

Product Change Notification Software Release Notice

MultiConnect® rCell 100 Series Cellular Router

New Firmware Available mPower™ Edge Intelligence



Date: November 20, 2019

Product Change Notification Number
PCN 112019-MTR-001

I. Overview

MultiTech announces new firmware for the MultiConnect® rCell (MTR-xx) Cellular Routers.

The purpose of this Product Change Notification is to:

1. Alert customers that updated code is available for evaluation
2. Provide customers important information the models numbers impacted and the schedule for final release

New firmware version: MTR 5.1.1

II. Schedule

The latest version of mPower Edge Intelligence firmware for MTR-xx models is available for customer evaluation and final release.

Contents:

- I. [Overview](#)
- II. [Schedule](#)
- III. [mPower™ Edge Intelligence](#)
- IV. [MTR Models Impacted](#)
- V. [MTR 5.1.1 Overview](#)
- VI. [Upgrading MTR Firmware](#)
- VII. [Ordering Part Numbers Impacted](#)
- VIII. [MultiConnect rCell Overview](#)
- IX. [Additional Information](#)

- Downloadable Version
 - Availability: December 2019
 - Visit <https://www.multitech.com/brands/multiconnect-rcell-100-series>
- Manufacturing
 - See [Models Impacted](#) for details on when MTR 5.1.1 will be available for different versions of the MultiConnect rCell
- DeviceHQ®
 - Cloud-based IoT Device Management
 - MTR 5.1.1 Availability: December 2019
 - https://www.devicehq.com/sign_in

III. mPower™ Edge Intelligence

mPower™ Edge Intelligence is a new embedded software offering, building on its 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 new security features including signed firmware validation, enhanced firewall and VPN settings, secure authentication and more.

IV. MultiConnect rCell Models Impacted

The following MultiConnect rCell models are impacted by these firmware updates:

MultiConnect rCell Hardware Description	Model
LTE Category 4 LTE	MTR-LEU7, MTR-LNA7
LTE Category 3 LTE	MTR-LEU1, MTR-LAT1, MTR-LVW2
LTE Category M1	MTR-MNG2
3G-HSPA+	MTR-H5
3G-HSPA	MTR-H6

For a specific list of the ordering part numbers impacted, reference [Ordering Part Numbers Impacted](#)

V. MTR 5.1.1 Overview

Model Name	Current Firmware Version	NEW Firmware Version
MultiConnect rCell	MTR 5.0.X	MTR 5.1.1

Minimum System Requirements (MTR 5.1.1)

To install MTR 5.1.1 firmware, the MultiConnect rCell must have the proper firmware version:

- MTR 3.4.5 or higher
- If running a firmware version lower than MTR 3.4.5, please install MTR 3.4.5 before loading the MTR 5.1.1

Feature Enhancements (MTR 5.1.1):

Firmware version MTR 5.1.1 includes the following new features and feature enhancements.

1. Hardware Support
 - a. Radio support **added** for the following cellular technologies

Cellular WAN Support	Wireless Carrier
4G-LTE Category 4 Europe (-LEU7 models)	European Carriers
4G-LTE Category 4 North America (-LNA7 models)	AT&T Verizon
4G-LTE Category M North America (-MNG2 models)	AT&T Verizon

- b. Added support for new GPS module
 - Current SkyTraq Technology GPS module (Venus 638) is end-of-life and replaced by a new SkyTraq Technology GPS module (Venus 816)
 - Transition from old to new GPS module will occur in late 2019
 - Impacts the following MTR models with GPS:

GPS-only models	GPS/Wi-Fi models	GPS/Wi-Fi/BT models
MTR-H5-B08 MTR-H5-B08-US-EU-GB MTR-LAT1-B08 MTR-LAT1-B08-US MTR-LEU1-B08 MTR-LEU1-B08-EU-GB MTR-LVW2-B08 MTR-LVW2-B08-US	MTR-H6-B19	MTR-H5-B10 MTR-H5-B10-US MTR-H5-B10-HZ

