MULTITECH®
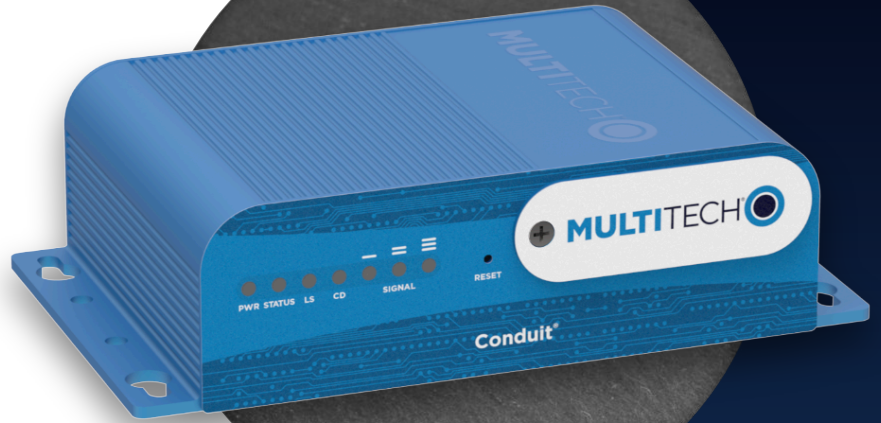
MultiTech Conduit®

LTE Category 4
Programmable Gateway

MTCDT-L4N1 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.
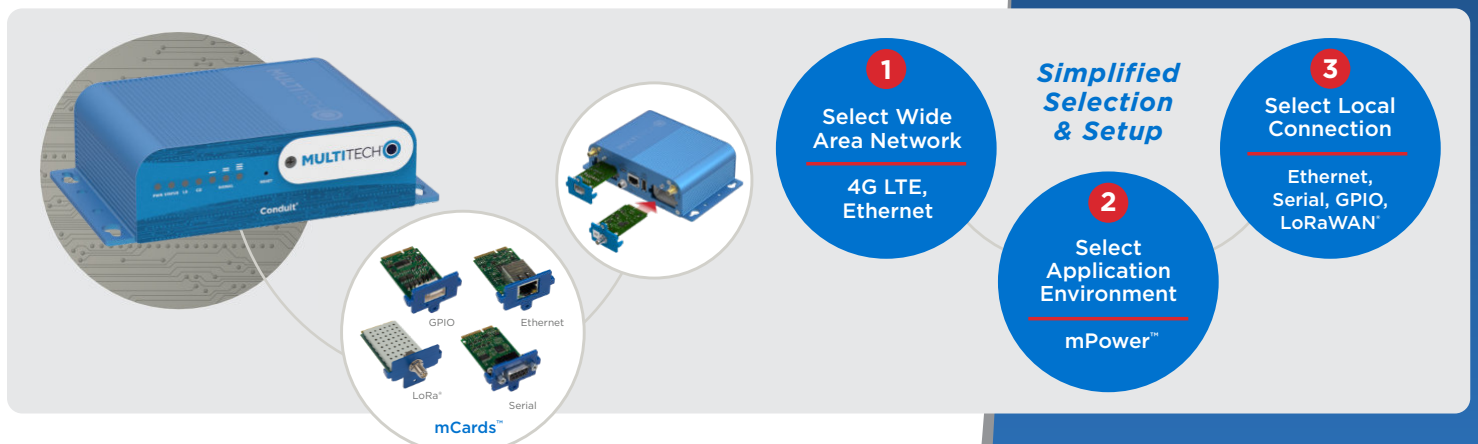
Available options include a LoRaWAN® mCard capable of supporting thousands of MultiTech mDot™ and xDot® long range RF modules connected to remote sensors or appliances. Quick-to-deploy and easy to customize and manage, the Conduit communications gateway realizes your IoT application.

