

**Product Change Notification
Software Release Notice**

MultiConnect[®] rCell 100 Series Cellular Routers

**mPower[™] Edge Intelligence
mPower 5.2.2 Firmware Available
MTR-LNA7 models only**



Date: August 19, 2020

Product Change Notification Number
PCN 08192020-MTR-001

I. Overview

MultiTech announces updated firmware versions for MultiConnect[®] rCell 100 Series cellular router devices. This firmware is for use with MTR-LNA7 models only.

The purpose of this Software Release Notice is to alert customers that updated code is available for evaluation and to provide customers important information on this new release.

New mPower Version: mPower MTR 5.2.2

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II. Suggested Action Plan

To help accelerate the acceptance of mPower MTR 5.2.2, we recommend that the following actions be taken.

Customers

- Please review the information in this PCN and forward to others within your organization who are actively involved with the development of IoT applications using the MultiConnect rCell.
- Review the [Ordering Part Numbers Impacted](#) to understand how mPower MTR 5.2.2 impacts the devices you are using.
- Consider downloading mPower MTR 5.2.2 firmware prior to the transition.
- Technical inquiries: email support@multitech.com
- Sales inquiries: email sales@multitech.com

Distributors

- Forward this announcement to others within your organization who are actively involved in the sale or support of cellular routers.
- Notify existing customers of this upcoming change and encourage them to evaluate the new firmware.

III. mPower MTR 5.2.2 Overview

Feature Enhancements (MTR 5.2.2):

MTR 5.2.2 includes the new features, feature enhancements, and bug fixes identified in mPower MTR 5.2.1 and resolves several known behaviors that were identified in MTR 5.2.1.

1. MTR 5.2.1 Release Notes: ftp://ftp.multitech.com/wireless/mtr/mtr-release-notes_5.2.1.pdf
2. Known Behavior #1: Lost Cellular Connection – MTR-LNA7 Models (MTR 5.2.1)
 - In MTR 5.2.1, when changing the MTR-LNA7 from one SIM card to another, cellular connection can be lost. MTR-LNA7 does not detect when the SIM card is swapped and continues to use the original dial string.
 - Scenario #1: Customer first inserts an AT&T SIM card and then later replaces it with a Verizon SIM card.
 - Scenario #2: Customer first inserts a Verizon SIM card and then later replaces it with an AT&T SIM card. [GP-652] [MTX-3446]
 - Solution (MTR 5.2.2): Default Dial String for Detected Carrier
 - The dial string number is empty by default
 - When the dial number is empty, the system considers it as AUTO, and uses a default dial string depending on the detected provider (carrier):

Detected Provider (Carrier)	Default Dial String
Verizon	*99***3#
Carrier other than Verizon	*99***1#

- If the dial number is not empty, the system uses the user-defined dial string, and the detected provider (carrier) is ignored.
- Note: When performing a firmware upgrade from mPower 5.2.1 to mPower 5.2.2, the dial string value remains without changes. There are three ways to reset the dial string value to default
 - [1] Click “Reset to Default” button on the Cellular Configuration page
 - [2] Reset the Dial String manually
 - [3] Reset the device configuration to factory default

