amber connect
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Quick Start Guide

AVC440
Amber Vision C440
Multi-Channel 4G DashCam

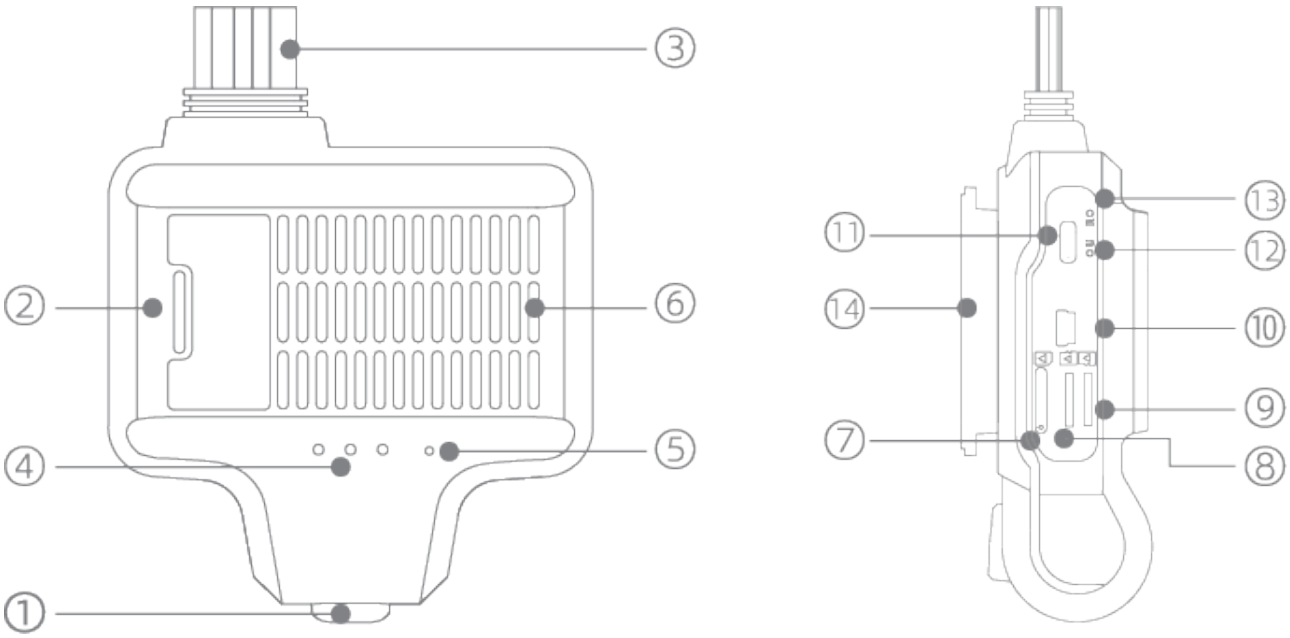
1 Install Your device

2 Download Amber Connect App

3 Activate the device



1. Overview of Product Appearance



1.1. Appearance Description

Pin	Description	Pin	Description
1	Front camera	8	Memory card slot 1
2	Speaker	9	Memory card slot 2
3	Wire harness	10	External camera interface
4	Status indicator	11	USB port
5	Microphone	12	Upgrade operation hole
6	Device cooling area	13	Reset hole
7	SIM card slot	14	Mounting support

1.2. Description of Work Indicators

Red LED is always on	Device works normally
Red LED is flashing	Device works incorrectly
Blue LED is always on	Network is connected
Blue LED is flashing	Network is disconnected
Green LED is always on	GNSS works normally
Green LED is flashing	GNSS works incorrectly
All three LEDs are off	Device in sleep mode

