DATA SHEET

CTH-SB760 BLE Multi-Mode Badge

Available Models (Kits)

CTK-SBST760 – Badge with Standard Life battery pack

CTK-SBEX760 – Badge with Extended Life battery pack

Key Highlights

- Offers scalable Multi-Mode RTLS functionality – compatible with CenTrak's UHF and BLE Networks
- Backwards compatible with any new or existing CenTrak platform (Pegasus and Orion)
- Integrates with CenTrak's proven Gen2IR Monitors for certainty-based room-level accuracy
- Low Frequency (LF) receivers to create choke points – compatible with CenTrak's LF Exciters, Safety Solutions Door Controllers, and CenTrak's Hand Hygiene Compliance Sensors
- IP67 liquid and dust resistant - resilient to harsh cleaning chemicals including bleach, ammonium compounds, peracetic acid, hydrogen peroxide, phenols
- Three buttons – 1 purpose-built for Duress functionality
- Multiple interfaces for user indication including real-time visualization of remaining battery life
  - Four alert LEDs, one diagnostic LED, and an audible buzzer
- Card retention features hold ID card in front of badge

BLE Multi-Mode Badge

CenTrak's BLE Multi-Mode Badge adapts to your accuracy requirements (zone, room, bed) and RF environment to maximize staff and/or patient locating initiatives. For quick deployments, the BLE Multi-Mode Badge utilizes existing BLE networks on Access Points from various vendors, eliminating the need for additional infrastructure. For areas demanding heightened performance, such as high-acuity clinical workflows, battery-operated Gen2IR and LF Egress infrastructure can be effortlessly integrated.

The ergonomic design of the CenTrak BLE Multi-Mode Badge allows it to be conveniently mounted (horizontally or vertically) on the loop of an ID lanyard or reel. Retention hooks securely hold and display a staff member's ID card in the front of the device. To ensure durability and compliance with infection prevention protocols, the device is IP67 dust and liquid resistant and can be easily cleaned with various cleaning agents, including harsh chemicals.

Each Badge has three buttons: two that can be customized based upon the use case, and one that is designated for duress/emergency call (recessed duress button design reduces false alerts). There are multiple interfaces for user indication, including four alert LEDs, one diagnostic LED, and an audible buzzer. Real-time visualization of remaining battery life and customizable use-case specific indications further enhance user control. The device operates on a replaceable battery pack with a 3V nominal voltage.

The system architecture and device design were meticulously crafted to ensure accurate locating, while prioritizing power efficiency and reducing congestion and collisions in the operational frequencies. All devices are configurable to established UHF local certified frequencies and are compliant with local regulation concerning RF operation. BLE operates according to Bluetooth Special Interest Group guidance and within the region-specific regulatory compliance standards.

CTH-SB760 BLE Multi-Mode Badge

Technical Specifications

BLE Communication	
Bluetooth Standard	BLE 5.2 (2.4 GHz)
Bluetooth Antenna	Internal Omnidirectional
Network Vendor Compatibility	Cisco, Aruba, Juniper
UHF Communication	
FCC Operating Range	902 - 928 MHz
CE Operating Range	868 - 870 MHz
UHF Antenna	Internal Omnidirectional
Operation	
Interface	3 Configurable Buttons
Indication	4 Alert LEDs, 1 Diagnostic LED Configurable Audible Alarm
Motion Sensor	Triaxial Accelerometer
Gen2IR Sensor	Dual Direction Wide Angle Sensing IR
Low Frequency Receiver	125 kHz, Dual Mode
Battery Replacement	Replacement Battery Pack, 2 Screw
Lanyard/Reel Attachment	Attachment Slots for Horizontal and Vertical Orientations
ID Card Attachment	ID Card Attaches to Front Side of Badge
Tag Dimensions	
Case Length	3.85 in (98 mm)
Case Height	2.56 in (65 mm)
Case Width	0.22 to 0.35 in (5.5 to 9 mm)
Case Weight (with battery)	33 g
Construction	Polyamide
Environmental/Cleaning	
Operating Temperature (Tag)	0 °C to 60 °C
Storage Temperature (Tag)	-10 °C to 65 °C
Sealing	IP67
Tag Cleaning Method	Submersion or Wipe cleaning. See Tag Disinfection Guide for instructions
Power	
Battery Type	Non-Rechargeable, Primary, Lithium

