ALTA by MONNIT

Remote Monitoring for Business

ETHERNET CELLULAR

ALTA XL® IoT Gateway

General Description

The ALTA XL® IoT Gateway features a powerful wireless transceiver with up to 1 Watt transmission strength, an amplified receiver, and 4G LTE CAT-M1/NB2 cellular technology to backhaul ALTA® Wireless Sensor data. The ALTA XL IoT Gateway can send and receive data communications with ALTA Sensors at 2,000+ feet through 18+ walls in commercial building environments.

You only need a power source and the iMonnit® Cloud Platform to monitor virtually any environment and equipment using Monnit's industry-leading wireless IoT devices. The ALTA XL® IoT Gateway communicates with ALTA Sensors and iMonnit to deliver data and send alerts about various machine, equipment, or area conditions.

The ALTA XL® IoT Gateway is available in two versions: Commercial and Industrial. It's equipped with a 60-hour backup battery and will continue to communicate with iMonnit via its advanced cellular engine transmission in the event of a power outage.

Additionally, the ALTA XL® IoT Gateway comes with an RJ-45 Ethernet jack (commercial version only) for local device configuration. However, it's ideal for applications without a wired Internet connection or with infrastructure dedicated to other resources.

The ALTA XL® IoT Gateway also includes a GNSS location chipset supporting GPS, GLONASS, BeiDou, Galileo, and QZSS satellites. With the proper gateway subscription enabled, the IoT gateway's location data can be collected, viewed, and distributed to iMonnit and additional software via an application programming interface (API).

ALTA XL® IoT Gateway Features

- 4G LTE CAT-M1/NB2 cellular technology
- Wireless range of 2,000+ feet through 18+ walls[1]
- Frequency-Hopping Spread Spectrum (FHSS)
- Best-in-class interference immunity
- Encrypt-RF® Security (256-bit Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- 32,000 sensor message memory[2]
- Over-the-air (OTA) updates (future-proof)
- True plug and play, no hassles for Internet configuration setup
- No PC required for operation
- Local status LEDs with transmission and online status indicators
- Magnetic on/off power button
- AC power supply
- Up to 60-hour battery backup in the event of a power outage
- External magnetic utility switch
- RJ-45 with 10/100BASE-TX Ethernet jack for configuration and server connectivity (commercial version only)
- Location data subscription supported (GPS/GLONASS/BeuDou/Galileo/QZSS)

1 Actual range may vary depending on the environment.

2 Total messages in memory varies with sensor type. (32,000 is for Temperature Sensors. Additional information available at Monnit.com/Support/.

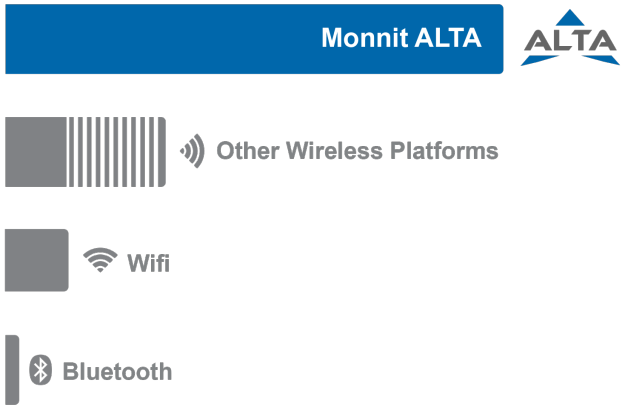
Example Applications

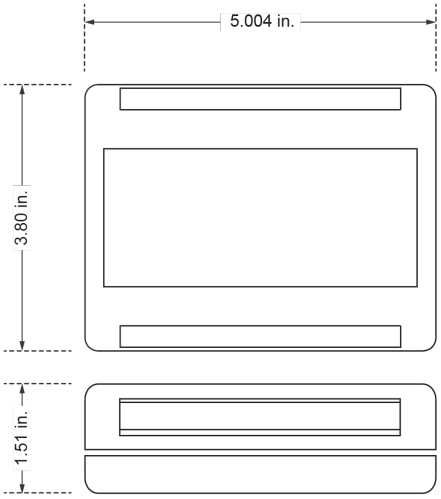
- Remote Location and Asset Monitoring
- Shipping and Transportation
- Agricultural Monitoring
- Vacant Property Management
- Vacation Home Property Management
- Construction Site Monitoring
- Data Center Monitoring

IMPORTANT! Before purchasing. you need to verify that your cellular provider is compatible with our gateway. Please click the link below to view the checklist you need to share with your provider.

