

MultiConnect[®] rCell 100 Series

Cellular Routers now supporting
LTE Cat 4, Cat M1 & NB-IoT



mPower[™]
EDGE INTELLIGENCE



BENEFITS

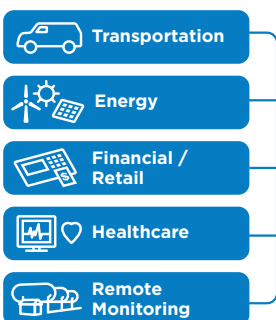
- Lowest total cost of ownership
- Long and stable lifecycles
- Certified and carrier approved

FEATURES

- 4G (Cat 4, Cat 3, Cat M1 & NB-IoT), 3G and 2G models
- Flexible Web API for developers based on RESTful JSON over HTTPs
- Ruggedized enclosure
- Designed, manufactured and tested in ISO 13485 facilities
- Remotely hosted device management platform
- mPower Edge Intelligence embedded software

MultiConnect[®] rCell 100 Series of industrial cellular routers, optimized for secure M2M (machine-to-machine)/Internet of Things (IoT) applications, with mPower[™] embedded software, offering a robust Ethernet or serial network interface platform ready to deploy. The intuitive user interface and free cloud device management (no recurrent monthly fees) allows for quick configuration and over-the-air upgrades. Enhanced with features such as WAN failover, secure software updates, advanced firewall and routing configuration, and Certificate Management, the MultiConnect rCell 100 Series creates an ideal environment for secure and redundant communications critical to the reliability of remote monitoring systems in a variety of industries.

Your Devices & Data



Insight + Action + Control



www.multitech.com/rcell100

HARDWARE SPECIFICATIONS

| Models | MTR-LNA7 | MTR-LEU7 |
|-----------------------------|--|--|
| Performance | LTE Cat 4 | |
| Frequency Band (MHz) | 4G: B2(1900), B4(AWS1700), B5(850), B12(700), B13(700) 3G: B2(1900), B4(AWS1700), B5(850) | 4G: B1(2100), B3(1800), B7(2600), B8(900), B20(800), B28A(700) 3G: B1(2100), B8(900) 2G: B3(1800), B8(900) |
| Packet Data* | Up to 150 Mbps downlink/ Up to 50 Mbps uplink (Category 4) | |
| Diversity/MIMO | Rx Diversity and MIMO DL 2x2 | |
| SMS | Point-to-Point Messaging, Mobile-Terminated SMS, Mobile-Originated SMS | |
| Voltage | 7V to 32VDC | |
| Connectors | | |
| Cellular | Female SMA | |
| Wi-Fi | Reverse polarity female SMA | |
| GPS | Female SMA | |
| SIM | Micro SIM (3FF); 1.8 and 3V | |
| LAN | RJ-45, 10/100 BaseT | |
| RS-232 | DE9 | |
| Power | 2.5 mm miniature (screw-on) | |
| Physical Description | | |
| Dimensions (L x W x H) | 4.17" x 3.0" x 1.15" (10.6 cm x 7.6 cm x 2.9 cm) | |
| Weight | 0.51 lbs (0.231 Kg) | |
| Chassis Type | Aluminum | |
| Environmental | | |
| Operating Temperature† | -40° to +176° F (-40° to +80° C) | |
| Storage Temperature | -40° to +185° F (-40° to +85° C) | |
| Humidity | Relative humidity 15% to 93% noncondensing | |
| Certifications | | |
| Regulatory | FCC Class B (US) | RED (EU Economic Area) |
| Safety | UL60950-1 (US), UL 201 (US) | IEC60950-1 (EU Economic Area) |
| Network | (pending) AT&T, Verizon, T-Mobile, Rogers | (pending) EU carriers |
| Quality | MIL-STD-810G: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration | |

* Actual performance speeds may be affected by a variety of attributes such as cell tower distance, data loads, packet sizes, etc.

