

MOTOTRBO[™] System Release Notes Professional Commercial Radios (PCR) & Systems

Version: M2023.01.07 v01

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EMEA Region

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Scope

These MOTOTRBO System Release Notes cover the following MOTOTRBO products:

- DP540, DP1400, R2, SL1600, SL2600, DP4000Ex Series, R7/R7a and DP4000Ex Ma Series Portables
- DP2000e Series, DP3000e Series, DP4000e Series and SL4000e Series Portables
- DM1000 Series and DM2600 Mobiles
- DM4000e Series Mobiles
- SLR 1000, SLR 5500 and SLR8000 Repeaters
- Radio Management
- CPS 2.0
- Air Tracer
- Tuner
- RDAC
- 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
- ESU Launchpad
- 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 M2023.01.07

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

MOTOTRBO R7/R7a, MOTOTRBO R2, DP4000e series, DP4000 Ex series, DM4000e series, DM2600, DP2000e series, DP3000e series, SL2600

Note: This M2023.01.07 release follows the M2023.01.01 system release in the EMEA region.

Radio New Features

Increasing Enhanced Privacy Key Storage from 16 to 32

Allow user to configure 32 privacy keys in Enhanced and AES256 Privacy

Randomized Enhanced Privacy Key Selection

Allow users to configure the <Random> option in Enhanced and AES256 Privacy which enables the radio to randomly select a privacy key for use for the duration of the call.

RM/CPS New Features

Hidden Encryption Key Values

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

What's New in System Release M2023.01.01

There are no new features introduced with this release.

The M2023.01.01 release addresses the following issues:

- Users may experience a radio hang or reset issue under certain conditions after upgrading their specific radio's firmware to the M2023.01 release without updating the language pack first.
- DM4000e series radio users who configured the system or radio frequency to be more than 500MHz might encounter LMR connectivity issues.
- The most recent setting of a MOTOTRBO R7 radio codeplug is not restored after Over The Air Programming via Wi-Fi.

See "Resolved Issues in Product Release" section.

What's New in System Release M2023.01

RM/CPS New Features

Channel Copy and Paste

Provide the capability for users to be able to copy and paste channels across different zones and configurations.

RM Access Control

RM access control gives an RM admin the ability to control an individual's access to configurations and shareable sets in the RM with "view" and "modify" permission respectively.

Radio New Features

PCR Ownership Experience Phase 1.5

This feature shall support "Service Mode", "Preventive Maintenance", and the "Software Update License (SMA) renewal" reminder. This reminder is applicable to DP2000e Series, DP3000e Series, DP4000e Series, and DM4000e Series both display and non-display models. R2 and R7/R7a supported in a future release.

VB400 Support on R7, DP4000e Series, DP3000e Series

This feature shall support VB400 integration with R7, DP4000e Series, DP3000e Series radios via Bluetooth connection. This integration will automatically begin recording on the VB400 when the paired radio enters an emergency state due to emergency button press, Lone Worker failure to respond or if the radio detects the user has fallen (Fall Alert/Man Down)

Unrecognized Battery notification

This feature shall resolve unintentional "Unrecognized battery" prompt on R7/R7a radios when the radio is placed into the charging station.

Bluetooth connection/disconnection tone

This feature shall allow the user to disable the Bluetooth related tones via CPS/RM tool. Applicable to both display and non-display radios that support Bluetooth.

Cybersecurity - Enforce users to change password on first access

This feature enforces users to change the default password of password related features.

Optimize the Duration of Radio Upgrade

This feature shall reduce radio upgrade time either via programming cable or via one-time activation.

MUTE mode as Standard feature on DP4000e series, DP4000 Ex series, DM4000e series, DM2600, DP2000e series, DP3000e series, SL2600

This feature changed MUTE mode from charged to standard feature to all impacted MOTOTRBO radios.

Max Channels is 64 on DP4000e series, DP4000 Ex series, DP2000e series, DP3000e series

This feature increased the default number of channels from either 16 or 32 to 64. And also the maximum number of zones shall be increased from 2 to 4.

Enhanced Remote Monitor Mic Source Selection

This feature allows consistent operational configuration for Mic source selection across all Hotmic features (Emergency Alarm followed by Voice and Remote Monitor).

Infrastructure/System New Features

DMR Tier 3 USBD Polling service for sending GPS location updates

The Unified Single Block Data (USBD) Polling Service supports a valuable subset of the Location Information Protocol (LIP) as defined in ETSI standards for DMR Tier 3 systems..

