

Overview

Experience cutting-edge RTLS hardware and middleware infused with state-of-the-art environmental sensing technology through Sentrax. Achieve unrivaled precision in location tracking with Sentrax's cost-effective BLE Angle of Arrival (AoA) RTLS system.

Ideal for healthcare, manufacturing, warehousing, smart buildings, retail, transportation, and public security, our energy-efficient Bluetooth Low Energy-based solution delivers real-time information.

Sentrax's proprietary algorithms and cutting-edge hardware it can seamlessly integrate with other applications, ensuring clients benefit from a highly dependable and accurate system for tracking both location and environment.



AoA Benefits



Real-Time Tracking



Advanced Environmental Data



Increases Safety & Security



Precise Tracking of Objects, People & Assets

Sentrax's Angle of Arrival RTLS caters to diverse business and industry requirements. It offers an optimal solution for tracking lone workers, the elderly, SOS calls, emergency management, evacuation guidance, workflow integration, valuable assets, and hygiene monitoring. With scalability, it suits businesses of all sizes and future-proof functionality.

AoA Beacons/Tags



PINIX TOW-1
Asset AoA BLE Beacon/
Tags with MEMS



PINIX TOK-1
Smart Badge BLE Tag
with MeMs

Sentrax BLE AoA Tags Multi-Protocol Beacon Technology

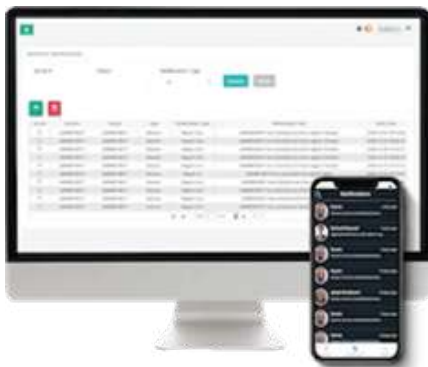
AoA Locator & Scanner



ZENIX LON-2
Indoor AoA BLE Locator & gateway with Air Quality &
Climatic Sensor

AoA BLE Scanner, PoE, Wi-Fi, Embedded MIPS processor, Antenna array, Temperature, Humidity, Pressure sensors, TVOC Air quality sensor, Wall mount, Indoor casing advanced filtering for accurate data. Edge computing algorithm for increased efficiency

Solix Suite



SOLIX Devices Management & Connectivity Software

Monitor all your BLE beacon/Tags, Locator/Scanners and Sensor data in one place with Solix IoT Platform

Cloud on site server-based devices management, configuration and system integration Platform.

SOLIX Platform manages and configures the deployed system. Data Streaming via APIs and MQTT

ZENIX LON-2

Indoor AoA BLE Locator-Gateway



Zenix LON-2 is an innovative BLE Angle of Arrival locator & gateway device with Edge computing capability and advanced positioning algorithm.

The Locator offers a wide area of coverage and comes equipped with multiple climatic sensors for environment sensing. Connect this with your higher level application using Solix Suite, advanced APIs, and MQTT.

Sentrax AoA Locator tracks precise locations, senses the environment. Our gateway devices seamlessly integrate IoT systems, drive efficiency, business success with cutting-edge tech.

Main Features

AoA BLE Scanner, PoE, Wi-Fi, Embedded ARM processor, Antenna array, Temperature, Humidity, Pressure sensors, TVOC Air quality sensor, wall mount, Indoor casing

Applications

- Sub-meter level BLE Tag Tracking
- Locator Edge Compute Companion
- Asset Tracking
- People Tracking
- Health check monitoring
- Climatic & Air Quality Monitoring

Configuration Portal



The ZENIX Configuration Portal is an embedded web page that allows easy configuration and management of device settings. User can conveniently monitor device status, modify parameters, the backup/restore configurations, and perform firmware upgrades through this portal.

