

## Software Release Notes

### mPower® Edge Intelligence Software

Includes firmware version mPower MTR 6.0.0

### MultiConnect® rCell 100 Series Cellular Routers



#### Overview

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.

#### Notes

This document includes the release notes and cumulative changelog for mPower Edge Intelligence embedded software. Detailed information is listed in reverse chronological order, starting with the most recent mPower MTR release:

- Operating system updates
- New hardware supported
- New features
- Enhanced features
- Known behaviors
- Bug fixes
- Feature deprecations

#### Additional Resources

Software Release Notes, mPower MTR 5.x.x:

<https://www.multitech.com/documents/publications/sales-flyers/mPower%20Software%20MTR%205.x.x%20for%20rCell%20100%20Routers.pdf>

Downloads:

- Visit [www.multitech.com/brands/multiconnect-rcell-100-series](http://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](https://www.devicehq.com/sign_in)

#### Contents

[mPower MTR 6.0.0](#) (May 2022)

## mPower MTR 6.0.0 Changelog and Overview

May 2022

Updates in mPower MTR 6.0.0, from [mPower MTR 5.3.6s-s1](#)

<a href="#">OS Changes</a>	<a href="#">New Hardware</a>	<a href="#">New Feature</a>	<a href="#">Feature Enhancement</a>	Known Behaviors	<a href="#">Bug Fixes</a>	<a href="#">Deprecations</a>	<a href="#">Schedule</a>	<a href="#">Models Impacted</a>	<a href="#">Upgrade Process</a>
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### Operating System Updates (mPower MTR 6.0.0)

<p>Updated Yocto Version</p> <ul style="list-style-type: none"> <li>Yocto version updated to Dunfell (version 3.1).</li> <li>Previous versions of mPower used Yocto Thud (version 2.6)</li> </ul>	GP-1322 MTX-4162
<p>Updated Linux Kernel</p> <ul style="list-style-type: none"> <li>Linux kernel updated to version 5.4</li> <li>Previous versions of mPower used Linux kernel v4.9.240</li> </ul>	
<p>Updated Python</p> <ul style="list-style-type: none"> <li>Python updated to version 3.8.11</li> <li>Previous versions of mPower used Python 2.7</li> </ul>	GP-1224 MTX-4164

### New Feature (mPower MTR 6.0.0)

<p>IP Masquerading</p> <p>The IP Masquerading feature allows users to enable or disable IP Masquerading for WAN interfaces of the device</p> <ul style="list-style-type: none"> <li>Main points <ul style="list-style-type: none"> <li>IP Masquerading feature can be used with WAN interfaces only</li> <li>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</li> <li>When IP Masquerading feature is disabled, the device passes client network requests unchanged to the corresponding WAN interface</li> </ul> </li> <li>API Changes <ul style="list-style-type: none"> <li>api/ni/nis: "wanMasquerade" option is added for each network interface</li> </ul> </li> </ul>	MTX-4104
<p>Downgrade Protection</p> <ul style="list-style-type: none"> <li>mPower MTR 6.0.0 includes a means of identifying MTR-LEU7 and MTR-LEU7 devices (hardware version MTRV1-0.4) with substitute components and limits the version of mPower that customers can use on those devices <ul style="list-style-type: none"> <li>This feature was originally introduced in mPower MTR 5.3.6</li> <li>Devices with substitute components can only be used with mPower 5.3.6 and later</li> </ul> </li> <li>The downgrade protection feature prevents customers from downgrading devices to an unsupported version of mPower</li> <li>DeviceHQ includes a similar feature that prevents customers from downgrading devices to an unsupported version of mPower</li> <li>Error Messages: If a user attempts to downgrade a device with substitute components to an incompatible firmware version, an error message will be displayed: <ul style="list-style-type: none"> <li>Downgrade using API Command: "Firmware check failed. Invalid firmware version for [MTRV1-0.4] hardware."</li> <li>Downgrade using DeviceHQ: "Software check failed. Invalid firmware version for [MTRV1-0.4] hardware."</li> </ul> </li> </ul>	GP-1431 MTX-4299 GP-1385

