**MTR5-LEU2 R1 Firmware Release Notes**

**Version v4.30 (February 2023)**

**OVERVIEW**

These release notes provide a cumulative changelog and overview for firmware used on MultiConnect rCell 500 Series Cellular Routers. Detailed information is listed in reverse chronological order, starting with the most recent firmware release. The latest version v4.26 includes new enhancements and bug fixes.

For more product information, visit website:

[www.multitech.com/brands/multiconnect-rcell-500-series](http://www.multitech.com/brands/multiconnect-rcell-500-series)

Multi-Tech Systems, Inc.

2205 Woodale Drive  
Mounds View, MN 55112  
United States

Main Office: +1 (763) 785-3500  
Support: +1 (763) 717-5863

**FIRMWARE UPDATE PROCESS**

**Follow these Steps to perform firmware upgrade:**

* Login into the Web UI
* Click on System Related -> System Tools -> Firmware Upgrade
* Click on Choose File button and select the firmware BIN file.
* Click on the Upgrade button.

**DO NOT INTERRUPT AND DO NOT POWER CYCLE DURING THE FIRMWARE UPGRADE PROCESS. THE UPGRADE PROCESS WILL TAKE AT LEAST 10 TO 12 MINUTES TO COMPLETE**

After firmware upgrade is successful, Login into the Web UI and make sure it displays the correct firmware version number you just upgraded.

In case there are any issues, press and hold the reset button for minimum 20 seconds to reset the device back to factory default settings.

NOTE: if upgrade from old firmware version v4.07 or below to the latest, you MUST perform factory default reset after new firmware upgrade

**FIRMWARE VERSION V4.30 (February 2023)**

**Firmware file name and MD5 checksum:**

Filename = 20240220\_MultiTech\_MTR5-LEU2\_v4.30.bin

MD5 checksum = 908e95de400a2334bc9b0d66d26e4578

**Enhancements:**

* Expanded Web UI guest login for all the site name and username edit fields to show more characters.
* Add Packet Analyzer to support capture WAN packet when it is configured with PPPoE

**Bug Fixes:**

* Fixed – web UI allows blank key setting in GRE tunnel setup.

**FIRMWARE VERSION V4.29 (February 2023)**

**Firmware file name and MD5 checksum:**

Filename = 20240130\_MultiTech\_MTR5-LEU2\_v4.29.bin

MD5 checksum = dc97917b04689d95f3d711a9374525aa

**Enhancements:**

* Added new web UI option in guest user login to allow edit of Ethernet WAN PPPoE account name.

**Bug Fixes:**

* Fixed – do not use cellular WAN APN settings in the manual configuration when the current settings are setup to use APN profile list. This issue only occurs with older MTR5 devices with internal Huawei LTE radio.
* Fixed – network monitoring ICMP check to match up with the configured setting.

**FIRMWARE VERSION V4.26 (September 2023)**

**Firmware file name and MD5 checksum:**

Filename = 20230926\_MultiTech\_MTR5-LEU2\_v4.26.bin

MD5 checksum = f53d9fc9779a161bff081a2794c0a78e

**Enhancements:**

* Added support with new web UI option to backup and restore new .r1r2 configuration file that is compatible with new MTR5 R2 device
* Improved configuration file restores process

**FIRMWARE VERSION V4.23 (MAY 2023)**

**Firmware file name and MD5 checksum:**

20230518\_MultiTech\_MTR5-LEU2\_v4.23.bin

MD5 checksum = c10f4ad68b0e53bd4c095a76ccae8249

**Bug Fixes:**

* Fixed - CVE-2022-0778 security issue relating to openssl.
* Fixed - Ipsec VPN connection issue when Ethernet WAN is setup with static IP address.
* Fixed - Time Sync using configured NTP servers and schedule time update every 12 hours.
* Fixed - Time drift causes clock to be off by 60 seconds until next time sync occurs.

**FIRMWARE VERSION V4.19 (January 2022)**

**Firmware file name and MD5 checksum:**

20220128\_MultiTech\_MTR5-LEU2\_v4.19.bin

MD5 checksum = 3690b7ebe47adf0b4694bf9b94cbbd8b

**Enhancements:**

1. Added new parameters reporting to DeviceHQ.
2. Added ipsec vpn tunnel ICMP keepalive
3. Added SNAT rule for UDP virtual server entry.
4. Added DeviceHQ status failed or success after checking in in Web UI
5. Allow system watchdog to have value up to 9999 minutes.
6. Added new web UI option to set configuration file name for backup / saved.

