Software Release Notes

mPower® Edge Intelligence Software

Includes firmware version mPower MTR 6.0.0

MultiConnect® rCell 100 Series Cellular Routers

Overview

These release notes provide a cumulative changelog and overview for mPower Edge Intelligence embedded software used on MultiConnect rCell 100 Series Cellular Routers. Detailed information is listed in reverse chronological order, starting with the most recent mPower MTR release.

The latest version, mPower MTR 6.0.0 includes new features and enhancements to the DeviceHQ interface, cellular hardware support, Modbus protocols, user interface, and networking and security features.

Updated mPower MTR 6.x.x release notes are available < here >

Downloadable Versions:

- Visit www.multitech.com/brands/multiconnect-rcell-100-series
- Locate and select the correct model number from the Product Listing
- Visit the DOWNLOADS tab for the list of available firmware downloads

Contents

mPower MTR 6.0.0 (May 2022)

Revision History

mPower™ Edge Intelligence is MultiTech's embedded software offering delivering 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.

mPower MTR 6.0.0 Changelog and Overview

Released: May 2022
Status: Shipping September 2022

Updates in mPower MTR 6.0.0, from mPower MTR 5.3.6s-s1

New Features & Enhancements	Operating System	Networking & Security	Known Behaviors	Bug Fixes	Deprecations	Schedule	Models Impacted	Upgrade Process

New Features and Enhancements (mPower MTR 6.0.0)

Software & Services | Hardware | Fieldbus Protocols | User Management | Certificate & Key Mgt | User Interface

Software & Services	
Overview: Updated messaging when partial configuration is applied by DeviceHQ • In mPower MTR 6.0.0, when a device checks into DeviceHQ and performs a partial configuration upgrade, the system displays a status message on Web UI: **Partial configuration has been applied.** **The system is going down for reboot now. (DATE/TIME)** • In the previous mPower releases, the Web UI does not show a message	Enhancement GP-418 MTX-4140 IN003879
Hardware Support	
Overview: New hardware versions are available for MTR devices. mPower MTR 6.0.0 identifies the MTR hardware version and only allow users to download approved mPower versions, preventing a mismatch between hardware and software. Feature: Downgrade Protection • mPower MTR 6.0.0 includes a means of identifying MTR-LEU7 and MTR-LNA7 devices (hardware version MTRV1-0.4) with substitute components and limits the version of mPower that customers can use on those devices • Devices with substitute components can only be used with mPower 5.3.6 and later • Downgrade protection prevents customers from downgrading devices to an unsupported version of mPower • DeviceHQ includes a similar feature that prevents customers from downgrading devices to an unsupported version of mPower • New Error Messages: If a user attempts to downgrade a device to an incompatible mPower version, an error message is displayed: ○ Downgrade using API Command: "Firmware check failed. Invalid firmware version for [MTRV1-0.4] hardware." ○ Downgrade using DeviceHQ: "Software check failed. Invalid firmware version for [MTRV1-0.4] hardware." • This feature was originally introduced in mPower MTR 5.3.6	New Feature GP-1431 MTX-4299 GP-1385

New Features and Enhancements (mPower MTR 6.0.0)

