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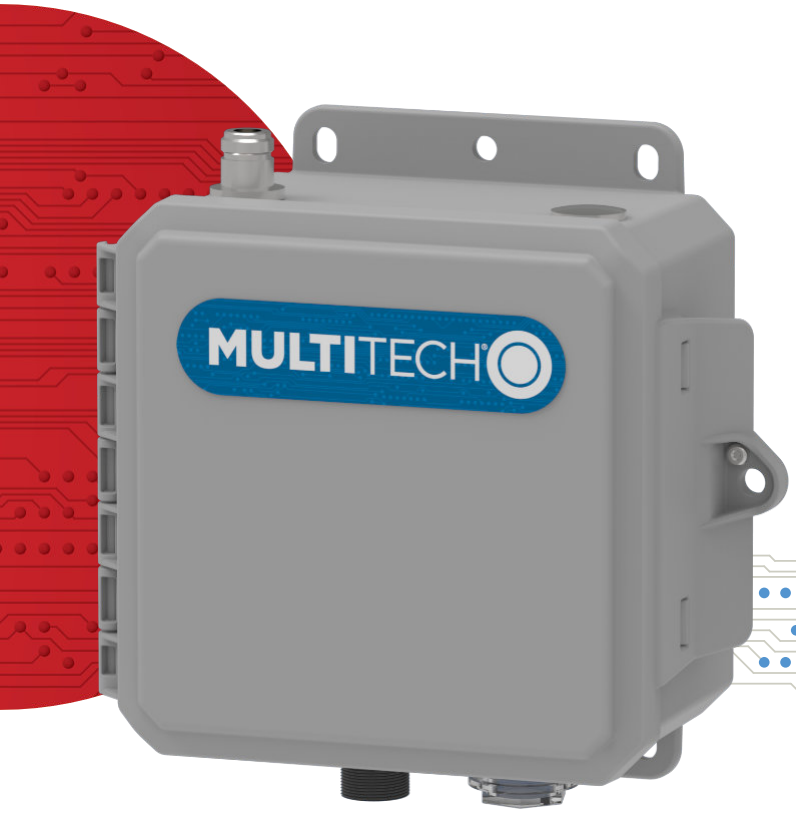
CREATE • CONNECT • COMMUNICATE



MultiTech Conduit® IP67 200 Series

IP67 Base Station for Outdoor LoRa® Deployments
EU868 for Europe

LoRa Alliance®

MultiTech Conduit® IP67 200 Series 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 Conduit IP67 solution can support thousands of LoRaWAN certified end nodes, including the MultiTech 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 an IP67 enclosure, LoRa antenna to improve outdoor range and Ethernet 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.)

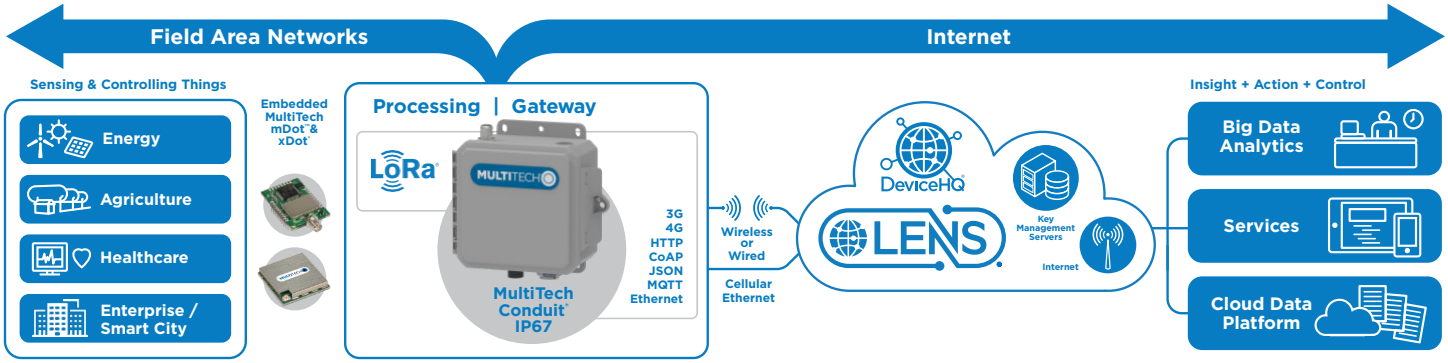
BENEFITS

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

FEATURES

- ISM band scanning for optimum LoRa performance
- GNSS for location coordinate information
- Certified for Europe 868 MHz ISM bands
- Internal super capacitor helps ensure safe shutdown in case of power failure

multitech.com/ip67-200



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.

