

MultiConnect® rCell 100 Series

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





MultiConnect rCell 100 Series of industrial cellular routers, optimized for secure M2M (machine-to-machine)/Internet of Things (IoT) applications, with mPower Edge Intelligence embedded software, offering a robust Ethernet or serial network interface platform ready to deploy. The intuitive user interface and cloud device management 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.

BENEFITS

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

FEATURES

- 4G-LTE (Cat 4, Cat M1 & NB-IoT)
- Optional GPS & Wi-Fi/BT capabilities
- 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



HARDWARE SPECIFICATIONS

| Models | MTR-L4G1 MTR-LNA7 MTR-LEU | | | | | |
|---|---|---|---|--|--|--|
| Cellular Radio | MTQ-LNA7-B02 | MTQ-LNA7-B02 | MTQ-LEU7-B02 | | | |
| Cellular Perfomance | | 4G - LTE Category 4 | | | | |
| Cellular Fallback | 3G - HSPA +, 2G - GPRS | 3G - HSPA+ | 3G - HSPA +, 2G - GPRS | | | |
| Frequency Band (MHz) | 4G FDD: B1(2100), B2(1900), B3(1800), B4(AWS1700), B5(850), B7(2600), B8(900), B12(B15(700), B18(850), B19(850), B20(800), B25(1900), B26(850), B28(700) 4G TDD: B38(2600), B39(1900), B40(2300), B41(2500) 3G: B1(2100), B2(1900), B4(AWS1700), B5(850), B6(800), B8(900), B19(850) 2G: B2(1900), B3(1800), B5(850), B8(900) | 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* | 4G-FDD: Up to 150 Mbps peak downlink. Up to 50 Mbps peak uplink 4G-TDD: Up to 130 Mbps peak downlink. Up to 30 Mbps peak uplink | Up to 150 Mbps downlink / Up to 50 Mbps uplink | | | | |
| Diversity/MIMO | | Rx Diversity and MIMO DL 2x2 | | | | |
| SMS | Point-to-Po | oint Messaging, Mobile-Terminated SMS, Mobile-Orig | ginated SMS | | | |
| Input Voltage | | 7V to 32VDC | | | | |
| Wi-Fi/Bluetooth (-B10 | | Wi-Fi: 802.11abng (2.4 & 5 GHz) | | | | |
| Models) | | Bluetooth: Classic 4.1 and BLE | | | | |
| GPS/GNSS (-B10 Models) | | GNSS connections: 3 GNSS Systems Supported: (default: concurrent GPS/QZSS/SBAS and GLONASS) | | | | |
| LEDs | POWER, STATUS Modem: CD LED (Carrier Detect), LS LED (Link Status) Signal Strength: 3 LEDs Ethernet: Link, Speed Wi-Fi (-B10 models only) | | | | | |
| Connectors | | | | | | |
| CELL1, CELL2 | | (2) Female SMA (Cellular Antenna) | | | | |
| WIFI (-B10 Models only) | Reverse polarity female SMA (Wi-Fi/BT Antenna) | | | | | |
| GPS (-B10 Models only) | Female SMA (GPS Antenna) | | | | | |
| SIM | Micro SIM Card (3FF); 1.8V and 3V | | | | | |
| E-NET | | Ethernet RJ-45, 10/100 BaseT | | | | |
| RS-232 | | DE9 (Serial Connection) | | | | |
| 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 | Anodized aluminum (blue) / (IP-Rating: Designed for IP30) | | | | | |
| Environmental | | | | | | |
| Operating Temperature [†] | | -40° to +176° F (-40° to +80° C) | | | | |
| Storage Temperature | -40° to +1/6° F (-40° to +80° C) -40° to +185° F (-40° to +85° C) | | | | | |
| Humidity | | Relative humidity 15% to 93% noncondensing | | | | |
| Certifications | | | | | | |
| EMC Compliance | Australia/New Zealand: CISPR 32 Canada: ICES-003 Class B Europe: RED, EN 55023 Class B, EN 301 489-3 V2.11, EN 301 489-1 V2.2.0, EN 301-489-52 V1.1.0 US: FCC Part 15 Class B | US: FCC Part 15 Class B | Europe: ROHS Directive 2011/65/EU EN 50581:2012. RED Directive 2014/53/EU. Article 3.1b (EMC) | | | |
| Radio Compliance | Australia/New Zealand: AS/NZS 4268:2012 + A1:2013 MPE Standard 2014 Europe: EN 300 220-1 V3.1.1, EN 300 220-2 V3.1.1, EN 300 328 V2.1.1, EN 301 511 V9.0.2, EN 301 893 V2.1.1, EN 301 908-1 V11.1.1, EN 62311-2008 Canada: ISED US: FCC Part 22, 24, 27 | US: FCC Part 22H, FCC Part 24E, FCC Part 27 | Europe: RED Directive 2014/53/EU. Art 3.2 (Radio) | | | |
| Safety | Australia/New Zealand: AS/NZS 60950.1 Canada: cUL 60950-1, cUL 62368-1 Europe: IEC 60950-1, IEC 62368-1 US: UL/ 60950-1, UL62368-1 | Canada: cUL 60950-1 US: UL 60950-1 2nd ED, IEC 62368-1 | Europe: IEC 60950-1:2005 (Second Edition), EN 62368-1:2014 + AC:2017 (Second Edition) | | | |
| Additional Regulatory Approvals Available (Contact MultiTech for details) | Anatel (Brazil), IFETEL (Mexico), SRRC/CCC/NAL (China), KC (South Korea), NCC (Taiwan, China), JATE/TELEC (Japan), FAC (Russia), NBTC (Thailand), IMDA (Singapore), ICASA (South Africa) | N/A | N/A | | | |
| Mobile Network Operator Approvals | Australia: RCM, Optus, Telstra, Vodafone Europe: GCF Approved Module, European Network Operators US: PTCRB, AT&T, Verizon | Canada: Bell, Telus US: PTCRB, AT&T, Verizon | Europe: GCF Approved Module, European Network Operators | | | |
| Additional Mobile Network Operator Certifications Available (Contact MultiTech for Details) | Canada: Rogers, Telus US: T-Mobile, US Cellular | Canada: Rogers US: T-Mobile | N/A | | | |
| Quality | MIL-STD-810G: High Temp, Low Temp, Random Vibration SAE J1455: Transit Drop & Handling Drop, Random Vibration, Swept-Sine Vibration IEC68-2-1: Cold Temp IEC68-2-2: Dry Heat | | | | | |
| | | IEC68-2-2: Dry Heat | | | | |