Overview: Cellular radio improvements for devices used on the AT&T network Feature: Disabled voice support • mPower MTR 6.0.0 disables voice support for new voice-capable radios in an AT&T-compatible configuration • The change affects the following AT&T-compatible voice-capable cellular radios: ○ MTR-L4G1 radios with AT&T SIM card installed ○ MTR-LNA7 radios with AT&T SIM card installed • mPower detects if the device is an MTR-L4G1 or MTR-LNA7 and if the carrier is AT&T. mPower checks for the voice-related configuration in the cellular modem. If the voice support is enabled and SMS-only mode is disabled, the system executes AT commands to disable voice support and enable SMS-only mode • With voice support is disabled, the "Wake Up On Call" feature does not support the Wake Up settings "On Caller-ID" and "On Ring." The system displays a message if one of these settings is enabled when user saves changes in the "Wake Up On Call" configuration **On Ring and On Caller ID options cannot be enabled in the Wake Up On Call configuration as voice calls are not supported by your carrier** • The **radio-query** has a new option **(--voice-support)** that allows the user to get the current voice support settings set in the cellular radio ○ radio-query --voice-support shows the information in the following format: { *"smsOnly" : "Indicates that registration flag is enabled or not : BOOL"* *"voiceEnabled" : "Indicates that voice support is enabled or not : BOOL"* *}* • The **radio-cmd** has a new option (**--disable-voice-support)** that disables support of voice calls. It accepts no additional parameters and returns "0" on success and "1" on failure. ○ Usage: *root@mtcdt:/var/config/home/admin# radio-cmd –disable-voice-support* *Success* • There is no option to enable voice support under **radio-cmd**. Instead, the appropriate AT commands can be used to enable voice support	New Feature GP-1364 MTX-4206 GP-1390 MTX-4251
Fieldbus Protocols	
Overview: Updates to Modbus slave feature • Modbus Slave feature is updated in mPower MTR 6.0.0 to use the generic implementation for all band-related queries • This enables future support of new cellular radios • For Modbus query information: http://www.multitech.net/developer/software/mtr-software/mtr-modbus-information/	Enhancement

New Features and Enhancements (mPower MTR 6.0.0)

Overview: Setting improvements for Modbus RTU/TCP Gateway and Serial-IP, allows configuration of the Serial Port so the Serial Port can be used by other features such as GPS • Mode dropdown is added to the General Configuration pane. It allows users to enable one of the following features: ○ Disabled (default). Serial-IP and Modbus RTU/TCP Gateway are disabled ○ Serial-IP ○ Modbus RTU/TCP Gateway ○ Serial-IP and Modbus RTU/TCP Gateway cannot work simultaneously • To use Modbus Gateway, check Protocol under IP Pipe and select SSL/TLS ○ Modbus RTU slave is connected to the Serial Port and a remote Modbus TCP Master ○ Modbus Gateway application works as a translator between Modbus RTU (slave) and Modbus-TCP (master) devices ○ Without Modbus Gateway enabled, the Serial-IP feature simply passes raw data between the serial DB9 interface and the socket representing the TCP connection in the system to a configured remote device • When the Modbus Gateway is enabled, its application runs in the system. The application works as a translator converting between the Modbus-TCP and Modbus RTU protocols. The Modbus Gateway passes data between an RTU connected to the serial port and a Modbus TCP remote client/server	Enhancement
User Interface (mPower MTR 6.0.0)	
Overview: Material design icons simplifies Web UI. • Material design icons are added throughout the Web UI • Material design icons are a set of universal icons used to improve usability and simplicity • Additional Information: https://materialdesignicons.com/	Enhancement GP-1362 MTX-4201
Overview: The device images used in the Web UI have been updated • Updated product images added to the First-Time Setup Wizard and Support Page	Enhancement GP-1371 MTX-4217

Operating System Updates (mPower MTR 6.0.0)

Updated Yocto Version • Yocto version updated to Dunfell (version 3.1). • Previous mPower versions used Yocto Thud (version 2.6)	Enhancement GP-1322 MTX-4162
Updated Linux Kernel • Linux kernel updated to version 5.4 • Previous mPower versions used Linux kernel v4.9.240	Enhancement

Networking and Security (mPower MTR 6.0.0)

IP Masquerading The IP Masquerading feature allows users to enable or disable IP Masquerading for WAN interfaces of the device • Main points ○ IP Masquerading feature can be used with WAN interfaces only ○ IP Masquerading is enabled by default. When IP Masquerading feature is enabled, the device performs IP address translation of client network traffic to the corresponding WAN interface ○ When IP Masquerading feature is disabled, the device passes client network requests unchanged to the corresponding WAN interface ○ API Changes ○ api/ni/nis: “wanMasquerade” option is added for each network interface	New Feature MTX-4104
Remote Syslog Feature Enhancement: TCP and SSL/TLS support • New settings are implemented for the Remote Syslog feature: ○ TCP Protocol support ○ SSL/TLS Protocol support ○ Configurable Port • The **Hostname** read-only field is added to the Remote Syslog pane. The hostname value is a part of log entries that are transferred to the remote Syslog Server. The **hostname** value can be configured in the **Hostname Configuration** pane on the **Status | Global DNS** page • API Changes ○ api/syslog ○ api/help/syslog ○ api/secureprotocols/rsyslogd	New Feature GP-869 MTX-4178 GP-1365 MTX-4205