2. Packaging List

2.1. Standard configuration

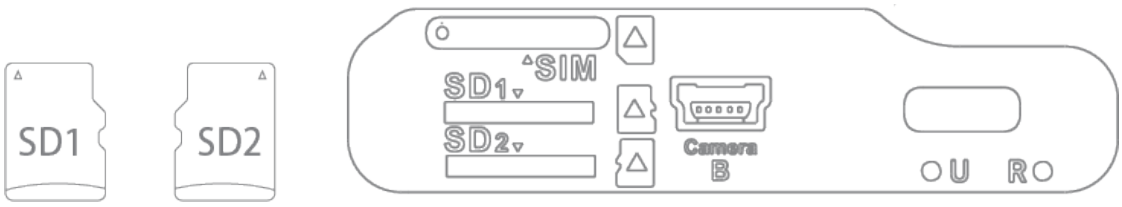
Host	X1	Power step-down cable	X1
Camera harness	X1	SOS key	X1
Mounting base	X1	Protective cover for the card slot	X1

2.2. Optional

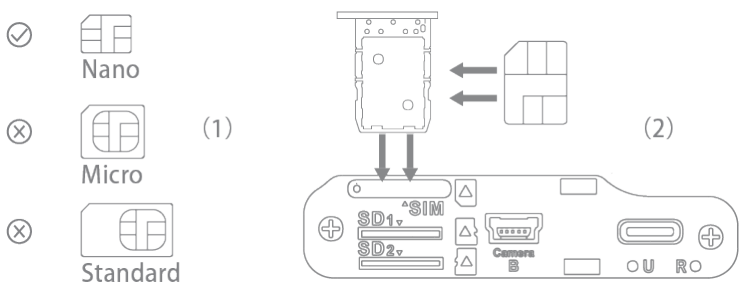
External camera with internal recording	Mounted in the vehicle, it is used for recording the internal environment of the vehicle.
Pull-out waterproof camera	Mounted outside the vehicle, it is used for recording the external environment of the vehicle.
Pull-out DMS camera	It is used for extension when the mounting distance is far from the host.
Camera extension cable	It is used for disconnecting the power and locking the vehicle through the extension harness relay interface.
Relay	It is used for disconnecting the power and locking the vehicle through the extension harness relay interface.
Extension accessories	Additional extension accessories may be provided according to the needs of the vehicle industry.

2.3. Selection of product accessories

1. **Memory card**
   - The device can support up to two Micro SD(TF)s.
   - Support 16GB–256GB capacity cards.
   - Please select cards that meet the class 10 rate or above and standard A1 or above.
   - When two memory cards are used, please select those cards with the same brand and specification in order to achieve the best compatibility.
   - Please insert the memory card according to the direction shown in the Figure.
   - Press the memory card to pop it up.
   - Do not insert the SIM card into the memory card slot.
   - When you only use one memory card, please insert it into the card slot 1.



2. **IM card**
   - Please select the SIM card with Nano size (as shown in Figure 1) for installation.
   - Install the SIM card (Please make sure that it is in ACC OFF mode before installing or removing the SIM card) according to the following method (as shown in Figure 2).
   - Make sure that the package of the SIM card has the mobile network function and maintains sufficient traffic.



3. Overview of product functions

AVC 440 is a 4G dashboard camera specially designed for commercial vehicles. It is equipped with four recording cameras, which can record video footage for multi views and multi scenes during driving. Provided with the visual AI function, it can support simultaneous computation of ADAS and DMS, so that it can analyze the early warning of the road conditions in front of the vehicle and the status of the driver in the vehicle and thus provide an alarm, so as to ensure driving safety and prevent potential hazards. Provided with such functions as event alarm and one-click for help, it is widely applicable to commercial vehicles such as general wagons, large trucks, small and medium-sized transport vehicles and etc.

3.1 Product Features

- **Dashboard camera**
  It supports simultaneous recording of up to four cameras in order to ensure the safety of vehicle personnel or assets in an all-round way.
- **Positioning**
  Provided with the built-in GPS & BDS dual-mode positioning, it can upload the real-time geographical location during driving.
- **4G LTE network**
  Provided with the built-in 4G LTE module, it can connect with the network at the CAT.4 rate to ensure smooth video transmission.
- **Remote management**
  It supports the connection with the cloud server through the wireless data network so that it can realize the multi-way control of locations and videos of the vehicle in a remote manner.
- **Visual AI**
  This product can predict the vehicle driving and the driver's fatigue status through the camera screen so that it can prevent accidents and improve driving safety.
- **Driving behavior**
  This product can monitor dangerous driving behaviors of the vehicle on a real-time basis, for example, rapid deceleration, rapid acceleration, sharp turning and overspeed.
- **Event alert**
  If the product detects any exception occurred on the vehicle, it will notify the platform, record the location and capture a short video and other information related to he exception, and upload these data to the cloud for future reference.