### New Feature (mPower MTR 6.0.0)

<p>Remote Syslog Feature Enhancement: TCP and SSL/TLS support</p> <ul style="list-style-type: none"> <li>New settings are implemented for the Remote Syslog feature: <ul style="list-style-type: none"> <li>TCP Protocol support</li> <li>SSL/TLS Protocol support</li> <li>Configurable Port</li> </ul> </li> <li>The <b>Hostname</b> 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 <b>hostname</b> value can be configured in the <b>Hostname Configuration</b> pane on the <b>Status   Global DNS</b> page</li> <li>API Changes <ul style="list-style-type: none"> <li>api/syslog</li> <li>api/help/syslog</li> <li>api/secureprotocols/rsyslogd</li> </ul> </li> </ul>	GP-869 MTX-4178 GP-1365 MTX-4205																										
<p>Support 802.1X authentication on the Ethernet interface(s)</p> <ul style="list-style-type: none"> <li>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</li> <li>The 802.1X Authentication settings depend on the Authentication Method. By default, the Authentication Method is NONE</li> <li>The system supports the following authentication methods: <ul style="list-style-type: none"> <li>EAP-PWD</li> <li>EAP-TLS</li> <li>EAP-TTLS</li> <li>EAP-PEAP</li> </ul> </li> </ul> <p>The following settings are available and depend on the Authentication Method:</p> <table border="1" data-bbox="186 1102 1258 1864"> <thead> <tr> <th>Setting</th> <th>Description</th> </tr> </thead> <tbody> <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> </tbody> </table>	Setting	Description	Authentication method	Type of the authentication	Username	Identity (user name) to authenticate the user in the inner (phase 2) authentication	Password (not used in EAP-TLS)	The secret string to be used for EAP-PWD authentication	Anonymous ID	Anonymous identity to authenticate the user in the outer (phase 1) authentication	CA Certificate (not used in EAP-PWD)	X.509 Certification Authority certificate	Domain Match (not used in EAP-PWD, optional)	Domain substring for server certificate validation	Subject Match (EAP-TLS only, optional)	Subject substring for server certificate validation	Client Certificate (EAP-TLS only)	X.509 client certificate	Private Key (EAP-TLS only)	Private key of the client	Private Key Password (EAP-TLS only)	Password to decrypt the private key	Authentication Method (EAP-TTLS and EAP-PEAP only)	Type of the inner (phase 2) authentication	PEAP Version (EAP-PEAP only)	Version of the PEAP protocol	GP-355 GP-1328 MTX-3053 MTX-4119 MTX-4170
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### New Feature (mPower MTR 6.0.0)

<p>Ping Feature Settings: New Options</p> <ul style="list-style-type: none"> <li>• <b>Number of Requests:</b> The number of ping requests. The default is 4. The maximum is 120</li> <li>• <b>Packet Size (Bytes):</b> Specifies the number of data bytes to be sent. <ul style="list-style-type: none"> <li>○ Packets include an additional 28 bytes of data (8 bytes ICMP header and 20 bytes IP header)</li> <li>○ The default packet size is 56 bytes (which equates to into 84 bytes of data due to ICMP header and IP header)</li> </ul> </li> <li>• When packet size of 0 bytes is requested, the actual packet size is 28 bytes due to ICMP header and IP header</li> <li>• <b>Do Not Fragment:</b> 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</li> </ul>	<p>GP-1279 MTX-4036 MTX-4131</p>
<p>Continuous Ping</p> <ul style="list-style-type: none"> <li>• The Continuous Ping feature allows users to start a continuous ping to an IP address or URL through a specific interface</li> <li>• Continuous Ping is available on the Debug Options page</li> <li>• To start a continuous ping, users specify <b>IP Address</b> or <b>URL</b>, <b>Network Interface</b>, <b>Packet Size</b>, and enable or disable the <b>Do Not Fragment</b> option <ul style="list-style-type: none"> <li>○ Continuous Ping starts when the user clicks the <b>Start Continuous Ping</b> button <ol style="list-style-type: none"> <li>1. The system starts pinging</li> <li>2. The button label changes to <b>Stop Continuous Ping</b></li> <li>3. The message “Ping is in progress...” is displayed next to the button</li> </ol> </li> <li>○ Continuous Ping stops when the user clicks the <b>Stop Continuous Ping</b> button <ol style="list-style-type: none"> <li>1. The system stops pinging</li> <li>2. The button label changes to <b>Start Continuous Ping</b></li> <li>3. The ping results are shown next to the <b>Start Continuous Ping</b> button</li> </ol> </li> </ul> </li> <li>• API Changes <ul style="list-style-type: none"> <li>○ <code>api/stats/continuousPing</code> - Continuous Ping status is stored in the “<b>isRunning</b>” field</li> </ul> </li> </ul>	<p>GP-1229 MTX-4033 MTX-4131</p>
<p>ICMP Keep Alive feature</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• In mPower MTR 6.0.0, new setting “Packet Size (Bytes)” is added next to the ICMP Count in the ICMP/TCP Check pane <ul style="list-style-type: none"> <li>○ The Packet Size setting specifies the number of data bytes to be sent</li> <li>○ Packets include an additional 28 bytes of data (8 bytes ICMP header and 20 bytes IP header)</li> <li>○ The default packet size is 56 bytes (which equates to into 84 bytes of data due to ICMP header and IP header)</li> <li>○ When packet size of 0 bytes is requested, the actual packet size is 28 bytes due to ICMP header and IP header</li> </ul> </li> </ul>	<p>GP-79 MTX-4167</p>

