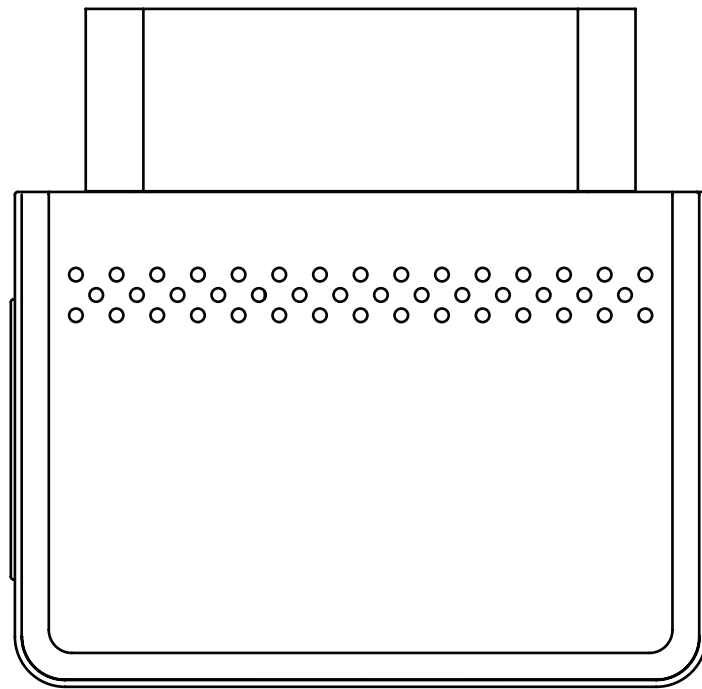


VL512

LTE Plug-in GNSS Tracker

Quick Manual V1.1



Read this manual carefully prior to use. No prior notice will be given for any changes made to the appearance color, or accessories of the product.

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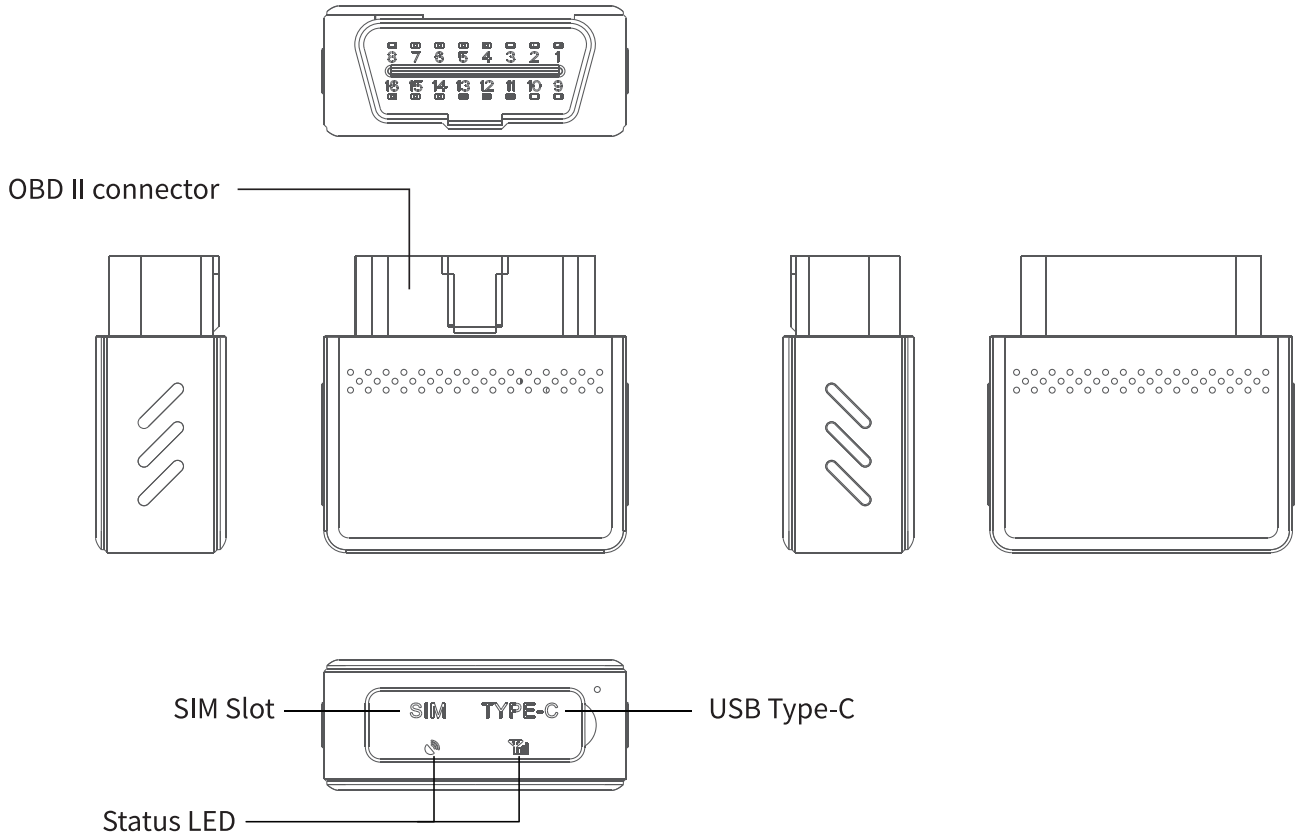
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01/Overview