3.2. Product configuration and parameters

Configuration	Parameter	Configuration	Parameter
Configuration	6-core	Camera	Support up to 4 channels
Running memory	2GB	Positioning	GPS+BDS
Built-in storage	8GB	Speaker	Built-in
External storage	Support dual memory cards	Microphone	Built-in
Mobile network	4G LTE	Key	External
Wireless network	Wi-Fi 2.4G	Weight	323g
Bluetooth	BT4.0	Size	106×113×33 (mm)

3.3. Product performance

Performance	Parameter	Performance	Parameter
Working voltage	9-30V	Under voltage protection	9V
Working temperature	–20˚C-70˚C	Overvoltage protection	36V
Storage temperature	–30˚C-85˚C	Reverse connection protection	Support
ESD protection	Air ±14KV; contact ±7KV	Flame retardant	UL94 V-0

4. Product installation

4.1 Notices

- This product is not applicable to battery electric vehicles and hybrid electric vehicles.
- For installation, please select accessories specified by the manufacturer.
- The power supply of this device is 9-30V. Please select the original power cable. Do not connect the positive and negative cables reversely during installation.
- Upon completion of the device installation, please remove the protective film from the camera to achieve the best visual effect.
- It is recommended that you ask dealers, designated professional units and personnel for installation and testing according to the instruction in this manual.

4.2 Installation preparation

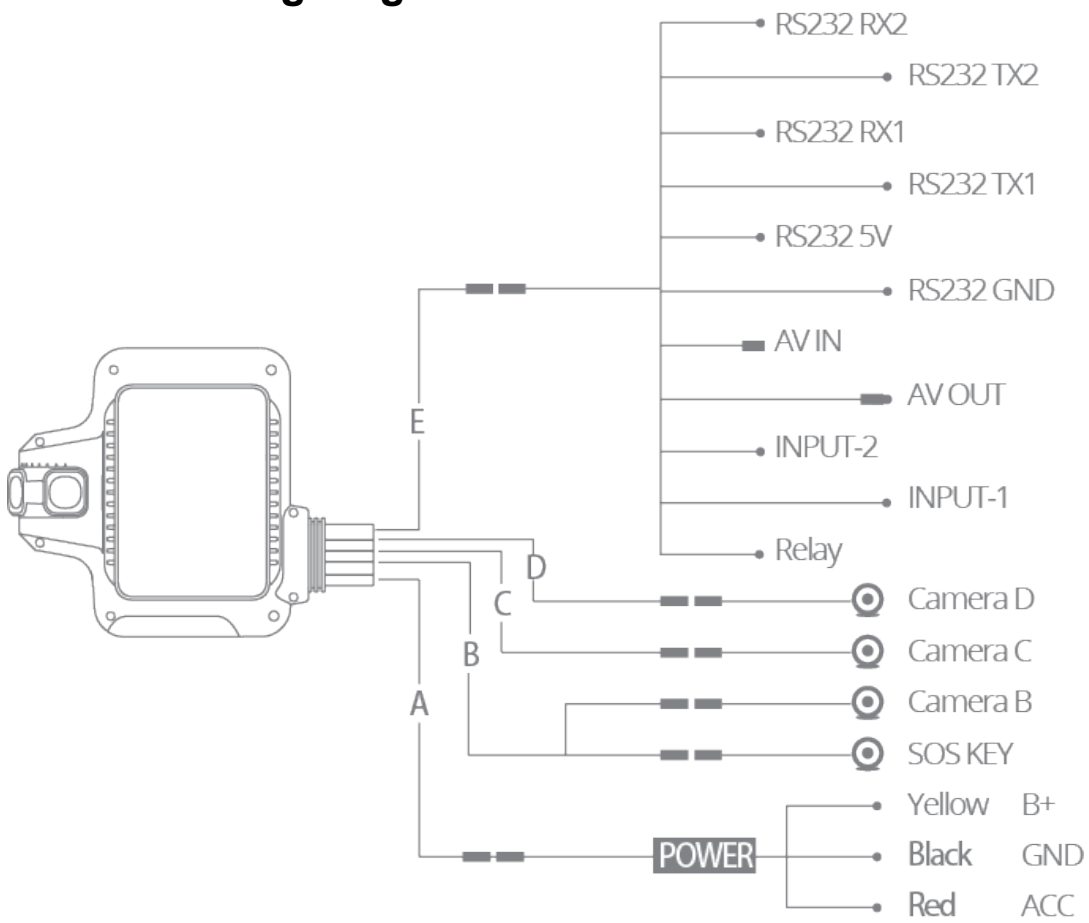
- Check whether the goods are consistent with the product packaging list and in good conditions.
- Make installation tools ready (insulating tape, screwdriver and wire cutter).
- Check whether original functions of the vehicle to be installed are normal.
- Take relevant cleaning and protection measures for the internal of the vehicle to be installed.