It supports LIP Immediate Reporting and provides a highly efficient method of supporting large quantities of GPS location updates.

Capacity Max Repeater Diagnostics - webpage access from SA

Adding a direct link to the repeater webpage accessible from the System Advisor Network Database and System View views.

Capacity Max Bridge Migration to CMSS

The Capacity Max Bridge (CMB) is a software service which creates a tunnel between a Connect Plus system and a Capacity Max system. The change of upgrade flow in Capacity Max systems, done in M2022.03 release, moved Capacity Max Bridge out of CMS Server. As continuity to improve customer experience of Capacity Max, CMB has been moved to be a part of CMSS.

The existing solution, with standalone CMB, may still be used with new releases.

Migrating CMSS from VMWare ESXi to RHEL KVM hypervisor

The Capacity Max Systems Server used virtualization based on VMWare ESXi 6.7. To continue delivery of modern and secure solutions and simplify the upgrade process, a new hypervisor KVM on Red Hat Enterprise Linux solution is being introduced to replace ESXi.

That change will improve the reliability of the upgrade process. Simplify the upgrade process and decrease upgrade time below 2h. The KVM solution does not require a manually entered license, which was required for ESXi in the R2.10 release.

The upgrade to M2023.01 is possible now from M2022.03 and M2022.01 versions (without the need of incremental upgrades for each step)

This change has no impact on any of the CMSS functionalities and performance.

New Part Numbers

Part Number	Description	Delivered As	How to Order
GMVN6241L	CPS 2.0 / Radio Management (and Tools)	DVD	Partner Hub Shop
GMVN5520U	RDAC Application	CD	Partner Hub Shop
T8911A	MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade	USB	Order Management
T8912A	MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade	MyView Download	Order Management

Cybersecurity

Motorola Solutions, Inc. (MSI) has delivered a PCR MOTOTRBO 2023.01 release. MSI development and operations teams continually make security updates as needed based on evaluated threats, determine

protective measures, create response capabilities, and promote compliance. MSI interacts with and participates in several US and international security organizations, such as U.S. Department of Homeland Security's National Cybersecurity & Communications Integration Center (NCCIC), National Institute of Standards and Technology (NIST), The 3rd Generation Partnership Project (3GPP), Telecommunications Industry Association (TIA), European Telecommunications Standards Institute (ETSI), Digital Mobile Radio (DMR) Security standardization, and others. Standards from the aforementioned organizations can map to security controls in international standards such as Information System Standards (ISO / IEC 27001).

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

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

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

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 M2023.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)	DM4000e Series Mobiles	R02.23.01.7000 (23.21.10)	Capacity Max System Server Installer Software Image	CVN7293I.is o
DP1400 Portables	R01.22.03.0000 (CP 22.42.08)	SLR 1000 Repeaters	R20.23.01.06 (CP 23.61.00)	System Design Tools	06.08
MOTOTRBO R2 Portables	R02.23.01.7000 (23.21.10)	SLR 5500 Repeaters	R20.23.01.06 (CP 23.61.00)	Sensor Management Tool	R01.00.01
SL1600 Portables	R01.22.03.0000 (CP 22.42.08)	SLR 8000 Repeaters	R20.23.01.06 (CP 23.61.00)	R2.X MPT1327 GOB	R01.02.06
DP2000e Series Portables	R02.23.01.7000 (23.21.10)	Radio Management	2.138.245.0	MPT1327 GOB CPS	R02.00.05
SL2600 Portables	R02.23.01.7000 (23.21.10)	CPS 2.0	2.138.245.0	R2.X Connect Plus GOB	R02.07.38 (CP 1.1.19)
DP3000e Series Portables	R02.23.01.7000 (23.21.10)	Air Tracer	11.0 (Build 39)	R2.X Connect Plus GOB CPS	R02.07.43
DP4000e Series Portables	R02.23.01.7000 (23.21.10)	Tuner	23.1 (Build 19)	XRC 9000 / 9100 Controller	R02.100.05.1 036_1695
MOTOTRBO R7/R7a Portables	R02.23.01.7000 (23.21.10)	RDAC	23.1 (Build 10)	XRT 9000 / 9100 Gateway	R02.100.05.1 036_1695
DP4000Ex/DP4000 Ex MA Series Portables	R02.23.01.7000 (23.21.10)	Device Discovery and Mobility Service (DDMS)	R23.01.0003	XRI 9100 Interconnect	R02.100.05.1 030
SL4000e Series Portables	R02.23.01.1002 (CP 23.21.05)	MOTOTRBO Network Interface Service (MNIS) Data Gateway	R23.01.0027	Network Manager (merged with XRC / XRI packages)	R02.100.05.1 030
DM1000 Series Mobiles	R01.22.03.0000 (CP 22.42.08)	MOTOTRBO Network Interface Service (MNIS) Status Agent	R22.3.1	Network Manager Connection Tool	R02.100.05.1 030
DM2600 Mobiles	R02.23.01.7000 (23.21.10)	Capacity Max ESU Launchpad	DESU_LP-R17.18. 10.56-01.rhel.iso	XRT Configuration Tool	R02.100.05.1 030

