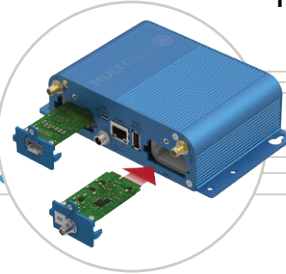
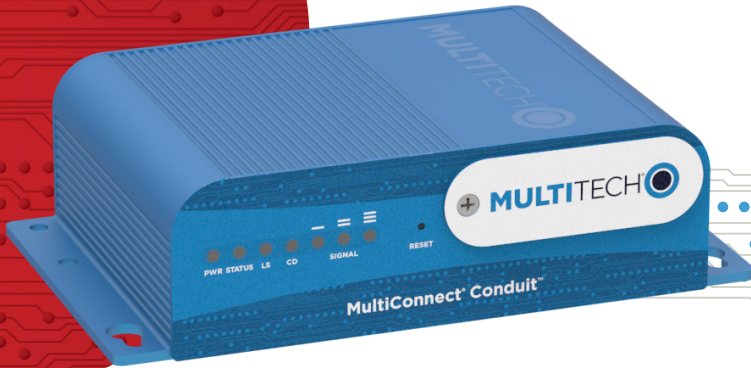


# MultiConnect<sup>®</sup> Conduit<sup>®</sup>

## Programmable Gateway for the Internet of Things



MultiConnect<sup>®</sup> Conduit<sup>™</sup> 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<sup>®</sup>, 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 MultiConnect<sup>®</sup> mCard<sup>™</sup> accessory cards supporting their preferred wired or wireless interface to connect a wide range of assets locally to the gateway.

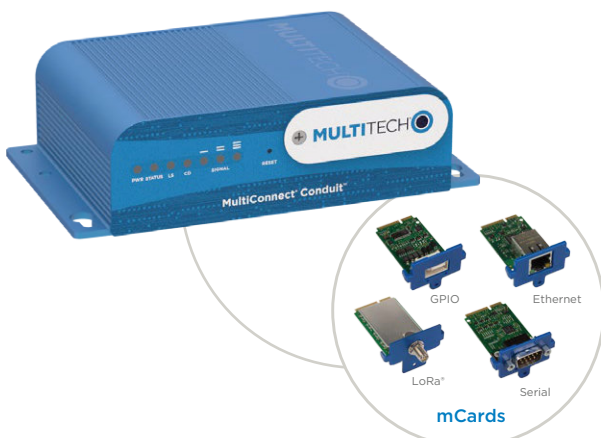
Available options include a LoRaWAN<sup>®</sup> mCard capable of supporting thousands of MultiConnect<sup>®</sup> mDot<sup>™</sup> and xDot<sup>®</sup> long range RF modules connected to remote sensors or appliances. Quick-to-deploy and easy to customize and manage, the Conduit communications gateway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

### GATEWAY BENEFITS

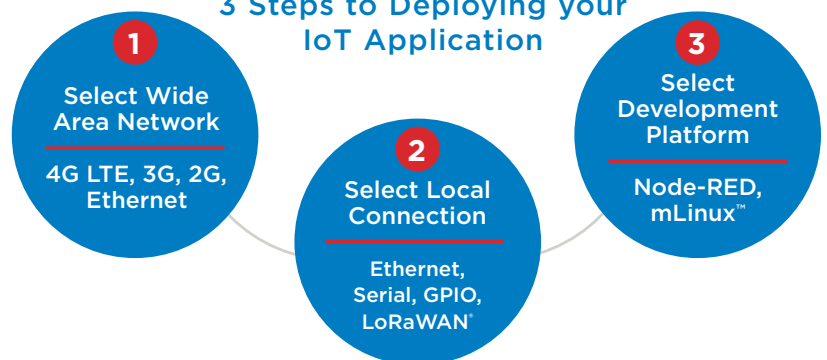
- Wi-Fi communication supporting 802.11 a/b/g/n 2.4 GHz and 5GHz with WPA2 personal transmission security. Wi-Fi Access Point and Client modes are supported simultaneously.
- BT Classic and BLE 4.1 communication supports local connectivity with automatic pairing with target devices utilizing 128 bit link key length security.
- GNSS module for LoRaWAN packet time-stamping and geo-location capability
- Backhaul options include 4G-LTE, 3G, 2G cellular or Ethernet for cost effective global deployment

