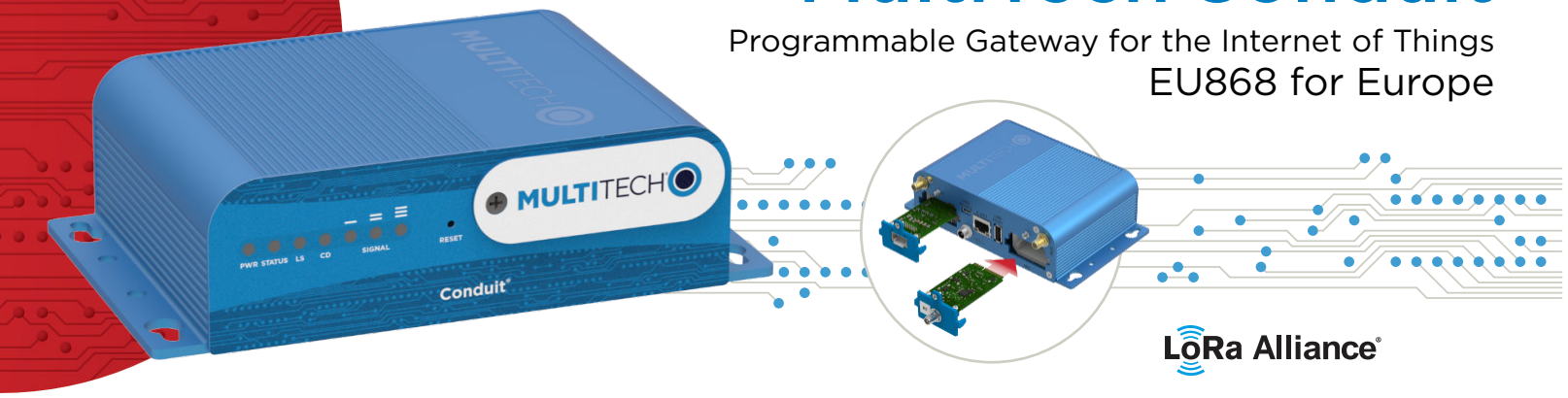
MULTITECH®
CREATE • CONNECT • COMMUNICATE

MultiTech Conduit®

Programmable Gateway for the Internet of Things
EU868 for Europe



LoRa Alliance®

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

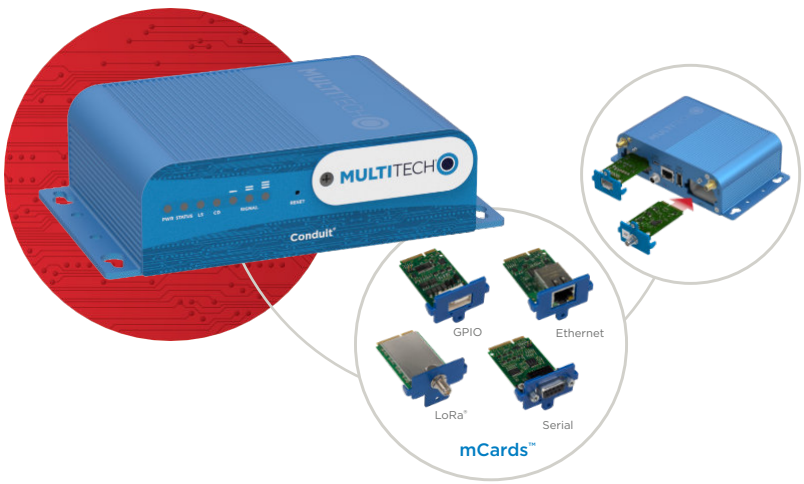
Available options include a LoRaWAN® mCard capable of supporting thousands of MultiTech mDot™ and xDot® long range RF modules connected to remote sensors or appliances. Quick-to-deploy and easy to customize and manage, the Conduit communications gateway realizes your IoT application.

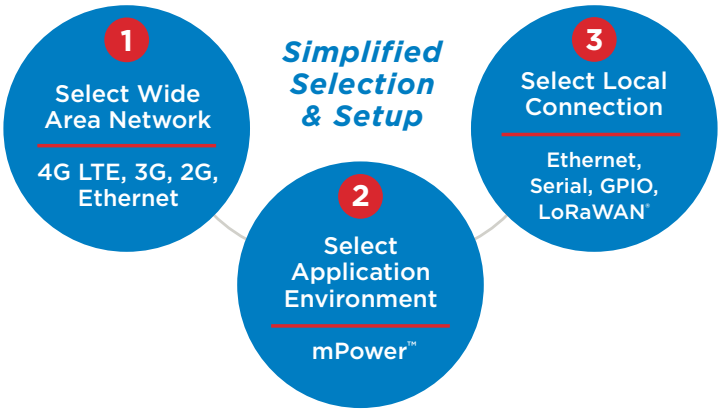
GATEWAY BENEFITS

- 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
- Ethernet RJ-45 10/100 BaseT for IP backhaul
- Optional 4G-LTE or 3G HSPA+ IP backhaul

LORA FEATURES

- Certified for Europe 868 Mhz ISM bands
- 14 dBm support for European region
- ISM band scanning for optimum LoRa® performance
- Listen Before Talk LoRa operating protocol





www.multitech.com/conduit

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.