Listed below are all MOTOTRBO Product Versions associated with the different M2023.xx system releases.

For products marked "-" in this table there were no new versions introduced with a system release.

MOTOTRBO Product	M2023.01	M2023.01.01	M2023.01.07
DP540 Portables	R01.23.01.0000 (CP 23.41.01) —	-	-
DP1400 Portables	_	_	_

	D00 00 01 1000	D00 00 01 0001	D00 00 01 7000
MOTOTRBO R2 Portables	R02.23.01.1002 (CP 23.21.05)	R02.23.01.3001 (CP 23.21.08)	R02.23.01.7000 (23.21.10)
SL1600 Portables	-	-	-
DP2000e Series Portables	R02.23.01.1002 (CP 23.21.05)	R02.23.01.3001 (CP 23.21.08)	R02.23.01.7000 (23.21.10)
SL2600 Portables	R02.23.01.1002 (CP 23.21.05)	-	R02.23.01.7000 (23.21.10)
DP3000e Series Portables	R02.23.01.1002 (CP 23.21.05)	R02.23.01.3001 (CP 23.21.08)	R02.23.01.7000 (23.21.10)
DP4000e Series Portables	R02.23.01.1002 (CP 23.21.05)	R02.23.01.3001 (CP 23.21.08)	R02.23.01.7000 (23.21.10)
MOTOTRBO R7/R7a Portables	R02.23.01.1002 (CP 23.21.05)	R02.23.01.3001 (CP 23.21.08)	R02.23.01.7000 (23.21.10)
DP4000Ex/DP4000 Ex MA Series Portables	R02.23.01.1002 (CP 23.21.05)	R02.23.01.3001 (CP 23.21.08)	R02.23.01.7000 (23.21.10)
SL4000e Series Portables	R02.23.01.1002 (CP 23.21.05)	-	-
DM1000 Series Mobiles	R01.22.03.0000 (CP 22.42.08)	-	-
DM2600 Mobiles	R02.23.01.1002 (CP 23.21.05)	-	R02.23.01.7000 (23.21.10)
DM4000e Series Mobiles	R02.23.01.1002 (CP 23.21.05)	R02.23.01.3001 (CP 23.21.08)	R02.23.01.7000 (23.21.10)
SLR 1000 Repeaters	R20.23.01.06 (CP 23.61.00)	-	-
SLR 5500 Repeaters	R20.23.01.06 (CP 23.61.00)	-	-
SLR 8000 Repeaters	R20.23.01.06 (CP 23.61.00)	-	_
Radio Management	2.138.176.0	_	2.138.245.0
CPS 2.0	2.138.176.0	-	2.138.245.0
Air Tracer	-	-	-
Tuner	23.1 (Build 19)	-	-
RDAC	23.1 (Build 10)	-	-
Device Discovery and Mobility Service (DDMS)	R23.01.0003	-	_
MOTOTRBO Network Interface Service (MNIS) Data Gateway	R23.01.0027	-	-
MOTOTRBO Network Interface Service (MNIS) Status Agent	-	-	-
Capacity Max ESU Launchpad	DESU_LP-R17.18.1 0.56-01.rhel.iso	-	-
Capacity Max System Server Installer Software Image	CVN72931.iso	-	-
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	-	-	-

3 rd Party Application	M2023.01	M2023.01.01	M2023.01.07
SmartPTT PLUS	9.13.0.895	-	-
TRBOnet PLUS	6.2.0.7263	-	_

