

MultiTech Conduit®

LTE Category 4
Programmable Gateway
MTCDT-L4G1 Models

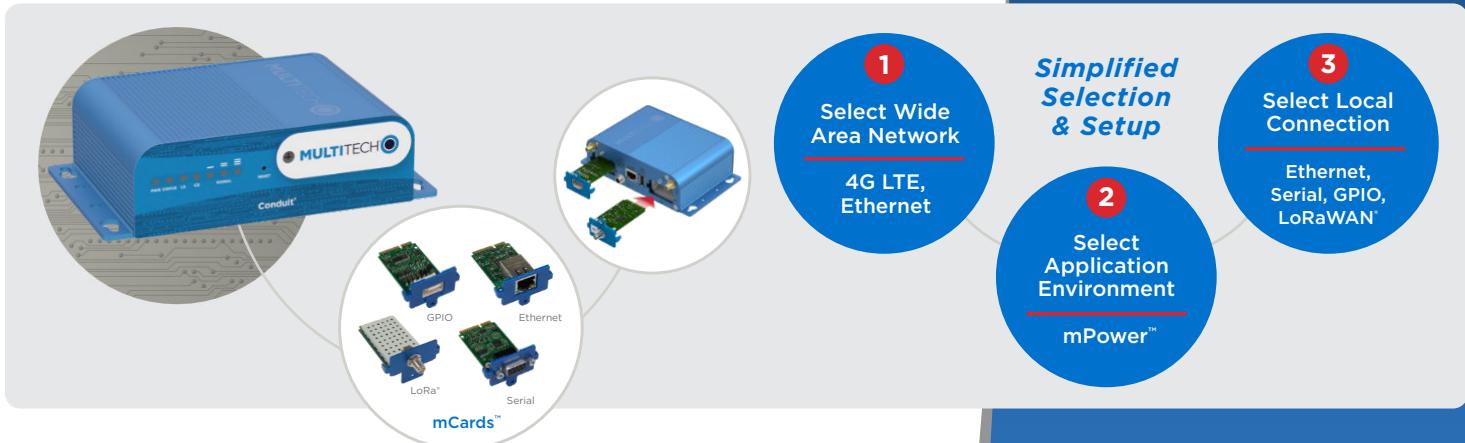
MultiTech Conduit® is the industry's most configurable, manageable, and scalable cellular communications gateway for industrial IoT applications. Network engineers can remotely configure and optimize their Conduit performance through DeviceHQ®, the world's first IoT Application Store and Device Management platform. The Conduit features Wi-Fi/Bluetooth/Bluetooth Low Energy (BT/BLE), GNSS, and two accessory card slots that enable users to plug in MultiTech mCard™ accessory cards supporting their preferred wired or wireless interface to connect a wide range of assets locally to the gateway.

Available options include a LoRaWAN® mCard capable of supporting thousands of MultiTech mDot™ and xDot® long range RF modules connected to remote sensors or appliances. Quick-to-deploy and easy to customize and manage, the Conduit communications gateway realizes your IoT application.



GATEWAY BENEFITS

- Global MNO and LoRaWAN® support
- Backhaul options include | Ethernet and optional 4G-LTE cellular for cost effective deployment
- GNSS module for LoRaWAN packet time-stamping and network based location
- Wi-Fi communication supporting 802.11 a/b/g/n 2.4 GHz and 5 GHz with WPA2 personal transmission security. Wi-Fi Access Point and Client modes are supported simultaneously.
- BT Classic and BLE 4.1 communication supports local connectivity with automatic pairing with target devices utilizing 128 bit link key length security.





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](#).

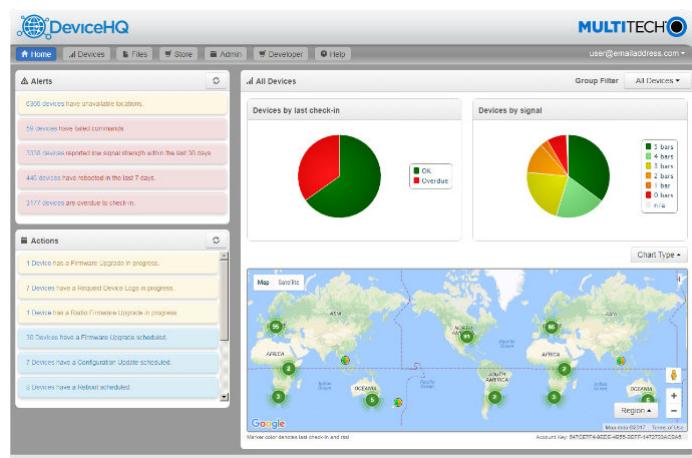


Cloud-based Application Store and IoT Device Management

MultiTech DeviceHQ™ is 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. DeviceHQ takes remote device management and maintenance to a new level, by providing an application marketplace, allowing users to browse applications or build their own and then easily deploy and customize them for remote devices located anywhere.

