Motorola Solutions, Inc.

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

North America Region

Version: R2.10.2
Date: August 14th, 2019

Contents

Overview

This section details the known MOTOTRBO product issues which remain outstanding at the time of this release of software to the field.
Known product issues are divided into two categories:
- Known issues contained within the current release
- Resolved Issues that have now been fixed within the current release

Definitions

A known issue is a problem that is currently unresolved (open).
A closed or resolved issue is one that has been repaired and no longer should occur in the product after upgrading to the new product version.
The risk and workaround aspects are included in the release note description (Known Issues) for overall assessment of the problem.

What's new in the Release

Updated August 2019 with new SLR repeater firmware for a defect fix.

Software Update Management

Software Update Management (SUM) is the feature that enables MOTOTRBO systems to continue to accept new software updates. Applicable to all MOTOTRBO subscribers, repeaters and CMSS, this feature provides products with built-in intelligence to determine if they are eligible to accept a software update. Products on prior releases must be upgraded to R2.10 before they can be upgraded to any future releases.

Staying current with MOTOTRBO software updates provides customers with new features, functionality. enhanced security and reliability. SUM enables customers to get continued access to new MOTOTRBO software updates, it also protects and extends the life of their MOTOTRBO system. Only products that are under warranty or have a MOTOTRBO Service Package will accept new software updates.

Infrastructure New Features

SLR 1000 Repeater - New Frequency Band - Available to order now
The SLR 1000 Repeater now supports the VHF frequency band (136-174M).

Enhanced Channel Access in Extended Range Direct Mode
Enhanced Channel Access on Direct Range Mode is utilized to ensure only one radio is transmitting voice and/or data into the repeater at a time, this functionality is now supported in Extended Range Direct Mode.

Capacity Max New Features

Dynamic Group Number Assignment
For customers that require their dispatch operators to have the ability to dynamically create Talk Groups to handle special events and/or tactical incidents, Dynamic Group Number Assignment (DGNA) provides a quick and efficient method for a console operator to replace a radio's currently selected channel's Talk Group (TG) and alias with a temporary DGNA Talk Group (TG) and alias of up to 16 characters. This is implemented per the DMR Tier 3 specification.

Radio New Features

Wave OnCloud
Supports WAVE OnCloud on selected Wi-Fi enabled MOTOTRBO radios. The radio is able to make and receive a group call with other WAVE OnCloud clients, receive a private call and talk back and update its presence and location. Please configure the following URL in your radio in order to be able to use WAVE On Cloud. You will need to have a valid subscription to WAVE OnCloud.
WAVE OnCloud URL: http://wgp.poc01.waveoncloud.com:443/cas/activation

Enhanced Battery Detection
Allow MOTOTRBO XPR 3000E/7000e radios to have a capability to detect non-MSI battery and alert the user.
This feature gives extra assurance to the customers choosing to buy genuine MSI batteries, as the MSI radios provide additional performance and safety when combined with genuine MSI batteries.

Wi-Fi On/Off Control
Allow a radio to remotely send a control command to turn Wi-Fi On/Off of another radio or a group of radios. This feature allows the customer to utilize WiFi programming whilst leaving the WiFi turned off by default on all the radios and switching it on for the duration of the programming procedure.

Indoor Location Enhancement
Provide more accurate indoor location tracking to provide insights into radio position/movement with minimal radio transmission overhead by adding Indoor Location protocol command for the application to
(a)   Request an unfiltered beacon buffering scheme and
(b)   Specify an iBeacon RSSI Threshold.

New DMR Call Types
Support the following new (DMR II) conventional voice call types on all MOTOTRBO radios: Unaddressed Call, Broadcast Call, and Open Voice Channel Mode Call.

An *Unaddressed Call* is a group call with hang time to one of sixteen predefined addresses. To start or receive an unaddressed call, the MOTOTRBO radio needs to be set up with an unaddressed call contact.

A ***Broadcast Call*** is a one-way call with no hang time to a single group. This is similar to an "all call" except it is directed to a single group instead of multiple groups.

An ***Open Voice Channel Mode Cal***l allows radios to participate in a group or individual call when not specifically addressed for the call; during this call said radio can both transmit and receive.