4.3 Product pre-installation

Before installing the device onto the vehicle, we need to install necessary accessories on the device, including:

- Insert the appropriate storage card into the device. Please pay attention to the front and back surfaces;
- Put the appropriate SIM card in the card holder and then insert it into the device;
- Make the camera to be installed ready and select the appropriate position as required;

4.4. Product wiring diagram

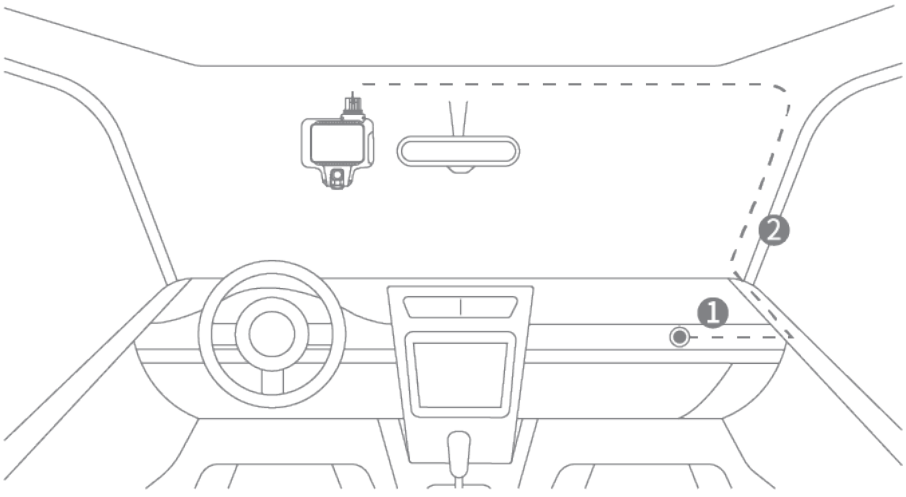


Installation description

- The description of all harnesses is shown in the Figure above. Please check the procured
- accessories and connect and install them according to actual conditions.
- When installing the DMS camera, please connect it with the Camera B interface.
- When the pull-out Camera B interface is inserted into the camera, the Camera B interface at the host end cannot be inserted into the cabin-facing camera simultaneously.
- When relevant I/O expansion function is not available, the I/O extension cable may not be installed in order to reduce the number of harnesses for installation.
- A special extension cable may be added for the pull-out camera in order to perform remote insatallation