ZENIX LON-2 Specifications

ENCLOSURE

Dimensions

- 240 × 240 × 60mm

Type

- BLE 5.1 AoA Scanner

Accessories

- Wall Mount

Material

- ABS UL94V-0

Protection

- Class IP40

Weight

- 625g

ACCESSORIES

- DC 12V/2A Adapter
- POE Communication Cable
- Wall/Ceiling Mount

HARDWARE - CONNECTIVITY

Supply Rating

- 24 Watts (12 V)

Communication

- RJ45 - Ethernet (POE)
- Wi-Fi - 2.4GHz b/g/n

Power Options

- RJ45 - POE 802.3at
- DC Adapter - 12 V/2A

OPERATING ENVIRONMENT

Temperature Range

- 0°C to 60°C

Operating Humidity

- 90%

SOFTWARE - CONNECTIVITY

- Sentrax's Solix Platform, MQTT*

CERTIFICATIONS

CE **, FCC***

SENSORS AND INTERFACES

Azimuth Angle

- 0 - 359 deg (± 5 deg)

Elevation Angle

- 0 - 90 deg (± 5 deg)

Humidity

- 0 - 100 %RH

Temperature

- 0 - 65°C

TVOC Sensing

- 1 - 500 VOC Index points

Button

- 1 user reset button

LED

- 2 Red LEDs
- 2 Green LEDs

Elevation Angle

- 0 - 90 deg (± 5 deg)

Humidity

- 0 - 100 %RH

PINIX TOW-1

Asset BLE Tag with MEMs & Climatic Sensors
w/ AoA Support



PINIX TOW-1, a specially designed beacon for advanced solutions in location-based and asset tracking applications. With ultra-low power consumption and extended battery life, it guarantees reliable and long-lasting operation. The PINIX TOW-1 is easily mountable on diverse surfaces and utilizes commercially available replaceable button cells for convenient power management.

This BLE 5.0 Beacon Tag offers Angle of Arrival (AoA) support, delivering precise directional information. Additionally, it incorporates an integrated MEMS accelerometer for motion sensing capabilities and environmental sensing. Ideal for high-value assets, the PINIX TOW-1 serves as a versatile beacon tag.

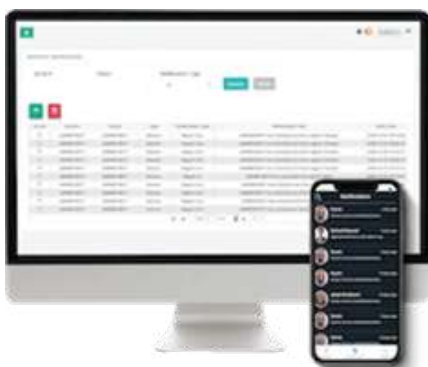
Main Features

BLE 5.0 Beacon Tag with AoA support, MEMS Accelerometer, Temperature, Humidity, Pressure, LED, button, Replaceable 2000mAh Lithium battery (5-8 years battery life), IP65 protection

Applications

- Precision Asset Tracking
- Vibration Detection
- Temperature, Humidity and Pressure monitoring

Configuration Portal



With the PINIX Beacon Manager App you can scan for nearby configurable PINIX beacons, display their battery status, view their settings and make modifications to those settings. Configuration of beacons are password protected with a four (4) digit user settable PIN.

As an added safety feature, the beacons can only be configured within a period of 15 minutes after installing the batteries or can be manually triggered into configuration mode by pressing the reset button on the Tag.

PINIX TOW-1 Specifications

BLUETOOTH RADIO

<p>Type</p> <ul style="list-style-type: none"> • Bluetooth Low energy 5.1 	<p>Advertisement</p> <ul style="list-style-type: none"> • iBeacon • Eddystone (UID & TLM) • sBeacon (Sentrax Proprietary) 	<p>Advertisement Interval</p> <ul style="list-style-type: none"> • 100ms to 10seconds
<p>Frequency</p> <ul style="list-style-type: none"> • 2.4GHz 	<p>Transmit Power</p> <ul style="list-style-type: none"> • +4dBm to -20 dBm 	<p>Antenna Type</p> <ul style="list-style-type: none"> • Chip antenna • Omni Directional