Regional New Features

Remove Default Analog Channel
All models will remove default Analog Channel, meaning all radios and repeaters out from factory will have Digital Channel only. NA, LA, EMEA regions can add back Analog Channels freely, except APAC countries, this is restricted by Analog Mode Support feature.

It is only applicable for Digital capable radio, not Analog Only model. And it is applicable for SLR1000, SLR5000 and SLR8000 repeater.

Tool New Features

CPS 2.0

MOTOTRBO^{TM} CPS 2.0 application simplifies Radio and Repeater configuration management, while ensuring users can accomplish their tasks with ease. CPS 2.0 focuses on better basics including: a lighter hardware specification, USB wired support, one radio at a time and ability to validate new codeplug updates. CPS 2.0 supports a more consistent experience across multiple applications compared to Radio Management. This includes similarities in the tree view structure and improved navigation.

RM Migration Analysis Tool

Radio Management introduced the Configuration Mode with the launch of R02.06.00 CapMax support. The Configuration Mode has improved users capabilities to manage a large fleet of Radios and Infrastructure component (i.e. Repeaters and Controller) level configuration. Since the Configuration Mode inception, the software suite has been supporting both the legacy Template Mode and Configuration Mode. To continue improving the overall user experience, future Radio Management releases will be focusing on exclusive support of Configuration Mode.

Effective with the launch of MOTOTRBO Radio Management software suite R02.10.00, the following Radio Management change will be made:

- Radio Management Template Mode will no longer be available
- Radio Management Template Mode training module will no longer be available from Learning
- Management System (PCT1026 - Radio Management 2.0 Template Mode)

RM Migration Analysis Tool will be available on MOL to help determine user actions needed to prepare their database for Configuration Mode. This tool will identify Radios that cannot be

converted to Configuration Mode with the recommended corrective actions. Please contact a Motorola Solutions Account Representative for any specific questions regarding this support.

Roaming Threshold Limit for CP/LCP and IPSC
RM/CPS 2.0 provides the ability to configure a higher limit of RSSI threshold, from current limit of -80dBm to -60dBm. The configuration is available for both Per Site and All Sites.

Cybersecurity Update

Motorola Solutions, Inc. (MSI) has delivered a PCR MOTOTRBO 2.10 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 2.10 system release includes enhancements to security based on the National Vulnerability Database, improved architecture, and industry standards:

- Authentication: updates to IP stack to improve web server authentication
- Hardening: refreshed and updated Ports and Protocols hardening
- Lifecycle management: third-party software was updated, for example RHEL, Microsoft Windows…
- Introduction of Software Update Management

PCT0114.00 New Features for MOTOTRBO 2.10 course and TBO300.02 MOTOTRBO Subscriber and Repeater Technical Service Academy are available in LMS - https://learning.motorolasolutions.com/

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

MOTOTRBO Product	Version Supported in Release
Subscriber – MOTOTRBO XPR 7000/7000e, XPR 5000/5000e, XPR 2500, XPR 3000/3000e, SL 7000/7000e, SL 3500e	R02.10.00.0001 (CP 15.00.16)
Subscriber – MOTOTRBO - SL300/CP200d/CM200d/CM300d	R01.01.40.0000 (CP 12.00.38)
Subscriber – MOTOTRBO - XPR 4000/6000	R01.12.17
Option Board – MOTOTRBO 2.0 (incl SL Series) - XPR 7000/7000e, XPR 5000/5000e, SL 7000/7000e Option Board – MOTOTRBO - XPR 4000/6000	R02.07.36 (CP 1.1.19) R01.07.45 (CP 1.0.16)
Repeater - XPR 8380/XPR 8400 Repeater - MTR3000 Repeater - SLR 1000, 5000, SLR 8000	R02.10.00.05_R20.00.02 R02.10.00.05_R20.00.02 R02.10.00.10_R07.00.08
XRC 9000 / 9100 Controller	R02.90.00.0594_1556
XRT 9000 / 9100 Gateway	R02.90.00.0594_1556
XRI 9100 Interconnect	R02.90.00.0594
Network Manager (merged with XRC / XRI packages)	R02.90.00.0594
Network Manager Connection Tool	R02.90.00.0594
XRT Configuration Tool	R02.90.00.0594
Capacity Max Bridge (CMB)	R02.10.00.0945_944
CPCPS	R02.07.41
Radio Management	2.18.95.0
CPS	CPS V16.0 Build 828
CPS 2.0	2.18.95.0
Tuner	V17.0 Build 246
RDAC	V10.0 Build 109
AirTracer	V10.0 Build 32
Device Discovery Mobility Service (DDMS)	R03.100..5001
Multi Channel Device Driver (MCDD)	R2.1.3
MNIS Data Gateway	R02.100..5001
MNIS Voice and Radio Command (VRC) Gateway	R02.100..5001
MNIS Status Agent	R02.90.5000 (no change)
Capacity Max ESU	DESU-R17.01.03.19 (DESU-PCR-02.10.01.03-19.iso)
Capacity Max Trunk Controller	TC_R02.10.00.08 (cmxtc-pcr-20.10.50.00-01.iso)
Capacity Max System Advisor	UEM-PCR-02.10.00.58 (UEM-PCR-02.10.00.58-00.iso)