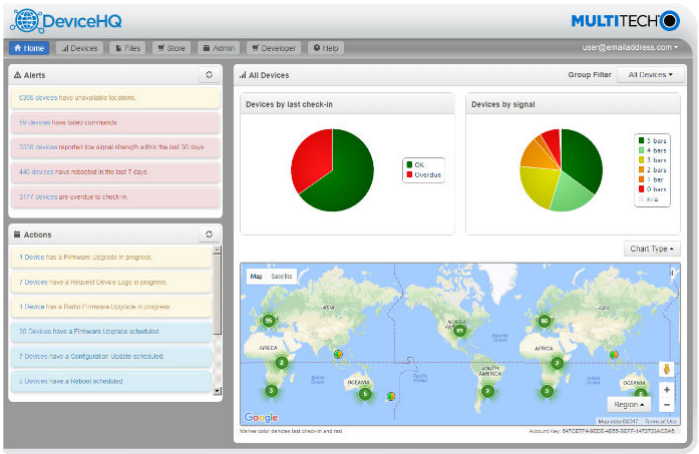
mPower software specifications can be found **here**.

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 SPECIFICATIONS

Models	MTCDT-L4E1	MTCDT-H5	MTCDT
Mobile Network Operator	European Network Operators		Non-Cellular
Cellular Performance	4G - LTE Category 4	3G-HSPA+	
Cellular Fallback	3G - HSPA+, 2G - GPRS	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)	3G: 850 / 900 / 1700 (AWS) / 1900 / 2100 2G: 850 / 900 / 1800 / 1900	
Packet Data (LTE FDD)	Up to 150 Mbps peak downlink Up to 50 Mbps peak uplink	Up to 100 Mbps peak downlink Up to 50 Mbps peak uplink	
Input Voltage	9 VDC 1.7A input provided to 100 - 240 VAC 50/60 Hz external adaptor or fused DC Power Cable		
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		
Wi-Fi/Bluetooth (-247 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	mPower models: PWR (Power), STATUS (Power Status), LS (Link Status), CD (Carrier Detect), SIGNAL (Signal Strength)		
LoRa Specifications (-868 models)			
LoRa Frequency Band	868 MHz		
LoRa Channel Plan	EU868 (EU863 - 870)		
Channel Capacity	8-channels (half-duplex)		
LoRa Maximum Output Power	Maximum EIRP: 14 dBm - 27 dBm*		
Connectors			
Power	2.5 mm miniature barrel jack (screw-on)		
Ethernet	RJ45 Ethernet jack (10/100 port)		
USB DEVICE	USB 2.0 Micro B connector		
USB HOST	USB 2.0 Type A connector		
AP1, AP2	MultiTech mCard Gateway Accessory Cards		
SIM (under nameplate)	2FF Mini SIM		N/A
SD Card (under nameplate)	Micro SD Card, 32GB (HSMCI) max (industrial temperature range recommended)		
Antennas	Cellular, GPS, LoRa: female SMA / LoRa: reverse polarity female SMA		
Physical Description			
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	Anodized aluminum (blue) Designed for IP30 Rating		
Environmental			
Operating Temperature	-30° to +70° C		
Storage Temperature	-40° to +85° C		
Humidity	20%-90% RH, non-condensing		
Certifications			
EMC Compliance	EN 55032 Class A, EN 301 489-3 V2.1.1, EN 301 489-1 V2.2.0, EN 301-489-52 V1.1.0		
Radio Compliance	EN 300 220-1 V3.1.1, EN 300 220-2 V3.1.1, EN 300 328 V2.1.1, EN 301 511 V9.0.2, EN 301 893 V2.1.1, EN 301 908-1 V11.1.1, EN 301 902-2 V11.1.1, EN 301 908-13 V11.1.1, EN 62311-2008		
Safety	IEC 60950-1, IEC 62368-1		
Network	GCF Certified Cell Module	GCF Certified Cell Module PTCRB, AT&T, T-Mobile	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		

* Maximum EIRP is 14 dBm for most of the band, except 27 dBm at 869.4 – 869.65

ORDERING INFORMATION

MultiTech Conduit® with GNSS & Wi-Fi/Bluetooth & MTAC-LORA Gateway Accessory Card