Networking and Security (mPower MTR 6.0.0)

<table>
<tr>
<td>
Support 802.1X authentication on the Ethernet interface(s)

802.1X Authentication feature is available for Ethernet network interface (Eth0) if it is not in the Bridge (BR0). For other network interfaces, including Bridge (BR0), this feature is not available and is hidden on Web UI
The 802.1X Authentication settings depend on the Authentication Method. By default, the Authentication Method is NONE
The system supports the following authentication methods:

EAP-PWD
EAP-TLS
EAP-TTLS
EAP-PEAP

The following settings are available and depend on the Authentication Method:
<table>
<tr><th>Setting</th><th>Description</th></tr>
<tr><td>Authentication method</td><td>Type of the authentication</td></tr>
<tr><td>Username</td><td>Identity (user name) to authenticate the user in the inner (phase 2) authentication</td></tr>
<tr><td>Password (not used in EAP-TLS)</td><td>The secret string to be used for EAP-PWD authentication</td></tr>
<tr><td>Anonymous ID</td><td>Anonymous identity to authenticate the user in the outer (phase 1) authentication</td></tr>
<tr><td>CA Certificate (not used in EAP-PWD)</td><td>X.509 Certification Authority certificate</td></tr>
<tr><td>Domain Match (not used in EAP-PWD, optional)</td><td>Domain substring for server certificate validation</td></tr>
<tr><td>Subject Match (EAP-TLS only, optional)</td><td>Subject substring for server certificate validation</td></tr>
<tr><td>Client Certificate (EAP-TLS only)</td><td>X.509 client certificate</td></tr>
<tr><td>Private Key (EAP-TLS only)</td><td>Private key of the client</td></tr>
<tr><td>Private Key Password (EAP-TLS only)</td><td>Password to decrypt the private key</td></tr>
<tr><td>Authentication Method (EAP-TTLS and EAP-PEAP only)</td><td>Type of the inner (phase 2) authentication</td></tr>
<tr><td>PEAP Version (EAP-PEAP only)</td><td>Version of the PEAP protocol</td></tr>
</table>
</td>
<td>New Feature

GP-355
GP-1328
MTX-3053
MTX-4119
MTX-4170</td>
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<td>
Ping Feature Settings: New Options

Number of Requests: The number of ping requests. The default is 4. The maximum is 120
Packet Size (Bytes): Specifies the number of data bytes to be sent.

Packets include an additional 28 bytes of data (8 bytes ICMP header and 20 bytes IP header)
The default packet size is 56 bytes (which equates to into 84 bytes of data due to ICMP header and IP header)

When packet size of 0 bytes is requested, the actual packet size is 28 bytes due to ICMP header and IP header
Do Not Fragment: Enable to prevent fragmentation. Without fragmentation, the ping fails if the ping packet exceeds MTU size for the network path. By default, the option is disabled

</td>
<td>New Feature

GP-1279
MTX-4036
MTX-4131</td>
</tr>
</table>

Networking and Security (mPower MTR 6.0.0)

