MultiConnect®Conduit®IP67 Base Station

IP67 Conduit for Outdoor LoRa® Deployments

LoRa Alliance™

MultiConnect® Conduit® IP67 Base Station is a ruggedized IoT gateway solution, specifically designed for outdoor LoRa® 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® applications in virtually any environment. The enhanced MultiConnect Conduit IP67 solution can support thousands of LoRaWAN certified end nodes, including the MultiConnect® mDot™* and xDot®*. 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® mCard™, 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

www.multitech.com/IP67

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**.

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.

MultiConnect® xDot®

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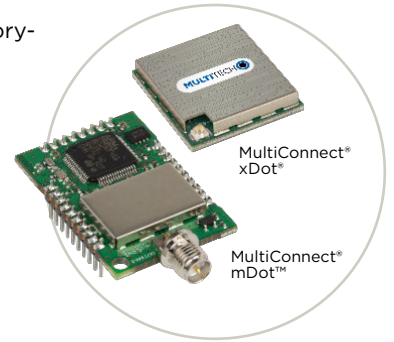
The mDot and xDot are LoRaWAN compliant, providing bi-directional data communication up to 10 miles line-of-sight and 2-3 miles in buildings, using the global sub-GHz ISM radio bands in North America, Europe, and the APAC regions.

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".
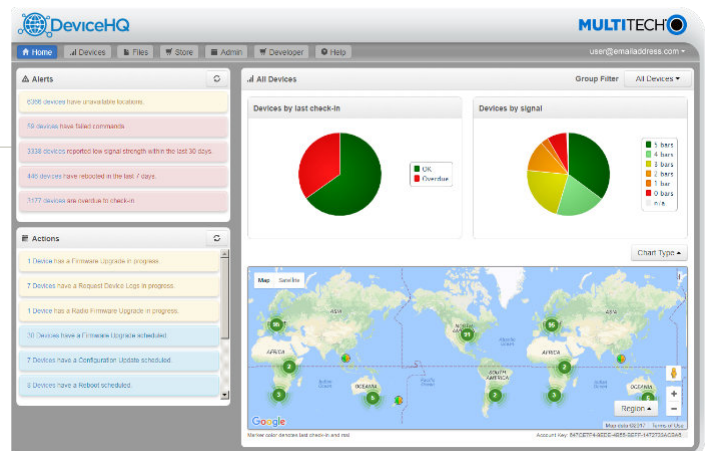
Easily Deploy and Manage Assets Via DeviceHQ®

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	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		
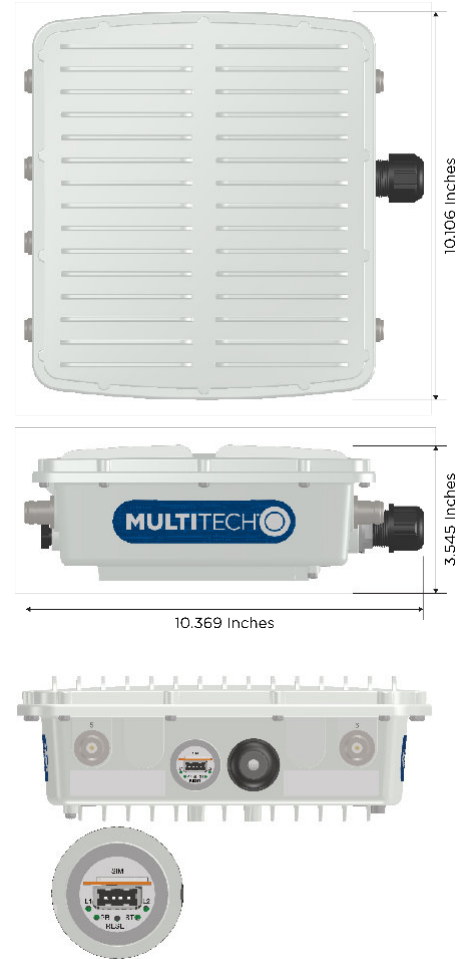
*UL Listed @ 40° C, limited by AC power supply. UL Recognized @ 70° C when used with the fused DC power cable, part number FPC-532-DC. Installation in outdoor locations or ambient temperature above 40° C or 70° C has not been evaluated by UL. UL Certification does not apply or extend to use in outdoor 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.

10.106 Inches

3.545 Inches

10.369 Inches

Field Area Networks — Internet

Sensing & Controlling Things

- Energy
- Agriculture
- Healthcare
- Enterprise / Smart City

Wireless or Wired

Embedded MultiConnect mDot™ & xDot™

Processing | Gateway

LoRa — Ethernet Serial

MultiConnect® Conduit® IP67 Base Station

3G 4G HTTP CoAP JSON MQTT Ethernet

Wireless or Wired

Cellular Ethernet

DeviceHQ — **LENS™**

Key Management Servers

Internet

Insight + Action + Control

- Big Data Analytics
- Services
- Cloud Data Platform