C6 Lite2.0 Series

Product User Manual



Streamax Technology CO.,Ltd.

Preface

This product user manual primarily introduces the usage methods and precautions for various functions of the C6 Lite2.0 series. All content, including text, images, and graphics, belongs to Shenzhen Streamax Technology Co., Ltd. Without written permission, no entity or individual may extract, copy, translate, or modify all or part of this user manual in any way. Unless otherwise agreed, our company does not make any statements or guarantees regarding this manual.

About this Product User Manual:

This product user manual is intended as a usage guide and is applicable to authorized users of the product and technical support personnel.

The product images and screen contents provided in the user manual are for illustration purposes only. The actual product effects (including but not limited to appearance, color, size) and screen display contents (including but not limited to background, UI, illustrations) may differ slightly; please refer to the actual product.

The data provided in the user manual are theoretical values obtained from Streamax Technology's internal laboratories under specific test conditions (please refer to specific explanations). Actual usage may vary slightly due to product individual differences, software versions, usage conditions, and environmental factors; please refer to actual usage conditions.

Due to real-time changes in product batches and production supply factors, Streamax may adjust and revise the textual descriptions, image effects, and other contents in the user manual in order to match the actual product performance, specifications, indices, and components as closely as possible. In cases where such modifications and adjustments are necessary, we will not provide special notification.

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Please read this manual first to ensure correct usage and the proper functioning of the required features.

	Warning: Situations that may involve the safety of the device user or cause harm to the device user.
	Special Attention: Situations that may compromise data integrity or damage the device firmware and hardware.
	Note: Additional explanations, glossary of terms, etc.

Date	Revision Version	Description of Changes	Author
2022/07/28	V0.0.1	Restructured Product User Manual	Xi Hongtao
2022/07/31	V0.0.2	1. Added quick configuration content 2. Adjusted some descriptions based on review	Xi Hongtao
2024/4/15	V0.0.3	1. Added standard feature interface description 2. Changed relevant parameter value ranges 3. Updated illustrations	Cao Yanfang / Chen Weidong
2024/7/15	V0.0.4	1. Modified and organized for C6 Lite2.0 user manual 2. translation and organization	Dong Yuhao/Wu Kejia
2024/11/27	V1.0.0	1. Modified description for CAN model 2. Update system connection graph	Dong Yuhao/Wu Kejia

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Abbreviation List:

Abbreviation	English Explanation
1080P	Resolution ratio 1920×1080
ADAS	Advanced Driving Assistance System
DSC	Driving Safety Cabin
DMS	Driver Monitoring System
VBR	Variable Bit Rate
CBR	Constants Bit Rate

1. Overview

The C6 Lite2.0 series includes two devices: C6 Lite2.0 and C6 Lite2.0-S. The C6 Lite2.0-S does not have a rear cabin camera and lacks built-in driver poor driving behavior detection functionality. The following product usage instructions primarily use the C6 Lite2.0 as an example, with notes on functional differences.

The C6 Lite2.0 is an intelligent device designed to help drivers reduce traffic accidents and assist fleet management in improving efficiency. Using AI technology, it can proactively identify dangerous driving events and poor driving behaviors. It supports local real-time alerts to drivers to avoid risks and event uploads to the fleet management platform for driver training. It provides real-time, accurate vehicle location information and operational data to the fleet management platform, along with high-quality remote intercom and video preview playback functions, reducing fleet management difficulty and enhancing efficiency. Additionally, the product is reliable, easy to install, simple to use, and cost-effective.

1.1 Features

- Front road wide-angle lens, supports up to 1080P HD recording
- Rear cabin ultra-wide-angle lens, supports up to 1080P HD recording (Not available on C6 Lite2.0-S)
- Supports up to 2 channels of recording (C6 Lite2.0-S also supports up to 2 channels)
- Supports H.264/H.265 encoding
- Supports 2*512GB dual Micro SD card storage, capable of saving both main and sub streams simultaneously
- Built-in Wi-Fi, 4G communication module, and standard positioning module
- TLS1.3Audio and video data support AES256 encryption, and data transmission supports TLS1.3 encryption protocol
- Supports 2 IO inputs, 1 IO output, 1 CAN or 1 RS232 (Device hardware distinction: If you

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select an RS232 device, the CAN functionality cannot be used; If you select a CAN device, the RS232 functionality cannot be used; CAN version devices do not support connection to Power Box Plus)

- Compact design that does not obstruct the driver's view in both large and small vehicles
- Supports OBD power supply for convenient and quick installation
- Built-in ADAS functions, supporting lane departure, forward collision, and close distance detection
- Built-in DSC function, supporting detection of poor driving behaviors (Not available on C6 Lite2.0-S)
- Supports echo suppression algorithm to enhance the quality of two-way voice intercom
- Supports sleep mode and remote wake-up
- Built-in 6-axis gravity sensor, supporting detection of rapid acceleration, rapid deceleration, sharp turns, and collisions

1.2 Main Uses and Scope of Usage

The C6 Lite2.0 series is primarily used in the field of vehicle safety, helping drivers reduce traffic accidents and assisting fleet management in improving efficiency.

1.3 Model Composition and Specific Meaning

- C6 Lite2.0: The high-end version of the C6 Lite2.0 series, featuring a front road wide-angle lens and a rear cabin ultra-wide-angle lens, with built-in DSC functionality.
- The simplified version of the C6 Lite2.0 series, without the rear cabin ultra-wide-angle lens and built-in DSC functionality.

1.4 Operating Environment

1. Power System: Supply range DC9V~36V
2. Operating Temperature: -40°C+70°C (-40°F+158°F)
3. Storage Temperature: -40°C+70°C (-40°F+158°F)
4. Operating Humidity: 15% - 95% (non-condensing)

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5. Storage Humidity: 15% - 95% (non-condensing)
6. Salt Spray: Complies with GB/T 2423.17 standards
7. Lighting: No requirements
8. Altitude: No requirements
9. Waterproof and Dustproof: IP30 (main unit is not waterproof)
10. Explosion-Proof and Impact-Resistant: Suitable for vehicle usage environment

Warning: The company is not responsible for any damage or malfunction caused by using the equipment in environments that do not meet the required conditions.

1.5 Environmental and Energy Impact

- Standby: 13.5V@4mA, 27V@2mA
- Sleep Mode (only 4G, GPS and MCU powered): 13.5V@27mA, 27V@13mA
- Typical Power Consumption (with dual Micro SD cards and SIM card for dialing): Approx. 7W
- Full Load Power Consumption (with dual Micro SD cards, SIM card for dialing, WiFi enabled, infrared light on): Approx. 11W

Special Note: The typical and full load power consumption for the C6 Lite2.0-S version is reduced by about 0.15W. The above data are obtained from specific laboratory test environments and may vary due to individual product differences, usage environments, and testing methods.

1.6 Safety

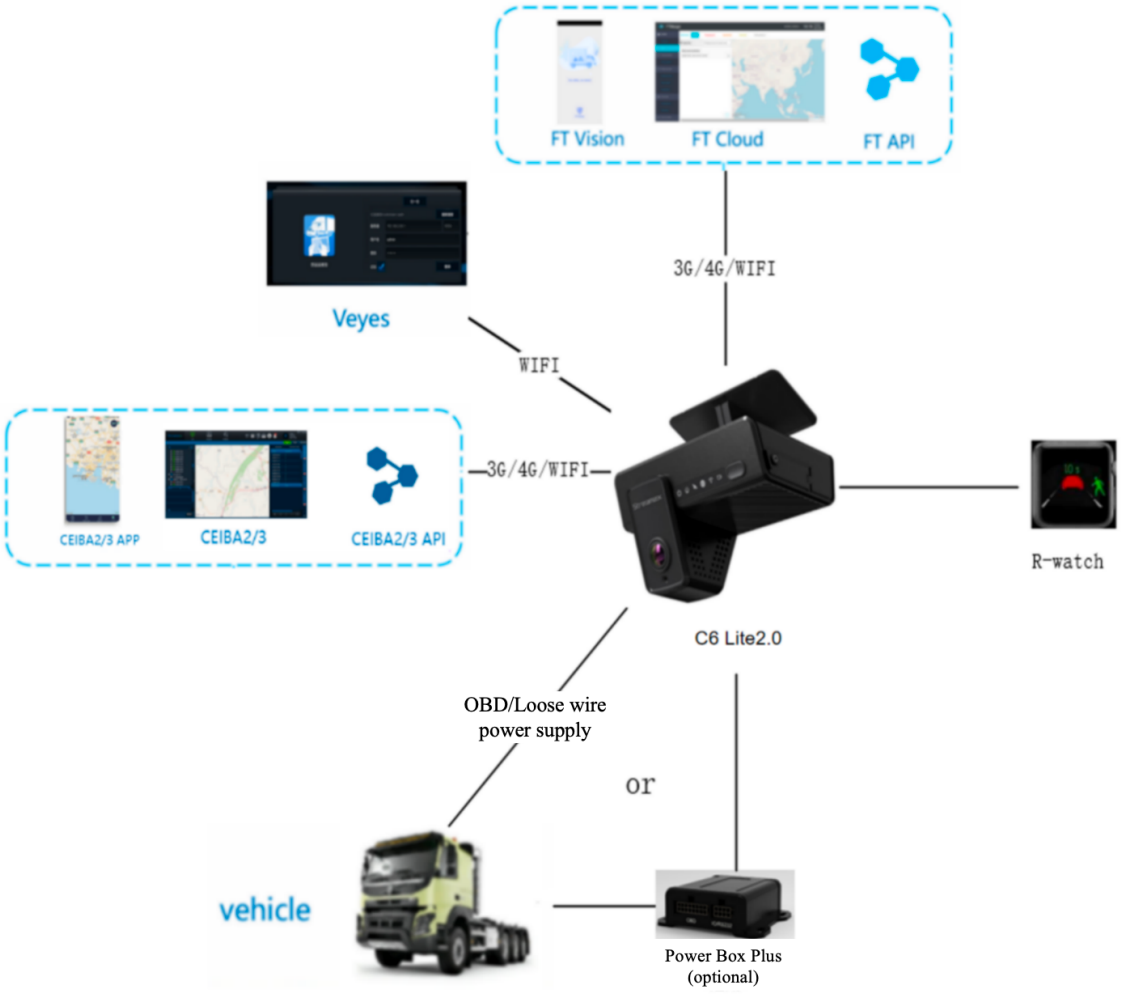
1. This product requires professional installation to avoid risks such as electric shock, vehicle wiring damage, compromised AI performance, and device detachment.
2. When in use, the surface temperature of this product can exceed 60 degrees Celsius under direct sunlight. Avoid touching sun-exposed surfaces to prevent burns.

