MULTITECH
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MultiConnect® Conduit™ AP

Access Point for LoRa® Technology
LoRaWAN™ to IP Border Gateway

LoRa Alliance™

MultiConnect® Conduit™ AP Access Point for LoRa® Technology affordably provides deep in-building connectivity and improved service levels for network operators and enterprises connecting thousands of IoT assets by harnessing the power of the LoRaWAN™ protocol.

Based on the award-winning MultiConnect® Conduit™ gateway, it is designed specifically to extend end-point density and provide coverage in difficult to reach areas cell tower or rooftop deployments may not penetrate.

For IoT assets clustered in commercial buildings like hotels, convention centers, offices and retail facilities, the easy-to-deploy access point with integrated antennas can be mounted on walls or ceilings to extend LoRa connectivity.

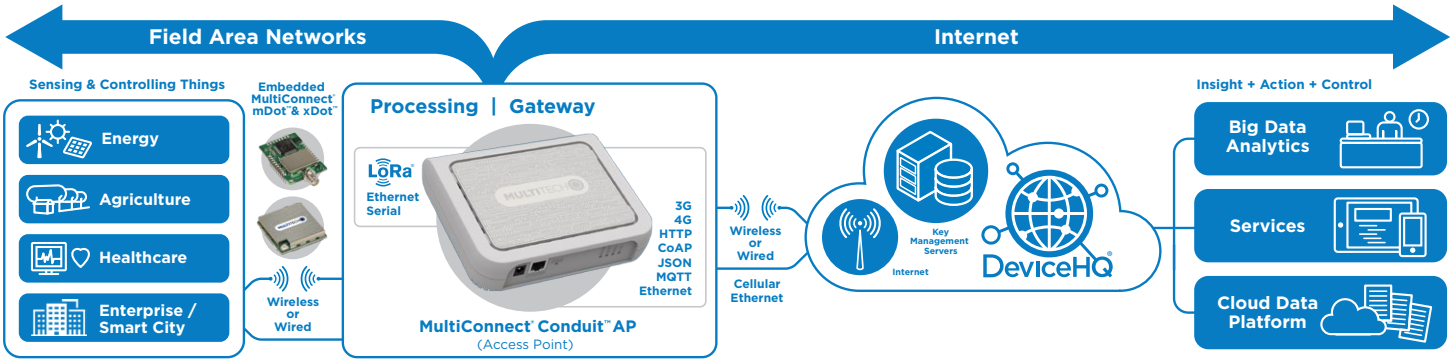
Compatible with leading LoRaWAN Network Servers operating in the cloud, enterprise data center or public operators' core networks, the access point provides you with a choice of 4G-LTE, Ethernet or Wi-Fi IP backhaul.

BENEFITS

- Provide Improved Service Level Agreements for LoRa
- Affordable LoRa connectivity in or around commercial buildings
- Configurable Ethernet, Wi-Fi and 4G-LTE interfaces for Primary or Secondary WAN
- Quick & easy to deploy
- Certified & carrier approved

FEATURES

- 4G-LTE with 2x2 MiMo
- LoRa Omni-Directional internal antenna with +2 dBi gain for 868/915 MHz ISM band
- Ethernet RJ-45 10/100 BaseT for IP backhaul
- Support for maximum 27dBm Transmitter Power Output



HIGHLIGHTS

Application Development Tailored to You

MultiConnect® Conduit™ AP Access Point provides mLinux development environments, offering IT professionals, integrators and developers alike, programming choice and capability to utilize the distributed intelligence capabilities of the Conduit to provide analytics on incoming data and provide more actionable outgoing data.

Design in or Retrofit

With a completely open Linux development environment, our mLinux distribution is based on the Open Embedded/ Yocto project; providing hundreds of open source packages and extensive language support.

This development path is recommended for those wanting to port existing applications, who have strong language preferences, or who need complete firmware control.