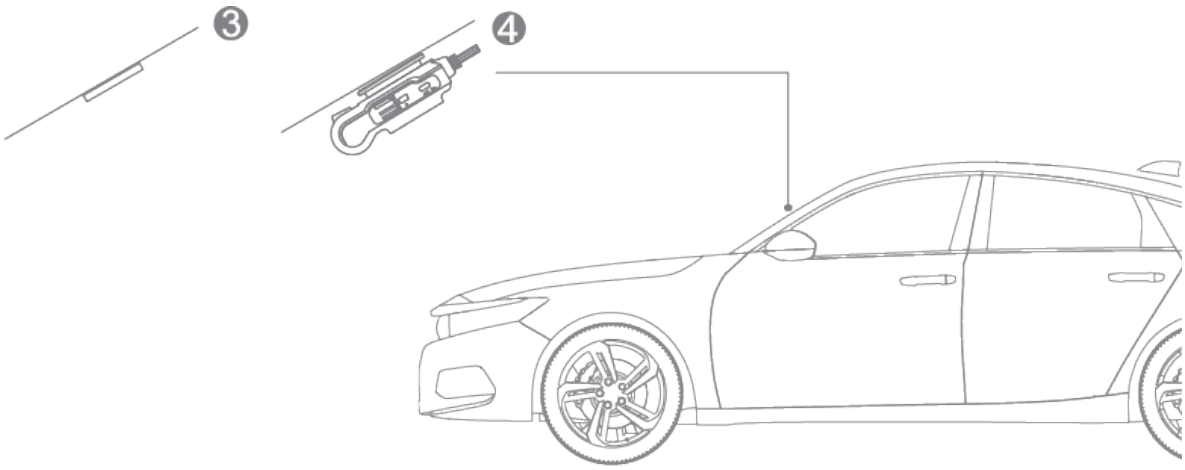
4.5. Installation

The host of this device is installed in the top center of the windshield in the vehicle. The host installation is divided into the main body installation and arrangement of relevant wires.



Step 1: Connect the power cable of the device with the B+, ACC and GND power from the vehicle fuse box. For locations, please refer to Figure ①.

Step 2: Install the power cable onto the top center of the front windshield along the A-pillar of the vehicle. Refer to the dotted line diagram in Figure ②.

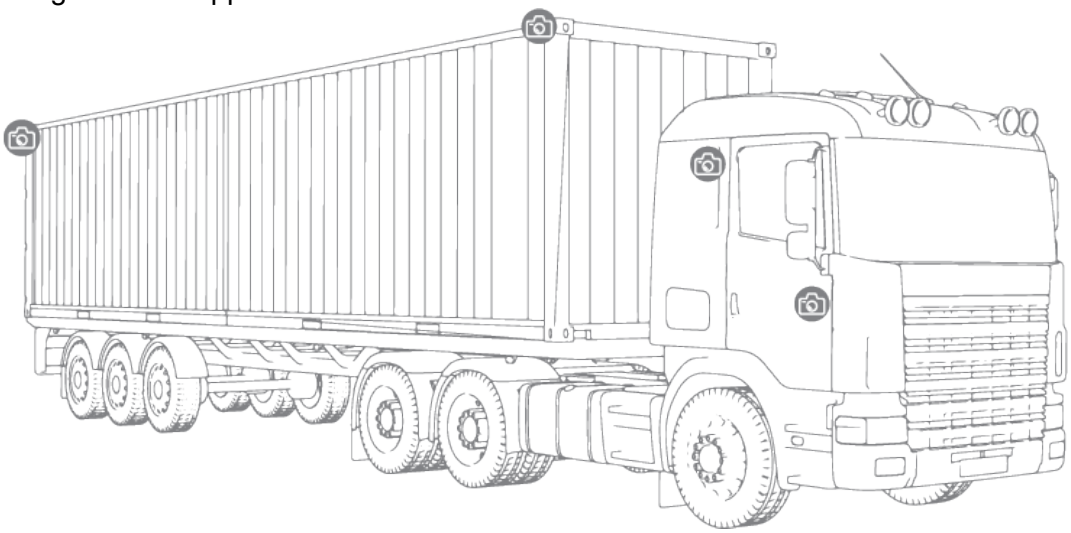


Step 3: Install the 3M protective film of the base and clean the area near the inside mirror; paste the base onto a suitable position; keep it there for at least 2 hours to prevent falling off. Refer to Figure ③.

