22.63.05)	Capacity Max Trunk Controller	**		

\* No upgrade packages available for the following non-E series radios from M2022.02 release - DP2000 series, DP3441, DP4000 series, SL4000 series and DM4000 series

\*\* From M2022.03 release we change the way how Capacity Max upgrade is delivered (in a single installer), so the components like Voice and Radio Command (VRC) Gateway, Trunk Controller, ESU and Systems Advisor are now included in the Capacity Max System Server Installer Software Image, and have been removed as standalone upgrade packages

Listed below are all MOTOTRBO Product Versions associated with the different M2022.xx system releases. For products marked “—” in this table there were no new versions introduced with a system release.

MOTOTRBO Product	M2022.01	M2022.01.01	M2022.02	M2022.03	M2022.03.01
DP540 Portables	R01.22.01.0000 (CP 21.44.02)	R01.22.01.0004 (CP 21.44.06)	—	—	R01.22.03.0000 (CP 22.42.08)
DP1400 Portables	R01.22.01.0000 (CP 21.44.02)	R01.22.01.0004 (CP 21.44.06)	—	—	R01.22.03.0000 (CP 22.42.08)
SL1600 Portables	R01.22.01.0000 (CP 21.44.02)	R01.22.01.0004 (CP 21.44.06)	—	—	R01.22.03.0000 (CP 22.42.08)
DP2000**/DP2000e Series Portables	R02.22.01.1005 (CP 22.21.10)	—	R02.22.02.3001*** (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
SL2600 Portables	R02.22.01.1005 (CP 22.21.10)	—	R02.22.02.3001*** (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
DP3441**/DP3000e Series Portables	R02.22.01.1005 (CP 22.21.10)	—	R02.22.02.3001*** (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
DP4000**/DP4000e Series Portables	R02.22.01.1005 (CP 22.21.10)	—	R02.22.02.3001*** (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
R7/R7a Portables	R02.22.01.1005 (CP 22.21.10)	R02.22.01.3004 (CP 22.21.30)	R02.22.02.3001 (CP 22.22.15)	R02.22.03.5000 (CP 22.23.06)	—
DP4000Ex/DP4000Ex MA Series Portables	R02.22.01.1005 (CP 22.21.10)	—	R02.22.02.3001*** (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
SL4000**/SL4000e Series Portables	R02.22.01.1005 (CP 22.21.10)	—	R02.22.02.3001 (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
DM1000 Series Mobiles	R01.22.01.0000 (CP 21.44.02)	R01.22.01.0004 (CP 21.44.06)	—	—	R01.22.03.0000 (CP 22.42.08)
DM2600 Mobiles	R02.22.01.1005 (CP 22.21.10)	—	R02.22.02.3001 (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
DM4000**/DM4000e Series Mobiles	R02.22.01.1005 (CP 22.21.10)	R02.22.01.3004 (CP 22.21.30)	R02.22.02.3001 (CP 22.22.15)	R02.22.03.1001 (CP 22.23.06)	—
DR 3000 Repeaters	R20.22.01.02 (CP 21.01.03)	—	—	—	R20.22.03.06 (CP 22.03.01)
MTR3000 Repeaters	R20.22.01.02 (CP 21.01.03)	—	—	—	R20.22.03.06 (CP 22.03.01)
SLR 1000 Repeaters	R20.22.01.02 (CP 21.61.05)	—	—	R20.22.03.06 (CP 22.63.03)	—
SLR 5500 Repeaters	R20.22.01.02 (CP 21.61.05)	—	—	R20.22.03.06 (CP 22.63.03)	R20.22.03.07 (CP 22.63.05)
SLR 8000 Repeaters	R20.22.01.02 (CP 21.61.05)	—	—	R20.22.03.06 (CP 22.63.03)	R20.22.03.07 (CP 22.63.05)
Radio Management	2.126.157.0	—	2.128.144.0	2.134.77.0	—
CPS 2.0	2.126.157.0	—	2.128.144.0	2.134.76.0	—
CPS	—	—	—	—	—
Air Tracer	—	—	—	—	—
Tuner	21.0 (Build 283)* / 22.01 (Build 289)*	—	22.2 (Build 8)	22.3 (Build 17)	—
RDAC	—	—	—	22.3 (Build 7)	—
Multi Channel Device Driver (MCDD)	—	—	—	—	—

Device Discovery and Mobility Service (DDMS)	R22.01.0005	—	—	R22.03.0002	—
MOTOTRBO Network Interface Service (MNIS) Data Gateway	R22.01.0030	—	—	R22.03.0021	—
MOTOTRBO Network Interface Service (MNIS) Voice and Radio Command (VRC) Gateway	vrcgw-upgrade-2022.01.00.00.21.iso	—	—	*****	*****
MOTOTRBO Network Interface Service (MNIS) Status Agent	R22.1.2	—	—	R22.3.1	—
Capacity Max Bridge (CMB)	R20.22.01.2072_1195	—	—	R20.22.03.2240_1248	—
Capacity Max Bridge Configuration Tool	****	****	****	R20.22.03.04	—
MOTOTRBO Motopatch	M2022.01 (cmss_upgrade_motopatch_M2022.01.1_20220518.iso)	—	—	Cancelled	—
Capacity Max ESU	—	—	—	*****	*****
Capacity Max Trunk Controller	—	—	—	*****	*****
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	—	—	DESU_LP-DESU-R17.18.10.20-03.rhel	—
Capacity Max System Server Installer Software Image	CVN7293G.zip	—	—	CVN7293H.img	—
System Design Tools	—	—	—	—	—
Sensor Management Tool	—	—	—	—	—
R2.X MPT1327 GOB	—	—	—	—	—
MPT1327 GOB CPS	—	—	—	—	—
R2.X Connect Plus GOB	—	—	—	—	—
R2.X Connect Plus GOB CPS	—	—	—	—	—
XRC 9000 / 9100 Controller	—	—	—	—	—
XRT 9000 / 9100 Gateway	—	—	—	—	—
XRI 9100 Interconnect	—	—	—	—	—
Network Manager (merged with XRC / XRI packages)	—	—	—	—	—
Network Manager Connection Tool	—	—	—	—	—
XRT Configuration Tool	—	—	—	—	—

\* Tuner 21.0 (Build 283) was part of interim M2022.01 early software release for SL1600 due to a factory cutover in February 2022. Tuner version 22.01 (Build 289) is available on the CPS 2.0 / Radio Management DVD GMVN6241H.

