

# Quick Start Guide

**AIC450**

**Amber Insight C450**

LTE OBDII GNSS Tracker

**1**  
Install  
Your device

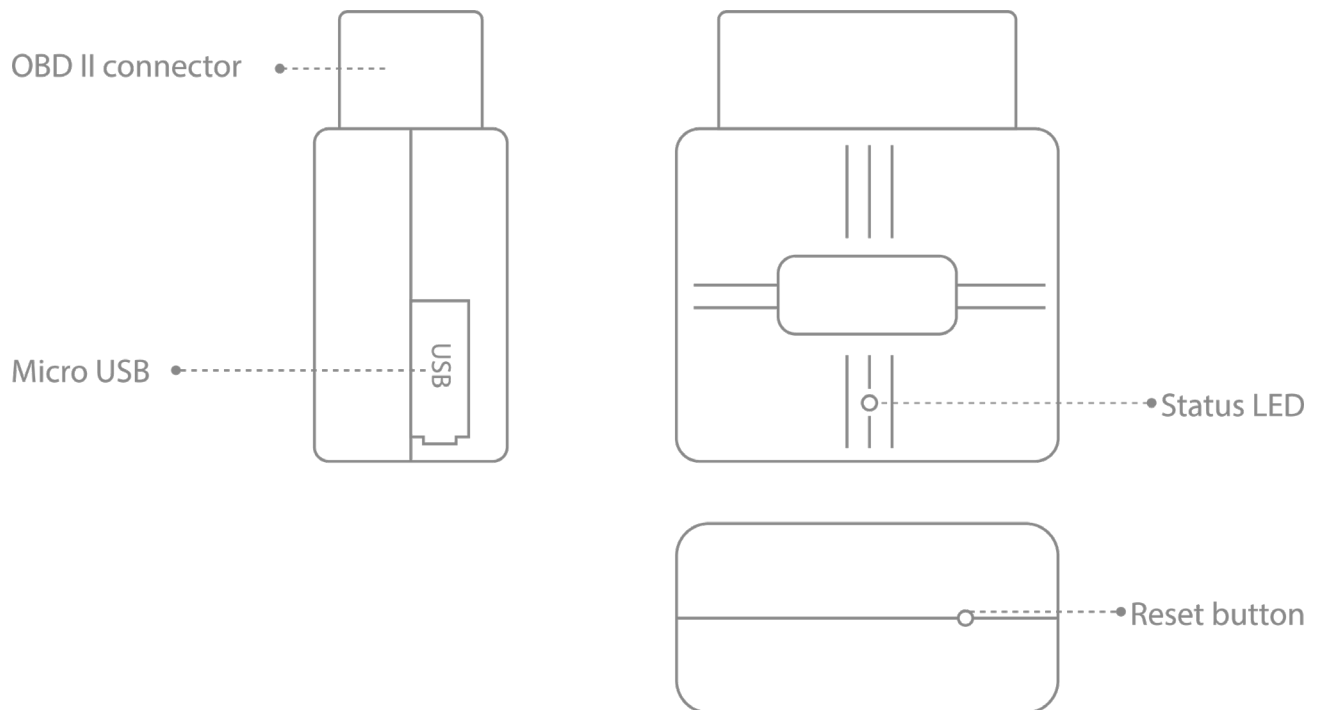
**2**  
Download  
Amber Connect  
App

**3**  
Activate  
the device

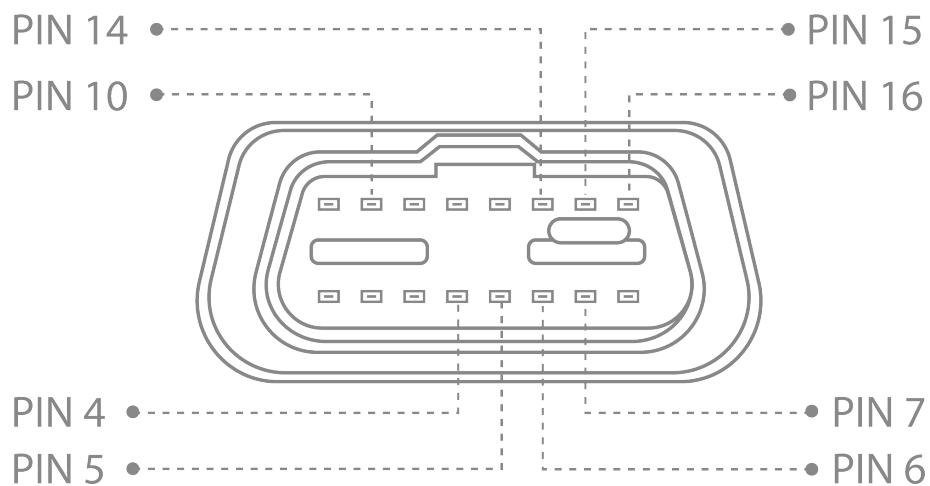


# 1. Overview

## 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)

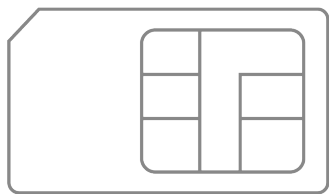
## 1.3. Status LED Indication

Behavior	Description
Solid on	Normal mode, OBD, GPRS, GNSS is working
1. 3s (off) 2. 200ms(on), 200ms(off) 3. 1 s(on), 200ms(off) 4. 1 s(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. 1 s(on), 200ms(off) 3. 1 s(on), 200ms(off) 4. 200ms(on), 200ms(off) 5. Repeat above 1~4	GPS works abnormally

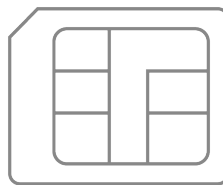
## 2. Installation

### 2.1. SIM Card Attachment

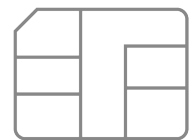
Step 1 Prepare a Nano-SIM.