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.
- 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.
- 3. 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.
- 4. For each CMSS (Capacity Max System Server):
 - a. Order (1) T8911A, MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade which contains the CVN7293I.iso loaded on a USB drive.
 - b. Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8912A, MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade where you will receive an e-mail with a unique link to access/download the CVN7293I.iso

- file from the MyView portal. The T8912A will require an e-mail address at the time of order.
- c. NOTICE: The USB drive (T8911A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8912A) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade.
- 5. For the PC used for CMSS upgrade:
 - a. Order (1) T8486A, MOTOTRBO Capacity Max System Server SW Update Launch Pad which contains the ESU LP software files on a DVD. (The M2023.01 upgrade requires this ESU LP version).
 - b. Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8483B, MOTOTRBO Capacity Max System Server SW Update Launch Pad where you will receive an e-mail with a unique link to access/download the ESU LP application files from the MyView portal. The T8483B will require an e-mail address at time of order.
 - c. Please refer to the section "Capacity Max System Upgrade from M2022.01 or M2022.03 to M2023.01" of Capacity Max System Release Upgrade Guide for additional details. It is available on Learning Experience Portal (LXP) and the Upgrade Guide applies for the patch upgrade as well.
 - d. NOTICE: The DVD (T8486A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8483B) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade
 - e. The ESU Launchpad About page describes the target CMSS versions that it supports to ensure the appropriate ESU Launchpad version is ordered along with the CMSS upgrade installation files.

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	M2023.01	M2023.01.01	M2023.01.07
TS 102 361-1: Air Interface Protocol	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
TS 102 361-3: Data Protocol	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

Product Availability

The following table indicates which MOTOTRBO products covered by this document are set up as orderable parts (to order via Partner Hub 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</release>
Upgrade Package for MOTOTRBO R2, DP2000e Series, SL2600, DP3000e Series, DP4000e Series, MOTOTRBO 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</release>
Upgrade Package for SL4000e Series Portables	N/A	MOTOTRBO EMEA Professional Devices Release <release> / MOTOTRBO EMEA Professional Devices</release>	MOTOTRBO EMEA Devices Release <release> / MOTOTRBO EMEA Devices</release>
Upgrade Package for DM1000 Series Mobiles	N/A	MOTOTRBO EMEA Commercial Devices Release <release> / MOTOTRBO EMEA Commercial Devices</release>	MOTOTRBO EMEA Devices Release <release> / MOTOTRBO EMEA Devices</release>
Upgrade Package for DM2600 Mobiles	N/A	MOTOTRBO EMEA Professional Devices Release <release> / MOTOTRBO EMEA Professional Devices</release>	MOTOTRBO EMEA Devices Release <release> / MOTOTRBO EMEA Devices</release>
Upgrade Package for DM4000e Series Mobiles	N/A	MOTOTRBO EMEA Professional Devices Release <release> / MOTOTRBO EMEA Professional Devices</release>	MOTOTRBO EMEA Devices Release <release> / MOTOTRBO EMEA Devices</release>
Upgrade Package for SLR 1000, SLR 5500 and SLR 8000 Repeaters	N/A	MOTOTRBO EMEA Repeaters Release <release> / MOTOTRBO EMEA Repeaters</release>	MOTOTRBO EMEA Repeaters Release <release> / MOTOTRBO EMEA Repeaters</release>
RDAC	GMVN5520_ (DVD)	N/A	N/A
CPS 2.0	GMVN6241_ (DVD)	MOTOTRBO EMEA Software Release <release> / MOTOTRBO EMEA Software</release>	MOTOTRBO CPS and RM Release <release> / MOTOTRBO CPS and RM</release>
Radio Management	GMVN6241_ (DVD)	MOTOTRBO EMEA Software Release <release> / MOTOTRBO EMEA Software</release>	MOTOTRBO CPS and RM Release <release> / MOTOTRBO Software</release>
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
Device Discovery Mobility Service (DDMS)	GMVN6241_ (DVD)	MOTOTRBO EMEA General Software Tools / MOTOTRBO EMEA Software	MOTOTRBO EMEA General Software Tools / 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 General Software Tools /

