

# LoRaWAN Tracker



## Product overview

The Macnman LoRaWAN Asset Tracker is a highly sophisticated device engineered for the meticulous monitoring and management of assets across a range of industries. Utilizing the advanced STM32WL series SoC for LoRaWAN communications and the nRF52 series SoC for Bluetooth Low Energy (BLE) functionality, this tracker is optimized for dual-mode wireless connectivity to ensure comprehensive coverage and exceptional reliability. An integral SOS button enhances safety by enabling immediate alerts to be sent to the server during emergencies.

## Key Features

### Dual Wireless Technology

Equipped with STM32WL for robust LoRaWAN connectivity and nRF52 for seamless BLE integration, facilitating broad and flexible application use. Wi-Fi positioning is optional.

### Emergency SOS Button

Provides a critical safety feature, allowing the user to send an immediate alert to central servers by pressing a dedicated SOS button, ensuring swift response actions.

### Extended Battery Life

Engineered for efficiency with a power management system that supports long-term deployment on a single set of batteries, reducing maintenance frequency and cost.

## Adaptable Installation Options

Supports multiple mounting mechanisms including wall screws, adhesive tape, and cable ties to accommodate various installation surfaces and environments.

## Rugged Construction

Crafted to withstand extreme conditions, boasting IP67 certification for water and dust resistance, along with IK09\* rating for protection against impacts and rough handling.

# Specifications

## Wireless Transmission

Protocols Supported	<div>LoRaWAN</div> <div>BLE</div> <div>WiFi*</div>
Frequency Options	<div>EU868</div> <div>IN865</div> <div>US915</div> <div>AU915</div>
Tx Power	<div>8 dBm - BLE</div> <div>22 dBm - LoRa</div>

## Positioning and Tracking

Accuracy	<div>5 meter - GNSS</div>
Indoor positioning	<div>BLE - 1 m</div> <div>WiFi - 1 m</div>
Sensitivity	<div>GNSS at -130 dBm</div> <div>Wi-Fi Scanning -90 dBm</div>

## Environmental Resistance

Temperature Range	<div>-30°C</div> <div>+70°C</div>
Humidity Range	0 to 95% non-condensing humidity
IP Rating	<div>IP67</div> <div>IP68</div>













## Physical and Power Characteristics

Dimensions	<div>120 × 90 × 65 mm</div>
Weight	<div>120 grams battery exeluded</div>
Battery Life Estimates	<div>7 + years twice a day</div> <div>4 + years once a hour</div> <div>1 + year every 5 mins</div>
Plastic material	<div>PE</div> <div>ABS</div> <div>White</div> <div>Grey</div> <div>Black</div>
Installations	<div>Surface mount</div> <div>Ties</div> <div>3M Tape</div>

## Regulatory Compliance and Certifications

Compliance Standards	<div>LoRaWAN (1.0.3)</div> <div>BLE (5.0)</div>
Protection Ratings	<div>IP67</div> <div>IK09*</div>

## Use tracker for

 Personal	 Cattle	 Crates	 Industry	 Forklifts	 Geofencing
 Assets	 Rescue	 Warehouse	 Medical	 Agricultural	 Carts