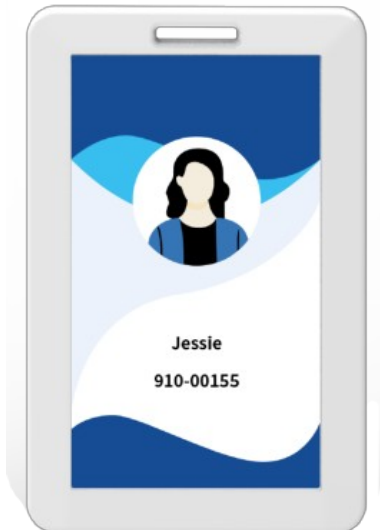




Lansitec LoRaWAN

Badge Tracker & Asset Management Tracker Datasheet



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contact@lansitec.com

For uplink/downlink payload definitions, contact us at contact@lansitec.com to request the Payload Specification.

1. Product Overview

The Lansitec LoRaWAN Badge Tracker and Asset Management Tracker combine LoRaWAN, Bluetooth Low Energy and GNSS to support indoor and outdoor positioning. The trackers use BLE beacon scanning for indoor positioning and GNSS for outdoor positioning, with configurable reporting policies and a built-in accelerometer for motion-aware operation. The Badge Tracker is a slim rechargeable wearable; the Asset Management Tracker is a larger long-life device designed for fixed assets.

2. Typical Applications

- Personnel and lone-worker location monitoring
- SOS and fall-event reporting for wearable deployments
- Indoor/outdoor personnel tracking with BLE + GNSS
- Asset and equipment tracking across yards, warehouses and outdoor sites
- Inventory and logistics visibility
- Location-aware safety and operational workflows

3. Product Highlights

- LoRaWAN 1.0.2B, Class A; OTAA or ABP activation
- GNSS outdoor positioning and BLE indoor positioning
- BLE 5.0 and iBeacon advertising
- Configurable periodic, autonomous and on-demand positioning modes
- Built-in accelerometer; motion state is included in heartbeat reporting
- Badge alarms: SOS and fall detection
- Configurable iBeacon UUID, Major, Minor, advertising interval and TX power
- FOTA over Bluetooth
- NFC support
- Automatic LoRaWAN connectivity supervision and rejoin behavior

4. Wireless & Positioning Specifications

LoRaWAN protocol	LoRaWAN 1.0.2B, Class A
Activation mode	OTAA or ABP
Frequency plans	US915, AU915, EU868, EU433, AS923, RU864, KR920, IN865, KZ865, CN470
TX power	0 to 20 dBm; available levels depend on regional frequency plan
Sensitivity	-137 dBm @ SF12, BW 125 kHz, 868/915 MHz
Typical communication distance	>1 km in an urban area (deployment dependent)
Encryption	AES-128
Bluetooth	BLE 5.0, iBeacon
BLE TX power	-20 to +4 dBm, configurable in 4 dB steps
BLE sensitivity	-96 dBm
GNSS constellations	GPS, BDS, Galileo, GLONASS, QZSS, SBAS (WAAS/EGNOS/GAGAN/MSAS)
GNSS accuracy	<2.5 m CEP50
GNSS acquisition	Typically 25-60 s in good outdoor conditions; GNSS timeout 3 minutes

5. Physical & Power Specifications

Parameter	Badge Tracker	Asset Management Tracker
Dimensions	95.4 x 61.4 x 7.3 mm	78 x 79 x 35 mm
Weight	28 g	133 g
Housing	ABS	PC + ABS
Switch	Physical button	Physical button
Operating temperature	-10 °C to +65 °C	-45 °C to +85 °C
Storage temperature	-20 °C to +80 °C	-60 °C to +90 °C
Operating humidity	5% to 95% RH, non-condensing	5% to 95% RH, non-condensing
Operating / standby current	20 µA to 139 mA	15 µA
Battery	600 mAh rechargeable Li-ion	2 x 4000 mAh Li/SOCI2
Charging	Micro-USB	Non-rechargeable battery
Ingress protection	-	IP66 (ordering information)
FOTA over Bluetooth	Supported	Supported
NFC	Supported	Supported

Battery-life planning: [Lansitec Battery Life Live Calculator](#) can be used to compare reporting intervals and operating scenarios.

6. Tracking & Reporting Behavior

At the beginning of a positioning cycle, the tracker scans for compatible BLE beacons for 3 seconds. If beacons are detected, the tracker reports the three strongest beacons using Major, Minor and averaged RSSI values. If no compatible beacon is received and GNSS is enabled, the tracker starts GNSS positioning. GNSS is not started when a positioning beacon is detected.

Mode	Behavior
Periodic	Starts positioning and reports at configured intervals.
Autonomous	Uses accelerometer motion state from the previous cycle to decide whether positioning is required, reducing energy use.
On-Demand	Starts positioning when requested by a supported LoRaWAN downlink command.

Heartbeat messages can be configured in 30-second units and are used to report device status and support network-connectivity supervision. GNSS and beacon position reports are unconfirmed by default; confirmed heartbeat behavior is configurable on supported firmware.

