Manuals+ — User Manuals Simplified.

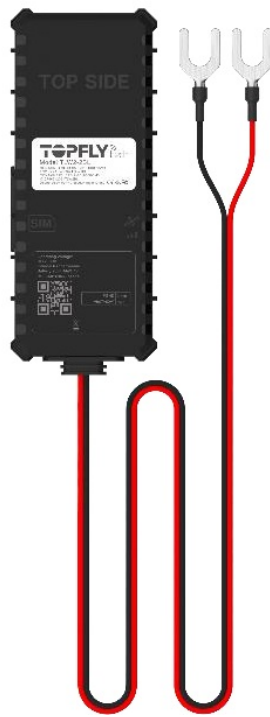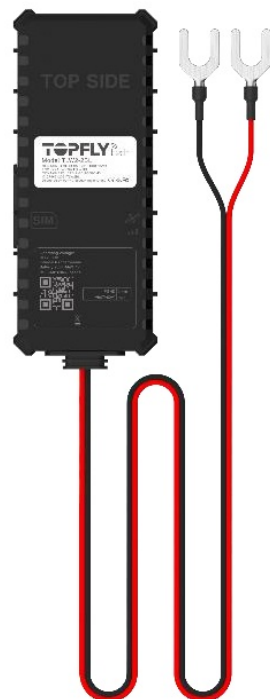# TOPFLYtech TLW2-2BL Asset GPS Tracker User Manual

Contents

TOPFLYtech TLW2-2BL Asset GPS Tracker

TLW2-2BL

The tracker is using GNSS & LTE technologies and could collect device coordinates then transfer them via LTE network to the server. It provides customers with cost-effective, efficient, and safe management. It has been widely used in commercial transportation, company vehicle fleet management, intelligent transportation, logistics, car rental, engineering machinery, marine transportation, and other segments.

Quick Reference

FOTA (firmware over the air) Notification

TOPFLYtech is committed to providing clients with the best user experience. We are offering an automatic firmware update feature for every device. This feature allows devices to always have the latest version of firmware. It can save clients the time and effort of updating firmware manually. Please note that this feature is enabled in default. If you want to turn it off, please contact with TOPFLYtech. If this feature is disabled, the fw update only can be done by sending the upgrade command manually.

Product Specifications

Network Specifications	
Frequency Range	BLE: 2402-2480MHz(1M/2M)
Data Transmission	NB1: Max. 32Kbps (DL), Max. 70Kbps (UL) NB2: Max. 1 27 (DL), Max. 158.5 (UL) EDGE: Max. 296Kbps (DL), Max. 236.8Kbps (UL) GPR S: Max. 107Kbps (DL), Max. 85.6Kbps (UL)
GNSS Specifications	
GNSS Chipset	MediaTek High Gain GNSS receiver

Parallel GNSS	GPS+Glonass or GPS+Beidou
Receiver type:	33 tracking / 99 acquisitions- channel GNSS receiver
Sensitivity	Acquisition: -149 dBm Tracking: -167 dBm Reacquisition: -161 dBm
Horizontal Position Accuracy	Autonomous: < 2.5 m CEP
TTFF @ -130 dBm with (without) EASY™	Cold Start: < 15s (32s) Warm Start: < 8s (28s) Hot Start: < 1s (1s)
Interfaces	
Network, GNSS Antenna	Internal only
Indicator LED	Network and GNSS
FOTA	Yes
Temperature Sensor	1 temperature sensor
BLE 5.0	Yes
Tracker Configuring	Micro USB connector
General Specifications	
Waterproof	IP65
Dimensions	120mm*42mm*12mm (4.72" *1.65" *0.47")
Weight	49g (1.73oz)
Battery	Li-Polymer 200 mAh/ 3.7V

