Dual Lens Dash Cam

User's Manual

V1.0.0

Foreword

Model

DHI-DAE-CDR8214-GFWI

Safety Instructions

The following categorized signal words with defined meaning might appear in the manual.

Signal Words	Description
DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
CAUTION	Indicates a potential risk which, if not avoided, may result in property damage, data loss, lower performance, or unpredictable result.
TIPS	Provides methods to help you solve a problem or save your time.
NOTE	Provides additional information as the emphasis and supplement to the text.

Terms

To simplify descriptions, some frequently cited functions and names in this manual have the following meanings:

- Unless otherwise specified, “device” in this document refers to “Dual Lens Dash Cam”.
- To keep the devices safe, IP addresses, MAC addresses, and serial numbers cited in this manual have all been modified.

Revision History

Version	Revision Content	Release date
V1.0.0	First release.	April 2025

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This chapter describes the contents covering proper handling of the Camera, hazard prevention, and prevention of property damage. Read these contents carefully before using the Camera, comply with them when using, and keep it well for future reference.

Operating Requirements

- Do not place or install the Camera near a heat source or where there is direct sunshine.
- Do not install the Camera in a humid, dusty, or smoggy place.
- Install the Camera horizontally or in a stable place. Take measures to prevent it from falling.
- Do not drip or splash liquid onto the Camera. Make sure that the Camera does not bear any objects filled with liquid to prevent liquid from flowing into the Camera.
- Prevent foreign objects from entering the Camera, which might result in damage.
- Install the Camera in a place with good ventilation. Do not clog the air vents of the Camera.
- Use the Camera only within the rated input and output range.
- Do not dismantle the Camera without permission.
- Transport, use and store the Camera under the allowed humidity and temperature conditions.
- Do not expose the Camera to water or excessive moisture when washing the car. A failure to follow this instruction might result in short circuit, fire, or other malfunctions.
- The dust on the circuit board will cause short circuit, which affect the normal operation of the Camera and even damage the Camera. To make the Camera work stably for a long time, please regularly use the brush to remove the dust from components, including circuit board, connectors, and chassis.
- Keep the Camera installed horizontally and make sure the internal anti-vibration components work properly.
- After all the cables are connected, tie up the cables to avoid the dangers such as short circuit, heat and electric shock resulted from loose cables.
- Pay attention to grounding of Camera, since poor grounding might lead to chip damage.

Power Requirements

- Use the wires (power cords) recommended for the region where the Camera is used within the specified range of specifications!
- The appliance coupler is a disconnection Camera. Keep a convenient angle when using it.
- Take care to complete the circuit connection. A failure to follow this instruction might result in Camera damage.
- Prevent short circuit from occurring on all external wiring parts.
- After all the lines connections are completed, you can start connecting power cable.
- Ensure the project is well grounded to avoid interference to video and audio signals and avoid electrostatic or induced voltage to damage the Camera.
- Unplug the power cable before you remove the audio/video signal cable, RS-232; otherwise these ports might be damaged.

Table of Contents

1 Product Introduction

1.1 Overview

The Dual Lens Dash Cam features a lightweight design, integrating the video, record, storage, intelligence, and platform connectivity. It comes equipped with 2-channel 1080P lenses and supports additional external inputs, including 2-channel 720P analog video inputs. Using deep learning algorithms, it enables various intelligent functions such as ADAS, DSM, facial recognition, and abandoned object detection. This product is specifically designed to address the driving safety concerns of various small vehicles. Features as below:

- Built-in 2-channel (ADAS/DSM) 1080P HD camera, supports for wide-angle.
- Built-in 4G Wireless Module, GPS+GLONASS, and Wi-Fi.
- Built-in infrared illumination, supports ICR automatic switching.
- Supports Wide Voltage Input: 9~36V.
- Supports lane departure warning, vehicle approach warning and forward vehicle start reminder.
- Supports fatigue driving detection, distracted-driving detection, phone-driving detection, the driver leave detection, wearing the infrared blocking sunglasses warning, smoking-driving warning, lens- obstruction warning and unfastened seat belt warning.
- Supports 1-channel alarm input and 2-channel alarm outputs (12V).
- Audio feature includes microphone collection,2-channel voice intercom (with echo cancellation) and speaker output.
- Complies with CE (EMC & LVD), E-Mark (R10) and EN50155 (environment, safety, EMC) certification and transportation qualification.

This camera can be applicable to the scenario requirements in the rental, online booking, and freight industry solutions.

1.2 Functions

Table 1-1 Functions Description

Functions	Description
Storage	The data is stored in a proprietary format, which prevents tampering and ensures data security.
Dual Stream	In response to the current challenges of limited bandwidth and unstable network conditions in wireless environments, a dual-stream technology is employed, where real-time video recording and network transmission are encoded separately. This approach optimizes the encoding for network transmission and enhances the control capabilities over wireless network data transfer.
Video Playback	● Each channel supports independent full real-time recording while simultaneously enabling functionalities such as playback, network monitoring, and recording search. ● Displays the accurate time when the event occurred during playback.

Functions	Description
Backup	● You can back up the data by downloading the files from the memory disk of the device through the Internet.
Alarm Linkage	● Provides 1-channel alarm inputs that can connect to signals such as vehicle door signal, cornering lamp signal, reversing and braking signal, to give an indication and take a record. ● Provides 2-channel alarm outputs that can supporting alarm output to control the state of vehicle relays. ● The alarm input and output ports are equipped with protective circuits to ensure the main device is safeguarded against damage. ● Gyroscope: Supports rollover, collision, rapid acceleration, rapid deceleration and sharp turn detection. G-sensor: Supports rollover, collision, rapid acceleration, rapid deceleration.  G-sensor and gyroscope are subject to actual shipment.
Rollover and Collision Detection	Provides rollover and collision detection and timely releases alarms through the platform.
Operation through Network	Supports remote operations through network, such as real-time remote monitoring, video recording search and playback, and PTZ remote control.
3G/4G, Wi-Fi	Adopts the latest wireless communication technology, which has improved the manageability of the device.
Compression	Supports multi-channel audio and video signals, and each channel signal Supports real-time compression by independent hardware to realize the sync between sound and image.
Satellite Positioning	Supports positioning function and recording linkage. Recording search can be linked with vehicle moving track.

1.3 Out-of-box Check

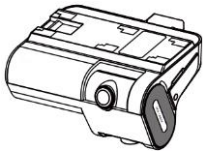
After unpacking the box, check if there is obvious damage to the appearance of the device, and make sure the components are complete according to the packing list. See Table 1-2 for details, and refer to real products for actual items.

Label Instruction:

The labels on the device are very important for our after-sales service. **So please keep the labels well, and do not tear or throw away, otherwise, warranty service cannot be guaranteed.** You need to provide the serial number of the product when calling the after-sales service.

For tools or accessories not mentioned in the box, please purchase them.

Table 1-2 Packing list

Figure	Name	Quantity
	Dual Lens Dash Cam	1
	Bracket	1
	Cable	1
	Alarm Button	1
	Installation Guide	1
	Regulation	1

2 Dimensions and Installation

This chapter introduces how to install the hardware of the device. Before installation, you need to know the device information, such as top cover, side panel, dimensions, and ports. After obtaining a sufficient understanding, you can install the SIM card, TF card and fix the device as needed.

2.1 Device Structure

Describes the structure of the device, including the top cover, side panel, port description, and dimensional diagram.

The following figures are for reference only, and the actual product shall prevail.

2.1.1 Top Cover

Describes the functions of the hotspot buttons and indicator lights on the top cover.

Figure 2-1 Top Cover

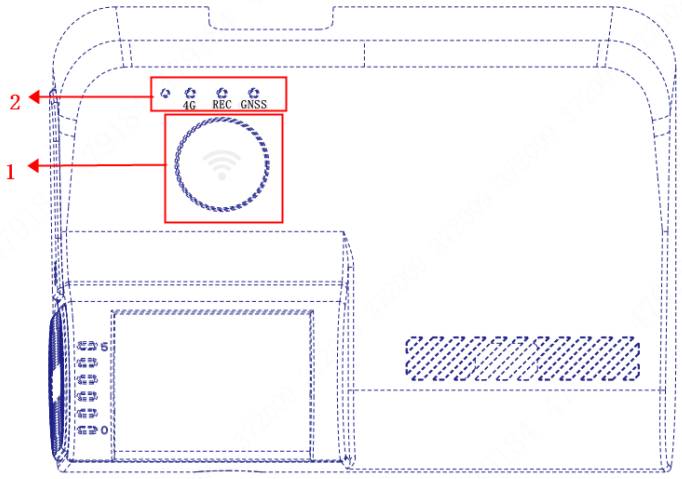


Table 2-1 Descriptions of ports and indicators

No.	Name	Descriptions
1	Hot Spot Button	• Press the button to enable or close the hot spot.
2	Indicator Light	• 4G On: 4G is connected. Off: 4G is not connected. • REC: On: The camera is recording. Off: The camera is not recording. • GNSS: On: GNSS is normal. Off: GNSS is abnormal.

2.1.2 Side Panel

Describes the functions of the side panel ports.

For the ports of the side panel, please see Figure 2-2, Table 2-2 for ports function description, and 2.1.3 Port Description for port definition.

Figure 2-2 Side Panel Ports

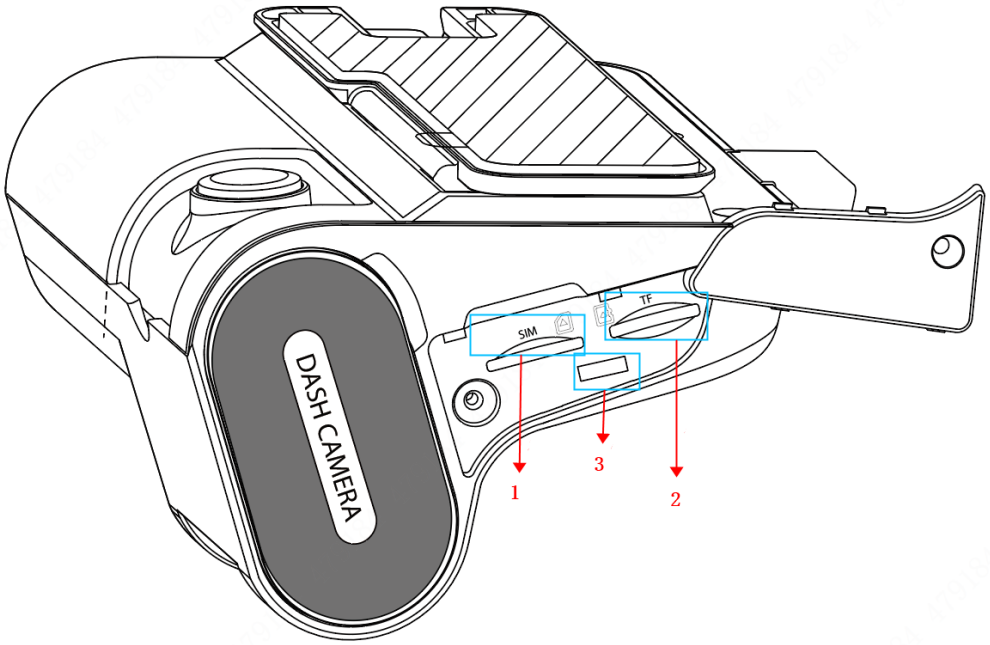


Table 2-2 Descriptions of side panel ports interfaces

No.	Name	Function
1	SIM card interface	Insert the SIM card.
2	TF card interface	Insert the TF card, up to 512G.
3	White port	Used for network testing and debugging.

2.1.3 Port Description

This manual only describes functions of each interfaces. You can follow these descriptions to prepare cables or contact our sales staff for purchasing cables.

2.1.3.1 Video Input Port

Figure 2-3 Video input port

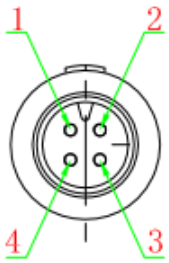


Table 2-3 Video input port description

No.	Description
1	12V
2	Signal ground
3	Power ground
4	Signal

2.1.3.2 Network Port

The Dash Camera is not pre-installed with an RJ45 network port, so it needs to be connected to the white port before connecting the network cable.

2.1.3.3 Power Input Port

Figure 2-4 Power input port

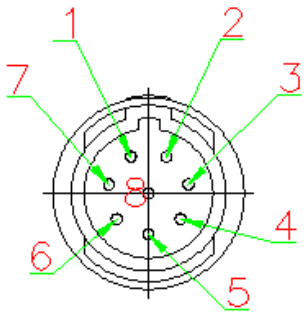


Table 2-4 Power port description

No.	Pin Description	Cable Color
1	ACC signal input grounding	Orange
2	Power positive pole input	Red
3	GND	Black
4	Alarm input_1	Green
5	Alarm input_2	Blue
6	Alarm input_3	White
7	RS232_TX	Yellow
8	RS232_RX	Brown

2.1.3.4 IPC Port

Figure 2-5 IPC port

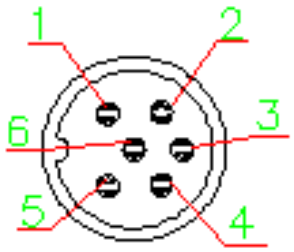


Table 2-5 IPC port description

No.	Pin Description
1	NET_RX-
2	NET_RX+
3	NET_RX- (12V)
4	NET_TX-
5	NET_TX+
6	GND

2.1.3.5 Alarm-Out Port

Figure 2-6 Alarm Out port

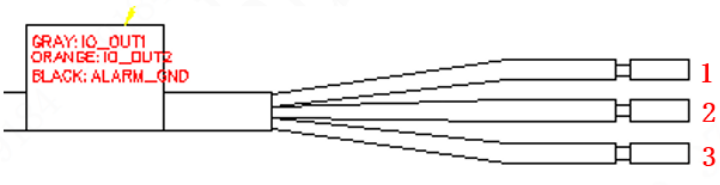
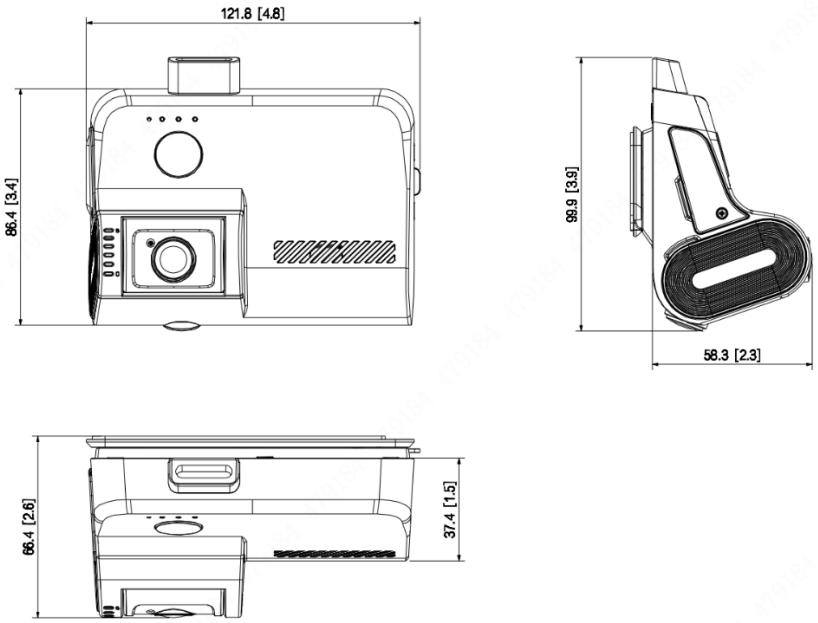


Table 2-6 Alarm Out description

No.	Pin Description
1	IO_OUT1
2	IO_OUT2
3	ALARM_GND

2.1.4 Dimensions

Figure 2-7 Dimensions (mm [inch])



2.2 Installation

After purchasing the product, it is necessary to open the package and inspect the devices as well as understand its structure. Then, install SIM cards and TF cards according to actual network and storage requirements.

- Before completing the installation of the device, please ensure that the power supply has been disconnected before installing the SIM card and TF card. Do not insert or remove components with power on.
- The device does not come standard with installation tools upon factory shipment; if required, please purchase them separately.

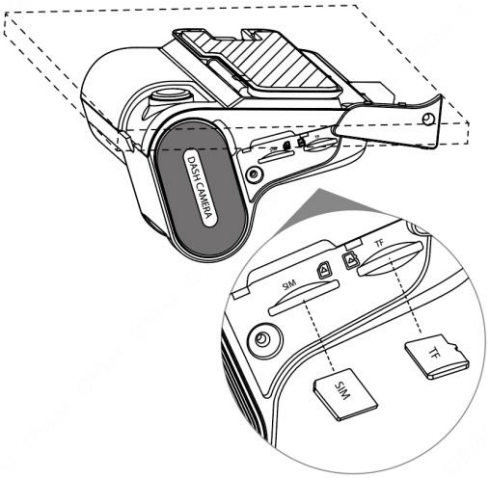
2.2.1 Installing SIM and TF Card

The SIM card and TF card are not provided with the device by default. To connect the device to network through dial-up connection, you need to purchase and install a SIM card. To store recording data, you need to purchase and install the TF card.

Step 1 Use the cross screwdriver to loosen the screws by turning them counterclockwise and disassemble the card cover.