**Bug Fixes:**

1. Fixed cellular wan manual network scan
2. Fixed cellular WAN settings cannot save when APN profile list entry is disabled.
3. Fixed openvpn TAP mode.
4. Fixed ipsec vpn tunnel dual wan failover and failback
5. Fixed ddns update with dual wan failover and failback.
6. Fixed dual wan when setup for failover and failback
7. Fixed Quectel radio PAP authentication issue with certain cellular networks
8. Fixed ddns update wan ip address changes.
9. Fixed system watchdog rebooting when setup for dual wan failover.
10. Fixed Integer overflow issue when trying to configure 3GB for Data Allowance / Data Usage

**FIRMWARE VERSION V4.17 (February 2020)**

**Firmware file name and MD5 checksum:**

20200207\_MultiTech\_MTR5-LEU2\_v417.bin

MD5 checksum = bc108f0c89d1972b787e218b60fdeba6

**Bug Fixes:**

1. Fixed outbound access when multiple WANs are active, and it is based on WAN configured / priority.
2. Fixed outbound access must fail over to lower priority WAN when higher priority WAN is down.
3. Fixed inbound access when multiple WANs are configured. Inbound access on particular WAN must reply back on the same WAN.
4. Fixed paknet outbound access on WAN3 when triple WANs are configured and when WAN1 and WAN2 are down.
5. Fixed download packet analyzer file when file is more than 1MB in size.

**FIRMWARE VERSION V4.16 (August 2019)**

**Firmware file name and MD5 checksum:**

20190814\_MultiTech\_MTR5-LEU2\_v416.bin

MD5 checksum = 100ae35f9b7148d97dabee5761eec0a4

**Enhancements:**

1. Dual ethernet WAN support using Ethernet E1 and E2 ports.
2. show content of receive SMS text message in the log.
3. SMS management text message can contain leading and trailing spaces and these extra spaces will be ignored.
4. improve monitor mechanism to detect internal LTE radio module lockup.
5. update IPsec module in order to support IKE v2. All existing Ipsec setting will get wiped out after new firmware update.
6. move OpenVPN status UI page into the main VPN status UI page.
7. Support new LTE CAT 4 radio.
8. remove APN name in Guest login UI page so user cannot edit this field.
9. add check box next to APN account / username so when it is checked and APN account / username is blank, it will skip APN profile entry when attemping make cellular WAN connection.
10. Added a new monitor task to detect the UDP / NAT / SNMP conntrack issue and reset the conntrack table when the issue occurs.

**Bug Fixes:**

1. Fixed system monitor daemon issue during exit error string process. This is relating to no WAN access, but still have local LAN access.
2. Fixed SMS remote management when setup using prefix security key.
3. Fixed serial and console port lockup issue during data transfer
4. Fixed Cellular WAN does not trigger cellular reconnect when change APN setting in APN profile list.
5. Fixed when changing Cellular WAN Internet Network type, it returns error when one of the entries in APN profile list is not enabled.
6. Fixed When received disconnect SMS management message, it does not perform cellular DHCP IP request / renew properly.
7. Fixed When cellular connection setup using 'Manually' mode, click UI connect button connection fail issue.

**FIRMWARE VERSION V4.15 (December 2018)**

**Firmware file name and MD5 checksum:**

20181210\_MultiTech\_MTR5-LEU2\_v415.bin

MD5 checksum = cfc59dcb79db974c30e45aed64825b6f

**Enhancements:**

1. Added - console commands to set/save IP UDP conntrack timeout values.
2. Added - new Paknet setting for TCP connection timeout when no serial data present for the time value configured (default 10 seconds)
3. Added - Display cellular RSCP and RSRP information in the Web UI
4. Added - Reduce TCP timeout when PAKNET originates TCP connection to remote servers.