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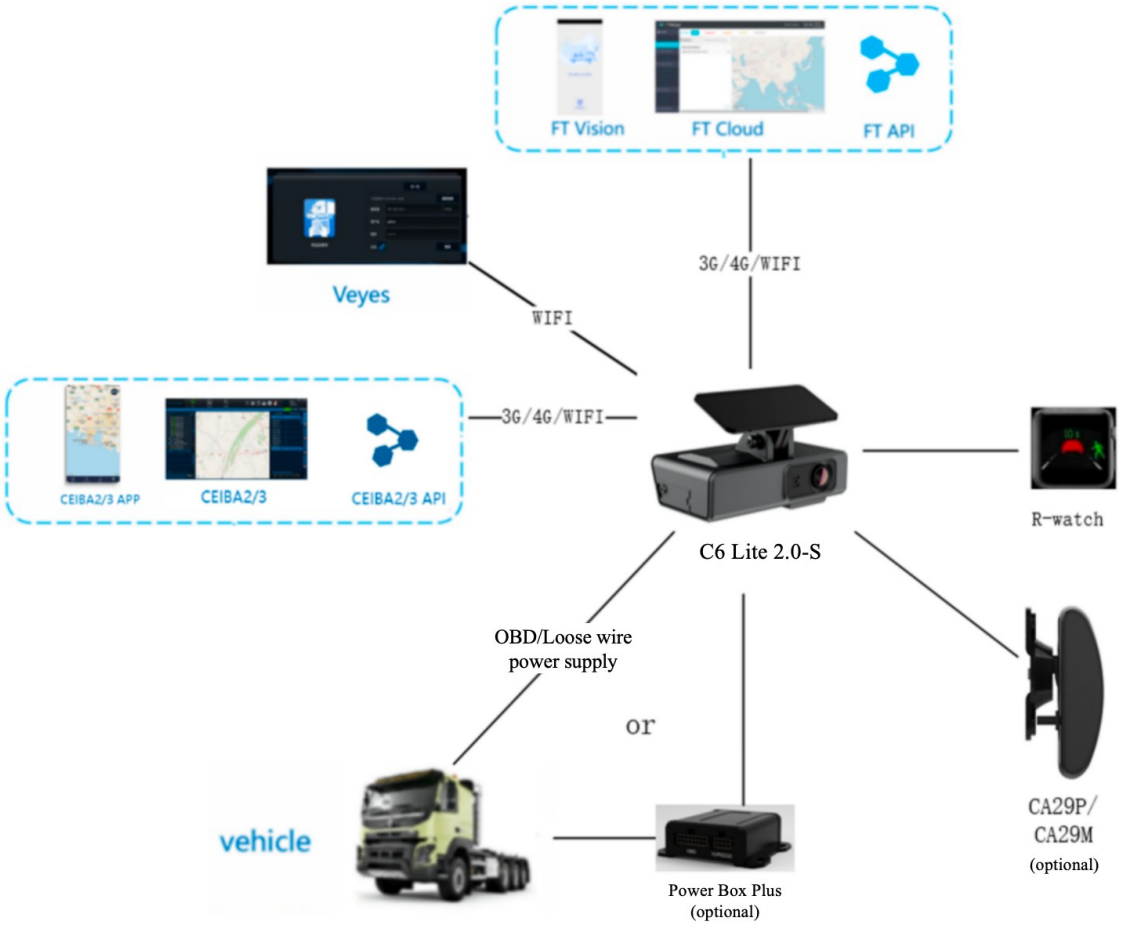
2. System Composition

This section introduces the complete system solution composition, which is not part of the standard shipment packaging. It aims to help users understand the product functions from a system level.

2.1 System Block Diagram



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2.2 Brief Introduction of Main Components

C6 Lite2.0 Series: Intelligent devices designed to help drivers reduce traffic accidents and assist fleet management in improving efficiency.

Veyes: An app used for device operation, maintenance, and configuration.

R-watch: An alert notifier.

CA29M: A professional fatigue detection camera.

FTCloud: A professional SaaS video service platform.

FTAPI: Business API interface provided by the FTCloud platform.

FT Vision: A mobile app used with the FTCloud platform.

2.3 System Connection Diagram

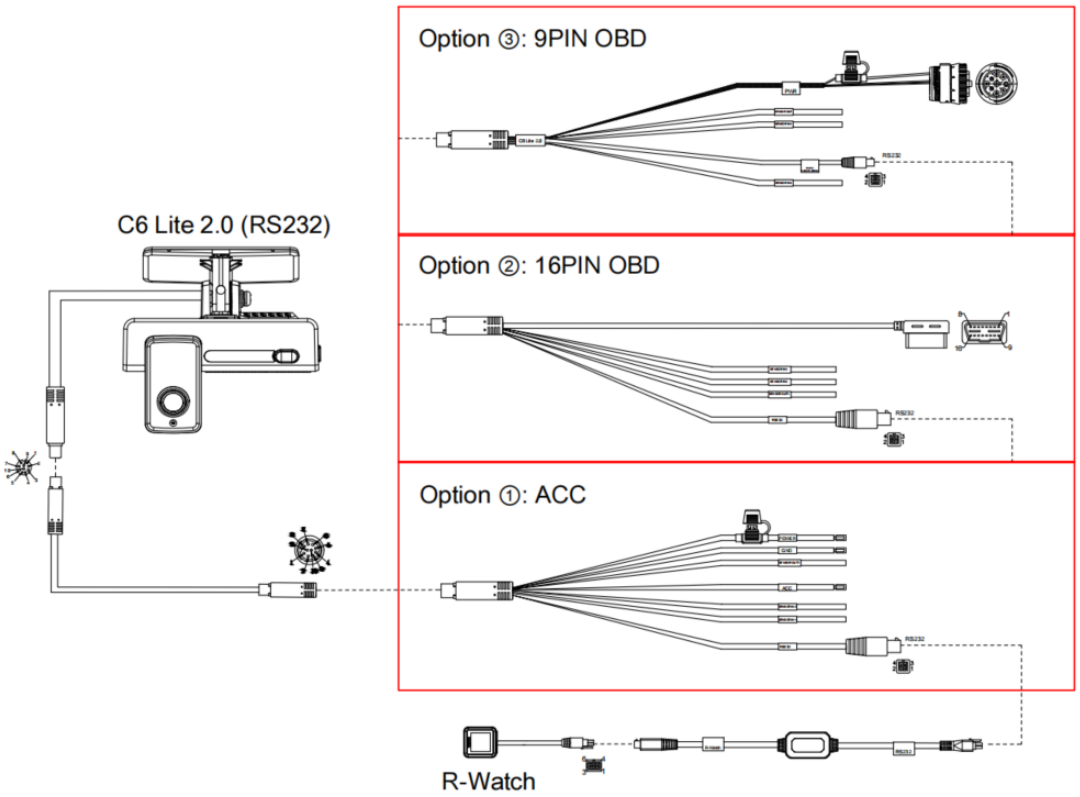
The standard shipment includes a standard power cable supporting ACC power connection to

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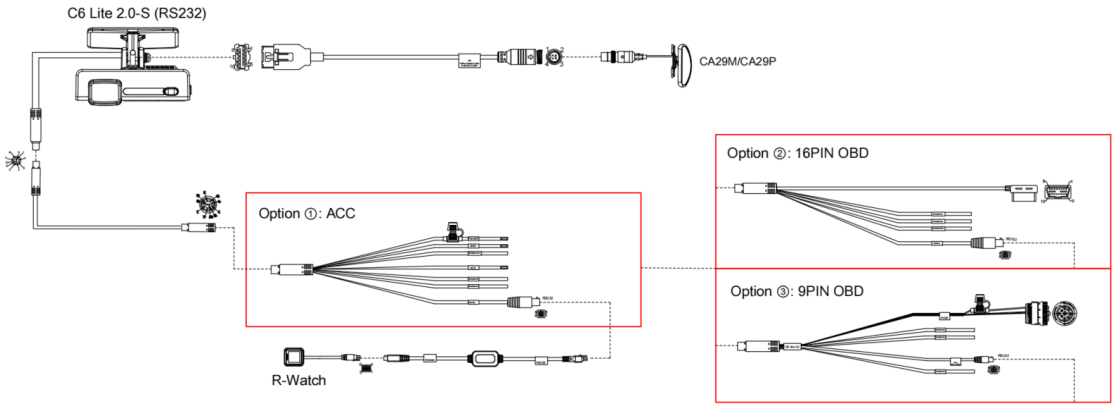
the vehicle. An OBD power cable can be optionally selected for OBD power connection. If OBD data acquisition is required, the Power Box Plus (PBP) can be used.