\*\* No upgrade packages available for the following non-E series radios from M2022.02 release - DP2000 series, DP3441, DP4000 series, SL4000 series and DM4000 series

\*\*\* There are 2 separate upgrade packages for Mid-Pro Tier Portable radios in M2022.02 release:

- Regular file for DP4000Ex series and DP4000ExMa series radios only,
- New file with “Eseries” as part of the name for DP2000e series, DP3000e series, DP4000e series and SL2600 radios only

\*\*\*\* Prior to M2022.03 release Capacity Max Bridge, used as a connector between Capacity Max and Connect Plus, was part of the Capacity Max Server unit

\*\*\*\*\* From M2022.03 release we change the way how Capacity Max upgrade is delivered (in a single installer), so the components like Voice and Radio Command (VRC) Gateway, Trunk Controller, ESU and Systems Advisor are now included in the Capacity Max System Server Installer Software Image, and have been removed as standalone upgrade packages

3 <sup>rd</sup> Party Application	M2022.01	M2022.01.01	M2022.02	M2022.03	M2022.03.01
SmartPTT PLUS	9.11.0.1449	9.11.0.1449	9.11.0.1449	9.12.0.1365	9.12.0.1365
TRBOnet PLUS	6.0.0.5786	6.0.0.5786	6.0.0.5786	6.1.0.5921	6.1.0.5921
HP Firmware Install Media	KC435V0HF000202005.iso	KC435V0HF000202005.iso	KC435V0HF000202005.iso	*	*
VMware vSphere 6.x Configuration Media	mot-csr-vsphere-cfg-20.01.23.10-27.iso	mot-csr-vsphere-cfg-20.01.23.10-27.iso	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	VMware-ESXi-6.7.0-Update3-17499825-MOT-670.U3.10.6.3.8-Jan2021-01.iso	VMware-ESXi-6.7.0-Update3-17499825-MOT-670.U3.10.6.3.8-Jan2021-01.iso	*	*

\* From M2022.03 HP Firmware Install Media,VMware vSphere 6.x Configuration Media, and VMware vSphere Install Media are part of the Capacity Max System Server Installer Software Image

Notes:

1. From M2020.01 onwards only products (i.e. MOTOTRBO radios, repeaters and CMSS) which are either in warranty or covered by a service package will accept software updates. 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.
2. From system release R2.9.1 onwards there is no software support for the original DR 3000 repeaters containing 8MB of memory.

3. Due to its size, the standalone RM file which is available to download from Motorola Online up to M2021.04 has been split into a number of parts. To download and install:
  - a. Download each RM part.
  - b. Use 7-Zip to unzip each RM part individually to the same folder.
  - c. Use 7-Zip again to Unzip RM\_x.xx.xxx.x.zip.001.
  - d. Install in the usual way from the resulting RM\_x.xx.xxx.x folder.
  - e. Alternatively, the combined CPS 2.0 / RM is available as an orderable DVD (GMVN6241\_).
4. Due to its size, the combined CPS / RM (old legacy version) file which is available to download from Motorola Online has been split into 3 parts. To download and install:
  - a. Download MOTOTRBO Legacy CPS (Parts 1, 2 & 3).
  - b. Use 7-Zip to unzip each part individually to the same folder.
  - c. Use 7-Zip again to Unzip cps\_16\_dot0\_build828.zip.001.
  - d. Install in the usual way from the resulting cps\_16\_dot0\_build828 folder.
  - e. Alternatively, the combined CPS / RM is available as an orderable DVD (GMVN5141\_).
5. The Capacity Max System Advisor (SA) client is not accessible for the System View, Grid View and Alarm Details view if Java version 8u211 or newer is used on the PC where the SA client resides. Downgrading Java to any version between and including 8u181 and 8u201 will work fine.
6. USB 3.0 is not supported for repeater upgrades. For R2.8.0 and newer repeater releases, the recommendation is to use a USB 2.0 port on the PC or connect the repeater via a USB 2.0 hub in order to upgrade the repeater via USB.
7. For each CMSS (Capacity Max System Server):
  - a. Order (1) T8878A, MOTOTRBO M2022.03 Capacity Max System Server SW Upgrade which contains the CVN7293H.img loaded on a USB drive.
  - b. Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8879A, MOTOTRBO M2022.03 Capacity Max System Server SW Upgrade where you will receive an e-mail with a unique link to access/download the CVN7293H.img file from the MyView portal. The T8879A will require an e-mail address at the time of order.
  - c. NOTICE: The USB drive (T8878A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8879A) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade.
8. 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 M2022.03 upgrade requires this 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 to M2022.03" 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.
- f. NOTICE: Capacity Max Bridge, used as a connector between Capacity Max and Connect Plus, has been moved out from Cap Max Server unit to a standalone PC. The software package can be downloaded from MyView and installed on the ESU Launchpad PC or dedicated PC.

The feature sets supported by these releases are compliant to the versions of ETSI DMR standard specifications listed below. Changes to the ETSI DMR Tier 3 standard are not always backwards compatible with previous versions of the standard, Capacity Max devices comply with the newer versions so may not always work with other manufacturers' infrastructure where it is compliant to a previous version of the ETSI DMR 3 standard.

ETSI DMR Standard	M2022.01	M2022.01	M2022.02	M2022.03
TS 102 361-1: Air Interface Protocol	v2.5.1	v2.5.1	v2.5.1	v2.5.1
TS 102 361-2: Voice and Generic Services and Facilities	v2.4.1	v2.4.1	v2.4.1	v2.4.1
TS 102 361-3: Data Protocol	v1.3.1	v1.3.1	v1.3.1	v1.3.1
TS 102 361-4*: Trunking Protocol	v1.7.1 ~ 1.11.1	v1.7.1 ~ 1.11.1	v1.7.1 ~ 1.11.1	v1.7.1 ~ 1.11.1

\*1.11.1 (2021-01) is the current version of the standard, and we continue to stay compliant

## Product Availability

The following table indicates which MOTOTRBO products covered by this document are set up as orderable parts (to order via Motorola Online or Shop / Order Management) and which are available to download from MyView Portal.

MOTOTRBO Product	Orderable Part Number	MyView Portal* (up to M2021.04) Product Name / Product Line	MyView Portal* (from M2022.01) Product Name / Product Line
Upgrade Package for DP540, DP1400 and SL1600 Portables	N/A	MOTOTRBO EMEA Commercial Devices Release <Release> / MOTOTRBO EMEA Commercial Devices	MOTOTRBO EMEA Devices Release <Release> / MOTOTRBO EMEA Devices
Upgrade Package for DP2000/DP2000e Series, SL2600, DP3441, DP3000e Series, DP4000/DP4000e Series, R7/R7a, DP4000Ex Series and DP4000Ex Ma Series Portables	N/A	MOTOTRBO EMEA Professional Devices Release <Release> / MOTOTRBO EMEA Professional Devices	MOTOTRBO EMEA Devices Release <Release> / MOTOTRBO EMEA Devices
Upgrade Package for SL4000/SL4000e Series Portables	N/A	MOTOTRBO EMEA Professional Devices Release <Release> / MOTOTRBO EMEA Professional Devices	MOTOTRBO EMEA Devices Release <Release> / MOTOTRBO EMEA Devices
Upgrade Package for DM1000 Series Mobiles	N/A	MOTOTRBO EMEA Commercial Devices Release <Release> / MOTOTRBO EMEA Commercial Devices	MOTOTRBO EMEA Devices Release <Release> / MOTOTRBO EMEA Devices
Upgrade Package for DM2600 Mobiles	N/A	MOTOTRBO EMEA Professional Devices Release <Release> / MOTOTRBO EMEA Professional Devices	MOTOTRBO EMEA Devices Release <Release> / MOTOTRBO EMEA Devices
Upgrade Package for DM4000/DM4000e Series Mobiles	N/A	MOTOTRBO EMEA Professional Devices Release <Release> / MOTOTRBO EMEA Professional Devices	MOTOTRBO EMEA Devices Release <Release> / MOTOTRBO EMEA Devices
Upgrade Package for DR 3000 and MTR3000 Repeaters	N/A	MOTOTRBO EMEA Repeaters Release <Release> / MOTOTRBO EMEA Repeaters	MOTOTRBO EMEA Repeaters Release <Release> / MOTOTRBO EMEA Repeaters
Upgrade Package for SLR 1000, SLR 5500 and SLR 8000 Repeaters	N/A	MOTOTRBO EMEA Repeaters Release <Release> / MOTOTRBO EMEA Repeaters	MOTOTRBO EMEA Repeaters Release <Release> / MOTOTRBO EMEA Repeaters
RDAC	GMVN5520_ (DVD)	N/A	N/A
Legacy CPS	GMVN5141_ (DVD)	MOTOTRBO EMEA Software Release R2.9.8 / MOTOTRBO EMEA Software	MOTOTRBO EMEA Software Release R2.9.8 / MOTOTRBO EMEA Software
CPS 2.0	GMVN6241_ (DVD)	MOTOTRBO EMEA Software Release <Release> / MOTOTRBO EMEA Software	MOTOTRBO CPS and RM Release <Release> / MOTOTRBO CPS and RM
Radio Management	GMVN6241_ (DVD)	MOTOTRBO EMEA Software Release <Release> / MOTOTRBO EMEA Software	MOTOTRBO CPS and RM Release <Release> / MOTOTRBO Software
Air Tracer	GMVN6241_ (DVD)	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software
Tuner	GMVN6241_ (DVD)	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software
Multi Channel Device Driver (MCDD)	GMVN6241_ (DVD)	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software
Device Discovery Mobility Service (DDMS)	GMVN6241_ (DVD)	MOTOTRBO EMEA General Software Tools /	MOTOTRBO EMEA General Software Tools /