2. Feature Enhancements

a. First-Time Setup

- Setup Wizard: option added for Remote Management – DeviceHQ

b. Network Interfaces

- Added support for IPV6 in several specific network configurations

Network Interface	IP Mode
Bridge (Br0)	STATIC
Ethernet (Eth0)	STATIC DHCP Client
PPP Interface (ppp0)	PPP PPP – Addresses Only

- IPv6 WAN on cellular only

c. Global DNS

- Option added to configure the hostname of the device

d. Dynamic Host Configuration Protocol (DHCP) Server

- IPv4 DHCP Servers (IPv4 support) or DHCPv6 and Router can be viewed, added, or edited

e. Setting up Wi-Fi as a WAN

- Support added for connecting to hidden SSID networks

f. Updated Destination and Source Interface Firewall Rules now include OPENVPN option

- Pre-routing rules
- Post-routing rules
- Input filter rules
- Inbound forwarding rules
- Output filter rules

g. Added Cellular Configuration Fields

- Cellular Mode: Select the cellular mode from the drop-down menu based on the cellular radio module in the device (Auto (default), LTE only, LTE prefer, 2G only, 3G only, or 3G prefer)
- Modem Configuration (allows user to switch firmware from one MNO network to another). Selections differ by model:

-L4N1 Models	-LNA3 Models	-MNG2 Models
AT&T Compatible (default) Verizon	Auto ⁽¹⁾ (default) AT&T Compatible Verizon	Auto ⁽¹⁾ (default) AT&T Compatible Verizon, World-Wide

⁽¹⁾ Auto option automatically detects SIM and configures to appropriate MNO

- h. Added Password Complexity Rules: Administrative user can choose rules and limitations for user passwords, including:
- Minimum length of passwords
 - Upper and lower case requirements
 - Special characters (non-alphanumeric)
 - Characters that are not permitted

Two modes are available:

- Default Mode: Minimum character length and specific number of characters
 - Credit Mode: Credits are granted for each password character and extra credits are applied for certain character classes. Administrators specify a minimum number of classes. Longer passwords are the strongest.
- i. Configuring Device Access: How the device can be accessed as well as security features that decrease susceptibility and malicious activity.
- Added Reverse SSH Tunnel: enable and configure reverse SSH tunnel either using DeviceHQ (or other cloud service) or a 3rd party service.
- j. Managing Devices Remotely (DeviceHQ): Updates to DeviceHQ Check-In Settings
- Single Check-In: Configure device to check-in to DeviceHQ at a specific date and time
 - Repeatable Check-In: Configure device to check-in to DeviceHQ at a specific time daily or on a specific day of the week.
- k. Upgrading Firmware from MultiTech website or DeviceHQ
- Signed Firmware Validation is automatically used once it is enabled after upgrading from version 5.1 and higher.
- l. Manage Custom Applications
- The MultiConnect rCell includes added support for installing custom applications and the managing the version of all installed applications.
- Maximum application size: 4MB (larger applications may encounter problems)
 - Refer to [Creating a Custom Application](#) on the MultiTech Developer Resources website for complete instructions on developing, installing, and deploying custom applications.