2.3.1 RS232 Model System Connection Diagram

- C6 Lite2.0



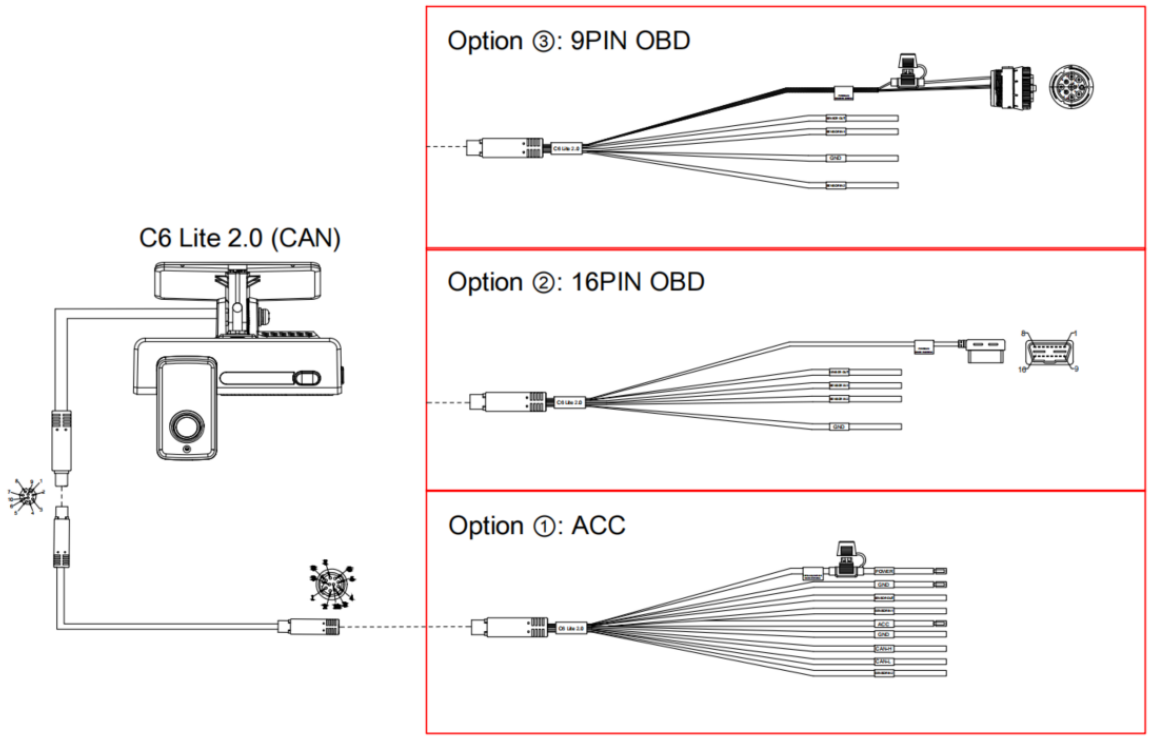
- C6 Lite2.0-S



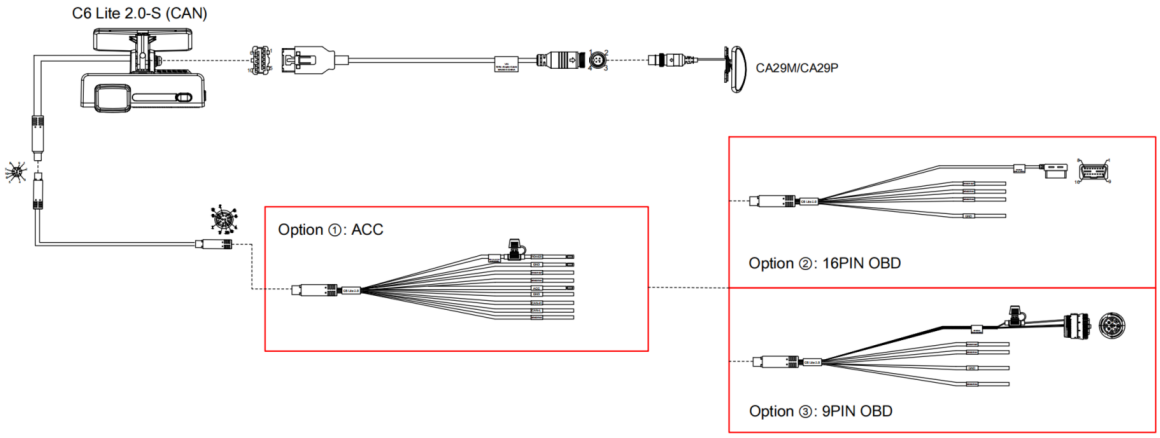
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2.3.2 CAN Model System Connection Diagram

- C6 Lite2.0

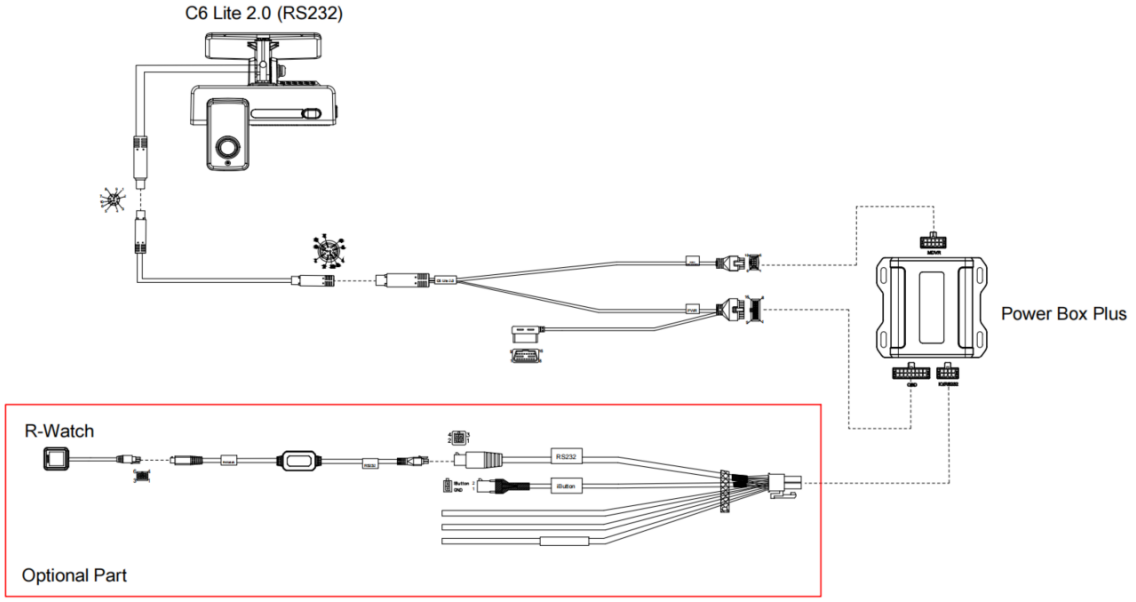


- C6 Lite2.0-S

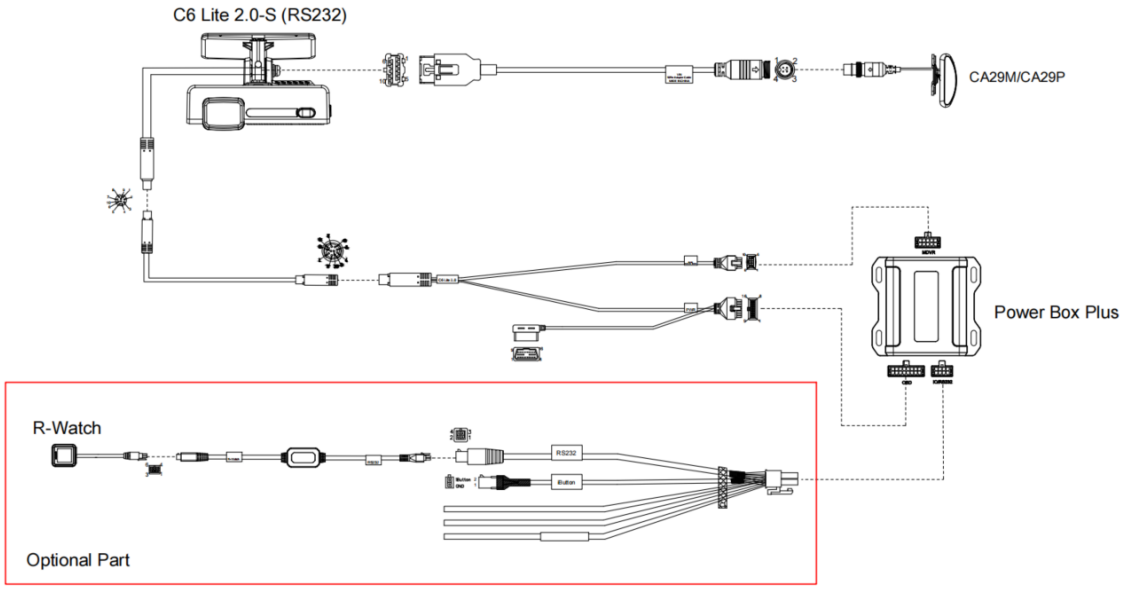


- C6 Lite2.0(RS232) + Power Box Plus（Optional）

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- C6 Lite2.0-S(RS232) + Power Box Plus（Optional）



3. Technical Specifications

For detailed technical specifications, refer to the "C6 Lite2.0 Product Specifications" and "C6 Lite2.0-S Product Specifications."

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4. Installation and Debugging

4.1 Mobile App Installation

- Android Users: Search for "Veyes" in the Google Play Store, download and install.
- IOS Users: Search for "Veyes" in the App Store, download and install.

Special Note: Mobile apps have system version requirements. Android requires version 5.0 or above, and iOS requires version 11 or above. Subsequent operation instructions use Android as an example, so installation effects are not demonstrated separately.

4.2 Quick Start Guide

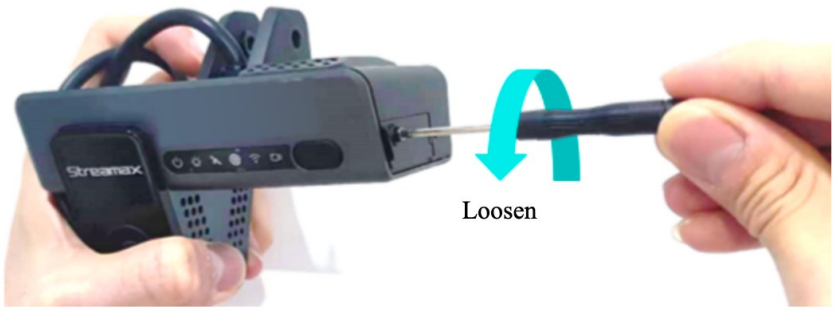
The quick start guide briefly describes device installation and configuration. For detailed instructions, refer to the device engineering installation and operation manual.

4.2.1 Preparation Before Installation

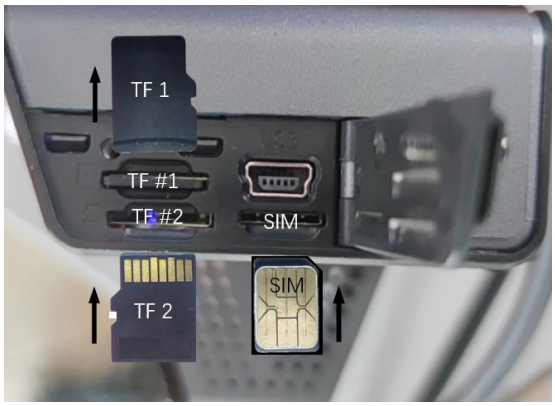
1、Prepare and check: product kit, Nano SIM card, TF card, screwdriver set toolbox, 5m tape measure, and smartphone.

2、Park the vehicle on a level surface and turn off the engine.

