



I.I.S.

Positioning

Badge Tag

The wearable badge tag can track and communicate to your employees, no matter where they are on your site. Accurate to within 8", the badge operates on ultra-wideband and is capable of detecting and logging the wearer's precise location up to 52 times per second.

The badge has an easy-to-read, e-paper display that communicates the badge's status in real-time, as well as alarms, text messages and other identifying information sent from the server. Using the web-based RTLS management platform, users can generate alerts from the server to send to the badge of an individual or to the whole workforce. These text-based alerts also trigger an audible alarm as well a visible strobe from the LED.

When integrated with the web portal, the badge gives users total visibility of job site activity and provides critical safety and efficiency metrics. The cloud-based server logs the badge's position reports, as well as alarms, which can be compiled and analyzed.

The badge can be fully provisioned, managed and programmed remotely over the air anywhere within the ultra-wideband mesh-network coverage area, without the need for complex network integration.

Provide a total RTLS solution.

The Badge Tag is the starting point to build your real-time location system.

ACCURATE up to 20cm (8") accuracy in two dimensions

COMMUNICATIVE active display shows real-time status, text messages and alerts about safety zones and other dangers

RESPONSIVE LED flashes and audible alarms beep to communicate status updates, notifications and hazards

INTERACTIVE call buttons send alarms or signal for help

EASY-TO-UPDATE over-the-air updates for upgrading and configuring devices

RECHARGEABLE with single-unit or 10-unit bank chargers



The Badge tag displaying an alarm and flashing a warning

Innovative Industrial Solutions, Inc.

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www.i-i-s.net

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Badge tag
Actual size: 68 x 102 x 7.6mm



10-bay bank charger

System

Parameter	Value
Operation Modes	Tracking, navigation, hybrid
Localization	2, 2½, and 3 dimensional
Typical Accuracy	10cm (1D mode) 20cm (2D mode)
Tag Update Rate	Configurable 1, 2 or 4 Hz or motion-based mode
Tag Density	Tracking mode: dependent on configured update rate Navigation mode: unlimited
Network Topology	Full mesh, self-organizing, self-healing
Network Scale	32-bit MAC address space, limited by RTL8 server capacity
Communication Range	50m line-of-sight in typical conditions
Operating Frequency	3.5 - 6.8 GHz
Channel Bandwidth	500 MHz
Peak Data Rate	850 kbps

Peripherals

Parameter	Value
Call Button	Sends message to server through UWB mesh. Configurable functionality, including emergency-call.
Display	Daylight-readable electronic paper display (EPD)
Visual Alert	RGB LED provides status and configuration notification as well as user-alert functionality
Audible Alert	On-board buzzer configured to alert for safety hazards
Motion	6-axis accelerometer for motion sensing and saving battery power

Mechanical & Environmental

Parameter	Value
Tag	68 x 102 x 7.5 (mm)
Temperature	0°C to 70°C
IP Rating	Water resistant. Not rated.

DC Characteristics

Parameter	Value
Charging	Single-unit or 10-bay bank charger
Battery Type	Single-cell, 700 mAh lithium-ion rechargeable
Battery Life	72 hours (using the 1 Hz update rate)
Battery Charging Current	500 mA maximum

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