BATTERY

<p>Battery Type</p> <ul style="list-style-type: none"> • CR2477 × 1, 1000mAh Replaceable CR2477 × 2 • 2000mAh, Replaceable (Enhanced1) 	<p>(Advertisement Rate)</p> <ul style="list-style-type: none"> • 1000ms • 5000ms 	<p>Battery Life</p> <ul style="list-style-type: none"> • 3 years • 7 years 7 months
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SENSORS & INTERFACES

<p>Motion Sensing</p> <ul style="list-style-type: none"> • 3 Axis Accelerometer 	<p>(Advertisement Rate)</p> <ul style="list-style-type: none"> • 0.3 - 1.2 bar (Enhanced) 	<p>Humidity Sensing</p> <ul style="list-style-type: none"> • 0 - 100 %RH (Enhanced)
<p>Temperature Internal</p> <ul style="list-style-type: none"> • Temperature Sensor 	<p>Button</p> <ul style="list-style-type: none"> • 1 user interact-able button 	<p>LED</p> <ul style="list-style-type: none"> • 1 Red LED

OPERATING ENVIRONMENT

<p>Temperature Range</p> <ul style="list-style-type: none"> • 30°C to 75°C 	<p>Operating Humidity</p> <ul style="list-style-type: none"> • 90%
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CERTIFICATIONS

CE **

ENCLOSURE

<ul style="list-style-type: none"> • Material : ABS+PC • Color : White • Weight : 19g 	<p>Dimensions</p> <ul style="list-style-type: none"> • 8.5.5 mm (L) x 54 mm (W) x 4.5 mm (H) 	<p>Accessories</p> <ul style="list-style-type: none"> • Double Sided Tape • Mounting Screws <p>Protection Class</p> <ul style="list-style-type: none"> • Ip65 and ip67. 2 versions
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PINIX TOK-1

Outdoor Anchor BLE Beacon Tag with MEMs



PINIX TOK-1, an advanced Bluetooth Low Energy 5.x beacon device tailored for business solutions. It utilizes multi-standard beacon technology and employs the energy efficient chipset to ensure efficient power consumption. Featuring a key-chain hole and a replaceable button cell, it offers effortless attachment to smaller assets and personnel for positioning.

The PINIX TOK-1 is equipped with a 3-color LED, user-interactable buttons, and a 3-axis accelerometer. Its compact design, inclusive of a key-chain hole, allows for easy attachment to smaller assets, sticking, wearing with a lanyard, or using it as a key-chain for personnel positioning.

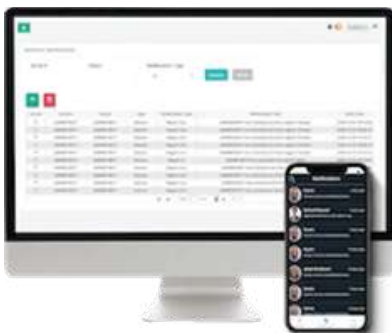
Main Features

Outdoor AoA BLE 5.0 Beacon for Positioning & Navigation, replaceable 7200mAh Lithium battery (7-13 Years battery life), IP65 protection, -30°C +70°C

Applications

- Precision Asset Tracking
- Precision People Tracking
- Motion Detection
- Temperature Monitoring
- Panic/SOS Button

Configuration Portal



Tags can be configured with the PINIX Beacon Manager App you can scan for nearby configurable PINIX beacons, display their battery status, view their settings and make modifications to those settings. Configuration of beacons are password protected with a four (4) digit user settable PIN.

PINIX TOK-1 Specifications

BLUETOOTH RADIO

<p>Type</p> <ul style="list-style-type: none"> • Bluetooth Low energy 5.1 	<p>Advertisement</p> <ul style="list-style-type: none"> • iBeacon • Eddystone (UID & TLM) • sBeacon (Sentrax Proprietary) 	<p>Advertisement Interval</p> <ul style="list-style-type: none"> • 100ms to 10seconds
<p>Frequency</p> <ul style="list-style-type: none"> • 2.4GHz 	<p>Transmit Power</p> <ul style="list-style-type: none"> • +4dBm to -20 dBm 	<p>Antenna Type</p> <ul style="list-style-type: none"> • PCB antenna • Omni Directional