		MOTOTRBO EMEA Software	MOTOTRBO EMEA Software
MOTOTRBO Network Interface Service (MNIS) Data Gateway	GMVN6241_ (DVD)	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software
MOTOTRBO Network Interface Service (MNIS) Status Agent	GMVN6241_ (DVD)	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software
MOTOTRBO Capacity Max System Server SW Update Launch Pad	T8486A** (DVD)	N/A	N/A
MOTOTRBO Capacity Max System Server SW Update Launch Pad	T8483B** (MyView Portal)	ESU Launchpad 1.0 (<Release>)***/ MOTOTRBO Capacity Max	ESU Launchpad 1.0 (<Release>)***/ MOTOTRBO Capacity Max
MOTOTRBO Capacity Max System Server (CMSS) Windows Update	T8735A** (DVD)	N/A	N/A
MOTOTRBO Capacity Max System Server (CMSS) Windows Update	T8736B** (MyView Portal)	CMSS Windows Motopatch***/ MOTOTRBO Capacity Max	CMSS Windows Motopatch***/ MOTOTRBO Capacity Max
MOTOTRBO 2.9.X Capacity Max System Server SW Upgrade	T8480A** (USB)	N/A	N/A
MOTOTRBO 2.9.X Capacity Max System Server SW Upgrade	T8479B** (MyView Portal)	CMSS Upgrade Package 2.9.8 Full***/ MOTOTRBO Capacity Max	CMSS Upgrade Package 2.9.8 Full***/ MOTOTRBO Capacity Max
MOTOTRBO 2.10.X Capacity Max System Server SW Upgrade	T8482A** (USB & DVD)	N/A	N/A
MOTOTRBO 2.10.X Capacity Max System Server SW Upgrade	T8481A** (MyView Portal)	CMSS Upgrade Package 2.10.X***/ MOTOTRBO Capacity Max	CMSS Upgrade Package 2.10.X***/ MOTOTRBO Capacity Max
MOTOTRBO M2020.01 Capacity Max System Server SW Upgrade	T8733A** (USB & DVD)	N/A	N/A
MOTOTRBO M2020.01 Capacity Max System Server SW Upgrade	T8734B** (MyView Portal)	CMSS Upgrade Package M2020.01***/ MOTOTRBO Capacity Max	CMSS Upgrade Package M2020.01***/ MOTOTRBO Capacity Max
MOTOTRBO M2020.02 Capacity Max System Server SW Upgrade	T8765A** (USB & DVD)	N/A	N/A
MOTOTRBO M2020.02 Capacity Max System Server SW Upgrade	T8766A** (MyView Portal)	CMSS Upgrade Package M2020.02***/ MOTOTRBO Capacity Max	CMSS Upgrade Package M2020.02***/ MOTOTRBO Capacity Max
MOTOTRBO M2021.01 Capacity Max System Server SW Upgrade	T8785A** (USB & DVD)	N/A	N/A
MOTOTRBO M2021.01 Capacity Max System Server SW Upgrade	T8786A** (MyView Portal)	CMSS Upgrade Package M2021.01***/ MOTOTRBO Capacity Max	CMSS Upgrade Package M2021.01***/ MOTOTRBO Capacity Max
MOTOTRBO M2021.02 Capacity Max System Server SW Upgrade	T8813A** (USB & DVD)	N/A	N/A
MOTOTRBO M2021.02 Capacity Max System Server SW Upgrade	T8814A** (MyView Portal)	CMSS Upgrade Package M2021.02***/ MOTOTRBO Capacity Max	CMSS Upgrade Package M2021.02***/ MOTOTRBO Capacity Max
MOTOTRBO M2021.04 Capacity Max System Server SW Upgrade	T8830A** (USB & DVD)	N/A	N/A
MOTOTRBO M2021.04 Capacity Max System Server SW Upgrade	T8831A** (MyView Portal)	CMSS Upgrade Package M2021.04***/ MOTOTRBO Capacity Max	CMSS Upgrade Package M2021.04***/ MOTOTRBO Capacity Max
MOTOTRBO M2022.01 Capacity Max System Server SW Upgrade	T8853A** (USB & DVD)	N/A	N/A
MOTOTRBO M2022.01 Capacity Max System Server SW Upgrade	T8854A** (MyView Portal)	CMSS Upgrade Package M2022.01***/ MOTOTRBO Capacity Max	CMSS Upgrade Package M2022.01***/ MOTOTRBO Capacity Max
MOTOTRBO M2022.03 Capacity Max System Server SW Upgrade	T8878A** (USB)	N/A	N/A

MOTOTRBO M2022.03 Capacity Max System Server SW Upgrade	T8879A** (MyView Portal)	CMSS Upgrade Package M2022.03*** / MOTOTRBO Capacity Max	CMSS Upgrade Package M2022.03*** / MOTOTRBO Capacity Max
R2.X MPT1327 GOB Upgrade Kit	N/A	MOTOTRBO MPT1327 GOB CPS and Upgrade Kits / MOTOTRBO EMEA Software	MOTOTRBO MPT1327 GOB CPS and Upgrade Kits / MOTOTRBO EMEA Software
MPT1327 GOB CPS	N/A	MOTOTRBO MPT1327 GOB CPS and Upgrade Kits / MOTOTRBO EMEA Software	MOTOTRBO MPT1327 GOB CPS and Upgrade Kits / MOTOTRBO EMEA Software

\* Login to MyView at <https://myview.motorolasolutions.com> , expand Entitlements on the left side menu, and click Software, then check for Product Name and Product Line as described in the table

\*\* The Capacity Max System Software can only be ordered via Order Management

\*\*\* Only becomes available if MyView Portal part number was ordered via Order Management.