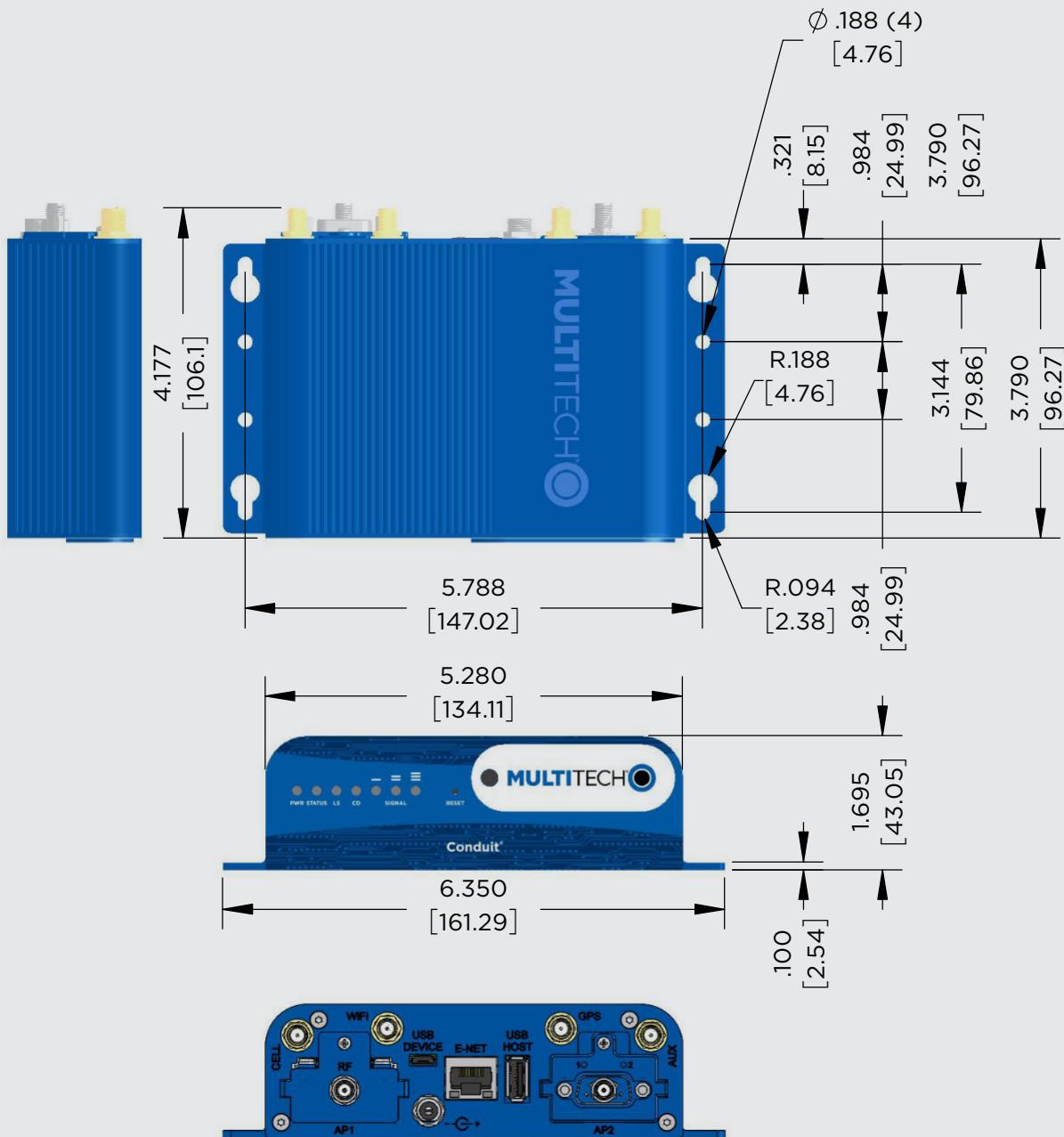
LENS® Embedded Network Server & Key Management Toolset for LoRaWAN® Networks

LENS is a hybrid LoRaWAN® network management platform that enables deployment and management of LoRaWAN networks at scale. Designed for private and enterprise networks, LENS provides a site-by-site user account and centralized management for LoRa® end devices, as well as configuration and control of Conduit® gateways. LENS has the capability to assign unique access rights to individual users, add gateways and LoRa end nodes in bulk, or create separate organizations and network segmentation to support different IoT use cases or applications.