The mLinux Distribution Includes:

Operating System: Linux 3.12 Kernel, Yocto 1.6

Language Support: Java, Ruby, Perl, Python, C/C++, PHP, C# and JavaScript

Packages: SQLite (Database), Ligttpd (Web Server), BusyBox (Core Utilities)

SPECIFICATIONS

Model	MTCAP-Lxxx			MTCAP-H5
	AT&T/T-Mobile	Europe	Verizon	
Cellular Performance	LTE 3GPP Release 9 (100 Mbps peak downlink/50 Mbps peak uplink)			HSPA+
	with HSPA+ 21/GPRS fallback	with HSPA+ 42/GPRS fallback	(No fall back)	
Cellular Frequency Band (MHz)	4G: 700(B17)/ 850(B5)/ AWS1700(B4)/ 1900(B2) 3G: 850(B5)/ 1900(B2) 2G: 850/1900	4G: 800(B20)/ 1800(B3)/2600(B7) 3G: 850(B5)/ 900(B8)/2100(B1) 2G: 900/1800	700(B13)/ AWS1700(B4)	3G: 850/900/1700 (AWS)/1900/2100 2G: 850/900/1800/1900
Packet Data	Up to 100 Mbps downlink, Up to 50 Mbps uplink			21 Mbps downlink, 5.76 Mbps uplink
Processor & Memory	ARM9 processor with 32-Bit ARM & 16-Bit Thumb instruction sets • 400 MHz • 16K Data Cache • 16K Instruction Cache • 128X16M DDR RAM • 256 MB Flash Memory			
LoRa Radio Frequency	915 / 868 MHz ISM LoRa proprietary Digital Spread Spectrum radio technique			
Input Power	5VDC at 1.7 A			
Power RF Output				
Max Transmitter Power Output	27 dBm @ 868 MHz / 20 dBm @ 915 MHz maximum output power before antenna			
Wi-Fi	Wi-Fi Alliance certified 802.11b/g/n - 1x1 @2.4 GHz Client mode only with EIRP conducted power of 20dBm (100mW)			
Integral Antenna Systems	Cellular (diversity), LoRa and Wi-Fi			
Connectors				
Ethernet	RJ-45 Ethernet 10/100 port			
Cellular	Internal PCB Antennas			
SIM	USIM			
Physical Description				
Dimensions (LxWxH)	165 x 133 x 32 mm			
Weight	1.36 kg			
Chassis Type	PC-ABS			
Environmental				
Operating Temperature	-10° to +60° 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 301 489-3 V1.6.1 (2013-08), EN 301 489-7 V1.3.1 (2005-11), EN 301 489-1 V1.9.2 (2011-09), EN 301 489-24 V1.5.1 (2010-10). Canada: ICES-003			
Radio Compliance	FCC Part 22,24,27 EN62311, EN301 511, EN301 908-1-2, EN301 908-1-13, EN300-220			
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			

SOFTWARE SPECIFICATIONS

mLinux

Open source embedded Linux distro based on the Yocto Project

Tool chain for creating custom images

WAN connection via Ethernet or cellular

Cellular PPP, DHCP client and server

Firewall configuration via iptables

Out of the box support for C, C#, C++, Java, Perl, Python, Javascript, Node.js, Ruby

Lighttpd web server

opkg package manager with limited package feed

Basic router functionality built-in with Linux

Four configurable LEDs

ORDERING INFORMATION

LTE Models

Model	Description	Region
MTCAP-LAT1-915-002L-US	LTE mLinux Programmable Access Point w/Wi-Fi, w/US Accessory Kit (AT&T)	US
MTCAP-LVW2-915-002L-US	LTE mLinux Programmable Access Point w/Wi-Fi, w/US Accessory Kit (Verizon)	US
MTCAP-LEU1-868-002L-EU-GB	LTE mLinux Programmable Access Point w/Wi-Fi, w/EU/UK Accessory Kit	EMEA
MTCAP-LEU1-868-001L-EU-GB	LTE mLinux Programmable Access Point w/EU/UK Accessory Kit	EMEA

HSPA+ Models

Model	Description	Region
MTCAP-H5-868-002L-EU-GB	HSPA+ mLinux Programmable Access Point w/Wi-Fi, w/EU/UK Accessory Kit	EMEA
MTCAP-H5-868-001L-EU-GB	HSPA+ mLinux Programmable Access Point w/EU/UK Accessory Kit	EMEA

Non-cellular Models

Model	Description	Region
MTCAP-915-002L-US	Ethernet mLinux Programmable Access Point w/Wi-Fi, w/US Accessory Kit	US

Go to 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

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