MULTITECH®
CREATE • CONNECT • COMMUNICATE

MultiConnect® Conduit® IP67 Base Station

IP67 Conduit for Outdoor LoRa® Deployments
AU915 for Australia

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 Ethernet backhaul or optional 4G-LTE backhaul. 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

- 27 dBm support for Australia
- Certified for Australian 915 MHz ISM bands
- ISM band scanning for optimum LoRa performance
- Listen Before Talk operating protocol
- GNSS for location coordinate information

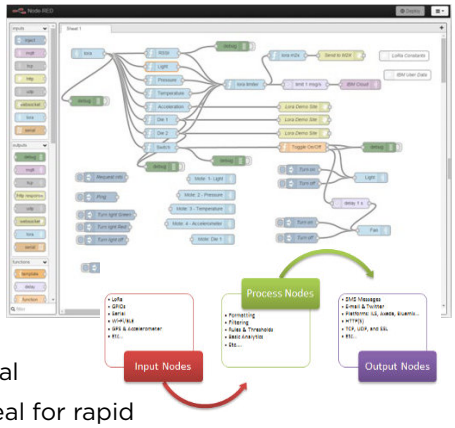
www.multitech.com/IP67

HIGHLIGHTS

Application Development Tailored to You

MultiConnect® Conduit® IP67 Base Station provides the IBM Node-RED graphical, drag-and-drop interface, offering IT professionals, integrators and developers alike, programming choice and capability to utilize the distributed intelligence capabilities of the Conduit. AEP models include the LoRa Network Server and Packet Forwarder to provide analytics on incoming data and provide more actionable outgoing data to our Cloud service partners like IBM Watson and Senet Network. Get started quickly with easy to follow recipes from our partners.

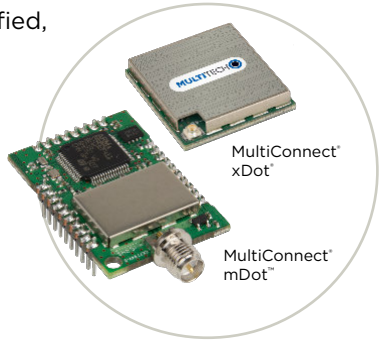
Fast and Intuitive Programming with Node.js and Node-RED Technologies



Applications can be simply created and deployed by the click of a button based upon IBM's Node-RED visual development tool. Incredibly user-friendly, Node-RED is an intuitive graphical programming tool ideal for rapid prototyping, designed for IT professionals to optimize and scale the edge behavior of their IoT network.

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.

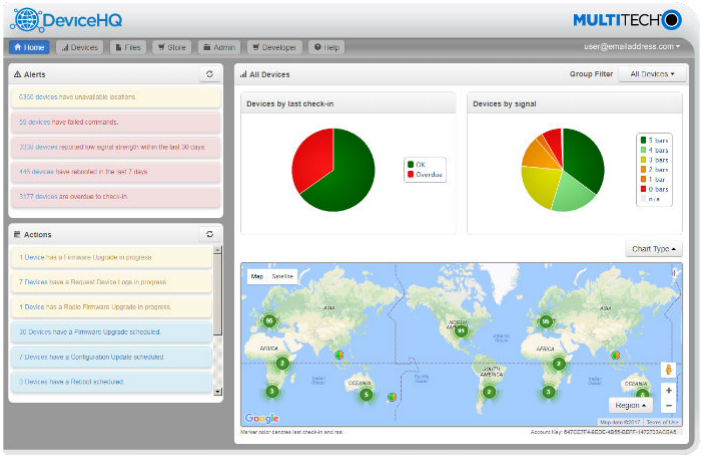
The mDot and xDot are LoRaWAN compliant, providing bi-directional data communication up to 10 miles line-of-sight and 2-3 miles in buildings, using the global sub-GHz ISM radio bands in North America, Europe, and the APAC regions.

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".