### New Feature (mPower MTR 6.0.0)

<p>Firewall Status Page</p> <ul style="list-style-type: none"> <li>• The <b>Status</b> page is added under the <b>Firewall</b> main menu</li> <li>• Firewall status page contains Filter tables in the <b>Filter Rules</b> pane, NAT tables in the <b>NAT Rules</b> pane, and iptables-save command output in the <b>IP Tables Dump</b></li> <li>• The <b>Download</b> 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: <ul style="list-style-type: none"> <li>○ <b>iptables-filter.log</b></li> <li>○ <b>iptables-nat.log</b></li> <li>○ <b>iptables-save.log</b></li> </ul> </li> <li>• API Changes. The following API endpoints are added: <ul style="list-style-type: none"> <li>○ <a href="https://192.168.2.1/api/firewall/downloadStatus">https://192.168.2.1/api/firewall/downloadStatus</a></li> <li>○ <a href="https://192.168.2.1/api/firewall/status">https://192.168.2.1/api/firewall/status</a></li> </ul> </li> </ul>	<p>MTX-4106</p>
<p>IPSec Tunnels</p> <ul style="list-style-type: none"> <li>• The “Allow All Traffic” checkbox is added to the IPsec tunnel configuration. The option is disabled by default when adding a new tunnel</li> <li>• 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</li> <li>• 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</li> <li>• 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</li> <li>• API Changes <ul style="list-style-type: none"> <li>○ The “allowAllTraffic” is added to the api/ipsecTunnels collection</li> </ul> </li> </ul>	<p>GP-1361 MTX-4200</p>
<p>IPSec Tunnels - Multiple Remote Networks Support</p> <ul style="list-style-type: none"> <li>• The system allows to specify multiple local networks and remote networks when configuring an IPSec tunnel</li> <li>• API changes <ul style="list-style-type: none"> <li>○ “remoteSubnets” array replaced the “remoteNetworkIp” and “remoteNetworkMask” in the /api/ipsecTunnels collection</li> </ul> </li> </ul>	<p>GP-1337 MTX-4180</p>

### New Feature (mPower MTR 6.0.0)

<p>Making cellular radios data-only on AT&amp;T network</p> <ul style="list-style-type: none"> <li>• All new mPower devices are certified as data-only devices. mPower disables voice support for new voice-capable radios in an AT&amp;T-compatible configuration</li> <li>• The change affects the following AT&amp;T-compatible voice-capable cellular radios: <ul style="list-style-type: none"> <li>○ MTR-L4G1 radios with AT&amp;T SIM card installed</li> <li>○ MTR-LNA7 radios with AT&amp;T SIM card installed</li> </ul> </li> <li>• mPower detects if the device is MTR-L4G1 or MTR-LNA7 and if the carrier is AT&amp;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</li> <li>• When the 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 <p style="text-align: center;"><b>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</b></p> </li> <li>• 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 <ul style="list-style-type: none"> <li>○ radio-query --voice-support shows the information in the following format: <pre>{   "smsOnly" : "Indicates that registration flag is enabled or not : BOOL"   "voiceEnabled" : "Indicates that voice support is enabled or not : BOOL" }</pre> </li> </ul> </li> <li>• The <b>radio-cmd</b> 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. <ul style="list-style-type: none"> <li>○ Usage: <pre>root@mtcdt:/var/config/home/admin# radio-cmd --disable-voice-support Success</pre> </li> </ul> </li> <li>• There is no option to enable voice support under radio-cmd. Instead, you can use the appropriate AT commands to enable voice support</li> </ul>	<p>GP-1364 MTX-4206 GP-1390 MTX-4251</p>
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### Feature Enhancement (mPower MTR 6.0.0)

