

Data Sheet:

# AeroScout Location Engine

Location and visibility for accurate and reliable people and asset information

## Product Description

The AeroScout Location Engine is a software layer of the AeroScout Visibility System, which delivers Unified Asset Visibility applications to the healthcare industry.

The AeroScout Location Engine receives information from Wi-Fi-based Active RFID Tags and standard Wi-Fi networking devices using a suitably designed and implemented WLAN. The system then applies multiple complex algorithms to produce highly accurate and reliable location and status data, in both indoor and outdoor environments.

The sophisticated processing abilities, multiple visibility modes and WLAN compatibility, make it a key component of the most complete and scalable Visibility solution on the market.

## Key Benefits

### Unified Asset Visibility to suit all needs:

The AeroScout Location Engine uniquely processes multiple forms of wireless location and status data over a single, unified infrastructure: accurate real-time location indoors and outdoors, presence detection, egress-point visibility, sensor capabilities and more.

### Architecture

The AeroScout Location Engine can run on either a physical appliance or as a virtual machine.

### Standard Wi-Fi infrastructure:

The AeroScout system utilizes standard wireless networks to keep costs low and enable enterprises to gain more benefits from their existing WLAN. Through integration between the AeroScout Location Engine and all major WLAN

vendors, customers can use standard Wi-Fi infrastructure devices as Active RFID readers to determine location and status – no additional hardware required.

### Visibility of any valuable asset:

The AeroScout Location Engine's advanced algorithms offer the industry's most accurate asset location determination.

Small, battery-powered AeroScout Tags are used to track people and a variety of assets and equipment, as well as standard Wi-Fi client devices such as laptops and tablets.

### Integrated sensor and telemetry capability:

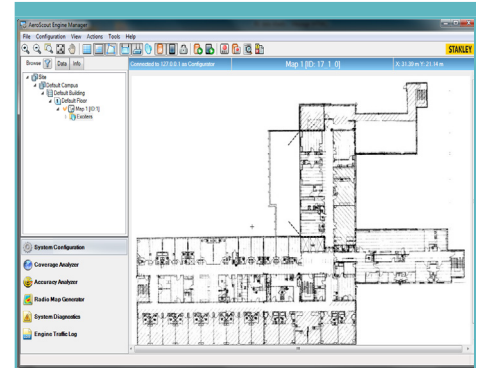
The AeroScout Location Engine processes sensor data received wirelessly from AeroScout tags. Built in options include motion, temperature and humidity sensors. Wired device telemetry capabilities also exist, using a tag interface, extending wireless communication of a wide range of status information to devices without inbuilt wireless functionality.

### Enterprise software for people and asset tracking:

The AeroScout Location Engine interfaces directly with AeroScout's MobileView application platform for delivering and integrating enterprise-class visibility applications.

### Accurate, reliable indoor and outdoor location:

AeroScout uniquely provides real-time location based on the Received Signal Strength Indication (RSSI) method. This enables accurate location determination within indoor Healthcare environments and outdoor surroundings.



## Functional Highlights

AeroScout Location Engine is the only location source to provide:

- Indoor & Outdoor visibility
- RSSI
- Egress Point detection
- Accurate, reliable Wi-Fi-based Active RFID
- Automatic Calibration
- Enhanced Ultrasound location accuracy
- Enhanced Infant and Patient protection capabilities

### Advanced visibility capabilities:

In addition to Wi-Fi based real-time location, the AeroScout Location Engine can process a variety of other location and visibility data. This includes immediate egress point detection, and room and bay level detection using AeroScout Exciters. These capabilities enable a wide range of applications to meet specific customer needs.

## Key Functionality

### Location Determination

- Processing and analysis of signal strength and presence data returned from standard Wi-Fi Access Points
- Patented dynamic online synchronization scheme to ensure accuracy
- Patented multi-path reduction algorithms that significantly reduce errors from signal reflections
- Floor separation capability for multi-floor installations
- Industry's leading proven Wi-Fi location accuracy, typically 5-10 meters, depending on the environment and WLAN infrastructure
- Fully integrated with all major enterprise WLAN systems, without requiring proprietary upgrades
- Automatic calibration functionality improves manual calibration for improved location accuracy, delivering real-time adjustments to physical changes in the monitored environment

### Management

- Centralized management, analysis and configuration of multiple applications and visibility modes, supporting all AeroScout hardware
- On-demand location request processing for client applications
- Event management tool for configuring system and application level events, including alerting and notification
- Intuitive graphical user interface (GUI) for management of asset location and presence data

- Map import and setup functions.
- Supports delivering of centralized wireless firmware upgrades to AeroScout infrastructure devices

### Additional Features

- Sophisticated AeroScout Analyzer software tool for analysis of location accuracy, Wi-Fi coverage and system diagnosis
- Ability to process sensors, telemetry and other advanced data retrieved and transmitted by tags
- Graphical installation tool for easy, intuitive system setup and performance management
- High-availability failover mechanism

## AeroScout Engine Manager Components

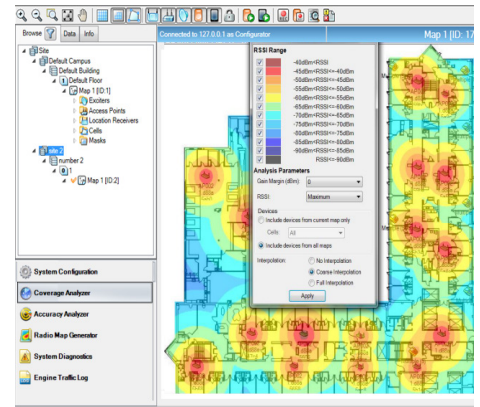
AeroScout Location Engine 5.0 brings together the System Manager and System Analyzer into a single user interface. This interface introduces intuitive menu commands quickly accessed via the 'Browse Tree'.

AeroScout Location Engine 5.0 also extends the capabilities of the AeroScout Asset Visibility System, supporting solutions for Infant protection and enhancing accuracy and coverage of solutions requiring room and bay level separation.

### System Configuration

The main administration and configuration tasks are centralized in this module. Site maps can be imported and managed, including creating the system topology and configuring of remote AeroScout infrastructure devices.

Additional administration functions include recording location data, event management and site monitoring.



### Coverage Analyzer

This analysis module provides Received Signal Strength, Synchronization Source and Coverage Density analysis based on RF recording files.

### Accuracy Analyzer

This analysis module provides Accuracy Map, Tracking, and Map Separation analysis based on RF recording files.

### Radio Map Generator

This module permits generation adjustment and analysis of Radio Maps.

It also provides Radio Map analysis options including Radio Map Ambiguity and Radio Map Visualization analysis.

### System Diagnostics

This module is designed to analyze configurations and recordings to pinpoint errors that are otherwise difficult to detect.

### Engine Traffic Log

This module permits the display of data contained within the RF recording files, allowing analysis of the information.