Continuous Ping • The Continuous Ping feature allows users to start a continuous ping to an IP address or URL through a specific interface • Continuous Ping is available on the Debug Options page • To start a continuous ping, users specify **IP Address** or **URL**, **Network Interface**, **Packet Size,** and enable or disable the **Do Not Fragment** option ○ Continuous Ping starts when the user clicks the **Start Continuous Ping** button 1. The system starts pinging 2. The button label changes to **Stop Continuous Ping** 3. The message "Ping is in progress…" is displayed next to the button ○ Continuous Ping stops when the user clicks the **Stop Continuous Ping** button 1. The system stops pinging 2. The button label changes to **Start Continuous Ping** 3. The ping results are shown next to the **Start Continuous Ping** button • API Changes ○ api/stats/continuousPing - Continuous Ping status is stored in the "**isRunning**" field	New Feature GP-1229 MTX-4033 MTX-4131
ICMP Keep Alive feature • Overview: Sometimes when working with private networks, the size of the ping request is regulated. It needs to be configurable to satisfy private network requirements • In mPower MTR 6.0.0, new setting "Packet Size (Bytes)" is added next to the ICMP Count in the ICMP/TCP Check pane ○ The Packet Size setting specifies the number of data bytes to be sent ○ Packets include an additional 28 bytes of data (8 bytes ICMP header and 20 bytes IP header) ○ The default packet size is 56 bytes (which equates to into 84 bytes of data due to ICMP header and IP header) ○ When packet size of 0 bytes is requested, the actual packet size is 28 bytes due to ICMP header and IP header	New Feature GP-79 MTX-4167
Firewall Status Page • The **Status** page is added under the **Firewall** main menu • Firewall status page contains Filter tables in the **Filter Rules** pane, NAT tables in the **NAT Rules** pane, and iptables-save command output in the **IP Tables Dump** • The **Download** button allows users to download an archive file that contains the same information that is displayed on Web UI; there are three files in the archive: ○ **iptables-filter.log** ○ **iptables-nat.log** ○ **iptables-save.log** • API Changes**.** The following API endpoints are added: ○ https://192.168.2.1/api/firewall/downloadStatus ○ https://192.168.2.1/api/firewall/status	New Feature MTX-4106

Networking and Security (mPower MTR 6.0.0)

IPSec Tunnels • The "Allow All Traffic" checkbox is added to the IPsec tunnel configuration. The option is disabled by default when adding a new tunnel • When the checkbox is disabled, all traffic through the tunnel is dropped and the user has to add firewall rules manually to allow the traffic. Enabling the checkbox allows all traffic through the tunnel without creating explicit rules to allow traffic by subnet and/or connection attributes • When performing a firmware upgrade from a previous firmware version that does not have this setting, all existing tunnels will have the "Allow All Traffic" checkbox enabled and corresponding firewall rules will be set in the system, so nothing will change in tunnel behavior after upgrade • When adding a new tunnel, if the "Allow All Traffic" checkbox is not checked, then all traffic through the tunnel will be dropped. The user will have to add a corresponding firewall rules on the Firewall Settings page • API Changes ○ The "allowAllTraffic" is added to the api/ipsecTunnels collection	New Feature GP-1361 MTX-4200
IPSec Tunnels - Multiple Remote Networks Support • The system allows to specify multiple local networks and remote networks when configuring an IPSec tunnel • API changes ○ "remoteSubnets" array replaced the "remoteNetworkIp" and "remoteNetworkMask" in the /api/ipsecTunnels collection	New Feature GP-1337 MTX-4180
Ping Feature – Update the Network Interfaces List • The list of the network interfaces available in the Network Interface dropdown list is updated. • The list of available network interfaces depends on the hardware configuration. • The following network interfaces are available: ○ ANY ○ BRIDGE (BR0) ○ CELLULAR ○ WI-FI WAN ○ WI-FI AP ○ ETHERNET (ETH0)	Enhancement GP-1320 MTX-4150
PPP-IP Pass-through / Serial Modem Mode - Hide Ping features from the Debug Options Page • PPP-IP Pass-through Mode: ○ It is not possible to Ping directly from the device ○ The Ping and Continuous Ping features are not available in the Debug Options Page • Serial Modem Mode: ○ Continuous Ping feature is not available ○ Ping feature is available. Network Interface options: ANY, BRIDGE (BR0) and ETHERNET (ETH0)	Enhancement MTX-4093

Networking and Security (mPower MTR 6.0.0)