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

** MTQ-LNA7-B02 is PTCRB, AT&T, Bell, Telus and Verizon approved

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.

HARDWARE SPECIFICATIONS

| Models | MTR-MNG2 |
|---|--|
| Cellular Performance | LTE Cat M1 / NB-IoT Dual Mode + 2G Fallback |
| Cellular Fallback | 2G - GPRS |
| Frequency Band (MHz) | 3GPP Rel. 13 4G: B1(2100)/B2(1900/B3(1800)/B4(AWS1700)/B5(850)/ B8(900)/B12(700)/B18(800)/B18(800)/B19(800)/ B20(800)/B26(850)/B28(700)/B39(1900) 2G: B2(1900)/B3(1800)/B5(850)/B8(900) |
| 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) |
| Diversity/MIMO | N/A |
| SMS | Text & PDU, Point-to-Point |
| nput Voltage | 7V to 32VDC |
| Wi-Fi/Bluetooth (-B10 Models) | Wi-Fi: 802.11a/b/n/g (2.4 & 5 GHz) Bluetooth: Classic 4.1 and BLE |
| GPS/GNSS (-B10 Models) | GNSS connections: 3 GNSS Systems Supported: (default: concurrent GPS/QZSS/SBAS and GLONASS) |
| LEDs | POWER / STATUS / Modem: CD LED (Carrier Detect), LS LED (Link Status) / Signal Strength: 3 LEDs / Ethernet: Link, Speed / Wi-Fi (-B10 models only) |
| Connectors | |
| CELL | (1) Female SMA (Cellular Antenna) |
| Wi-Fi (-B10 Models only) | Reverse polarity female SMA (Wi-Fi/BT Antenna) |
| GPS (-B10 Models only) | Female SMA (GPS Antenna) |
| SIM | Mini SIM (2FF); 1.8 and 3V |
| _AN | Ethernet RJ-45, 10/100 BaseT |
| RS-232 | DE9 (Serial Connection) |
| 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 | Anodized aluminum (blue) / (IP-Rating: Designed for IP30) |
| 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 | |
| EMC Compliance | US: FCC Part 15 Class B Europe: ROHS Directive 2011/65/EU EN 50581:2012. RED Directive 2014/53/EU. Article 3.1b (EMC) |
| Radio Compliance | US: FCC Part 15 Class B, FCC Part 22H, FCC Part 24E, FCC Part 27, IC Class B Europe: RED Directive 2014/53/EU. Art 3.2 (Radio) |
| Safety | Canada: cUL 60950-1 US: UL 60950-1 2nd ED, IEC 62368-1 Europe: IEC 60950-1:2005 (Second Edition), IEC 62368-1:2014 (Second Edition) |
| Mobile Network Operator Approvals | US: PTCRB, AT&T, Verizon Europe: GCF Approved Module, European Network Operators |
| Additional Mobile Network Operator Certifications Available (Contact MultiTech for Details) | US: T-Mobile Canada: Rogers, Telus, Bell |
| Quality | MIL-STD-810G: High Temp, Low Temp, Cold Dwell, Random Vibration and Sine Vibration SAE J1455: Random Vibration and Sine Vibration |
| Warranty | 2-Years / www.multitech.com/legal/warranty |

- 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.

