

# MultiConnect<sup>®</sup> Conduit<sup>®</sup> IP67 Base Station

IP67 Conduit for Outdoor LoRa<sup>®</sup> Deployments



**MultiConnect<sup>®</sup> Conduit<sup>®</sup> IP67 Base Station** is a ruggedized IoT gateway solution, specifically designed for outdoor LoRa<sup>®</sup> public or private network deployments. This highly scalable and certified IP67 solution is capable of resisting the harshest environmental factors including moisture, dust, wind, rain, snow and extreme heat, supporting LoRaWAN<sup>®</sup> applications in virtually any environment. The enhanced MultiConnect Conduit IP67 solution can support thousands of LoRaWAN certified end nodes, including the MultiConnect<sup>®</sup> mDot<sup>™</sup>\* and xDot<sup>\*\*</sup>. This flexible solution provides durable, low-power, wide area connectivity in support of M2M and IoT applications for both LoRa service providers and individual enterprises wanting to expand their LoRa network coverage.

Designed for easy deployment, the solution includes a MultiConnect Conduit with a LoRa MultiConnect<sup>®</sup> mCard<sup>™</sup>, IP67 enclosure, LoRa antenna to improve outdoor range and provides a choice of 4G-LTE or Ethernet backhaul options. It can be deployed as part of an existing telecommunications tower, individual stand or wall mount.

\*Represents ideal network configuration and equipment set up. Results vary depending on payload amount, transmission frequency, spreading factor used, as well as terrain, RF interference and obstruction type (e.g., metal, cement, etc.)



## BENEFITS

- Greatly expands LoRa network coverage
- External antenna increases LoRa connectivity to remote assets
- Improved design enhancing thermal performance and easy external port access to SIM and USB connectors

## FEATURES

- ISM band scanning for optimum LoRa performance
- Listen Before Talk operating protocol
- GNSS for location coordinate information
- 27 dBm support for European region
- Certified for Europe 868 MHz, North American 915 MHz ISM bands

**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](#).

## Easily Deploy and Manage Assets Via DeviceHQ®



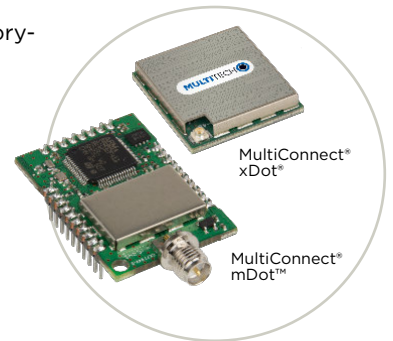
MultiTech DeviceHQ is the M2M industry's first

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.

## CONNECTING THE “THINGS”

### MultiConnect mDot™ & xDot®

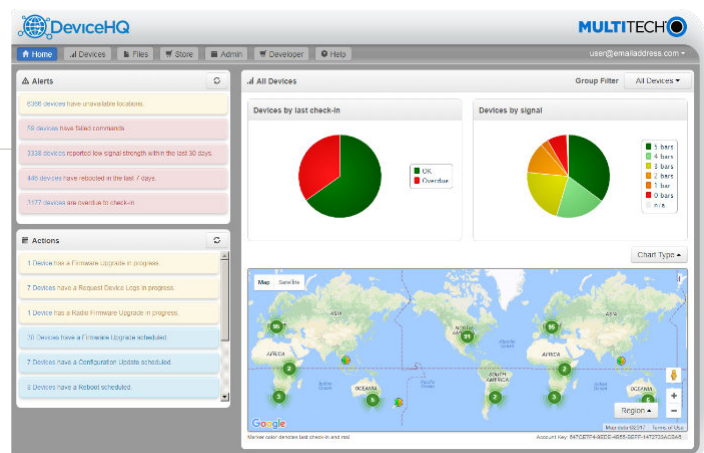
MultiConnect mDot and xDot are secure, regulatory-certified, Arm® Mbed™ programmable, low-power RF modules, providing long-range, low bit rate IoT data connectivity to sensors and actuators.



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”.

