USER MANUAL

Model T1-300

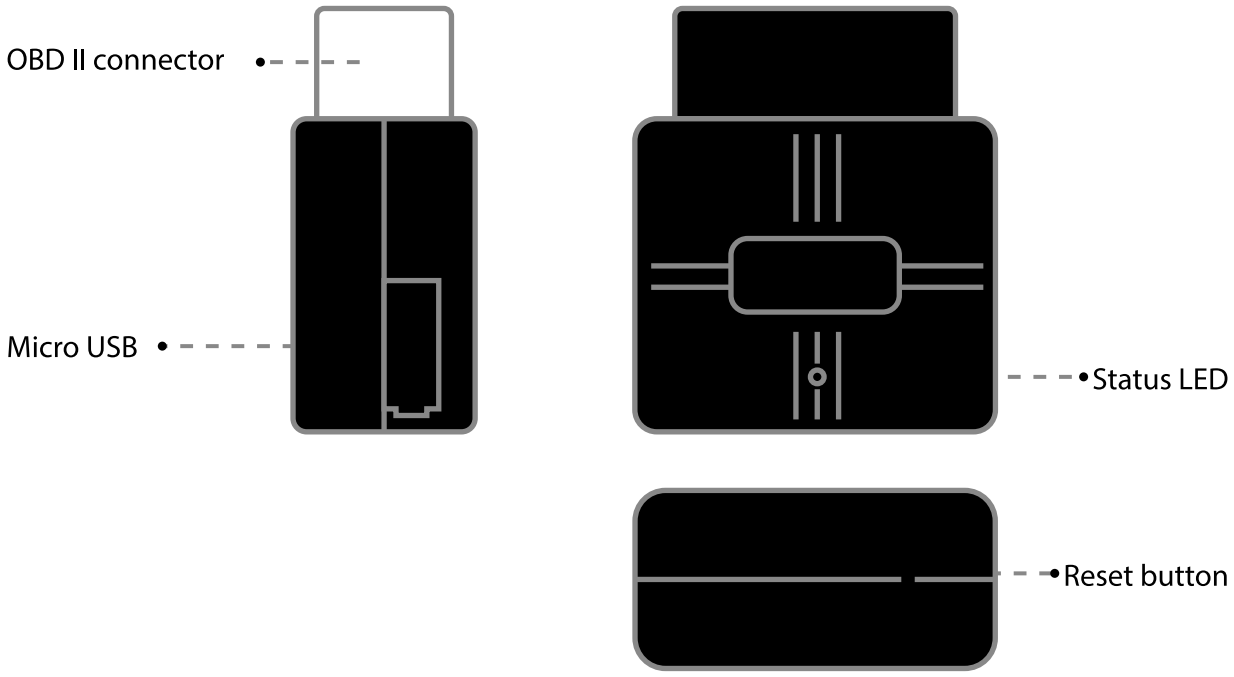
Smart tracking,
everywhere, anytime.

trackone
GPS tracking solutions

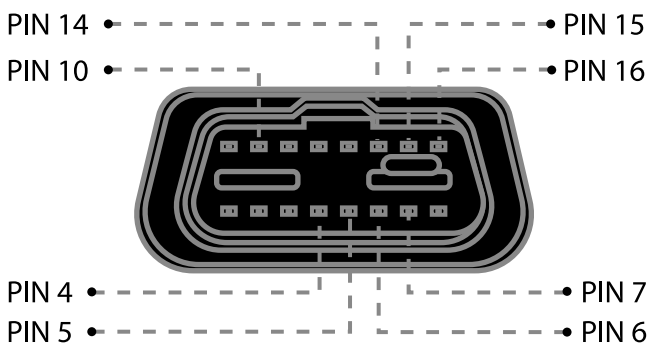
www.trackone.io

01/Overview

1.1. Appearance



1.2. Pinout



Pin Number	Pin Name	description
4	GND(-)	Ground
5	GND(-)	Ground
6	CAN_H	CAN high
7	K-Line	
14	CAN_L	CAN low
15	L-Line	
16	VCC(9-36)V DC(+)	Power supply(9-36 V DC)

1.3. Status LED Indication

Behavior	description
Solid on	Normal mode, OBD, GPRS, GNSS is working

1.3s (off) 2.200ms(on), 200ms(off) 3.1s(on), 200ms(off) 4.1s(on), 200ms(off) 5.Repeat above 1~4	OBD function works abnormally
1.3s(off) 2.1s(on), 200ms(off) 3.200ms(on), 200ms(off) 4.1s(on), 200ms(off) 5.Repeat above 1~4	GNSS signal is not received
1.3s(off) 2.1s(on), 200ms(off) 3.1s(on), 200ms(off) 4.200ms(on), 200ms(off) 5.Repeat above 1~4	GPS works abnormally

