



Square Tracker Xtreme for LoRaWAN

Compact Indoor/Outdoor asset tracker with extended battery life

10+ years battery life

Long-range (2 km)

Motion controlled

Location-aware

Simple installation & mounting

Built-in data memory

Indoor & Outdoor

This compact sensor for LoRaWAN provides indoor and outdoor locations, using **GPS/Beidou and WiFi**. Like all Sensative products, it is designed with **precision and longevity** in mind. For instance, positioning can be **motion-triggered**, and the position calculation is performed in an external cloud service (rather than on-device) to save significant amounts of power.

The custom battery provides **many years of problem-free operations**. In contrast, most battery-powered asset-tracking devices last around a year before they need to be recharged or changed. Replacing batteries in hundreds or thousands of devices can be expensive, work-intensive, and lead to downtime, increasing overall operation and device ownership costs.

The Square Tracker comes in three different versions. The ultra-compact slim version is merely **7 mm thick** but yet provides **up to ten years of battery life** depending on application and transmission intervals. The medium and large versions are 15 mm thick and carry even larger batteries.

Our tracking sensors are designed to be user-friendly, easy to include in most LoRaWAN platforms, and **configurable over the air or NFC**. They also provide extra value by **monitoring the temperature** of the asset and its surroundings, highly interesting data in many applications.



DESCRIPTION

Square Tracker Xtreme represents a cutting-edge generation of low-power, precision trackers suitable for both indoor and outdoor environments. This device is engineered to offer advanced asset management capabilities without the necessity for battery replacement or charging.

It utilizes GNSS (GPS & Beidou), WIFI MAC address scanning, and LoRaWAN TDoA (Time Difference on Arrival) to deliver accurate and power-efficient tracking of assets, both indoors and outdoors.

The cloud-based location solution significantly reduces scanning time and power consumption compared to conventional trackers.

A 3D accelerometer further enhances the tracker's responsiveness and battery life. It detects any motion and tilt position change of the sensors. This information can be used to send alarm messages if the object is moved or to control the tracker activity such as going to the tracker sleep mode during periods of inactivity, thereby conserving energy.

There are multiple configuration options available, allowing users to fine-tune the balance between device performance and battery longevity.

The compact tracker is constructed to endure, featuring a sturdy and sealed housing, a conformal coated circuit board, and an integrated 4 Ah battery. This battery is capable of supporting over 10 years of life under standard configuration profiles, making the Square Tracker Xtreme a robust and reliable solution for long-term asset tracking.

Benefits & Use Cases

The Square Tracker Xtreme is a comprehensive tracking solution, ideal for a wide range of applications related to asset tracking and surveillance. Its advanced features, including positioning and 3D accelerometer technologies and a robust design, make it particularly suitable for scenarios where precise tracking is essential.

Enhanced Positioning Technologies:

GPS & Beidou: Provide accurate outdoor tracking across the globe.

WIFI: Effective for indoor location tracking using nearby WIFI networks.

LoRaWAN TDoA: Offers reliable positioning in diverse environments, complementing GPS and WIFI.

Key Applications:

- **Asset Management & Logistics:** Ideal for tracking assets and goods in transit, such as containers and high-value cargo.
- **Vehicle & Fleet Monitoring:** Suitable for tracking various vehicles, aiding in security and fleet optimization.

- **Healthcare Equipment Tracking:** Monitors vital hospital equipment, ensuring efficient utilization.

- **Construction & Agricultural Equipment:** Tracks machinery and tools, preventing loss and unauthorized use.

Excellent suited for scenarios where the location updates should be based on the activity, such as assets that move infrequently.

Ideal for situations requiring up to one position update per hour or only upon request from the service. This feature makes it perfect for monitoring assets that do not require constant location updates.

Additional Advantages:

- **Indoor and Outdoor Capability:** Seamlessly transitions between indoor and outdoor tracking modes.

- **Durable and Weather-Proof:** Withstands challenging conditions, thanks to its IP68 and IK06 ratings.

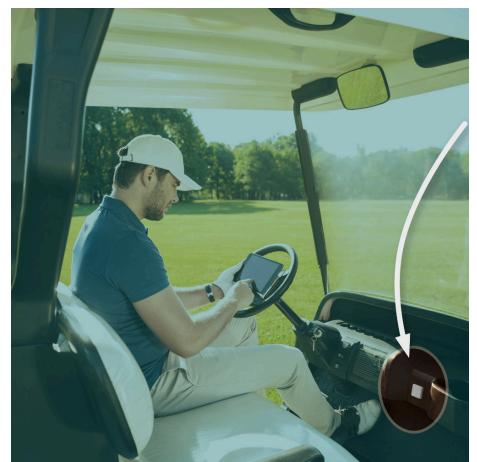
- **Extended Battery Life:** The 4 Ah battery ensures long-term operation with minimal maintenance.

- **Flexible Installation:** Offers multiple mounting options with adhesive, cable ties or screws for easy deployment.

- **Motion and Temperature Sensors:** Includes a 3D accelerometer for movement-based alarms & tracking and a temperature sensor for environmental monitoring.

The Square Tracker Xtreme, with its blend of multiple positioning technologies, durable build, and energy-efficient design, is an invaluable tool for various industries, enhancing operational efficiency and asset security, particularly in applications with specific tracking frequency requirements.

IMAGE GALLERY



SPECIFICATION

Application

Application Tracking, Asset management, Vehicle monitoring

Benefits

Benefits 10+ years battery life, Long-range (2 km), Motion controlled, Location-aware, Simple installation & mounting, Built-in data memory

In/Outdoor usage Indoor & Outdoor

Features

Sensor Temperature, 3D accelerometer

Accessories Cloud Positioning Service

Configuration LoRaWAN OTAA, NFC

Geopositioning WiFi, GNSS (GPS & BeiDou)

Connectivity data

Frequency EU (868 MHz) or India (868 MHz) or US (915 MHz) or AU915 - Australia 915 - 928 MHz or AS923-1 - Asia 902 - 928 MHz or KR920 - South Korea 902 - 928 MHz or AS923-2 - Asia 923-925 MHz

Protocols / Connectivity LoRaWAN, NFC

LoRaWAN version V 1.0.4

LoRaWAN class Class A

Sensor data

Temperature accuracy ± 2 °C/ 3.6 °F @ 0-30 °C/32-86°F

Sensor type GPS/Beidou and WiFi location

Power supply

Powered by Non-replaceable battery, Built-in battery (LiMnO₂), 4 Ah

Operating Conditions

IP Class 68

Operating range -20 - +60 °C

Mechanical data

Weight (g) 61

Width (mm) 60.4

Depth (mm) 15

Height (mm) 67.2

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