HARDWARE DESCRIPTION

MultiTech Conduit® Dimensional Drawing



Dimensions in Inches [mm]

SPECIFICATIONS*

Models	MTC-L4G1 Models	
Cellular Module	Quectel EG25-G	
Regions	Australia / Canada / European Union / Japan / Korea / United Kingdom / United States	
Cellular Module Performance****	3GPP Release 11 / 4G-LTE FDD/TDD Category 4 150 Mbps peak downlink / 50 Mbps peak uplink with 3G/2G fallback	
Frequency Band (MHz)	4G LTE FDD (Europe): B1(2100), B3(1800), B7(2600), B8(900), B20(800), B28(700) 3G (Europe Fallback): B1(2100), B3(1800), B8(900) 2G (Europe Fallback): B2(1900), B3(1800), B8(900) 4G LTE FDD (AT&T): B2(1900), B4(AWS1700), B12(700) 4G LTE FDD (Verizon): B4(AWS1700), B13(700) 4G LTE FDD: B5(850), B18(800), B19(800), B25(1900), B26(850) 4G LTE TDD: B38(2600), B39(1900), B40(2300), B41(2500)	
FirstNet Support	-	
Diversity/MIMO	Rx Diversity and MIMO DL 2x2	
SMS	Mobile Originate, Mobile Terminated, Point-to-Point	
Processor & Memory	ARM9 processor with 32-Bit ARM & 16-Bit Thumb instruction sets • 400 MHz • 16K Data Cache • 16K Instruction Cache • 128X16 MB DDR RAM • 256 MB Flash Memory	
Wi-Fi / Bluetooth (-247 models)	Wi-Fi: 802.11abng (2.4 & 5 GHz) / Bluetooth: Classic 4.1 and BLE	
GNSS (-246 and -247 models)	GNSS for LoRa Packet Time Stamping Concurrent GNSS connections: (3) GNSS Systems Supported: (default: concurrent GPS/QZSS/SBAS and GLONASS)	
LEDs	PWR (Power), STATUS (Power Status), LS (Link Status), CD (Carrier Detect), SIGNAL (Signal Strength)	
LoRa Specifications (for models that include MTAC-003 or MTAC-LORA Gateway Accessory Card)		
Gateway Accessory Card	MTAC-003E00 MTAC-LORA-H-868	MTAC-003U00 MTAC-LORA-H-915
LoRa Frequency Band	868 MHz	915 MHz
LoRa Channel Plan	EU868 (EU863 - 870)	US915
Channel Capacity	8-channels (half-duplex)	8-channels (half-duplex)
LoRa Power Output	Maximum EIRP: 14 dBm - 27 dBm*****	27 dBm maximum output power before antenna
LoRaWAN Standard	LoRaWAN 1.0.3 specifications	LoRaWAN 1.0.3 specifications
Connectors	Power: 9 - 32 VDC (2.5 mm miniature barrel jack (screw-on)) E-NET: RJ-45 Ethernet jack (10/100) USB DEVICE: USB 2.0 Micro B USB HOST: (1) USB 2.0 Type A API, AP2: Slots for MTAC Accessory Cards (2) SIM (under nameplate): mini SIM (2FF) 1.8 & 3V Micro SD Card (under nameplate): 32 GB (HSMCI) max (industrial temperature range recommended) Debug Port (under nameplate): micro USB or 3-pin connector RESET: Push-button reset switch	
Standard Connectors (all models)	Antenna: (3) SMA (cellular, auxiliary, GPS) Antenna: (4) SMA (cellular, auxiliary, GPS, WiFi)	
Antenna Connectors (-246 models)	Antenna: (1) SMA (RF-LoRaWAN)	
Additional Antenna Connectors (LoRaWAN models)		
Physical Description		
Dimensions	6.35" x 4.23" x 1.69" (161.3 mm x 107.4 mm x 42.8 mm) See mechanical drawing for dimensions	
Weight	1.0 lbs (0.45 kg) with two accessory cards installed	
Chassis Type	Anodized aluminum (blue)	
Mounting Options	Desktop / Wall mount / DIN rail mount (using DIN-FLANGE Accessory)	
Power Requirements		
Input Voltage	9-32 VDC at 1.7A***** provided to 100 - 240 VAC 50/60 Hz external adaptor or fused DC Power Cable	
Power Draw @ 9 VDC****	Sleep Mode: N/A / Idle: 700 mA / Max Power: 1250 mA (average)	
Environmental		
Operating Temperature	-30° to +70° C***	
Storage Temperature	-30° to +70° C***	
Relative Humidity	20 to 90% non-condensing	
Certifications		
EMC / Radio Compliance	CE / FCC Part 15 Class B / IC Class B / KCC (Korea) / Radio Law (Japan) / RCM / UKCA	
Safety Compliance	UL/CUL/IEC 60950-1	
Network Compliance	PTCRB	
Network Operator	AT&T, Verizon (Carrier approved MTSMC-L4G1-U)	
Warranty	2-Years - www.multitech.com/legal/warranty	

* See hardware guides for additional information.