### LORA FEATURES

- Certified for North American and Australian 915 MHz ISM bands, Europe 868 MHz
- 27 dBm support for European region
- ISM band scanning for optimum LoRa<sup>®</sup> performance
- Listen Before Talk LoRa operating protocol



### 3 Steps to Deploying your IoT Application



# 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 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.

mPower is the unification and evolution of well-established MultiTech smart router and gateway firmware platforms. In addition to ongoing support of the current feature-sets, gateway customers can enjoy the additional security features currently available on the MultiConnect® rCell 100 Series.

mPower Edge Intelligence 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.

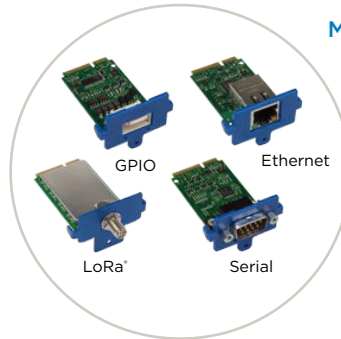
In response to evolving customer security requirements, mPower Edge Intelligence incorporates a host of new security features including signed firmware validation, enhanced firewall and VPN settings, secure authentication and more.

mPower software specifications can be found [here](#).

## ACCESSORIES

### MultiConnect® Conduit® Accessories – From the Gateway to the Endpoint

MultiConnect Conduit is the center of an integrated IoT platform and comes with the following options:



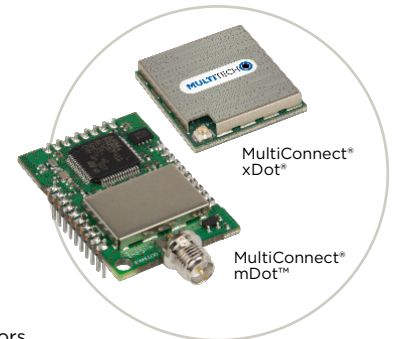
### MultiConnect mCard

MultiConnect mCards provide the flexibility needed to manage diverse infrastructures, supporting a wide range of interfaces and communication protocols including:

- Multi-Function Serial, GPIO, Ethernet
- LoRa LPWAN

### MultiConnect mDot™ & xDot® – Connecting the “Things”

MultiConnect mDot and xDot are secure, regulatory-certified, Arm® Mbed™ programmable, low-power RF modules, providing long-range, low bit rate IoT data connectivity to sensors and actuators.



The mDot and xDot are LoRaWAN compliant, providing bi-directional data communication up to 10 miles line-of-sight and 2-3 miles in buildings, using the global sub-GHz ISM radio bands in North America, Europe, and the APAC regions.

The mDot was the first Arm Mbed platform listed on mbed.org that was deployment ready. The mDot supports applications written and compiled in the mbed online environment using developer friendly libraries. Decision making and control can be done at the edge, reducing the need to optimize RF performance and implement complex IoT middleware.

mDots and xDots bring intelligence, reduced complexity and a lower overall bill of material to the edge of the network while supporting a variety of interfaces to connect just about any battery-powered “thing”.

