About the Conduit® AP 300 Series Access Point

Conduit AP 300 Series (MTCAP3) securely connects thousands of LoRaWAN® wireless IoT sensors to the cloud using the LoRaWAN® protocol. The Conduit AP Access Point packet forwarding gateway offers Ethernet and Cellular Wide Area Networks seamless connectivity options to connect to Cloud based applications in centrally located data centers.

Intended Use

The Conduit AP is designed for indoor use and industrial applications, such as smart buildings, retail spaces, agricultural environments, and other deployments where reliability and secure long-range data communication is essential.

MTCAP3 Ordering Options

Ordering Part Number	Description	Cellular Region
MTCAP3-EN-A23UEA-LWM.R1	Ethernet-only mPower programmable access point with LoRa 915 MHz and external LoRa antenna	Australia Canada New Zealand United States
MTCAP3-EN-A23UEA-DWM.R1	Ethernet-only mPower programmable access point with LoRa 915 MHz	
MTCAP3-LNA7D-A23UEA-LUM.R1	LTE Cat 4 mPower programmable access point with LoRa 915 MHz and external LoRa antenna	Canada United States
MTCAP3-LNA7D-A23UEA-DUM.R1	LTE Cat 4 mPower programmable access point with LoRa 915 MHz	
MTCAP3- L4G2D-A23UEA-LUM-BAC	LTE Cat 4 mPower/BACnet programmable access point with LoRa 915 MHz and external LoRa antenna	
MTCAP3-L4G2D-A23UEA-DUM	LTE Cat 4 mPower programmable access point with LoRa 915 MHz and internal LoRa antenna	Australia Canada New Zealand European Union United Kingdom United States
MTCAP3-L4G2D-A23UEA-LUM	LTE Cat 4 mPower programmable access point with LoRa 915 MHz and external LoRa antenna	
MTCAP3-L4G2D-A23EEA-DEM	LTE Cat 4 mPower programmable access point with LoRa 868 MHz and internal LoRa antenna	
MTCAP3-L4G2D-A23EEA-LEM	LTE Cat 4 mPower programmable access point with LoRa 868 MHz and external LoRa antenna	
MTCAP3-L4G2D-A23EEA-LEM-BAC	LTE Cat 4 mPower/BACnet programmable access point with LoRa 868 MHz and external LoRa antenna	European Union United Kingdom
MTCAP3-LEU7-A23EEA-LEM.R1	LTE Cat 4 mPower programmable access point with LoRa 868 MHz and external LoRa antenna	
MTCAP3-LEU7-A23EEA-DEM.R1	LTE Cat 4 mPower programmable access point with LoRa 868 MHz	
MTCAP3-EN-A23EEA-LEM.R1	Ethernet-only mPower programmable access point with LoRa 868 MHz and external LoRa antenna	
MTCAP3-EN-A23EEA-DEM.R1	Ethernet-only mPower programmable access point with LoRa 868 MHz	

Specifications

Specifications for 915 MHz Models

Category	Description
General	
Standards	LoRaWAN 1.0.4 specifications
	LTE FDD Cat 4, 3GPP release 11 compliant
	WCDMA/GSM fallback
LoRa radio frequency	915 MHz ISM band

Category	Description
Cell radio frequency bands (MHz) for L4G2D	4G LTE FDD (Europe): B3 (1800), B7 (2600), B8 (900), B20 (800)
	2G (Europe fallback): B2 (1900), B3 (1800), B5 (850), B8 (900)
	4G LTE FDD (AT&T): B2 (1900), B4 (AWS1700), B12 (700), B14 (700)
	4G LTE FDD (Verizon): B2 (1900), B4 (AWS1700), B13 (700)
	4G LTE FDD (Anterix): B8-US (900)
	4G LTE FDD (APAC): B1 (2100), B9 (1800), B18 (800), B19 (850), B26 (850), B28 (700)
	3G: B1 (2100), B2 (1900), B4 (AWS1700), B5 (850), B6, B8 (900), B19 (850)
	2G: B2 (1900), B3 (1800), B5 (850), B8 (900)
	4G LTE FDD bands: B25 (1900)
Cell radio frequency bands (MHz) for LNA7D	LTE FDD: B2 (1900), B4 (AWS1700), B5 (850), B12 (700), B13 (700), B25 (1900), B26 (850)
	WCDMA: B2 (1900), B4 (AWS1700), B5 (850)
Physical Description	
Dimensions	165 (6.5) × 135 (5.3) × 36 (1.4) mm (in)
Weight	0.11 kg (0.24 lb) without antenna
Chassis	PC-ABS
Power Requirements	
Operating voltage	5 VDC @ 2.5A
AC power requirement	Ethernet active, cellular connection established, LoRa RX: 2W
	Ethernet active, cellular connection at maximum transmit power, LoRa RX+TX: 5W
LoRa tx power	Australia and North America: 29.1 dBm maximum EIRP *(includes external LoRa antenna)*
	Japan: 14 dBm maximum EIRP *(includes external LoRa antenna)*
	New Zealand: 29.9 dBm maximum EIRP *(includes external LoRa antenna)*
Environment	
Operating temperature[1]	0 °C to 70 °C (32 °F to 158 °F)
Storage temperature	-40 °C to 85 °C (-40 °F to 185 °F)
Humidity	20%-90%, RH non-condensing
Certifications	
EMC and radio compliance	FCC Part 15 Class B
	FCC Part 15.247 (LoRa)
	FCC 22H, 24E, 27, 90
	RSS130,RSS133, RSS139
	RSS210 (LoRa)
	ASNZ 4268
Safety compliance	UL 62368-1 2nd Edition
	UL / IEC 62368-1