## Documentation

The MOTOTRBO System Release Notes are available on MyView Portal in Entitlements / Software under Product Name and Product Line “MOTOTRBO EMEA System Release Notes” at:

<https://myview.motorolasolutions.com>

The latest MOTOTRBO User Guides, Quick Reference Guides, Basic Service Manuals, Installation Manuals, Accessory Leaflets, EME Safety Booklets, RED Leaflets, UL/TIA Manuals, ATEX Safety and Approved Accessory leaflets, System Planner (68007024085\_), Radio Management System Planner (MN004686A01\_) and Capacity Max System Advisor Guide (MN002730A01\_) are available on the Learning Experience Portal (LXP) at:

<https://learning.motorolasolutions.com>

The latest MOTOTRBO Declaration of Conformity (DoC) documents with attached ATEX DEKRA certificates (where applicable) are available on the EMEA “Documents of Compliance” Website at:

[https://www.motorolasolutions.com/en\\_xu/support/emea-compliance.html](https://www.motorolasolutions.com/en_xu/support/emea-compliance.html)

## Training Material

The following courses are available on the Learning Experience Portal (LXP) and open for enrolment to Partners and Customers.

### New courses

[PCT0154](#) MOTOTRBO M2022.03 New Features Training

### Registration

Registration for these classes is open and available through the LXP at:

<https://learning.motorolasolutions.com>

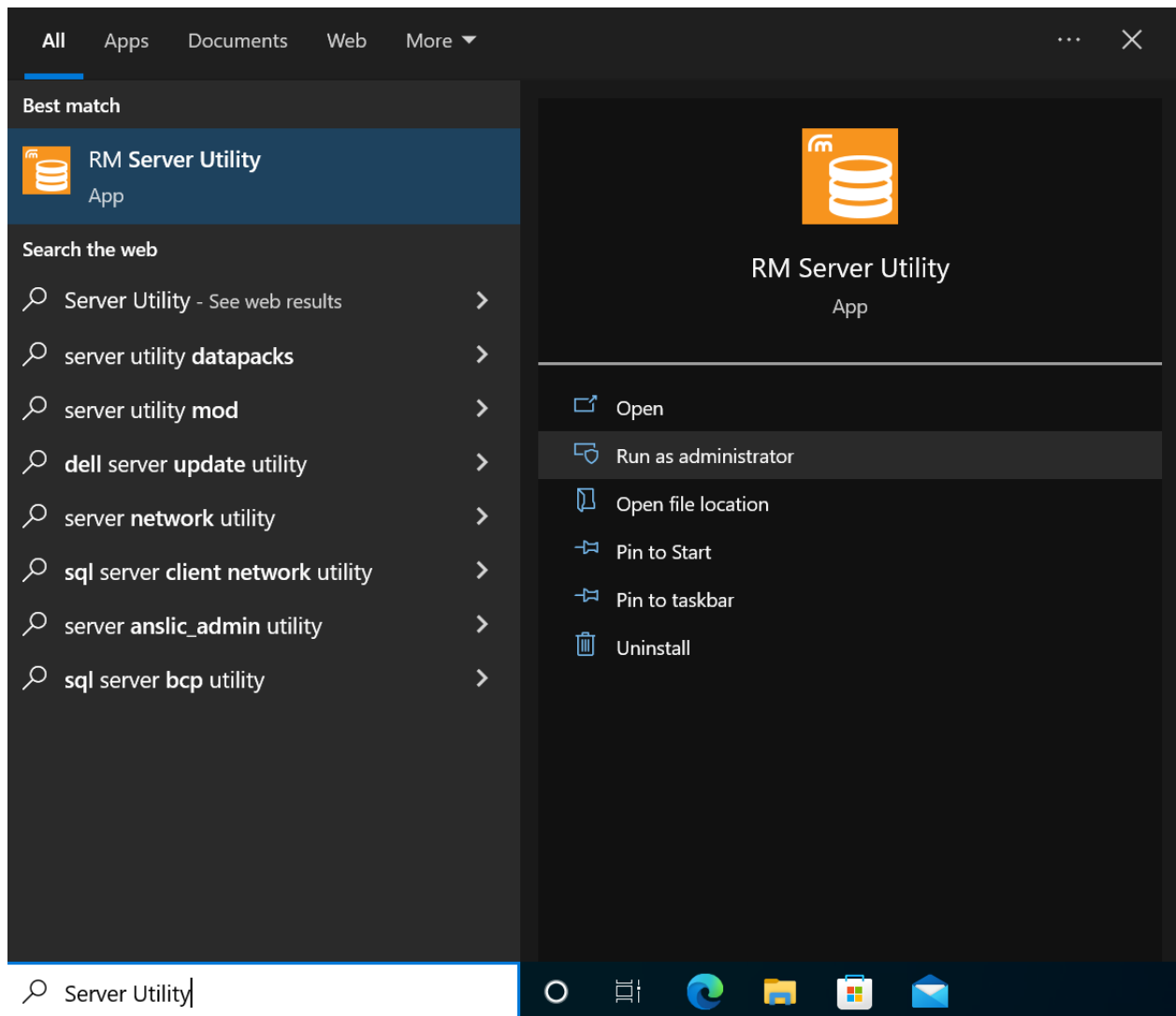
## Important Notes

### RM Access Control Feature Note

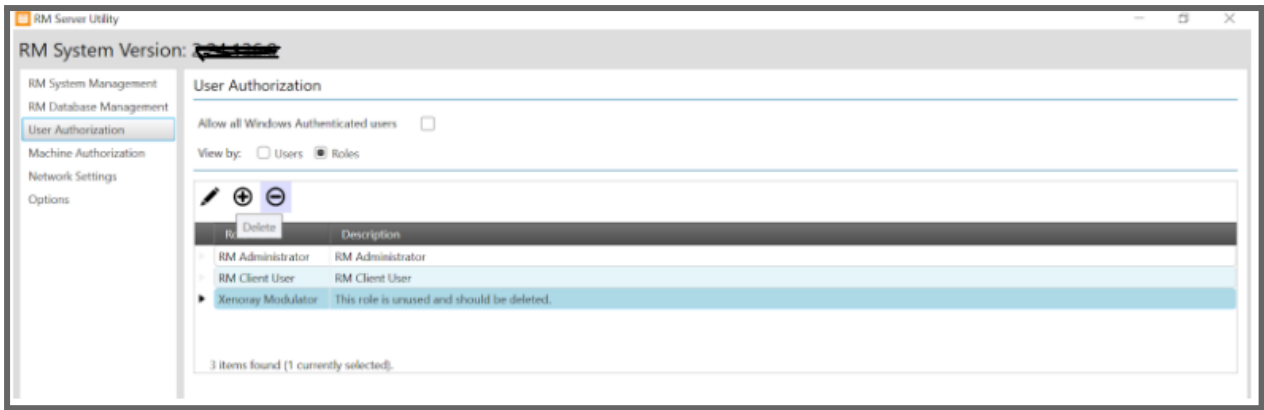
#### Important note for the customers who DO NOT need to use RM Access Control:

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.