<p>Updated Modbus slave feature</p> <ul style="list-style-type: none"> <li>• In order to add support of new cellular radios, the Modbus Slave feature is updated in mPower MTR 6.0.0 to use the generic implementation for all band-related queries</li> <li>• For Modbus query information: <a href="http://www.multitech.net/developer/software/mtr-software/mtr-modbus-information/">http://www.multitech.net/developer/software/mtr-software/mtr-modbus-information/</a></li> </ul>	<p>GP-862 MTX-4190</p>
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### Feature Enhancement (mPower MTR 6.0.0)

<p>Serial-IP: Modbus Gateway and Serial-IP settings improvements</p> <ul style="list-style-type: none"> <li>• The Mode dropdown is added to the General Configuration pane. It allows users to enable one of the following features: <ul style="list-style-type: none"> <li>○ Disabled (default). Serial-IP and Modbus RTU/TCP Gateway are disabled</li> <li>○ Serial-IP</li> <li>○ Modbus RTU/TCP Gateway</li> <li>○ Serial-IP and Modbus RTU/TCP Gateway cannot work simultaneously</li> </ul> </li> <li>• The system allows customers to configure the Serial Port. Serial Port can be used by other features such as GPS</li> <li>• To use Modbus Gateway, check Protocol under IP Pipe and select SSL/TLS <ul style="list-style-type: none"> <li>○ Modbus RTU slave is connected to the Serial Port and a remote Modbus TCP Master</li> <li>○ Modbus Gateway application works as a translator between Modbus RTU (slave) and Modbus-TCP (master) devices</li> <li>○ 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</li> <li>○ 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</li> </ul> </li> </ul>	<p>GP-1432 MTX-4301</p>
<p>Ping Feature – Update the Network Interfaces List</p> <ul style="list-style-type: none"> <li>• The list of the network interfaces available in the Network Interface dropdown list is updated.</li> <li>• The list of available network interfaces depends on the hardware configuration.</li> <li>• The following network interfaces are available: <ul style="list-style-type: none"> <li>○ ANY</li> <li>○ BRIDGE (BR0)</li> <li>○ CELLULAR</li> <li>○ WI-FI WAN</li> <li>○ WI-FI AP</li> <li>○ ETHERNET (ETH0)</li> </ul> </li> </ul>	<p>GP-1320 MTX-4150</p>
<p>PPP-IP Pass-through / Serial Modem Mode - Hide Ping features from the Debug Options Page</p> <ul style="list-style-type: none"> <li>• PPP-IP Pass-through Mode: <ul style="list-style-type: none"> <li>○ It is not possible to Ping directly from the device</li> <li>○ The Ping and Continuous Ping features are not available in the Debug Options Page</li> </ul> </li> <li>• Serial Modem Mode: <ul style="list-style-type: none"> <li>○ Continuous Ping feature is not available</li> <li>○ Ping feature is available. Network Interface options include: ANY, BRIDGE (BR0) and ETHERNET (ETH0)</li> </ul> </li> </ul>	<p>MTX-4093</p>