Specifications for 868 MHz Models

Category	Description
General	
Standards	LoRaWAN 1.0.4 specifications
	LTE FDD Cat 4, 3GPP release 11 compliant *(LEU7 models only)*
	WCDMA/GSM fallback
LoRa radio frequency	868 MHz ISM

1 UL listed at 40 °C, limited by AC power supply. Product has been tested to 70 °C excluding power supply.

Category	Description
Cell radio frequency bands (MHz) for L4G2D	4G LTE FDD (Europe): B3 (1800), B7 (2600), B8 (900), B20 (800)
	2G (Europe fallback): B2 (1900), B3 (1800), B5 (850), B8 (900)
	4G LTE FDD (AT&T): B2 (1900), B4 (AWS1700), B12 (700), B14 (700)
	4G LTE FDD (Verizon): B2 (1900), B4 (AWS1700), B13 (700)
	4G LTE FDD (Anterix): B8-US (900)
	4G LTE FDD (APAC): B1 (2100), B9 (1800), B18 (800), B19 (850), B26 (850), B28 (700)
	3G: B1 (2100), B2 (1900), B4 (AWS1700), B5 (850), B6, B8 (900), B19 (850)
	2G: B2 (1900), B3 (1800), B5 (850), B8 (900)
	4G LTE FDD bands: B25 (1900)
Cell radio frequency bands (MHz) for LEU7	LTE FDD: B1 (2100), B3 (1800), B7 (2600), B8 (900), B20 (800), B28A (700)
	WCDMA: B1 (2100), B8 (900)
	GSM: B3 (1800), B8 (900)
Physical Description	
Dimensions	165 (6.5) × 135 (5.3) × 36 (1.4) mm (in)
Weight	0.11 kg (0.24 lb) without antenna
Chassis	PC-ABS
Power Requirements	
Operating voltage	5 VDC @ 2.5A
AC power requirement	Ethernet active, cellular connection established, LoRa RX: 2W
	Ethernet active, cellular connection at maximum transmit power, LoRa RX+TX: 5W
LoRa tx power[2]	Internal antenna models: 12.3–24.8 dBm maximum ERP; maximum ERP is 12.3 dBm for whole band, except 24.8 dBm at 869.525 MHz
	External antenna models: 13.0–25.5 dBm maximum ERP; maximum ERP is 13.0 dBm for whole band, except 25.5 dBm at 869.525 MHz
Environment	
Operating temperature[3]	0 °C to 70 °C (32 °F to 158 °F)
Storage temperature	-40 °C to 85 °C (-40 °F to 185 °F)
Humidity	20%-90% RH, non-condensing
Certifications	
EMC and radio compliance	CE Mark, RED (EU)
	EN 300 220-1 / EN 301 489-1 / EN 301 908-1 (see Declaration of Conformity for details)
Safety compliance	UL/IEC 62368-1

mPower™ Edge Intelligence

mPower™ Edge Intelligence is an embedded software offering to deliver programmability, network flexibility, enhanced security, and manageability for scalable Industrial Internet of Things (IIoT) solutions. mPower represents the unification and evolution of well-established MultiTech smart router and gateway firmware platforms.

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, secure boot, new Cloud management, programmability of custom apps, DI/DO, and more.

Accessories

To find information on accessories for your product, go to https://multitech.com/all-products/accessories/.

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2 ERP = EIRP – 2.15 dB

3 UL listed at 40 °C, limited by AC power supply. Product has been tested to 70 °C excluding power supply.

Contact Information

General Information	info@multitech.com https://multitech.com/contact-us/
Sales	+1 (763) 785-3500 sales@multitech.com
Technical Support Portal	+1 (763) 717-5863 https://support.multitech.com
Website	www.multitech.com
World Headquarters	2205 Woodale Drive Mounds View, MN 55112 USA