Available Accessories	
CTA-BTST760	Standard Life Battery Pack (3V, 430 mAh)
CTA-BTEX760	Extended Life Battery Pack (3V, 675 mAh)

Device Name: BLE Multi-Mode Badge
Model: CTH-SB760
FCC ID: ST2-CTHSB760
IC: 6012A-CTHSB760

WARNING

Never dispose of Battery Packs in fire because they can explode. It is important not to dispose of large quantities of Battery Packs in a loose group. Used Battery Pack are often not completely "dead." Grouping used batteries together can bring these "live" batteries into contact with one another, creating safety risks.

CHOKING HAZARD - SMALL PARTS. Small parts contained in your device and its accessories may present a choking hazard to small children.

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Device Management

This device is to be used in conjunction with CenTrak's CoreServer and related services to provide high-availability and low-latency location services to Hospital and Healthcare Systems. The BLE Multi-Mode Badge will be automatically detected by the locating network and can be used in it's default state or provisioned and upgraded through CoreServer. CenTrak's BLE MM family of devices can also be connected to using our IOS and Android mobile applications to reconfigure and upgrade. To search a database or manually add a device to a system, the DeviceID is printed in text and 2D scanable barcode.

Operation

The BLE Multi-Mode Badge is providing location services any time it is within coverage of compatible UHF and BLE networks. The latency is dependent on the type of system employed throughout the hospital as well as the configuration set at the system level.

The three buttons located on the back side of the Badge allow for end users to notify system administrators or connected systems of events. The center button provides a high-priority, persistent Duress notification. To ensure the safety of the user, this notification will be continuously transmitted until a confirmation is returned from CoreServer or the applicable management solution. The two buttons to the left and right of the Badge are configurable and can be designated for use per the site's needs. Single, double, long, and multi-click options are configurable, supporting a wide range of possible interactions. Some built in functions are available even without connection to a system, ex. Double click of both side buttons initiates a battery notification and displays the remaining battery capacity using the LEDs visible on the front side of the Badge.

Many use cases such as Hand Hygiene Compliance and Nurse Call do not require any manual intervention at all, as the Badge can be configured to automatically report proximity to certain locations and entry and exit from rooms or zones.

The front side of the Badge can hold a standard size ID card, reducing the number of items a user needs to carry. The retention features allow for the card to be easily inserted from the left side of the Badge and removed by pressing on the right side of the card and sliding to the left.

The Badge can be attached to a lanyard or cord through either of the two cutout features. This allows for both horizontal and vertical presentation of the Badge and card it contains.

Maintenence

When the battery pack is low and nearing recommended replacement levels, CenTrak's pulse management application will alert the system administrator. The precise battery level can also be monitored at any time through CoreServer and the mobile applications. For the user, when a battery notification is requested from the Badge, a low level will be displayed by the LEDs and a red LED will indicate battery level below 25%.

To change the battery, both screws on the back side of the Badge must be removed and the pack can be lifted from the Badge by the tab located at the top of the pack. Replacement battery packs will also contain new water sealing gaskets and screws for ease of replacement. To replace, slide the pack bottom side first into the locking features and tighten the two screws. Once replaced, the Badge will indicate a detected battery change with a new battery notification and return to normal operation.

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FCC Regulatory Conformance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a **Class B** digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

RF Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

IC Regulatory Conformance

This device complies with CAN ICES-003 (B)/NMB-003(B).
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme à la norme CAN ICES-003 (B)/NMB-003 (B).
Cet appareil contient des émetteurs / récepteurs exempt (s) de licence qui sont conformes aux RSS exemptes de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes:

1. Cet appareil ne doit pas provoquer d'interférences.
2. Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

RF Exposure

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme aux limites d'exposition aux radiations de la IC définies pour un environnement non contrôlé.

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