† Device has been tested up to +85° C. UL Recognized @ 40° C, limited by AC power supply. UL Recognized @ 60° C when used with the fused DC power cable, part number FPC-532-DC. Note: The radio's performance may be affected at the temperature extremes. This is considered normal. There is no single cause for this function. Rather, it is the result of an interaction of several factors, such as the ambient temperature, the operating mode and the transmit power.

HIGHLIGHTS

Embedded Software

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.

Wi-Fi/Bluetooth Specifications

The Wi-Fi interface can be set up in 802.11 b/g/n Access Point (AP) or client mode. In AP mode, the router can support up to 5 client connections. The Bluetooth serial interface allows you to set up a transparent data pipe from a Bluetooth device to a remote server. The router can be configured using TCP or UDP protocols and supports client and server modes giving you the flexibility you need for your particular application. RFCOM and SPP profile support. Contact MultiTech about additional Bluetooth profile support.

Security

The MultiConnect rCell 100 Series of cellular routers use IPSec industry standard data encryption to provide high performance, secure LAN-to-LAN VPN connections with 3DES or AES encryption using IKE and PSK key management. Support for five concurrent VPN tunnels. Additionally a private, secure digital signature with integrity check update technique is now available, minimizing file damage, tampering or loading of invalid firmware. MultiTech signs and distributes firmware updates through a secure standard firmware distribution process and verifies the firmware signature before installation of the firmware for maximum device integrity.

Wi-Fi

- 802.11 b/g/n (1x1), 2.5GHz (20MHz BW)
- 11, 54 and 65 Mbps max theoretical throughput, for 802.11 b/g/n, respectively
- 20, 15 and 14.5 dBm output power, for 802.11 b/g/n, respectively
- WEP, WPA, and WPA2 support

Bluetooth

- Version 2.1+EDR
- Power Class 1.5
- Data rate 3 Mbps

HARDWARE SPECIFICATIONS

| Models | MTR-MNG2 | MTR-LAT1 | MTR-LVW2 | MTR-LEU1 |
|-----------------------------|--|---|-----------------------------|--|
| Performance | LTE Cat M1 / NB-IoT Dual Mode + 2G Fallback | LTE Cat 3 | | |
| Frequency Band (MHz) | 3GPP Rel. 13 4G: B1(2100)/B2(1900)/B3(1800)/B4(AWS1700)/B5(850)/B8(900)/B12(700)/B13(700)/B18(800)/B19(800)/B20(800)/B26(850)/B28(700)/B39(1900) 2G: B2(1900)/B3(1800)/B5(850)/B8(900) | 4G: B17(700)/B5(850)/B4(AWS1700)/B2(1900) 3G: B5(850)/B2(1900) 2G: (850/1900) | 4G: B13(700)/B4(AWS1700) | 4G: B20(800)/B3(1800)/B7(2600) 3G: B5(850)/B8(900)/B1(2100) 2G: (900/1800) |
| Packet Data* | Cat. M1: Up to 300 Kb/s Downlink Up to 375 Kb/s Uplink NB1: Up to 250 Kb/s Downlink (multi-tone) Up to 20 Kb/s Uplink (single-tone) | Up to 100 Mbps downlink/ Up to 50 Mbps uplink (Category 3) | | |
| Diversity/MIMO | N/A | Rx Diversity and MIMO DL 2x2 | | |
| SMS | Text & PDU, Point-to-Point | Point-to-Point Messaging, Mobile-Terminated SMS, Mobile-Originated SMS | | |
| Voltage | 7V to 32VDC | | | |
| Connectors | | | | |
| Cellular | Female SMA | | | |
| Wi-Fi | Reverse polarity female SMA | N/A | | |
| GPS | Female SMA | | | |
| SIM | Mini SIM (2FF); 1.8 and 3V | | | |
| LAN | RJ-45, 10/100 BaseT | | | |
| RS-232 | DE9 | | | |
| Power | 2.5 mm miniature (screw-on) | | | |
| Physical Description | | | | |
| Dimensions (L x W x H) | 4.17" x 3.0" x 1.15" (10.6 cm x 7.6 cm x 2.9 cm) | | | |
| Weight | 0.51 lbs (0.231 Kg) | | | |
| Chassis Type | Aluminum | | | |
| Environmental | | | | |
| Operating Temperature† | -40° to +176° F (-40° to +80° C) | | | |
| Storage Temperature | -40° to +185° F (-40° to +85° C) | | | |
| Humidity | Relative humidity 15% to 93% non-condensing | | | |
| Certifications | | | | |
| Regulatory | RED (EU Economic Area) (pending) | FCC Class B (US), IC (Canada) | FCC Class B (US) | RED (EU Economic Area) |
| Safety | IEC 60950-1 (EU Economic Area) (pending) | UL60950-1 (US), UL 201 (US), cUL60950-1 (Canada) | UL60950-1 (US), UL 201 (US) | IEC60950-1 (EU Economic Area) |
| Network | AT&T (pending), Verizon (pending), T-Mobile (pending), Rogers (pending) EU Carriers (pending) | AT&T, T-Mobile, Rogers | Verizon | EU carriers |
| Quality | MIL-STD-810G: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration | | | |