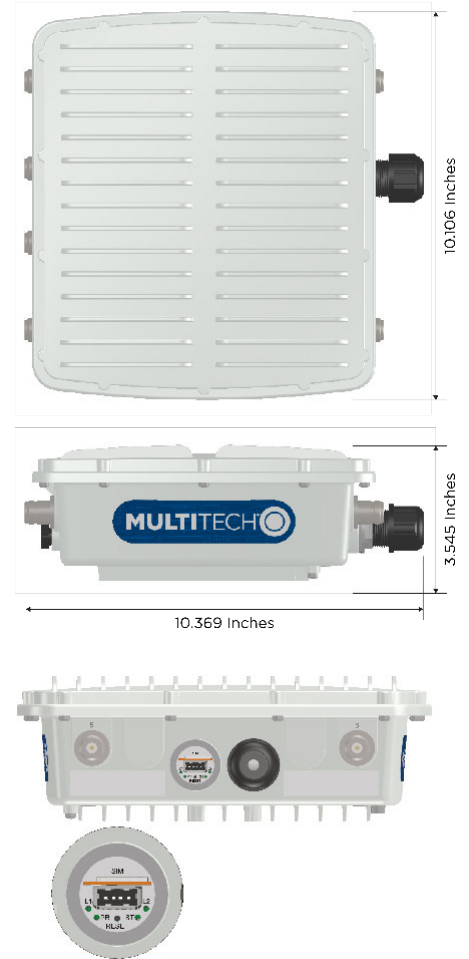


### Benefits

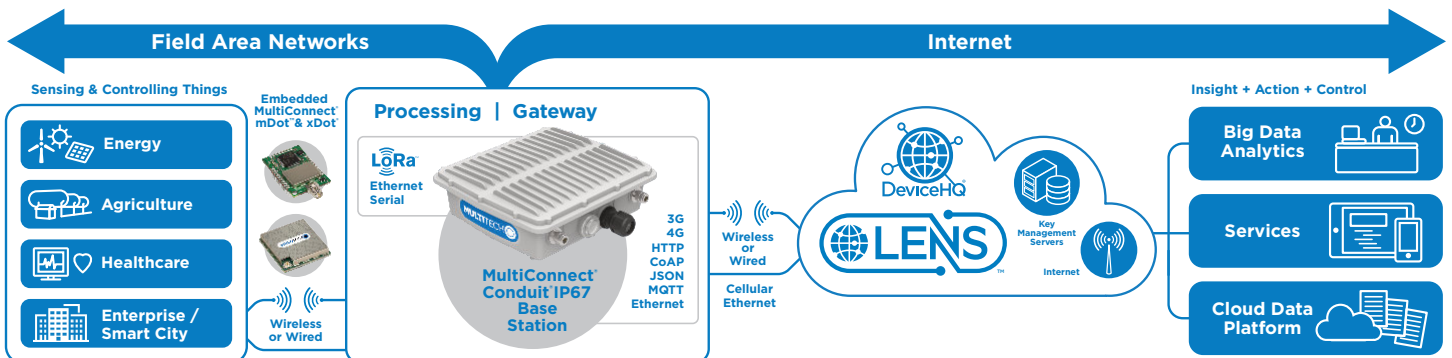
- “Low Touch” asset deployment reduces costs, complexity and time
- Easily scales to your network needs
- Browse and download a wide variety of custom applications tailored to your business needs
- Reduce truck-rolls using remote performance management and asset updates

# SPECIFICATIONS

Models	MTCDTIP-Lxxx		
Cellular Options	LTE 3GPP Release 9 (100 Mbps peak downlink/50 Mbps peak uplink)		
	AT&T/T-Mobile	Verizon	Europe
	HSPA+ 21/GPRS Fallback	(No Fallback)	HSPA+ 42/GPRS Fallback
Frequency Band (MHz)	4G: 700(B17)/850(B5)/AWS1700(B4)/1900(B2) 3G: 850(B5)/1900(B2) 2G: 850/1900	700(B13)/AWS1700(B4)	4G: 800(B20)/1800(B3)/2600(B7) 3G: 850(B5)/900(B8)/2100(B1) 2G: 900/1800
Processor & Memory	ARM9 processor with 32-Bit ARM & 16-Bit Thumb instruction sets • 400 MHz • 16K Data Cache • 256 MB Flash Memory • 16K Instruction Cache • 128X16M DDR RAM		
Packet Data	Up to 100 Mbps downlink, Up to 50 Mbps uplink		
Radio Frequency LoRa	LoRa 868 or 915 MHz - a proprietary Digital Spread Spectrum technique		
Storage	Micro SD		
Input Voltage	Power over Ethernet (PoE) 48Vdc 25W compliant to IEEE802.3at		
Connectors			
Ethernet	1 RJ-45 Ethernet 10/100 port (PoE)		
Serial	1 Debug Serial: USB Micro-B		
Antenna	Cell 3dBi (Qty2), LoRa 3dBi (Qty1), GPS (Qty 1)		
SIM	Micro SIM (3FF)		
Physical Description			
Dimensions (LxWxH)	262 mm x 91 mm x 257 mm		
Weight	2.75 kg		
Chassis Type	IP67 Rated, Aluminum		
Environmental			
Operating Temperature	-40° to +70° C		
Storage Temperature	-40° to +85° C		
Relative Humidity	20% to 90%, non-condensing		
Certifications			
EMC Compliance	US: FCC Part 15 Class B. EU: EN 55022 Class B, EN 55024. Canada: ICES-003		
Radio Compliance	FCC 15.247, IC RSS-210, EU EN 300 220		
Safety	UL 60950-1 2nd Ed., cUL 60950-1 2nd Ed., IEC 60950-1 2nd Ed		
Network Approvals	PTCRB, GCF certified module, AT&T, T-Mobile Pending: Rogers, Bell, Telus, Verizon & 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.