Step 4: Install the device onto the base and connect it with the power cable. Refer to Figure ④; wires firmly and reliably to complete the installation.

4.6. Camera installation

AVC440 device can support simultaneous connection of up to 4 cameras; among them, the front camera is the built-in main body and the other three cameras can be selected and installed according to actual needs of the vehicle. The installation positions shall be selected according to actual application scenes.



4.7. Installation of other accessories

1. **SOS key installation**

   It is used for seeking help in case of an emergency. Connect the SOS key with the interface of the main device; remove the release paper from 3M adhesive of the key and paste it on a convenient position.

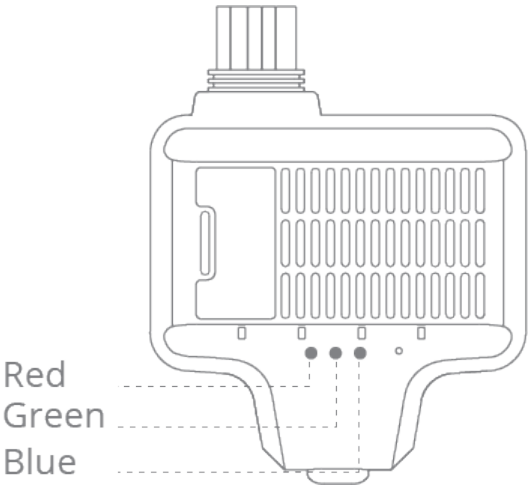
2. **Relay installation**

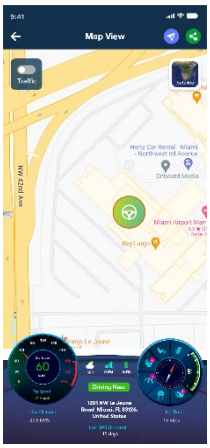
   The opening and closing of the relay can be controlled remotely in order to cut off the power supply of the original vehicle to stop the vehicle operation forcibly. For the schematic diagram of installation, refer to 1.4 definition of product wiring.

3. **R232 installation (optional)**
   It is used for connecting an external device. When the device itself cannot meet the application scenes, it can be connected with external professional device through the serial port to achieve the expansion function.

4.8. Device testing

1. Check the installation of device power: When the vehicle is in ACC ON, the red LED indicator of the device is on; when the vehicle is in ACC OFF, the red LED indicator is off, which means correct installation.
2. Check the GPS positioning of the device: When the vehicle is in ACC ON, the green LED indicator of the device starts to flash; drive the vehicle to an open place and wait for 1 minute; when the green GPS LED indicator is always on, it means normal positioning of the GPS.





3. Check the data communication of the device: When the vehicle is in ACC ON, the blue LED indicator of the device starts to flash; drive the vehicle to a place where the mobile data signal is good, when the blue LED indicator of the network is always on, it means normal data communication;
4. Check the camera of the device: Log in to the mobile APP and use the real-time video function of the vehicle camera; browse to the camera picture; when the camera can be switched normally, it means the camera functions properly. Please adjust the height of the camera of the device manually according to the actual screen.

5. Main functions

5.1 Basic operation

- Startup
  When the B+, ACC and GND power cables of the device are connected with the vehicle power correctly, the device will be started automatically without manual intervention.
- Shutdown
  When the device power is disconnected, it will be shutdown automatically. The device cannot be shutdown during normal operation.
- Sleep
  When ACC OFF is detected, the device will turn off recording, positioning and etc. to enter the sleep mode for low power consumption.

5.2. Main functions

- Video recording
  When the vehicle is in ACC ON, the device will start the recording function automatically. It will perform simultaneous recording according to the number of cameras connected, including both video and audio. This function can make use of cyclic recording to the storage card automatically, without manual intervention.
- Positioning
  When the vehicle is in ACC ON, the device will start the positioning function

automatically. It can get the geographical location of the vehicle and upload the data to the platform.

