GA5202

LoRaWAN Asset Tracker User manual

V1.0.0

Document Revision Record

Version	Time	Description	Remark
V1.0.0	2021-08-27	Preliminary version	Mike

1. Description

GA5202 is a LoRa based asset tracker support GPS and BLE

positioning, Build in two Li-SOCl2 battery, with low power

consumption, long battery life and communication range.

The asset tracker's location data will uplink to LoRaWAN

gateway according to the schedule you choose.

Application:

Vehicle and feet management in airports, seaports, construction site, mining, oil&gas etc industries
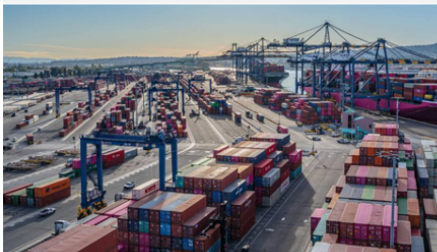

| Yacht Ports | Airports | Construction Site |
| Seaports | Fleet | Mining |

2. Specification

Parameters	Specification
Frequency Band	868~928MHz, Optional
Battery Specs	38000mah Li – SOCl2 battery, Non rechargeable
Temperature	-45~+75℃
Dimensions	185*57*53mm (Weight 360g)
Communication range	9 KM LoS 3~5KM in dense environment
Transmit Power	+18dBm
Modulation	LoRa Modulation Patented by Semtech
Protection Requirements	IP67
Positioning solution	Indoor 5-8M, outdoor 20M

3. Features

- **Communicate via LoRa， No SIM card required**

  LoRaWAN compliant, create a reliable backup communication network for use when cell service is down. Highly sensitive radio receiver available in 868 or 902~928Mhz versions for global LoRaWAN connectivity.

- **Industry-Leading Battery Life & Reliability**

  Each tracker is equipped with two replaceable 19000mah battery, battery life as long as 5 years @ 1 location per hour, A notification is sent when the battery power falls below 20%.

- **Build-in GPS/GLONASS and BLE chipset, support indoor and outdoor positioning**
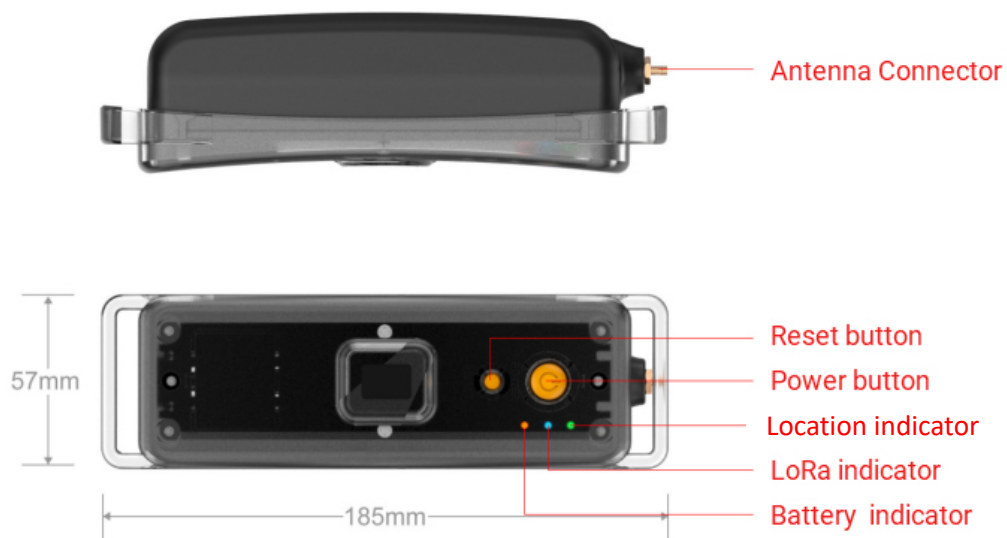
- **Rugged & waterproof**

  IP67 Water-Proof design Weight just 360g.

- **Easy Integration**

  Easy integration with comprehensive documentation and a flexible and open payload format

4. Interface and LED idicator

4.1 Buttons

Buttons	Description
Power button	Power on: Press power button 1 second, Yellow LED lit
	Power off: Press power button 3 seconds, Yellow LED extinguish
Reset button	Reset device：Press reset button 3 seconds

4.2 LED Indicator

Green LED indicator--Positioning indicator

LED indicator status	Description
Green LED not lit	Power off/Sleeping states
Green LED blinking every 3 seconds	Positioning failed
Green LED stays on for 3 seconds and then goes out	Positioning successful

Blue LED indicator--LoRa indicator

LED indicator status	Description
Blue LED off	Power off/Sleeping
Blue LED blinking every 2 seconds	Send network access requirement
Blue blinking quickly	Device failed to connect to LoRaWAN™network(The buzzer will bleep 2 times)
Blue LED stays on for 3 second and then goes out	Device successfully connected to LoRaWAN™ network
Blue LED blinking 3 times	Data transmit

Yellow LED indicator--Battery indicator

LED indicator status	Description
Yellow LED off	Power off/Sleeping
Yellow LED constantly lit	Battery level of device is enough
Yellow LED blinking every 3 seconds	Battery level of device is low
Yellow LED Blinking quickly	Device is out of battery

5. User Guide

5.1 Power on/Power off

Press power button 1 second to power on the device.

Press and hold power button 3 seconds to power off the device.

5.2 Operation Mode

After the device is powered on, the device will connect to the LoRaWAN network through OTAA

automatically. After successfully joined the LoRaWAN network, the device starts positioning. BLE

first. then GPS. the location data will uplink to the LoRaWAN gateway way according to the

schedule you choose.

5.3 Reset

Press and hold the reset button 3 seconds to reset the device.

5.4 Activation method

- **OTAA** (Over-The-Air Activation) by default

- **ABP**(Activation By Personalization）

5.5 Installation guide

Install the antenna before power on the device. Then attach the tracker to the object you want to

track.

Remark:

- Stay away from high-frequency and high current equipment, such as microwave ovens and other

  high-power wireless equipment.

- Try to use the equipment in a relatively open environment. If it is installed in a closed environment, please confirm the network communication capability in the current environment.

- Confirm that the installation position is firm enough to support the weight of the tracker.

- Long time exposure to hazardous areas with high temperature and humidity, dusty, corrosive gas, flammable, explosive, electromagnetic interference and strong vibration will accelerate the aging of the equipment.

6. Package

No	Picture	Item	QTY	Remark
1		GA5202 asset tracker	1	
2		LoRa antenna （rubber antenna by default）	1	
3		EVA （Optional）	2	Assist installation
4		Stainless steel hose clamp （optional）	2	Fix the device
5		User guide	1	
6		Warranty card	1	