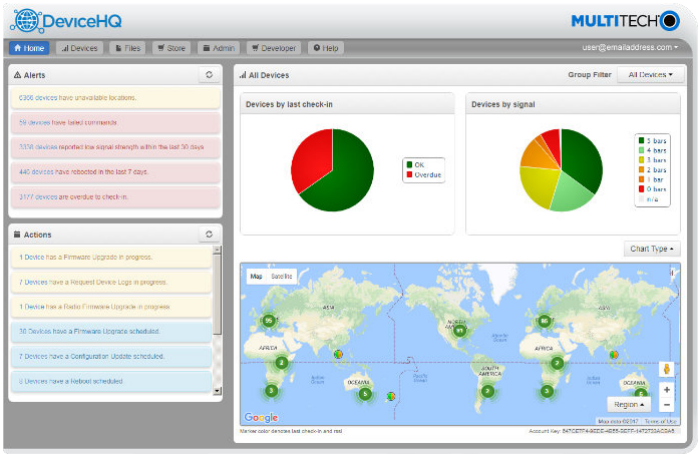
mPower software specifications can be found **here**.

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

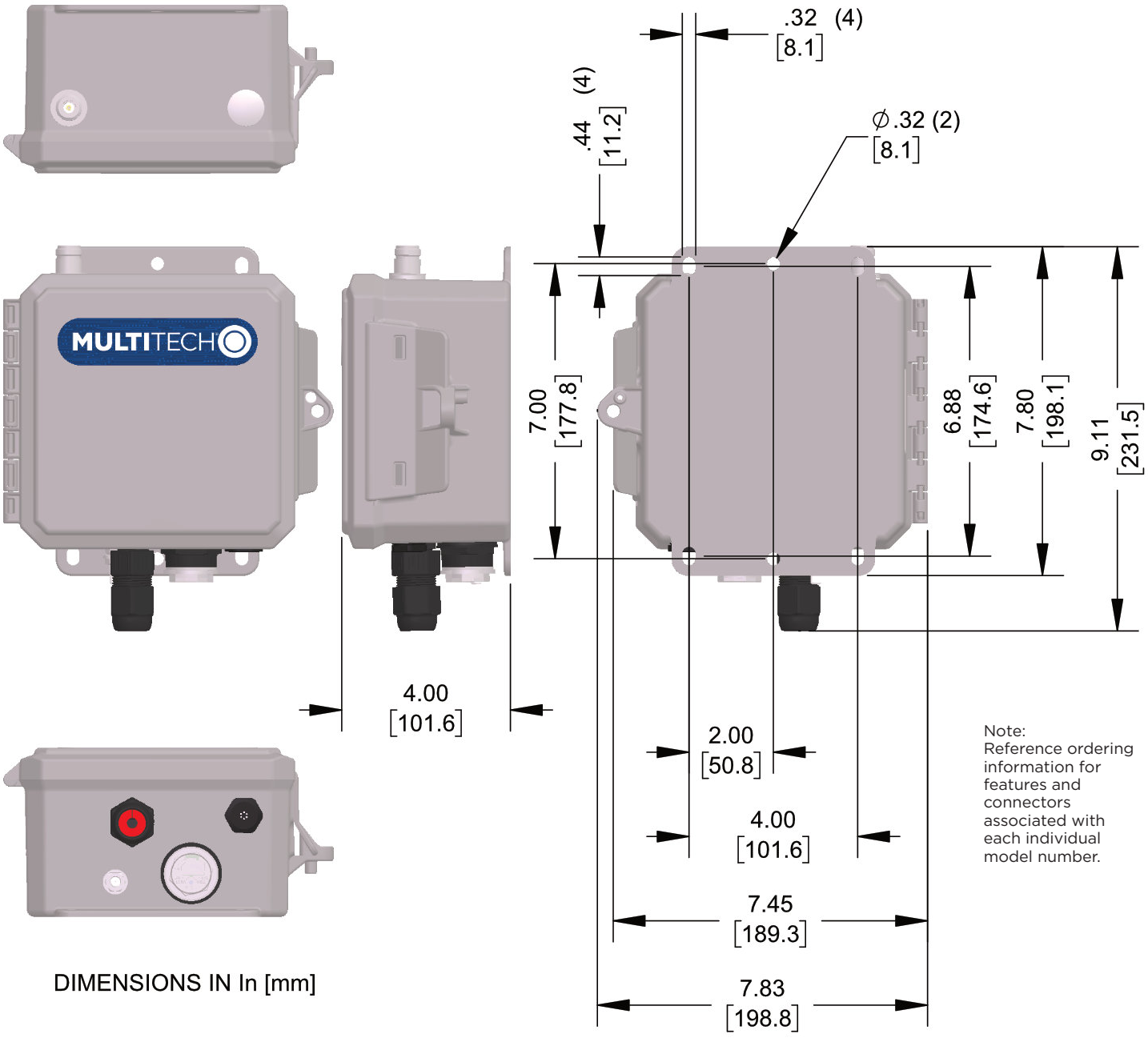
LENS is a hybrid LoRaWAN® network management platform that enables deployment and management of LoRaWAN networks at scale. Designed for private and enterprise networks, LENS provides a site-by-site user account and centralized management for LoRa® end devices, as well as configuration and control of 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.