Programmable embedded software provides enhanced security and enables task execution at the edge for



reduced latency and cost optimization.

mPower™ Edge Intelligence embedded software delivers programmability, network flexibility, enhanced security and manageability for scalable Industrial Internet of Things (IIoT) solutions.

mPower 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 software specifications can be found here.

Cloud-based **Application Store** and IoT Device Management



MultiTech DeviceHQ® is a cloud-based tool

set for managing the latest

generation of MultiTech devices. It incorporates all the functionality of MultiTech Device Manager, on which so many M2M and IoT applications already rely for remote monitoring, upgrades and configuration of entire device populations whether one or 1 million.

HIGHLIGHTS

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/Bluetooth Specifications

The Wi-Fi interface can be set up in 802.11 a/b/n/g 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.

ORDERING INFORMATION

MultiConnect* rCell 100 Series 4G-LTE Global Models

| Model | Description | Region |
|-----------------|---|-------------|
| MTR-L4G1-B07 | LTE Cat 4 Router with Fallback, without Accessories (Global) | US/Canada |
| | | Europe/GB |
| | | Australia |
| | | New Zealand |
| MTR-L4G1-B07-WW | LTE Cat 4 Router with Fallback and Accessory Kit #1 (Global) | US/Canada |
| | | Europe/GB |
| | | Australia |
| | | New Zealand |
| MTR-L4G1-B10 | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, without Accessories (Global) | US/Canada |
| | | Europe/GB |
| | | Australia |
| | | New Zealand |
| MTR-L4G1-B10-WW | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, with Accessory Kit #2 (Global) | US/Canada |
| | | Europe/GB |
| | | Australia |
| | | New Zealand |

MultiConnect* rCell 100 Series 4G-LTE Global 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 Accessory Kit #3 (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 Accessory Kit #4 (AT&T/Verizon) | US/Canada |

MultiConnect* rCell 100 Series 4G-LTE Europe Models

| Model | Description | Region |
|--------------------|--|-----------|
| MTR-LEU7-B07 | LTE Cat 4 Router with Fallback, without Accessories | Europe/GB |
| MTR-LEU7-B07-EU-GB | LTE Cat 4 Router with Fallback and Accessory Kit #5 | Europe/GB |
| MTR-LEU7-B10 | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, without Accessories | Europe/GB |
| MTR-LEU7-B10-EU-GB | LTE Cat 4 Router with Fallback and Wi-Fi/BT/GPS, with Accessory Kit #6 | Europe/GB |

MultiConnect* rCell 100 Series LTE Cat M1+NB-IoT Models

| Model | Description | Region |
|-----------------|--|--------|
| MTR-MNG2-B07 | LTE Cat M1+NB-IoT Router with Fallback, without Accessories | Global |
| MTR-MNG2-B07-WW | LTE Cat M1+NB-IoT Router with Fallback, with and Accessory Kit #7 | Global |
| MTR-MNG2-B10 | LTE Cat M1+NB-IoT Router with Wi-Fi/BT/GPS & Fallback, without Accessories | Global |
| MTR-MNG2-B10-WW | LTE Cat M1+NB-IoT Router with Wi-Fi/BT/GPS & Fallback, Fallback and Accessory Kit #8 | Global |

Accessory Kit Overview

Accessory kits differ by model number. All accessory kits include: Power supply, Ethernet cable, mounting tab and screws, and quick-start guide

| Accessory Kit Number | Kit #1 | Kit #2 | Kit #3 | Kit #4 | Kit #5 | Kit #6 | Kit #7 | Kit #8 |
|----------------------|--------------------|--------------------|--------|--------|--------|--------|---------------------|---------------------|
| Cellular Antanna(s) | (2) | (2) | (2) | (2) | (2) | (2) | (1) | (1) |
| Wi-Fi/BT Antenna | | (1) | | (1) | | (1) | | (1) |
| GPS Antenna | | (1) | | (1) | | (1) | | (1) |
| Power Blade(s) | (4) | (4) | (1) | (1) | (2) | (2) | (4) | (4) |
| | AU/NZ FU. GB.US | AU/NZ FU. GB.US | US | US | EU, GB | EU, GB | AU/NZ FU. GB. US | AU/NZ FU. GB. US |

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.

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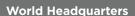
Services & Warranty

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



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



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