## Easily Deploy and Manage Assets Via DeviceHQ®

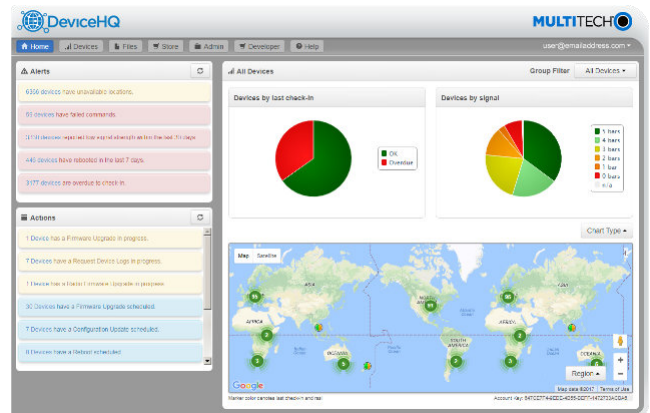


MultiTech DeviceHQ is the M2M industry's first

IoT online application store to enable customers to easily deploy and scale applications to their connected devices. Drag-and-drop tools easily allow customers to create and manage applications for in-field assets. The DeviceHQ application store gives your business the power to innovate operations management and create value-added services.

### Benefits

- “Low Touch” asset deployment reduces costs, complexity and time
- Easily scales to your network needs
- Browse and download a wide variety of custom applications tailored to your business needs
- Reduce truck-rolls using remote performance management and asset updates



## SPECIFICATIONS

Models	MTCDDT-Lxxx			MTCDDT-H5
Performance	LTE 3GPP Release 9 (100 Mbps peak downlink/50 Mbps peak uplink)			HSPA+
	AT&T/T-Mobile	Europe	Verizon	Global
	with HSPA+ 21/GPRS Fallback	with HSPA+ 42/GPRS Fallback	(No Fallback)	with HSPA+ GPRS Fallback
Frequency Band (MHz)	4G: 700(B17)/850(B5)/ AWS1700(B4)/1900(B2) 3G: 850(B5)/1900(B2) 2G: 850/1900	4G: 800(B20)/ 1800(B3)/2600(B7) 3G: 850(B5)/ 900(B8)/2100(B1) 2G: 900/1800	700(B13)/ AWS1700(B4)	3G: 850/900/1700 (AWS)/1900/2100 2G: 850/900/1800/1900
Processor & Memory	ARM9 processor with 32-Bit ARM & 16-Bit Thumb instruction sets <ul style="list-style-type: none"> <li>• 400 MHz</li> <li>• 16K Data Cache</li> <li>• 16K Instruction Cache</li> <li>• 128X16M DDR RAM</li> <li>• 256 MB Flash Memory</li> </ul>			
Packet Data	Up to 100 Mbps downlink, Up to 50 Mbps uplink			21 Mbps downlink, 5.76 Mbps uplink
Radio Frequency LoRa	LoRa 868 or 915 MHz - a proprietary Digital Spread Spectrum technique			
Radio Frequency Wi-Fi & BT/BLE	802.11 a/b/n/g 2.4 Ghz and 5 Ghz & BT Classic BLE 4.1			
Storage	Micro SD max size 32GB (HSMCI), Industrial temp is recommended			
Input Voltage	9V to 32VDC			
<b>Connectors</b>				
Ethernet	1 RJ-45 Ethernet 10/100 port			
USB	2 USB Ports: USB Host (Type-A), USB Device (Micro-B)			
Serial	1 Debug Serial: USB Micro-B			
Antenna	Female SMA, Cell 2dBi (Qty 2) GPS (Qty 1) and Wi-Fi/BT (Qty 1)			
SIM	SIM/USIM (2FF)			
<b>Physical Description</b>				
Dimensions (L x W x H)	6.35" x 4.23" x 1.69" (161.3 mm x 107.4 mm x 42.8 mm)			
Weight	1.0 lbs (0.45 kg) with two accessory cards installed			
Chassis Type	Metal			
<b>Environmental</b>				
Operating Temperature	-30° to +70° C*			
Storage Temperature	-40° to +85° C			
Humidity	Relative humidity 20% to 90%, non-condensing			
<b>Certifications</b>				
EMC Compliance	US: FCC Part 15 Class B. EU: EN 55022 Class B, EN 55024. Canada: ICES-003			
Radio Compliance	FCC Part 22,24,27			
Safety	UL 60950-1 2nd Ed., cUL 60950-1 2nd Ed., IEC 60950-1 2nd Ed			
Network	PTCRB, GCF certified module, AT&T, Verizon and T-Mobile. Pending: Rogers, Bell, Telus & Sprint			
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			