* Actual performance speeds may be affected by a variety of attributes such as cell tower distance, data loads, packet sizes, etc.

† Device has been tested up to +85° C. UL Recognized @ 40° C, limited by AC power supply. UL Recognized @ 60° C when used with the fused DC power cable, part number FPC-532-DC. Note: The radio's performance may be affected at the temperature extremes. This is considered normal. There is no single cause for this function. Rather, it is the result of an interaction of several factors, such as the ambient temperature, the operating mode and the transmit power.

HARDWARE SPECIFICATIONS

| Models | MTR-H6 | MTR-H5 | MTR-G3 |
|-----------------------------|--|---|--|
| Performance | HSPA | HSPA+ | GPRS Class 10 |
| Frequency Band (MHz) | 3G: Tri-band 850/900/2100 2G: Quad-band 850/900/1800/1900 | 3G: WCDMA/HSDPA/HSUPA 800/850/900/AWS1700/1900/2100 2G: GSM/GPRS/EDGE 850/900/1800/1900 | Quad-band 850/900/1800/1900 |
| Packet Data* | Up to 7.2 Mbps downlink, up to 5.76 Mbps uplink | Up to 21.0 Mbps downlink, up to 5.76 Mbps uplink | Up to 85.6K downlink Up to 85.6K uplink |
| Diversity/MIMO | No | Yes | No |
| SMS | Point-to-Point Messaging, Mobile-Terminated SMS, Mobile-Originated SMS | | |
| Voltage | 7V to 32VDC | | |
| Connectors | | | |
| Cellular | Female SMA | | |
| Wi-Fi | Reverse polarity female SMA | | N/A |
| GPS | Female SMA | | |
| SIM | Mini SIM (2FF); 1.8 and 3V | | |
| LAN | RJ-45, 10/100 BaseT | | |
| RS-232 | DE9 | | |
| Power | 2.5 mm miniature (screw-on) | | |
| Physical Description | | | |
| Dimensions (L x W x H) | 4.17" x 3.0" x 1.15" (10.6 cm x 7.6 cm x 2.9 cm) | | |
| Weight | 0.51 lbs (0.231 Kg) | | |
| Chassis Type | Aluminum | | |
| Environmental | | | |
| Operating Temperature† | -40° to +185° F (-40° to +85° C) | | |
| Storage Temperature | -40° to +185° F (-40° to +85° C) | | |
| Humidity | Relative humidity 15% to 93% noncondensing | | |
| Certifications | | | |
| Regulatory | RED (EU Economic Area), RCM (Australia/NZ) | FCC Class B (US), IC (Canada), RED (EU Economic Area), RCM (Australia/NZ) | RED (EU Economic Area) |
| Safety | IEC60950-1 (EU Economic Area), AS/NZS 60950.1 (Australia/NZ) | UL60950-1 (US), UL 201 (US), Class I Div 2 (US and Canada), cUL60950-1 (Canada), IEC60950-1 (EU Economic Area), AS/NZS 60950.1 (Australia/NZ) | IEC60950-1 (EU Economic Area) |
| Network | GCF, Telstra, EU carriers | PTCRB, GCF approved module, AT&T, T-Mobile, Telstra, EU carriers Rogers, Pending: Bell, Telus | EU carriers |
| Quality | MIL-STD-810G: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration | | |

* Actual performance speeds may be affected by a variety of attributes such as cell tower distance, data loads, packet sizes, etc.