** Some devices are shipped with MTAC gateway accessory card installed at factory. See ordering part number for details.

*** UL Listed @ 40° C, limited by AC power supply. UL Recognized @ 65° C for Conduit LTE devices when used with the fused DC power cable, part number FPC-532-DC.

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

***** See Hardware Guide for additional power measurements.

***** All future end-user (OEM) devices will and must go through FirstNet certification prior to being included in the FirstNet device ecosystem.

***** Maximum EIRP is 14 dBm for most of the band, except 27 dBm at 869.4 - 869.65

***** Optional power must be UL Listed ITE power supply marked LPS or Class 2 rated with rating between 9 -32 Vdc minimum of 1A.

ORDERING INFORMATION

Models Using the MTAC-003 LoRa Gateway Accessory Card

Ordering Part Number	Description	Region
MTCDT-L4GI-246A-868.R3-WW	LTE Cat 4 Programmable Gateway, 8-channel, 868 MHz, GNSS with MTAC-003E00 mCard and Accessory Kit #1	European Union United Kingdom
MTCDT-L4GI-247A-868.R3-WW	LTE Cat 4 Programmable Gateway, 8-channel, 868 MHz, GNSS + Wi-Fi/BT, with MTAC-003E00 mCard and Accessory Kit #2	European Union United Kingdom
MTCDT-L4GI-246A-915.R3-WW	LTE Cat 4 Programmable Gateway, 8-channel, 915 MHz, GNSS with MTAC-003U00 mCard and Accessory Kit #1	Australia / Canada Japan / United States
MTCDT-L4GI-247A-915.R3-WW	LTE Cat 4 Programmable Gateway, 8-channel, 915 MHz, GNSS + Wi-Fi/BT, with MTAC-003U00 mCard and Accessory Kit #2	Australia / Canada Japan / United States

Models with GNSS and Wi-Fi/Bluetooth

Ordering Part Number	Description	Region
MTCDT-L4GI-247A-WW	LTE Cat 4 Programmable Gateway with GNSS + Wi-Fi/BT and Accessory Kit #3	Australia / Canada European Union / Japan United Kingdom United States

Models with GNSS

Ordering Part Number	Description	Region
MTCDT-L4GI-246A-WW	LTE Cat 4 Programmable Gateway with GNSS and Accessory Kit #4	Australia / Canada European Union / Japan United Kingdom United States

ACCESSORY KIT SPECIFICS

Accessory kits differ by model number.

Accessory & Kit Number	1	2	3	4
Power Supply	(1)	(1)	(1)	(1)
Power Blade(s)	(4) AU, EU, GB, US			
Cellular Antenna	(2)	(2)	(2)	(2)
Wi-Fi/BT Antenna		(1)	(1)	
LoRa Antenna	(1)	(1)		
Ethernet Cable	(1)	(1)	(1)	(1)
USB Cable	(1)	(1)	(1)	(1)

ACCESSORIES

MultiTech Conduit® Gateway / Device Specific Accessories

Model	Description	Region
ANGPS-1MM	Antenna Indoor Magnetic for GNSS	Global
AN868-915A-1HRA	868-915 MHz RP-SMA Antenna, 8" (3.0 dBi)	Global
CA-MTAC-GPIO	GPIO Cable for MTAC-GPIO (2.5 feet)	Global
CA9-9-D	DE9M-DE9F Serial Cable (6 feet)	Global
CA-USB-A-MICRO-B-3	USB Cable Type A to Type B Micro (3 feet)	Global
CA-MTCDF-DEBUG	USB to 3 Pin Debug Cable (for use with Linux host systems only)	Global
FPC-532-DC	DC Power Cable with Inline Fuse (5 feet)	Global

MultiTech mCard™ Gateway Accessory Cards (MTAC Series)

Model	Description	Region
MTAC-003x	Gateway Accessory Cards - LoRa 868 MHz LoRa Accessory Card, Antenna Sold Separately	European Union United Kingdom
MTAC-003E00		
MTAC-003U00	915 MHz LoRa Accessory Card, Antenna Sold Separately	Australia / Canada Japan / United States
MTAC-GPIO	Gateway Accessory Cards - GPIO GPIO Accessory Card, GPIO Cable Sold Separately	Global
MTAC-GPIO		
MTAC-MFSER	Gateway Accessory Cards - Serial I/O Multi-Function Serial Accessory Card - DTE Interface	Global
MTAC-MFSER-DTE	Multi-Function Serial Accessory Card - DCE Interface	Global
MTAC-MFSER-DCE		
MTAC-ETH	Gateway Accessory Card - Ethernet 10/100/1000 Mbps Ethernet Accessory Card, Ethernet Cable Sold Separately	Global
MTAC-ETH		

Visit: www.multitech.com for detailed product model numbers.

For additional accessory information, visit: www.multitech.com/all-products/accessories

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
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

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