4.2.2 Installation Step 1: Install the SIM Card and Storage Card

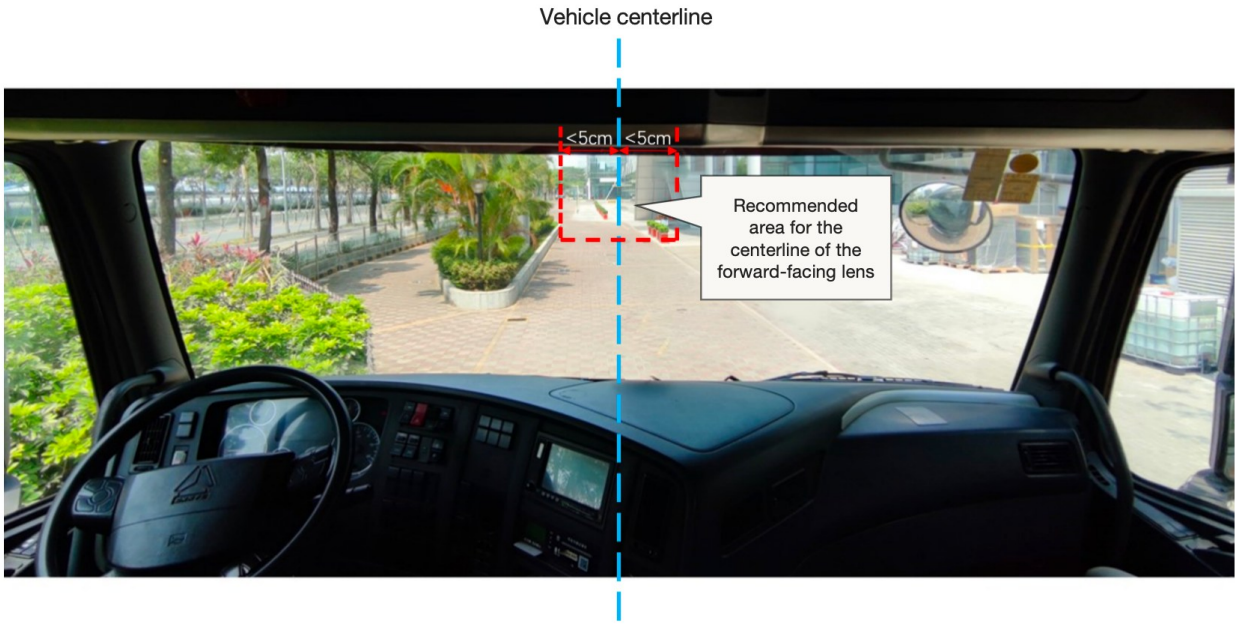


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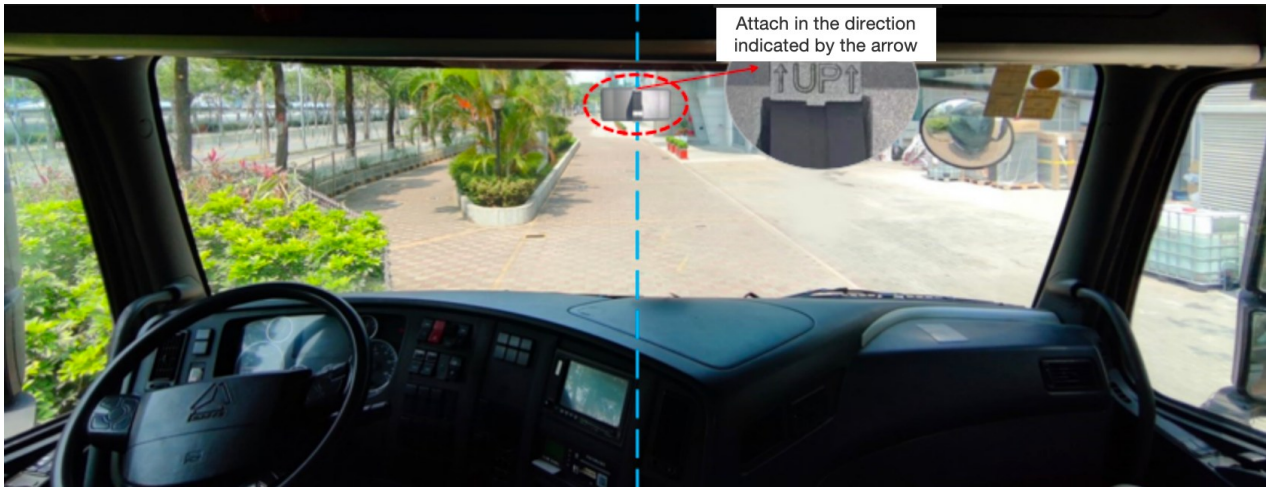


Warning: Industrial-grade SIM cards (MP2) are required. Ordinary-grade SIM cards (MP1) are prohibited. Our company is not responsible for any issues arising from the use of ordinary-grade SIM cards. The minimum read/write speed for TF cards is Class 10; Class 10 or higher is recommended.

4.2.3 Installation Step 2: Select a Suitable Area to Install the Bracket



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4.2.4 Installation Step 3: Install the Device, Adjust the Angle, and Secure It





4.2.5 Installation Step 4: Wiring and Power Connection



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4.2.6 Installation Step 5: Connect to Veyes

Refer to section 5.3: Device Login and Logout.

4.2.7 Installation Step 6: Calibrate ADAS and DSC

Refer to section 5.5.2: AI Calibration.

4.2.8 Installation Step 7: Configure Server Information and AI Alarms

Refer to section 5.7.5: Server Configuration in Network Settings

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Refer to section 5.10.4: AI Alarms

4.2.9 Installation Step 8: Check Device Status

Refer to section 5.4: General Information Viewing to check server connection status, storage status, and enter the preview screen to check the display.

If any anomalies are found, refer to Chapter 7: Troubleshooting and Resolution.

4.3 Device Engineering Installation

For detailed installation instructions, refer to the "C6 Lite2.0 Installation Guide."

5. Usage Operations

5.1 Panel Button Descriptions

- Single Click: Press and release within 2 seconds to trigger an emergency alarm. Enable emergency alarm and configure related settings; refer to Panel Alarm in Basic Alarms.
- Double Click: Press and release twice within 2 seconds to activate WiFi AP mode.
- Long Press: Press and hold for more than 2 seconds to enable or disable privacy mode; refer to Privacy Alarm in Video Alarms.

5.2 Panel Status Light Descriptions

LED Status Indicators	
Power Status Light	Off/Green Light Off: Indicates the device is not powered Steady Green: Indicates the device is powered normally
Alarm Indicator Light	Off/Red Light Off: Indicates the device has not generated an alarm Red Light Flashes Three Times: Indicates the device has generated an alarm

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GPS Indicator Light	Off/Red Off: Indicates device GPS positioning function is normal Steady Red: Indicates device GPS positioning function is abnormal (not positioned, module not connected, or module damaged) Flashing Red (once per second): Indicates poor device GPS positioning quality
Network Status Light	Off/Red Off: Indicates the device is connected to the server normally Red Steady: Indicates the device connection to the server is abnormal Red Blinking (once per second): Indicates the device has entered flight mode
WiFi Status Light	Off/Red/Green Off: Indicates the device is in Disable or Client mode Green Steady: Indicates the device is in AP mode Red Steady: Indicates the device WiFi is abnormal
Recording Status Light	Off/Red Off: Indicates the built-in camera or extended camera recording status is normal Red Steady: Indicates the built-in camera or extended camera recording has stopped (including privacy mode) or has a fault *Recording enable (main stream, sub-stream) is turned on, and it will alert if no recording is detected. Recording enable (main stream, sub-stream) is turned off and considered normal recording status.

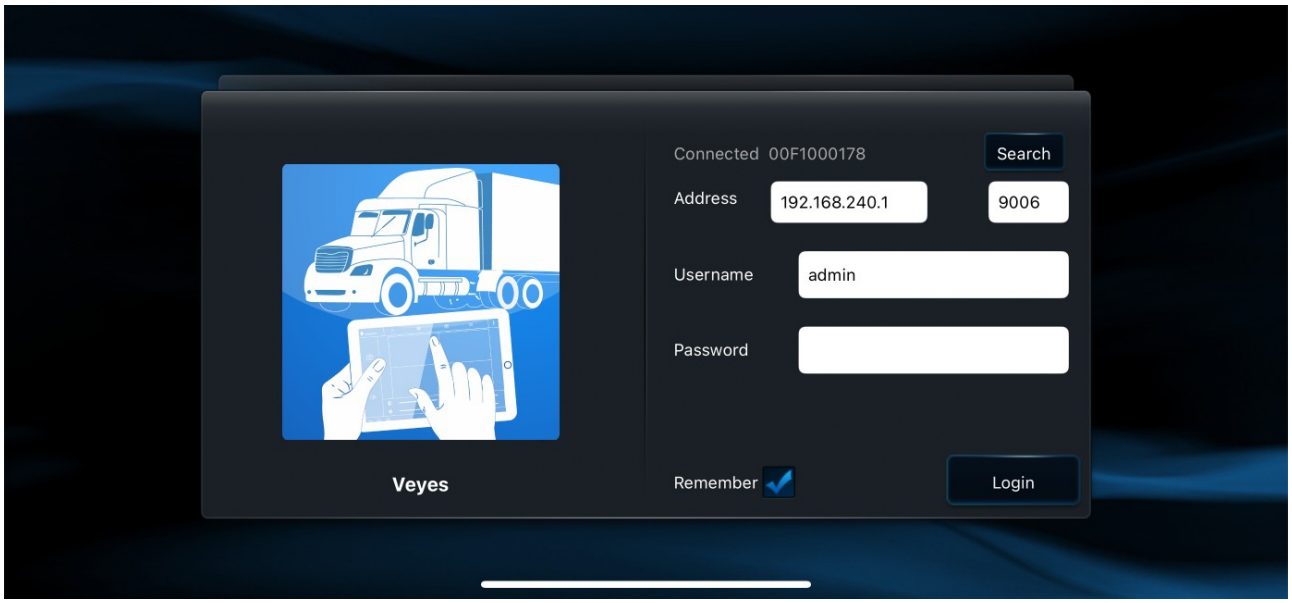
5.3 Device Login and Logout

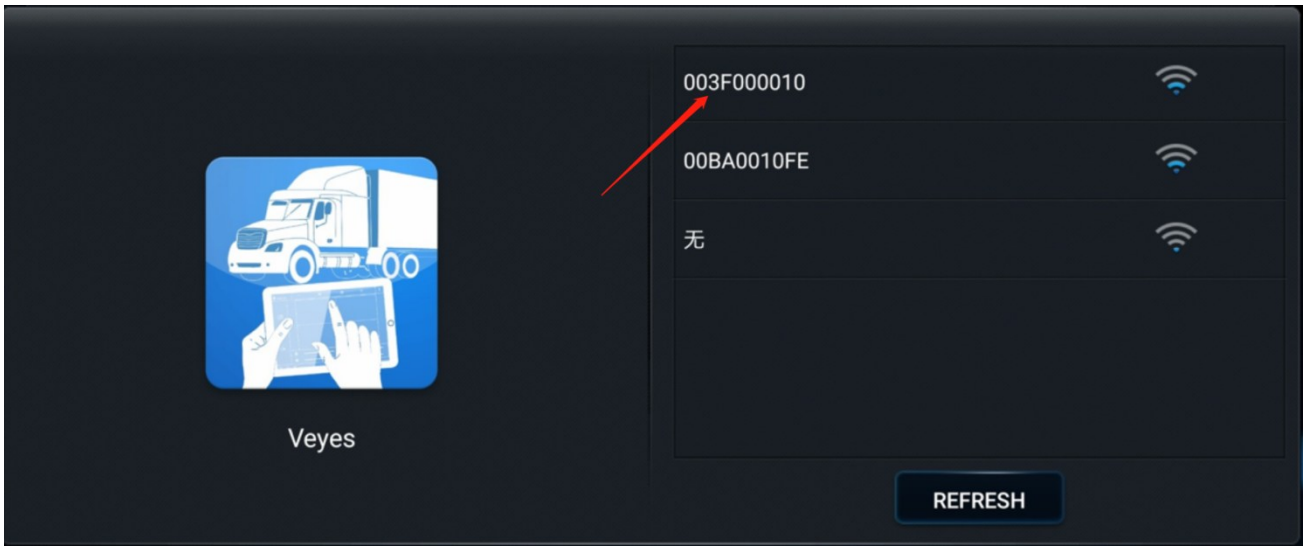
1. Enable Device WiFi in AP Mode: Within 3 minutes of device startup, WiFi is in AP mode, or double-click the front panel button after device startup to enable AP mode.
2. Connect to WiFi Hotspot: Turn on your phone's WiFi, open Veyes, and click the [Search] button. In the WiFi hotspot search interface, select the corresponding hotspot. For initial

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login, the WiFi hotspot name is the device's serial number (found on the device label). If the license plate number is not empty, the hotspot name will be the license plate number.

3. Login: On the login interface, enter the corresponding username and password, then click login to enter the operation interface. The default username/password is admin/admin.