† Device has been tested up to +85° C. UL Recognized @ 40° C, limited by AC power supply. UL Recognized @ 60° C when used with the fused DC power cable, part number FPC-532-DC. Note: The radio's performance may be affected at the temperature extremes. This is considered normal. There is no single cause for this function. Rather, it is the result of an interaction of several factors, such as the ambient temperature, the operating mode and the transmit power.

SOFTWARE SPECIFICATIONS

| SECURITY | |
|---|---|
| VPN | <p>Up to 5 concurrent tunnels IPSec IKEv1,v2 Open VPN Cipher suite: DHGroup 14 Configurable encryption, Configurable hash, Configurable TLS: 1.0,1.1,1.2 Encapsulation: ESP Encryption Methods: 3DES, AES-128, AES-192, AES-256, Authentication: MD5, SHA-1, SHA-2, SHA2-256, SHA2-384, SHA2-512., Key Group: DH2 (1024-bit), DH5 (1536-bit), DH14 (2048-bit), DH15 (3072-bit), DH16 (4096-bit), DH17 (6144-bit), DH18 (8192-bit), DH22 (1024-bit), DH23 (2048-bit), DH24 (2048-bit)</p> |
| MAC Filtering | Accept, reject, drop or log packets based on MAC address |
| SPI Firewall | Configurable DNAT, NAT-T, SNAT |
| IP Defense | <p>Denial-of-service / ICMP/Ping flood / Brute force access PPP IP-Pass through mode provides ./.24 network masks and regular ./.32 network masks Separate Firewall configuration allows setup and management of a trusted list of IP addresses IPv4 Mask settings allow the connected device to obtain LAN settings automatically or the LAN settings can be configured manually. Enables multiple devices to connect to the MTR providing for the unique management and identification of all the devices within the network.</p> |
| X.509 Certificates | Support generation and/or import of multiple CA certificates through use of SHA-256. User can add and delete user's root certificates in addition to the certificates from the /etc/ssl by application. |
| PAP/CHAP | Authentication protocols for secure PPP connections |
| MANAGEMENT | |
| SNMP | <p>V1,2,3 SNMPv3 and authentication protocols MD5 and SHA1 as well as encryption protocols DES and AES-128. configurable multiple SNMP trap servers and SNMP server configurations enhanced SNMP server Web UI allows configuring SNMPv3 security settings for SNMP configurations and SNMP trap servers</p> |
| RADIUS | Remote Authentication |
| HTTP server | Web UI for setup and help |
| SMS | <p>Trouble shooting commands to store logs to DeviceHQ Remote reboot over SMS Commands to retrieve connection status, radio stats, Ethernet link status APN modification over SMS</p> |
| Administration | Multiple user hierarchy and access rights |
| DeviceHQ | Remote device management platform provides device status and information in a clear graphical format. Manage , monitor, group, configure and upgrade devices remotely |
| Event Notifications (SNMP, SMS, Email) Time Stamped | <p>Active/inactive interface status (serial, Ethernet, Wi-Fi, cellular link) Data traffic stats (Ethernet, Wi-Fi, Cellular) Data usage alerts</p> |
| API | RESTful JSON over HTTPs |
| FOTA | Radio firmware update over the air - limited to H5/H6 models |
| Firmware Updates | Private, secure, digital signature technique to enable transferring the device firmware safely. The technique will defeat attempts to load invalid firmware files or files that have been subjected to damage or tampering. MultiTech signs and distributes the firmware through a secure, standard firmware distribution process, and verifies the firmware signature before it installs the firmware files to ensure integrity. |
| USER INTERACTION | |
| User Interface | Secure graphical and intuitive web UI (requires user name and password) |
| Configuration | Set up wizard or manual option |
| Help | Context sensitive help. Documentation and step-by-step directions integrated into the web UI |
| Personalization | Customize support contact information, logos and color schemes |
| NETWORKING FLEXIBILITY | |
| WAN Failover | Wi-Fi to Cellular |
| Dynamic DNS (DDNS) | Automatically updates DNS |
| DHCP Server | Supports fixed and dynamic IP addressing |
| Bridge Mode | PPP/IP Pass-through |
| Clock | Configurable SNTP client |
| Serial RS-232 | PAD, TCP/UDP client and server |
| MODBUS | Pass-through, RTU to TCP and vice versa, TCP slave query |
| Persistent Connectivity/ Keep Alive | Automatic repair of the cellular PPP connection Configurable ICMP or TCP ping at specified intervals |
| Dial on Demand | Cellular connection only when there is traffic to send |
| Wake up on Call | Cellular connection upon a wake up event such as ring, caller ID or SMS |
| GPS | Server and client |
| Wi-Fi | Server and client |