GATEWAY BENEFITS

- Wi-Fi communication supporting 802.11 a/b/g/n 2.4 GHz and 5GHz 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
- GNSS module for LoRaWAN packet time-stamping and geo-location capability
- Backhaul options include Ethernet and optional LTE Category 4 cellular for cost effective deployment

LORA FEATURES

- Certified for North American 915 MHz ISM bands
- ISM band scanning for optimum LoRa® performance
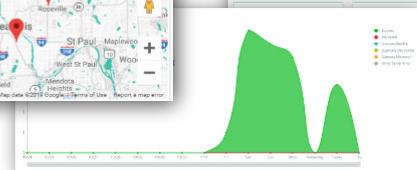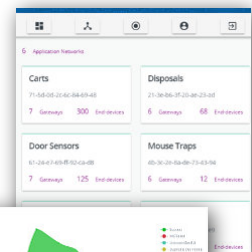
Simplified Selection & Setup

1 Select Wide Area Network — 4G LTE, Ethernet

2 Select Application Environment — mPower™

3 Select Local Connection — Ethernet, Serial, GPIO, LoRaWAN®

GPIO | Ethernet
LoRa® | Serial

mCards™

mPower
EDGE INTELLIGENCE

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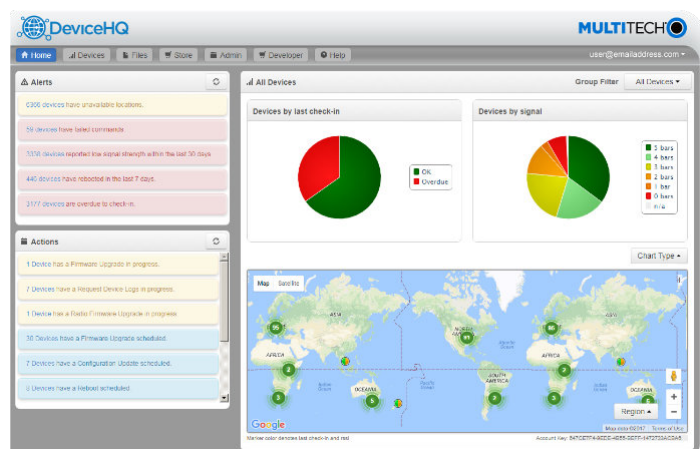
LENS® Embedded Network Server & Key Management Toolset for LoRaWAN® Networks