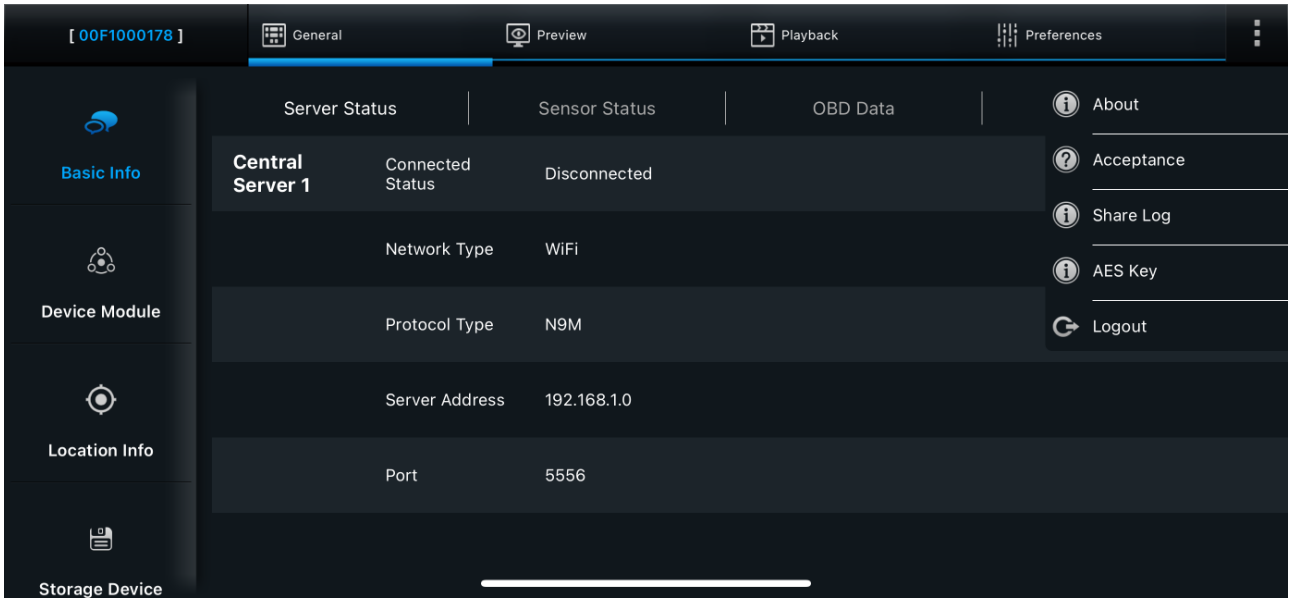


4. Click the [Login] button to enter the operation interface, as shown below:

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5. Click the top right corner , to access options such as viewing help information, app version, and logout. Click [Logout] to disconnect from the device, click [Help] to access the Veyes help documentation, and click [About] to view the app version information. Acceptance mode: When the device is stationary and cannot trigger alarms, you can enter acceptance mode to preset a speed for the device.

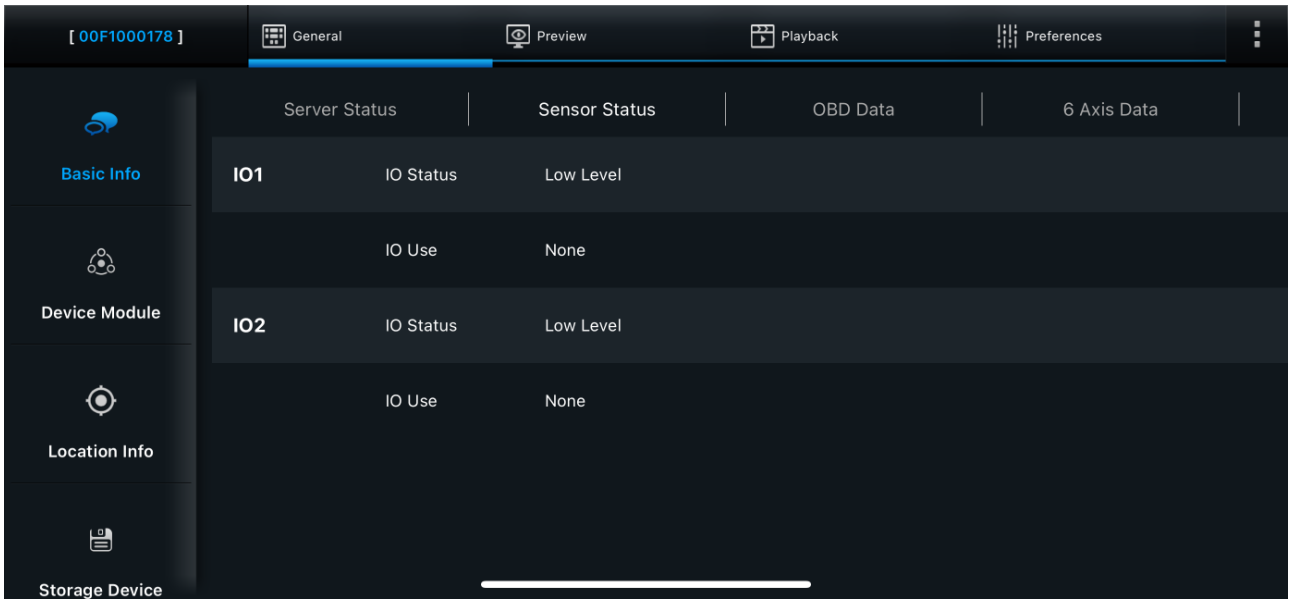


5.4 General Information Viewing

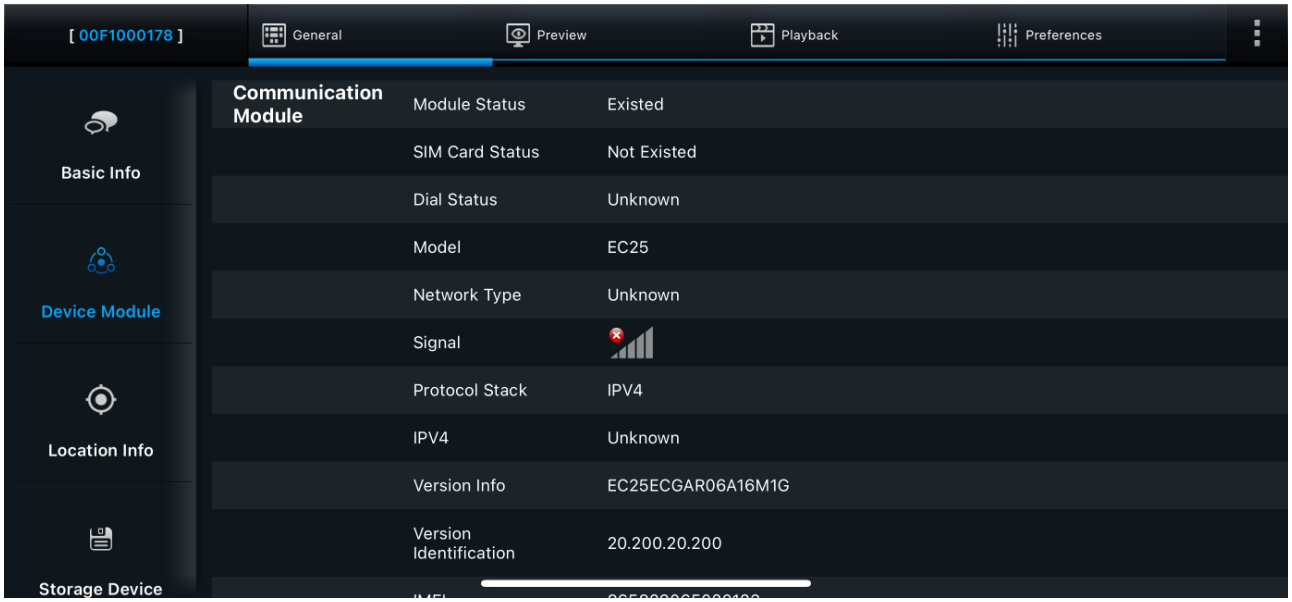
The general interface is mainly used to view the device's real-time status, version information, import/export parameters and logs, and perform software upgrades.

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- Basic Information: Used to view the device's server connection status, IO high/low-level status and usage, OBD data, G-sensor data, ACC status, pulse status, device status, and algorithm channel calibration status.



- Device Modules: Used to view the status of the device's WiFi, 3/4G, and positioning modules.



- Location Information: Used to view the quality of the device's satellite positioning signal, helping installation and maintenance personnel assess the device's positioning capability and quality to perform corresponding maintenance actions. The top line shows the number of valid satellites and the total number of satellites. The list below shows PRN (satellite number), GNSS (the global satellite navigation system the satellite belongs to, such as GPS, GLONASS,

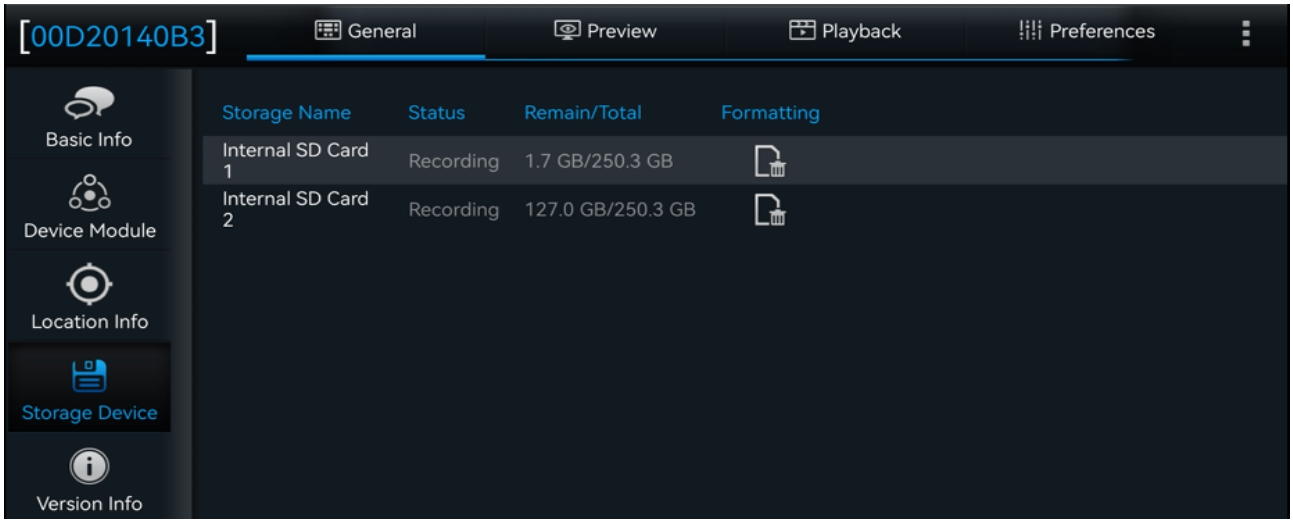
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GALILEO), SNR (signal-to-noise ratio, reflecting satellite positioning signal quality), Direction Angle (satellite azimuth angle), and Altitude Angle (satellite elevation angle).