Service Statistics Enhancement The status for new services are added to the Service Statistics Page. Services and their possible statuses are listed below: SNMP Server ○ SNMP Server is disabled ○ SNMP Server is running ○ SNMP Server is stopped Security Violation ○ Security violation is disabled ○ Security violation has not been detected ○ Security violation has been detected (shown if the /var/log/tomoyo/reject_003.log log is NOT empty) Reverse SSH ○ Reverse SSH service is disabled ○ Reverse SSH service is running ○ Reverse SSH service is stopped MQTT Broker ○ MQTT Broker service is disabled ○ MQTT Broker service is running ○ MQTT Broker service is stopped Remote Management ○ Displaying statuses from the Remote Management page Continuous Ping ○ Continuous Ping is running ○ Continuous Ping is disabled	Enhancement GP-1295 MTX-4142
Support Static IP on Wi-Fi as WAN • Ability to disable DHCP Client and enable **Static** mode is implemented for WLAN0 (Wi-Fi as WAN) network interface • In mPower MTR 6.0.0 the WLAN0 network interface can be configured in the following modes: ○ DHCP Client (default) ○ DHCP Client – Addresses Only ○ Static	Enhancement GP-76 MTX-4186 SP-5084144
Web Server X.509 Certificate - Default details are updated • The CN value in the default Web Server X.509 certificate is changed from **ocg.example.com** to **mtx.example.com**	Enhancement GP-1247 MTX-4058

Networking and Security (mPower MTR 6.0.0)

Firewall Settings Improvement • Firewall "Normal Settings" is the default mode. This view was formerly "Advanced Settings" ○ Prerouting Rules ○ Input Filter Rules ○ Forward Filter Rules ○ Output Filter Rules • Firewall "Legacy Settings" now includes the following. This view was formerly "Normal Settings" ○ Port Forwarding ○ Input Filter Rules ○ Output Filter Rules	Enhancement GP-1426 MTX-4286
IPsec, GRE, OpenVPN Tunnels - Enabled checkbox is moved to the tunnel configuration page • This is an improvement that does not affect the GRE, IPSec and OpenVPN functionality and API • The "Check" icon in the Enabled column on the GRE, IPSec or OpenVPN Tunnel Configuration page does not allow the user to enable or disable a tunnel • To enable or disable a tunnel, click the **Enabled** checkbox while adding or editing tunnel	Enhancement GP-1392 MTX-4255
SNMP Configuration Page - Network Address and Mask validation, IP address conversion to the Network address • In the previous mPower releases, the system displayed an error if the entered IP Address and Mask do not match while adding an IP network to the Allowed IP Addresses list on the SNMP Configuration page • In mPower MTR 6.0.0 the system automatically converts the IP address based on the Mask value, and adds a corresponding valid Network Address to the list	Enhancement GP-1468 MTX-4387
Network IP and Mask validation (GRE and IPSec Configuration) • The system (Web UI) checks the entered IP Address and Mask and automatically converts the IP address value to a valid Network Address while adding or editing GRE or IPsec Tunnels • The API validation of the entered Network Address and Mask is implemented, and the system does not allow to save the settings if the Network Address and Mask do not match • For example, user enters **Remote Network Route** as **192.168.2.2** and the **Remote Network Mask** as **24** while editing a GRE Tunnel. The Network Address in this case is 192.168.2.0, and the system will automatically change it and add a valid Network address, so the remote network route will be a valid value of **192.168.2.0/24** • The same conversion is performed for Local Networks and Remote Networks when adding or editing an IPSec tunnel	Enhancement GP-1453 GP-1287 MTX-4353 MTX-4118

Known Behaviors (mPower MTR 6.0.0)

Failed to upload and apply a configuration file if the filename contains a space character • In mPower MTR 6.0.0 and previous versions, if the configuration filename contains a space character, the system fails to process and apply it properly and considers that the file is not valid. The problem is observed in the following features: ○ Upload X.509 CA Certificates ○ Upload Device Configuration file	Software & Services GP-1574 MTX-4465

Known Behaviors (mPower MTR 6.0.0)