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.
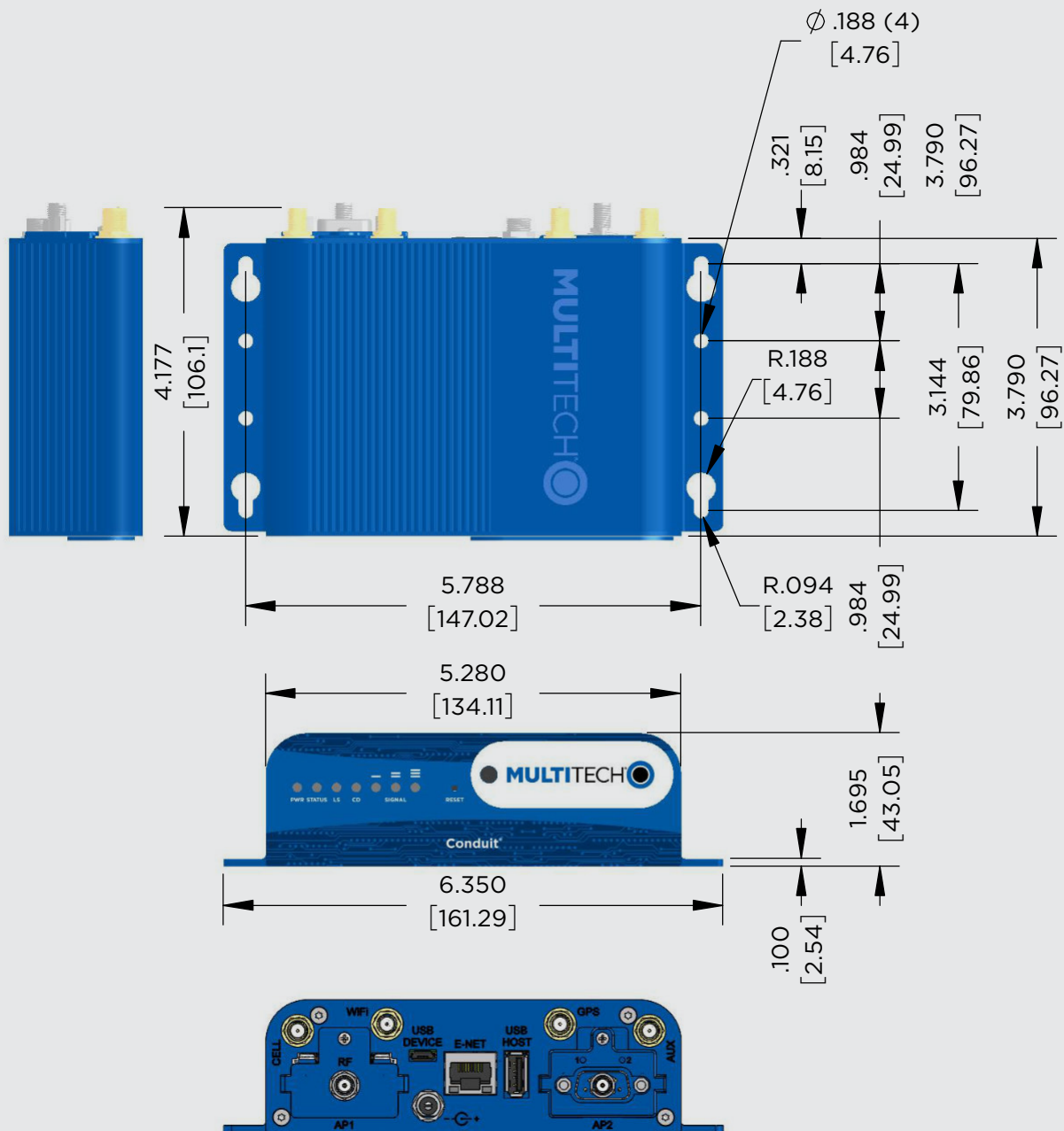

DeviceHQ®

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.

MultiTech Conduit® Dimensional Drawing

⌀ .188 (4)
[4.76]

.321 [8.15]

.984 [24.99]

3.790 [96.27]

4.177 [106.1]

R.188 [4.76]

3.144 [79.86]

3.790 [96.27]

5.788 [147.02]

R.094 [2.38]

.984 [24.99]

MULTITECH

5.280 [134.11]

PWR STATUS LS CD SIGNAL RESET

MULTITECH

Conduit®

1.695 [43.05]

6.350 [161.29]

.100 [2.54]

WIFI

GPS

CELL

USB DEVICE

E-NET

USB HOST

AUX

RF

1

2

AP1

AP2

Dimensions in Inches [mm]

SPECIFICATIONS*

Models	MTCDT-L4N1 Models
Cellular Module	Telit LE910C4-NF
Regions	Canada United States
Cellular Module Performance****	3GPP Release 10 4G-LTE FDD Category 4 150 Mbps peak downlink 50 Mbps peak uplink with 3G fallback
Frequency Band (MHz)	**4G LTE FDD (AT&T):** B2(1900), B4(AWS1700), B12(700), B14(700-FirstNet)****** **4G LTE FDD (T-Mobile):** B2(1900), B4(AWS1700), B5(850), B66(AWS-3 1700), B71(600) **4G LTE FDD (Verizon):** B4(AWS1700), B13(700) **3G (AT&T):** B2(1900), B4(AWS1700), B5(850)
FirstNet Support	Yes (AT&T)******
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)	
LoRa Frequency Band	915 MHz
LoRa Channel Plan	US915 / AU915
Channel Capacity	8-channels (half-duplex)
LoRa Power Output	27 dBm maximum output power before antenna
LoRaWAN Standard	LoRaWAN 1.0.3 specifications
Connectors	
Standard Connectors (all models)	**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 **AP1, 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
Antenna Connectors (-246 models)	Antenna: (3) SMA (cellular, auxiliary, GPS)
Antenna Connectors (-247 models)	Antenna: (4) SMA (cellular, auxiliary, GPS, Wi-Fi)
Additional Antenna Connectors (LoRaWAN models)	Antenna: (1) SMA (RF-LoRaWAN)
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: 165 mA / Max Power: 635 mA (average)
Environmental	
Operating Temperature	-30° to +70° C***
Storage Temperature	-40° to +85° C
Relative Humidity	20 to 90% non-condensing
Certifications	
EMC / Radio Compliance	FCC Part 15 Class B / IC Class B
Safety Compliance	UL 60950-1
Network Compliance	PTCRB
Network Operator	AT&T, Verizon (Carrier approved MTSMC-L4N1-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