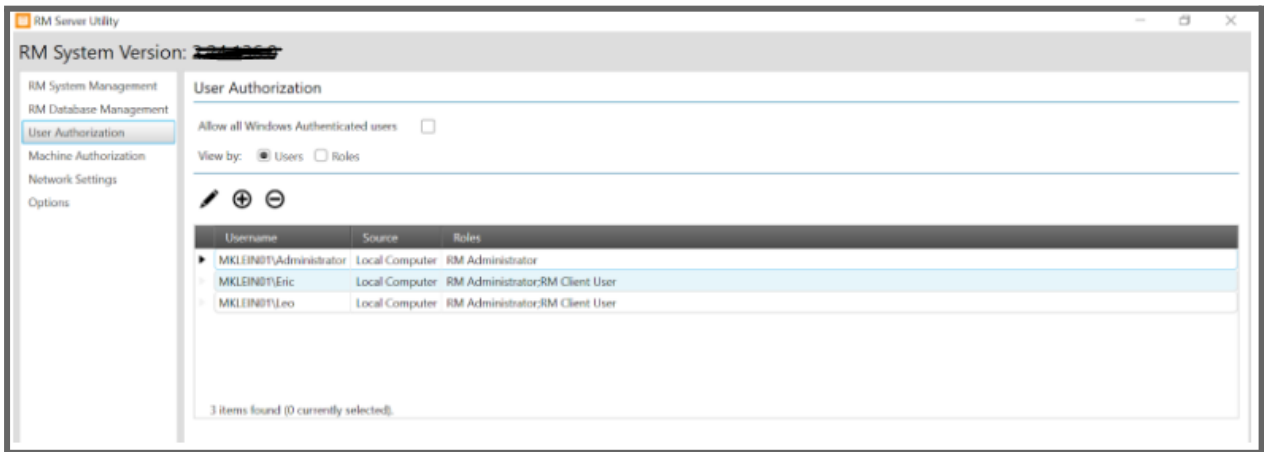
- 1) After performing the upgrade the user should open the RM Server Utility App on the machine that hosts the RM Server.



- 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



Name	Date modified	Type
MOTOTRBO_2.0_R0222021000_222213_Portable_NA.zip	8/30/2022 11:09 AM	Compressed (zipp...

Open

Open in new window

---

Extract All...

Select Left Folder for Compare

4. Open Folder

Name	Date modified	Type	Size
MOTOTRBO_2.0_R0222021000_222213_Portable_NA.zip	8/30/2022 11:09 AM	Compressed (zipp...	58,252 KB
MOTOTRBO_2.0_R0222021000_222213_Portable_NA	10/11/2022 1:45 PM	File folder	

5. Run the Exe

program files	10/11/2022 1:45 PM	File folder	
0x0409.ini	10/1/2014 11:41 AM	Configuration sett...	22 KB
MOTOTRBO 2.0 R0222021000_222213 Portable Update Packages.msi	8/30/2022 11:09 AM	Windows Installer ...	663 KB
MOTOTRBO_2.0_R0222021000_222213_Portable_NA.exe	8/30/2022 11:09 AM	Application	1,269 KB
Setup.ini	8/30/2022 11:09 AM	Configuration sett...	6 KB

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

### Upgrades to M2020.01 Onwards

From M2020.01 onwards only products (i.e. MOTOTRBO radios, repeaters and CMSS) which are either in warranty or covered by a service package will accept software updates. 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. Please refer to the MOTOTRBO Post Cancellation Support Policy for further information.

When a service package is purchased, a SUM license is issued and pre-registered (in the Motorola Solutions licensing database) to the product serial number. The SUM license is then available for retrieval and activation in the product using Radio Management (RM) or the Customer Programming Software 2.0 (CPS). Once a SUM license has been activated in a product, that product is then eligible to accept software updates for the duration of the MOTOTRBO Service Package.

Note: Selected radio models shipped since 18-Nov-2019 with enhanced warranties are eligible to accept software updates for a period of up-to 5 years.

### **R2.10.10 Upgrade Packages**

The R2.10.10 radio upgrade packages are only able to upgrade radios already containing R2.10 system release firmware. For radios containing pre-R2.10 system release firmware they first need to be upgraded to a previous R2.10 system release before they can be upgraded to R2.10.10. This restriction does NOT apply to the R2.10.10 repeater upgrade packages.

### **MOTOTRBO™ CPS 2.0**

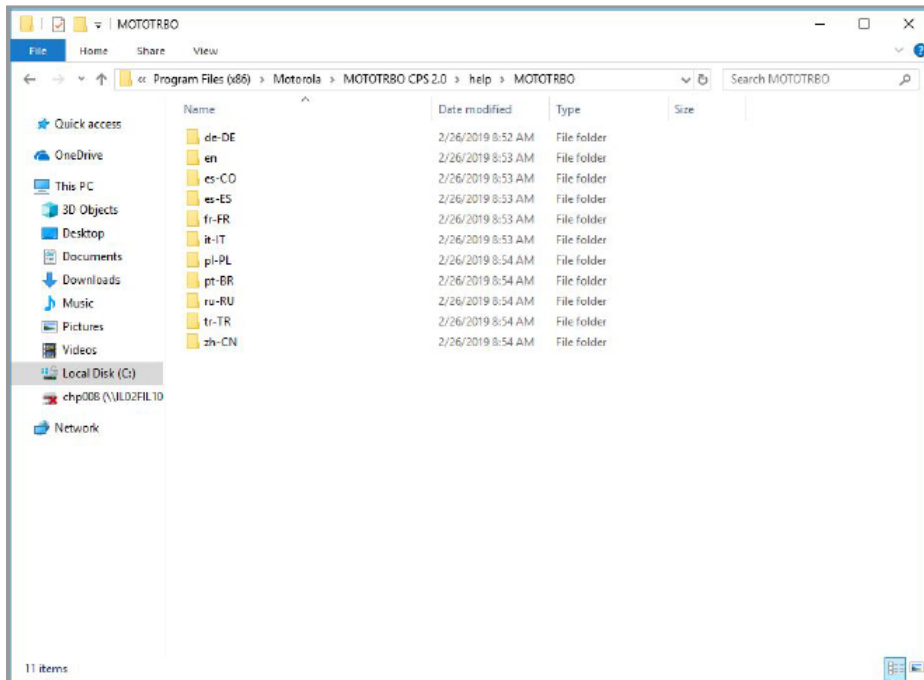
The old MOTOTRBO Legacy CPS which supports up to MOTOTRBO system release R2.9 (including minor releases) has now been retired, however it remains available to download from MOL and order as a DVD so that customers can continue to configure and upgrade devices containing old MOTOTRBO system releases.

The old MOTOTRBO Legacy CPS has been replaced by the new MOTOTRBO CPS 2.0 introduced with MOTOTRBO system release R2.10. The MOTOTRBO CPS 2.0 provisioning and license management functionality is tested for up to three previous releases while the MOTOTRBO CPS 2.0 software update support is tested for up to five previous releases.

### **MOTOTRBO™ CPS 2.0 Version 2.18.95.0 Online Help**

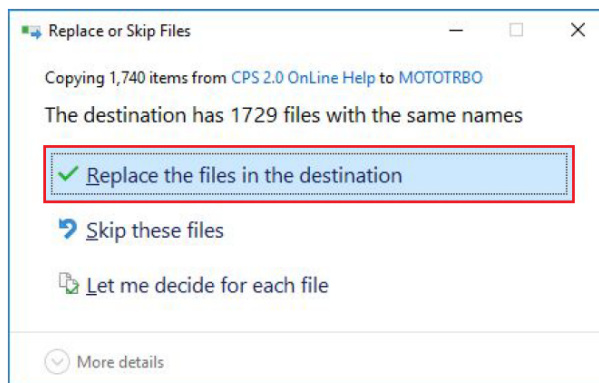
MOTOTRBO CPS 2.0 version 2.18.95.0 provides only partial international language support for OnLine Help. Users requiring full international language support for OnLine Help shall be required to download and install the latest MOTOTRBO CPS 2.0 OnLine Help file from MOL as follows:

1. Ensure the MOTOTRBO CPS 2.0 application is not running.
2. Download the latest MOTOTRBO CPS 2.0 OnLine Help file (CPS\_2.0\_Online\_Help.zip) from the “System Releases / R2.10.x / Software Tools” MOTOTRBO Resource Centre Location on MOL.
3. Extract the content of the zipped file and a new File Explorer window should open containing a number of extracted Folders.
4. Open another File Explorer window and go to “C:\Program Files (x86)\Motorola\MOTOTRBO CPS 2.0\help\MOTOTRBO”.