Step 2 According to the device identification, insert the SIM card and TF card chip down and notch inward into the corresponding card slots respectively. See Figure 2-8.

Figure 2-8 Install the SIM and TF Card



Step 3 Close the card slot cover and use a cross screwdriver to tighten the screws clockwise.

Step 4 The installation of the SIM card and TF card is complete.

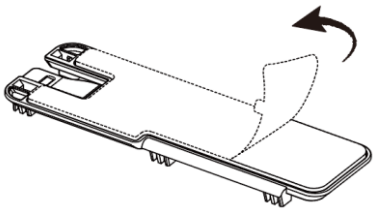
2.2.2 Installing Device

- The optimal installation position for the Dash Camera is near the front windshield and rearview mirror, **maintaining a level and centered position** with the windshield.
- When installing, please adjust the position according to actual conditions to avoid obstructing the driver's line of sight.

Step 1 Wipe the front windshield clean and ensure there is no dust.

Step 2 Peel off the backing adhesive. See as Figure 2-9.

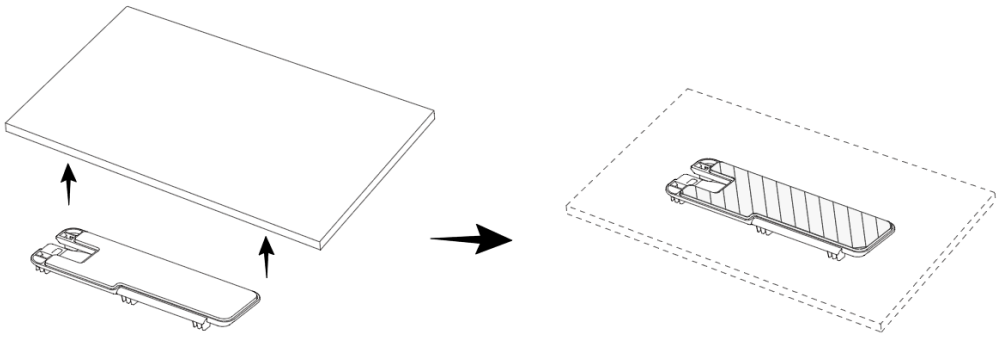
Figure 2-9 Remove the backing adhesive



Step 3 Peel off the backing adhesive. Stick the bracket on the windshield and squeeze it with appropriate force to ensure that there are no bubbles. See as Figure 2-10.

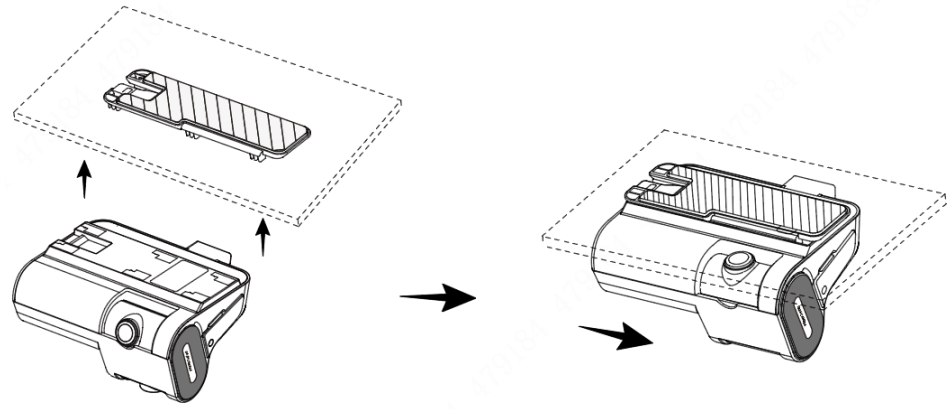
- After the bracket is stuck firmly, it is recommended to let it stand for 4 hours before installing the dash camera.
- When installing, the bracket must be kept level with the windshield, otherwise it will affect the calibration effect.

Figure 2-10 Bracket Installation



Step 4 Align the groove on the body of the Camera with the protrusion on the bracket, slide the body as shown in Figure 2-11 until you hear a "click" sound, and fix the body to the mounting bracket.

Figure 2-11 Fix the bracket



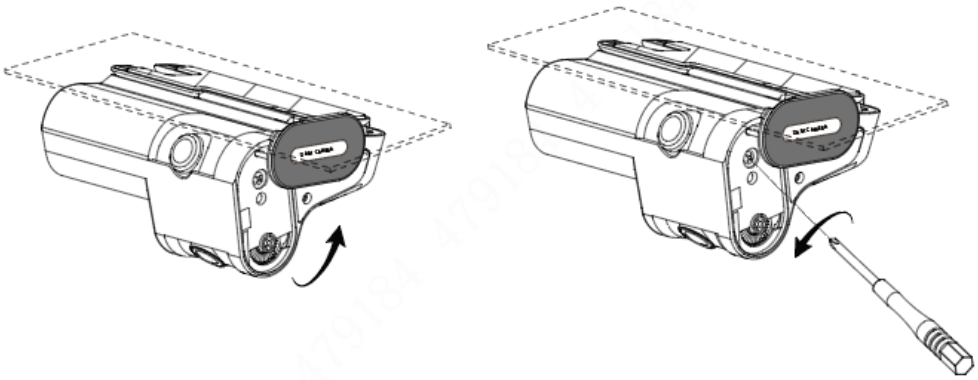
Step 5 Connect the cables. Refer to 2.3 Cable Instructions for details.

2.2.3 Adjusting the Angle

After powering on the device, activate the hotspot and log in using the mobile APP. You can use the app interface to preview the video in real time and adjust the camera angle of the dash cam according to the desired monitoring position. For detailed instructions on operating the login interface of the app, please refer to **3.3 Logging in to Camera**.

Step 1 Remove the protective cover on the side of the device and use a cross screwdriver to loosen the lens to adjust the screw counterclockwise. See Figure 2-12.

Figure 2-12 Loosen the screw

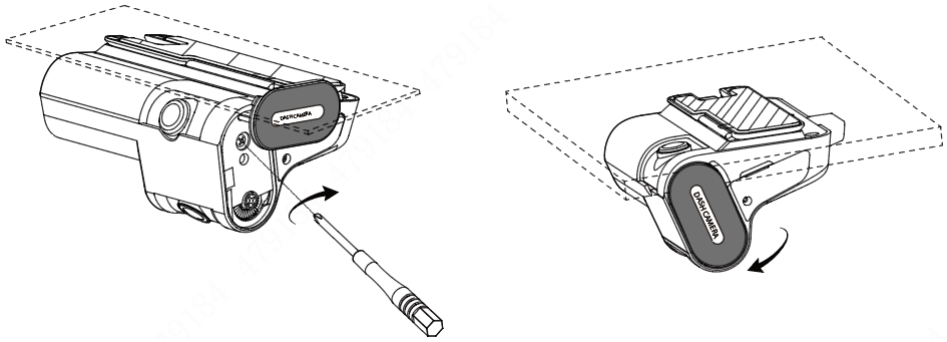


Step 2 According to the video screen, use a cross screwdriver to rotate the lens adjustment slot and adjust the lens angle. See Figure 2-13.

Figure 2-13 Adjust the angle

Step 3 Use a screwdriver to tighten the lens to adjust the screw clockwise. See Figure 2-14.

Figure 2-14 Tighten the screw



2.3 Cable Instructions

2.3.1 Connecting Power Cable

- Before connecting the power cable, make sure the input voltage is between DC 9V and DC 36V. If it is out of the range, it will damage the Camera.
- Make sure that the positive and negative poles of the power are connected correctly. If not, the Camera may be damaged.
- When connecting the cables to the Camera, make sure that the main power switch of the vehicle is turned off and the key of the vehicle is placed in the off state. Do not perform live operation.

2.3.1.1 Power Cable Introduction

For power cable of the Camera, see Figure 2-15.

Connect one end of the power cord to the power interface of the device (left port in the diagram), and the other end needs to be connected to the vehicle's battery by the user.

- The red one with fuse is positive pole of the power (normalizing fire).
- The black one is the grounding cable.
- The orange one is the ACC signal (key starting wire).

Figure 2-15 Power cable

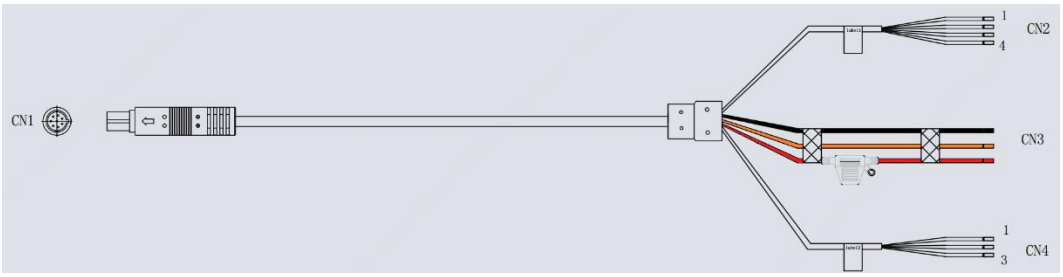


Table 2-7 Power cable description

Name	Description
CN1	Connect the device.
CN2	Connect the alarm button.
CN3	GND
CN4	Connect Acc signal.
CN5	Connect the positive power.

2.3.1.2 Obtaining Connection Modes

To ensure correct cable connection, it is necessary to obtain the connection mode of the main power switch (By connection mode here, it means to confirm the main power switch is connected to the positive or negative pole of the battery). In the following three ways:

- Consult the vehicle manufacturer the connection modes of the main power switch of the vehicle.
- Measure with a multimeter: Disconnect the main switch, and then measure the voltage between the vehicle body and the positive pole of the vehicle battery. If the voltage is 12V or 24V, it means that the main switch disconnects the positive pole. If the voltage is 0V, then the main switch disconnects the negative pole.
- Visual inspection: Whether the switch cable near the vehicle battery is connected to the positive pole or the negative pole.

2.3.1.3 Connecting Operation

The Camera must be connected to the ground wire, ACC signal, and constant electricity.

Step 1 Enable the main power switch on the vehicle, place the key in the OFF state, and then measure the constant electricity of the vehicle.

Step 2 Use a multimeter to measure the voltage on the fuse by switching to the DC voltage range. When the multimeter detects voltage, it measures the constant electricity on the vehicle. Generally, the voltage is 24V DC for large vehicles and 12V DC for small vehicles. However, this is subject to actual data.

Step 3 When the vehicle key is placed at the ACC signal or the ON state, the ACC signal of the vehicle is measured.

Step 4 Use a multimeter to measure the voltage on the fuse by switching to the DC voltage range. When the multimeter detects voltage, remove the vehicle key. If the voltage changes to 0V, it means that the measured signal is ACC on the vehicle.

Step 5 Turn off the main power switch on the vehicle, and place the key in the OFF state.

Step 6 Connect the power cable according to the main power switch installation mode. See Figure 2-16 and Figure 2-17.

- The positive terminal and negative terminal of the battery must be equipped with protective devices such as fuses.
- For vehicles where the main power switch is installed at the negative terminal of the accumulator, isolation installation is needed.

Figure 2-16 Vehicle main power switch installed on the positive terminal of the vehicle battery

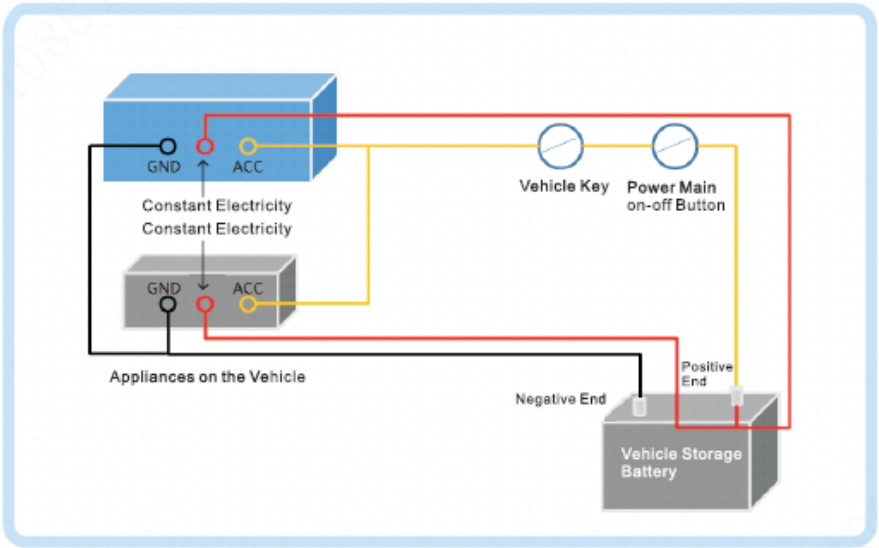
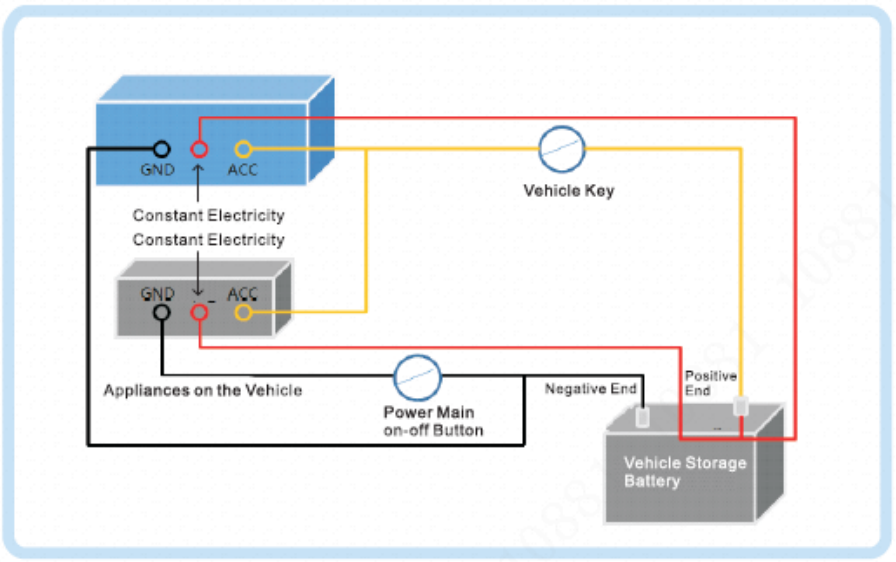


Figure 2-17 Vehicle main switch installed on the negative terminal of the vehicle battery



2.3.2 Alarm Input Connection

Before using the alarm function, please learn about the connections method of alarm input port.

Alarm Input

- The alarm input port supports alarm signal from ground and Camera of 12V-24V voltage.
- If the alarm Camera is connected to the Camera and other Cameras at the same time, use relay for isolation.

No Restriction for Alarm Input Types. The alarm input can be Normally Open (NO) or Normally Closed (NC).

2.3.2.1 Port Definition

Describes the function of alarm input ports. See as Figure 2-18 and Table 2-8.

Figure 2-18 Alarm input port

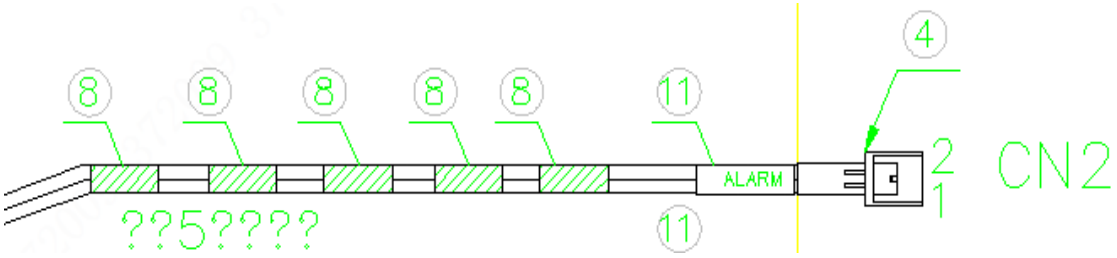


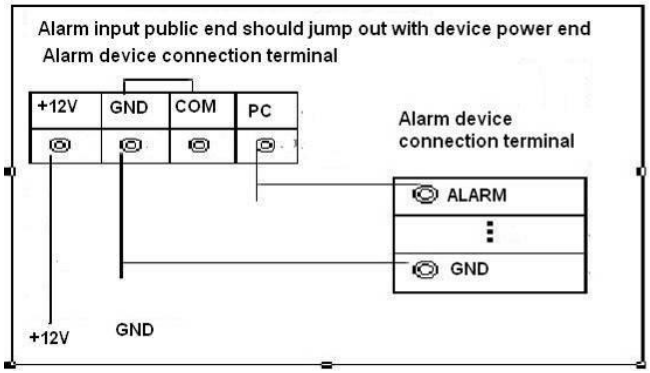
Table 2-8 Alarm port description

Name	Description
Alarm input port	Alarm input 1, the local alarm input port.

2.3.2.2 Alarm Input Port Description

- Both NO and NC are supported.
- The GND of alarm detector is in parallel connection with COM (the power supply of alarm detector should be from external power source). See Figure 2-19.
- The GND of alarm detector is in parallel connection with GND of Camera.
- Connect the NC port of alarm detector to the alarm input port (ALARM).
- When supplying power from external power source to the alarm device, the alarm device should be common-grounded with the Camera.