**Bug Fixes:**

1. Fixed - ipsec web UI setup and edit corrupted local / remote subnet mask.
2. Fixed - initialize default bearer PDP context with proper APN, Username and password in order to avoid O2 operator username authentication issue.
3. Fixed - stop auto rebooting when cellular WAN is not configured/used, and SIM card is not installed.
4. Fixed - corrected SNMP OID and update SNMP MIB file to match (this will require new SNMP MIB file)
5. Fixed - DNS proxy issue
6. Fixed - To prevent configuration file corruption, remove configuration flash memory update when there is no changes during boot up. Check and make sure all flash memory update processes are close completely before executing any auto reboot.

**FIRMWARE VERSION V4.12 (March 2018)**

**Firmware file name and MD5 checksum:**

20180321\_MultiTech\_MTR5-LEU2\_v412.bin

MD5 checksum = 46a3f9193a335eac999d85360c8afcf7

**Enhancements:**

1. Added - guest user login with limited web UI options.
2. Added - Support Multiple Cellular APN profile list during cellular connection setup.
3. Added - Option to Shut down and detach from cellular network.
4. Added - improved site survey scan results.
5. Added - support two NTP servers.
6. Added - display SIM ICCID information in web UI.
7. Added - improved firmware file check to prevent corruption during firmware update.
8. Added - options to setup IPsec NAT traversal mode and Ipsec encapsulation mode under GRE VPN setup.

**Bug Fixes:**

1. Fixed - DeviceHQ log message shows proper failure message when wrong API keys are used.
2. Fixed - OpenVPN client compatibility issue. Allow custom parameters to be included in the OpenVPN configuration file.
3. Fixed - paknet emulation when DCD pin is not connected.
4. Fixed - Ipsec site to site connection and compatibility issue

**FIRMWARE VERSION V4.10 (December 2017)**

**Firmware file name and MD5 checksum:**

20171201\_MultiTech\_MTR5-LEU2\_v410.bin

MD5 checksum = f07bb4d6ab0b101ab17c7788d4d865fe

**Bug Fixes:**

1. Fixed - OpenVPN client compatibility issue when connecting to service provider using username and password. Certificate must be removed and recreate.
2. Fixed - DeviceHQ showing serial number matching with product printed label = WAN MAC address
3. Fixed - DeviceHQ showing check-in interval value need to match up with web UI setting.
4. Fixed - error handling on TCP server daemon for serial port
5. Fixed - memory leak problem after running for a long time.
6. Fixed - writing serial port data to serial port log files
7. Fixed - Wi-Fi patch to address KRACK issue.

**FIRMWARE VERSION V4.09 (October 2017)**

**Firmware file name and MD5 checksum:**

20171004\_MultiTech\_MTR5-LEU2\_v409.bin

MD5 checksum = 3557bcf66b765b5911742c517991e02d

**Enhancements:**

1. Added - update OpenVPN module.
2. Added - Cellular site survey tool (require newer hardware with serial number 40004225A and above)
3. Added - paknet emulation on serial port.
4. Added - TCP server on console serial port.
5. Added - DeviceHQ device managment (https://www.devicehq.com)
6. Added - QoS based type of cellular bandwidth.
7. Added - show more cellular status and SIM information in log file.
8. Added - improve auto recovery when SIM detection and modem query failures.
9. Added - system watchdog to monitor WAN link and processes and auto recover.
10. Added - two more SMS phone range.
11. Added - SFTP server.
12. Added - data logging when serial ports are active.

**Bug Fixes:**

1. Fixed - web UI access using firebox browser.
2. Fixed - WiFi setup UI display issue
3. Fixed - Packet Analyzer downloading file when UI setup has blank file name.

**FIRMWARE VERSION V4.08 (November 2016)**

**Firmware file name and MD5 checksum:**

20161124\_MultiTech\_MTR5-LEU2\_v408

MD5 checksum = 9d38ae0c133d2ba3342732ef35fdfbd9

**Enhancements:**

1. Added - OpenVPN server and client.
2. Added - new cellular WAN setting to allow 2G only connection.
3. Added - record and save log file when auto reboot occurs.
4. Added - enhance serial data decode information for RS232 port.
5. Added - improve cellular WAN connectivity, recovery and retry.
6. Added - SNMP support to query cellular WAN status information.
7. Added - improve web UI access via cellular when cellular WAN link is at slow speed.
8. Added - allow IP address range when setup QoS rules.
9. Added - improve firmware upgrade process to avoid corruption.
10. Added - detect 4G radio lockup and auto reboot to recovery.
11. Added - option to sync time with 4G radio clock.