VI. Upgrading MTR Firmware

- a. At any time in the upgrade process, customers can send an email to support@multitech.com or call +763-717-5863.
- b. 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 MTR and log into the MTR 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.
- c. To upgrade firmware using the MTR Web User Interface, MTR 3.4.5 firmware or higher must be installed.
 - If firmware version is earlier than MTR 3.4.5, first upgrade to MTR 3.4.5 and then upgrade to MTR 5.1.1.
- d. Instructions:
 1. Save the firmware binary file to a directory on your workstation.
 2. Using the workstation browser, enter the IP address of the MTR (i.e. <http://192.168.2.1>).
 3. Login with admin user and enter the admin password.
 4. Click "Administration" tab on left side menu bar.
 5. Click "Save/Restore".
 6. Click "Save Configuration to File" to save a backup file. A popup window will appear.
 7. Select "Save File" and click "OK" button.
 8. Now click "Firmware Upgrade" tab on left side menu.
 9. This version of firmware has a Firmware Validation option. Review the Firmware Upgrade Help for further information.
 10. Click the Browse button and select the latest version of BIN file
rcell-mtr-upgrade_5.1.1.bin (non-LTE)
or
rcell-mtrv1-upgrade_5.1.1.bin (LTE).
Use the respective -signed upgrade file based on Firmware Validation option.
 11. Click the "Start Upgrade" button. Confirm the 10 minute "OK" button.
 12. Wait for the unit to upgrade and reboot automatically.
 13. Again, browse to the IP address, login and verify the Home Page indicates the correct version, 5.1.1.

VII. Ordering Part Numbers Impacted (Page 1 of 2)

The following products and ordering part numbers are impacted by these updates:

Model Name	Ordering Part Numbers	Release Date
MultiConnect® rCell LTE Category 4 Routers	MTR-LNA7-B07 MTR-LNA7-B07-US MTR-LNA7-B10 MTR-LNA7-B10-US MTR-LEU7-B07 MTR-LEU7-B07-EU-GB MTR-LEU7-B10 MTR-LEU7-B10-EU-GB	Early December 2019 MTR 5.1.1 firmware will ship as new MTR hardware is released
MultiConnect® rCell LTE Category 3 Routers	MTR-LAT1-B07 MTR-LAT1-B07-US MTR-LAT1-B08 * MTR-LAT1-B08-US * MTR-LVW2-B07 MTR-LVW2-B07-US MTR-LVW2-B08 * MTR-LVW2-B08-US * MTR-LEU1-B07 MTR-LEU1-B07-EU-GB MTR-LEU1-B08 * MTR-LEU1-B08-EU-GB *	Products must be individually updated by the customer using information on www.multitech.com or using DeviceHQ https://www.devicehq.com/sign_in
MultiConnect® rCell LTE Category M / NB-IOT Routers	MTR-MNG2-B07 MTR-MNG2-B07-WW MTR-MNG2-B10 MTR-MNG2-B10-WW	Early December 2019 MTR 5.1.1 firmware will ship as new MTR hardware is released
MultiConnect® rCell 3G-HSPA+ Routers	MTR-H5-B07 MTR-H5-B07-US-EU-GB MTR-H5-B08 * MTR-H5-B08-US-EU-GB * MTR-H5-B09 MTR-H5-B09-US-EU-GB MTR-H5-B10 * MTR-H5-B10-US * MTR-H5-B10-HZ *	January 2020 Products must be individually updated by the customer using information on www.multitech.com or using DeviceHQ https://www.devicehq.com/sign_in

* Models with GPS module will be upgraded to MTR 5.1.1 in mid-December 2019.

See [Added support for new GPS module](#)

VII. Ordering Part Numbers Impacted (Page 2 of 2)

The following products and ordering part numbers are impacted by these updates:

Model Name	Ordering Part Numbers	Release Date
MultiConnect® rCell 3G-HSPA Routers	MTR-H6-B16 MTR-H6-B16-EU MTR-H6-B16-GB MTR-H6-B18 MTR-H6-B18-EU MTR-H6-B18-GB MTR-H6-B19 *	January 2020 Products must be individually updated by the customer using information on www.multitech.com or using DeviceHQ https://www.devicehq.com/sign_in

* Models with GPS module will be upgraded to MTR 5.1.1 in mid-December 2019.

See [Added support for new GPS module](#)

VIII. MultiConnect® rCell® 100 Series Intelligent 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/Software Release Notification, please contact your MultiTech sales representative or visit the technical resources listed below:

World Headquarters – U.S.A.

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EMEA Headquarters – UK

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

For additional information on MultiTech mPower™ Edge Intelligence Software, please visit:

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