Figure 2-19 NC alarm input illustration

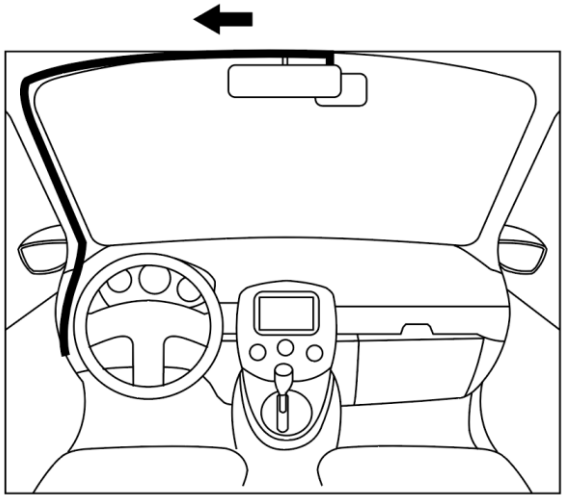


2.3.3 Cable Layout

Connect the power supply and alarm input port by using an extension cable. Please complete the cable layout according to the diagram. See Figure 2-20.

- The device comes with a default extension cable and customizations are available for special requirements..

Figure 2-20 Cable Layout



3 Basic Settings

Please log in to the mobile APP for the basic settings.

- Supports login and configuration through mobile APP.
- After setting up a specific channel, Click **OK** to display the latest configuration.

3.1 Booting up Camera

- Before booting up the Camera, check if input voltage matches rated voltage of the Camera.
- Please refer to the international standard to offer the power input (power input that is with stable power value and less interference) to ensure the Camera works stably and prolong its service life.
- In the first power-on, the Camera needs connection to the ACC to work as intended.

For the first boot up or after restoring to the default factory settings, the initialization interface is displayed on the screen. Follow on-screen instructions to initialize your Camera prior to use.

3.2 Initializing Camera

You need to initialize the device when you log in to the device for the first time or restore the device to factory Settings. You can configure and operate the device only after initializing the device.

Preparation

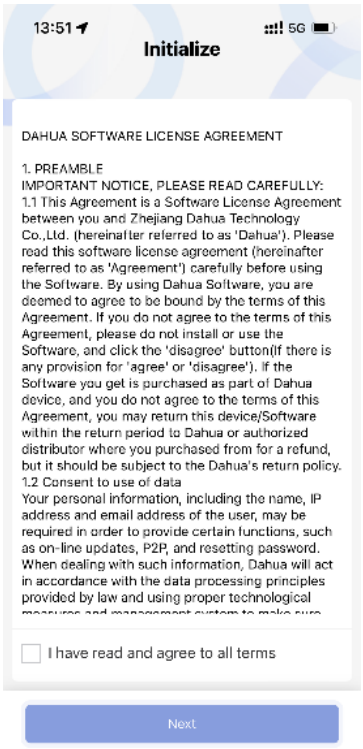
Please make sure the correct Wi-Fi connection between your phone and the device.

Procedure

Step 1 Turn on the Wi-Fi hotspot of the device, and select the hotspot of the corresponding device on the Wi-Fi connection interface of the mobile phone to connect.
The **Device Initialization** interface is displayed. See Figure 3-1.

The hotspot name must start with AP and end with product serial number, for example, AP_AE05CC6YDA00009.

Figure 3-1 Device initialization

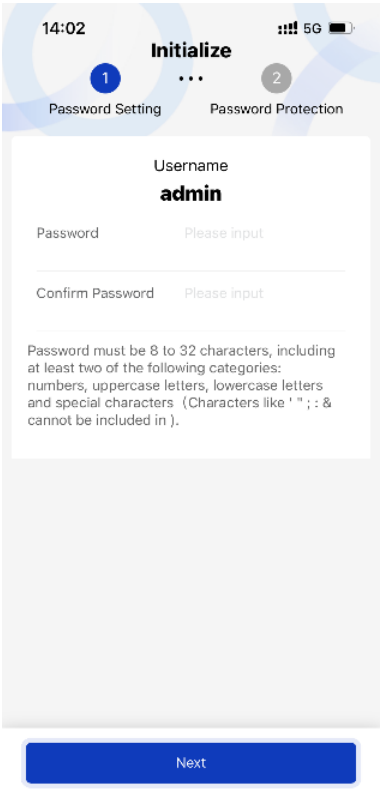


Step 2 Select ☐ , then click **Next**.

Step 3 Select "Time Zone" and "System Time", then click **Next**.

The **Password Setting** is displayed. See Figure 3-2.

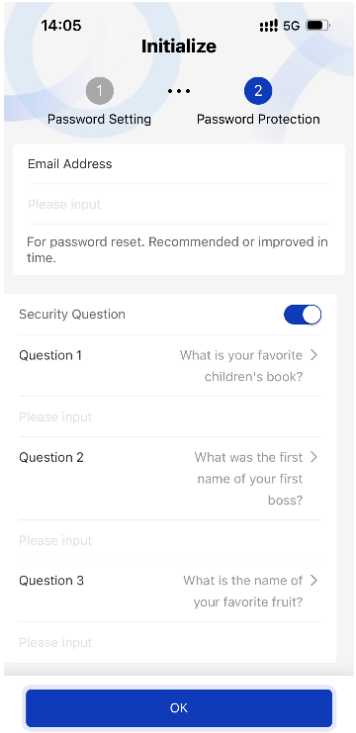
Figure 3-2 Password Setting



Step 4 Enter your password and enter it again to confirm it. Then click **Next**.

The **Password Protection** is displayed . See Figure 3-3.

Figure 3-3 Password Protection



Step 5 Set password protection. Select a password protection mode based on the actual situation. You are advised to enable both modes.

- Select **Email Address** and enter the number.
- Select **Security Question**, and select the question and set the answer to the question.

Step 6 Click **OK**.

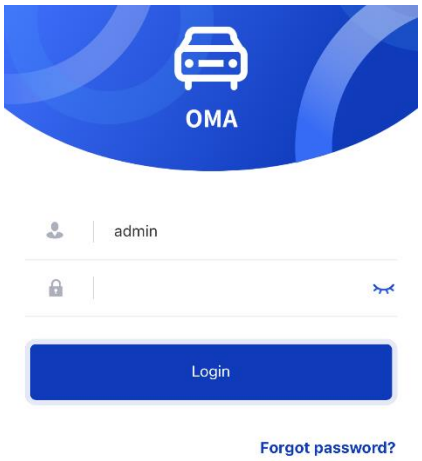
Device initialization completed.

3.3 Logging in to Camera

You can log in to the APP then configure the device.

Step 1 Open the hotspot of the corresponding device and connecting, then open the mobile APP. The **Login** interface is displayed. See Figure 3-4.

Figure 3-4 APP login interface



Step 2 Enter username and password, and click **Login**. The **APP** interface is displayed. See Figure 3-5.

For **admin** account, if you forget password, click Forgot password to find back the password. For details, see 5.6.2 Resetting Password.

Figure 3-5 APP interface

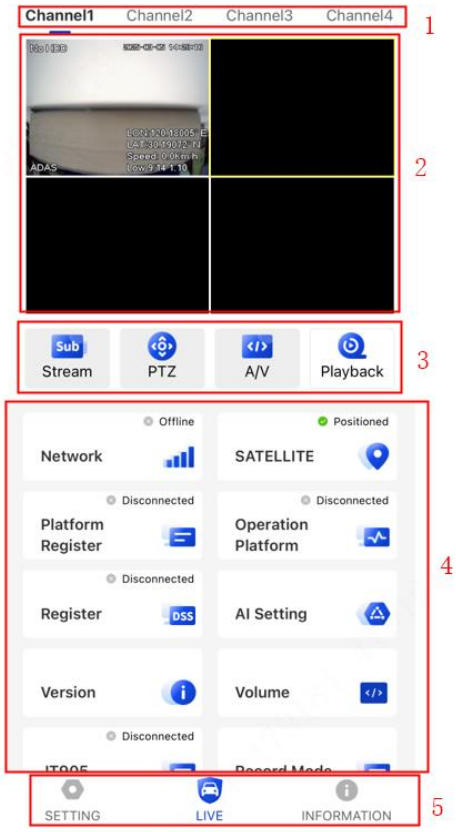


Table 3-1 WEB interface description

No.	Name	Description
1	Channel	Click the channel name to open the live view stream of the corresponding channel.
2	LIVE Preview	Double click to zoom in and preview the real-time stream.
3	Manu Bar	● Stream: After double-clicking the corresponding channel display, a single click allows you to toggle between the main and sub streams. ● PTZ: Reverse control of the corresponding channel camera. ● A/V: Quickly configure camera information. ● Playback: Click to view the local common video and emergency alarm video.
4	Function	Click the corresponding button to view device network information, satellite information, platform registration information, version information, volume adjustment, and record mode.
5	Navigation Bar	● Click SETTING, enter the Setting interface, supports Alarm, System, Disk Manager and Logout functions. See as Figure 3-6. ● Click INFORMATION, enter the Information interface, supports viewing Alarm Info, Log, Text Info and Device Status. See as Figure 3-7.

Figure 3-6 SETTING

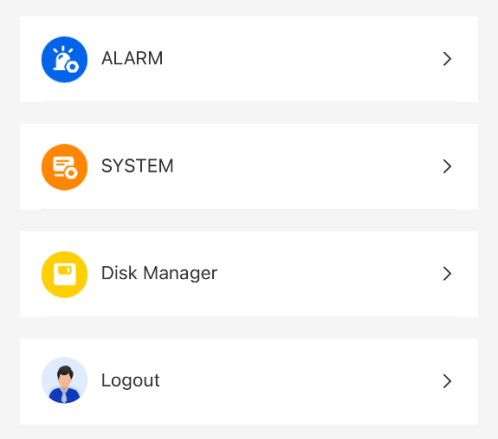
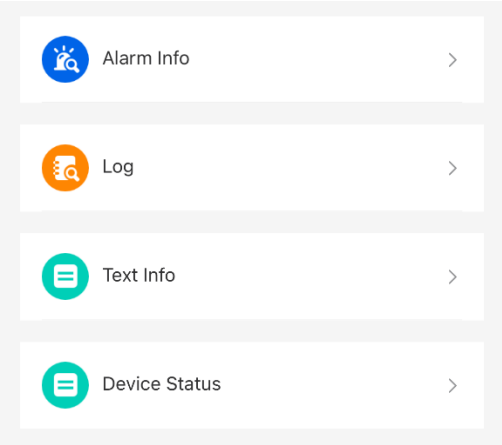


Figure 3-7 INFORMATION



3.4 Configuring General Settings

You can configure the general settings, including time and date settings.

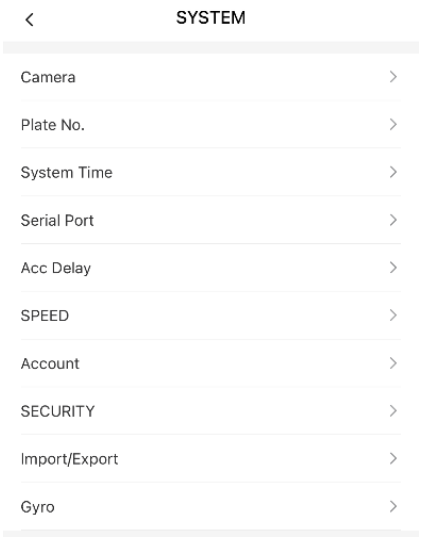
3.4.1 Configuring General Information

Set the general information of the Camera, including Camera, Plate No, System Time, Serial Port, Acc Delay, Speed, Account, Security, Import/Export, Gyro and more.

Step 1 On the APP main interface, select **SETTING > SYSTEM**.

The **System** interface is displayed. See Figure 3-8.

Figure 3-8 SYSTEM



Step 2 Configure more settings. See Table 3-2.

Table 3-2 General settings parameters description

Parameter	Description
Camera	Supports display of video channel encoding methods.
Plate No.	Supports display of the license plate number of the vehicle where the device is installed.
System Time	Supports setting of system time.
Serial Port	Supports modification of device serial port parameters.
Acc Delay	Supports configuration of delayed shutdown parameters.
SPEED	Supports configuration of speed and mileage parameters.
Account	Supports management of user passwords.
SECURITY	Supports enabling and disabling the device security interface.
Import/Export	Supports import and export of device parameters.
Gyro	Supports Gyro calibration.

Step 3 Click **OK**.

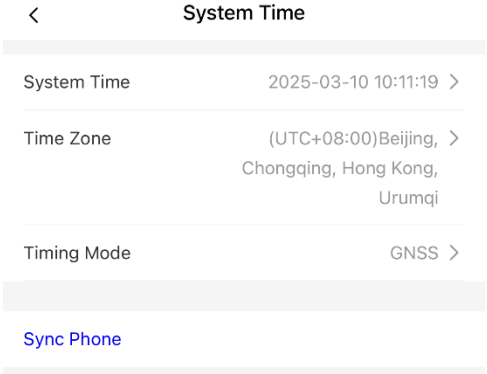
3.4.2 Configuring System Time

You can configure settings such as System Time, Time Zone, Timing mode and Sync Phone.

Step 1 On the APP main interface, select **SETTING > SYSTEM >System Time**.

The **System Time** interface is displayed. See Figure 3-9.

Figure 3-9 System Time



Step 2 Configure more settings. See Table 3-3.

Table 3-3 System Time settings parameters description

Parameter	Description
System Time	Default displays the current system date and time.
Time zone	Defalut configure the Time zone that the Camera is at. In the **Timing Mode** list, if **GNSS** or **NTP** is selected, configure this parameter.
Timing Mode	Select a timing mode, including DSS, GNSS, and NTP. The default selection is NTP ● **DSS**: The system time syncs with DSS platform. ● **GNSS:** The system time syncs with satellite. ● **NTP**: The system time syncs with NTP server that you configured.
Server Address	In the **Timing Mode** list, if **NTP** is selected, configure this parameter. After configuring NTP server, the Camera syncs time with NTP server. 1. In the **Timing Mode** list, select **NTP** to enable the NTP timing function. 2. Configure parameters. ◇ Server Address: Enter IP address of NTP server. ◇ Manual Update: Click **Manual Update** to sync the Camera time with NTP server. ◇ Port: The system supports TCP protocol only and the default setting is 123. ◇ Interval: Enter the interval that you want the Camera to sync time with the NTP server. The maximum value is 65535 minutes.
Port	
Interval	

Step 3 Click **OK**.

Click **Sync Phone**, supports mobile phone time synchronization.

3.5 Configuring Record Mode

The record mode is consisted of auto mode and manual mode.

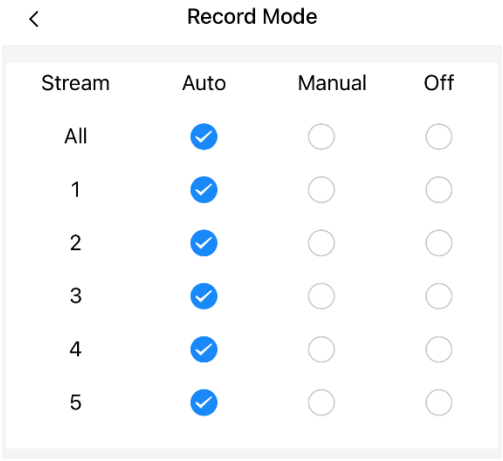
- Auto: The recording starts automatically according to the record type and recording time as configured in the recording schedule.
- Manual: Keep general recording for 24 hours for the selected channel.

- Manual recording operation requires the user have the permission to access STORAGE settings. Please ensure the HDD installed in the Camera has been formatted properly before operating.

Step 1 On the APP main interface, select **LIVE > RECORD MODE**.

The **Record Mode** interface is displayed. See Figure 3-10.

Figure 3-10 Record Mode



Step 2 Configure more parameters, for the detailed description, see Table 3-4.

Table 3-4 Record Mode parameter description

Parameter	Description
Channel	Displays the channel number. You can select one or several channels or select **All**.
Status	Indicates the recording status of corresponding channels. The choices include Auto, Manual and Off. ● : Selected ● : Not selected
Auto/Manual/Off	Select the recording mode, including Manual, Auto, and Off. ● Manual: Top priority. When the **Manual** check box is selected, the system keeps general recording for 24 hours for the corresponding channel. ● Auto: The system starts recording according to the record type (such as general alarm, motion detect, and system alarm) and recording time. ● Off: Do not record.

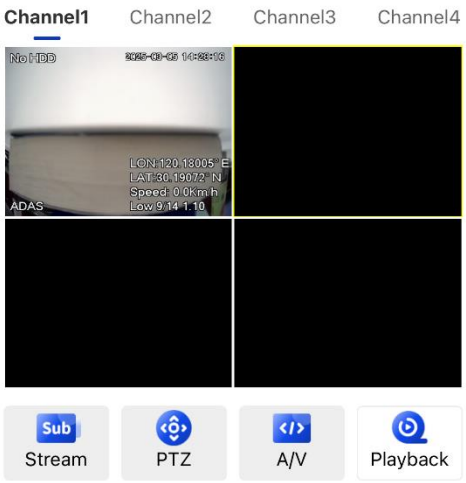
Step 3 Click **OK**.

4 Function Modules Operations

4.1 Live Preview

Step 1 After you logged in to the APP interface, click **LIVE**.
The **LIVE** interface is displayed. See Figure 4-1.