**Bug Fixes:**

1. Fixed - varies web UI issues.

**FIRMWARE VERSION V4.07**

**Firmware file name**

MultiTech\_MTR5-LEU2\_v407.BIN (Version v4.07)

**Enhancements:**

1. Added - option to enable / disable roaming in 4G mobile WAN intenret setup.
2. Added - Serial port parameters for control serial data transmission over TCP.
3. Added - Turn on Serial LED when TCP session is active.
4. Added - more status information on SMS status command query.
5. Added - query Realtime clock from 4G LTE module using AT+CCLK.
6. Added - do not allow upload / restore corrupted configuration file.
7. Added - wireshark packet capture tool to capture and analyze LAN and WAN traffics.
8. Added - separate "Firmware Upgrade" and "Configuration Restore" buttons in the UI under System Tools
9. Added - Improve firmware upgrade process in recovery mode.
10. Added - when sync time from PC is selected, set the PC time into the 4G LTE radio module.
11. Added - Web UI shows configuration file name as “<Reset to factory defaults>” after resetting device to faulty defaults.
12. Added - improve 4G mobile WAN connectivity.
13. Added - DHCP server does not giving out default gateway address when gateway option is set to 0.0.0.0

**Bug Fixes:**

1. Fixed - Dyanamic IPsec VPN setup and function
2. Fixed - maintain and keep realtime clock after reboot.
3. Fixed - varies web UI display issues.
4. Fixed - blank IP address in network monitoring setup after running Wizard setup.
5. Fixed - short timeout issue on active WAN during another WAN down. This is when dual WANs setup (ethernet WAN and 4G WAN) is used.
6. Fixed - traffics reply on wrong WAN link when dual WANs are active (ethernet WAN and 4G WAN)
7. Fixed - NAT forward rules in some setup when forwarding WAN traffics to LAN.

**FIRMWARE VERSION V4.06 (February 2016)**

**Firmware file name**

MultiTech\_MTR5-LEU2\_v406.BIN (Version v4.06)

**Enhancements:**

1. Added - option to set up a unique Site Name and display configured site name on top of the Web UI
2. Added - display custom configuration file name that was loaded and currently active on top of the Web UI
3. Added - new Network Monitoring option without using cellular data and it is based on "data load check" by checking the cellular WAN link receive data activity.
4. Added - reduce amount of data usage during Network Monitoring ICMP keep alive check on cellular WAN link.
5. Added - SIM LED now will blink when SIM is present, and it is on solid when there is a active internet connection
6. Added - change RS232 virtual comm port settings "Connection idle timeout" and "Alive Check timeout" to use second instead of minute.
7. Added - RS232 port now can support baud rate as low as 1200.
8. Added - virtual server mapping allow up to 100 entries.
9. Added - network status page should time out and auto log off based web administrator time out setting.
10. Added - allow two SMS range of numbers for remote management only using SMS.
11. Added - configure Ethernet speed and duplex on each individual Ethernet port.
12. Added - options to allow HTTP and/or HTTPS web UI access on LAN or WAN
13. Added - Internal TCP keep alive server for remote to query via the active WAN links.
14. Added - custom factory default settings to replace standard factory default settings.
15. Added - custom Web UI login username beside admin.
16. Added - after receive SMS reboot message, it will reply to sender with an SMS message before rebooting router.
17. Added - when SIM card detection is not able to identify SIM status, it will auto recover and auto reboot.
18. Added - when carrier authentication fails too many times consecutively, it will auto recover and auto reboot.
19. Added - when network monitoring fail too many times consecutively, it will auto recover and auto reboot.
20. Added - improve HTTPS web UI access with very slow cellular WAN link.