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

HARDWARE SPECIFICATIONS

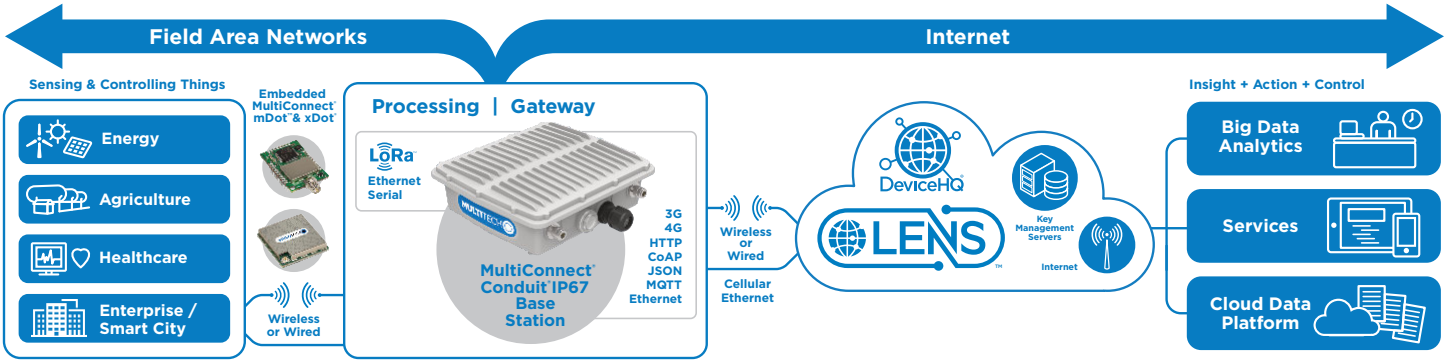
Models	MTCDTIP-LAP3	MTCDTIP-LEU1	MTCDTIP-915
Mobile Network Operator	European Network Operators		non-Cellular
Cellular Performance	4G - LTE Category 1	4G - LTE Category 3	
Cellular Fallback	3G - HSPA+	3G - HSPA+, 2G - GPRS	
Frequency Band (MHz)	4G: B1(2100), B3(1800), B5(850), B8(900), B28(700) 3G: B1 (2100), B5 (850), B8 (900)	4G: B3 (1800), B7 (2600), B20 (800) 3G: B1 (2100), B5 (850), B8 (900) 2G: B3 (1800), B8 (900)	
Packet Data (LTE FDD)	Up to 10 Mbps peak downlink Up to 5 Mbps peak uplink	Up to 100 Mbps peak downlink Up to 50 Mbps peak uplink	
Input Voltage	Ethernet Input Power: 37 - 57 VDC. Provided by PSE injector with power rating of 25W or greater		
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 (-267 models)	Wi-Fi: 802.11abng (2.4 & 5 GHz) / Bluetooth: Classic 4.1 and BLE		
GPS/GNSS	GNSS for LoRa Packet Time Stamping Concurrent GNSS connections: 3 GNSS Systems Supported: (default: concurrent GPS/QZSS/SBAS and GLONASS)		
LEDs*	PR (Power), ST (Status, user-programmable), L1 (user-defined), L2: (user-defined)		
LoRa Specifications (for models that include MTAC LORA Gateway Accessory Card)			
LoRa Channel Plan	AU915		
Channel Capacity	8-channels (half-duplex)		
LoRa Power Output	27 dBm maximum output power before antenna		
Connectors			
E-NET	RJ45 Ethernet jack (10/100 port) (POE)		
USB HOST*	USB 2.0 Type A connector		
SIM*	3FF Micro SIM		None
Antennas	Cellular: female SMA / LoRa: N Male / GPS: N-Plug		
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		
Certifications			
EMC Compliance	Australia: CISPR 32		
Radio Compliance	AS/NZS 4268:2012 + A1:2013 MPE Standard 2014		
Safety	IEC 60950-1 | IEC 62368-1		
Network Approvals	Telstra		N/A
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		
Warranty	2-Years - www.multitech.com/legal/warranty		

* SIM, LEDs, and USB port accessible under IP67-rated bottom cap cover

SOFTWARE SPECIFICATIONS

AEP

- Enhanced closed-source embedded Linux platform
- Seamless integration with DeviceHQ, MultiTech's device management platform
- LoRa network server
- LoRa Packet Forwarder
- Cellular connection management
- Dynamic DNS
- Secure firewall with NAT and port forwarding
- Node-RED application development environment
- Static Routing
- Open VPN
- Graphical web interface for configuration and management
- Remote Access
- Configuration backup and restore
- Easy firmware upgrade through graphical web interface
- System and network statistics
- Tool chain for creating custom images
- WAN connection via Ethernet or cellular
- Cellular PPP, DHCP client and server
- Firewall configuration via iptables
- Language support: Python, C, C++, Javascript
- Package upgrade support: Java, Perl, Ruby, Mono C#
- opkg package manager with limited package feed
- Basic router functionality with built-in Linux
- One Programmable LED