Capacity Max ESU Launchpad	DESU_LP-R17.01.03.19 (DESU_LP-R17.01.01.03-01.rhel.iso)
Capacity Max System Server One-Click Upgrade	CVN7213A.iso (This is required for 2.9.x to 2.10.0 upgrade)
MNIS VRC Gateway	R02.100..5001 (vrcgw-pcr-02.100.08.iso)
System Design Tools	Version 06.08

3rd Party Applications	Version Supported in Release
GW3-TRBO	2.16.3.2
Avtec VP Gate	4.8.2
Avtec Scout Console/Scout Manager	4.8.2
Avtec VPGate Advanced Radio Support w/Encryption	4.8.2
Avtec Data Management Services - Scout Central Distributor	4.8.2
SmartPTT PLUS	9.5.14.0
TRBOnet PLUS	5.4.0.2092

ETSI DMR Specification	Version Supported in Release
TS 102 361-1: the DMR air interface protocol	v2.5.1
TS 102 361-2: the DMR voice and generic services and facilities	v2.4.1
TS 102 361-3: the DMR data protocol	v1.3.1
TS 102 361-4: the DMR trunking protocol	v1.7.1 ~ 1.9.2

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

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

3. **For each CMSS (Capacity Max System Server),**
   a. **Order (1) T8482A, MOTOTRBO 2.10.x Capacity Max System Server SW Upgrade which contains the CVN7213X.zip file loaded on a USB drive.**
   b. **Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8481A, MOTOTRBO 2.10.x Capacity Max System Server SW Upgrade where you will receive an e-mail with a unique link to access/download the CVN7213X.zip file from the MyView portal. The T8481A will require an e-mail address at time of order.**
   c. **NOTICE: The USB drive (T8482A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8481A) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade.**
   d. **Both the T8481A and T8482A will also require the MSI Capacity Max Server's Serial Number (SN #: 435xxxxxxx) at time of order for validation purposes.**

4. **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 R2.10.x upgrade requires this new ESU LP version).**
    b. **Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8483A, 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 T8483A will require an e-mail address at time of order.**
    c. **Please refer to the section "Upgrading a *Capacity Max System from R2.9.0 to R2.10.0*" of Capacity Max System Release Upgrade Guide for additional details. It is available on MOL 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 (T8483A) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade**
    e. **The ESU Launchpad About page describes the target CMSS versions that it supports to, ensure the appropriate ESU Launchpad version is ordered along with the CMSS upgrade installation files.**

Known Issues in Product Release

Infrastructure Impact

Issue Number:	**UEM-6012**
System/Product:	Capacity Max System Advisor Client - latest Java version (8u211) incompatibility
Description:	The user will not be able to access the System View, Grid View and Alarm Details view. There is no data loss and the GridView will still be available from the web browser.
Workarounds:	Any Java version between and including 8u181 and 8u201 will work fine.

Issue Number:	**ENG_INFRA_PCR-1453**
System/Product:	SLR Repeaters
Description:	In a CapMax system with greater than 15 sites, a user may see an incorrect value
	(non-zero and out-of range) in the Receiver Site ID field in System Advisor.
Workarounds:	N/A

Radio or CPS/RM Impact

Issue Number:	**DMGMT-1454**
System/Product:	MOTOTRBO RM
Description:	When attempting to edit Cap Max Site Selection List set, RM freezes. It takes minutes to display and edit Cap Max Site Selection List from the set view.
Workarounds:	Show and edit Cap Max Site Selection List from the configuration view instead of the set view.