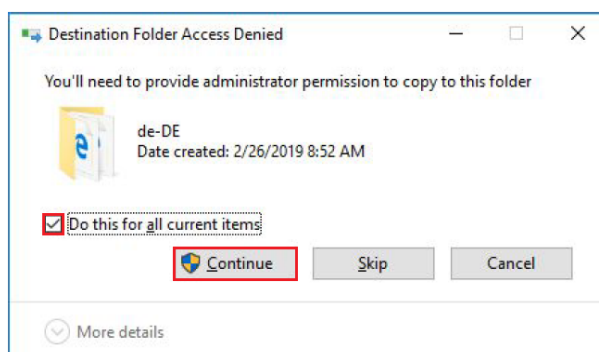


5. Copy all the Folders extracted from the zipped file and Paste (Overwrite) all the folders of the same name at “C:\Program Files (x86)\Motorola\MOTOTRBO CPS 2.0\help\MOTOTRBO”.
6. While the above folders are being overwritten:

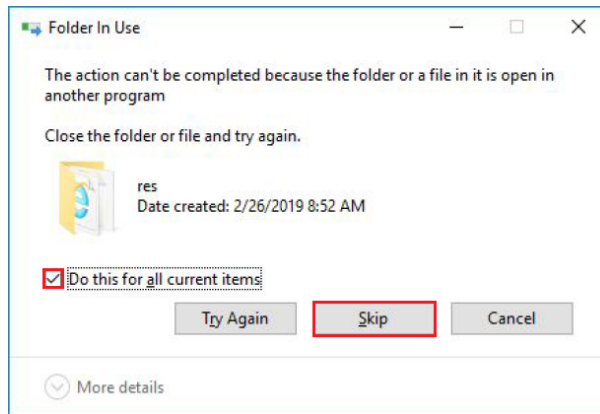
If the following pop-up window appears then select **“Replace the files in the destination”**



If the following pop-up window appears then ensure **“Do this for all current items”** is selected and then select **“Continue”**



If the following pop-up window appears then ensure **“Do this for all current items”** is selected and then select **“Skip”**



7. Launch the MOTOTRBO™ CPS 2.0 application.
8. To start using the Online Help, select the Menu option **“Help”** and then click **“Contents and Index”** (note: the Online Help language is determined by the Language selected in the CPS 2.0 Settings Menu).

MOTOTRBO CPS 2.0 versions 2.21.61.0 onwards provide full international language support for Online Help, so no OnLine Help file downloads are required for these releases.

### **MOTOTRBO™ CPS Version 16.0 (Build 827) Error 1646 (for Italian Language)**

There's a format issue caused by the Italian language online help file included with the Legacy CPS Version 16.0 (Build 827) supplied with DVD GMVN5141AV that results in Error 1646 when the Italian language is selected.

There are 2 alternative corrective options as follows:

#### **Repair Existing Installation**

Replace help-text file (help\_it-it.xml) which is located at C:\Program Files (x86)\Motorola\MOTOTRBO CPS\it-it\help\_it-it.xml with a revised version available from Motorola Online (“MOTOTRBO Programming Software” folder).

Note: help\_it-it.xml needs to be extracted from help\_it-it.zip.

#### **Fresh Install**

1. Uninstall the current CPS installation.
2. Download the combined CPS / RM CPS Version 16.0 (Build 828) from Motorola Online (note: it's important to download the combined CPS / RM version rather than the standalone CPS version).
3. Reinstall the CPS.

## Use of Old Archive Codeplugs

It is generally good practice to use codeplugs generated from the default codeplug associated with the latest firmware release rather than reuse very old archived codeplugs which is not recommended.

In order to obtain the improvements in audio clarity introduced as part of the R2.6 system release it is especially important to use codeplugs generated from firmware release R2.6 or later.

## Upgrade of Early Firmware

When an upgrade spanning multiple releases is to be performed it is strongly recommended that the upgrade be performed in multiple steps spanning no more than 3 major releases.

## Upgrading Radio Systems Running Applications

To avoid unforeseen issues resulting from upgrading deployed radio systems running Applications, we recommend that you check first with your Application provider to ensure that the version of Application you are running is fully compatible with the new version of radio system.

## Repeater Update Duration

When updating MOTOTRBO repeaters, it's important to ensure that the update process is not interrupted until the "Device Update Successful" message appears on the CPS screen.

## Repeater Knockdown

It is recommended that the Repeater is not in the Repeater Knockdown state while performing a CPS Read or Write operation.

## PN, DDMS, MNIS and MCDD Applications

The Device Discovery and Mobility Service (DDMS) application replaces the legacy Presence Notifier (PN) application. Additionally, the DDMS is backwards compatible with the PN such that existing applications that interface with the PN do not require any changes to receive presence notifications from the DDMS.

The Device Discovery and Mobility Service (DDMS), MOTOTRBO Network Interface Service (MNIS) and Multi-Channel Device Driver (MCDD) applications are included on the CPS DVD and are also available to download from MyView Portal.

The DDMS, MNIS and MCDD applications are not installed automatically from the CPS DVD, instead they need to be manually copied over from the top level DVD folder.

## SMA / MX Connector Antennas

Even though the SMA antennas are non-GPS, the SMA portable models still support GPS / GNSS since all DP4x01e series portables contain internal GPS / GNSS antennas.

Only SMA antennas should be attached to SMA portable models. Attaching a standard (MX) antenna to an SMA portable will damage the SMA connector centre pin on the portable.

Conversely, only standard (MX) antennas should be attached to standard (MX) portables. Attaching an SMA antenna to a standard (MX) portable will degrade performance.

### Control Head Cable Flex

The cable flex (part 30012045001) supplied with older (Numeric / Colour Display) Control Head, Remote Mount Control Head and Handheld Control Heads kits is not compatible with the new DM4000e series mobiles.

To determine if a given Numeric Display Model Control Head kit is compatible with the new DM4000e series mobile radios, refer to its part number. If the part number is PMLN5677\_, then the cable flex (part 30012045001) needs to be replaced with a newer cable flex (part 30012045002) before the Numeric Display Control Head kit can be used with the DM4000e series mobile radios. If the part number is PMLN7500\_, then the Numeric Display Control Head kit is already compatible with the DM4000e series mobiles.

To determine if a given Colour Display Model Control Head kit is compatible with the new DM4000e series mobile radios, refer to its part number. If the part number is PMLN5678\_, then the cable flex (part 30012045001) needs to be replaced with a newer cable flex (part 30012045002) before the Colour Display Control Head kit can be used with the DM4000e series mobile radios. If the part number is PMLN7501\_, then the Colour Display Control Head kit is already compatible with the DM4000e series mobiles.

To determine if a given Remote Mount Control Head kit (PMLN6404\_) is compatible with the new DM4000e series mobile radios, refer to the part number on the Remote Transceiver Interface. If the part number is PMLN6402\_, then the cable flex (part 30012045001) needs to be replaced with a newer cable flex (part 30012045002) before the Remote Mount Control Head kit can be used with the DM4000e series mobile radios. If the part number is PMLN7504\_, then the Remote Mount Control Head kit is already compatible with the DM4000e series mobiles.