\* UL Listed @ 40° C, limited by AC power supply. UL Recognized @ 70° C when used with the fused DC power cable, part number FPC-532-DC. Installation in outdoor locations or ambient temperature above 40° C or 70° C has not been evaluated by UL. UL Certification does not apply or extend to use in outdoor applications. Optional power must be UL Listed ITE power supply marked LPS or Class 2 rated 12VDC, 5A. Certification does not apply or extend to voltages outside certified range, and has not been evaluated by UL for operating voltages beyond tested range.

## ORDERING INFORMATION

### LTE Models with GNSS and Wi-Fi/Bluetooth (BT/BLE)

Model	Description	Region
MTCDDT-LATI-247L-US	LTE mLinux Programmable Gateway GNSS & BT/Wi-Fi w/US Accessory Kit	US/Canada
MTCDDT-LATI-247A-US	LTE Application Enablement Gateway GNSS & BT/Wi-Fi w/US Accessory Kit	US/Canada
MTCDDT-LVW2-247L-US	LTE mLinux Programmable Gateway GNSS & BT/Wi-Fi w/US Accessory Kit (Verizon)	US
MTCDDT-LVW2-247A-US	LTE Application Enablement Gateway GNSS & BT/Wi-Fi w/US Accessory Kit (Verizon)	US
MTCDDT-LEU1-247L-EU-GB	LTE mLinux Programmable Gateway GNSS & BT/Wi-Fi w/EU/UK Accessory Kit	EMEA
MTCDDT-LEU1-247A-EU-GB	LTE Application Enablement Gateway GNSS & BT/Wi-Fi w/EU/UK Accessory Kit	EMEA

### LTE Models with GNSS

Model	Description	Region
MTCDDT-LATI-246L-US	LTE mLinux Programmable Gateway GNSS w/US Accessory Kit	US/Canada
MTCDDT-LATI-246A-US	LTE Application Enablement Gateway GNSS w/US Accessory Kit	US/Canada
MTCDDT-LVW2-246L-US	LTE mLinux Programmable Gateway GNSS w/US Accessory Kit (Verizon)	US
MTCDDT-LVW2-246A-US	LTE Application Enablement Gateway GNSS w/US Accessory Kit (Verizon)	US
MTCDDT-LEU1-246L-EU-GB	LTE mLinux Programmable Gateway GNSS w/EU/UK Accessory Kit	EMEA
MTCDDT-LEU1-246A-EU-GB	LTE Application Enablement Gateway GNSS w/EU/UK Accessory Kit	EMEA

### HSPA+ Models with GNSS and Wi-Fi/Bluetooth (BT/BLE)

Model	Description	Region
MTCDDT-H5-247L-US-EU-GB	HSPA+ mLinux Programmable Gateway GNSS & BT/Wi-Fi w/US/EU/UK Accessory Kit	Global
MTCDDT-H5-247A-US-EU-GB	HSPA+ Application Enablement Gateway GNSS & BT/Wi-Fi w/US/EU/UK Accessory Kit	Global

### HSPA+ Models with GNSS

Model	Description	Region
MTCDDT-H5-246L-US-EU-GB	HSPA+ mLinux Programmable Gateway GNSS w/US/EU/UK Accessory Kit	Global
MTCDDT-H5-246A-US-EU-GB	HSPA+ Application Enablement Gateway GNSS w/US/EU/UK Accessory Kit	Global