BATTERY

<p>Battery Type</p> <ul style="list-style-type: none"> • CR2032 × 1, 225mA 	<p>(Advertisement Rate)</p> <ul style="list-style-type: none"> • 1000ms • 5000ms 	<p>Battery Life</p> <ul style="list-style-type: none"> • 1 year 2 months • 2 years 3 months
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SENSORS & INTERFACES

<p>Motion Sensing</p> <ul style="list-style-type: none"> • 3 Axis Accelerometer 	<p>Temperature</p> <ul style="list-style-type: none"> • Internal Temp. Sensor 	<p>LED</p> <ul style="list-style-type: none"> • 3 LEDs (Blue, Red and Green)
<p>Button</p> <ul style="list-style-type: none"> • 1 user interact-able button 		

OPERATING ENVIRONMENT

<p>Temperature Range</p> <ul style="list-style-type: none"> • -30°C to 75°C 	<p>Operating Humidity</p> <ul style="list-style-type: none"> • 90%
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CERTIFICATIONS

CE **

ENCLOSURE

<ul style="list-style-type: none"> • Material : ABS • Color : White • Weight : 12g 	<p>Dimensions</p> <ul style="list-style-type: none"> • 55.3 mm (L) x 38.6 (w) x 8.4 (H) 	<p>Accessories</p> <ul style="list-style-type: none"> • Key Ring <p>Protection Class</p> <ul style="list-style-type: none"> • IP65
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AoA Evaluation Kit

Exclusively designed for testing, demonstrations, project pilots, and evaluations

Get hands-on experience with the Sentrax Angle of Arrival evaluation kits, exclusively designed for testing, demonstrations, project pilots, and evaluations. These kits offer a sub-meter accurate real-time positioning experience with Bluetooth Angle of Arrival (AoA) technology, perfect for businesses looking to enhance their operations and improve overall efficiency.

High level location accuracy packed in a box!

Main Features

- Advanced accurate Real-Time Indoor Tracking system
- Integrated climatic & environmental sensors
- Easy and fast out of the box RTLS deployment
- Easy online system configuration with data stream interfaces and reporting system
- Access to online support and training material
- Ideal for smart building, healthcare and industrial applications
- Offers precise real-time people/asset tracking and localization

Applications

- Sub-meter level BLE Tag Tracking
- Asset Tracking
- People Tracking
- Health check monitoring
- Climatic & Air Quality Monitoring

Evaluation Kit Includes

- 3x ZENIX LON-2
- 5x PINIX TOW-1
- 5x PINIX TOK-1
- 1x SOLIX Suite
- Connecting Wire
- Batteries
- POE Cable
- Power Adapter
- Screws & Nuts

Documents

Configuration, Deployment, and User Guides, [ZENIX LON-2 Datasheet](#), [PINIX-TOW-1 Datasheet](#), [PINIX TOK-1 Datasheet](#), [SOLIX Brochure](#)



Solix Platform- Standard

Sentrax Devices Management & Connectivity Platform

Sentrax's Solix Suite of cloud and on-site server based device management and connectivity platform for Smart Building offers a range of features to support different types of applications ranging from building administration to security management to physical asset management. In addition environmental and climatic status monitoring of the premises can be carried out using appropriate sensors, tags and scanners provided by Sentrax.

Sentrax uses BLE (Bluetooth Low-Energy) and high precision BLE-AoA (Angle of Arrival) enabled tags in a range of application specific form factors to provide real-time sensor and position data through scanners and gateways. The scanners are to be installed within the facility for monitoring and tracking.

Main Features

Live Tracking

With an integrated Tracking Engine, the Tracking Module provides a powerful and user-friendly dashboard for determining the live location of all tags within a particular facility.

Environmental & Climatic Monitoring

Sentrax's sensor integrated beacons and gateways provide an interface to monitor real time air quality (indoor air pollutants gases – TVOC) as well as temperature, humidity and pressure across the facility where the devices are deployed.

Device Health Monitoring

For the deployed beacons and gateways our portal gives live health statistics as well as historical health statistics.

Device Configuration

Using our portal live device configuration of the beacons in the field can be viewed as well as live update of the beacon configuration can be carried out.