Custom web server certificate can cause the device to become unavailable • The web server certificate is dynamically generated • When Client Authentication is enabled, the resulting file is generated by merging the web server .pem file and the certificate part from the same server.pem • In mPower MTR 6.0.0 and previous versions, when the original server.pem does not contain a “new line” at the end of the filename, the device becomes unavailable	Certificate & Key Management GP-1593 MTX-4485
Session expires while mPower firmware upgrade or cellular radio firmware upgrade is in process • Default session timeout is 5 minutes • In mPower MTR 6.0.0 and previous versions, if the mPower upgrade or cellular radio firmware upgrade exceeds the session timeout, the user is logged out and the upgrade is not completed	Networking & Security GP-1456 MTX-4366
WAN FAILOVER CONFIGURATION, active monitor settings are applied to the wrong interfaces • In mPower MTR 6.0.0, when the user changes WAN Failover Active monitoring settings for one interface, the changes are applied to another interface • Interfaces impacted: Hostname or ICMP Count	Networking & Security GP-1591 MTX-4484
WWAN mode - ppp-rx-monitor is running after Data Receive Monitor feature is disabled • In mPower MTR 6.0.0 and previous versions, in the WWAN mode only, 1. User disables Data Receive Monitor 2. User submits, saves, and applies the changes • The ppp-rx-monitor process does not stop as intended	Networking & Security GP-1628 MTX-4519
WWAN mode. Ping KeepAlive • In mPower MTR 6.0.0 and previous versions, in the WWAN mode only 1. User disables ICMP/TCP Check 2. User submits, saves, and applies changes • The pppcheck process is still present, even though it was just disabled	Networking & Security MTX-4481 IN-4573 TS-5110508
WAN Failover does not work in the TCP mode • In mPower MTR 6.0.0 and previous versions, WAN Failover does not work in TCP mode • There are no TCP requests corresponding to the configured settings that can be seen on the WAN interface • The device considers the WAN does not have an Internet connection and does not switch to it in case of failover	Networking & Security GP-1658 MTX-4548
Continuous Ping does not return the ping results • In mPower MTR 6.0.0 and previous versions, the continuous ping feature returns unexpected ping results	Networking & Security GP-1660 MTX-4549
Remote syslog (Administration | Debug) does not work properly when reset to user defined default • In mPower MTR 6.0.0 and previous versions, remote syslog server does not receive logs from devices when reset to user-defined default	Networking & Security GP-1664 MTX-4551 TS-5111956

Bug Fixes (mPower MTR 6.0.0)

Reset to User Defined Defaults shall restore custom applications • If a custom application is installed while a user sets the current configuration as user-defined defaults, the system shall try to restore it when performing reset to User Defined defaults • Main use case ○ Install a custom application, configure the device, save the changes, and set the current configuration as user-defined defaults ○ Change the configuration (make any changes you need), save and apply the changes. ○ Click "Reset to User Defined Defaults" • Result ○ Device reboots ○ overlayfs is reset ○ The system installs the custom application from /var/persistent ○ Device reboots again as soon as the custom app is installed. NOTE: Actual behavior depends on the custom application ○ When device boots, the custom application is installed	Software & Services GP-1326 MTX-4154
Custom application failed to install on MTR device • In previous mPower versions, custom applications fail to install • In mPower MTR 6.0.0, the issue is resolved, and custom application is now successfully installed from Web UI and DeviceHQ	Software & Services GP-1297 MTX-4133
libmts-io • MCC and MNC values are retrieved incorrectly from table • In mPower MTR 6.0.0, MCC and MNC values are retrieved correctly for further carrier detection	Hardware GP-114 MTX-4168
The CD LED is always OFF in the Serial Modem mode • In previous mPower versions, the CD (Carrier Detect) LED is always off (unilluminated) • In mPower MTR 6.0.0, the issue is resolved, and the CD LED is solid on (illuminated) when cellular connection is established	Hardware MTX-4351
Rogers Wireless – Web Interface Update • In mPower MTR 6.0.0, the Web Interface (Cellular, Radio Status) has been updated to display the following when a Rogers SIM is inserted in the MTR device **Home Network: Rogers Wireless** • In previous mPower versions software, the Web Interface (Cellular, Radio Status) displays the following when a Rogers SIM was inserted in the MTR device **Home Network: Rogers AT&T Wireless**	Hardware GP-1388
SMS - quotation mark character (Double universal) " is displayed with the backslash \ character in the received SMS message (like an escaped character) • An extra slash character is added before the quotation mark " in the sent and received messages • In mPower MTR 6.0.0, the issue is resolved and an extra slash is no longer added to the Sent and Received SMS messages	Hardware MTX-4359