Issue Number:	**DMGMT-9941**
System/Product:	MOTOTRBO RM
Description:	Conversion of radios in the template mode to config mode failed with error #101202. Some of the XPR 3000 radios w/ Wrong Battery setting configured inappropriately cannot be converted to Config mode w/ the error #101202.
Workarounds:	Re-read the radios that cannot be converted to RM config mode.

Issue Number:	**N/A**
System/Product:	MOTOTRBO CPS 2.0
Description:	Online Help partial international language support.
Workarounds:	Users requiring updated OnLine-Help language support will be required to download and install the updated language files. Please refer to the CPS 2.0 Language Translation Bulletin for instruction to install updated language pack

into CPS 2.0.

Resolved Issues In Product Release

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

Defect ID	Release Introduced	Product	Headline
SS4462	MOTOTRBO2.10.0	SLR Repeaters	Major alarms triggered may result in a continuous reboot without going into a disabled state.
TBD (SS4453)	MOTOTRBO2.10.0	Repeater (SLR 8000 8/900 and SLR 1000 VHF)	Chassis module ID Alarm error after repeater upgrade to R2.10.0 C3: 26763529
ENG_INFRA_PCR-715	MOTOTRBO 2.8.0	MNIS VRC (Motorola Network Interface Service Voice and Radio Command)	Create Fix for Unconfirmed Group Data ACK in 2.9, issue is only visible for ADP developers. C3: 26535072 in SmartClient C3 case tracking tool
CCMPD02137431	MOTOTRBO 2.8.0	Capacity Max Bridge (CMB)	CMSS_Motorola_Error 537 when writing CMSS C3: 25640113 RFC: 25675854
MOTOTRBO_INFRA_FW-4060	MOTOTRBO 2.9.0	Repeater	SLR 8000 not sending the CWID in IPSC. C3: 26402589
MOTOTRBO_INFRA_FW-3934	MOTOTRBO 2.6.0	Repeater	Seven second delay on SLR 5700 when channel steering with tone remote adapter. C3: 26366061
MOTOTRBO_INFRA_FW-3856	MOTOTRBO 2.6.0	Repeater	SLR 5700 CWID not transmitted. C3: 26269889
MOTOTRBO_INFRA_FW-3633	MOTOTRBO 2.9.0	Repeater	SLR 5700 fans alarming intermittently after R2.9 upgrade. C3: 26254483
MOTOTRBO_INFRA_FW-3632	MOTOTRBO 2.7.0	Repeater	SLR 5700 backup DC power does not roll back to the low level setting. C3: 26260475
MOTOTRBO_INFRA_FW-3621	MOTOTRBO 2.8.0	Repeater	Unable to change channel from DMM mode using GPIOs in SLR 5700 . C3: 26214449
MOTOTRBO_INFRA_FW-3564	MOTOTRBO 2.2	Repeater	Repeater malfunction with high GPS load and digital voting enabled. C3:26244676
MOTOTRBO_INFRA_FW-3473	MOTOTRBO 2.8.5	Repeater	CapMax Call Pre-emption does not work when Enhanced Privacy is enabled. C3: 26023325
MOTOTRBO_INFRA_FW-3466	MOTOTRBO 2.8.0	Repeater	Repeaters fail DHCP handshake. C3: 25709959
MOTOTRBO_INFRA_FW-3355	MOTOTRBO 2.6.0	Repeater	MTR3000_RCS_Cap Plus System not trunking. C3: 26117149