Alerts and Notifications

Solix Suite comes with a variety of alerts and notifications that can be generated and configured as per user requirements. These include low battery indications, device tampered alerts, or unauthorized settings at device.

Historical Data Logging

Solix Suite saves historical data of all events and live data for up to one month for statistical analysis, this data can be offloaded to our client servers using our API endpoints.

APIs

Rest API and MQTT streaming APIs are available to connect real time data, building metadata as well as historical data. Along with this connectors for remote configuration of beacons are also provided.

Main Features

Solix Standard Features

- Buildings and Floors with 2D maps generated by client
- Placing gateways on maps
- Region Placement
- Region Alerts (SMS and Email)
- Beacon Sensor Data Stream (MQTT)
- Beacon Raw Data Stream (MQTT)
- Beacon Historical data saving for one month (Sensor), can get through API Get deployment meta using API or MQTT

Solix Position Add on Features

- All Basic Features
- Real time positioning data stream of beacons (MQTT)
- Beacon Historical data saving for one month (Position), can get through API

Solix Configuration Add on Features

- All Basic Features
- Remote Configuration Management of Beacon Tags
- Configuration History

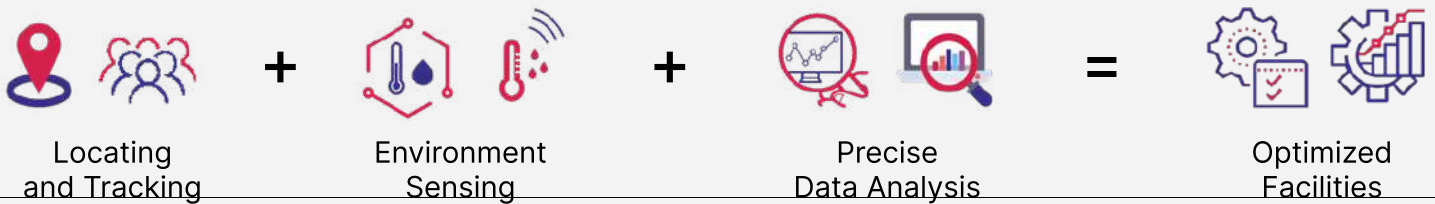


Sentrax RTLS & Environment Sensing

Navigating the Future with BLE AoA Location and Environment Sensing

Get valuable insights, increase operational efficiency, reduce costs, and enhance safety & security with Sentrax’s Bluetooth Low Energy (BLE) Real-time location system (RTLS) and environment sensing. Whether you're looking to track inventory, monitor the movement of personnel, provide way-finding, or monitor the environment, our BLE (AoA) can help you achieve your goals.

Use-Case Examples of RTLS & Environment Sensing



Safety & Security

- Evacuation Guidance
- Emergency Responder Guidance
- Staff Safety System



Warehouses

- Digital Labeling & Inventory Tracking
- Maintenance management
- Personnel & Forklift Tracking



Healthcare

- Environment Sensing
- Patient/Staff tracking & Call for help
- Real-Time Equipment Tracking



Airport

- Ambient environment monitoring
- Mobile equipment Tracking
- Staff Notification System



Smart Buildings

- Asset & Inventory Tracking
- Automated Check-in/out
- Indoor Air Quality



Manufacturing

- Lone worker safety & tracking
- Shrinkage management
- Asset life-cycle & maintenance tracking

Benefits of Sentrax's RTLS



Strategic Benefits

- Real-time visibility & auto-update of events across the building
- Unprecedented high level of information



Process Benefits

- More efficient automated processes
- Increased accuracy & control of operations
- Increased traceability of assets life cycle



Business Benefits

- Reduction in Inventory & Capital Assets
- Increased staff productivity and better cost management
- More efficient automated processes
- Increased accuracy & control of operations Increased traceability of assets life cycle

Advantages of RTLS & Environment Sensing

- Advanced accurate Real-Time Indoor Tracking system
- Integrated climatic & environmental sensors
- Easy online system configuration with data stream interfaces and reporting system
- Access to online support and training material