Model	Description	Region
MTCDT-L4E1-247A-868-EU-GB	LTE Cat 4 mPower Programmable Gateway, 8-channel, 868 MHz, GNSS+Wi-Fi/BT w/ EU/UK Accessory Kit	Europe
MTCDT-H5-247A-868-EU-GB	HSPA+ mPower Programmable Gateway, 8-channel, 868 MHz, GNSS+Wi-Fi/BT w/ EU/UK Accessory Kit	Europe
MTCDT-247A-868-EU-GB	Ethernet Only mPower Programmable Gateway, 8-channel, 868 MHz, GNSS+Wi-Fi/BT w/ EU/UK Accessory Kit	Europe

Accessory kit includes: Conduit Gateway with installed MTAC-LORA-H-868 accessory card and power supply with regional-specific blades, appropriate antennas, Ethernet cable, USB cable and quick-start guide. GNSS Antenna sold separately

MultiTech Conduit® with GNSS & MTAC-LORA Gateway Accessory Card

Model	Description	Region
MTCDT-L4E1-246A-868-EU-GB	LTE Cat 4 mPower Programmable Gateway, 8-channel, 868 MHz, GNSS w/ EU/UK Accessory Kit	Europe
MTCDT-H5-246A-868-EU-GB	HSPA+ mPower Programmable Gateway, 8-channel, 868 MHz, GNSS w/ EU/UK Accessory Kit	Europe
MTCDT-246A-868-EU-GB	Ethernet Only mPower Programmable Gateway, 8-channel, 868 MHz, GNSS w/ EU/UK Accessory Kit	Europe

Accessory kit includes: Conduit Gateway with installed MTAC-LORA-H-868 accessory card and power supply with regional-specific blades, appropriate antennas, Ethernet cable, USB cable and quick-start guide. GNSS Antenna sold separately

MultiTech Conduit® with GNSS and Wi-Fi/Bluetooth

Model	Description	Region
MTCDT-L4E1-247A-EU-GB	LTE Cat 4 mPower Programmable Gateway, GNSS+Wi-Fi/BT w/ EU/UK Accessory Kit	Europe
MTCDT-H5-247A-US-EU-GB	HSPA+ mPower Programmable Gateway, GNSS+Wi-Fi/BT w/US/EU/UK Accessory Kit	Global
MTCDT-247A-US-EU-GB	Ethernet Only mPower Programmable Gateway, GNSS+Wi-Fi/BT w/US/EU/UK Accessory Kit	Global

Accessory kit includes: Conduit Gateway with power supply with regional-specific blades, appropriate antennas, Ethernet cable, USB cable and quick-start guide. GNSS Antenna sold separately

MultiTech Conduit® with GNSS

Model	Description	Region
MTCDT-L4E1-246A-EU-GB	LTE Cat 4 mPower Programmable Gateway, GNSS w/ EU/UK Accessory Kit	Europe
MTCDT-H5-246A-US-EU-GB	HSPA+ mPower Programmable Gateway, GNSS w/US/EU/UK Accessory Kit	Global
MTCDT-246A-US-EU-GB	Ethernet Only mPower Programmable Gateway, GNSS w/US/EU/UK Accessory Kit	Global

Accessory kit includes: Conduit Gateway with power supply with region-specific blades, appropriate antennas, Ethernet cable, USB cable and quick-start guide. GNSS Antenna sold separately

RECOMMENDED ACCESSORIES

MultiTech mCard™

Model	Description	Region
MTAC-GPIO	GPIO Accessory Card, GPIO Cable Sold Separately	Global
MTAC-MFSER-DTE	Multi-Function Serial Accessory Card - DTE Interface	Global
MTAC-MFSER-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

Developer Kit, Antennas & Accessories

Model	Description	Region
MTUDK2-ST-MDOT	Developer Kit (includes SMA antenna and USB cable)	Global
ANGPS-1MM	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

MultiTech mDot™

Model	Description	Region
MTDOT-868-X1-SMA-x	868 MHz X1 LoRa SMA (Single or 50 Pack)	Europe
MTDOT-868-X1P-SMA-x	868 MHz X1 LoRa SMA w/Programming Header (Single Pack)	Europe
MTDOT-868-X1-UFL-x	868 MHz X1 LoRa UFL (Single or 50 Pack)	Europe
MTDOT-868-M1-UFL-x	868 MHz SMT LoRa UFL (Single or 100 Pack)	Europe
MTDOT-868-M1-TRC-x	868 MHz SMT LoRa RF Pad (Single or 100 Pack)	Europe

MultiTech xDot®

Model	Description	Region
MTXDOT-EU1-A00-1-x	868 MHz LoRa Module UFL/TRC (Single or 100 Pack)	EMEA
MTXDOT-EU1-A01-100	868 MHz LoRa Module TRC (100 Pack)	EMEA

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

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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