Note: This interface is only displayed when the GPS raw data recording command is enabled. Refer to [Preferences] > [Collection] > [General] > [Location] for detailed operation instructions.

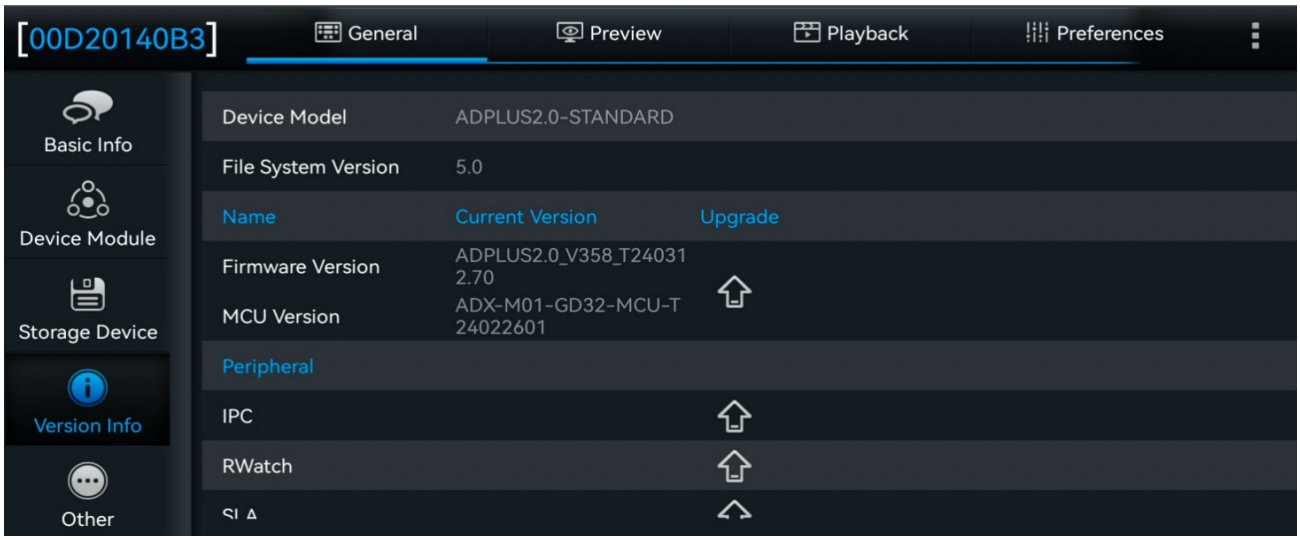


- Storage Device: View the device's storage status and format it if needed. Clicking the format button will prompt a confirmation before execution.

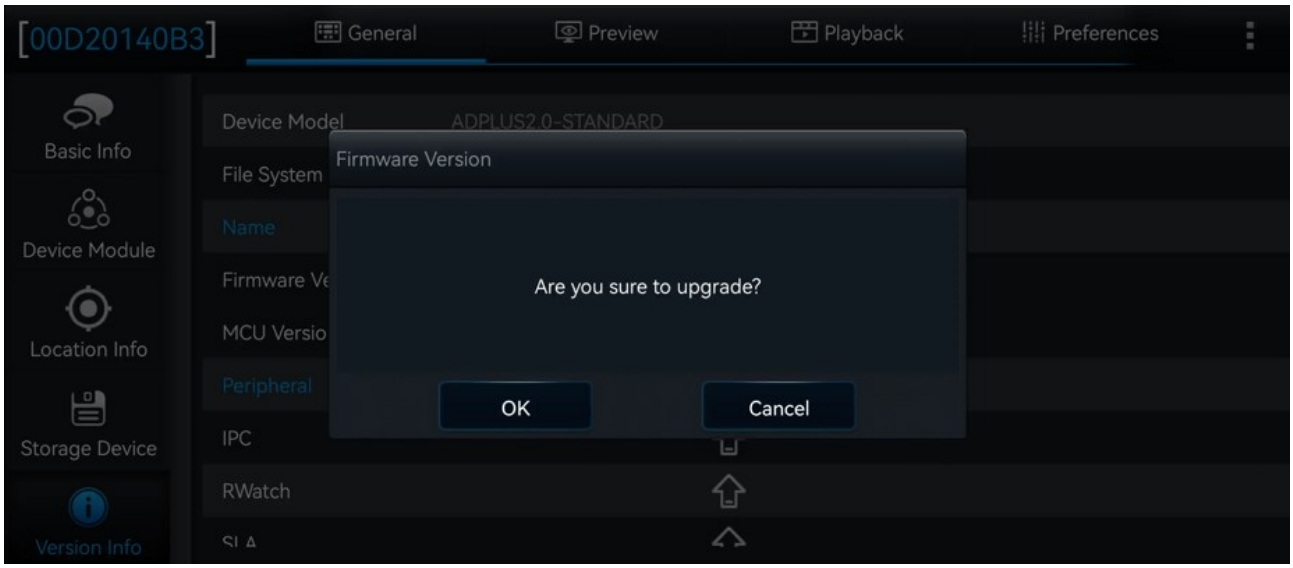


- Version Information: View software version information.

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In the version information interface, you can locally upgrade the main unit version, IPC version, R-Watch version, audio-visual alarm version, communication module, GPS or power box version. Place the upgrade files in the root directory of a USB drive (folder named "upgrade") and connect the USB drive to the device. During the upgrade, click  button, a confirmation prompt will appear, click [OK] to start the upgrade.

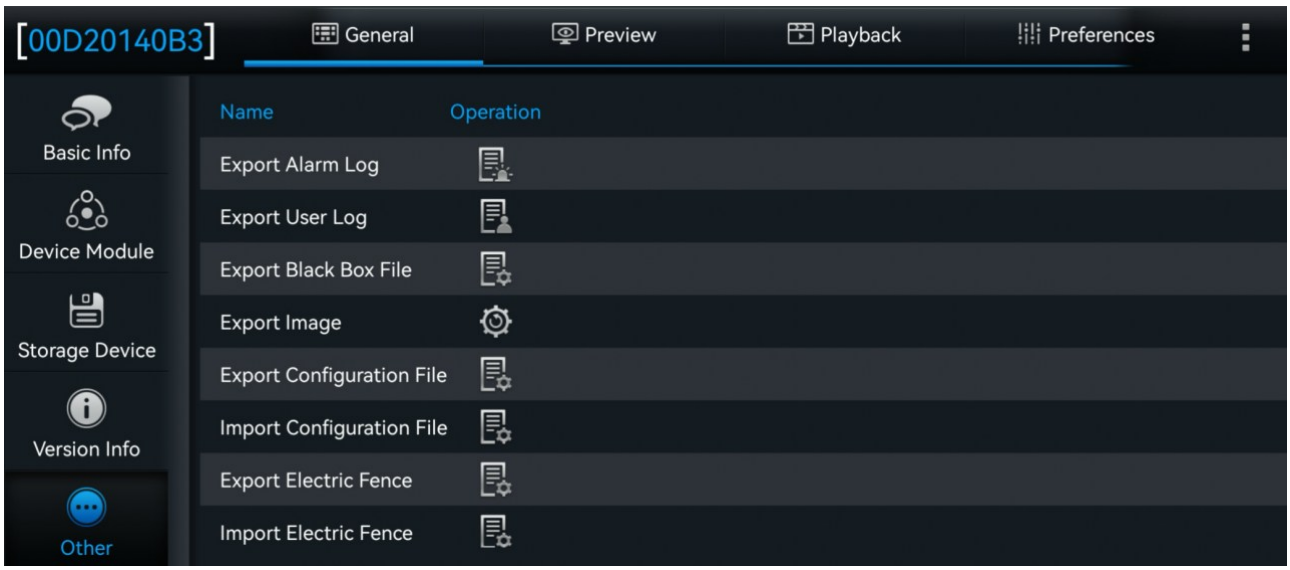


Note: In the version information interface, there are options to locally replace the AI alarm voice content. For this operation, contact your local agent or technical support for guidance to avoid importing non-compliant audio files that may cause alarm function anomalies.

- Other: Import/export data and configuration, restore factory settings, and restart the device.

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When importing/exporting data, an external USB drive is required.



1. Export alarm logs, user logs, and black box files.
2. Export alarm capture images for a selected time period.
3. Import/export electronic fence information.
4. Import/export AI configuration files.
5. Import/export parameter configuration files.
6. Restore default settings.
7. Export print data for a selected time period.
8. Reboot the device.

5.5 Real-Time Preview

The preview interface allows viewing real-time images, enabling/disabling sound, enabling/disabling grid, and performing AI calibration operations.

5.5.1 Real-Time Preview

In the preview interface, you can view the recording status of each channel in real-time. Double-clicking a channel preview enlarges the view of that channel, and double-clicking again returns to the normal view. Channels with no connected camera or with damaged cameras will display "VIDEO LOSS."

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5.5.2 AI Calibration

ADAS calibration requires on-site measurement of the ADAS camera installation height, left margin, vehicle width, and vehicle length. The settings interface can be found in Preferences > Alarm > AI App > Calibration Parameter. This section introduces the general guided calibration method, including ADAS algorithm calibration and optional external DMS camera calibration from the preview interface.

5.5.2.1 ADAS Calibration

①From the home page, click [Preview] to enter the preview interface.

②Click [AI Calibration] in the bottom left to enter the calibration selection.

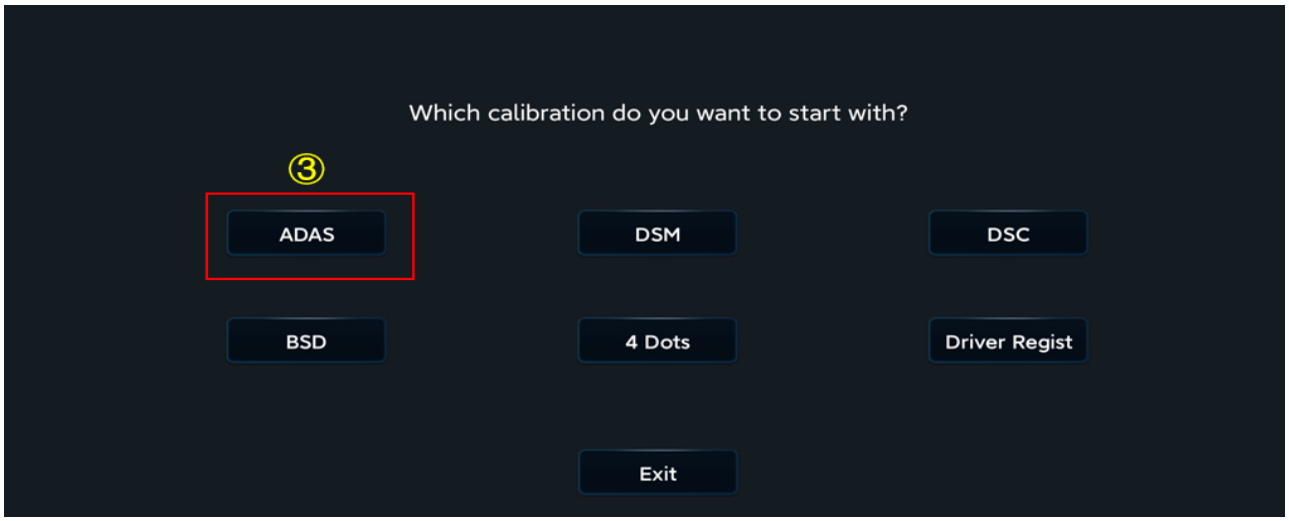


③Select [ADAS] for calibration.