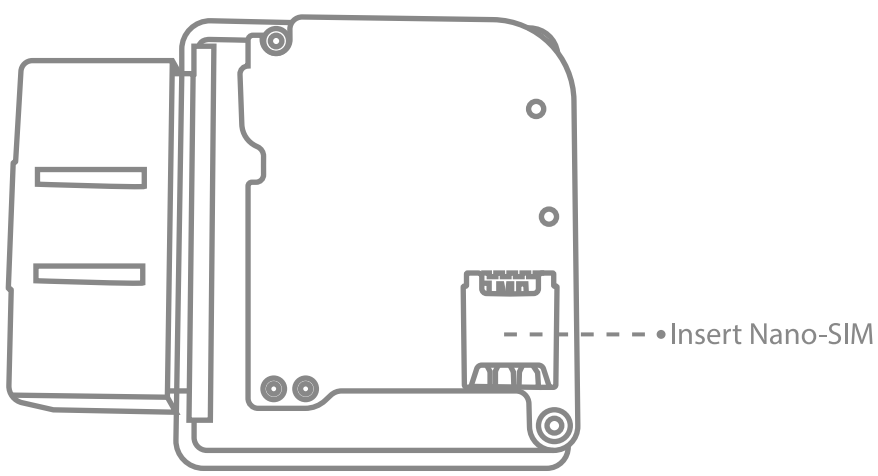
02/Installation

2.1. SIM Card Attachment

Step 1 Prepare a Nano-SIM.

Step 2 Attach the SIM.

Remove the cover and insert the SIM by the figure. Then attach device cover back.



Note:

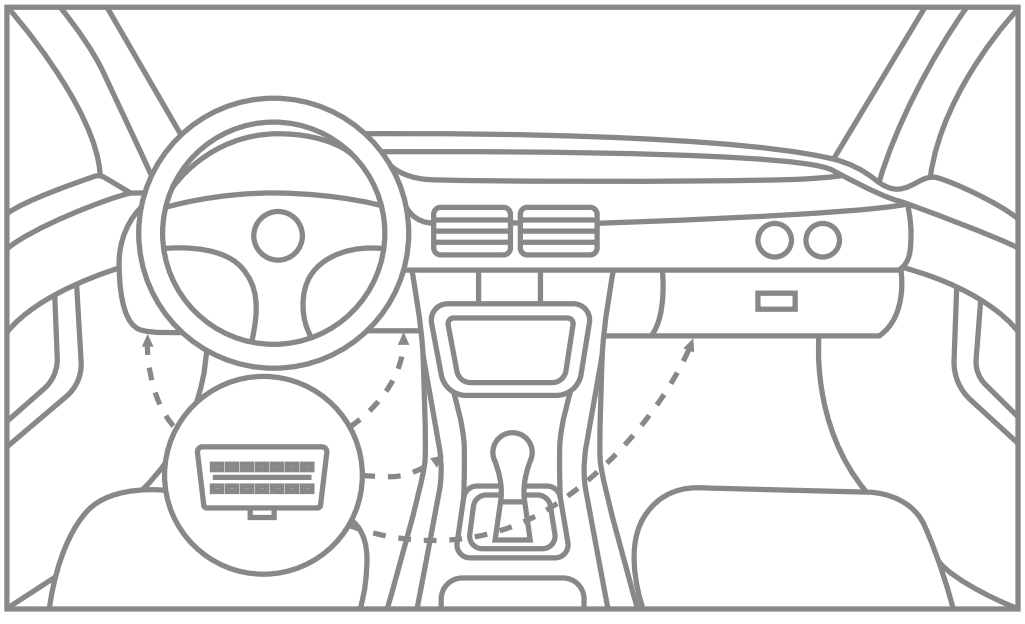
①. After the SIM is in inserted, the device powers on using the backup battery. If the device fails to power due to low battery, you can connect the device to the OBDII connector of the vehicle to obtain power.

②. The SIM card must be inserted correctly, has GPRS services activated, and is not in arrears. If the SIM is identified and requires a PIN, please disable the PIN request.

2.2. Installing the Device

Connecting the device to the vehicle:

-Find OBDII Connector in your vehicle（the following figure shows most of common OBD II connector locations）.



03/Quick SMS configuration

3.1. Configuring APN and Server Parameters

To ensure the device gets online and operates correctly, you are advised to check the APN and server settings. You can set the APN and the server via SMS commands if necessarily.

APN settings

It is recommended to contact your network operator to confirm the APN information. Then you can use your phone to deliver the following SMS command to the VL502:

APN,apnname#

For example: APN,internet#

Or if your local APN contains a user name and password, you can use the following command to set the APN:

APN,apnname,user,password#

For example:APN,internet,CLENTE,AMENA#

Server settings

It is recommended to contact your platform service provide to confirm the domain name and IP address of their serve. Then you can use your phone to deliver the following command to the VL502:

SERVER,mode,domain name/IP,port,protocol#

For example:

SERVER,1,www.ydpat.com,8011,0#

SERVER,0,211.154.135.113,8011,0#

"Mode=1" means to set the server parameters via the domain name;

"Mode=0" means to set the server parameters via the IP address.

"Protocol=0" means to connect to the server using TCP protocol.

3.2. Default configuration settings

Movement and ignition detection:

Vehicle movement will be detected by accelerometer.