To determine if a given Handheld Control Head kit (PMLN7131\_) is compatible with the new DM4000e series mobile radios, refer to the part number on the Handheld Control Head Transceiver Adapter. If the part number is PMLN7033\_, then the cable flex (part 30012045001) needs to be replaced with a newer cable flex (part 30012045002) before the Handheld Control Head kit can be used with the DM4000e series mobile radios. If the part number is PMLN7502\_, then the Handheld Control Head kit is already compatible with the DM4000e series mobiles.

### RSSI Display Value

To make a MOTOTRBO subscriber display its current RSSI value, press the left arrow three times and immediately press the right arrow three times, all within 5 seconds of power up.

## R2.X MPT1327 GOB Upgrade Kit

The R2.X MPT1327 GOB Upgrade Kit supports Windows 7.

When installing and launching the R2.X MPT1327 GOB Upgrade Kit on a Windows 7 computer, select “Run as administrator”.

The R1.X and R2.X MPT1327 GOB Upgrade Kits cannot be installed together on the same computer. So if the R1.X MPT1327 GOB Upgrade Kit is already installed then this will have to be un-installed before the R2.X MPT1327 GOB Upgrade Kit can be installed.

The R2.X MPT1327 GOB Upgrade Kit does NOT preserve the R2.X MPT1327 GOB configuration, so before upgrading the R2.X MPT1327 GOB firmware read the R2.X MPT1327 GOB configuration using the MPT1327 GOB CPS and save it to a \*.rad file. After upgrading the R2.X MPT1327 GOB firmware, the saved \*.rad file can be written back to the R2.X MPT1327 GOB using the MPT1327 GOB CPS.

## MPT1327 GOB CPS

The MPT1327 GOB CPS supports Windows 7.

When installing and launching the MPT1327 GOB CPS on a Windows 7 computer, select “Run as administrator”.

## MPT1327 / Connect Plus Options

Certain radio models can be ordered with factory fitted MPT1327 / Connect Plus option boards.

(NOTE: the generic option board can NOT be field upgraded to support MPT1327)

## MPT1327 / Connect Plus GOB Firmware Compatibility

Where a radio contains an MPT1327 / Connect Plus option board it’s important to adhere to the following simple rules in order to ensure full compatibility between the option board firmware and the radio firmware:

1. On installing an MPT1327 / Connect Plus option board, ensure that both the option board and the radio contain the latest available firmware versions.
2. On upgrading a radio to the latest available firmware version, ensure that the option board also contains the latest available firmware version.
3. On upgrading an option board to the latest available firmware version, ensure that the radio also contains the latest available firmware version.

Options boards for DP4000/DM4000 series radios are NOT forward compatible with DP3000e/DP4000e/DM4000e series radios and option boards for DP3000e/DP4000e/DM4000e series radios not backwards compatible with DP4000/DM4000 series radios.

## Repeater Hardware Compatibility

DR 3000 repeaters containing 32MB of memory and MTR3000 repeaters support the R1.X and R2.X features.

DR 3000 repeaters containing 8MB of memory support most R1.X features. However such repeaters do not support the IP Repeater Programming R1.X feature, Linked Capacity Plus or any of the R2.X features.

From system release R2.9.1 onwards there is no software support for DR 3000 repeaters containing 8MB of memory (note: DR 3000 repeaters containing 32MB of memory continue to be supported beyond R2.9.1).

Note: Any DR 3000 repeater ordered since the launch of R1.7 contains 32MB of memory.

To determine if a given DR 3000 repeater contains 8MB of memory then check the S/Tanapa label. DR 3000 repeaters containing one of the following S/Tanapa numbers contain 8MB of memory (all other DR 3000 repeaters contain 32MB):

- PMUE2390AAEAA DR 3000 UHF1 (25-40W)
- PMUE2390AAE DR 3000 UHF1 (25-40W)
- PMUE2390BAEAA DR 3000 UHF1 (25-40W)
- PMUD2091AAEAA DR 3000 VHF (25-45W)
- PMUD2091AAE DR 3000 VHF (25-45W)
- PMUD2091BAEAA DR 3000 VHF (25-45W)
- PMUD2092AAEAA DR 3000 VHF (1-25W)
- PMUD2092BAEAA DR 3000 VHF (1-25W)
- PMUE3017AAEAA DR 3000 UHF1 (1-25W)
- PMUE3017BAEAA DR 3000 UHF1 (1-25W)
- PMUE3084AAEAA DR 3000 UHF2 (1-40W)

## DR 3000 Repeater Hardware Upgrades

A MOTOTRBO RDAC Indicator Repeater Board Service Kit (PMLN5269) is available to upgrade pre-R1.4 VHF / UHF1 DR 3000 repeaters to support the power / fan failure diagnostic alarms.

Note: Any DR 3000 repeater ordered since the launch of R1.4 does NOT require this hardware upgrade.

To determine if a given DR 3000 repeater requires the hardware upgrade then check the S/Tanapa label. DR 3000 repeaters containing one of the following S/Tanapa numbers will require the hardware upgrade (all other DR 3000 repeaters will not):

- PMUE2390AAEAA DR 3000 UHF1 (25-40W)
- PMUE2390AAE DR 3000 UHF1 (25-40W)
- PMUD2091AAEAA DR 3000 VHF (25-45W)
- PMUD2091AAE DR 3000 VHF (25-45W)
- PMUD2092AAEAA DR 3000 VHF (1-25W)
- PMUE3017AAEAA DR 3000 UHF1 (1-25W)



## Open (Unresolved) Issues

Open (Unresolved) issues are all known or reported issues that still exist in this current software release and may occur under certain circumstances.

### Infrastructure Impact

N/A

### CPS-RM / RDAC Impact

N/A

### Radio Impact

**Issue Number:** DEVICES\_COMMON-5955  
**System/Product:** R7, OnSemi/NXP DP4000e Series (NXP 8987)  
**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-36742  
**System/Product:** OnSemi/NXP DP4000e Series (NXP 8987)  
**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:** R7  
**Description:** Radio shows Wi-Fi 1 bar user when user turns off Wi-Fi or brings away the radio from router in the middle of Rajang 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.

**Issue Number:** DEVICES\_COMMON-39351  
**System/Products:** All MOTOTRBO non-display radio

Description: The non-display radio is not able to make a group call after receiving Call Alert on radio that has been programmed as "Private Call" disabled. The user needs to make sure that the call alert is disabled on a channel that has been programmed as "Privacy Call" disabled.

Workaround: The user needs to make sure that the call alert is disabled on a channel that has been programmed as "Privacy Call" disabled.

## Resolved Issues in M2022.xx System Releases

Resolved issues are the known product problems that were reported in products releases, but have now been fixed or closed.

### Resolved in M2022.xx:

#### Infrastructure Impact

**Issue Number:** INC000005780701  
**System/Product:** Capacity Max/Voice and Command Radio Gateway (VRC)  
**Description:** CapMax Radio unable to initiate call to broadband due to rs plugin down. VRC Reports Incorrect State to Wave During Redundancy Switchover. As a workaround, the user had to restart the Primary VRC.