IP67 BASE STATION STANDARD MOUNTING OPTIONS

Mounting Options
(optional accessories shown)

ORDERING INFORMATION

MultiConnect Conduit IP67 Base Station

Model	Description	Region
MTCDTIP-LAP3-266A-915	LTE Category 1 AEP Conduit IP67 Base Station 8-channel, 915 MHz, w/ GNSS and Accessory Kit (Australia) - Accessory Kit: Mounting bracket kit, 1 LoRa antenna, 2 cellular antennas, 1 GNSS antenna	Australia
MTCDTIP-LEU1-266A-915	LTE Category 3 AEP Conduit IP67 Base Station 8-channel, 915 MHz, w/ GNSS and Accessory Kit (Australia) - Accessory Kit: Mounting bracket kit, 1 LoRa antenna, 2 cellular antennas, 1 GNSS antenna,	Australia
MTCDTIP-267A-915	AEP Conduit IP67 Base Station 8-channel, 915 MHz, w/ GNSS+WiFi/BT and Accessory Kit (North America/Australia) - Accessory Kit: Mounting bracket kit, 1 LoRa antenna, 1 GNSS antenna, 1 Wi-Fi/BT antenna	North America/Australia
MTCDTIP-266A-915	AEP Conduit IP67 Base Station 8-channel, 915 MHz, w/ GNSS and Accessory Kit (North America/Australia) - Accessory Kit: Mounting bracket kit, 1 LoRa antenna, 1 GNSS antenna	North America/Australia

RECOMMENDED ACCESSORIES

MultiConnect mDot

Model	Description	Region
MTDOT-915-AU-X1-SMA	915 MHz XBee LoRa SMA (Single or 50 Pack)	Australia
MTDOT-915-AU-X1P-SMA	915 MHz XBee LoRa SMA w/Programming Header (Single Pack)	Australia
MTDOT-915-AU-X1-UFL	915 MHz XBee LoRa UFL (Single or 50 Pack)	Australia
MTDOT-915-AU-M1-UFL	915 MHz SMT LoRa UFL (Single or 100 Pack)	Australia
MTDOT-915-AU-M1-TRC	915 MHz SMT LoRa RF Pad (Single or 100 Pack)	Australia

MultiConnect xDot

Model	Description	Region
MTXDOT-AU1-A00-1	AU915 MHz LoRa Module UFL/TRC (Single Pack)	Australia
MTXDOT-AU1-A01-100	AU915 MHz LoRa Module TRC (100 Pack)	Australia

Developer Kit & Accessories

Model	Description	Region
MTKIT-IP67-MF	IP67 Accessory Kit w/Mounting Bracket, 5' Coax Cable N Type, Male/Female Connectors & Lightning Arrestor	Global
LGT-ARRST-1	Conduit IP67 Base Station Lightning Arrestor (1 Pack)	Global
LGT-ARRST-5	Conduit IP67 Base Station Lightning Arrestor (5 Pack)	Global
CA-NTYPE-MF-1	Outdoor Coax Cable, N Type Male & Female connectors, 5 feet (1 Pack)	Global
CA-NTYPE-MF-5	Outdoor Coax Cable, N Type Male & Female connectors, 5 feet (5 Pack)	Global
MB-ANT-IP67-1	Conduit IP67 Antenna Mounting Bracket, Mounts One Antenna (1 Pack)	Global
MB-ANT-IP67-5	Conduit IP67 Antenna Mounting Bracket, Mounts 1 Antenna (5 Pack)	Global
AN868-915A-1-IP67	IP67 LoRa Antenna, 15.3" (4.5 dBi) (1 Pack)	Global
AN868-915A-5-IP67	IP67 LoRa Antenna, 15.3" (4.5 dBi) (5 Pack)	Global
ANLTE5-1-IP67	IP67 LTE Antenna, 7" (3.5 dBi) (1 Pack)	Global
ANLTE5-5-IP67	IP67 LTE Antenna, 7" (3.5 dBi) (5 Pack)	Global

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

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