### Feature Enhancement (mPower MTR 6.0.0)

<p>Service Statistics Enhancement The status for new services are added to the Service Statistics Page. Services and their possible statuses are listed below:</p> <p>SNMP Server</p> <ul style="list-style-type: none"> <li>○ SNMP Server is disabled</li> <li>○ SNMP Server is running</li> <li>○ SNMP Server is stopped</li> </ul> <p>Security Violation</p> <ul style="list-style-type: none"> <li>○ Security violation is disabled</li> <li>○ Security violation has not been detected</li> <li>○ Security violation has been detected (shown if the /var/log/tomoyo/reject_003.log log is NOT empty)</li> </ul> <p>Reverse SSH</p> <ul style="list-style-type: none"> <li>○ Reverse SSH service is disabled</li> <li>○ Reverse SSH service is running</li> <li>○ Reverse SSH service is stopped</li> </ul> <p>MQTT Broker</p> <ul style="list-style-type: none"> <li>○ MQTT Broker service is disabled</li> <li>○ MQTT Broker service is running</li> <li>○ MQTT Broker service is stopped</li> </ul> <p>Remote Management</p> <ul style="list-style-type: none"> <li>○ Displaying statuses from the Remote Management page.</li> </ul> <p>Continuous Ping</p> <ul style="list-style-type: none"> <li>○ Continuous Ping is running</li> <li>○ Continuous Ping is disabled</li> </ul>	<p>GP-1295 MTX-4142</p>
<p>Cellular Radio Firmware Upgrade Changes</p> <ul style="list-style-type: none"> <li>● Menu name changed to "Cell Radio FW Upgrade"</li> <li>● Page name changed to "Cellular Radio Firmware Upgrade"</li> <li>● "Cell Radio Firmware Upgrade" shall be in the setup menu, below time configuration (PPP-IP pass-through mode and serial modem mode)</li> </ul>	<p>GP-1451 MTX-4343</p>
<p>Rogers Wireless – Web Interface Update</p> <ul style="list-style-type: none"> <li>● In earlier versions of mPower software, the Web Interface (Cellular, Radio Status) displays the following when a Rogers SIM was inserted in the MTR device <b>Home Network: Rogers AT&amp;T Wireless</b></li> <li>● In mPower MTR 6.0.0, the Web Interface (Cellular, Radio Status) has been updated to display the following with a Rogers SIM is inserted in the MTR device <b>Home Network: Rogers Wireless</b></li> </ul>	<p>GP-1388</p>
<p>Web UI Improvement</p> <ul style="list-style-type: none"> <li>● Material design icons added throughout the web UI</li> <li>● Material design icons are a set of universal icons used to promote simplicity</li> <li>● Additional Information: <a href="https://materialdesignicons.com/">https://materialdesignicons.com/</a></li> </ul>	<p>GP-1362 MTX-4201</p>
<p>Web UI Improvement (Wizard and Support Page)</p> <ul style="list-style-type: none"> <li>● Updated product images added to the First-Time Setup Wizard and Support Page</li> </ul>	<p>GP-1371 MTX-4217</p>



### Feature Enhancement (mPower MTR 6.0.0)

<p>Support static IP on Wi-Fi as WAN</p> <ul style="list-style-type: none"> <li>• Ability to disable DHCP Client and enable <b>Static</b> mode is implemented for WLAN0 (Wi-Fi as WAN) network interface</li> <li>• In mPower MTR 6.0.0 the WLAN0 network interface can be configured in the following modes: <ul style="list-style-type: none"> <li>○ DHCP Client (default)</li> <li>○ DHCP Client – Addresses Only</li> <li>○ Static</li> </ul> </li> </ul>	<p>GP-76 MTX-4186 SP-5084144</p>
<p>Web Server X.509 Certificate - Default details are updated</p> <ul style="list-style-type: none"> <li>• The CN value in the default Web Server X.509 certificate is changed from <b>ocg.example.com</b> to <b>mtx.example.com</b></li> </ul>	<p>GP-1247 MTX-4058</p>
<p>Firewall Settings Improvement</p> <ul style="list-style-type: none"> <li>• Firewall “Normal Settings” is the default mode. This view was formerly “Advanced Settings” <ul style="list-style-type: none"> <li>○ Prerouting Rules</li> <li>○ Input Filter Rules</li> <li>○ Forward Filter Rules</li> <li>○ Output Filter Rules</li> </ul> </li> <li>• Firewall “Legacy Settings” now includes the following. This view was formerly “Normal Settings” <ul style="list-style-type: none"> <li>○ Port Forwarding</li> <li>○ Input Filter Rules</li> <li>○ Output Filter Rules</li> </ul> </li> </ul>	<p>GP-1426 MTX-4286</p>
<p>IPsec, GRE, OpenVPN Tunnels - Enabled checkbox is moved to the tunnel configuration page</p> <ul style="list-style-type: none"> <li>• This is an improvement that does not affect the GRE, IPsec and OpenVPN functionality and API</li> <li>• 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</li> <li>• To enable or disable a tunnel, click the <b>Enabled</b> checkbox while adding or editing tunnel</li> </ul>	<p>GP-1392 MTX-4255</p>
<p>SNMP Configuration Page - Network Address and Mask validation, IP address conversion to the Network address</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• 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</li> </ul>	<p>GP-1468 MTX-4387</p>