**Issue Number:** ENG\_INFRA\_PCR-12354  
**System/Product:** Capacity Max/VRC  
**Description:** VRC Does Not Support Multi-Emergency Calls from Wave

**Issue Number:** ENG\_INFRA\_PCR-12229  
**System/Product:** Linked Capacity Plus/Multi-Site Capacity Plus, Capacity Plus/Wave  
**Description:** Emergency Alarm with Voice to Follow from MOTOTRBO ION radios fails

**Issue Number:** INC000005823916  
**System/Product:** Linked Capacity Plus/Multi-Site Capacity Plus, Capacity Plus, Conventional, IP Site Connect/DDMS (Device Discovery and Mobility Update) and MNIS Status Agent  
**Description:** Fixed Log4Net vulnerability issue (CVE-2018-1285). Reference: MTN-0059-22-NA

**Issue Number:** ENG\_INFRA\_PCR-12358  
**System/Product:** All System Type / SLR5500, SLR8000  
**Description:** SLR repeater may raise Power Amplifier Temperature Alarm caused by inefficient fans operations after firmware upgrade. As a workaround, the user had to restore the repeater to default factory settings.

**Issue Number:** ENG\_INFRA\_PCR-12100  
**System/Product:** Analog / SLR series repeaters  
**Description:** XCMP Clone Read to read channel Squelch Value returns 0

**Issue Number:** ENG\_INFRA\_PCR-12371  
**System/Product:** Analog, Digital single repeater systems / SLR series repeaters  
**Description:** Repeater may not apply Power Level, Enable/Disable or Knockdown command if executed in one XCMP bundle with Channel Change command. This kind of control is used by RDAC or third party applications. As a workaround, the user had to perform channel change and other commands separately when this issue happened.

**Issue Number:** ENG\_INFRA\_PCR-12545  
**System/Product:** Capacity Max / SLR series repeaters  
**Description:** A voice call may not be interrupted/preempted occasionally in Capacity Max systems with enhanced privacy. The issue occurrence is lower if a system is less occupied. The issue won't happen when enhanced privacy is not utilized.

**Issue Number:** UEM-6419  
**System/Product:** Capacity Max / System Advisor  
**Description:** The latest Java 8u321 is not rendering stripes on System View correctly. This issue is fixed in the M2022.01 release

**Issue Number:** ENG\_INFRA\_PCR-13242  
**System/Product:** MNIS  
**Description:** The Sites configuration page will accept the two decimal places. Once a value is entered into the GPS Longitude column it will not allow adding any digits after the decimal point. A way to work around this is to type out the digits first (e.g. -10577), then add the decimal point.

**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.

## **CPS-RM / RDAC Impact**

**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.

**Issue Number:** RMCPGCD-1212/INC000005750063  
**System/Product:** MOTOTRBO RM  
**Description:** The user was not able to edit 5 Tone ID in RM radio view when the RM language was set to Italian. This was due to the inconsistent Italian translation of RM strings.

**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 MSI suggests removing the DP folder manually if

desired.

**Issue Number:** DMCI-1406  
**System/Products:** CMSS in Radio Management  
**Description:** Fast Start setting is hidden on the existing CMSS managed in the RM after upgrading the RM from pre-M2022.01 release to M2022.01 or M2022.02 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  
**Description:** Radio's 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\_COMM-2877  
**System/Product:** R7/R7a ( only with Lithium Polymer battery (PMNN4809A) )  
**Description:** R7/R7a radios exceed transmit max power of 4.8W when attached with PMNN4809A Lithium Polymer battery. This violates FCC (Federal Communication Commission) requirements in which it doesn't allow portable radio transmission power exceeding 4.8W. Issues happen on current shipping R7/R7a as well.

**Issue Number:** PCR\_SUB-37455  
**System/Product:** R7  
**Description:** Radio's regionalization process failed and caused it to display "Update Not Available" with red solid LED blinking.

**Issue Number:** PCR\_SUB-39489  
**System/Product:** R7/R7a  
**Description:** No current on VBUS line on 3rd party GCAI Mini connector.

**Issue Number:** PCR\_SUB-36975  
**System/Product:** R7  
**Description:** R7 radio displays a privacy icon during a phone call. In MOTOTRBO, phone calls are not encrypted.

**Issue Number:** INC000006241596  
**System/Product:** R7/R7a  
**Description:** When any CFS license is installed in R7 or R7a radio, and is not combined with CPS/RM configuration write, the user will observe blinking radio LED, beep and “Configuration error” string (R7 display model) every time the radio powerup afterwards.

**Issue Number:** PCR\_SUB-31828/INC000005026591  
**System/Product:** All MOTOTRBO radio devices  
**Description:** The radio will show Error 669 “Application has encountered an error. Failed to access a file in the device.” during configuration update using RM or CPS via USB programming. The issue happened only when the user’s radio configuration contained double dots naming (“..”) in the attached file (example:voice announcement file).

**Issue Number:** PCR\_SUB-34082/INC000005026591  
**System/Product:** All MOTOTRBO radio devices  
**Description:** On radio with Enhanced Channel Access (ECA) mode, digital Repeater Channel with admit criteria set to “Color Code Free” showing “Channel Busy” and PTT blocked when there is a raised noise floor on the Base Transmit frequency, even if noise floor is caused by analog carrier or digital carrier with different color code.

**Issue Number:** PCR\_SUB-36103/INC000005724619/, PCR\_SUB-36558/INC000005841683  
**System/Product:** R7  
**Description:** Activation or regionalization process unsuccessful due Staging failure and IoT Status mismatch. Radio will flash a red LED with bonk tone and “Update Not Available” display. \*Note: The fix on Device only.

**Issue Number:** PCR\_SUB-36426/INC000005797819/PCRMOL-448  
**System/Product:** R7  
**Description:** Radio couldn’t complete regionalization and was stuck at “Downloading Updates.”. This was due to the synchronization issue between devices and server. \*Note: The fix on Device only.

**Issue Number:** PCR\_SUB-39223  
**System/Product:** R7  
**Description:** Text to speech configuration takes no effect as the voice pack for text to speech apparently is empty when the CPS/RM read back the radio configurations. Note that this issue also impacts language packs and voice announcement packs.

**Issue Number:** PCR\_SUB-39008  
**System/Product:** R7  
**Description:** When the radio connected to the bluetooth devices and the radio’s volume offset was in negative value (<0), radio tone was not hearable and muted.

**Issue Number:** PCR\_SUB-38483  
**System/Product:** R7  
**Description:** Remote Dekey feature has an inaccurate German translation when activated via the Action Menu. "Fern Tx aus" should be used instead of "Fernschluss".

**Issue Number:** PCR\_SUB-40645 / INC000006919015  
**System/Product:** R7  
**Description:** When using RM to write configuration to the R7 radio which has previously been upgraded via Wifi programming method, the configuration job will failed and RM will prompt Error #679 messages.

**Issue Number:** PCR\_SUB-39660  
**System/Products:** DM1000 Series, DP540, DP1400 and SL1600 radios  
**Description:** The Option Board is unable to decode the CSBK data correctly when there are additional values in the beginning of the data.

**Issue Number:** PCR\_SUB-39209  
**System/Products:** DM1000 Series, DP540, DP1400 and SL1600 radios  
**Description:** Radio that was configured with Impolite Tx capability was unable to initiate the voice call whenever the channel is busy or idle after a SFR repeater was added to the system.

**Issue Number:** PCR\_SUB-37630  
**System/Products:** DM1000 Series, DP540, DP1400 and SL1600 radios  
**Description:** The XCMP Versioning Info command to read "Host Software" was not working on the radio, and received an error code on reply "0x06 Security Locked".

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