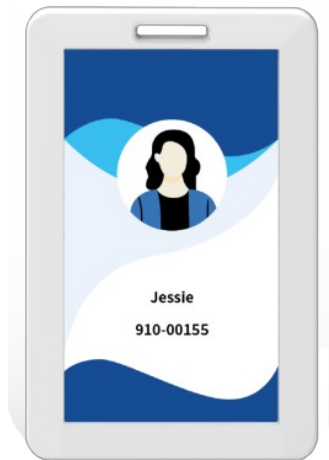
Payload decoding: [Lansitec Payload Decoder Calculator](#) provides an online tool for decoding supported Lansitec device payloads.

7. User Interface, Alarms & Bluetooth Functions

Function	Description
Power / status button	Long press controls power; short press checks network status.
LED indicators	Green/red LED feedback for power, network state and charging status.
SOS alarm - Badge	Three button presses within 3 seconds trigger a confirmed SOS alarm and positioning behavior.
Fall detection - Badge	Configurable fall threshold; a detected fall triggers a confirmed alarm and positioning behavior.
iBeacon advertising	Default UUID plus configurable UUID, Major, Minor, interval and TX power.
Local configuration	Bluetooth configuration supported using a compatible BLE application.

Function	Description
Firmware update	FOTA over Bluetooth supported.

8. Installation Overview



Badge Tracker

Wear using the supplied lanyard or an approved badge holder. Keep the GNSS antenna region unobstructed and, where outdoor GNSS performance is important, orient the antenna face toward the sky.



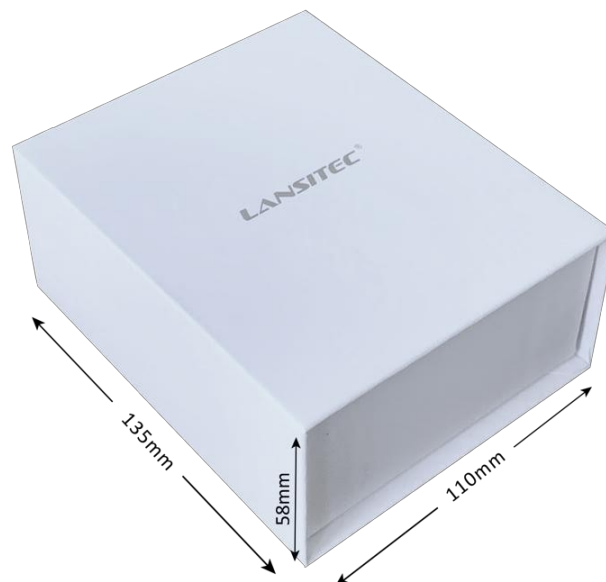
Asset Management Tracker

Secure the enclosure using its side mounting tabs with application-appropriate fasteners. Avoid shielding the GNSS antenna with metal and select a mounting position with suitable LoRaWAN and GNSS exposure.

For complete installation, positioning orientation, charging and configuration instructions, refer to the User Manual.

9. Packaging

Badge Tracker sample package: 1 x Badge Tracker, 1 x 1.0 m Micro-USB charging cable, 1 x lanyard and 1 x PVC sticker. Batch packaging contains 12 Badge Trackers, with accessories packaged separately according to the order configuration.



Supplied accessories and mounting hardware depend on the order configuration. Refer to the purchase order for the applicable packing list.

10. Ordering Information

Part Number	Description
100-02876	Badge Tracker, AS923, BLE 5.0, 600 mAh

Part Number	Description
100-02476	Badge Tracker, AS923, BLE 5.0, GNSS, 600 mAh
100-02566	Badge Tracker, IN865, BLE 5.0, GNSS, 600 mAh
100-02567	Badge Tracker, IN865, BLE 5.0, 600 mAh
100-02490	Badge Tracker, EU868, BLE 5.0, GNSS, 600 mAh
100-02489	Badge Tracker, EU868, BLE 5.0, 600 mAh
100-02478	Badge Tracker, US915, BLE 5.0, GNSS, 600 mAh
100-02461	Badge Tracker, US915, BLE 5.0, 600 mAh
100-02491	Badge Tracker, RU864, BLE 5.0, GNSS, 600 mAh
100-02493	Badge Tracker, RU864, BLE 5.0, 600 mAh
100-02501	Badge Tracker, AU915, BLE 5.0, GNSS, 600 mAh
100-02502	Badge Tracker, AU915, BLE 5.0, 600 mAh
100-02497	Badge Tracker, KR920, BLE 5.0, 600 mAh
100-02499	Badge Tracker, KR920, BLE 5.0, GNSS, 600 mAh
100-02371	Badge Tracker, CN470, BLE 5.0, 600 mAh
100-02372	Badge Tracker, CN470, BLE 5.0, BDS/GNSS, 600 mAh
100-00165	Asset Management Tracker, LoRaWAN, BLE 5.0, GNSS, 2 x 4000 mAh, IP66

Reference Documents

- Lansitec LoRaWAN Badge Tracker & Asset Management Tracker User Manual - Document Number 990-00114
- Payload Specification (Document Number 990-00115) - contact us at contact@lansitec.com to request access.
- 930-01232 - LoRaWAN Tracker Positioning Service API Document
- 990-00170 - B-Fixed® Personnel & Asset Tracking Solution

Payload integration information is supplied separately. To request the Payload Specification, contact us at contact@lansitec.com.

Note: Product specifications may vary by hardware option, firmware revision and regional configuration. Confirm project-specific requirements before deployment.