Remote Monitoring for Business

ALTA ADVANCED EDGE GATEWAY

General Description

ALTA Advanced Edge Gateway is a feature rich gateway from Monnit. With ever-increasing data generated by billions of "things" that are now part of the Internet of Things, decentralizing the processing of that data to close proximity of the "things" allows for spontaneous analytics, instant action based on monitored metrics and the support of enhanced situation-based applications. Able to support custom edge based IoT applications the ALTA Advanced Edge Gateway is ideal for IoT OEMs and ISVs. Additionally, the Advanced Edge Gateway deploys as an MQTTS client, allowing data to be sent to MQTT brokers hosted on platforms such as Amazon AWS, Microsoft Azure, IBM Watson, GCP, or to a user's own broker. The gateway includes a local web interface for configuration. As with all ALTA gateways, this new gateway supports Monnit's line of 80+ ALTA long range wireless sensors.

Principles of Operation

Monnit's ALTA Advanced Edge Gateway is a sensor-to-server solution that securely delivers IoT data to any mainstream cloud provider, such as Amazon AWS, or a proprietary MQTTS server. The device addresses requests for economical hardware that allows rapid deployment of Monnit's low-cost wireless sensors and direct transmission of sensor data to the cloud.

The Edge Gateway features a custom integrated iMonnit Express 4.0 software for simple sensor network configuration, parameterization (i.e., check-ins and measurement thresholds), visualization, and setup for MQTT cloud. The Ethernet-based gateway is customizable for MQTT topics and message formats; integrated macros permit users to specify their data configuration, e.g., JSON format. The gateway employs MQTTS to securely collect and transmit data to a designated cloud server(s). The gateway's integrated macros streamline data management by allowing users to configure data presentation, e.g., JSON or XML.

ALTA Advanced Edge Gateway Features

- Wireless range of 1,200+ feet through 12+ walls *
- Frequency Hopping Spread Spectrum (FHSS)
- Best in class interference immunity
- Encrypt-RF® Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Up to 5,000 sensor message memory per sensor
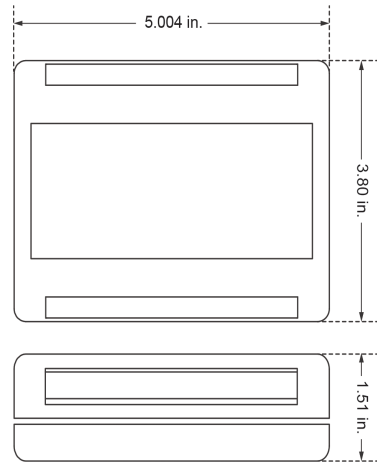- Local status LEDs with transmission and online status indicators
- AC power supply

  * Actual range may vary depending on environment.

Wireless Range Comparison

Monnit ALTA

Other Wireless Platforms

Wifi

Bluetooth

Note - The following sensors support the Advanced Edge Gateway:

Temperature	Dry Contact	Water Detect	Open/Close
Button Press	G-Force Snapshot	Light Meter	Carbon Monoxide
High Temperature	Humidity	Low Temperature	Ultrasonic
Resistance	0-5 VDC Meter	0-10 VDC Meter	Tilt
Water Rope	Pressure: 50 PSI	Pressure: 300 PSI	Duct Temperature
Thermocouple	Pulse Counter	Digital Temperature	20 Amp Current Meter
150 Amp Current Meter	Vibration Meter	PIR Motion Detector	Air Quality PM 2.5
Differential Pressure 500 Pa	Carbon Dioxide	200 VDC Meter	Air Velocity
Vehicle Detection	500 AC Voltage Meter	200 VDC Voltage Detect	Propane Tank Level
G-Force Max & Avg.	500 Amp Three Phase Current Meter	Tilt Detection	

ALTA Advanced Edge Gateway Specifications

Models	
Ethernet	MNG2-9-EDG-CCE
Processor	
CPU	Cortex-A53
RAM	1 GB LPDDR2 SDRAM
Disk	16 GB
Operating System	Ubuntu Linux
Power	
Input Power	5.0 VDC @ 2.5 A
Max Input Voltage	5.5 VDC
Mechanical	
LEDs	Connectivity, Power, Cloud Services, Network Status
Enclosure	ABS
Dimensions	5.004 x 3.8 x 1.51 in.
Weight	7 ounces
Environmental	
Operating Temperature	0 to +50°C (32 to 122°F)
ALTA Wireless	
Transmit Power (EIRP)	50 mW (900 MHz), 25 mW (868 MHz), 10 mW (433 MHz)
Antenna Type	Connector: RPSMA Gain: 3.0 dBi
Wireless Range	1,200+ ft. non-line-of-sight *
Security	Encrypt-RF® (256-bit key exchange and AES-128 CBC)
Certifications	(Certifications Pending) RF: 900 MHz product includes model FCC ID: ZTL-G2SC1 / IC: 9794A-G2SC1 868 MHz product includes Module G2SC1 (IEC 300 220-1, -2); 433 MHz product includes Module G2SC2 (IEC 300 220-1,-2)

* Actual range may vary depending on environment.

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Change Log

Date	Change	Reason	Modified By
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