



AeroScout Rugged Location Receiver

Data Sheet

Overview

AeroScout Rugged Location Receivers enable accurate location solutions in harsh and outdoor environments.

The AeroScout Location Receiver is a hardware component of the AeroScout Visibility System that enables location-based applications in a wireless LAN environment. The AeroScout Rugged line of Location Receivers provide the same robust and sophisticated time difference of arrival (TDOA) measurement capabilities as standard AeroScout Location Receivers, packaged in NEMA-rated housing for the widest variety of environments.



The AeroScout Location Receiver stands out in several ways:

- **Locates any tagged asset using AeroScout's Wi-Fi-based Active RFID tags.**
AeroScout's small, rugged battery-powered tags can be attached to people and to a variety of equipment such as medical devices, manufacturing equipment, vehicles and trailers. Location Receivers receive and process tag information accurately from a long range.
- **Locates standard Wi-Fi clients without hardware or software modifications.**
The AeroScout system also locates standard Wi-Fi clients such as laptops, PDAs and barcode scanners, without the need to tag these assets or introduce client software. This eliminates a major management challenge and enables simple implementation.
- **Accurate real-time location as well as RFID choke-point detection.**
The AeroScout system uses sophisticated algorithms to determine accurate location. With the AeroScout Exciter, the same system also enables tags to be detected, reprogrammed or transfer data messages as they pass through doorways, gates or other choke points.

Rugged Location Receivers extend the use of the AeroScout system to the harshest outdoor environments, where protection from the elements is paramount. Wireless Rugged Location Receivers include integrated 802.11b wireless bridges for the elimination of Ethernet cable runs – especially valuable in outdoor areas and buildings where additional wiring is difficult.

Key Benefits

Designed for Harsh Environments

Rugged Location Receivers are housed in NEMA 4X (IP66) rated enclosures, ensuring that they are water-tight, dust-tight and corrosion-proof in indoor and outdoor settings. In addition, Rugged Location Receivers are verified to work in a wide range of temperatures, from -20°C to +55°C (-4°F to 131°F). For installations with consistently high temperatures, Rugged Location Receiver models offer an optional ventilation unit in the housing.

Integrated Wireless Bridging

The AeroScout Wireless Rugged Location Receiver can communicate with the AeroScout Engine wirelessly using an integrated Wi-Fi bridge – no dedicated location network cabling is required.

Flexible Power and Network Interface Options

Rugged Location Receivers can support AC power or provide power connection provisioned through 802.3af-compliant standard Power over Ethernet. In addition to standard Ethernet network connectivity, the Rugged Location Receiver can also be supplied with a fiber optic interface.

Performance

AeroScout's expertise in wireless signal processing has led to the development of a range of patent-pending algorithms and techniques. Embedded in the Location Receiver, these measure the time of arrival of 802.11b client and AeroScout Tag messages to the nanosecond. Each Location Receiver cell can process over 300 location measurements per second, enough to satisfy even the most demanding applications.

More Key Benefits

Standards-based Products

All AeroScout Location Receivers are fully compliant with IEEE 802.11b standards. Location Receivers do not interfere with the wireless local area network or allow any association of client devices. Even with Wireless Rugged Location Receivers, which provide location-measurement data wirelessly, the incremental volume of network traffic generated is insignificant.

Additional Options

Mounting options include a wall mounting kit and a pole mounting kit. Antenna options include:

- 5.5dBi Omni-directional Antenna
- 8dBi Omni-directional Antenna
- 5dBi Directional antenna
- 8dBi Directional antenna
- 6.5dBi Directional diversity antenna
- 2dBi Omni-directional diversity antenna

Further options include antenna cables and power adapters to fit a variety of installation needs.

For further information on the AeroScout Location Receiver family of products, please download the AeroScout Location Receiver Data Sheet, available at www.aeroscout.com.

Ordering Information

For ordering and pricing information contact AeroScout at info@aeroscout.com and refer to:
BWH1100-W0V0F0 (AeroScout Rugged Location Receiver)
BWH1100-W0V1F0 (AeroScout Rugged Location Receiver with ventilation unit)
BWH1100-W0V0F1 (AeroScout Rugged Location Receiver with fiber optic interface)
BWH1100-W0V1F1 (AeroScout Rugged Location Receiver with ventilation unit and fiber optic interface)
BWH1100-W1V1F0 (Wireless AeroScout Rugged Location Receiver with ventilation option)
BWH1100-W1V1F0R (AeroScout Rugged Location Receiver with root bridge and ventilation option)
BWH1100-W1V1F1R (AeroScout Rugged Location Receiver with root bridge, ventilation option and fiber optic interface)
BWH1100-X (AeroScout Explosion Proof Location Receiver)

Technical Support

Contact AeroScout for support at support@aeroscout.com or at +972 (8) 9363136, extension 116. Additional technical support can be acquired by purchasing one of our fee-based support options.



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Specifications

PERFORMANCE

Outdoor range: up to 200m (600 feet)
Indoor range: up to 60m (180 feet)
Over 300 measurements processed per second per Receiver cell (system capacity also dependent on server processing power)
Patent-pending signal-processing algorithms
Supports standard Wi-Fi (802.11b) clients and AeroScout Tags

PHYSICAL AND MECHANICAL

Dimensions: 380mm x 280mm x 130mm (15" x 11" x 5.1")
Housing: NEMA 4X (IP66) rated enclosure (with optional ventilation unit)
Weight: 4360g (standard), 6820g (wireless)
Temperature: -20°C to +55°C (-4°F to 131°F)
Humidity: 0 to 95%, non-condensing

EXPLOSION PROOF VERSION

Explosion Proof Zone 1 Rugged Location Receiver: ATEX certified, II 2 G EEx d [ia] IIC T5

RADIO

Standard: 2.4GHz direct sequence spread spectrum 802.11b radio
Supports all worldwide Wi-Fi channels (1-14) limited to local regulations
Wireless Rugged model: Additional 2.4GHz 802.11 Cisco 350 Wireless Bridge included (see Cisco site for further specifications)

INTERFACES

Antenna interface: external N-type antenna interface (reverse polarity), including lightning protection. Additional diversity interface is optional.
Network interface: 1 Ethernet (RJ45), optional fiber optic connection.

MANAGEMENT

All settings configured remotely using AeroScout System Manager

POWER SUPPLY

110/220V AC external power connection
Power-over-Ethernet: 802.3af compliant (not available in all configurations)

CERTIFICATION

Radio (Location Receiver unit):
FCC Part 15, sub-part C class B, sub-part B
EN 300-328, EN 300-330, EN 301-489
RSS 210 (Canada)
ARIB STD-T66 (Japan), ARIB STD-33 (Japan)
Safety (Location Receiver unit): CE, cTUVus (EN60950)

WARRANTY

One year limited warranty