ORDERING INFORMATION

MultiConnect® rCell 100 Series 4G-LTE Models

| Model | Description | Region |
|--------------------|---|-----------|
| MTR-LNA7-B07 | LTE Cat 4 Router with Fallback, without Accessories (AT&T/Verizon) | US/Canada |
| MTR-LNA7-B07-US | LTE Cat 4 Router with Fallback and US Accessory Kit (AT&T/Verizon) | US/Canada |
| MTR-LNA7-B10 | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, without Accessories (AT&T/Verizon) | US/Canada |
| MTR-LNA7-B10-US | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, with US Accessory Kit (AT&T/Verizon) | US/Canada |
| MTR-LEU7-B07 | LTE Cat 4 Router with Fallback, without Accessories (Europe) | Europe/GB |
| MTR-LEU7-B07-EU-GB | LTE Cat 4 Router with Fallback and EU/UK Accessory Kit (Europe) | Europe/GB |
| MTR-LEU7-B10 | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, without Accessories (Europe) | Europe/GB |
| MTR-LEU7-B10-EU-GB | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, with EU/UK Accessory Kit (Europe) | Europe/GB |
| MTR-LAT1-B07 | LTE Cat 3 Router w/Fallback, w/o Accessory Kit (AT&T) | US/Canada |
| MTR-LAT1-B07-US | LTE Cat 3 Router w/Fallback, w/US Accessory Kit (AT&T) | US/Canada |
| MTR-LAT1-B08 | LTE Cat 3 Router w/GPS & Fallback, w/o Accessory Kit (AT&T) | US/Canada |
| MTR-LAT1-B08-US | LTE Cat 3 Router w/GPS & Fallback, US Accessory Kit (AT&T) | US/Canada |
| MTR-LVW2-B07 | LTE Cat 3 Router w/o Accessories (Verizon) | US |
| MTR-LVW2-B07-US | LTE Cat 3 Router w/US Accessory Kit (Verizon) | US |
| MTR-LVW2-B08 | LTE Cat 3 Router w/GPS w/o Accessories (Verizon) | US |
| MTR-LVW2-B08-US | LTE Cat 3 Router w/GPS & US Accessory Kit (Verizon) | US |
| MTR-LEU1-B07 | LTE Cat 3 Router w/o Accessories (Europe) | Euro/GB |
| MTR-LEU1-B07-EU-GB | LTE Cat 3 Router w/EU/UK Accessory Kit (Europe) | Euro/GB |
| MTR-LEU1-B08 | LTE Cat 3 Router w/GPS w/o Accessories (Europe) | Euro/GB |
| MTR-LEU1-B08-EU-GB | LTE Cat 3 Router w/GPS & EU/UK Accessory Kit (Europe) | Euro/GB |
| MTR-MNG2-B07 | LTE Cat M1+NB-IoT Router w/Fallback, w/o Accessory Kit | Global |
| MTR-MNG2-B07-WW | LTE Cat M1+NB-IoT Router w/Fallback, w Accessory Kit | Global |
| MTR-MNG2-B10 | LTE Cat M1+NB-IoT Router w/Wi-Fi/BT/GPS & Fallback, w/o Accessory Kit | Global |
| MTR-MNG2-B10-WW | LTE Cat M1+NB-IoT Router w/Wi-Fi/BT/GPS & Fallback, w/ Accessory Kit | Global |