Figure 4-1 Live



4.1.1 Live Channels

Display the list of monitoring channels. See Figure 4-2.

Figure 4-2 Monitoring channels

Monitoring Channels Operations

Step 1 Click any monitoring channel to display its live video.
The **LIVE** interface is displayed. See Figure 4-3.

Figure 4-3 Live video

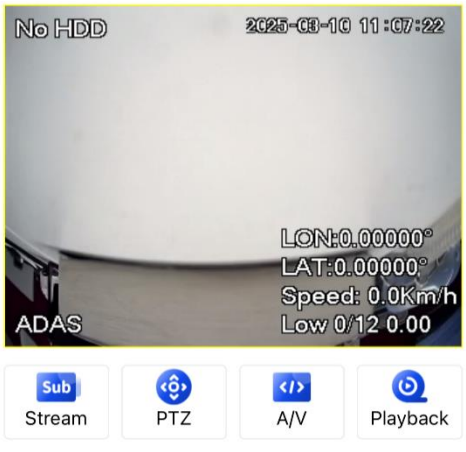


Table 4-1 Video monitoring window parameters description

Parameter	Description
Stream	Supports switching between main and sub stream.
PTZ	Supports controlling the camera parameters of the current channel.
A/V	Supports configuring video encoding parameters for channels.
Playback	Supports playback of recorded video files.

4.2 Video Playback

Supports to replay the video files, and more in the playback interface.

4.2.1 Playback Operation

Step 1 On the APP main interface, select **LIVE > Playback**.
The **Playback** interface is displayed. See Figure 4-4.

Step 2 Swipe left or right on the timeline to view the recordings for the corresponding time period.

Figure 4-4 Playback

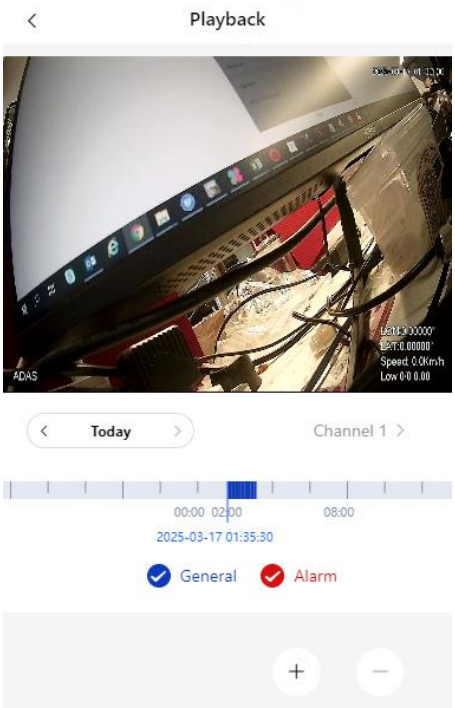


Table 4-2 Playback function bar

No.	Function	Description
1	Today Record	Click < to select time, supports searching videos by time.
2	Channel	Click > to select channel, supports searching videos by channel.
3	General	Supports play the general video.
4	Alarm	Supports play the alarm video.
5	+/-	+ : Enlarge the timeline - : Reduce the timeline

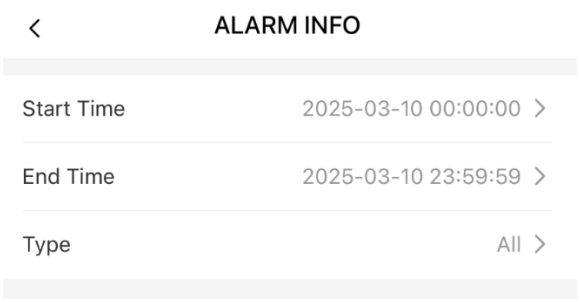
4.3 Viewing Alarm Info

You can view the alarm information during a fixed period.

Step 1 On the APP main interface, select **INFORMATION** > **Alarm Info**.

The **Alarm Info** interface is displayed. See Figure 4-5.

Figure 4-5 Alarm info(1)

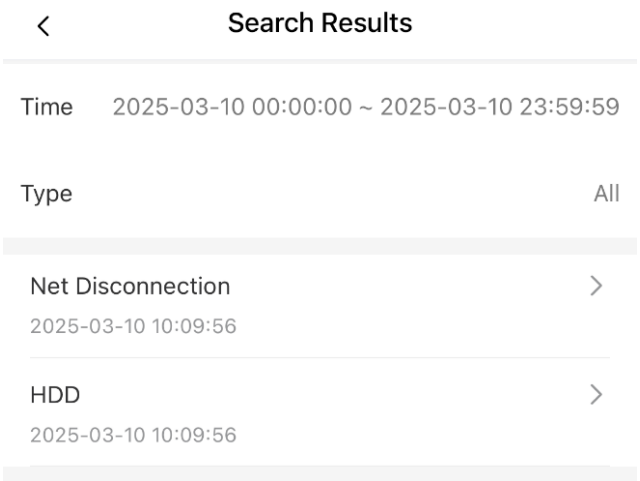


Step 2 Select **Type** to set the alarm type to be searched for, including All, Exception, Local Alarm and Intelligent.

Step 3 Set the start time and end time.

Step 4 Click **Search**. Alarm information in the set type during the set period is displayed. See Figure 4-6.

Figure 4-6 Alarm info(2)



5 System Settings

Please log in to the mobile APP for the basic settings .

- Some functions can only be configured on the APP interface. The actual interface shall prevail.
- In this section, when you have configured the settings for a channel, click **OK** to apply the settings to other channels. Click **Refresh** to display the latest configuration. Click **Default** to restore to factory default settings.

5.1 Configuring Alarm Settings

Alarm information settings include the setting of alarm input and exception.

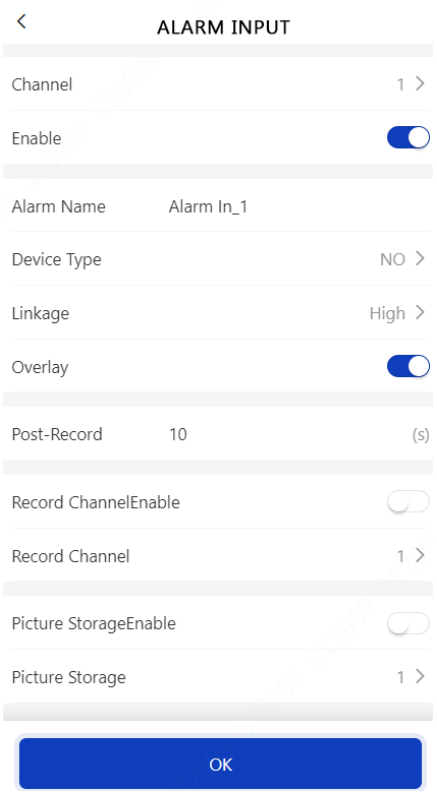
5.1.1 Configuring Alarm Input

You can select different types of input according to different sources of alarm and set up alarm output methods.

Step 1 On the APP main interface, select **SETTING > ALARM > ALARM INPUT**

The **ALARM INPUT** interface is displayed. See Figure 5-1.

Figure 5-1 ALARM INPUT



Step 2 Set the local alarm as required: The alarm signal detected on the device alarm input port.

Step 3 Select the **Alarm Channel** and select **Enable**.

Step 4 Configure more settings. See Table 5-1.

Table 5-1 Alarm input parameters

Parameter	Description
Alarm Name	Enter a customized alarm name.
Device Type	If the **Event Type** is **Local Alarm**, configure this parameter. ● **NO**: The alarm signal is disconnected normally. The alarm is triggered when alarm signal is connected. ● **NC**: The alarm signal is connected normally. The alarm is canceled when alarm signal is disconnected.
Overlay	Select the **Overlay** to overlay alarm names onto channel images.
Post-Record	Supports setting the recording delay.
Linkage	If the Event Type is Local Alarm, configure this parameter. If the alarm signal is 12V/24V voltage, select High as the triggering mode; if the alarm signal is ground voltage, select Low as the triggering mode.
Record channel	Select the corresponding check box and set a record channel. When an alarm event occurs, the corresponding channel starts recording automatically. Following condition must be satisfied before recording function works: ● Auto recording is enabled. See 3.5 Configuring Record
Picture Storage	Select the corresponding check box and set the channel. When an alarm event occurs, the corresponding channel starts capturing automatically.
Alarm-out Port	Supports configure the alarm out setting.
Anti-dither	Click **More** to set the anti-dither time. The system records only one alarm input event during this period.
Log	Click **More**, and select the corresponding check box to enable the device to create a local alarm log when an alarm event occurs.
Send email	Click **More**, and select the corresponding check box. When an alarm event occurs, the system sends email to the specified mailbox. Set your e-mail first before enabling this function.

Step 5 Click **OK**.

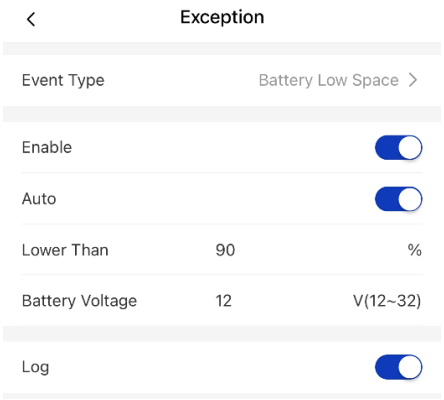
5.1.2 Configuring Exception

You can configure the ways to handle the device when errors occur.

Step 1 On the APP main interface, select **ALARM > EXCEPTION**.

The **EXCEPTION** interface is displayed. See Figure 5-2.

Figure 5-2 Exception



Step 2 Select the **Event type**, and select **Enable** to enable the handling of corresponding abnormal events.

Step 3 Configure more settings. See Table 5-2.

Table 5-2 Exception parameters

Parameter	Description
Event type	You can configure corresponding abnormal events on the following types. ● Battery Low Space: Set up notifications for insufficient power supply from the battery. ● Over Speed：Trigger an over-speed alarm when the GPS speed exceeds the preset threshold. ● Collision &Turnover：Identify abnormal vehicle states such as crashes or rollovers based on changes in G-sensor parameters. ● ACC Power Off：Off ACC. ● Rapid Speedup：An alarm is triggered when the device's speed increases beyond the set threshold within a unit of time. ● Sharp Brake：An alarm is triggered when the device's speed decreases beyond the set threshold within a unit of time. ● Rapid Turn：An alarm is triggered when the device's angular velocity increases beyond the set threshold within a unit of time. ● No Disk：Display an OSD (On-Screen Display) notification in the top-left corner when no TF card is inserted, indicating "No Hard Disk." ● HDD Error：Configure handling methods for hard disk-related exceptions, such as no hard disk or hard disk errors. ● Low Space：Notify when local storage space is running low. The event type might be different depending on the model you purchased, and the actual interface shall prevail.
Lower Than Auto Battery Voltage	Select **Device** tab, and if **Event Type** is **Battery Low Voltage**, configure this parameter. The supply voltage to the device from the vehicle and the percentage of available supply voltage capacity. When the vehicle is in ACC Off, and the voltage supplied to the device is less than the percentage of available capacity, the system triggers an alarm.
Max speed	Select **Device** tab, and if the **Event Type** is **Over Speed**, configure this parameter. The upper limit of vehicle speed. When the vehicle speed exceeds this value, the system triggers an alarm.
Min speed	Select **Device** tab, and if **Event Type** is **Low Speed**, configure this parameter. The lower limit of vehicle speed. When the vehicle speed is lower than this value, the system triggers an alarm.
Log	Select the corresponding check box to enable the device to create a local alarm log when an alarm event occurs.

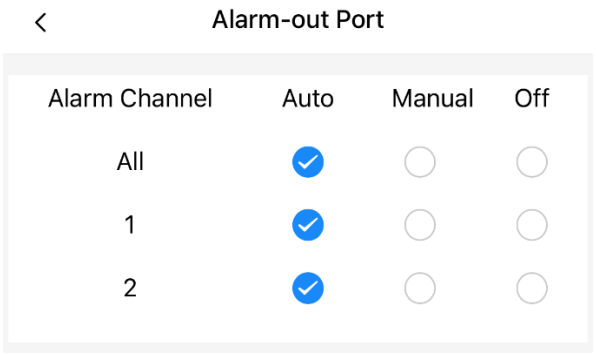
Step 4 Click **OK**.

5.1.3 Configuring Alarm-out Port

Step 1 On the APP main interface, select **ALARM > Alarm-out Port**.

The **Alarm-out Port** interface is displayed. See Figure 5-3.

Figure 5-3 Alarm-out Port



Step 2 Configure more parameters, for the detailed description, see Table 5-3.

Table 5-3 Record Mode parameter description

Parameter	Description
Alarm Channel	Displays the alarm channel number. You can select one or several channels or select **All**.
Status	Indicates the recording status of corresponding channels. The choices include Auto, Manual and Off. ● : Selected ● : Not selected
Auto/Manual/Off	Select the recording mode, including Manual, Auto, and Stop. ● Manual: Top priority. When the **Manual** check box is selected, the system keeps general recording for 24 hours for the corresponding channel. ● Auto: The system starts recording according to the record type (such as general alarm, motion detect, and system alarm) and recording time. ● Off: Do not record.

Step 3 Click **OK**.

5.2 Configuring AI Settings

The AI solution includes active safety driving intelligent functions. After activating and setting the intelligent solution, the corresponding functions can take effect.

- ADAS: Advanced Driver Assistance Systems detect events such as lane departure, too close following distance,. The system then executes alarm linkage actions and reports to the platform.
- DSM: The system supports the analysis and processing of driver behavior captured by the camera, including the detection of fatigue driving, distracted driving, phone usage while driving, driver absence, wearing infrared-blocking sunglasses, smoking while driving, camera lens obstruction, and unfastened seatbelt.
- Forward-Looking Smart: Supports Vehicle Ahead Start reminder.

- You can enable up to two intelligent functions at the same time.
- The camera mentioned in this chapter is based on some models, and the actual product shall prevail.

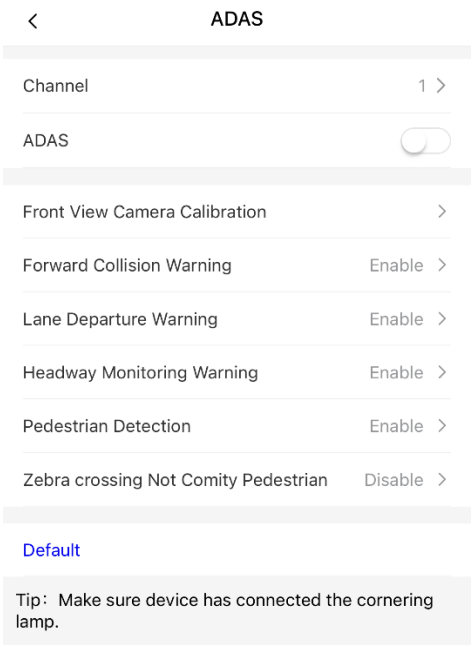
5.2.1 Configuring ADAS Alarm

ADAS alarms mainly include support for lane departure warning, headway monitoring warning, etc.

5.2.1.1 Configuring ADAS Parameters

Step 1 On the APP main interface, select **LIVE>AI Setting> ADAS**.
The **ADAS** interface is displayed. See Figure 5-4.

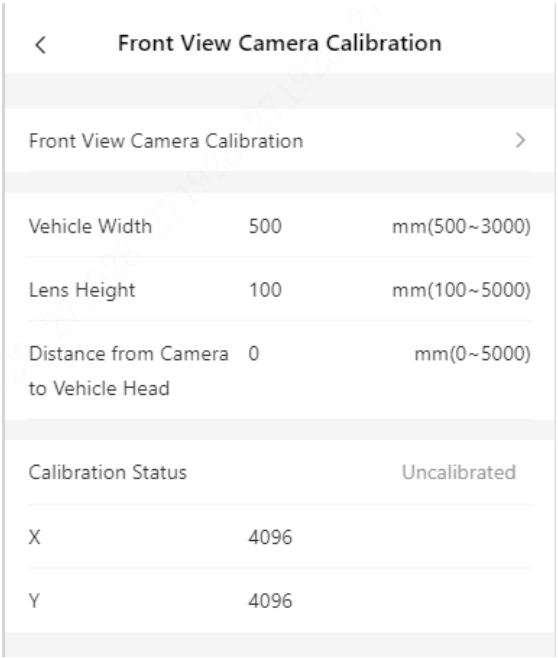
Figure 5-4 ADAS



Step 2 Click **Enable** and **OK** to enable the ADAS alarm.

Step 3 Click Front View Camera Calibration.
The **Calibration** interface is displayed. See Figure 5-5.

Figure 5-5 Calibration



- The installation position of the vehicle's assisted driving camera needs to be calibrated before use. When configuring parameters, please measure the width of the vehicle, the height of the lens, and the distance from the camera to the front of the vehicle in advance. After a certain period of driving, the equipment will automatically calibrate its position. For details, please refer to the construction documentation.
- -The X value represents the yaw angle of the camera installation, ranging from 2958 to 5233; Y value represents the pitch angle of the camera installation, ranging from 3872 to 4320. If it exceeds this range, it is judged as an unreasonable camera installation angle and calibration failure.

Step 4 Enter the vehicle width, the lens height and the distance from the camera to the vehicle head, and click **OK** to complete the calibration.