### Non-cellular Models with GNSS and Wi-Fi/Bluetooth (BT/BLE)

Model	Description	Region
MTCDDT-247L-US-EU-GB	mLinux Programmable Gateway GNSS & BT/Wi-Fi w/US/EU/UK Accessory Kit	Global
MTCDDT-247A-US-EU-GB	Application Enablement Gateway GNSS & BT/Wi-Fi w/US/EU/UK Accessory Kit	Global

### Non-cellular Models with GNSS

Model	Description	Region
MTCDDT-246L-US-EU-GB	mLinux Programmable Gateway GNSS w/US/EU/UK Accessory Kit	Global
MTCDDT-246A-US-EU-GB	Application Enablement Gateway GNSS w/US/EU/UK Accessory Kit	Global

## RECOMMENDED ACCESSORIES

### MultiConnect mCard

Model	Description	Region
MTAC-GPIO	GPIO Accessory Card, GPIO Cable Sold Separately	Global
MTAC-MF5SER-DTE	Multi-Function Serial Accessory Card - DTE Interface	Global
MTAC-MF5SER-DCE	Multi-Function Serial Accessory Card - DCE Interface	Global
MTAC-ETH	Ethernet Accessory Card, Ethernet Cable Sold Separately	Global
MTAC-LORA-H-868	868 MHz LoRa Accessory Card, Antenna Sold Separately	EMEA
MTAC-LORA-H-915	915 MHz LoRa Accessory Card, Antenna Sold Separately	NAM

### MultiConnect mDot

Model	Description	Region
MTDOT-868-X1-SMA	868 MHz XBee LoRa SMA	Euro
MTDOT-868-X1P-SMA	868 MHz XBee LoRa SMA w/Programming Header	Euro
MTDOT-868-X1-UFL	868 MHz XBee LoRa UFL	Euro
MTDOT-868-M1-UFL	868 MHz SMT LoRa UFL	Euro
MTDOT-868-M1-TRC	868 MHz SMT LoRa RF Pad	Euro
MTDOT-915-X1-SMA	915 MHz XBee LoRa SMA	NAM
MTDOT-915-X1P-SMA	915 MHz XBee LoRa SMA w/Programming Header	NAM
MTDOT-915-X1-UFL	915 MHz XBee LoRa UFL	NAM
MTDOT-915-M1-UFL	915 MHz SMT LoRa UFL	NAM
MTDOT-915-M1-TRC	915 MHz SMT LoRa RF Pad	NAM

### MultiConnect xDot

Model	Description	Region
MTXDOT-NA1-A00-1	915 MHz LoRa Module UFL/TRC (Single Pack)	NAM
MTXDOT-EU1-A00-1	868 MHz LoRa Module UFL/TRC (Single Pack)	EMEA
MTXDOT-AU1-A00-1	AU915 MHz LoRa Module UFL/TRC (Single Pack)	Australia

### Developer Kit, Antennas & Accessories

Model	Description	Region
MTUDK2-ST-MDOT	Developer Kit (includes SMA antenna and USB cable)	Global
ANGPS-IMM	Antenna Indoor Magnetic for GNSS	Global
AN868-915A-1HRA	868-915 MHz RP-SMA Antenna, 8" (3.0dBi)	Global
CARSMA-UFL	Reverse SMA-to-UFL Coax RF Cable, 6"	Global
CA-MTAC-GPIO	GPIO Cable for MTAC-GPIO (2.5 ft)	Global
CA9-9-D	DE9M-DE9F Serial Cable (6 ft)	Global
CA-USB-A-MICRO-B-3	USB Cable Type A to Type B Micro (3ft)	Global

Go to [www.multitech.com](http://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.

## Installation Support

MultiTech's Installation Support Service delivers priority service with the ability to work one-on-one with an experienced MultiTech technical support engineer, to guide you through the installation process for our products.

## 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](http://www.multitech.com/support.go)

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