④Choose channel 1.

⑤Click [Calibration] to proceed to the next step.

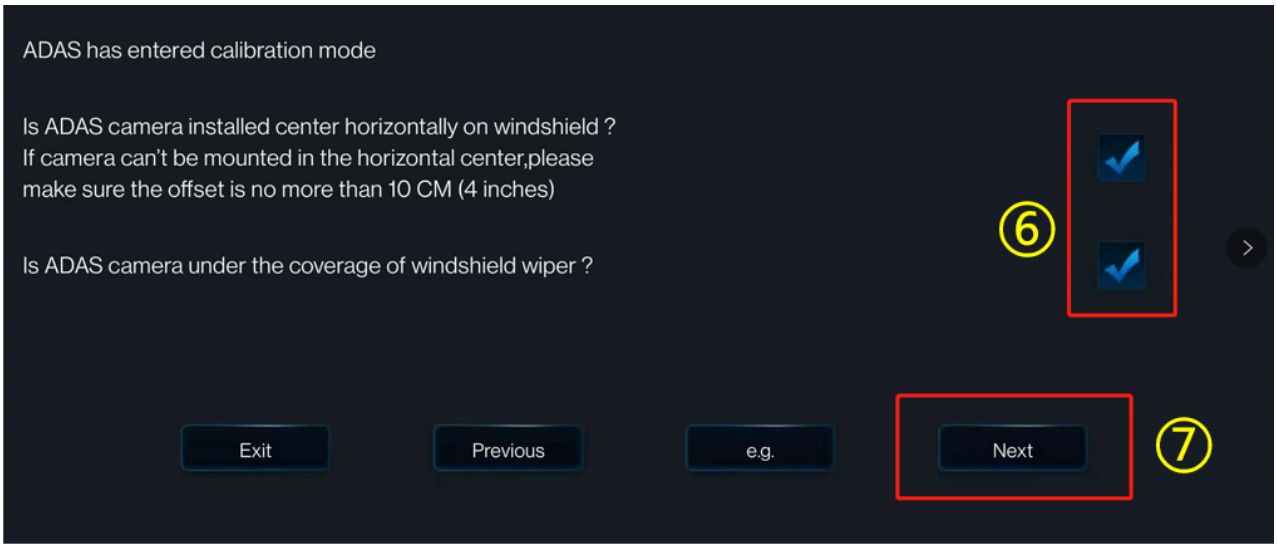
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⑥Check the confirmation box.

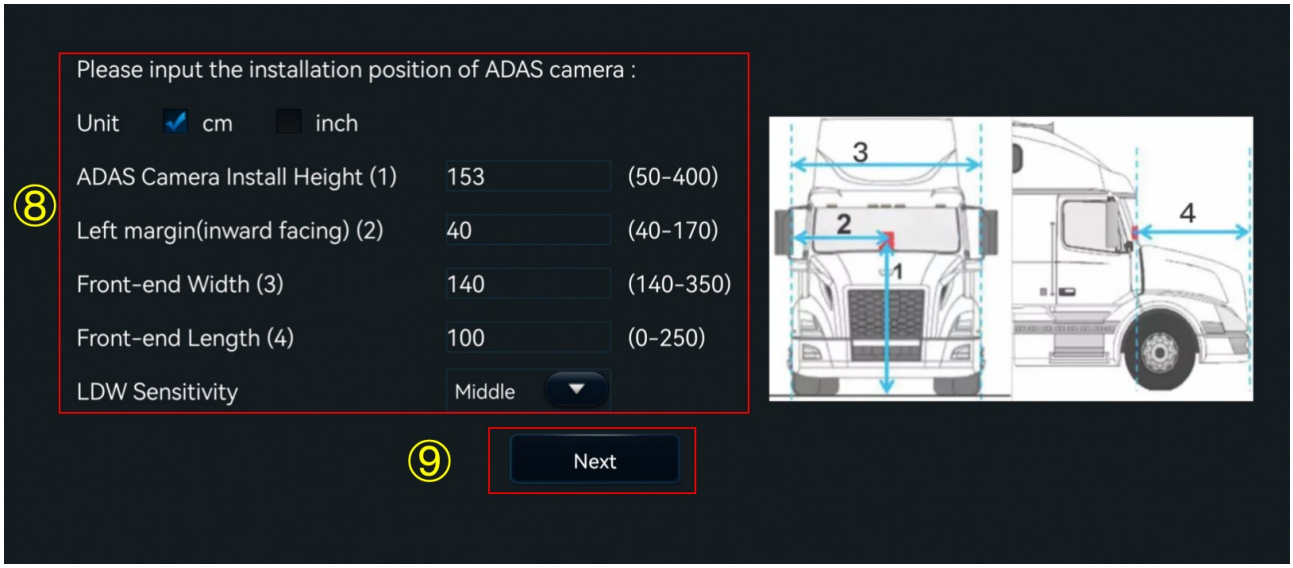
⑦Click [Next] to proceed.



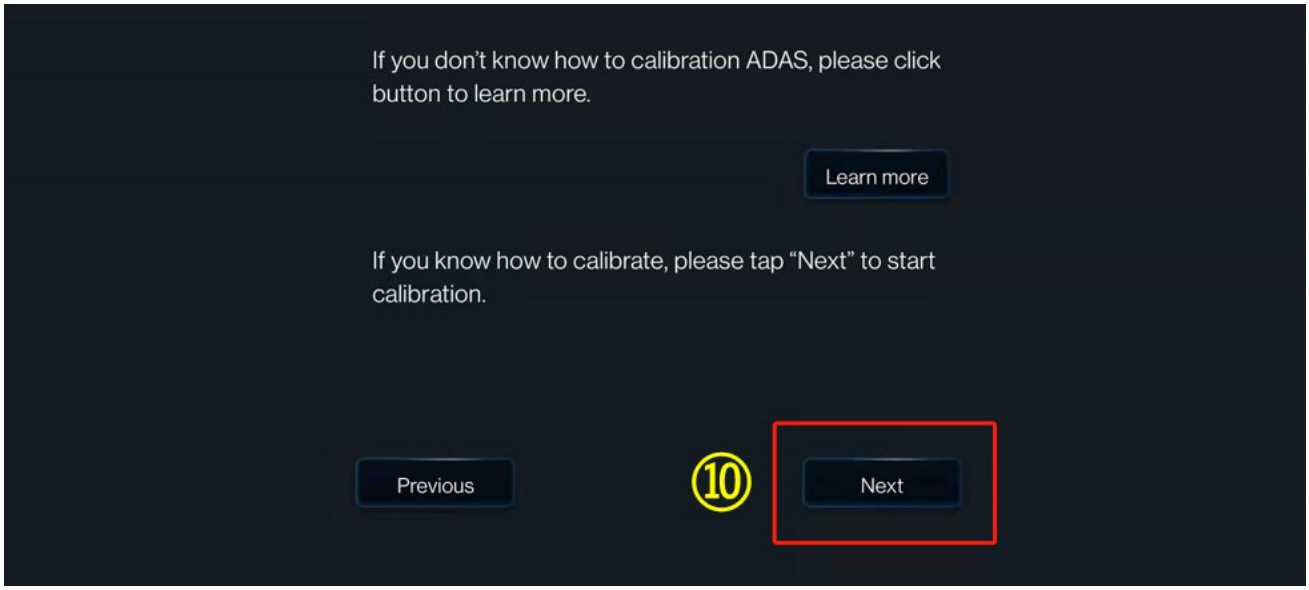
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⑧Enter the vertical height of the front camera from the ground, the horizontal distance from the front camera to the outer edge of the left tire (standing outside facing the front of the vehicle), vehicle width, and vehicle length (units can be centimeters or inches). Sensitivity settings for lane departure warning are also included in this step. The options are cross-line alarm (low), line press alarm (medium), and line press pre-warning (high), with medium sensitivity as default.

⑨Click [Next] to proceed.



⑩Click [Next] again (click [Learn more] for calibration guidance).



⑪Click [Next] to proceed.

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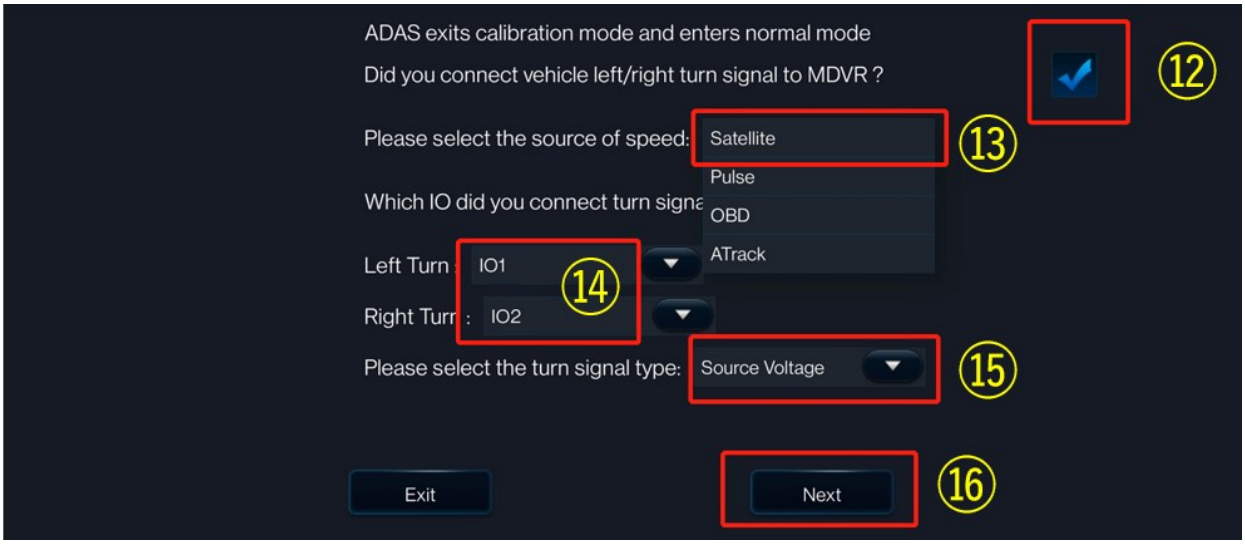
⑫Check the confirmation box.

⑬Select the speed source (top to bottom: GPS - Pulse - OBD/CAN - ATtrack device).

⑭[Left Turn]: Choose the corresponding wiring for the left turn signal. [Right Turn]: Choose the corresponding wiring for the right turn signal.