Step 5 Configure more parameters. For details, see Table 5-4.

 means the corresponding alarm is enabled.

Table 5-4 ADAS parameter description

Parameter	Description
Channel	ADAS is fixed to channel 1.
Forward collision warning	Gives out warning if it is possible to collide with the vehicle in front.
Alarm trigger speed	The speed at which the Forward Collision Warning is triggered: The range is 0km/h–200km/h.
Report Alarm	The speed at which the Forward Collision Warning is uploaded to the platform: The range is 0km/h–200km/h.
Alarm protection time	Continuous alarm time: The range is 0s–6525s.
TTC	Time to collision: The range is 2s–10s.
Lane departure warning	Gives out warning when the vehicle directly changes the lane without turning on the left or right cornering lamp.
Alarm trigger speed	The speed at which the Lane Departure Warning is triggered: The range is 0km/h–200km/h.
Report Alarm	The speed at which the Lane Departure Warning is uploaded: The range is 0km/h–200km/h.
Alarm protection time	Continuous alarm time: The range is 0s–6525s.
Distance of driving on solid line	Set the distance of driving on solid line: The range is -30cm–30cm.
Headway Monitoring Warning	Gives out warning when the vehicle is too close to the vehicle in the front.
Alarm trigger speed	The speed at which the Headway Monitoring Warning is triggered: The range is 0km/h–200km/h.
Report alarm	The speed at which the Headway Monitoring Warning is uploaded: The range is 0km/h–200km/h.
Alarm protection time	Continuous alarm time: The range is 0s–6525s.
TTC	Time to collision: The range is 1s–10s.

Step 6 Click **OK**.

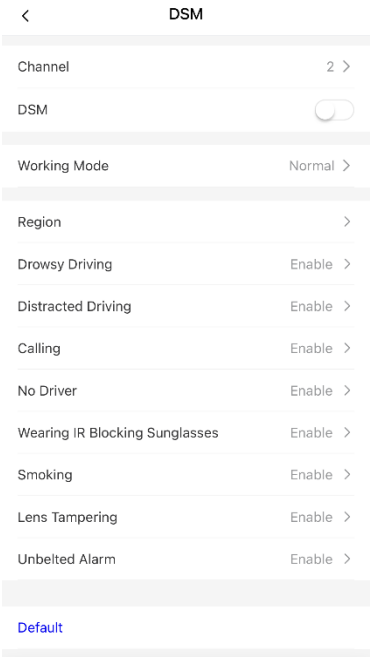
5.2.2 Configuring DSM Alarm

DSM Alarm including the drowsy driving, distracted driving, calling, no driver, wearing IR blocking sunglasses, smoking, lens obstruction, and unbelted alarm.

5.2.2.1 Configuring DSM Parameters

Step 1 On the APP main interface, select **LIVE>AI Setting> DSM**.
The **DSM** interface is displayed. See Figure 5-6.

Figure 5-6 DSM



Step 1 Click **Enable** to enable the DSM alarm.

Step 2 Configure more parameters. See Table 5-5.

Table 5-5 DSM parameter description

Parameter	Description
Channel	The DSM is fixed to channel 2.
Working mode	Vehicle working modes include normal mode and test mode.
Region	Supports to configure the region.
Rule Type	For alarm rules, you can select Drowsy Driving, Distracted Driving, Calling, No driver, Wearing IR blocking sunglasses, Smoking, Lens Tempering and Unbelted Alarm.
Alarm trigger speed	The speed at which the alarm is triggered: The range is 0 km/h–200 km/h.
Report alarm	The speed at which the alarm is uploaded to the platform: The range is 0 km/h–200 km/h.
Alarm protection time	Continuous alarm time: The range is 10s–6525s.
Closed eyes duration	Setting is necessary when the rule type is **Drowsy Driving**: The range is 1s–60s.
Yawn duration	
Duration of lowering head	Setting is necessary when the rule type is **Distracted Driving**: The range is 1s–60s.
Duration of looking around	
Duration of calling	Setting is necessary when the rule type is **Calling**: The range is 1s–60s.
Duration of No driver	Setting is necessary when the rule type is **No driver**: The range is 1s–60s.
Duration of wearing IR blocking sunglasses	Setting is necessary when the rule type is **Wearing IR Blocking Sunglasses**: The range is 1s–60s.
Duration of smoking	Setting is necessary when the rule type is **Smoking**: The range is 1s–60s.
Duration of acceleration when camera is shielded	Setting is necessary when the rule type is **Lens Tampering**: The range is 1s–60s.
Duration of Unbelt Alarm	Setting is necessary when the rule type is **Unbelted Alarm**: The range is 1s–60s.

Step 3 Click **OK**.

means the corresponding alarm is enabled.

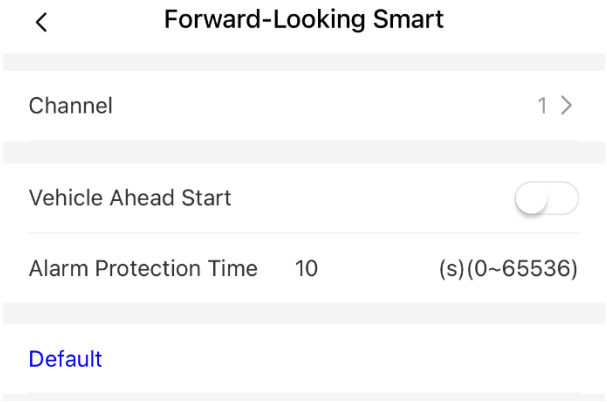
5.2.3 Configuring Forward-Looking Smart

Forward-Looking Smart supports Vehicle Ahead Start reminder.

5.2.3.1 Configuring Parameters

Step 1 On the APP main interface, select **LIVE>AI Setting> Forward-Looking Smart.**
The **Forward-Looking Smart** interface is displayed. See Figure 5-7.

Figure 5-7 Forward-Looking Smart



Step 2 Click **Enable** to enable the Vehicle Ahead Start.

Step 3 Configure more parameters. See Table 5-6.

Table 5-6 Forward-Looking Smart parameter description

Parameter	Description
Channel	The DSM is fixed to channel 1.
Alarm protection time	Continuous alarm time: The range is 0s–65536s.

Step 4 Click **OK.**

means the corresponding alarm is enabled.

5.3 Configuring Camera

You can set camera properties and camera parameters.

5.3.1 Configuring PTZ control

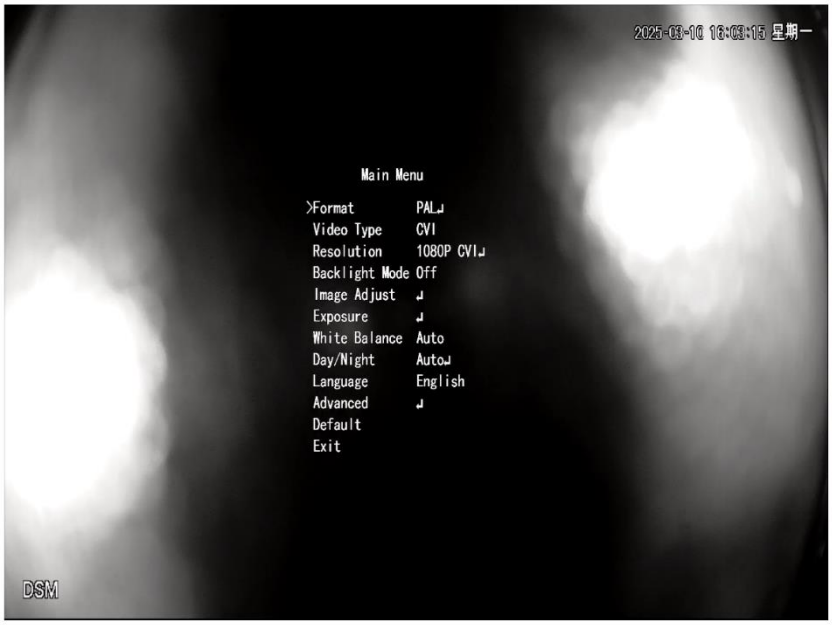
You can set up the camera property parameters of the channel.

Different cameras have different property parameters. The actual parameters shall prevail.

Step 1 On the APP main interface, select **LIVE >PTZ Control**.

The **PTZ Control** interface is displayed. See Figure 5-8.

Figure 5-8 PTZ Control



Step 2 Configure more parameters. See Table 5-7.

Table 5-7 Parameters description

Parameter	Description
Format	Supports switching the camera's P/N system.
Video Type	Supports toggling between video types (CVI/AHD).
Resolution	Supports adjusting camera resolution.
Backlight Mode	Supports optimizing image effects in strong light mode.
Image Adjust	Supports configuring image parameters.
Exposure	Supports modifying exposure settings.
White Balance	Supports regulating white balance modes.
Day/Night	Supports switching image modes (full color/black and white/auto).
Language	Supports changing the camera language.
Advanced	Supports viewing the camera's system parameters.

Step 3 Finish configuring, back and then click **OK**.

5.3.1.1 PTZ Control Bar

The PTZ control bar function please see Figure 5-9 and Table 5-8.

Figure 5-9 Control Bar

Table 5-8 Control Bar Description

Icon	Function	Description
OK	Comfirm	Used to confirm a selection or access a sub-menu.
	Up	Click , Used to move up or select items in a menu or list.
	Down	Click , Used to move up or select items in a menu or list.
	Left	Click , Used to adjust the corresponding parameters.
	Right	Click , Used to adjust the corresponding parameters.

5.3.2 Configuring Camera Parameters

You can set **Audio/Video**, **Overlay**, and **Video Mirror**.

5.3.2.1 Configuring Audio/Video

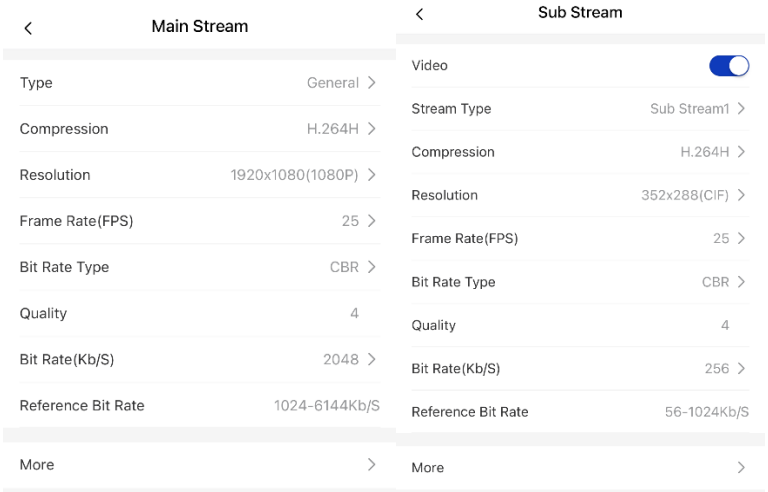
You can configure the encode settings for main stream and sub-stream.

Step 1 On the APP main interface, select **SETTING >SYSTRM > Camera > Audio/Video**.

The **Audio/Video** interface is displayed. See Figure 5-10.

Encode parameters might be different depending on devices, and the actual product shall prevail.

Figure 5-10 Audio/Video



Step 2 Configure parameters. See Table 5-9.

Table 5-9 Camera parameters

Parameter	Description
Video Enable	Click to enable the sub stream.
Type	The record type of main stream is permanently fixed as General and cannot be changed. General, motion detect and alarm use the general stream configurations for recording.
Stream Type	Shows sub-stream type.
Compression	Shows compression mode.
Resolution	The resolution of the displayed video. The higher the video resolution, the better the image quality.
Frame Rate (FPS)	Configure the frames per seconds for videos. The higher the value, the smoother and more vivid the image.
Bit Rate Type	You can select the bit rate type. ● CBR: Constant Bit Rate, which changes around the configured value. ● VBR: Variable Bit Rate, which changes along with environment. ● It is recommended to select CBR when there might be only small changes in the monitoring environment, and select VBR when there might be big changes in the monitoring environment.
Quality	This parameter can be set only when **Bit Rate Type** is set to **VBR**. The image quality level. There are six levels in total. The higher the value, the better the image will become.
Bit Rate (kb/s)	Configure the bit rate for main stream and sub stream. ● When CBR is selected, select the bit rate according to the reference bit rate, and the bit rate changes around the configured value. ● When VBR is selected, select the upper limit value of bit rate according to the reference bit rate, and the bit rate changes along with the monitoring environment. But the maximum bit rate value changes around the configured value. ● Select **Custom** to configure bit rate value manually.
Reference Bit Rate	The system recommends the optimal bit rate range according to the resolution and frame rate settings.
Audio Enable	Click **More** to enable the audio. If the corresponding check box is selected, the video recordings are audio and video combined streams.
Audio Encoding	Select an audio encode format. The parameters might be different depending on the model you purchased, and the actual product shall prevail.
Audio source	Shows source of audio.

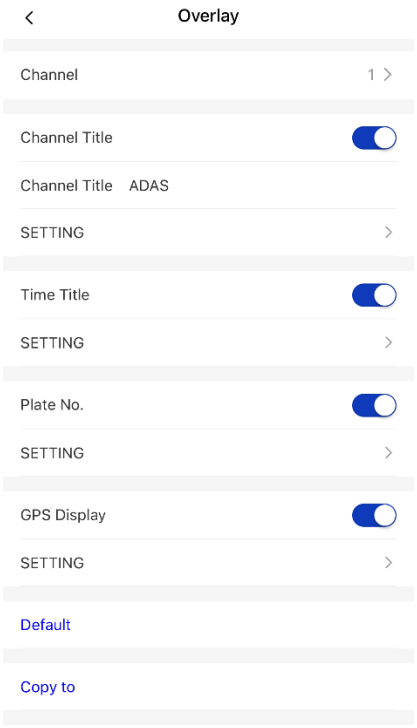
Step 3 Click **OK**.

5.3.2.2 Configuring Overlay

You can configure the overlay title information.

Step 1 On the APP main interface, select **SETTING >SYSTRM > Camera >Overlay**.
The **Overlay** interface is displayed. See Figure 5-11.

Figure 5-11 Overlay



Step 2 Select a channel.

Step 3 Configure more parameters. See Table 5-10.

Table 5-10 Overlay parameters

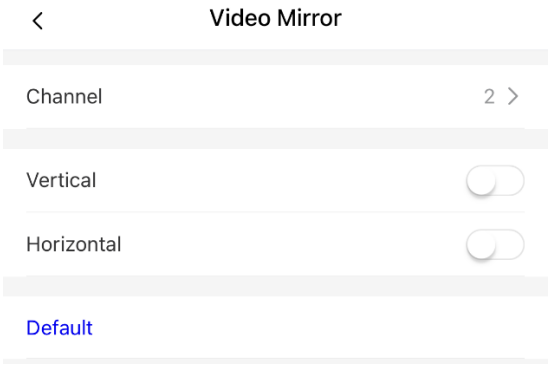
Parameter	Description
Channel Title	Enable the Channel Title, shows SETTING. Click **SETTING**, enter the Channel Title, drag the **Channel Title** to the appropriate position.
Time Title	Enable the Time Title, shows SETTING. Click **SETTING**, drag the **Time Title** to the appropriate position.
Plate No.	Enable the Plate No, shows SETTING. Click **SETTING**, drag the **Plate No** to the appropriate position.
GPS Display	Enable the **GPS Display,** shows SETTING. Click **SETTING**, drag the **GPS Display** to the appropriate position.

Step 4 Click **OK**.

5.3.2.3 Configuring Video Mirror

Step 1 On the APP main interface, select **SETTING >SYSTRM > Camera >Video Mirror.**
The **Video Mirror** interface is displayed. See Figure 5-12.

Figure 5-12 Video Mirror



Step 2 Configure more parameters. See Table 5-11.

Table 5-11 Video parameters

Parameter	Description
Channel	Supports channel 2,3,4.
Vertical	Click to enable the vertical mode.
Horizontal	Click to enable the horizontal mode.

Step 3 Click **OK**.

means the corresponding alarm is enabled.

5.4 Configuring Network Parameters

You can set the network parameters of the device as needed, including Cellular Settings, Wi-Fi Settings, TCP/IP Settings and Camera Settings.

5.4.1 Configuring Wireless Network

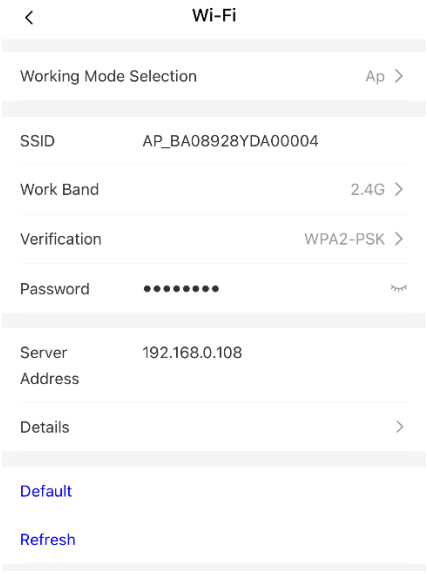
5.4.1.1 Configuring Wi-Fi Hot Spot

The device can work as a hot spot to share the network connection to other terminals. The terminals connected to the hot spot can log in to the device through host IP address (192.168.0.108). After login, you can view videos on the device.

