ALTA by MONNIT

Remote Monitoring for Business

ALTA® Wireless Site Survey Tool

General Description

The ALTA® Wireless Site Survey Tool helps you plan the placement of ALTA Wireless Sensors by measuring the strength and quality of the radio frequency (RF) signal from an ALTA Gateway.

Key Features

- Measures the strength and quality of the RF signal from an ALTA® or ALTA XL® Gateway.
- Reports: Pass, Poor or Fail

Principles of Operation

The ALTA® Site Survey Tool helps you plan the placement of ALTA Wireless Sensors by measuring the strength and quality of the radio frequency (RF) signal from an ALTA® Gateway or ALTA XL® Gateway. With the Site Survey Tool, you can assess every square foot of your facility or site for the ideal locations to install your sensors. After a quick signal test, the tool's LCD reports the average TRUESIGNAL™ and Pass, Poor, or Fail based on your preferred signal reliability setting. The TRUESIGNAL is calculated from the wireless signal strength and the amount of wireless interference measured at the test location. This data will help you optimize data communications throughout your Internet of Things (IoT) network.

The iMonnit dashboards will also present the data points related to your testing. You can configure the tool's customizable test settings and review an advanced reading log online at iMonnit.com. Choose your signal reliability settings—Mission-Critical, Strong, or Functional—according to your environment, use case, and how frequently and reliably your sensors need to send data.

Example Applications

- Environments with expansive open spaces of more than 1,200 feet (400 meters) and fewer obstructions, such as greenhouses, petrochemical plants, agriculture, etc.
- Buildings with extensive concrete, rebar, and square footage, such as high rises, skyscrapers, sports and concert arenas, stadiums, schools, hospitals, churches, etc.
- Warehouses with many obstructions, shipping containers, and tractor-trailer yards

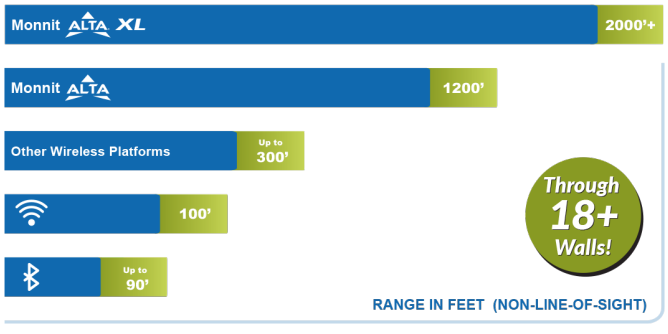
Features of Monnit ALTA Sensors

- Wireless range of 2,000+ feet through 18+ walls[1]
- Frequency-Hopping Spread Spectrum (FHSS)
- Best-in-class interference immunity
- Best-in-class power management for longer battery life[2]
- Encrypt-RF® Security (Diffie-Hellman Key Exchange + Advanced Encryption Standard (AES)-128 Cipher Block Chaining (CBC) for sensor data messages)
- Sensor logs 2000 to 4000 readings if the gateway connection is lost (non-volatile flash, persists through power cycling):
  - 10-minute Heartbeats = ~ 22 days
  - 2-hour Heartbeats = ~ 266 days
- Automatic over-the-air updates to sensor firmware (future-proof)
- Free iMonnit Basic Online Wireless Sensor Monitoring and Notification System to configure sensors, view data, and send alerts via SMS text, email, and voice call

1 Actual range may vary depending on the environment and gateway.

2 Battery life is determined by the sensor reporting frequency and other variables. Other power options are also available.