ORDERING INFORMATION

Models Using the MTAC-003U00 LoRa Gateway Accessory Card

Ordering Part Number	Description	Region
MTCDT-L4N1-246A-915.R3-US	LTE Cat 4 Programmable Gateway, 8-channel, 915 MHz, GNSS with MTAC-003U00 mCard and Accessory Kit #1	Canada United States
MTCDT-L4N1-247A-915.R3-US	LTE Cat 4 Programmable Gateway, 8-channel, 915 MHz, GNSS + Wi-Fi/BT with MTAC-003U00 mCard and Accessory Kit #2	Canada United States

Models using the MTAC-LORA-H-915 LoRa Gateway Accessory Card

Ordering Part Number	Description	Region
MTCDT-L4N1-246A-915-US	LTE Cat 4 Programmable Gateway, 8-channel, 915 MHz, GNSS with MTAC-LORA-H-915 mCard and Accessory Kit #1	Canada United States
MTCDT-L4N1-247A-915-US	LTE Cat 4 Programmable Gateway, 8-channel, 915 MHz, GNSS + Wi-Fi/BT, with MTAC-LORA-H-915 mCard and Accessory Kit #2	Canada United States

Models with GNSS and Wi-Fi/Bluetooth

Ordering Part Number	Description	Region
MTCDT-L4N1-247A-US	LTE Cat 4 Programmable Gateway with GNSS + Wi-Fi/BT and Accessory Kit #3	Canada United States

Models with GNSS

Ordering Part Number	Description	Region
MTCDT-L4N1-246A-US	LTE Cat 4 Programmable Gateway with GNSS and Accessory Kit #4	Canada 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)	(1) US	(1) US	(1) US	(1) 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-MTCDT-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**	
MTAC-003E00	868 MHz LoRa Accessory Card, Antenna Sold Separately	European Union United Kingdom
MTAC-003U00	915 MHz LoRa Accessory Card, Antenna Sold Separately	Australia / Canada Japan / United States
MTAC-GPIO	**Gateway Accessory Cards - GPIO**	
MTAC-GPIO	GPIO Accessory Card, GPIO Cable Sold Separately	Global
MTAC-MFSER	**Gateway Accessory Cards - Serial I/O**	
MTAC-MFSER-DTE	Multi-Function Serial Accessory Card - DTE Interface	Global
MTAC-MFSER-DCE	Multi-Function Serial Accessory Card - DCE Interface	Global
MTAC-ETH	**Gateway Accessory Card - Ethernet**	
MTAC-ETH	10/100/1000 Mbps Ethernet Accessory Card, Ethernet Cable Sold Separately	Global
MTAC-LORA	**Gateway Accessory Cards - LoRa**	
MTAC-LORA-H-915	915 MHz LoRa Accessory Card, Antenna Sold Separately	Canada United States

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.

The LoRa® name and associated logo are trademarks of Semtech Corporation or its subsidiaries.
Trademarks and Registered Trademarks: MultiTech and the MultiTech logo, Conduit, mDot, xDot, mPower, DeviceHQ:
Multi-Tech Systems, Inc. All other products and technologies are the trademarks or registered trademarks of their respective holders.

2025-05 • 86002220 • © 2025 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 USA
Tel: +1 763-785-3500
Email: sales@multitech.com
www.multitech.com

MULTITECH®