Provider Requirements

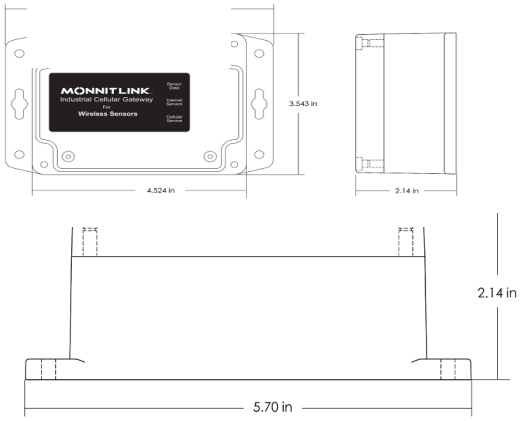
Wireless Range Comparison





ALTA XL® IoT Gateway Specifications	
Models	
	MNG3-9-CME-CCE-(OPTIONS)
Cellular	
Cellular Technology	LTE CAT-M1 / NB2 module for global use in bands 1,2,3,4,5,8,12,13,18,19,20,25,26,27,28,66,71,85
SIM Card Compatibility	Mini-SIM (3FF) 15 mm x 12 mm x 0.76 mm
Cellular Antenna Type	Connector: SMA / Gain: 4.0 dBi
GNSS Antenna Type	Internal Mount Active (28db) Ceramic Patch
GNSS Satellites Supported	GPS, GLONASS, BeiDou, Galileo, and QZSS
Ethernet	
Hardware	IEEE 802.3 10/100BASE-TX compatible controller
Operation	Full- and Half-Duplex
Cross-over Correction	Automatic MDI / MDI-X
Protocols Supported	DHCP, DNS, UDP, TCP, SNTP, MSVR Proprietary
Power	
Input Power	5.0 VDC @ 1 A
Battery Backup	Battery Type: 2900mAh Rechargeable Lithium Polymer
	Battery Duration: Up to 60 hours
	Battery Cycle Life: 500 times
	Battery Safety: IEC62133
Mechanical	
Power Connector	2.1 x 5.5 mm
Ethernet Connector	RJ-45
LEDs	Internet Connectivity, Gateway Services, ALTA® Network Status
Enclosure	
Material	ABS
Dimensions	5.004 x 3.8 x 1.51 in.
Weight	7 ounces
Environmental	
Operating Temperature	+5 to +45°C (41 to 113°F)
Storage Temperature	-20 to +60°C (-4 to 140°F)
ALTA XL Wireless	
Transmit Power	+30dBm or 1W
Antenna Type	Connector: RP-SMA / Gain: 3.0 dBi (Antenna EIRP: 32.6dBm or 1.8W rating)
Wireless Range	2,000+ ft. non-line-of-sight [1]
Security	Encrypt-RF® (256-bit Diffie-Hellman key exchange and AES-128 CBC)
Device Memory	Up to 32,000 sensor messages (Sensor messages will be stored in the event of an Internet outage and transferred when the connection is restored.)
Certifications FC CE Industry Canada	Safety: IEC 62368-1 EMC: FCC 47 CFR Part 15, subpart B and ICES - 001 Issue 6; RF: Include Models FCC ID: ZTL-G2XL1 / IC: 9794A-G2XL1 and FCC ID: XMR202007BG95M6 / IC:10224A-2020BG95M6)

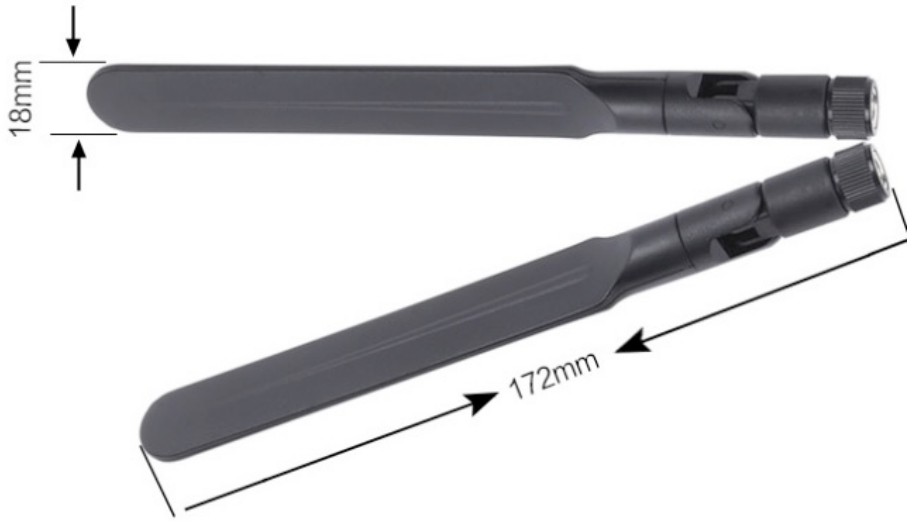
[1] Actual range may vary depending on the installation environment.