### Feature Enhancement (mPower MTR 6.0.0)

<p>Network IP and Mask validation (GRE and IPsec Configuration)</p> <ul style="list-style-type: none"> <li>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</li> <li>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</li> <li>For example, user enters <b>Remote Network Route</b> as <b>192.168.2.2</b> and the <b>Remote Network Mask</b> as <b>24</b> 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 <b>192.168.2.0/24</b></li> <li>The same conversion is performed for Local Networks and Remote Networks when adding or editing an IPsec tunnel</li> </ul>	<p>GP-1453 GP-1287 MTX-4353 MTX-4118</p>
<p>Add a status message when a partial configuration in the Web UI is applied via DHQ</p> <ul style="list-style-type: none"> <li>In the previous releases, the system does not show a message when a partial configuration upgrade is performed.</li> <li>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: <b>Partial configuration has been applied.</b> <b>The system is going down for reboot now. (DATE/TIME)</b></li> </ul>	<p>GP-418 MTX-4140 IN003879</p>

### Bug Fixes (mPower MTR 6.0.0)

<p>Custom OpenVPN config breaks iptables</p> <ul style="list-style-type: none"> <li>Customer unsuccessfully tried to setup a VPN connection using custom OVPN config file.</li> <li>Upon investigation the root cause was found in this string: <i>remote 20.191.55.208 1194 udp</i></li> <li>If we split the string to these two, VPN connection works properly: <i>proto udp</i> <i>remote 20.191.55.208 1194</i></li> <li>Corresponding changes are implemented and such custom configuration can be applied and the tunnel connection will be established successfully</li> </ul>	<p>GP-1421 MTX-3873 SP-5105937</p>
<p>Save &amp; Apply restart redirects to LAN when connected through WAN</p> <ul style="list-style-type: none"> <li>When connected through the WAN, the Web UI redirects to a LAN IP (Ethernet eth0) when executing a Save &amp; Apply that requires a reboot</li> <li>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</li> </ul>	<p>GP-1006 IN-4375 MTX-4040</p>
<p>Device UI inaccessible after firmware upgrade if User Authentication enabled</p> <ul style="list-style-type: none"> <li>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</li> <li>This issue exists in the previous released firmware (mPower 5.2.1 and mPower 5.3.0)</li> <li>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</li> </ul>	<p>GP-1301 MTX-4143</p>

### Bug Fixes (mPower MTR 6.0.0)

<p>SMS - quotation mark character (Double universal) " is displayed with the backslash \ character in the received SMS message (like an escaped character)</p> <ul style="list-style-type: none"> <li>An extra slash character is added before the quotation mark " in the sent and received messages</li> <li>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</li> </ul>	MTX-4359
<p>The CD LED is always OFF in the Serial Modem mode</p> <ul style="list-style-type: none"> <li>In earlier versions of mPower, the CD (Carrier Detect) LED is always off (unilluminated)</li> <li>In mPower MTR 6.0.0, the issue is resolved and the CD LED is solid on (illuminated) when cellular connection is established</li> </ul>	MTX-4351
<p>PPP-IP Passthrough Mode – multiple farpd instances are running if connection re-establishes</p> <ul style="list-style-type: none"> <li>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</li> <li>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</li> </ul>	MTX-4350
<p>libmts-io</p> <ul style="list-style-type: none"> <li>MCC and MNC values are retrieved incorrectly from table</li> <li>In mPower MTR 6.0, MCC and MNC values are retrieved correctly for further carrier detection</li> </ul>	GP-114 MTX-4168
<p>Custom application failed to install on MTR device</p> <ul style="list-style-type: none"> <li>In earlier mPower versions, custom applications fail to install</li> <li>In mPower MTR 6.0.0, the issue is resolved and custom application is now successfully installed from Web UI and DeviceHQ</li> </ul>	GP-1297 MTX-4133  MTR only
<p>Reset to User Defined Defaults shall restore custom applications</p> <ul style="list-style-type: none"> <li>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</li> <li>Main use case <ul style="list-style-type: none"> <li>Install a custom application, configure the device, save the changes and set the current configuration as user-defined defaults</li> <li>Change the configuration (make any changes you need), save and apply the changes.</li> <li>Click "Reset to User Defined Defaults"</li> </ul> </li> <li>Result <ul style="list-style-type: none"> <li>Device reboots</li> <li>overlays is reset</li> <li>The system installs the custom application from /var/persistent</li> <li>Device reboots again as soon as the custom app is installed. NOTE: Actual behavior depends on the custom application</li> <li>When device boots, the custom application is installed</li> </ul> </li> </ul>	GP-1326 MTX-4154