MultiConnect® rCell 100 Series HSPA+ Models

| Model | Description | Region |
|---------------------|---|------------|
| MTR-H5-B07 | HSPA+ Router w/o Accessories | Global |
| MTR-H5-B07-US-EU-GB | HSPA+ Router w/US/EU/UK Accessory Kit | US/Euro/UK |
| MTR-H5-B08 | HSPA+ Router w/GPS w/o Accessories | Global |
| MTR-H5-B08-US-EU-GB | HSPA+ Router w/GPS & US/EU/UK Accessory Kit | US/Euro/UK |
| MTR-H5-B09 | HSPA+ Router w/Wi-Fi w/o Accessories | Global |
| MTR-H5-B09-US-EU-GB | HSPA+ Router w/Wi-Fi & US/EU/UK Accessory Kit | US/Euro/UK |
| MTR-H5-B10 | HSPA+ Router w/Wi-Fi/GPS w/o Accessories | Global |
| MTR-H5-B10-US | HSPA+ Router w/Wi-Fi/GPS & US Accessory Kit | US/Canada |
| MTR-H5-B07-HZ | HSPA+ Router w/Class I Div 2 Kit | US/Canada |
| MTR-H5-B10-HZ | HSPA+ Router w/Wi-Fi/GPS & Class I Div 2 Kit | US/Canada |

MultiConnect® rCell 100 Series HSPA Models for Europe

| Model | Description | Region |
|---------------|---|---------|
| MTR-H6-B16 | HSPA Router w/o Accessories | Euro/GB |
| MTR-H6-B16-EU | HSPA Router w/EU Accessory Kit | EMEA |
| MTR-H6-B16-GB | HSPA Router w/UK Accessory Kit | GB/IE |
| MTR-H6-B18 | HSPA Router w/Wi-Fi w/o Accessories | Euro/GB |
| MTR-H6-B18-EU | HSPA Router w/Wi-Fi & EU Accessory Kit | EMEA |
| MTR-H6-B18-GB | HSPA Router w/Wi-Fi & UK Accessory Kit | GB/IE |
| MTR-H6-B19 | HSPA Router w/Wi-Fi/GPS w/o Accessories | Euro/GB |

MultiConnect® rCell 100 Series GPRS Models for Europe

| Model | Description | Region |
|------------------|-----------------------------------|---------|
| MTR-G3-B16 | GPRS Router w/o Accessories | Euro/GB |
| MTR-G3-B16-EU-GB | GPRS Router w/EU/UK Accessory Kit | EMEA |

Use ordering codes for specific build options.

Go to www.multitech.com for detailed product model numbers.

Produced in the U.S. of U.S. and non-U.S. components. Features and specifications are subject to change without notice.

Trademarks and Registered Trademarks: MultiTech and the MultiTech logo, MultiConnect: Multi-Tech Systems, Inc. All other products and technologies are the trademarks or registered trademarks of their respective holders.

2020-09 • 86002163 • © 2020 Multi-Tech Systems, Inc. All rights reserved.

Services & Warranty

MultiTech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations.

Technical Support Services

At MultiTech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from.

For additional information on Support Services as well as other service offerings, please contact your MultiTech representative or visit www.multitech.com/support.go

World Headquarters

Multi-Tech Systems, Inc.
2205 Woodale Drive
Mounds View, MN 55112 U.S.A.
Tel: 763-785-3500
Toll-Free: 800-328-9717
Email: sales@multitech.com
www.multitech.com

EMEA Headquarters

Multi-Tech Systems (EMEA)
Strata House
264-270 Bath Road
Harlington UB3 5JJ
United Kingdom
Tel: +(44) 118 959 7774
Email: sales@multitech.co.uk
www.multitech.co.uk

MULTITECH 