1.1 Appearance



1.2 Status LED Indication

Blue LED

Behavior	Meaning
Fast blink[0.3S-0.3S(on-off)]	The GPS/BD signal Searching
Solid on	The GPS/BD positioning is successful
Light off	The GPS/BD is dormant or not working

Green LED

Behavior	Meaning
Fast blink[0.3S-0.3S(on-off)]	The GSM is initializing
Slow blink[1S-1S(on-off)]	The GSM works correctly
Solid on	The device is online
Light off	Network error or no SIM card

02/Installation

2.1 SIM Card Attachment

Step 1 Prepare a Nano-SIM.



Standard ❌



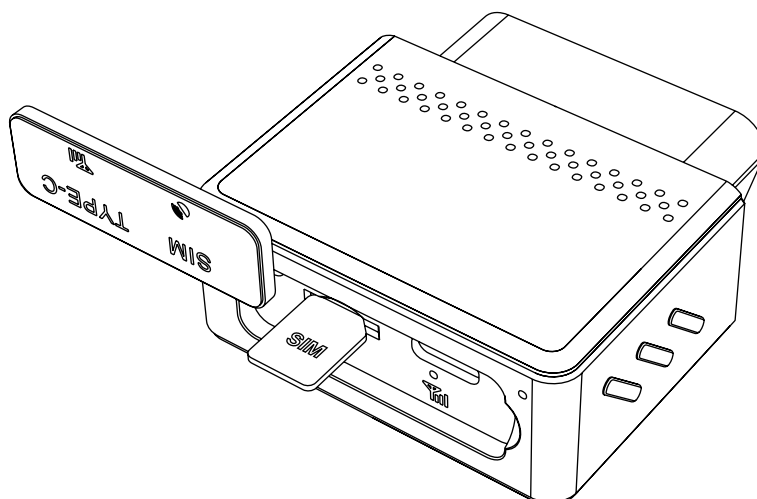
Micro ❌



Nano ✔️

Step 2 Attach the SIM.

Open the cover and insert the SIM. Then attach device cover back.



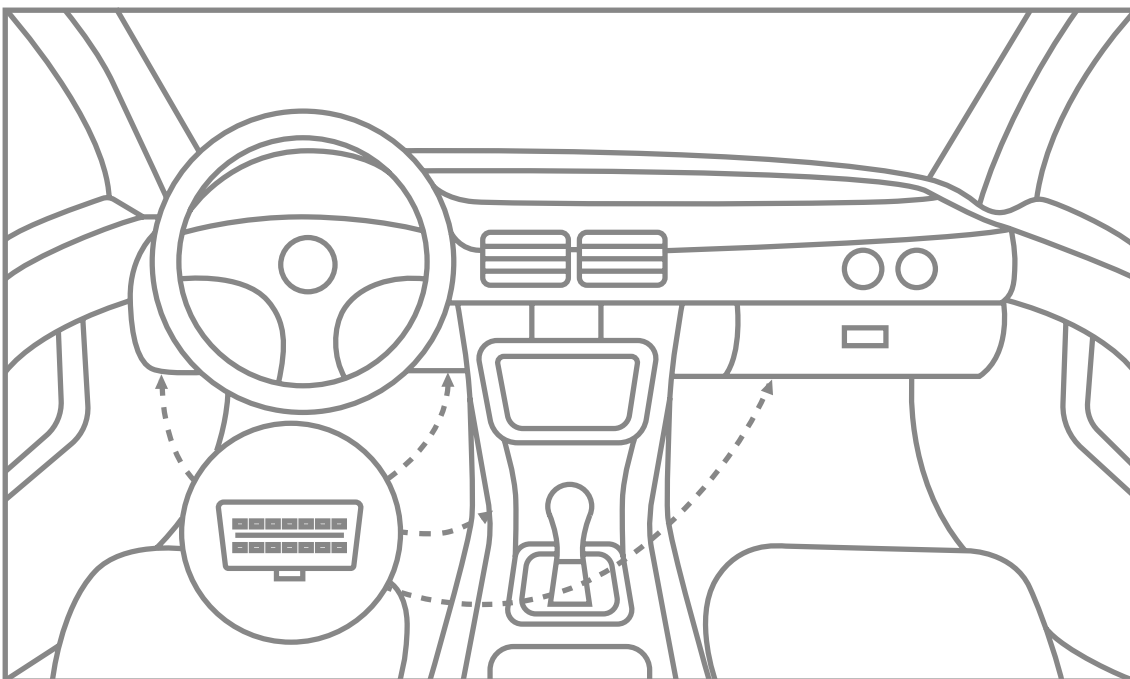
Note:

1. After the SIM is 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)



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 VL512:

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 VL512:

SERVER,mode,domain name/IP,port #

For example:

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

SERVER,0,211.154.135.113,8011#

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

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

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.
- The state of charge of the backup battery of the device is lower than 10%.

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.
- Receive alerts when any of 4 kinds of dangerous driving behavior is detected.
- Inconspicuous mic allows for remote monitoring and recording of ambient sounds around the device
- Instant alerts for atypical events such as collision, overspeed, device pull-out, low battery, geo-fence entry/exit, etc.
- 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	<5 meters
Track sensitivity	-162 dBm
Acquisition sensitivity	-148 dBm (cold) /-156 dBm (hot)
TTFF (open sky)	Avg. hot start \leq 1sec
	Avg. cold start \leq 32sec

Cellular

Communication network	LTE Cat1 + GSM
Frequency	Cat1 LTE-FDD B1/B3/B7/B8/B20/B28
	LTE-TDD B34/B38/B39/B40/B41
	GSM: B2/B3/B5/B8

Power

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

Physical specification

Dimensions	51.0 x 50.0 x 22.0mm (LxWxH)
Weight	55g

Interface

Connection	OBD II socket
GNSS antenna	Internal High Gain
GSM antenna	Internal High Gain
USB	1xUSB Type-C
LED indication	GNSS(Blue), Cellular(Green)
SIM	Nano-SIM
Data storage	8+16MB

Operating environment

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

Feature

Voice monitoring range	≤ 5 meters
Sensors	Accelerometer and gyroscope
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.

08/Warranty Instructions

8.1 Disclaimer

- No prior notice will be given if the product is upgraded due to technological reasons.
- The appearance or color of the product is subject to the actual.
- The warranty card applies to the services of repair, replacement, and refund of the product with the following IMEI.
- Please keep this warranty card and the original purchase receipt together in a safe place, as these will be needed at time of services.

8.2 Warranty Terms

- (1) For damages not caused by human factors, this warranty lasts for 2 (two) years (including one year replacement service) from the date of purchase.
- (2) You can choose to pay for the repair services in any of the following cases:

8.3 Warranty Instructions and Service

- The warranty card expires;
- No warranty card or valid proof of purchase;
- The product, including its accessories, is not in the warranty period;
- Damage caused by unauthorized repairs, crash, liquid spillage, accident, modifications, or incorrect voltage input; or the label, IMEI, or counterfeit mark of the device is broken or scribbled;
- Damages caused by installation or use not in accordance with the user manual;
- Damage caused by force majeure such as fire, flood, or lightning;
- The product model is inconsistent with the warranty card or the warranty card is altered;
- Other damages caused by force majeure.

8.4 Reminder

- As of January 1, 2016, the warranty lasts for 2 (two) years for repair from the date of purchase, including one year for replacement.

8.5 The specific terms are

- A full replacement, including accessories, if the product is found defective during unpacking check;
- If a defect occurs within one year after installation, then:
 - ① Replace only the mainboard if the housing is intact and doesn't affect normal use;
 - ② Replace the housing and the mainboard if the housing is defective and affects normal use. Please be noted that man-made damages will void the replacement service for the housing.
- Free repair services will be given to the device if a defect is found during the second year under proper use.

Maintenance Record

Date		Serviced by	
Product Model			
IMEI Number			
Failure Description			
Comments			