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 then easily deploy them to and customize them for remote devices from anywhere.



HARDWARE DESCRIPTION



DIMENSIONS IN In [mm]

HARDWARE OVERVIEW

Connectors		
Interface	Label	Connector Type
SIM Card	SIM	3FF Micro SIM
Ethernet Port	None	RJ-45 Jack
Ground Lug		7/16 HEX 1/4 x 20 Stainless Steel
Vent Valve		S-Flange
Antenna Connectors		
Interface	Label	Connector Type
LoRa Antenna	1	N-Type Antenna Connector
Cellular Antenna (primary)	None	Internal antenna. No external interface
GNSS Antenna		
Cellular Antenna (diversity)		

HARDWARE SPECIFICATIONS

Feature	Description		
CPU Module	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		
WAN Backhaul Options	Ethernet	10/100 Base T	All Models
	Cellular	LTE Category 1	-LNA3 models only
GNSS (location, time stamping)	GNSS for LoRa Packet Time Stamping Concurrent GNSS connections: 3 GNSS Systems Supported: GPS, Galileo, QZSS GNSS antenna: Internal to chassis		
LEDs (located beneath plastic cover)	LAN, LORA, CELL, SYS		
Reset Button (located beneath plastic cover)	Recessed push-button used to reset device		
Input Power	Ethernet Input Power: 37 - 57 VDC provided by PSE injector with power rating of 25W or greater		
Power-over-Ethernet (PoE)	PoE Standard: IEEE 802.3at		
Power Draw	See Hardware Guide for current draw at specified voltages		
Internal Super Capacitor	Helps ensure safe shutdown in case of power failure		
Physical Description			
Dimensions (L x W x H)	6″ x 6″ x 4″ (152.4 mm x 152.4 mm x 101.6 mm) (see diagram)		
Weight	Approximately 3 lbs (1.4 kg)		
Chassis Type	IP67-Rated composite		
Mounting Options	Wall mount built into chassis (see diagram) / Pole mount (accessory required)		
Environmental			
Operating Temperature	-40° C to +70° C		
Storage Temperature	-40° C to +85° C		
Certifications and Approvals			
EMC Compliance	ROHS Directive 2011/65/EU EN 50581:2012 RED Directive 2014/53/EU. Article 3.1b (EMC) EN 301 489-1 V2.1.1 (General) EN 62311:2008 (MPE/RD Exposure)		
Radio Certifications	RED Directive 2014/53/EU. Article 3.2 (Radio)		
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		
Safety	Low Voltage Directive (LVD) 2014/35/EU Article. 3.1a IEC 62368-1:2014 (Second Edition), EN 62368-1:2014 + AC:2017 (Second Edition)		
Warranty	2-Years - www.multitech.com/legal/warranty		

Product specifications are subject to change without notice.