		MOTOTRBO EMEA Software	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</release>	ESU Launchpad 1.0 (<release>)*** / MOTOTRBO Capacity Max</release>
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
MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade	T8911A** (USB)	N/A	N/A
MOTOTRBO M2023.01 Capacity Max System Server SW Upgrade	T8912A** (MyView Portal)	CMSS Upgrade Package M2023.01*** / MOTOTRBO Capacity Max	CMSS Upgrade Package M2023.01*** / MOTOTRBO Capacity Max
HPE Switch Sample Configurations for Capacity Max	N/A	HPE Switch Sample Configurations for Capacity Max <release> / MOTOTRBO Transport</release>	HPE Switch Sample Configurations for Capacity Max <release> / MOTOTRBO Transport</release>
Juniper Switch and Router Sample Configurations	N/A	Juniper Switch and Router Sample Configurations <release> / MOTOTRBO Transport</release>	Juniper Switch and Router Sample Configurations <release> / MOTOTRBO Transport</release>
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
SmartPTT PLUS	N/A***	SmartPTT Plus / MOTOTRBO Sold and Supported	SmartPTT Plus / MOTOTRBO Sold and Supported
TRBOnet PLUS	N/A***	TRBONet Plus / MOTOTRBO Sold and Supported	TRBONet Plus / MOTOTRBO Sold and Supported

^{*} 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.

^{****} Relevant license part numbers must be purchased to use these applications.

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

Training Material

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

New courses

N/A

Registration

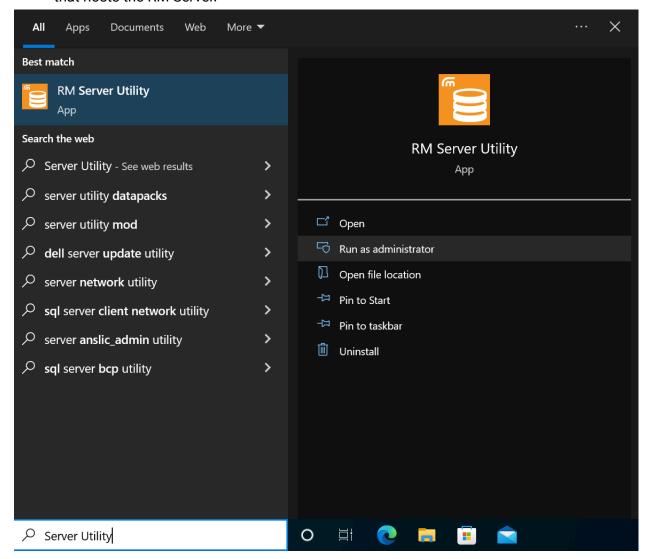
https://learning.motorolasolutions.com

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.

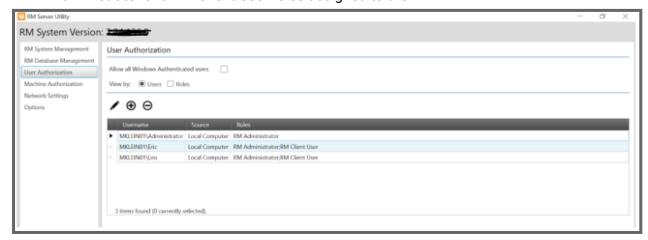
1) After performing the upgrade the user should open the RM Server Utility App on the machine that hosts the RM Server.



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.

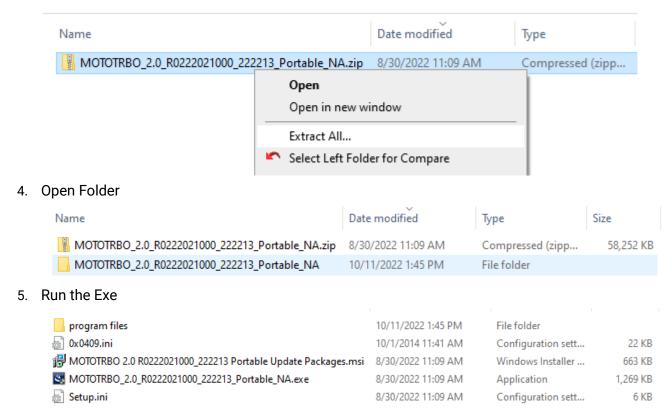


4) This completes the necessary steps for users that do not wish to use the Access Control features. The RM Server Utility can be closed at this point. Users should be able to use the RM Configuration Client to connect to the RM Server and perform normal operations.

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



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 new MOTOTRBO CPS 2.0 was 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.

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.