MOTOTRBO_INFRA_FW-3214	MOTOTRBO 2.8.0	Repeater	VRC Gateway Issue _ 2 groups are displaying the error "Equipment is not Connected" when the user PTT's on Dispatch. C3: 25894765
ENG_INFRA_PCR-1146	MOTOTRBO 2.6.0	Repeater	Capmax - RM IP R2.9 Repeater upgrade resets system. C3: 26571523
ENG_INFRA_PCR-832 ENG_INFRA_PCR-497	MOTOTRBO 2.6.0	Repeater	CapMax - Digitized audio burst from a RF site to Console. C3: 26493065
** INFRA/Repeater Defects below			**The following defects were fixed in the prior R2.9.8 release - left here for reference
MOTOTRBO_INFRA_FW-4028	MOTOTRBO 2.9	Capacity Max Trunking Controller	CapMax - High priority call doesn't pre-empt the channel if there's more than 1 repeater on site C3: 26403498-1
MOTOTRBO_INFRA_FW-4060	MOTOTRBO 2.9	Repeater	The SLR 8000 may stop sending a CWID in Conventional mode or in an IP Site Connect system. C3: 26402589
MOTOTRBO_INFRA_FW-3564	MOTOTRBO 2.6	Repeater	The repeater may stop forwarding data or voice traffic when there is a high GPS load and digital voting enabled and used in single repeater digital conventional mode or in an IP Site Connect system. C3: 26244676
MOTOTRBO_INFRA_FW-3473	MOTOTRBO 2.8	Repeater	Capacity Max Call Preemption does not work when Enhanced Privacy is enabled. C3: 26023325
MOTOTRBO_INFRA_FW-3633	MOTOTRBO 2.9	Repeater	SLR 5700 fans falsely alarm intermittently. The fans remain operational during the alarm and alarms clear over time. C3: 26254483
PCR_SUB-3544 (C3: 26191214)	MOTOTRBO 2.8.0	XPR and SL series radios	Bluetooth in some radios is not connecting directly
PCR_SUB-5631 (C3: 26274321)	N/A	XPR and SL series radios	CPS/RM issue while trying to write the radio #2954 and #8853 errors
PCR_SUB-5167 (C3: 26366072)	N/A	XPR 7550	XPR7550 - Radio's Mute Mode is not silent (produce audible clicks and hiss noise)
PCR_SUB-5380 (C3: 26381633)	N/A	XPR 7550e	XPR7550e_Low RX audio at beginning of call, compared to prior units
PCR_SUB-6483 (C3: 26399043)	MOTOTRBO 2.7.0	XPR 7000/XPR 5000	XPR7000/XPR5000 - Telemetry built-in service fails at FW 2.9 (propagated)
PCR_SUB-8514 (C3: 26566080)	MOTOTRBO 2.9.0	XPR and SL series radios	CMSS_Radio Communications_Radios intermittently have registration issues on Shared CC

PCR_SUB-4055 (C3:25882902)	MOTOTRBO 2.8.0	XPR 5580	XPR5580 GPS Data missing in Connect Plus (propagated - MOTOTRBO2.10.0)
PCR_SUB-4258 (C3:25930870)	MOTOTRBO 2.6.0	XPR and SL series radios	Cap Max C3 SU Forgets The Announced Sites After Power Cycle.
PCR_SUB-5664 (C3:26401618)	N/A	XPR 7550e	XPR7550e CapMax Radios missing audio at the beginning of calls .
PCR_SUB 1518	MOTOTRBO 2.9.0	XPR and SL series radios	Capacity Max with Enhanced Telephony - Cannot initiate a telephone call while in a group call.
PCR_SUB-1007	MOTOTRBO 2.9.0	XPR and SL series radios	Bluetooth Enabled XPR and SL Radios - Radio prompt "Purchase Required" notice after pairing with a second Bluetooth device. The second device is of a type that initiates the pairing automatically.
RMGMT-1975	N/A	RDAC	When click on the help button on the wizard of view features or register features, Error #1722 prompts that %1 does not exist. Please check the file name"
DMGMT-1404	N/A	Capacity Max and RM	When radio ID in the radio view is changed, you need to go to Actions > Manage > Capacity Max Server Data > SAC for SAC table to get the updated radio ID. Then CMSS needs to be programmed for the updated Radio ID in the SAC.
DMCI-430 (26116465)	N/A	CPS/RM	PROBLEM WITH TXT MESSAGES ON DP1400
DMCI-572 (26532563)	N/A	RM	WRITE JOB FAILED PLEASE RUN ANALYZE IN MOTOTRBO RADIO MANAGEMENT

Additional Info

LMS Training

1. **PCT0114 New Features for MOTOTRBO R2.10**
2. **PCT0115 MOTOTRBO CPS 2.0 Tutorial**