truvami

tag XL



93 x 89 x 37 mm

LoRaWAN® GNSS Wi Fi Sniffing BLE Scanning

Truvami® tag XL is a compact and versatile GNSS tracking device with integrated sensors, passive Wi-Fi scanning, and Bluetooth connectivity. Its cloud-based location computation helps conserve battery life, making it ideal for various tracking applications. With an IP67-rated housing and highly customizable firmware, it offers reliable performance in harsh industrial environments while optimizing battery usage.

Multi-protocol approach

Accurate indoor and outdoor positioning through WiFi, BLE and GNSS technology

Customizable sensors

Offers optional sensing capabilities, including temperature, pressure and humidity

Long battery life

Provides up 2+ years of battery life (hourly location fixes)

Built-in accelerometer

Features an integrated accelerometer and gyroscope to trigger motion- and rotation-induced location fixes

Ultra rugged

Robust IP67 housing for operation in harsh environments

Semtech LoRa Edge ™

Tightly integrated with the Semtech LoRa Cloud ™Locator service

Datasheet 2024 version 1.0

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Mechanics & power

Mechanical specifications

Weight	178g
Dimensions	93 x 89 x 37 mm
Enclosure	Plastic, ABS (with strong magnets)

Operating conditions

Temperature	-20 - 60 °C
Humidity	0 – 95 % RH, non-condensing

Power management

Battery type	2x AA lithium cell

Estimated battery life

1 position / day	7.5 years
1 position / hour	2 years
1 position / 15 min.	7 months

Communication

LoRaWAN frequencies

EU868 MHz

US915 MHz

AU915 MHz

AS923 MHz

IN865 MHz

LoRaWAN details

LoRaWAN® device type	Class A
LoRaWAN® version	LoRaWAN® 1.0.3
Supported LoRaWAN® features	OTAA, ADR, adaptive channel setup
LoRaWAN® receiver sensitivity	-127 dBm (SF7, 125 kHz) to -141 dBm (SF12, 125 kHz)
LoRaWAN® transmission power	14 dBm / 22 dBm (depending on region)

Location

Passive GNSS

Receiver	Semtech LR1110 receiver with external patch antenna
GNSS	GPS & Beidou
GNSS bands	L1
Accuracy (assuming - 130 dBm)	5 - 50m, depending on environment

WiFi

Receiver	2.4 GHz passive MAC scanning 802.11 b/g/n
Frequency band	2412 – 2484 MHz
Sniffer sensitivity (best-case)	-75 dBm
Accuracy	10 - 20 meters

BLE

Transceiver	Advertising, FOTA, device config via BLE connection, 2.4 GHz passive BLE beacon scanning capabilities
Transmission power	6 dBm
Sensitivity	-106.7 dBm(125 kbps) to -96.2 dBm(2 Mbit/s)
Accuracy	Depends on infrastructure

Sensors and peripherals

Accelerometer (3-axis)

Range	±2, ±4, ±8, ±16
Resolution	16 bit
Accuracy (typ.)	±20 mg

Inertial Measurement Unit (6-axis)

Accelerometer (3-axis)

Range	±2, ±4, ±8, ±16
Resolution	16 bit
Accuracy (typ.)	±20 mg

Gyroscope (3-axis)

Range	±125, ±250, ±500, ±1’000, ±2’000 dps (degrees per second)
Resolution	16 bit
Accuracy (typ.)	±1 dps (degrees per second)

Integration and security

Truvami application

The truvami's application offers a range of powerful features, including receiving, decoding, storage, and efficient accessibility of the data for further processing. With the option of on-premise or cloud service installation, the application provides flexible deployment options to suit your needs. The application is built on a scalable and highly available architecture, allowing for independent scaling of microservices. When deployed on-premises, it can be horizontally and vertically scaled to meet the demands of your IoT solution.

Third party integration

SSO: Bring your own identity provider to truvami. We support SAML 2.0 and OpenID Connect.
API: Integrate truvami with your existing systems. We provide a RESTful API for easy integration.

Data security

LoRaWAN: Securely connect your LoRaWAN devices to truvami. LoRaWAN® networks use AES-128 Encryption.
TLS: Securely connect your devices to truvami.

Device management

Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application. The firmware can be upgraded with Bluetooth, while the settings can be configured via LoRaWAN downlink.

Operating modes

Efficiency mode	Settings optimized for battery saving
Dynamic mode	Regular interval for real-time tracking
Custom	Configure the parameters yourself to fit your needs

Customization

Branding	Customize the look and feel of truvami to match your corporate identity.
Custom views	Create custom views to display the data in a way that suits your needs.
Bring your own map	Use your own map provider in truvami

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Truvami® is an IoT startup specialized in flexible end-to-end tracking solutions, based in Zurich, Switzerland. Our mission is to support enterprises in safeguarding their workforce and valuable assets through cutting-edge tracking technologies at smallest size. truvami offers a portfolio of different trackers that are designed to serve different use-cases in vertical markets like transport, logistics, industrial, construction, fleet- and animal tracking. The innovative multi-protocol approach combined with a dedicated geolocation engine allows seamless in- and outdoor tracking. Together with Truvami's cloud software platform, customers can easily integrate the solution into their existing IT landscape.

Get in touch today!

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