



ALTA ADVANCED EDGE GATEWAY

General Description

ALTA Advanced Edge Gateway is a new, 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 new 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, or to a user’s own broker. This device can support a maximum of 100 sensors on a 10-minute heartbeat. 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

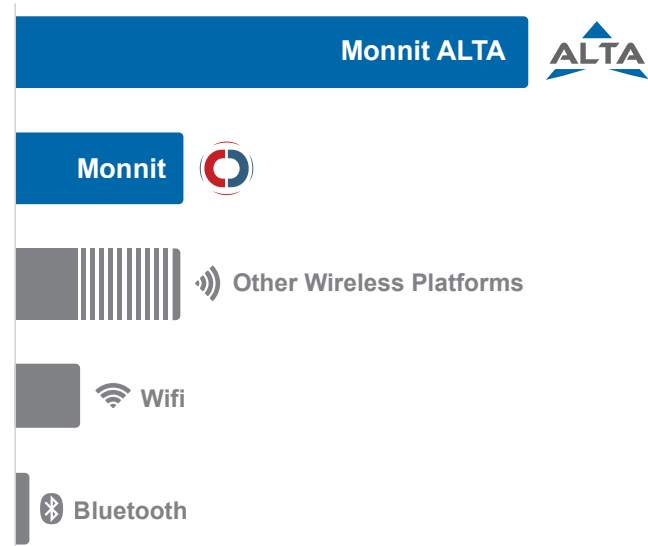
Monnit’s ALTA Advanced Edge Gateway is a sensor-to-server solution that securely delivers IoT data to any mainstream cloud provider, such as Amazon AWS, or a proprietary MQTTS server. The device addresses requests for economical hardware that allows rapid deployment of Monnit’s low-cost wireless sensors 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 the designation of MQTT brokers. The Ethernet-based gateway is customizable for MQTT topics and message formats; integrated macros permit users to specify their data configuration, e.g., JSON file 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

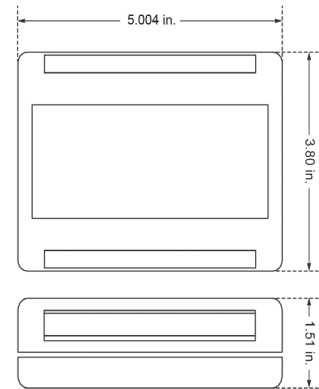
- Wireless range of 1,200+ feet through 12+ walls *
 - Frequency Hopping Spread Spectrum (FHSS)
 - Improved interference immunity
 - Encrypt-RF® Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
 - Up to 5,000 sensor message memory per sensor
 - Local status LEDs with transmission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

Wireless Range Comparison



Note - The following sensors support the Advanced Edge Gateway:

Temperature	Voltage Meter 0- 200 VDC	Water Temp.	Duct Temp.
Thermocouple	Open/Close	Water Rope	Dry Contact
Humidity	Current Meter	High Temp.	Low Temp.
Activity Detection	Light Sensor	Impact Detect	Air Quality-PM Meter
Voltage Detection - 200 VDC	Carbon Dioxide (CO2)	Infrared Motion	Voltage Detection - 500 VAC
Voltage Meter - 0-500 VAC	0-20mA Cur- rent Meter	Pulse Counter	Button Press
Tilt	Tilt Detection	Water Detect	Water Puck



ALTA Advanced Edge Gateway Specifications

Models

Ethernet	MNG2-9-EDG-CCE
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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
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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)
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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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