Wireless Range Comparison



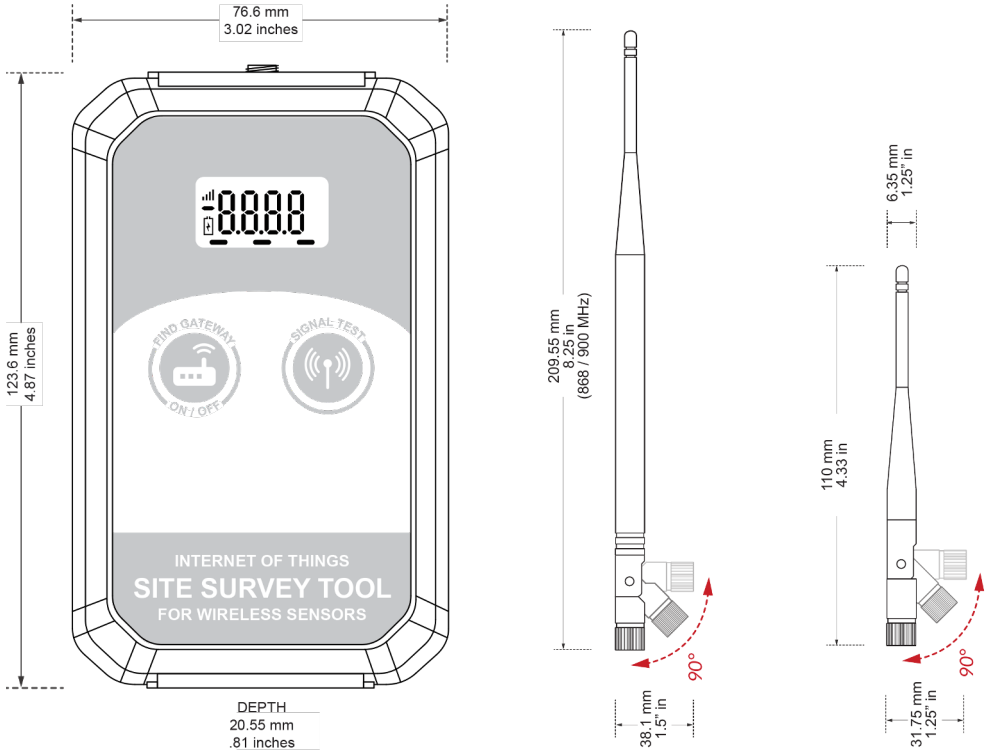
Technical Specification | ALTA® Wireless Site Survey Tool		
Site Survey	Battery	2x 1.5V AAA Alkaline, 1500 mAh, (standard)
	Battery Life	200 hours of active testing
	Operating temperature range with given power sources[1]	-18°C to 55°C (0°F to 130°F) - AAA Alkaline Batteries -25°C to 60°C (-13°F to 140°F) - AAA Lithium L91 Batteries
	Operating humidity	5 to 85% RH (non-condensing)
	Wireless antenna type	1/2-wave dipole with RP-SMA connector
	Weight	5.5 ounces (155 g)
ALTA Wireless	Data logging	Sensor logs 2000 to 4000 readings if gateway connection is lost (non-volatile flash, persists through power cycling): 10-minute Heartbeats = ~22 days - 2-hour Heartbeats = ~266 days
	Wireless protocol	ALTA Proprietary Frequency-Hopping Spread Spectrum (FHSS)
	Wireless transmission power (EIRP)	50 mW (900MHz), 25 mW (868 MHz), 10 mW (433 MHz)
	Wireless range	2,000+ ft. through 18+ walls with the ALTA XL® Gateway
	Security	Encrypt-RF® (256-bit key exchange and AES-128 CTR)
General	Battery voltage range	2.0 to 3.8 VDC
	Operating altitude (non-pressurized environments)	-15.2 to 1,982 m (-50 to 6,500 ft)[2]
	Storage altitude (non-pressurized environments)	-15.2 to 3,048 m (-50 to 10,000 ft)[2]
	Operating humidity	5 to 85% RH (non-condensing)
	Certifications	900 MHz sensors: **FCC ID: ZTL-G2SC1** and **IC: 9794A-G2SC1**. 868 and 433 MHz sensors tested and comply with: **EN 55032**: 2015/A11:2020; **EN 55035**:2017/A11:2020; **ETSI EN 300 220** V3.2.1 (2018-06); **ETSI EN 301 489-3** V2.2.0. (2021-11); and **ETSI EN 303 645**. All sensors tested and comply with: **EN 61010-1** and **EN 60950** and meet **RoHS 2015/863** and **REACH 224** (June 2022), according to **IEC 63000**:2016/AMD1:2022.

1. Operating below 0°C (32°F) degrees will reduce battery life.
2. Operating and storage altitude without DC power supply is -30.48 to 9144 m (-100 to 30000 ft).

The tool reports the Signal Percentage: Signal strength and quality as a percentage.

The tool reports the Signal Strength as Pass, Poor, or Fail.

Device Dimensions



The *larger* articulated antenna is a dipole configuration and emulates the behavior of our industrial sensors with their external antenna. If you plan to buy and install **ALTA industrial sensors**, connect the dipole antenna to the ALTA Site Survey Tool.

The *smaller* antenna is a monopole configuration and emulates our commercial sensor with the wire antennas found on the **ALTA compact coin cell and enterprise (AA battery) sensors**. Please connect this antenna if you plan to deploy any ALTA commercial sensors.

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