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 and MNIS 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) and MOTOTRBO Network Interface Service (MNIS) applications are included on the CPS 2.0 DVD and are also available to download from MyView Portal.

The DDMS and MNIS applications are not installed automatically from the CPS 2.0 DVD, instead they need to be manually installed from the Additional_Apps folder which can be easily accessed by clicking the Additional Applications button in the CPS 2.0 DVD installer.

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 DM400e 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 DM400e 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 DM400e 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 DM400e 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.

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

Issue Number: ENG_INFRA_PCR-16111

System/Products: Trbonet and LCP

Description: When 2 or more Capacity Plus Multi Site systems are set up to use a single

MNIS gateway with a dispatch console, only one system will be able to work correctly, while the other systems will fail to communicate with the dispatch

console.

Workaround: Use separate MNIS to each LCP system.

Issue Number: UEM-6670 System/Products: CMSS/UEM

Description: During the upgrade to M2022.03 or M2023.01, the ATIA logs are not

automatically saved and they will be lost, so users will not be able to access

historical calls information

Workaround: Download ATIA logs via SA client and store them outside SA VM before

upgrade.

Issue Number: ENG_INFRA_PCR-16303

System/Products: CMSS

Description: CMSS defective hardware (incl. SD card) causes upgrade from 2022.03 to

2023.01 to fail

Workaround: Workaround/early detection is possible with checking HPE components

state in iLO.

See "Active Health System Logs" chapter in "System Operations,

Troubleshooting, and Maintenance Guide" for System Release M2023.01

MOTOTRBO CAPACITY MAX.

Recovery steps include disconnecting the SD card and re-running the

upgrade.

Issue Number: ENG_INFRA_PCR-16386
System/Products: CMB - Capacity Max Bridge

Description: After the upgrade from M2022.01 to M2023.01, CMB license is not

preserved, which can be seen in System Advisor, CMB webpage. Without a

license, CMB will not operate.

Workaround: Use Radio Management to provision CMB license after upgrade from

M2022.01 to M2023.01.

Issue Number: UEM-6738

System/Products: CMSS/System Advisor

Description: Grid View and Raw View may display incorrect information about ongoing

calls in the system. This issue is related to the number of simultaneous calls in the system. When there are many calls started and ended in a short period of time, System Advisor is not able to process all of them and starts

to display incorrect information on Grid View and Raw View.

Workaround: It is possible to clear internally stored call data by restarting the System

Advisor. It can be done by using the UIS web page or System Advisor client.

CPS-RM / RDAC Impact

Issue Number: DMGMT-47928

System/Products: CapMax System, RM/CPS

Description: Export MNIS configuration containing keys with empty values - the MNIS

export will fail, but validation doesn't throw errors. This scenario can only

happen if:

1. Radio with Enhanced Security key is read by RM, and the key is not

configured in the RM at that time.

2. The keys retrieved from radio are then added to the MNIS configuration.

Workaround: Fill key values and initiate the export again.

Issue Number: DMGMT-47486

System/Products: CapMax System, RM/CPS

Description: After new SMA license registration for CMSS, CMSS SMA license expiration

date in the Configuration View is not updated.

Workaround: Use the License View - the SMA license is correctly registered and reflected

correctly in the Capacity Max System Server License View.

Issue Number: RSSI Smoothing Algorithm for DP540, DP1400, SL1600 Portables

System/Product: CPS/RM

Description: When the radio A is transmitting close by to the radio B, it would degrade the

RSSI (Received Signal Strength Indicator) significantly leading to the radio B

deregistration from the system.

Radio Impact

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 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.

Resolved Issues in M2023.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 M2023.xx:

Infrastructure Impact

Issue Number: INC000007389103

System/Product: CMSS

Description: CMSS upgrade failure - SA backup fails to restore

Issue Number: INC000007567809

System/Product: SLR 1000

Description: After a firmware upgrade the SLR1000 Repeater no longer shows AC voltage

in RDAC getting Error 790

Issue Number: RFC_PCR-218 System/Product: SLR 8000

Description: After reset or boot-up of SLR8000 a Major Alarm "Power Supply Hardware

Version Incorrect" may be raised which leads to additional reset after which

the repeater recovers itself.

Issue Number: INC000007126631 System/Product: Capacity Max - VRC

Description: VRC does not accept connection and is not discovered by SA after an

upgrade

CPS-RM / RDAC Impact

Issue Number: DMGMT-49245 / INC000007953389 (resolved in M2023.01.07 release)

System/Product: DP2400e

Description: Not possible to assign the Zone Toggle option to the programmable button

(PB) for DP2400e radio.

