



REAL-TIME INDOOR TRACKING SOLUTION FOR HEALTHCARE SERVICE

Track and monitor your mobile assets in real time in health centers



TRACEONIX



Real-Time Indoor Tracking Solution For Healthcare Service

Healthcare environments require precise, fast, and reliable visibility of patients, medical equipment, and staff. TRACEONIX Indoor Tracking Solution uses BLE (Bluetooth Low Energy)–based real-time positioning technology to track all mobile assets within healthcare facilities with high accuracy. It provides instant visibility of staff movements, patient locations, and the real-time status of medical equipment in areas where GPS is ineffective. In addition, the system enhances operational efficiency by reducing the time spent searching for critical equipment and optimizing staff workflows. Real-time alerts and analytics support faster decision-making, improved patient safety, and better compliance with healthcare regulations. By delivering continuous, accurate indoor location data, TRACEONIX helps healthcare organizations improve resource utilization, reduce operational costs, and deliver higher-quality patient care.



Areas of Usage



Personnel Tracking

The TRACEONIX indoor positioning solution enables real-time tracking of the personnel working in your organization, ensuring that internal operations (cleaning, controls, security, etc.) ensures its smooth operation and optimization of related processes.



Patient Tracking

The TRACEONIX indoor positioning system enables immediate tracking of your patients receiving treatment within your organization, increasing your patients' safety and efficiency in emergency management.



Medical Equipment Monitoring and Search

The TRACEONIX indoor positioning system increases the efficiency of the organization by allowing you to quickly find and track all kinds of tools and equipment that are vital in the organization and are used for the diagnosis, monitoring, treatment or alleviation of the disease.



Security

The TRACEONIX indoor positioning system enables shortening of emergency response processes and obtaining fast/reliable information in these processes with its real-time tracking capability and the emergency call button feature it contains in its equipment.

How Does It Work?

In order to track mobile assets inside the health center with the TRACEONIX indoor positioning solution, signal-transmitting tags should be attached to the mobile assets that need to be monitored, and receivers should be placed in fixed positions to receive the transmitted signals. Thus, a network is created with multiple fixed receivers and moving tags. The signals from the tags are transmitted to the location server via the receivers in this network. The location server calculates the positions of mobile assets using these signal data and visualizes them on a map. This process is repeated at certain periods to provide real-time location tracking.



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Basic Features

Installation

- Minimum infrastructure requirement
- One flexible infrastructure that is scalable and suitable for the future business case

Positioning

- Cost-effective positioning with BLE technology
- Location detection with high accuracy with UWB

Mapping

- Real-time location tracking
- Real-time visibility of asset (personnel, object) locations

Virtual Zone

- Creation of descriptive virtual zones within the environment

Emergency Management

- Real-time notification of emergency situations

Analytics

- Rich customizable reports for requirements (heat map, asset movement analysis, etc.) and screens



Indoor Positioning Solution

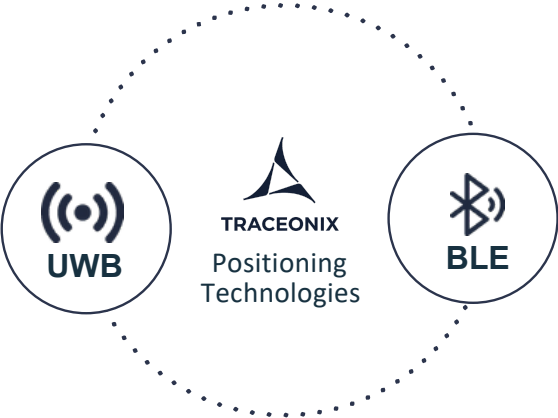
The TRACEONIX indoor positioning system is designed to meet different needs, such as cost and accuracy, and offers a positioning system that supports multiple technologies, including Ultra-WideBand (UWB) and Bluetooth Low Energy (BLE), either separately or together depending on the environment. This system combines the capabilities of each technology to create a more adaptive and dynamic tracking solution that can effectively meet current and future requirements. For example, in health centers, BLE devices can be used in areas where sensitivity is less critical, while UWB devices are deployed in machine-intensive areas where high precision is required. This approach ensures the most cost-effective solution for changing environmental conditions and operational requirements.

The TRACEONIX indoor positioning system based on BLE technology.

- Low power consumption
- Low cost
- 3-5m positioning accuracy

The TRACEONIX indoor positioning system based on UWB technology.

- High cost hardware elements
- High positioning accuracy (80cm)
- Resistance to environmental and other signal interference



System Components

The TRACEONIX indoor positioning system delivers professional real-time indoor localization for diverse indoor environments through intelligent algorithms and the use of BLE and UWB technologies, either independently or in combination. In this context, the TRACEONIX indoor positioning system consists of technology specific transmitter, receiver, and location server components.

Tag

These are devices attached to mobile assets (personnel, equipment, vehicles) to monitor their movements within the environment.

Gateway

These are devices placed at fixed points within the environment that collect location-specific tag signals and transmit them to the location server.

Location Server

It is the software component that processes the collected signal data to perform location calculation, visualization, analysis, and related operations.

BLE System Components



UWB System Components