ALTA XL® Industrial IoT Gateway Specifications

Models	
Cellular	MNG3-9-CME-IN-(OPTIONS)
Cellular	
Cellular Technology	LTE CAT-M1 / NB2 module for global use in bands 1,2,3,4,5,8,12,13,18,19,20,25,26,27,28,66,71,85
SIM Card Compatibility	Micro-SIM (3FF) 15 mm x 12 mm x 0.76 mm
Cellular Antenna Type	Connector: SMA / Gain: 4.0 dBi
GNSS Antenna Type	Internal Mount Active (28db) Ceramic Patch
GNSS Satellites Supported	GPS, GLONASS, BeiDou, Galileo, and QZSS
Power	
Power Interrupt	Magnetic Reed Switch (see page 3 for details)
Input Power	90-240 VAC @ 0.2A max (15W), 5.9VDC @ 2500mA max
Battery Backup	Battery Type: 2900 mAh Rechargeable Lithium Polymer
	Battery Duration: Up to 60 hours
	Battery Cycle Life: 500 times
	Battery Safety: IEC62133
Mechanical	
LEDs	Sensor Data, Server Status, Cellular Status
Device Memory	Up to 32,000 sensor messages (Sensor messages will be stored in the event of an Internet outage and transferred when the connection is restored.)
Enclosure	Polycarbonate, NEMA 1, 2, 4, 4x, 12 and 13 rated, sealed, and weatherproof
Weight	16.9 ounces
Environmental	
Operating Temperature	-20 to 55°C (-4 to 131°F)
Charging Temperature	0 to 45°C (32 to 113°F)
Storage Temperature	-20 to +60°C (-4 to 140°F)
ALTA XL Wireless	
Transmit Power	+30dBm or 1W
Antenna Type	Connector: RP-SMA Gain: 3.0 dBi (Antenna EIRP: 32.6dBm or 1.8W rating)
Wireless Range	2,000+ ft. non-line-of-sight [1]
Security	Encrypt-RF® (256-bit key exchange and AES-128 CBC)
Certifications	Safety: IEC 62368-1 EMC: FCC 47 CFR Part 15, subpart B and ICES - 001 Issue 6; RF: Include Models FCC ID: ZTL-G2XL1 / IC: 9794A-G2XLC and FCC ID: XMR202007BG95M6 / IC:10224A-2020BG95M6)

[1] Actual range may vary depending on the installation environment.



Cellular Antenna (Extended Details)

Frequency Range	698-960/ 1710-2700(MHz)
Gain	5 dBi
VSWR	2.5 Max
Polarization	Vertical
Impedance	50 (Ω)
Connector Type	SMA male
Antenna Length	172 mm / 6.77 inch
Type	Omni-directional, Multi-band antenna

ALTA Antenna (Extended Details)

Frequency Range	902-946 (MHz)
Gain	3 dBi
VSWR	1.8 Max
Polarization	Vertical
Impedance	50 (Ω)
Connector Type	RP-SMA male
Antenna Length	210 (mm) / 8.26 inch
Type	Omni-directional dipole antenna

USING THE INDUSTRIAL IoT GATEWAY ON/OFF AND UTILITY SWITCHES

The ALTA XL Industrial IoT Gateway has a magnetic On/Off power switch and utility switch. To operate either button or reed switch, use the magnet that shipped with the gateway. To use, simply place the provided magnet to the touch points on either side of the gateway (highlighted in red below).

Left side: Magnetic power on/off button

Users will receive one of the two magnets.

Right side: Magnetic utility button

Commercial-Grade Sensors

Monnit commercial-grade wireless sensors are designed for applications in ordinary environments (normal room temperature, humidity, and atmospheric pressure). Do not subject these sensors to the following, as these environmental aggressors could degrade the device and its performance, leading to failures and burnout:

- Corrosive or deoxidizing gas, e.g., chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, and nitric oxide
- Volatile or flammable gas
- Dusty conditions
- Extremely low or high pressures
- Wet or excessively humid locations
- Places where saltwater, oils, chemical liquids, or organic solvents are routinely present
- Applications/locations prone to excessive or strong vibration
- Other sites where similar hazardous conditions exist

Use these products within the Monnit-specified temperature range. Higher temperatures could deteriorate both the product and its functionality.

For more information about our products or to place an order, please contact our sales department at 801-561-5555. Visit us on the web at www.monnit.com.

Industrial-Grade Gateways | Type 1, 2, 4, 4X, 12, and 13 NEMA-Rated Enclosure

Industrial gateways are enclosed in reliable, weatherproof NEMA-rated enclosures. Our NEMA-rated enclosures are constructed for both indoor or outdoor use and protect the gateway circuitry against the ingress of solid foreign objects like dust and the damaging effects of water.

- Safe from falling dirt
- Protects against wind-blown dust
- Protects against rain, sleet, snow, splashing water, and hose-directed water
- Increased level of corrosion resistance
- Remains undamaged by ice formation on the enclosure

WARNING: Opening the waterproof housing to access the SIM socket or internal utility button will require care to correctly seal the housing. Alternately tighten all screws evenly until achieving a torque of 0.4 N*M or 3.5 in*lbs per screw. Failing to do this may cause the lid to incorrectly seal and the product could be damaged by environmental factors.

MONNIT

Monnit Corporation
3400 South West Temple • Salt Lake City, UT 84115 • 801-561-5555
www.monnit.com

Change Log

Revision	Author	Date (yyyy/mm/dd)	Change
1		2023/1/19	Original release.
2			
3			