



# Helmet Sensor

Bluetooth, LoRaWAN, GNSS

## OVERVIEW

Lansitec Helmet Sensor is designed based on GNSS, Bluetooth5.0 and LoRa technology. It supports indoor and outdoor tracking. It supports various features which contribute to easy management in industrial settings.

Its built-in 3-axis accelerator could be used for determining the motion status of the terminal. Therefore, it can help save battery and enhance user experience.

## FEATURES



Sensing: Wear detection, Fall detection and alarm, Step count



Alarm: Search and rescue mode with alarm, Panic alarm, Zone detection and alarm, overstay alarm



Geolocation



Installation: Simple installation



Management: NFC for DevEUI, ID or more, Magnetic charging port, FOTA via Bluetooth

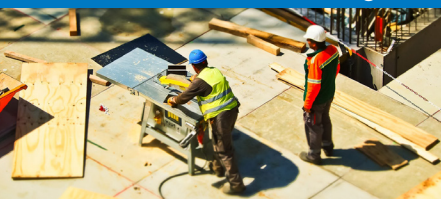


\*Product does not include the helmet

## APPLICATIONS

It is suitable for the following use cases: visitor management, factory worker tracking, construction worker tracking, vehicle tracking etc.

### Construction Worker Tracking



### Visitor Management



### Factory Personnel Tracking



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## CONNECTIVITY

<b>Bluetooth Protocol</b>	Bluetooth 5.0, iBeacon
<b>Bluetooth TX Power</b>	-20 to +4 dBm TX power, configurable in 4dB steps
<b>Bluetooth Sensitivity</b>	-96dBm
<b>Bluetooth Positioning Accuracy</b>	3m
<b>LoRaWAN Protocol</b>	LoRaWAN 1.0.2B, Class A
<b>Activation Mode</b>	OTAA or ABP
<b>LoRaWAN Band</b>	US915, AU915, EU868, EU433, AS920-923, AS923-925, RU864, ID920, KR920, IN865, KZ865, CLAA, CN470, CN470-Ali
<b>LoRa TX Power</b>	0 to 20dBm
<b>LoRa Sensitivity</b>	-139dBm @SF12, BW125kHz, 434MHz/470MHz -137dBm @SF12, BW125kHz, 868MHz/915MHz
<b>LoRa Distance</b>	> 1km in urban area
<b>Encryption</b>	AES128
<b>GNSS Band</b>	1575 to 1610MHz
<b>GNSS Tracking Accuracy</b>	2.5m
<b>GNSS Cold Start Duration</b>	30s to 120s

## POWER

<b>Battery</b>	Li-ion, 1000mAh
<b>GNSS (report interval &gt;10minutes)</b>	Approx. 8,000 times
<b>Bluetooth positioning</b>	Approx. 33,000 times

Please refer to our battery calculator for details.

## ORDERING INFORMATION

Product Description	Part Number
Sensor, Helmet use, BLE5.0, GNSS, 1000mAh	100-02388 (CE)

## MECHANICS

<b>Dimension</b>	80*80*35mm
<b>Operating Temperature</b>	-10°C~+60°C
<b>Charging Temperature</b>	0°C~+50°C
<b>Weight</b>	90g
<b>Housing Material</b>	ABS and PC
<b>Ingress Protection</b>	IP66
<b>Impact Protection</b>	IK10
<b>Standby Current</b>	25µA
<b>Maximum Current</b>	145mA

## FUNCTION

<b>G-sensor</b>	Support
<b>Barometer</b>	Support, 10cm altitude accuracy
<b>PCB Coating</b>	Water proof coating
<b>NFC Tag (optional)</b>	1KB
<b>Adjustable Position Report Interval</b>	5s x n (1 to 65536)
<b>Heartbeat Report Interval</b>	30s x n (1 to 65536)
<b>Switch</b>	Touch button
<b>FOTA over Bluetooth</b>	Support
<b>Battery Level Report</b>	Support
<b>Proximity Detection</b>	Support

## CERTIFICATIONS

<b>Certification</b>	CE, FCC, ATEX (to be obtained)
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