## WHAT'S INCLUDED WITH YOUR IP67 BASE STATION

The IP67 Base Station includes the following:

- 1 - MultiTech Conduit IP67 Gateway with MTAC-LORA mCard installed
- 1 - LoRa IP67-rated antenna
- 2 - Cellular antennas (if equipped with Cell Backhaul)
- 1 - GNSS antenna
- 1 - Mounting Bracket Kit with screws and hose clamp (can mount to pole, wall, tower)
- 1 - Installation guide for setting up IP67 chassis and inserting SIM card



## ORDERING INFORMATION

### MultiConnect Conduit IP67 Base Station

Model	Description	Region
MTCDTIP-266L-868	Ethernet mLinux Programmable Conduit IP67 Base Station GNSS w/Accessory Kit	Europe
MTCDTIP-266A-868	Ethernet Application Enablement Conduit IP67 Base Station GNSS w/Accessory Kit	Europe
MTCDTIP-266L-915	Ethernet mLinux Programmable Conduit IP67 Base Station GNSS w/Accessory Kit	NAM
MTCDTIP-266A-915	Ethernet Application Enablement Conduit IP67 Base Station GNSS w/Accessory Kit	NAM
MTCDTIP-LEU1-266L-868	LTE mLinux Programmable Conduit IP67 Base Station GNSS w/Accessory Kit	Europe
MTCDTIP-LEU1-266A-868	LTE Application Enablement Conduit IP67 Base Station GNSS w/Accessory Kit	Europe
MTCDTIP-LAT1-266L-915	LTE mLinux Programmable Conduit IP67 Base Station GNSS w/Accessory Kit (AT&T)	US/Canada
MTCDTIP-LAT1-266A-915	LTE Application Enablement Conduit IP67 Base Station GNSS w/Accessory Kit (AT&T)	US/Canada
MTCDTIP-LVW2-266L-915	LTE mLinux Programmable Conduit IP67 Base Station GNSS w/Accessory Kit (Verizon)	US
MTCDTIP-LVW2-266A-915	LTE Application Enablement Conduit IP67 Base Station GNSS w/Accessory Kit (Verizon)	US
MTCDTIP-LEU1-266A-915	LTE Application Enablement Conduit IP67 Base Station, GNSS w/Accessory Kit	Australia
MTCDTIP-LEU1-266L-915	LTE mLinux Programmable Conduit IP67 Base Station, GNSS w/Accessory Kit	Australia

## RECOMMENDED ACCESSORIES

### 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 & Accessories

Model	Description	Region
MTUDK2-ST-MDOT	Developer Kit (includes SMA antenna and USB cable)	Global
MTKIT-IP67-MF	Conduit IP67 Accessory Kit (includes antenna mounting bracket, coax cable, two clamps and lightning arrestor)	Global
LGT-ARRST-x	Lightning Arrestor (Single or 5 pack)	Global
CA-NYPE-MF-x	Outdoor Coax Cable, N Type Male & Female (Single or 5 pack)	Global
MB-ANT-IP67-x	Antenna Mounting Bracket, Mounts 1 Antenna (Single or 5 pack)	Global
PS-56V-POE-NAM-x	Single Port Power over Ethernet Transformer w/NAM Power Cord (Single or 5 pack)	NAM
PS-56V-POE-EU-x	Single Port Power over Ethernet Transformer w/EU Power Cord (Single or 5 pack)	EMEA
PS-56V-POE-GB-x	Single Port Power over Ethernet Transformer w/UK Power Cord (Single or 5 pack)	GB/IE

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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