LORAWAN WAN SPECIFICATIONS

Feature	Description					
LoRa Module	Frequency Band	Channel Plan	Power Output*	RX Range	TX Range	Receive Sensitivity**
	868 MHz	EU868	14 - 27 dBm*	863 – 873 MHz	863 – 873 MHz	-124.8 to -138.9 dBm
Antenna Connector	Internal or external to chassis (depending on model)					
EMC Compliance	ROHS Directive 2011/65/EU EN 50581:2012 RED Directive 2014/53/EU. Article 3.1b (EMC) EN 301 489-1 V2.1.1 (General) EN 301 489-3 V2.1.1 (LoRa/SRD)					
Radio Compliance	EN 300 220-2 V3.1.1 (LoRa/ISM Radio)					

*Maximum ERP (including LoRa antenna) is 14 dBm for most of the band, except 27 dBm at 869.4 - 869.65 / 1x8 channel / Half-Duplex
** Receive Sensitivity changes based on Spreading Factor

CELLULAR WAN SPECIFICATIONS

Models	MTCDTIP2-L4E1
Cellular Performance	4G - LTE Category 4
Cellular Fallback	3G - HSPA+, 2G - GPRS
Frequency Band (MHz)	**4G:** B1(2100), B3(1800), B7(2600), B8(900), B20(800), B28A(700) **3G:** B1(2100), B3(1800), B8(900) **2G:** B3(1800), B8(900)
Packet Data (LTE FDD)	Up to 150 Mbps downlink, Up to 50 Mbps uplink
SIM Card	(1) 3FF Micro SIM
Antenna Connectors	Primary and diversity: Internal to chassis
Mobile Network Operator (MNO) Approvals	GCF Certified Cell Module. European Network Operators
EMC Compliance	UKCA, CE Mark, IEC 62368-1
Radio Compliance	Draft EN 301 489-52 V1.1.0 (Cellular) EN 301 511 V12.5.1 (GSM) EN 301 908-1 V11.1.1 (IMT Cellular)

Product specifications are subject to change without notice.

MultiTech Conduit® IP67 200 Series Base Station with GNSS

Model	Description	Region	Ethernet	Cellular	Internal LoRa Antenna	External LoRa Antenna	GNSS	Accessory Kit
Ethernet Only Models								
MTCDTIP2-EN-B11EKP-D1M	Ethernet only mPower Programmable Base Station, 8-channel, 868 MHz with internal LoRa antenna	Europe	•		•		•	None
MTCDTIP2-EN-B11EKP-L1M	Ethernet only mPower Programmable Base Station, 8-channel, 868 MHz with external LoRa antenna	Europe	•			•	•	•
LTE Category 4 Models								
MTCDTIP2-L4E1-B11EKP-D1M	LTE Cat 4 mPower Programmable Base Station, 8-channel, 868 MHz with internal LoRa antenna, internal cellular antenna	Europe		•	•		•	None
MTCDTIP2-L4E1-B11EKP-L1M	LTE Cat 4 mPower Programmable Base Station, 8-channel, 868 MHz with external LoRa antenna, internal cellular antenna	Europe		•		•	•	•

Accessory Kit includes LoRa Antenna.

RECOMMENDED ACCESSORIES

MultiTech Conduit® IP67 200 Series Base Station

Model	Description	Region
PS-56V-POE-EU-1	Single Port 30W Power over Ethernet Transformer (Class A) with European Power Cord (1 Pack)	Europe
PS-56V-POE-EU-5	Single Port 30W Power over Ethernet Transformer (Class A) with European Power Cord (5 Pack)	Europe
PS-56V-POE-GB-1	Single Port 30W Power over Ethernet Transformer (Class A) with European Power Cord (1 Pack)	GB/IE
PS-56V-POE-GB-5	Single Port 30W Power over Ethernet Transformer (Class A) with European Power Cord (5 Pack)	GB/IE
MTKIT-IP67-MF	Conduit IP67 Accessory Kit (includes antenna mounting bracket, coax cable, two clamps and 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
MTKIT-POLEMOUNT-2	Pole Mount Kit, for 2 inch diameter poles (for MTCDTIP2-xx models)	Global
MTKIT-POLEMOUNT-3	Pole Mount Kit, for 3 inch diameter poles (for MTCDTIP2-xx models)	Global
MTKIT-POLEMOUNT-10-12	Pole Mount Kit, for 10 - 12 inch diameter (for MTCDTIP2-xx models)	Global

Go to www.multitech.com for detailed product model numbers.

Visit 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.

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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