Issue Number: DMGMT-51234 / INC0000161483 (resolved in M2023.01.07 release)

System/Product: DP4600e and DP4601e

Description: Multi Button PTT option is not available in the RM/CPS for DP4600e and

DP4601e radios.

Issue Number: RFC_PCR-206/INC000007341004

System/Product: CPS/RM

Description: MOTOTRBO Issue when changing Real Time Clock setting on R7 Premium

when CPS2 is in French language.

Issue Number: RFC_PCR-200/INC000007160259

System/Product: RDAC tool

Description: The customer installed the latest RDAC version (22.3 build 7) but cannot

register the Multiple System license.

Issue Number: RSSI Smoothing Algorithm for R2, SL2600, DP4000Ex Series, MOTOTRBO

R7/R7a, DP4000Ex Ma Series, DP2000e Series, DP3000e Series, DP4000e

Series and SL4000e Series Portables

System/Product: CPS/RM

Description: When the radio A is transmitting close by to the radio B, it would degrade the

RSSI (Received Signal Strength Indicator) significantly leading to the radio B

deregistration from the system.

<u>Device Impact</u>

Issue Number: PCR_SUB-42646 / PBI000000043708 (resolved in M2023.01.07 release)
System/Product: DP4000e series, DM4000e series and MOTOTRBO R7 - radios listed in

Addendum at pages 31-32.

Description: Occasionally the radio may resend the same GPS coordinates in a 2 minutes

interval out of the hour. The issue goes away once the device is restarted.

Issue Number: PCR_SUB-44367 / INC000008342284 (resolved in M2023.01.07 release)
System/Product: MOTOTRBO R7/R7a, MOTOTRBO R2, DP4000e series, DP4000 Ex series,

DM4000e series, DP2000e series, DP3000e series

Description: Changes to the service audio and text notifications. For further details

please refer to: MTN-0172-23-MOTOTRBO Service And Support

Notifications.

Issue Number: PCR_SUB-43054 (resolved in M2023.01.01 release)

System/Product: MOTOTRBO R7/R7a, MOTOTRBO R2, DP2000e series, DP3000e series,

DP4000e series and DP4000Ex

Description: Users who upgraded their radio's firmware to M2023.01 version without

updating the language pack will encounter a continuous reset issue.

Refer to MTN-104-23 MOTOTRBO Radio Hang/Reset After Upgrade to

M2023.01.

Issue Number: PCR_SUB-43050/PBI000000035215 (resolved in M2023.01.01 release)

System/Product: DM4000e series

Description: Users who configured the system or radio frequency to be more than

500MHz might encounter LMR connectivity issues.

Issue Number: PCR_SUB-41962 (resolved in M2023.01.01 release)

System/Product: MOTOTRBO R7

Description: The most recent setting of the radio codeplug is not restored after Over The

Air Programming via Wi-Fi.

Issue Number: PCR_SUB-41154/INC000007221083
System/Product: MOTOTRBO R7/R7a and DP4000e Series

Description: Upon power-up, the radio does not receive any TMS (text message service)

from the data application. Randomly, the radio does not respond with "Acknowledgement" to the Data Application (console application).

Issue Number: DEVICES_COMMON-5955

System/Product: MOTOTRBO R7, OnSemi/NXP DP4000e Series (NXP 8987)

Description: Switching connection between radio and other Bluetooth PAN devices

several times on a PC may cause the radio to not be able to connect back to

the PC.

Workarounds: Unpair and pair to reconnect the 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 actions such as BT connection, BT "Find Me" or BT "Find Device", the user would see that the suspended indoor location icon continues to display although the radio has resumed

scanning the iBeacon.

Issue Number: DEVICES_COMMON-39351 / PCR_SUB-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 "Private Call" disabled channel.

Issue Number: PCR_SUB-40630/INC000006919246

System/Product: All MOTOTRBO Mobile Radio

Description: Radio's audio quality deteriorated after they upgraded to a newer version.

This issue only happens when the radio's "Audio Profile→Environment" was set to "Loud" profile and the radio is powered up from a Capacity Max,

Capacity Plus or Linked Capacity Plus channel.