2. Known Behavior #2: Lost Cellular Connection – MTR-LNA7 Models (MTR 5.2.1)
 - Scenario (MTR 5.2.1): Customer first inserts a Verizon SIM card with one APN and then later replaces it with a second Verizon SIM card that has a different APN [GP-65] [MTX-3448]
 - Solution #1 (MTR 5.2.2): Web User Interface Update
 - If the current provider is Verizon, the system provides an option to retrieve APN settings from the Verizon network.
 - “Reset Class 3 APN (Verizon)” button has been added to the Debug Options page under the Reset Options pane. The “Reset Class 3 APN (Verizon)” button is visible ONLY if a Verizon SIM is detected.
 - When user clicks the “Reset Class 3 APN (Verizon)” button, the OMA DM procedure starts. An information message notifies the user that the request to retrieve APN settings from the Verizon network was sent successfully. The process occurs in the background and the user can continue working with Web UI. When the OMA DM procedure is completed, an informational message with the result appears.
 - If the result is successful, the message is displayed:
“APN has been retrieved and applied to the modem configuration successfully.”
 - If the settings cannot be retrieved, the error message appears:
“Failed to retrieve APN from the Verizon network.”
 - Solution #2 (MTR 5.2.2): New API Command
 - A new API command is implemented and is available in the `/api/commands:`
vzw_reset_class3_apn
 - If this command is executed on a device other than the MTR-LNA7, the following error message will be returned:
“error”: “This command is not supported on this radio”
 - If this command is executed on the MTR-LNA7 and the current or detected carrier is NOT VERIZON, the following error message will appear:
“error”: “This command is available for Verizon network only”
3. Known Behavior #3: Lost Cellular Connection – MTR-LNA7 Models (MTR 5.2.1)
 - Scenario (MTR 5.2.1): Cellular connection is lost because system detects that the SIM card is not present in the SIM slot (GP-653)
 - Solution (MTR 5.2.2): New Error Message
 - When the SIM card is not present in the SIM slot, the following error message is displayed:
**“SIM card is not detected. If you swapped SIMs, please restart the device.
(Date and Time Stamp)”**
4. Known Behavior #4: SMS Messages Not Being Received – MTR-LNA7 Models (MTR 5.2.1)
 - Scenario (MTR 5.2.1): When a Verizon SIM and MTR-LNA7 have different 3GPP configurations, the MTR-LNA7 will not receive SMS messages. [GP-655]
 - Solution (MTR 5.2.2): SMS feature changed to support both SMS formats
 - System supports 3GPP and 3GPP2 formats
 - This change is implemented for Verizon SIM cards only
5. Known Behavior #5: Dial-On-Demand – Error/Warning (MTR 5.2.1)
 - Scenario (MTR 5.2.1): Dial-on-demand is not supported on the Verizon network. In previous mPower versions, a warning was presented to the customer. This warning was removed in mPower 5.2.1 [GP-656]

- Solution (MTR 5.2.2): New Error Message
 - When Verizon is the current provider, the system does not enable dial-on-demand feature
 - The following error message is displayed:
**“Dial-On-Demand feature cannot be supported when the provider is Verizon.
Dial-On-Demand will not be enabled.”**

Minimum System Requirements (MTR 5.2.2)

To install mPower 5.2.2, the MultiConnect rCell must be upgraded to MTR 5.0.0 or higher. Customers that are running earlier versions of mPower should use the following upgrade process:

MultiConnect rCell Models:

- mPower MTR 3.4.5
 1. Upgrade to MTR 5.0.0
 2. Install and upgrade to MTR 5.2.2
- mPower versions earlier than mPower 3.4.5
 1. Upgrade to MTR 3.4.5
 2. Upgrade to MTR 5.0.0
 3. Install and upgrade to MTR 5.2.2
- mPower 5.0.0
 1. Install and upgrade to MTR 5.2.2

IV. Schedule

There are multiple versions of mPower Edge Intelligence firmware available for customer evaluation and final release.

- Downloadable Versions
 - mPower MTR 5.2.2 Availability: August 17, 2020
 - 1. Visit <https://www.multitech.com/brands/multiconnect-r-cell-100-series>
 - 2. Locate and select the correct model number from the Product Listing
 - 3. Visit DOWNLOADS tab and select mPower 5.2.2 from the list of available firmware downloads
- Manufacturing
 - Devices continue to ship with earlier mPower versions for the next 30 days.
 - Customers are encouraged to evaluate mPower MTR 5.2.2 firmware prior to this transition.
 - See [Ordering Numbers Impacted](#) for more details.
- DeviceHQ[®]
 - Cloud-based IoT Device Management
 - mPower MTR 5.2.2 Availability: August 17, 2020
 - https://www.devicehq.com/sign_in

V. Upgrading Firmware

At any time in the upgrade process, customers can send an email to support@multitech.com or call +1(763) 717-5863.

Upgrading Using DeviceHQ

DeviceHQ can update the firmware running on any supported device. Since devices have no live connection to DeviceHQ, firmware updates are made the next time a device checks into DeviceHQ.

Instructions:

1. Visit <https://www.devicehq.com>
2. Sign in to your account using your **email address** and **password**
3. Click **Devices**. The device list page opens.
4. Click the name of the device you want to update. You can update firmware on filtered devices or selected devices.
 - If you select individual devices, you update firmware on selected devices or the filtered devices.
 - If you do not select devices you update the firmware on the filtered devices.
5. Click **Schedule** and select **Upgrade Firmware**. From the list of firmware that appears, select the name of the firmware file. A confirmation message appears, informing you that the new firmware is to be applied to the device when the device next checks in.
6. To confirm that you want to update the firmware click **OK**.