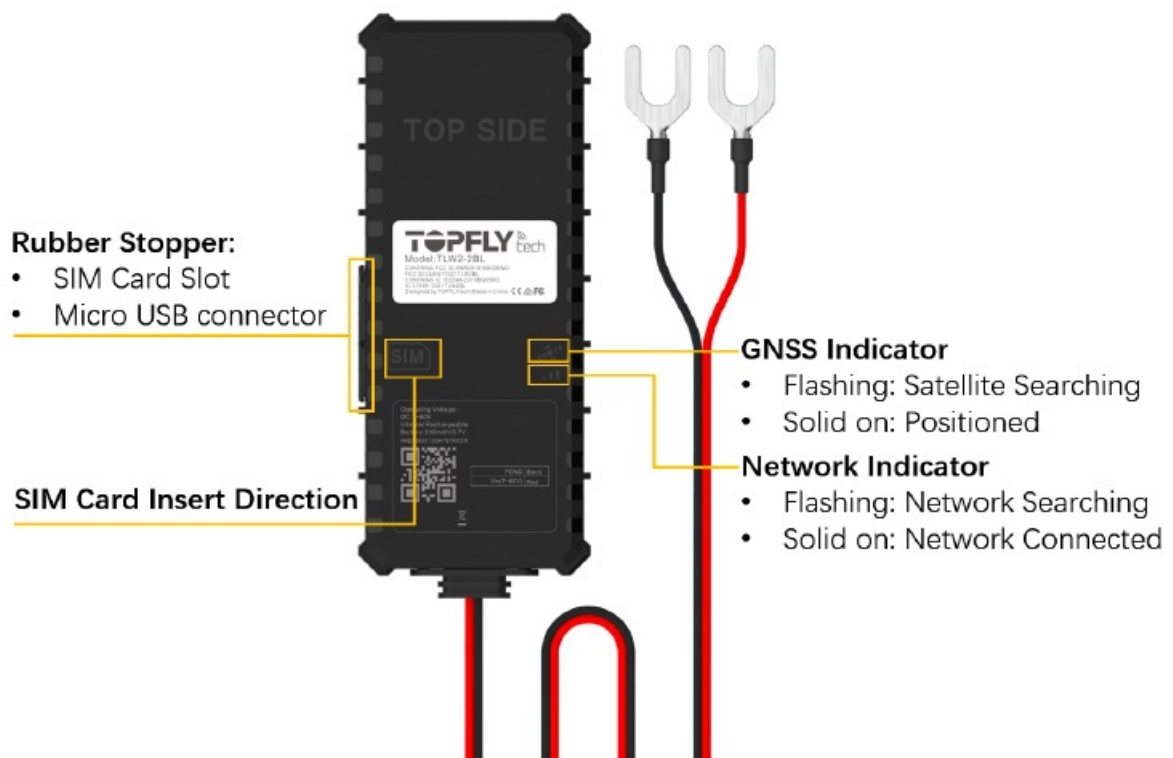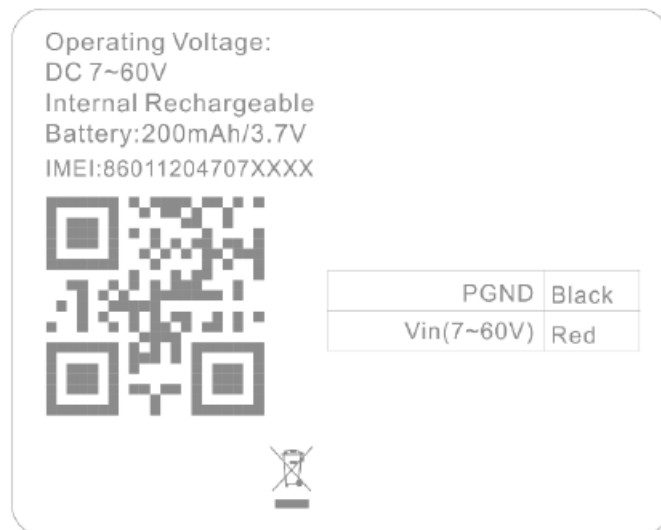|	
Operating Voltage	7V to 60V DC
Operating Temperature	-25℃ ~ +70℃ (-13°F ~ 158°F)
Storage Temperature	-40℃ ~ +85℃ (-40°F ~ 185°F)
Air Interface Protocol	
Transmit Protocol	TCP, UDP, MQTT, SMS
Protocol Check & Encryption Support	MD5/ AES256
BLE Accessory Support	Yes
Scheduled Timing/angle/distance Report	Report position and status at preset intervals
External Power Status Alarm	Report when external power is disconnected
Low Power Alarm	Report when backup battery is low
Speeding Alarm	Report when speed exceed the pre-set value
Towing Alarm	From internal 6-axis accelerometer
Remote Control	Remote output control
Network Signal Jamming Detection	Report network jamming
Data Roaming Control	Avoid additional data consumption
Driving Behavior Monitoring	Aggressive driving behavior detection, e.g., harsh braking and acceleration
Crash Detection	Accident data collection for reconstruction and analysis