### Deprecations (mPower MTR 6.0.0)

<p>Python 2 support</p> <ul style="list-style-type: none"> <li>Python 2 is not present in mPower. Only Python 3.8.11 is supported.</li> </ul>	GP-1224 MTX-4164
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### Deprecations (mPower MTR 6.0.0)

<p>RF Survey</p> <ul style="list-style-type: none"> <li>The RF Survey page is removed from mPower MTR 6.0.0</li> <li><b>Page 404</b> is displayed when trying to access the page using the direct link: /rf_survey</li> </ul>	<p>GP-1444 MTX-4321</p>
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### 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](http://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 July 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)

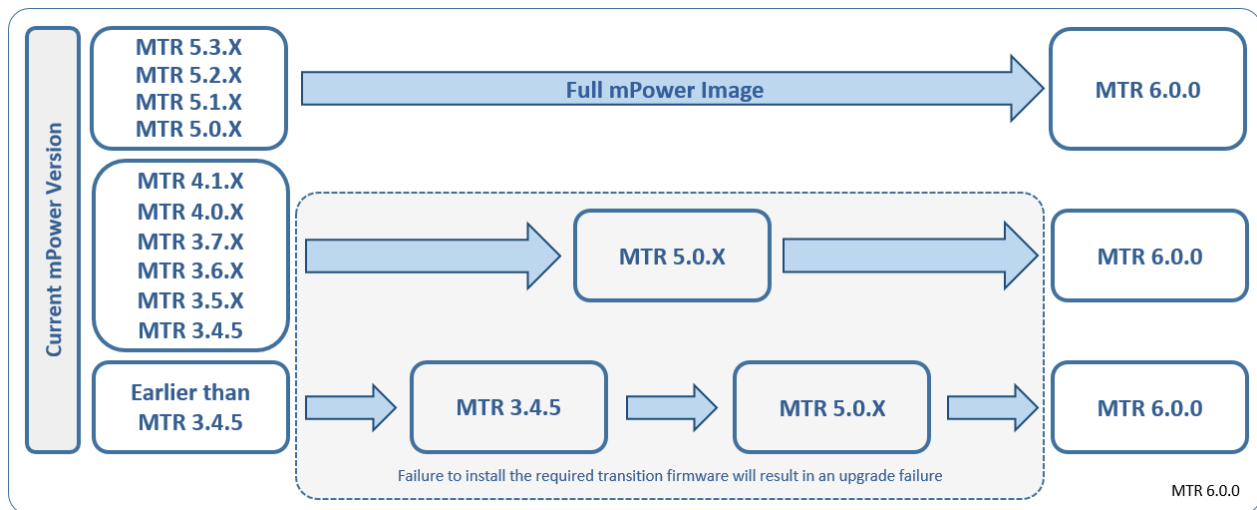
The following ordering part numbers are impacted by mPower MTR 6.0.0:

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 earlier versions of mPower should use the following upgrade process.



NOTE: Differential mPower images are not available for mPower MTR 6.0.0.



### **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**

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#### **EMEA Headquarters – UK**

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#### **MultiTech Developer Resources**

[www.multitech.net](http://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](http://support.multitech.com)

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

#### **MultiTech Website**

[www.multitech.com](http://www.multitech.com)

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## Revision History

Version	Author	Date	Change Description
-003	DT	06/16/2022	MTR-L4G1 models added to <a href="#">mPower MTR 6.0.0</a>
-002	DT	05/19/2022	GPSD update removed from <a href="#">mPower MTR 6.0.0</a>
-001	DT	05/04/2022	Initial Version