Step 1 On the APP main interface, select **LIVE** > **NETWORK** > **Wi-Fi**.
The **Wi-Fi** interface is displayed.

Step 2 Select **Ap** as the working mode.
The **Ap** interface is displayed. See Figure 5-13.

Figure 5-13 Ap Settings



Step 3 Enter SSID, select work band and verification type, and then enter the password.

- The work band can only be 2.4G.
- Select the check box behind **Password**, and the password will be visible.

The default password is 12345678.

Step 4 Click **OK**.

5.4.1.2 Configuring Cellular

Preparation

- Make sure that the device is equipped with 3G/4G module and inserted with SIM card from corresponding communication operators.
- The dial number, user name, and password have been obtained from corresponding communication operators.

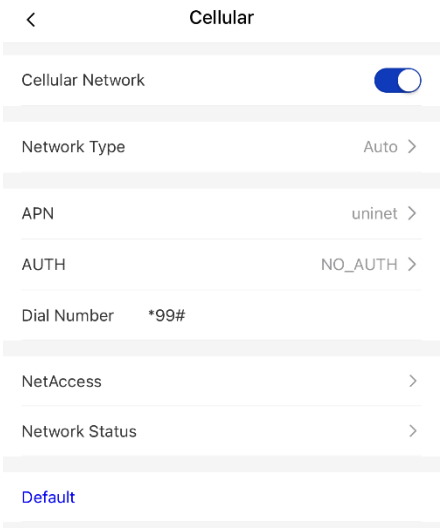
Procedure

Step 1 On the APP main interface, select **LIVE > NETWORK > Cellular**.

The **Cellular** interface is displayed. See Figure 5-14.

After 3G/4G module is connected, the module information and wireless signal are displayed; if not, click **Search** to search for wireless signal.

Figure 5-14 Cellular settings



Step 2 Enable the Cellular Network.

This function is enabled by default.

Step 3 Configure more parameters. See Table 5-12.

Table 5-12 Cellular parameters

Parameter	Description
Net Access	When the device is connected to a private network, select the **NetAccess**, enter APN name and select authentication mode. If **PAP** or **CHAP** is selected for authentication mode, enter user name and password, and then the device is automatically connected to the private network.
Network Type	When enabled, the network type is displayed, which is used to distinguish between the 3G/4G modules of different communication operators, such as TD-LTE.
APN	When enabled, the access point of the communication operator is displayed. To manually set up APN, select **Customized**.
AUTH	Includes PAP, CHAP, and NO_AUTH protocols. The system automatically recognizes and displays the enabled protocol.
Dial Number	Enter the dial number provided from the communication operator.
User name	This parameter needs to be set up when AUTH is set to PAP or CHAP. The system automatically recognizes the user name and password.
Password	
Network Status	After successful dial-up, all relevant information is displayed without any setup needed. Such information includes module state, SIM state, PPP state, working mode, IMSI, IMEI, IP address, subnet mask, gateway, and module type.

Step 4 Click **OK**. After successful connection, the obtained IP address is displayed.

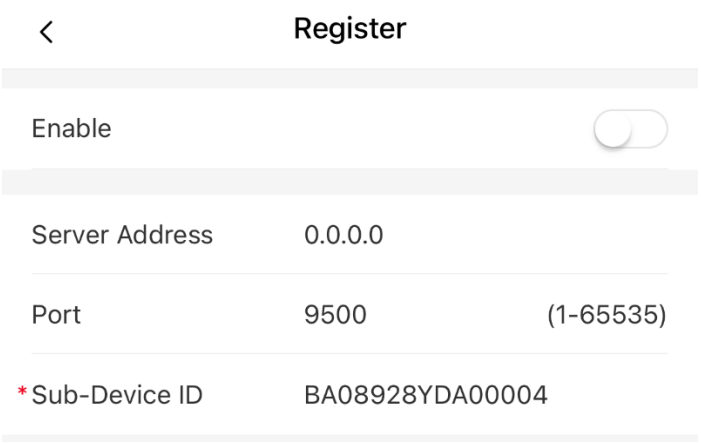
5.4.2 Configuring Auto Register

After successfully auto registered, when the device is connected into the Internet, it will report the current location to the specified server to make it easier for the client software to access to the device, and to view and monitor it.

Step 1 On the APP main interface, select **LIVE > Register**.

The **Register** interface is displayed. See Figure 5-15.

Figure 5-15 Register



Step 2 **Enable** the function. (Selected by default).

Step 3 Configure more parameters. See Table 5-13.

Table 5-13 Register parameters

Parameter	Description
Server Address	Enter the IP address or domain name of the server to register.
Port	Enter the port of the server to register.
Sub device ID	Unique ID for identifying the device. When different devices register to the same server, the sub device IDs should be different.

Step 4 Click **OK**.

5.4.3 Configuring Platform Register

The Ministry of Transport Standard Platform, known as the 808 Platform, currently supports a range of functions including platform online and offline status management, message distribution, and vehicle location positioning.

The Ministry of Transport Standard Platform (Bu Biao) is a proprietary protocol specific to China. If integration is required, the third-party customer must have this platform. Typically, overseas products use the auto registration .

5.4.3.1 Register Configuration

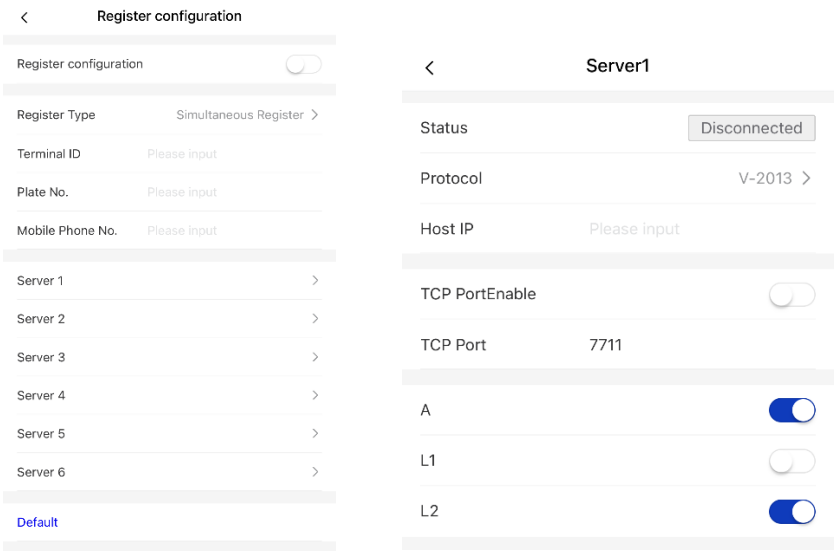
Preparation

- The 3G functionality has been activated.

Procedure

Step 1 On the APP main interface, select **LIVE > Platform Register > Register configuration**.
The **Register configuration** interface is displayed. See Figure 5-16.

Figure 5-16 Register configuration settings



Step 2 Enable the Register configuration.

Step 3 Configure more parameters. See Table 5-14.

Table 5-14 Register configuration parameters

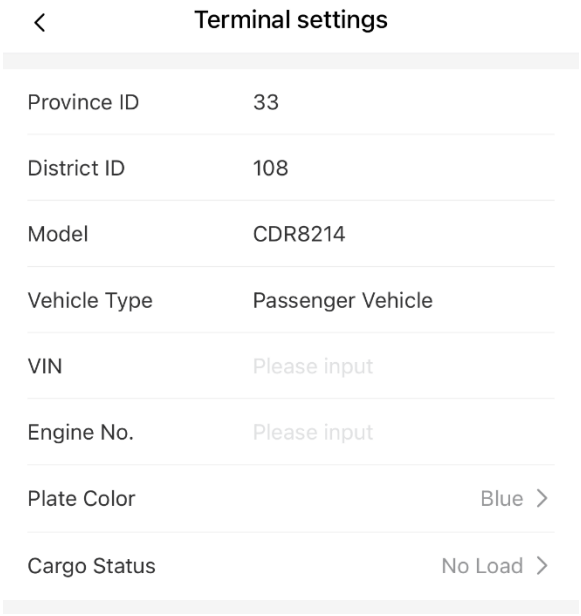
Parameter	Description
Register Type	Simultaneous Registration: Register simultaneously to both the primary and secondary servers.
Main Server	Enter the IP address or domain name of the Ministry of Transport standard primary server to which you need to register.
Status	Network connection status between the device and the Ministry of Transport standard platform.
Protocol	Version of the Ministry of Transport standard protocol.
TCP Port Enable	Select the checkbox to enable the TCP port.
TCP Port	The port number through which the TCP protocol provides communication services.
Terminal ID	The unique identifier (ID) of the device.
Plate No.	The license plate number of the vehicle in which the device is installed.
Mobile Phone No.	The phone number corresponding to the SIM card installed in the device.

Step 4 Click **OK**.

5.4.3.2 Terminal Settings

Step 1 On the APP main interface, select **LIVE > Platform Register > Terminal settings.** The **Terminal settings** interface is displayed. See Figure 5-17.

Figure 5-17 Terminal settings



Step 2 Configure more parameters. See Table 5-15.

Table 5-15 Terminal settings parameters

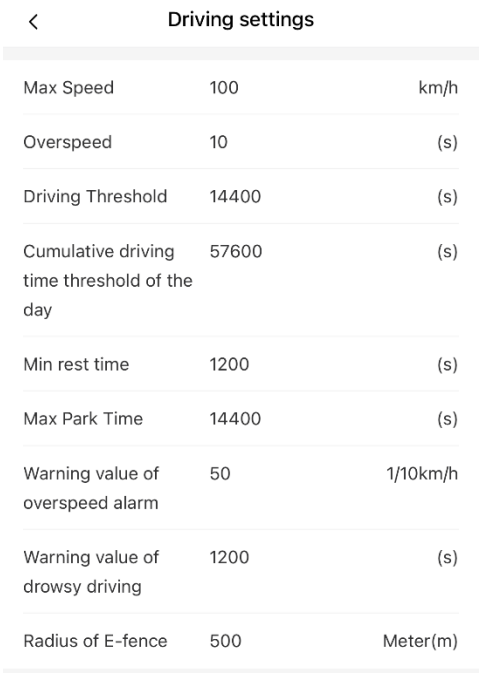
Parameter	Description
Province ID	The ID of the province where the device is located.
District ID	The ID of the city or county where the device is located.
Model	The model of the device.
Vehicle Type	The type of the vehicle where the device is installed, please select according to the actual situation.
VIN	The unique identifier for the vehicle where the device is installed.
Engine No.	The identifier for the vehicle's engine where the device is installed.
Plate Color	The color of the license plate of the vehicle where the device is installed.
Cargo Status	The cargo status of the vehicle, please select according to the actual situation.

Step 3 Click **OK**.

5.4.3.3 Driving Settings

Step 1 On the APP main interface, select **LIVE > Platform Register > Driving settings**.
The **Driving settings** interface is displayed. See Figure 5-18.

Figure 5-18 Driving settings



Step 2 Configure more parameters. See Table 5-16.

Table 5-16 Driving settings parameters

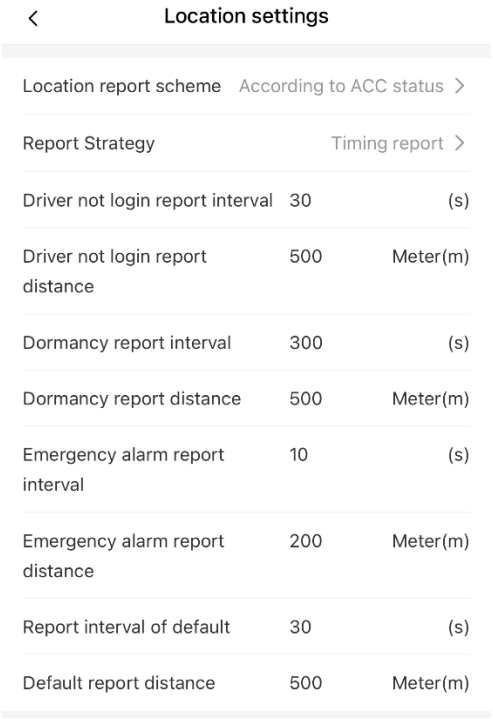
Parameter	Description
Max Speed	The highest speed at which the vehicle can be driven.
Overspeed	The duration beyond the set time limit when the system triggers an overspeed warning.
Driving Threshold	The longest duration a driver can operate the vehicle without a break.
Cumulative driving time threshold of the day	The cumulative driving time allowed in a single day.
Min Rest Time	The minimum rest period required after exceeding the continuous driving time.
Max Park Time	The longest duration the vehicle can remain parked.
Warning value of overspeed alarm	When the difference between the current speed and the overspeed limit is less than the set value, the system triggers an overspeed warning.
Warning value of drowsy driving	When the difference between the current driving duration and the fatigue driving time limit is less than the set value, the system triggers a fatigue driving warning.
Radius of E-fence	When the device (e.g., vehicle or asset) enters or exits the defined radius, the system triggers alerts or notifications.

Step 3 Click **OK**.

5.4.3.4 Location Settings

Step 1 On the APP main interface, select **LIVE > Platform Register > Location settings.** The **Location settings** interface is displayed. See Figure 5-19.

Figure 5-19 Location settings



Step 2 Configure more parameters. See Table 5-17.

Table 5-17 Terminal setting parameters

Parameter	Description
Location report scheme	Device reports the vehicle location plan, including the following options: ● According to ACC status: report vehicle location according to ACC status. ● When ACC is ON, the location is reported according to the default time interval or distance interval. ● When ACC is OFF, the location is reported according to hibernation time interval or distance interval. ● When an Alarm occurs, the location is reported according to the emergency alarm time interval or distance interval. ● According to Login status and ACC status: report vehicle location according to login status and ACC status. ● When the driver is not logged in, the location will be reported according to the interval or distance interval when the driver is not logged in. ● When the driver is operation and ACC is on, the location is reported according to the default time interval or distance interval. ● When the driver is operation and ACC is off, the location is reported according to hibernation time interval or distance interval. ● When an alarm occurs, the location is reported according to the emergency alarm time interval or distance interval.
Report Strategy	The strategy of equipment reporting vehicle location includes the following options: ● Timing report: Report the location of the vehicle according to the fixed time of driving. ● Fixed-distance report: Report the location of the vehicle according to the fixed distance of driving. ● Timing/Fixed-Distance: If it meets a fixed time, it will be reported, and if it meets a fixed distance, it will also be reported (the two do not interfere with each other).
Driver not login report interval	According to the location reporting plan and submission strategy, vehicle locations will be reported based on fixed time intervals or predetermined distances when the driver is not logged in.
Driver not login report distance	
Dormancy report interval	According to the location reporting plan and submission strategy, vehicle position should be reported based on fixed time intervals or distances traveled when the ACC is off or the driver is logged in.
Dormancy report distance	
Emergency alarm report interval	According to the position reporting scheme, the position is reported according to the emergency alarm time interval or distance interval when an alarm occurs.
Emergency alarm report distance	
Report interval of default	

Default report distance	According to the location reporting plan and submission strategy, vehicle position should be reported based on fixed time intervals or distances traveled when the ACC is ON or the driver is logged in.

Step 3 Click **OK**.

5.4.4 Configuring Operation Platform

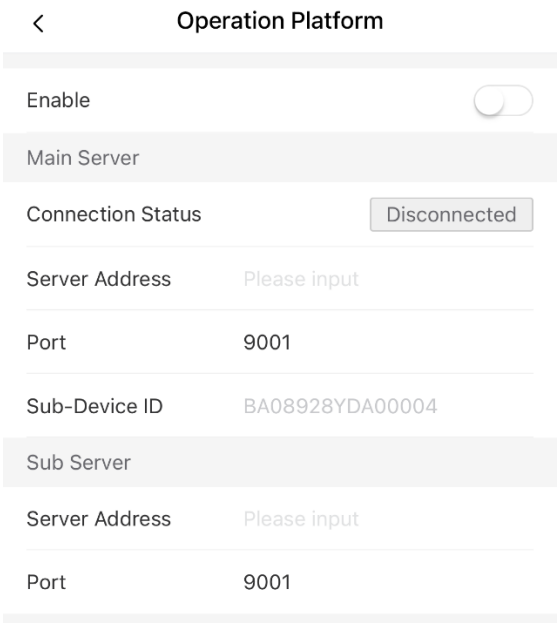
By connecting to the operation and maintenance platform, modify the configuration information on the device side, collect device printing information, GNSS raw data, perform remote upgrades, and more.

Overseas products do not include this platform, but the devices retain this functionality.

Step 1 On the APP main interface, select **LIVE > Operation Platform**.

The **Operation Platform** interface is displayed. See Figure 5-20.

Figure 5-20 Operation Platform



Step 2 **Enable** the function.

Step 3 Configure more parameters. See Table 5-18.

Table 5-18 Operation Platform parameters

Parameter	Description
Connection Status	Connected: The device has successfully registered to the platform. Disconnected: The device has not successfully registered to the platform.
Server Address	Enter the IP address or domain name of the server to register.
Port	Enter the port of the server to register.
Sub device ID	Unique ID for identifying the device. When different devices register to the same server, the sub device IDs should be different.

Step 4 Click **OK**.