Bug Fixes (mPower MTR 6.0.0)

Cellular Radio Firmware Upgrade Changes • Menu name changed to "Cell Radio FW Upgrade" • Page name changed to “Cellular Radio Firmware Upgrade” • “Cell Radio Firmware Upgrade” shall be in the setup menu, below time configuration (PPP-IP pass-through mode and serial modem mode)	Hardware GP-1451 MTX-4343
Device UI inaccessible after firmware upgrade if User Authentication enabled • If User Authentication feature was enabled prior to the firmware upgrade, UI will be inaccessible with SSL error when the upgrade is finished. To restore access to the device user should either reboot the device or restart lighttpd service. This may lead to the issues with upgrade in the field if there is no physical access to the device and no ssh access or SMS commands are enabled • This issue exists in the previous released firmware (mPower 5.2.1 and mPower 5.3.0) • In mPower MTR 6.0.0, the issue is resolved, and user can access the device after performing upgrade if the User Authentication is enabled	User Interface GP-1301 MTX-4143
Custom OpenVPN config breaks iptables • Customer unsuccessfully tried to setup a VPN connection using custom OVPN config file. • Upon investigation the root cause was found in this string: *remote 20.191.55.208 1194 udp* • If we split the string to these two, VPN connection works properly: *proto udp* *remote 20.191.55.208 1194* • Corresponding changes are implemented, and such custom configuration can be applied, and the tunnel connection will be established successfully	Networking & Security GP-1421 MTX-3873 SP-5105937
Save & Apply restart redirects to LAN when connected through WAN • When connected through the WAN, the Web UI redirects to a LAN IP (Ethernet eth0) when executing a Save & Apply that requires a reboot • In mPower MTR 6.0.0, if the current device IP is external (public) IP address or this is a domain name, redirection will be performed to the same address. Otherwise, the system will redirect to LAN IP address	Networking & Security GP-1006 IN-4375 MTX-4040
PPP-IP Passthrough Mode – multiple farpd instances are running if connection re-establishes • In some cases, there are multiple farpd instances running at the same time. The issue occurs when the PPP-IP Passthrough mode cellular connection is interrupted. When the cellular connection reestablishes, the system runs a new farpd instance, but does not end the previous one. This issue does not affect the functionality • In mPower MTR 6.0.0, when cellular connection re-establishes and new settings are obtained, the farpd service restarts and there is only one farpd service in the services list	Networking & Security MTX-4350

Deprecations (mPower MTR 6.0.0)

RF Survey • The RF Survey page is removed from mPower MTR 6.0.0 • **Page 404** is displayed when trying to access the page using the direct link: /rf_survey	Hardware GP-1444 MTX-4321

Schedule (mPower MTR 6.0.0)

- Downloadable Versions
  - mPower MTR 6.0.0 Availability: May 2022
  - Visit www.multitech.com/brands/multiconnect-rcell-100-series
    - Locate and select the correct model number from the Product Listing
    - Visit the DOWNLOADS tab for the list of available firmware downloads
- Manufacturing Updates:
  - Devices that ship from MultiTech starting in September 2022 will include mPower MTR 6.0.0
  - See part numbers impacted for details
- DeviceHQ:
  - mPower MTR 6.0.0 Availability: May 2022
- Differential Images:
  - Differential mPower updates are not available for mPower MTR 6.0.0

Models Impacted (mPower MTR 6.0.0)

The following ordering part numbers are impacted by mPower MTR 6.0.0:

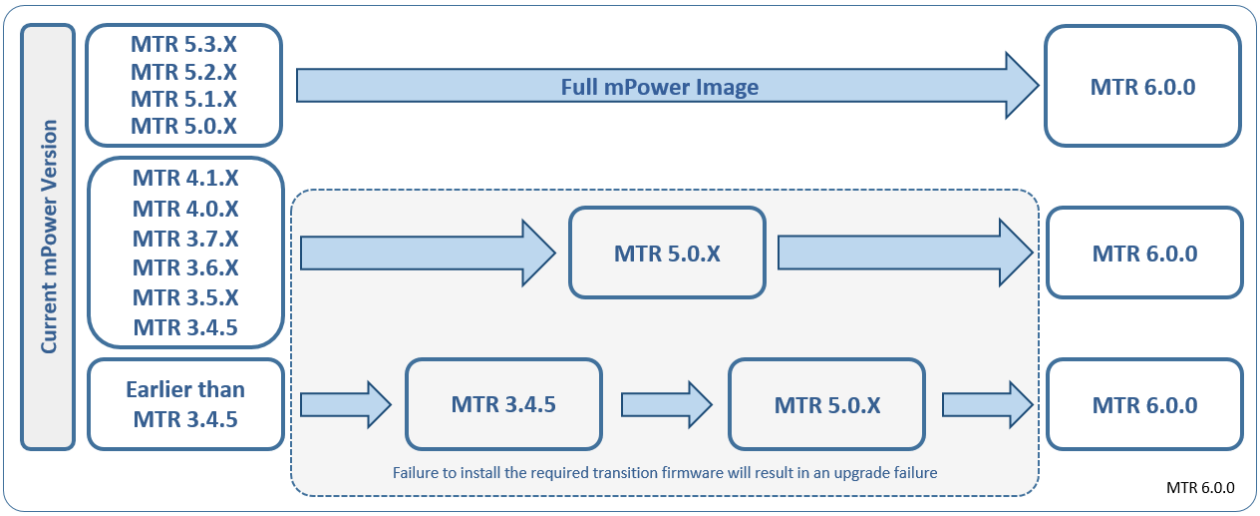
MultiConnect rCell 100 Series Cellular Router

- MTR-L4G1 models
- MTR-LEU7 models
- MTR-LNA7 models
- MTR-MNG2 models

Upgrade Process (mPower MTR 6.0.0)

To install mPower MTR 6.0.0, the MTR device must be upgraded to mPower 5.0.0 or higher. Customers that are running previous mPower versions should use the following upgrade process.

Differential mPower images are not available for mPower MTR 6.0.0.



Using an old configuration file on new MTR devices may result in the new devices becoming non-functional. To successfully update new MTR devices, create separate configuration templates for each type of MTR device:

- Hardware version (MTRV1-0.3, MTRV1-0.4)
- Cellular radio (-L4G1, -LNA7, -LEU7)
- mPower version (mPower MTR 5.3.5, mPower MTR 5.3.6s-s1, mPower MTR 6.0.0)

When upgrading a device fleet:

1. Upgrade the mPower version on one device
2. Modify the user-specific configuration settings
3. Perform in-house testing and adjust settings if necessary
4. Use the newly developed configuration file as part of field updates when the new version of mPower is widely deployed

Additional Information

Software Release Notes

https://www.multitech.com/brands/mpower

Security Advisories

https://www.multitech.com/landing-pages/security

Downloads:

- Visit www.multitech.com/brands/multiconnect-rcell-100-series
- Locate and select the correct model number from the Product Listing
- Visit the DOWNLOADS tab for the list of available firmware downloads

API Reference:

http://www.multitech.net/developer/software/mtr-api-reference/

Support:

Visit https://support.multitech.com/ to create a support case

DeviceHQ, Cloud-based IoT Device Management

Login: https://www.devicehq.com/sign_in

MultiTech Developer Resources

www.multitech.net

An open environment where you can ask development related questions and hear back from MultiTech engineering or a member of this community.

Knowledge Base

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

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

MultiTech Support Portal

support.multitech.com

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

MultiTech Website

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Revision History

Version	Author	Date	Change Description
-006	DT	10/26/2022	Editorial updates
-005	DT	08/03/2022	Editorial updates
-004	DT	07/25/2022	mPower MTR 6.0.0, Upgrade Process updated
-003	DT	06/16/2022	mPower MTR 6.0.0, MTR-L4G1 models added to Models Impacted
-002	DT	05/19/2022	mPower MTR 6.0.0, GPSD update removed
-001	DT	05/04/2022	Initial Version