NOTE: To schedule multiple devices at once, see help file within DeviceHQ

Upgrading Using the Web Interface

It is recommended that customers backup their configuration before performing an upgrade.

- If the firmware upgrade fails, or it does not show the login page again, wait an additional 10 minutes.
- Power off and on the hardware and log in using the web interface to check the version.
- If the version does not show the latest, then the upgrade was not successful.
- Try to perform the firmware upgrade again by repeating all the steps.

Instructions:

1. Before upgrading, reboot the device.
2. Visit <https://www.multitech.com/brands/multiconnect-rcell-100-series>
3. Locate and select the model number from the product listing
4. For the model number selected, open the DOWNLOADS menu
5. Select the latest firmware version and download it to a known location
6. Open the device web interface
 - a. Select **Administration > Firmware Upgrade**. The Administration: Firmware Upgrade pane opens
 - b. Click **Choose Firmware Upgrade File** button:
 - i. Click **Browse** to find where the firmware file resides that you want to apply
 - ii. Select the file and click **Open**. The file name appears next to the **Choose Firmware Upgrade File** button. Make sure you select the correct BIN file; otherwise, your device can become inoperable.
 - c. Click **Start Upgrade**.
 - d. A message about time needed to upgrade appears. Click **OK**. A progress bar appears indicating the status of the upgrade. When upgrade is completed, your device reboots.

- e. After the firmware upgrade is complete, verify your configuration to make sure it is what you expected.

Notes:

- The new firmware is written into flash memory.
- It may take up to 10 minutes to upgrade the firmware. Do not interfere with the device power or press the reset button during this time.

VI. Ordering Part Numbers Impacted

The following ordering part numbers are impacted by these updates:

Model Name	Ordering Part Numbers	
MultiConnect® rCell 100 Cellular Routers		
MTR-LNA7-B07	MTR-LNA7-B10	MTR-LNA7-B07-HZ
MTR-LNA7-B07-US	MTR-LNA7-B10-US	MTR-LNA7-B10-HZ
MTR-LNA7-B07-PS		

- Devices continue to ship with earlier mPower versions for the next 30 days.
- Customers are encouraged to evaluate mPower MTR 5.2.2 firmware prior to this transition.

VII. mPower™ Edge Intelligence

mPower™ Edge Intelligence is MultiTech’s embedded software offering, building on the popular application enablement platform, to deliver programmability, network flexibility, enhanced security and manageability for scalable Industrial Internet of Things (IIoT) solutions.

mPower Edge Intelligence simplifies integration with a variety of popular upstream IoT platforms to streamline edge-to-cloud data management and analytics, while also providing the programmability and processing capability to execute critical tasks at the edge of the network to reduce latency, control network and cloud services costs, and ensure core functionality – even in instances when network connectivity may not be available.

In response to evolving customer security requirements, mPower Edge Intelligence incorporates a host of security features including signed firmware validation, enhanced firewall and VPN settings, secure authentication and more.

VIII. MultiConnect® rCell® 100 Series Intelligent Cellular Routers

The MultiConnect rCell is a compact, intelligent and fully-featured communications platform that provides cellular capabilities for fixed and mobile applications. It is intended for use in settings such as:

- Remotely monitoring solar micro-inverters, tanks, pipelines, meters, pumps and valves in any energy, utility, or industrial application.
- The MultiConnect rCell 100 series family has also been successfully deployed by professionals in emergency services, vending, remote patient monitoring, renewable energy systems, process automation and mobile applications (truck, rail, and boat).

The MultiConnect rCell 100 series (MTR-xx) of cellular routers are a part of the MultiTech comprehensive portfolio of cellular connectivity products optimized for M2M (machine-to-machine). The MultiConnect rCell comes with no cost access to DeviceHQ® which is MultiTech’s cloud platform service to monitor and manage deployed MultiConnect rCell cellular routers in the field.

IX. Additional Information

If you have any questions regarding this Product Change Notification/Software Release Notice, please contact your MultiTech sales representative or visit the technical resources listed below:

World Headquarters – USA

+1 (763) 785-3500 | sales@multitech.com

EMEA Headquarters – UK

+(44) 118 959 7774 | sales@multitech.co.uk

Knowledge Base:

<http://www.multitech.com/kb.go>

Immediate access to support information and resolutions for all MultiTech products.

MultiTech Support Portal:

<https://support.multitech.com/support/login.html>

Create an account and submit a support case directly to our technical support team.

MultiTech Website:

www.multitech.com