5.4.5 Managing Disk

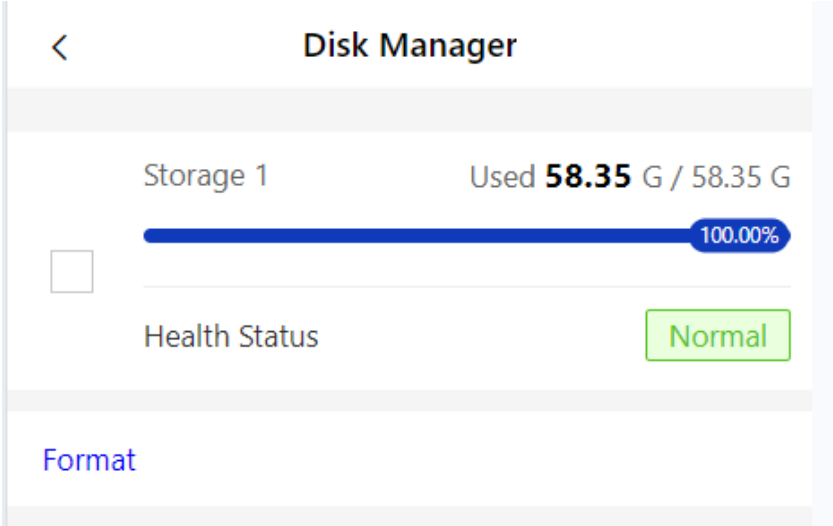
Set the read and write properties of the TF card and view the capacity information of the HDD.

Step 1 On the APP main interface, select **LIVE > Operation Platform > Disk Manager**.

The **Disk Manager** interface is displayed. See Figure 5-21.

Select TF card and click **Format** to clear all data in the SD card. Proceed with caution.

Figure 5-21 Disk Manager



5.5 Configuring System

You can configure system information, such as Serial Port Parameters, Security Management and Vehicle Information.

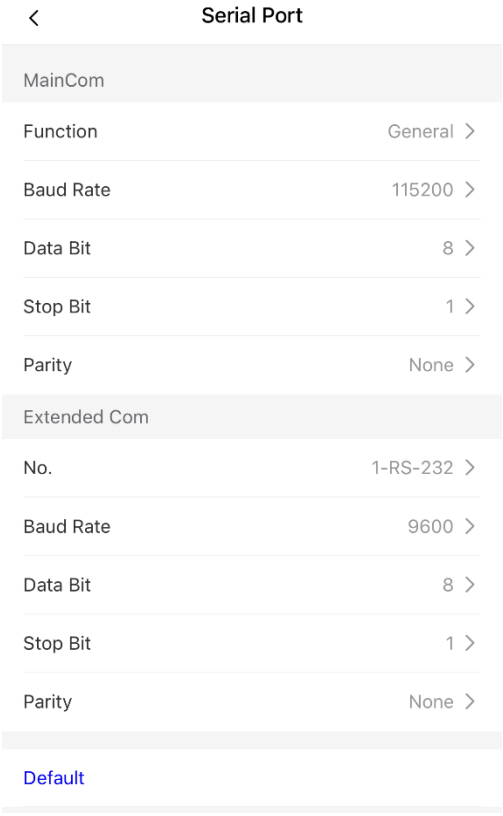
5.5.1 Configuring Serial Port Parameters

You can configure the serial port parameters such as baud rate, date bits, stop bits, and parity.

Step 1 On the APP main interface, select **SETTING > SYSTEM > Serial Port**.

The **Serial Port** interface is displayed. See Figure 5-22.

Figure 5-22 Serial Port



Step 2 Click the **MainCom** or **Extended Com** TAB based on the serial port function.

- If a common serial port is used, click the **MainCom** TAB.
- When RS-485 or RS232 is used, click the **Extended Com** TAB.

Step 3 Configure parameters. See Table 5-19.

Table 5-19 Serial port setting parameters description

Parameter	Description
Function	Select the corresponding protocol. ● General: Upgrades programs and debug by suing the serial interface and mini terminal software. ● GPS： Used to transmit real-time GPS data.
Baud rate	The times of signal changes on the transmission line in time unit. ● The default baud rate is 115200 for a General. ● The default baud rate is 9600 for a transparent serial port. ● The default baud rate is 9600 for a Extended Com.
Data Bit	Select a data bit. The default is **8**.
Stop Bit	The default is **1**.
Parity	Select a parity mode from None, Odd, Even, Mark, and Space. The default is **None**.

Step 4 Click **OK**.

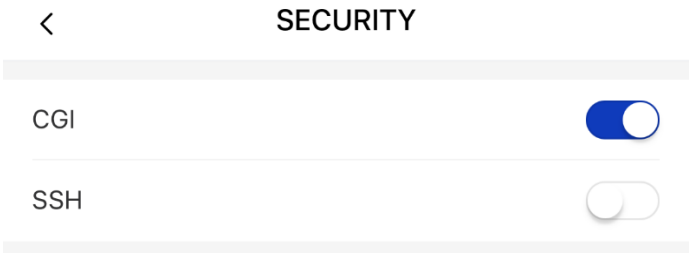
5.5.2 System Service

The corresponding service can only be used after the system service is turned on.

Step 1 On the APP main interface, select **SETTING > SYSTEM** > **SECURITY.**

The **SECURITY** interface is displayed. See Figure 5-23.

Figure 5-23 SECURITY



Step 2 Select whether to enable CGI, or SSH as needed.

- After enabling CGI, a third-party platform can connect to this device via the CGI protocol.

Step 3 Click **OK**.

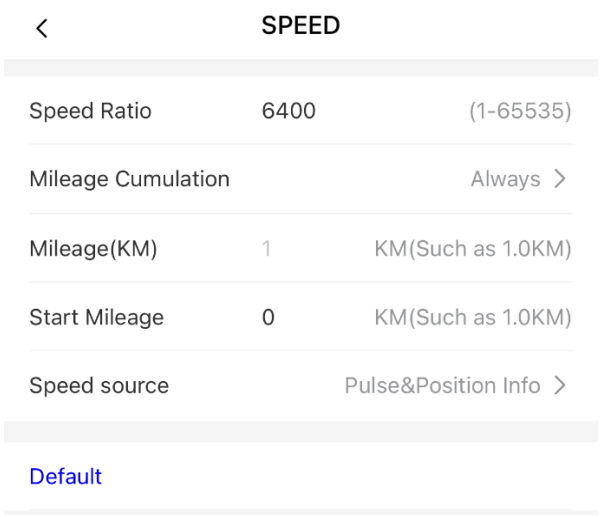
5.5.3 Configuring Vehicle Settings

You can set the vehicle speed.

5.5.3.1 Configuring Speed

Step 1 On the APP main interface, select **SETTING > SYSTEM > speed.**
The **SPEED** interface is displayed. See Figure 5-24.

Figure 5-24 Speed



Step 2 Configure more settings. See Table 5-20.

Table 5-20 Speed parameters

Parameter	Description
Speed Ratio	The parameter for converting speed.
Mileage Cumulation	Select the vehicle mileage cumulation mode.
Mileage	Displays the total mileage.
Start Mileage	Enter the initial mileage of the vehicle.
Speed source	Select where the speed is obtained, including **Pulse**, **Position Info**, and **Pulse&Position Info**. ● Pulse: Gets the speed information from vehicle pulse system. ● Position Info: Gets the speed information from positioning system. ● Pulse&Position Info: Gets the speed information from both the pulse system and positioning system. Information from the pulse system is used first.

Step 3 Click **OK**.

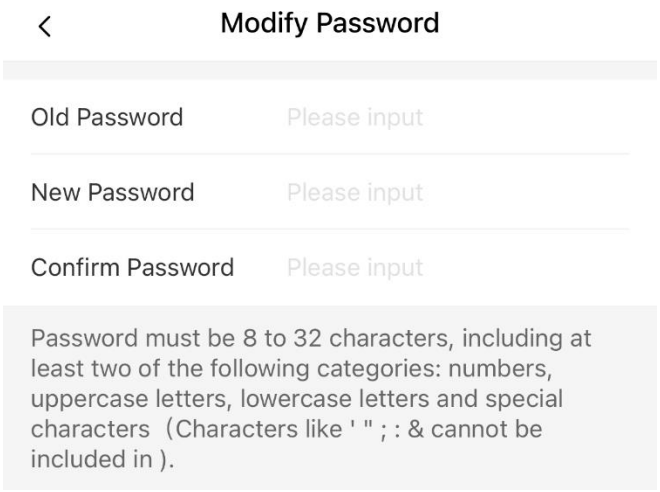
5.6 Managing User Account

You can manage security questions for admin account.

5.6.1 Modifying Password

Step 1 On the APP main interface, select **SETTING > SYSTEM > Account.**
The **Account** interface is displayed. See Figure 5-25.

Figure 5-25 Modifying Password



Step 2 Enter the Old Password, New Password and Confirm Password.
Step 3 Click **OK**.

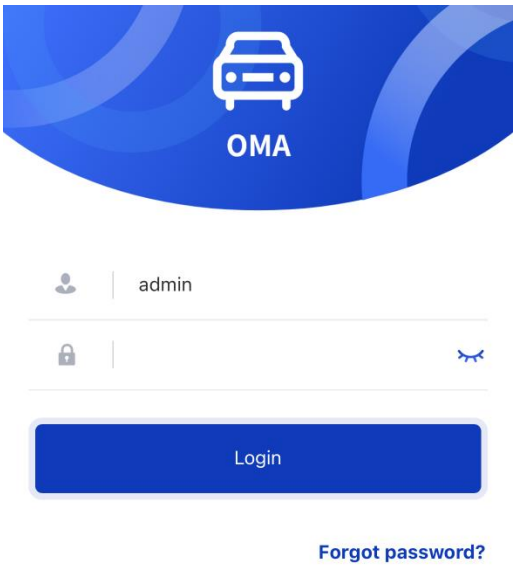
5.6.2 Resetting Password

You can reset the password through the reserved Email Address when you forget the login password of admin.

Step 1 Open the APP and log in.

The **Login** interface is displayed. See Figure 5-26.

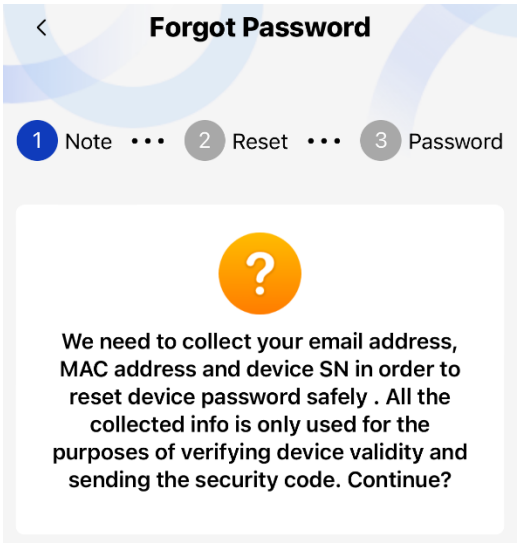
Figure 5-26 Login



Step 2 Click **Forgot Password?**.

The **Password Reset** interface is displayed. See Figure 5-27.

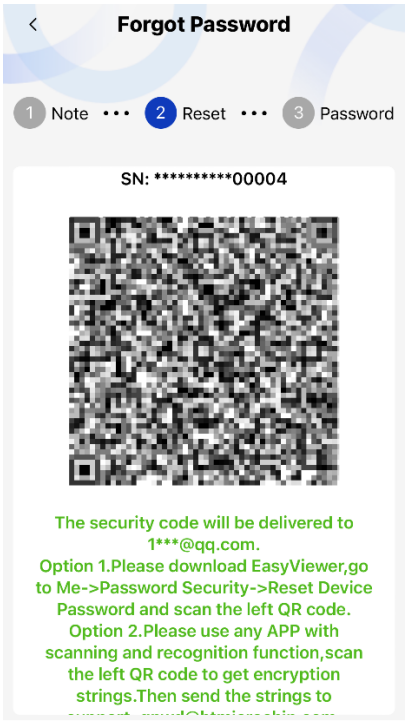
Figure 5-27 Reset password (1)



Step 3 Click **OK**.

The **Password Reset** interface is displayed. See Figure 5-28.

Figure 5-28 Reset password (2)



Step 4 Follow the instructions to scan the QR code and get the security code.

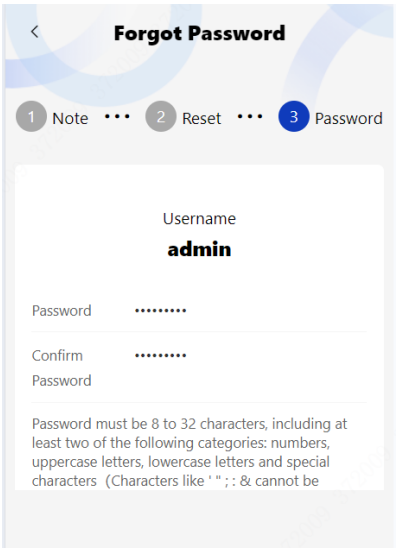
- Please scan the QR code on the actual interface of device.
- At most two security codes will be generated by scanning the same QR code. To get more security code, refresh the QR code.
- Please use the security code within 24 hours after you receive it. Otherwise, it will become invalid.
- Wrong security code entered for up to five times will cause account locked for 5 min.

Step 5 In the **Security Code** box, enter the security code you received.

Step 6 Click **Next**.

The new password setting interface is displayed. See Figure 5-29.

Figure 5-29 New password setting



Step 7 Reset and confirm the password.

The new password must be 8 to 32 characters, including at least two of the following categories: numbers, uppercase letters, lowercase letters and special characters (Characters like'"; & cannot be included in).

Step 8 Click **OK**.

The system prompts successful operation and restarts. You can use the new password to log in to the device.

6 System Upgrade

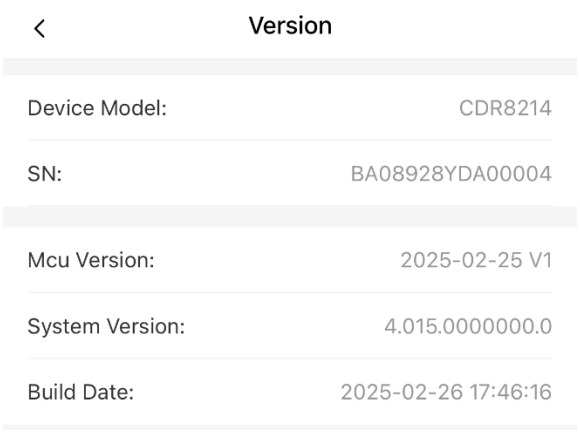
6.1 Viewing System Version

You can view the device version information.

Step 1 On the APP main interface, select **SETTING > SYSTEM > Version.**

The **Version** interface is displayed. See Figure 6-1.

Figure 6-1 Version



6.2 Upgrading System Firmware

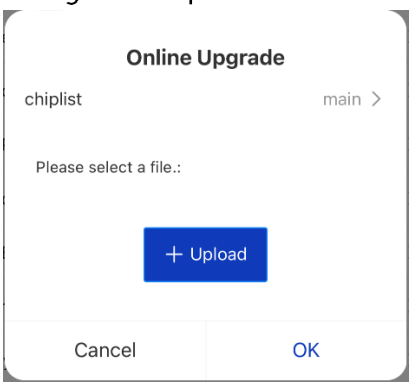
Import the update file in the format of .bin to update the system.

- Do not disconnect the power or network, or restart or shut down the device during update cannot be used.
- Incorrect update programs may result in the device unable to work.

Step 1 On the APP main interface, select **SETTING > SYSTEM > Update.**

The **Update** interface is displayed. See Figure 6-2.

Figure 6-2 Update



Step 2 Select the chip list that suits your actual needs.

- To upgrade system programs, select **main** for the chip list.
- To upgrade the MCU firmware programs, select **MCU** for the chip list.

Step 3 Click **Upload** and select the upgrade files you want to use.

Step 4 Click **OK.** The system starts upgrading.

You should log in to the APP again after upgrading.

7 System Maintenance

7.1 Maintenance Requirement

For the system's good and safe running, it's recommended to manage and maintain the system, back up files in the following methods.

- Check monitoring images regularly.
- Clear the users and user groups not frequently used regularly.
- Modify your password every 3 months.
- Check your system log regularly. Handle problems in a timely manner.
- Back up your configuration of the system regularly.
- Restart the device regularly.
- Upgrade firmware in a timely manner.

7.2 Viewing System Information

You can view device version information, logs, network information, HDD information, channel information, satellite information, and MAC information.

For version information, see 6.1 Viewing System Version.

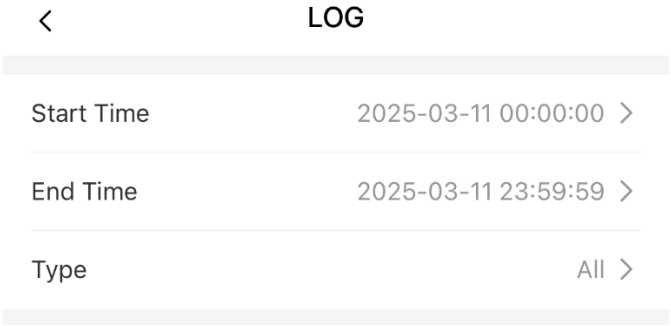
7.2.1 Viewing Log

You can search, view, and back up the logs to local PC.