- Event monitoring
  When the device is in operation, it can monitor the vehicle speed, gravitational acceleration, status of the driver and vehicle driving and etc.; when any abnormal condition occurs, the device will issue an alarm to remind the driver and upload the event to the platform for storage of geographical location and picture/video evidence.
- Visual AI
  When the device is in operation, it can monitor the vehicle speed, gravitational acceleration, status of the driver and vehicle driving and etc.; when any abnormal condition occurs, the device will issue an alarm to remind the driver and upload the event to the platform for storage of geographical location and picture/video evidence.

5.3. Remote function

- Real-time video
  The user can transmit the camera audio and video by use of the 4G network of the device through the background service and thus watch the real-time vehicle status.
- History video
  The user can push the selected audio and video files to the platform by use of the 4G network of the device and history video files stored in the storage card through the background service.
- Location query
  The user can perform real-time or history query of the vehicle through the platform to understand the driving trace of the vehicle.

6. Others

6.1. FAQ

1. The device cannot be started, and the LED indicator is not on.
   - Check the ignition status of your vehicle, as the device will only start to work when the vehicle is ignition on;
   - Check whether the B+, ACC, and GND wires of the device and the vehicle are connected;
   - Check whether the fuse is melted or if there is a short-circuit.
2. The dashboard camera cannot work normally, and the red LED indicator is flashing.
   - Please check whether the storage card is installed correctly.
   - Please insert the storage card into the computer to check whether it is normal.
   - The default format of the storage card for the device is FAT32, please format the card To FAT32 before use.
   - When using only one storage card, please insert it into the TF card slot 1.
3. The device cannot be connected with the network, and the blue LED indicator is flashing.
   - Please check whether the SIM card is installed correctly and check whether the card has the mobile network function.
   - If it is an IoT network card, the APN may not be adapted automatically. So you need to add the APN configuration manually.
4. The device cannot perform positioning, and the green LED indicator is flashing.
   - Please drive the vehicle to an open area. It cannot be located in an underground garage or tunnel.
   - When the device is started under a high building, it will be slow for searching and positioning; it is a normal case. You can drive the vehicle to an open area to accelerate the positioning.
5. Visual AI driver assistant function (ADAS/DMS) cannot be used.
   - This function can be started only when the vehicle speed reaches 60KM/H; it will be silent when the speed is less than such value.
   - Please check whether relevant cameras are connected normally, or whether there is any obstruction or whether the angle is appropriate.
6. The platform cannot receive relevant alarm.
   - Please check whether switches for relevant alarms of the device are open on the

platform.

7. It is easy for the flat camera to loosen after angle adjustment.
   - All cameras of C440 can be adjusted, with the support of adjustment locking. Please tighten the locking screw nearby after adjusting the lens angle to the appropriate position.
8. It is easy for the device base to fall off after installation.
   - The base is provided with 3M double-sided sticker with high viscosity. Please clean the glass before installation in order to avoid the decrease of viscosity due to floating dust or grease.

7. After-sales Service Terms

7.1. Special Note

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.

7.2. Warranty Terms

For damages not caused by human factors, this warranty lasts for one year starting from the date of purchase.
You can choose to pay for the repair services in any of the following cases:

- 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, incident, accident, modifications, or incorrect voltage input; or the label, IMEI, or counterfeit mark of the product 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 device model is inconsistent with the warranty card or the warranty card has been altered;
- Other damages caused by force majeure.

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Disclaimer:
©All Rights Reserved Please 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.

8. Warranty Card

Customer Information:

Customer Name		IMEI No.	
Mailing Address			
Product Model		Phone	
Date of Purchase		Invoice No.	
Purchased From			
Address			
Phone			

Maintenance Record

Service Start Date	Problem and Solution	Service End Date	Customer Signature

Important
Please keep this warranty card in a safe place, as it is the proof for one-year free warranty services. If this card is lost, the Company will determine the date of purchase to be the thirtieth (30th) day after the date of production.

Need help? Contact 24/7 live support!

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

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