Ignition will be detected by vehicle power voltage between 9 – 36 V.

Device will send a alert notification to the server if one of these events happen:

Vehicle keeps moving at speeds above the threshold for a preset duration.

Driver steps on the brake or gas pedal hard, corners rapidly.

The device is plugged or unplugged from the OBDII connector.

04/Introduction

4.1. Features

- Communication via 4G LTE networks with 2G GSM fallback. Two complementary positioning systems ensure the locations to be accurately displayed on cloud platform.
- Obtains real data of vehicle (accurate mileage, fault code, ACC status, fuel consumption statistics, battery voltage, engine speed, etc.)
- Two complementary positioning systems ensure the locations to be accurately displayed on cloud platform.
- Get instant alerts for 4 or 8 kinds of dangerous driving behavior, depending on your needs.
- Instant alerts for atypical events such as car fault, collision, overspeed, device pull-out, engine idling, low battery, geo-fence entry/exit, etc.
- Through bluetooth connection you can configure parameters, upgrade software, and debug.
- Ensures constant tracking in the area with poor GPS signal or even without it.
- Simply plug this device into OBD II socket, you don't have to turn to professionals.

4.2. Basic characteristics

GNSS

Positioning system	GPS/BDS
Frequency	L1
Positioning accuracy	＜2.5m CEP
Track sensitivity	-162 dBm
Acquisition sensitivity	-148 dBm (cold) /-156 dBM (hot)
TTFF (open sky)	Avg. hot start ≤1sec
	Avg. cold start ≤32sec

Cellular

Communication network	LTE + GSM
Frequency	VL502(L): LTE-FDD: B2/B3/B4/B5/B7/B8/B28/B66 GSM: B2/B3/B5/B8 VL502(E): LTE-FDD: B1/B3/B5/B7/B8/B20/B28 GSM: B2/B3/B5/B8

Power

Battery	50mA/3.7V
Input voltage	9-36VDC

OBD interface

Data	K-Line, CAN Bus Data
Data Reading	Allow information to be read from OBDII port upports OBD protocols: ISO 9141-2 (5 baud init, 10.4 kbaud) ISO 14230-4 KWP (5 baud init, 10.4 kbaud) ISO 14230-4 KWP (fast init, 10.4 kbaud) ISO 15765-4 CAN (11 bit ID, 250 kbaud) ISO 15765-4 CAN (11 bit ID, 500 kbaud) ISO 15765-4 CAN (29 bit ID, 250 kbaud) ISO 15765-4 CAN (29 bit ID, 500 kbaud)

Interface

Connection	OBD II socket
GNSS antenna	Internal High Gain
GSM antenna	Internal High Gain
USB	2.0 Micro-USB
LED indication	1 status LED lights
SIM	Nano-SIM
Data storage	8+16MB

Physical specification

Dimensions	61 x 52 x 26mm（LxWxH）
Weight	55g

Operating environment

Operating temperature	-20°C to 70°C
Operating humidity	5%～95%, non-condensing

Feature

Sensors	Accelerometer
BLE	Support BLE 4.2 protocol
Ignition detection	External Power Voltage, Accelerometer Engine RPM
Scenarios	Vehicle movement alert, Over-speed alert Geo-fence, Vehicle battery detection, Power supply disconnection
Driving behavior analysis	Harsh acceleration, Harsh braking Harsh cornering, Collision
SMS	Configuration, Events, Debug
Fuel monitoring	OBD II

05/Platform Operations

By logging in to the mobile app or locations services platform designated by your dealer and correctly binding your device, you can query and set related parameters.

5.1. Logging In to Service Platform

Log in to the location services platform designated by your dealer and configure accordingly.

5.2. Downloading Mobile App

Log in to the URL designated by your dealer to download the mobile app.

IOS

Android

06/Troubleshooting

When any of the following faults occurs, please troubleshoot it by the solution. If the fault persists, please contact your dealer or service provider.

Issue	Description	Solution
Poor satellite signal	The device is blocked by metal objects	Remove the metal objects away from the device
Power-on failure	The battery is lower	Connect the device to an external power source
	The SIM card slot is damaged	Contact your dealer for a replacement

Failed to access the network	The SIM card is attached incorrectly	Re-attach it
	The metal side of the SIM card is stained	Wipe it with a clean cloth
	The SIM card is damaged or invalid	Replace it
	The device is out of GSM service areas	Try it in a service area
	The signal is poor	Check if the device is securely connected with the OBD connector of the vehicle
LED off	The contact is poor	Check if the device is securely connected with the OBD port of the vehicle
Failed to query a location	Your SIM card has no GPRS services activated	Please contact the network operator and activate GPRS services
	The device does not respond to a command	Check the device and make sure that the device can access the network and the SIM card has text services activated

07/Safety information

CAUTION

Risk of explosion if the battery is replaced by an incorrect type

Disposal of a battery into fire or a hot oven, or mechanically crushing or mechanically crushing or cutting of a battery，that can result in an explosion;

Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;

A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

TrackOne by Forguard access to portal

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