Standard ❌



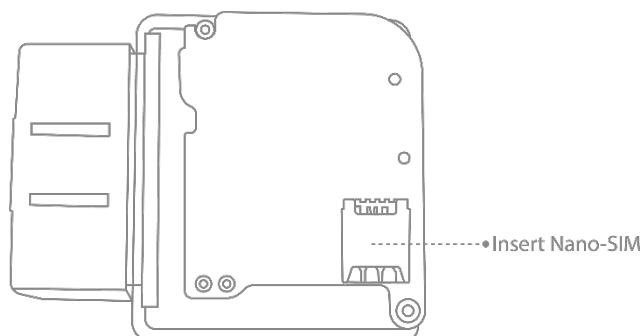
Micro ❌



Nano ✔️

Step 2 Attach the SIM.

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



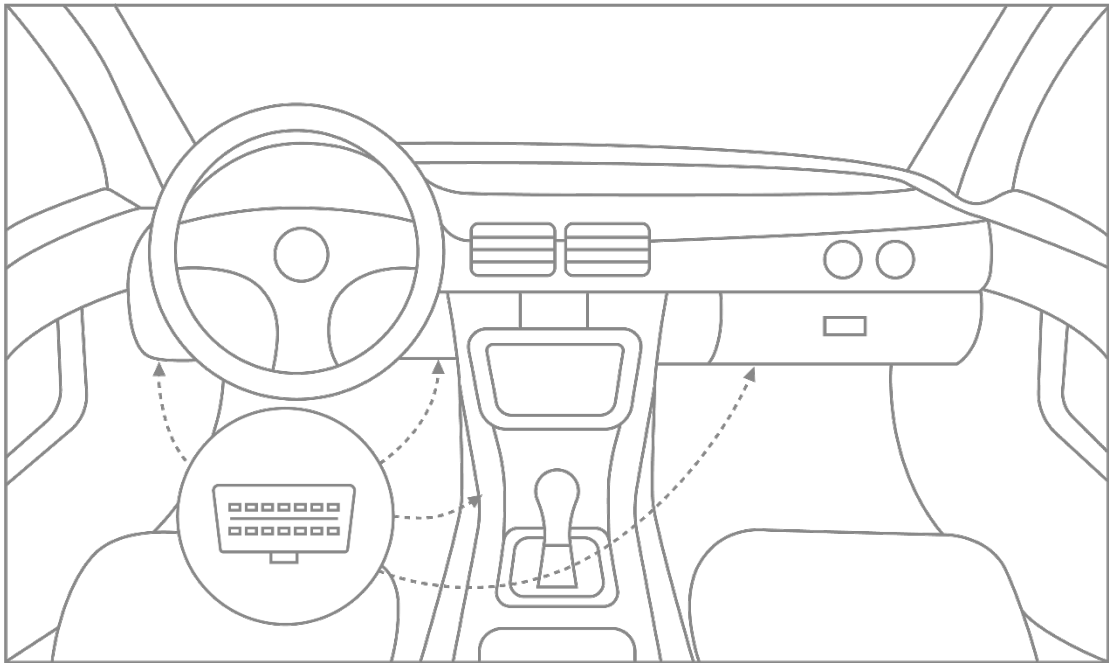
## Note

- After the SIM card is inserted, the device powers on using the backup battery. If the device fails to power on due to low battery, you can connect the device to the OBD port of the vehicle to obtain power.
- 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 con-necter locations).



## 3. Quick SMS configuration

### 3.1. 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.

# 4. 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 <1 sec
	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: B 1 /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 supports 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 x52 x26mm (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

## 5. Platform Operations

By logging in to the mobile app or location 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.



## 6. 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 low.	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. Replace it.
	The SIM card is damaged or invalid.	Try it in a service area.
	The device is out of GSM service areas.	Try it in an area with strong signals.
	The signal is poor.	Check if the device is securely connected with the OBD port 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 re-pond to a command	Check the device and make sure that the device can access the network and the SIM card has text services activated

## 7. 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 mechanical-ly 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.

## 8. Warranty Instructions

### Disclaimer

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

### 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:

### Warranty Instructions and Service

1. The warranty card expires;
2. No warranty card or valid proof of purchase;
3. The product, including its accessories, is not in the warranty period;
4. 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;
5. Damages caused by installation or use not in accordance with the user manual;
6. Damage caused by force majeure such as fire, flood, or lightning;
7. The product model is inconsistent with the warranty card or the warranty card is altered;
8. Other damages caused by force majeure.

### 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.

### The specific terms are:

1. A full replacement, including accessories, if the product is found defective during unpacking check;
2. If a defect occurs within one year after installation, then:
  - ①. Replace only the main board if the housing is intact and doesn't affect normal use;
  - ②. Replace the housing and the main board if the housing is defective and affects normal use. Please be noted that man-made damages will void the replacement service for the housing.
3. 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			



Need help? Contact 24/7 live support!

 In App Chat

 [support@amberconnect.com](mailto:support@amberconnect.com)

 Chat via website [www.amberconnect.com](http://www.amberconnect.com)

Works with Android phones and tablets, iPhone, iPad.  
Compatible with Chrome, Mac and PC web browsers.



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