**Bug Fixes:**

1. Fixed - BGP routing function
2. Fixed - varies web UI text and display issues.
3. Fixed - no HTTP packets allow if only HTTPS access is enabled.
4. Fixed - SMS status reply with all current active WAN link status.
5. Fixed - data usage display issue in Network status
6. Fixed - remove and delete all unknown received SMS messages to prevent SMS inbox from filling up.
7. Fixed - SMS data usage allowance reach alert notification

**FIRMWARE VERSION V4.05 (October 2015)**

**Firmware file name**

MultiTech\_MTR5-LEU2\_v405.BIN (Version v4.05)

**Enhancements:**

1. Added - Improve LTE data performance and throughput by using CDC ECM interface instead of PPP when making Cellular connection.
2. Added - Firmware upgrade and configuration restore using the same web UI page.
3. Added - Allow periodic ICMP pinging of two local LAN hosts.
4. Added - new cellular APN profiles.
5. Added - support TR069 using HTTPS.

**Bug Fixes:**

1. Fixed - SIM card detection issue
2. Fixed - firmware upgrade using HTTPS.
3. Fixed - varies captive portal issues when using with www.hostpotsystem.com.

**FIRMWARE VERSION V4.04 (June 2015)**

**Firmware file name**

MultiTech\_MTR5-LEU2\_v404.BIN (Version v4.04)

**Enhancements:**

1. Added - re-arrange and move MMI web timeout option to the System web UI password page.
2. Added - enhanced web user interface setup for OSPF and BGP routing.
3. Added - Captive Portal for managing public WiFi HotSpot using cloud service provider www.hotspotsystem.com.
4. Added - Cellular WAN link data usage allowance management.
5. Added - Web user interface to allow adding server settings for easy configuration. Servers such as Syslog, Mail, Radius, UAM, LDAP and Active directory
6. Added - Cellular WAN Link Network type and scan management selection.
7. Added - Simplified WAN link Network Monitoring options in the Web user interface.
8. Added - Dual SIM switching based on data usage allowance.
9. Added - Combined System related menus in the Web user interface.
10. Added - WISP (Wireless internet service provider). WiFi client can be set up as WAN link and at the same time WiFi AP can be used as local Access Point
11. Added - UPnP feature in System Management
12. Added - Enhanced QoS set up menus in the Web user interface.
13. Added - Enhanced DHCP Server set up menus in the Web user interface.
14. Added - Enhanced the Network status page display.
15. Added - Auto Reboot based on time schedule.
16. Added - Allow a list of preconfigured AT commands to be sent to Cellular modem before making connection.
17. Added - method to support direct AT command mode access to the internal Cellular modem via LAN interface using Telnet or SSH
18. Added - Dual SIM A/B auto switching based on network failure or data usage limit.
19. Added - virtual server allows multi-to-multi port range mapping.
20. Added - detect LTE module lockup and auto HW reset and auto recover.

**Bug Fixes:**

1. Fixed - SIM pin code unlock issue during the initiating of 4G Cellular connection.
2. Fixed - some language error messages.
3. Fixed - Web user interface cannot display more than 10 entries in MAC control setup page
4. Fixed - After reset to default, and then set WAN as Ethernet, SIM status don't display.
5. Fixed - Refresh button of 3G/4G Modem Status page
6. Fixed - Syslog sending log to LAN syslog server.
7. Fixed - login page sometime jump to status page when MTR5 logout
8. Fixed - Router stop trying after Networking monitoring failure.
9. Fixed - SMS management not replying.
10. Fixed - Varies browser and web user interface issues.
11. Fixed - DDNS update issue when WAN link failover occurs.
12. Fixed - Seamless Failover when switching back from 4G WAN to ethernet WAN.
13. Fixed - Varies SMS remote management issues.
14. Fixed - In Virtual COM RS232 setup, removed Hardware Flow control DTR/DSR option from web UI.
15. Fixed - WiFi WDS mode provides no statistics.
16. Fixed - Virtual COM RS232 TCP client mode file transfer downloading issue.
17. Fixed - Virtual COM RS232 TCP client mode auto initiating first connection after power on and after internet connection is active.
18. Fixed - Dual Power mode LEDs on / off display issue
19. Fixed - Virtual COM RS232 and TCP client mode connection problem.

# ADDITIONAL INFORMATION

**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.

**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](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](https://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/)

**World Headquarters – USA**

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

**EMEA Headquarters – UK**

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

**Trademarks and Registered Trademarks**

MultiConnect, MultiTech and the MultiTech logo are registered trademarks of Multi-Tech Systems, Inc.

All other trademarks or registered trademarks are the property of their respective owners. Copyright © 2023 by Multi-Tech Systems, Inc. All rights reserved.