Standard Accessories Introduction

Sponge Double-side Adhesive Tape

LED indicator and SIM card Slot

Rubber Stopper:
- SIM Card Slot
- Micro USB connector

SIM Card Insert Direction

GNSS Indicator
- Flashing: Satellite Searching
- Solid on: Positioned

Network Indicator
- Flashing: Network Searching
- Solid on: Network Connected

Note: Indicator lights will go out automatically after the tracker turns on for 8 mins.

Wire Definition

Operating Voltage:
DC 7~60V
Internal Rechargeable
Battery:200mAh/3.7V
IMEI:86011204707XXXX

PGND	Black
Vin(7~60V)	Red

Installation Guide

SIM Card Pre-Installation Note

SIM card data service should be enabled.
If SIM card is locked via PIN, please unlock it first.
Ensure there is sufficient balance in the SIM card.

SIM card installation

Open the rubber stopper on the side
Insert the SIM card by following the direction icon on the tracker cover
Give a little push to the SIM card. When there is a "click" sound, it stands for the SIM card has been successfully inserted

Installation

Away from emission sources such as all kinds of sensors, burglar alarm,s and other communication devices.

Quick Trouble Shooting

Unable to Connect to the Tracking Platform

Check the APN and IP settings.
Check the SIM card whether supports a specific network and the data service whether is enabled.
Make sure there is no limitation or already added server IP to the IP whitelist when using a M2M SIM card.
Check the remaining balance or network signal of the SIM card.

Tracker Shows Offline

Check the external power voltage to see whether the tracker is disconnected from external power.
Check whether the vehicle entered the network blind area.
Check the balance of tracker SIM card.
If the connection lost happens on the last several days of the month, check whether the network service is terminated by carrier because of exceeding the max data usage volume.

Unable to locate

Is the top side (with TOP SIDE logo on) facing upwards without being shielded by metallic things during the installation?
Does the vehicle enter an area with no satellite coverage?

Location Drift

In an area with poor GNSS signal (like the areas with lots of high buildings), location drift may happen. When moving to an open area, the drift will no longer exists.

No Command Reply

Check the command format. Make sure it's correct.
The vehicle may be in-network blind area.
Ensure the SIM card is properly inserted.

Warranty and Stock
The standard warranty period is 12 months starting from the date of purchase. If the tracker will be stored for a long time, please connect it to the external power and recharge the internal battery (10 hours) every 3 months. It will be helpful to the internal battery life.

Optional Accessories List

TA12	BLE Tag	
TA20	External TPS Set (BLE)	
TA22	Internal TPS Set (BLE)	
TSTH1-B	BLE 5.0 Wireless Temperature & Humidity Sensor	
TSDT1-B	BLE 5.0 Wireless Door & Temperature Sensor	
TSR1-B	BLE 5.0 Wireless Relay	

FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and

2. this device must accept any interference received, including interference that may cause undesired operation

Caution!
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IMPORTANT NOTICE:
FCC Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

ISEDC Warning

This device complies with Innovation, Science, and Economic Development Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.
the device is compliance with RF exposure guidelines, users can obtain Canadian information on RF exposure and compliance.The minimum distance from body to use the device is 20cm.

Documents / Resources

TOPFLYtech TLW2-2BL Asset GPS Tracker [pdf] User Manual
2021TLW2BL, 2ASWY2021TLW2BL, TLW2-2BL Asset GPS Tracker, TLW2-2BL, Asset GPS Tracker