Issue Number: PCR_SUB-41527/INC000007316111
System/Product: All MOTOTRBO Portable Radio

Description: The radio audio preference level goes back to default on every channel

change or zone change.

<u>Addendum</u>

List of GNSS receiver radios affected by the resolved issue PCR_SUB-42646 / PBI000000043708 (see further details at page 29)

Product Name	Tanapa	Description
R7 radio	PMUE5722CAB	MOTOTRBO R7 UHF 4W FKP (ENG) GNSS BT WLAN UL
	PMUE5723CAA	MOTOTRBO R7 UHF 4W NKP GNSS BT WLAN UL
	PMUE5723CBA	MOTOTRBO R7 UHF 4W NKP GNSS BT WLAN GOB1 UL
	PMUE5724CAB	MOTOTRBO R7 UHF 4W FKP (ENG) GNSS BT WLAN
	PMUE5724CAF	MOTOTRBO R7 UHF 4W FKP (ARABIC) GNSS BT WLAN
	PMUE5724CAG	MOTOTRBO R7 UHF 4W FKP (CYRILLIC) GNSS BT WLAN
	PMUD3491CAB	MOTOTRBO R7 VHF 5W FKP (ENG) GNSS BT WLAN UL
	PMUD3492CAA	MOTOTRBO R7 VHF 5W NKP GNSS BT WLAN UL
	PMUD3492CBA	MOTOTRBO R7 VHF 5W NKP GNSS BT WLAN GOB1 UL
	PMUD3493CAB	MOTOTRBO R7 VHF 5W FKP (ENG) GNSS BT WLAN
	PMUD3493CAF	MOTOTRBO R7 VHF 5W FKP (ARABIC) GNSS BT WLAN
	PMUD3493CAG	MOTOTRBO R7 VHF 5W FKP (CYRILLIC) GNSS BT WLAN
	PMUD3530AAA	MOTOTRBO R7 350-400M 4W NKP CFS GNSS BT WLAN
	PMUD3531AAB	MOTOTRBO R7 350-400M 4W FKP BT WIFI GNSS
DP4000e series	PMUE5770BACEAA	DP4801E 403-527 4W FKP GNSS BT WIFI TIA4950
	PMUE5774BAAEAA	DP4401E 403-527 4W NKP GNSS BT WIFI TIA4950
	PMUE3675FACEAA	DP4801E 403-527 4W FKP GNSS BT WIFI
	PMUE3681FAAEAA	DP4401E 403-527 4W NKP GNSS BT WIFI
	PMUE3678FAQEAA	DP4601E 403-527 4W LKP GNSS BT WIFI
	PMUD3496BACEAA	DP4801E 136-174 5W FKP GNSS BT WIFI TIA4950
	PMUD3496BAGEAA	DP4801E 136-174 5W CYR FKP GNSS BT WIFI TIA4950
	PMUD3496BAHEAA	DP4801E 136-174 5W ARB FKP GNSS BT WIFI TIA4950
	PMUD2904EACEAA	DP4801E 136-174 5W FKP GNSS BT WIFI
	PMUD2904EAHEAA	DP4801E 136-174 5W ARB FKP GNSS BT WIFI
	PMUD2906EAAEAA	DP4401E 136-174 5W NKP GNSS BT WIFI
	PMUD2918EAQEAA	DP4601E 136-174 5W LKP GNSS BT WIFI
DM4000e series	PMUE4125CBLEAA	DM4401E 450-527M LP-HP GOB WIFI/BT/GNSS ND
	PMUE4125CBMEAA	DM4601E 450-527M LP-HP GOB WIFI/BT/GNSS CD
	PMUE3646DAMEAA	DM4601E 403-470M 25W WIFI/BT/GNSS CD
	PMUE3646DALEAA	DM4401E 403-470M 25W WIFI/BT/GNSS ND

	PMUE3647DALEAA	DM4401E 403-470M 40W WIFI/BT/GNSS ND
	PMUE3647DAMEAA	DM4601E 403-470M 40W WIFI/BT/GNSS CD
	PMUD2568EAMEAA	DM4601E 136-174M 25W WIFI/BT/GNSS CD
	PMUD2565EAMEAA	DM4601E 136-174M 45W WIFI/BT/GNSS CD
	PMUD2568EALEAA	DM4401E 136-174M 25W WIFI/BT/GNSS ND
	PMUD2565EALEAA	DM4401E 136-174M 45W WIFI/BT/GNSS ND

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