Step 1 On the APP main interface, select **INFORMATION > Log.**

The **Log** interface is displayed. See Figure 7-1.

Figure 7-1 Log



Step 2 Set Start Time, End Time, and Type.

Step 3 Click **Search**. The obtained logs are displayed.

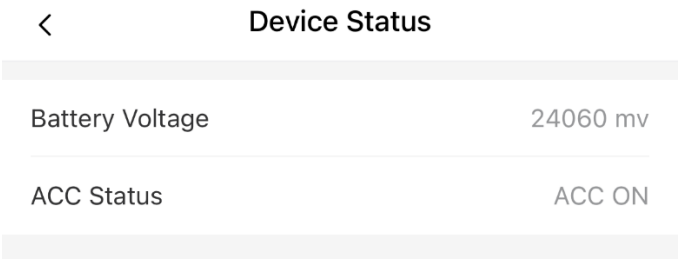
7.2.2 Viewing Device Status

You can view the device status.

Step 1 On the APP main interface, select **INFORMATION > Device Status**.

The **Device Status** interface is displayed. See Figure 7-2.

Figure 7-2 Device Status



Step 2 Pull down the page to refresh the interface, and the system will display the latest device status.

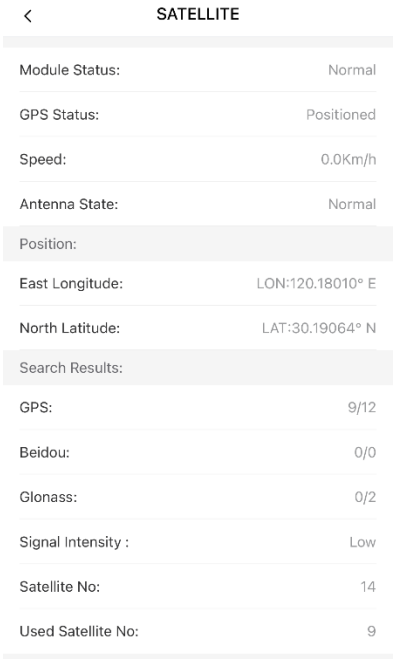
7.2.3 Viewing Satellite Information

You can view the satellite positioning information such as module state, GPS status, latitude and longitude, and search results.

Step 1 On the APP main interface, select **LIVE > SATELLITE**.

The **SATELLITE** interface is displayed. See Figure 7-3.

Figure 7-3 Satellite information



Step 2 Pull down the page to refresh the interface, and the latest satellite information is displayed.

- If the GPS module state indicates Normal but does not position within 5 minutes, the GPS module automatically resets and repositions. When the positioning information is obtained again, the GPS module reset times is up to 20, or the device is restarted, you can view the GPS module reset records in the log.
- When the GPS module is short-circuited for more than 10 seconds, the module state is abnormal and the GPS module is automatically powered off and no longer powered on. After the device is restarted, the GPS module will be powered on again.

7.3 Auto Maintenance

You can configure the automatic maintenance settings such as auto restart and delay for auto shutdown.

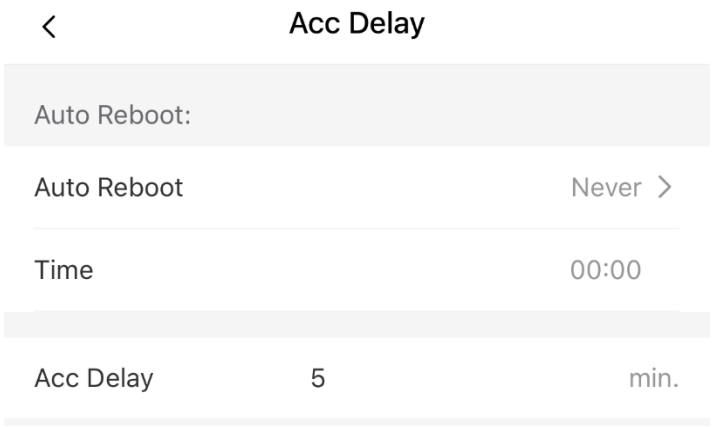
7.3.1 Restarting System

Once the device is running for a long time, you can set to automatically reboot the device at idle time. After configuring auto reboot, when the device is working, it reboots according to the schedule.

Step 1 On the APP main interface, select **SETTING** > **SYSTEM** > **Acc Delay**.

The **Acc Delay** interface is displayed. See Figure 7-4.

Figure 7-4 Acc Delay



Step 2 Select the strategy of auto restart.

- Select **Never**, and the device will never restart automatically.
- Select **Every Day**, set the device restart time, and the device will restart automatically at that time point.
- Select **Monday** to **Sunday**, set the device restart time, and the device will restart automatically at that time point every week. If **Sunday** and **01:00** are selected, the device will restart automatically at 1:00 every Sunday.

Step 3 Click **OK**.

7.3.2 Delay for Auto Shutdown

After configuring delay for auto shutdown, when ACC is disconnected, the device shuts down as per the settings of delay for auto shutdown.

- If you enter a delay value that is not 0, the device automatically shuts down after the preset delay.
- If you enter 0, the device shuts down as per the auto shutdown settings without delay.

Step 1 On the APP main interface, select **SETTING** > **SYSTEM** > **Acc Delay**.

The **Acc Delay** interface is displayed. See Figure 7-4.

Step 2 Configure the auto delay for shutdown.

The value ranges from 0 through 65535. The fault value is 5 mins.

Step 3 Click **OK**.

7.4 Backing Up and Restoring

You can back up or restore the web configurations and restore to default settings.

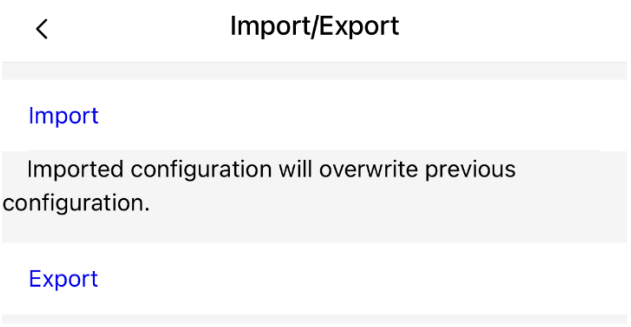
7.4.1 Backing Up Configuration

You can back up all web configurations.

Step 1 On the APP main interface, select **SETTING > SYSTEM** > **Import/Export.**

The **Import/Export** interface is displayed. See Figure 7-5.

Figure 7-5 Configuration import/export



Step 2 Click **Export**, and select the backup path.

The system starts backing up configurations.

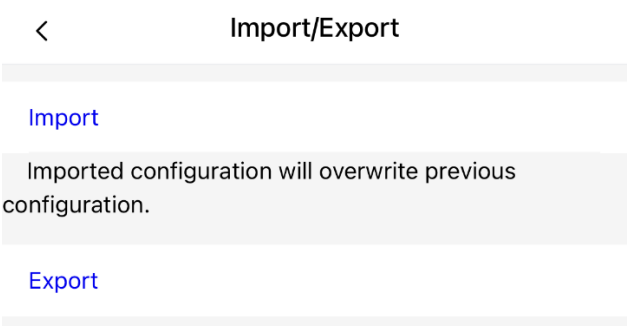
7.4.2 Importing Configurations

You can use the backed up configurations to quickly configure the device and restore the device configurations.

Step 1 On the APP main interface, select **SETTING > SYSTEM** > **Import/Export.**

The **Import/Export** interface is displayed, see Figure 7-6.

Figure 7-6 Import/Export



Step 2 Click **Import** and select the backup file..

7.4.3 Restoring to Default

You can restore the system to default configurations or the factory default. Only the user with the

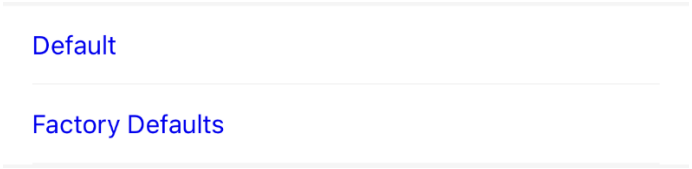
default & upgrade authorities can do this.

The corresponding functions will be restored to the factory settings, and your current configurations will be lost. Proceed with caution.

Step 1 On the APP main interface, select **SETTING > SYSTEM > Default.**

The **Default** interface is displayed. See Figure 7-7.

Figure 7-7 Factory default



Step 2 Select the check box of the options that you want to restore to the factory default.

- Default: Click **Default**, and the **Confirm** dialog box is popped up. See Figure 7-8. Then click **OK**. All configurations other than user name, password, security questions, device IP, 4G, Wi-Fi are restored to the default configuration of the device.
- Factory Defaults: Click **Factory Defaults**, and the **Confirm** dialog box is popped up. See Figure 7-9. Then click **OK**, and the system restarts. After the device is restarted, the system will restore to factory defaults, and the device requires initialization again. Proceed with caution.

Figure 7-8 Prompt (1)

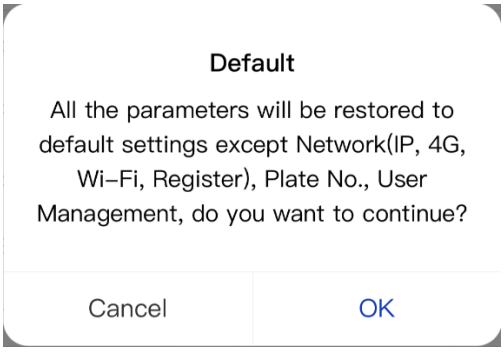
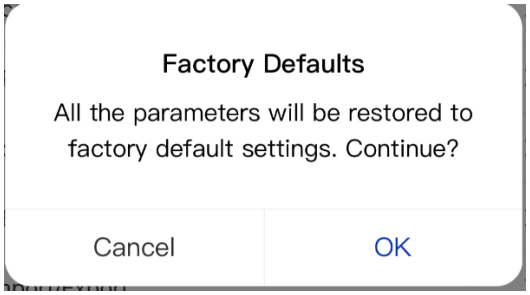


Figure 7-9 Prompt (2)



8 Operating by Mobile Center

Beside from APP, you can also remotely log in to the Camera from Mobile Center.

For details, please see the manual of Mobile Center.

Appendix 1 FAQ

If your questions are not solved by following the answers in this document, contact your local customer service or call customer service at headquarters. We will guide you to solve your problems.

1. **Q: The interface shows that no SIM card is detected.**

   A: Possible reasons:

   - SIM card not inserted.
   - Micro SIM card reversely inserted with its notch facing outward. Follow instructions on the label to insert the SIM card.
   - SIM card is damaged.

2. **Q: DVR cannot boot up properly.**

   A: Possible reasons:

   - The input power is not correct; the input voltage is too low or too high.
   - Poor contact in the input power cable or incorrect wiring.
   - HDD is damaged or poor contact between the HDD carrier and HDD.
   - Main board is damaged.

3. **Q: DVR automatically reboots or frequently crashes.**

   A: Possible reasons:

   - Input voltage is unstable or too low
   - The device is not properly installed, which result in poor contact between components.
   - Poor heat dissipation and too many dusts result in poor working environment for the device.
   - Hardware malfunction.

4. **Q: There is no video output for single channel, multiple channels or all channels.**

   A: Possible reasons:

   - Incorrect program. Upgrade to the correct program.
   - Image brightness is set as 0. Restore to default settings.
   - Video input signal is null or too weak.
   - Channel protection (or screen protection) is set.
   - Hardware malfunction.

5. **Q: Real-time video image is abnormal, such as color and brightness is distorted.**

   A: There are the following possibilities:

   - NTSC and PAL settings are not correct, and the image becomes black and white.
   - Device and monitor resistance is not compatible.
   - Video network transmission distance is too far or transmission line signal attenuation is too much.
   - NVR color or brightness settings are not correct.

6. **Q: I cannot search video record in local playback.**

   A: There are the following possibilities:

   - Poor contact between the HDD carrier and HDD.
   - HDD is damaged.
   - Upgraded a program different from the original program file system.
   - The video record is overlapped.
   - The video record is not opened.

7. **Q: The local video record is blurry.**

   A: Possible reasons:

   - The image quality is too low.

- Program read error, bit data is too small, and there is full of mosaic in the screen. Please firstly try to restart the DVR to solve this problem.
- HDD Error
- Hardware malfunction.

8. **Q: When using the platform for remote viewing, no audio.**

   A: Possible reasons:
   - It is not an active speaker.
   - Audio cable is damaged.
   - Hardware malfunction.

9. **Q: There is audio under monitoring state but no audio under playback state.**

   A: There are the following possibilities:
   - Audio function is not enabled.
   - The corresponding channel does not connect to the camera. Playback is not continuous when the screen is blue.

10. **Q: The time displayed in the video record is wrong.**

    A: Possible reasons:
    - Error settings.
    - Poor battery contact or low voltage.
    - Crystal oscillator does not work.

11. **Q: Alarm does not work.**

    A: Possible reasons:
    - Incorrect alarm settings.
    - Incorrect alarm wiring.
    - Incorrect alarm input signal.
    - An alarm device is connected to 2 loops at the same time.

12. **Q: Messy channel display.**

    A: Possible reasons:
    - Incorrect selection of camera type. Auto switch is recommended.
    - The camera is damaged.

13. **Q: Record storage period is not enough.**

    A: Possible reasons:
    - Low camera quality, dirty lens, camera installed against the light, or iris not properly adjusted caused large big rate.
    - HDD capacity is not enough.
    - The HDD is damaged.

14. **Q: No 3G/4G dial-up. No dial-up IP.**

    A: Possible reasons:
    - Check if the SIM card is normal.
    - Check if the SIM card is not in service.
    - Check if the 3G/4G antenna is connected as intended.
    - Check if the 128 G/4 G signals are strong enough.
    - Try out with another SIM card.

15. **Q: 3G/4G platform is not online.**

    A: Possible reasons:
    - Check if 3G/4G dial-up is normal.
    - Check if local active registration is correctly set up.
    - Check if the sever terminal is correctly set up.

16. **Q: No GPS data.**

    A: Possible reasons:

    - Check if the GPS antenna is connected as intended.
    - Make sure the GPS antenna is in a place where signals are not blocked.

17. **Q: GPS drifting and produces speed for no reason.**

    A: Possible reasons:

    - Weak GPS signal.

18. **Q: Video record is silent.**

    A: Possible reasons:

    - Check if a normal analog camera is connected. Only HDCVI camera with audio input supports audio.

19. **Q: Algorithm does not recognize.**

    A: Possible reasons:

    - Algorithm function not enabled.
    - Incorrect intelligent configuration of related algorithms.
    - The algorithm recognizes that the calibration box has not been calibrated and saved.
    - The installation angle of the equipment does not meet the standard.

Appendix 2 Storage Capacity Calculation

When the device is installed for the first time, make sure the HDD (or TF card) is installed.

Capacity calculation formula:

Total capacity (M) = Channel quantity × Demand time length (hour) × storage capacity occupied per hour (M/hour)

Recording time calculation formula:

$$\text{Recording time (hour)} = \frac{\text{Total capacity (M)}}{\text{Storage capacity occupied per hour (M/hour)} \times \text{Channel quantity}}$$

The device adopts H.264/H.265 compression technology, which features a large dynamic range. Therefore, when calculating HDD capacity, you should accord to the bit rate to evaluate the file size generated per hour from each channel.

Appendix 3 Cybersecurity Recommendations

Mandatory actions to be taken for basic device network security:

1. **Use Strong Passwords**

   Please refer to the following suggestions to set passwords:

   - The length should not be less than 8 characters.
   - Include at least two types of characters; character types include upper and lower case letters, numbers and symbols.
   - Do not contain the account name or the account name in reverse order.
   - Do not use continuous characters, such as 123, abc, etc.
   - Do not use overlapped characters, such as 111, aaa, etc.

2. **Update Firmware and Client Software in Time**

   - According to the standard procedure in Tech-industry, we recommend to keep your device (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the device is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
   - We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your device network security:

1. **Physical Protection**

   We suggest that you perform physical protection to device, especially storage devices. For example, place the device in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable device (such as USB flash disk, serial port), etc.

2. **Change Passwords Regularly**

   We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. **Set and Update Passwords Reset Information Timely**

   The device supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. **Enable Account Lock**

   The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. **Change Default HTTP and Other Service Ports**

   We suggest you to change default HTTP and other service ports into any set of numbers between 1024–65535, reducing the risk of outsiders being able to guess which ports you are using.

6. **Enable HTTPS**

   We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. **MAC Address Binding**

   We recommend you to bind the IP and MAC address of the gateway to the device, thus reducing

the risk of ARP spoofing.

8. **Assign Accounts and Privileges Reasonably**

   According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

9. **Disable Unnecessary Services and Choose Secure Modes**

   If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

   If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

   - SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
   - SMTP: Choose TLS to access mailbox server.
   - FTP: Choose SFTP, and set up strong passwords.
   - AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.

10. **Audio and Video Encrypted Transmission**

    If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

    Reminder: encrypted transmission will cause some loss in transmission efficiency.

11. **Secure Auditing**

    - Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
    - Check device log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

12. **Network Log**

    Due to the limited storage capacity of the device, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

13. **Construct a Safe Network Environment**

    In order to better ensure the safety of device and reduce potential cyber risks, we recommend:

    - Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
    - The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
    - Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.
    - Enable IP/MAC address filtering function to limit the range of hosts allowed to access the device.