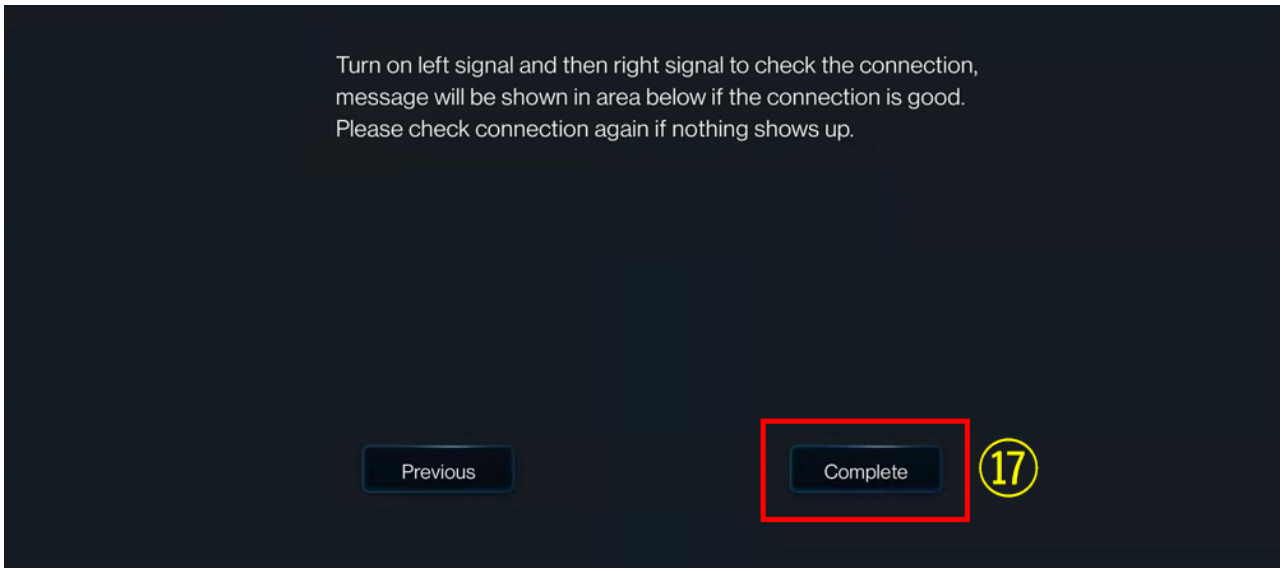
⑮Select the signal source type: [Source Voltage] for level signal, [Source Pulse] for pulse signal. Usually, the signal source is a pulse signal.

⑯Click [Next] to proceed



⑰After verifying the left and right turn signals, click [Complete] to finish the ADAS camera calibration.

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Warning: ADAS camera calibration must strictly follow the requirements of the "C6 Lite2.0 Installation Guide." Parameters needed for installation and calibration must be measured carefully. Verification of left and right turn signals must be performed diligently. Otherwise, ADAS will not effectively detect road information, resulting in decreased alarm accuracy or non-functional features. Our company is not responsible for any functional anomalies caused by improper installation or calibration.

5.5.2.2 DSC Calibration (Not available for C6 Lite2.0-S)

①From the home page, click Preview to enter the [Preview] interface.

②Click [AI Calibration] in the bottom left to enter the calibration selection.

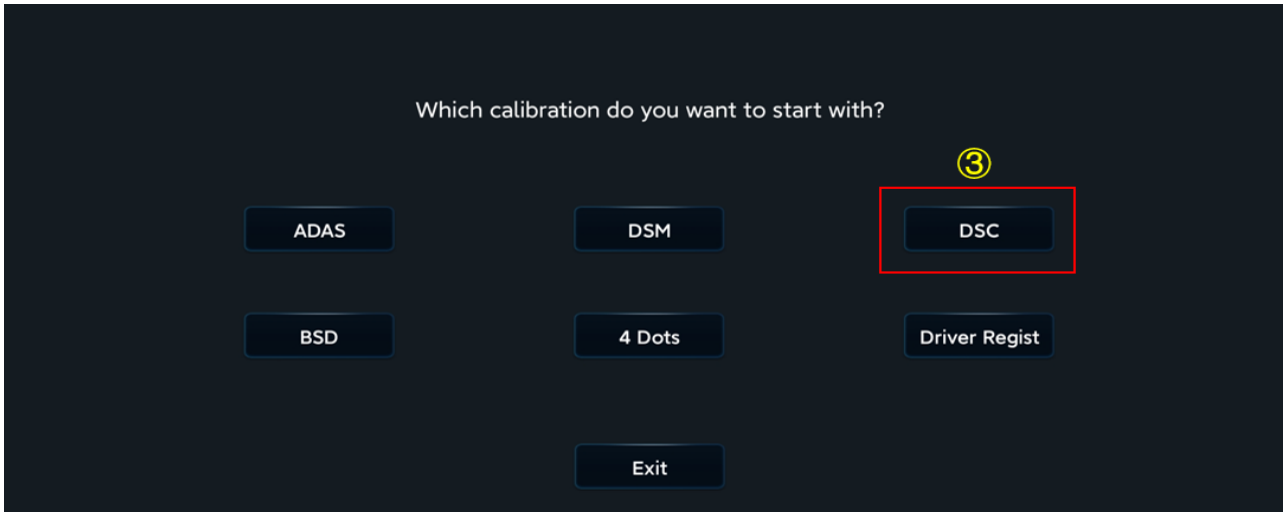
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③Select [DSC] for calibration.

④Choose channel 2.

⑤Click [Calibration] to proceed to the next step.



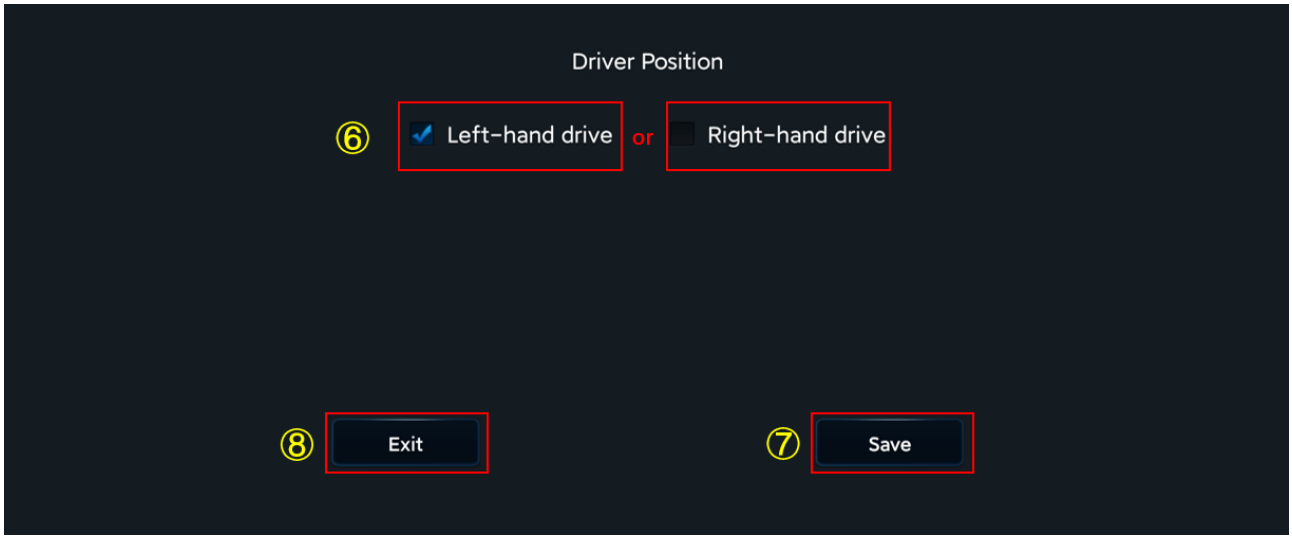
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⑥Choose whether the steering wheel is on the left or right (when the driver sits in the driver's seat facing forward, the steering wheel on the left side of the cabin indicates left-hand drive; on the right side indicates right-hand drive).

⑦Click [Save] to save the settings. The interface will confirm the successful save, completing the DSC calibration.

⑧Click [Exit] to exit DSC calibration.



Warning: Selecting the correct left or right-hand drive configuration is crucial for DSC alarms. The calibration process must be followed meticulously to ensure the accuracy of the left or right-hand drive information. Otherwise, DSC will not effectively detect the driver for alarm judgments, leading to alarm failures. Our company is not responsible for any functional anomalies

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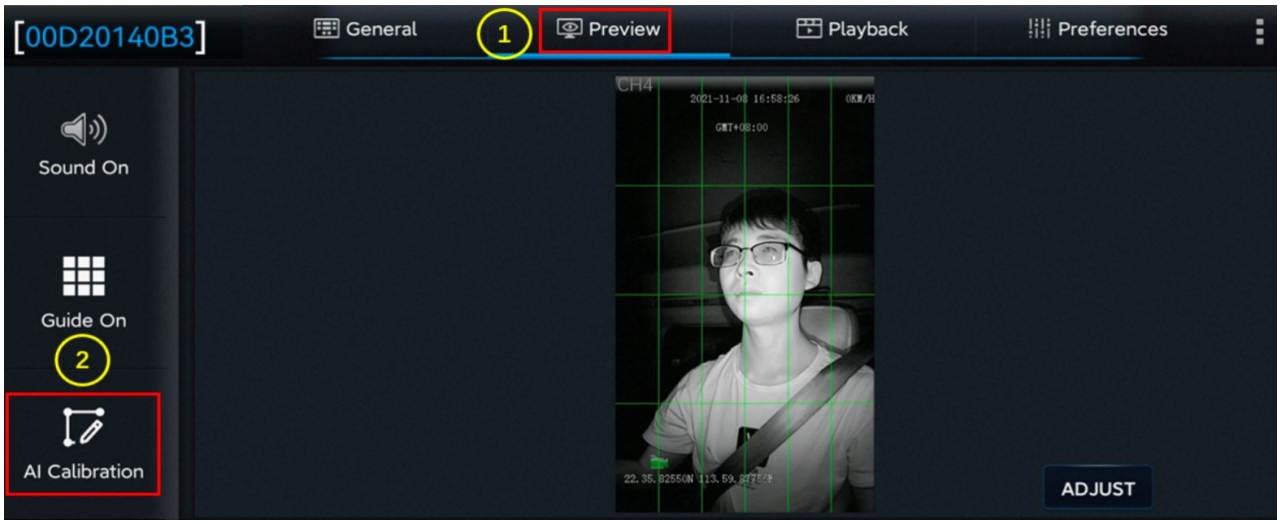
caused by improper installation or calibration.

5.5.2.3 DMS Calibration (Optional, not available for C6 Lite2.0)

The recommended DMS camera models are CA29M/CA29P. CA29M is a professional-grade AHD camera for DMS functions. It supports left and right A-pillar installation and tabletop installation, automatically adjusting the image to fit different installation positions. It covers scenarios with the camera at 50-100cm from the driver's face, suitable for various vehicle types. Choose the installation method based on actual conditions, correctly install the CA29M according to the guidelines, and then proceed with DMS calibration.

①From the home page, click [Preview] to enter the preview interface.

②Click [AI Calibration] to enter the calibration selection.

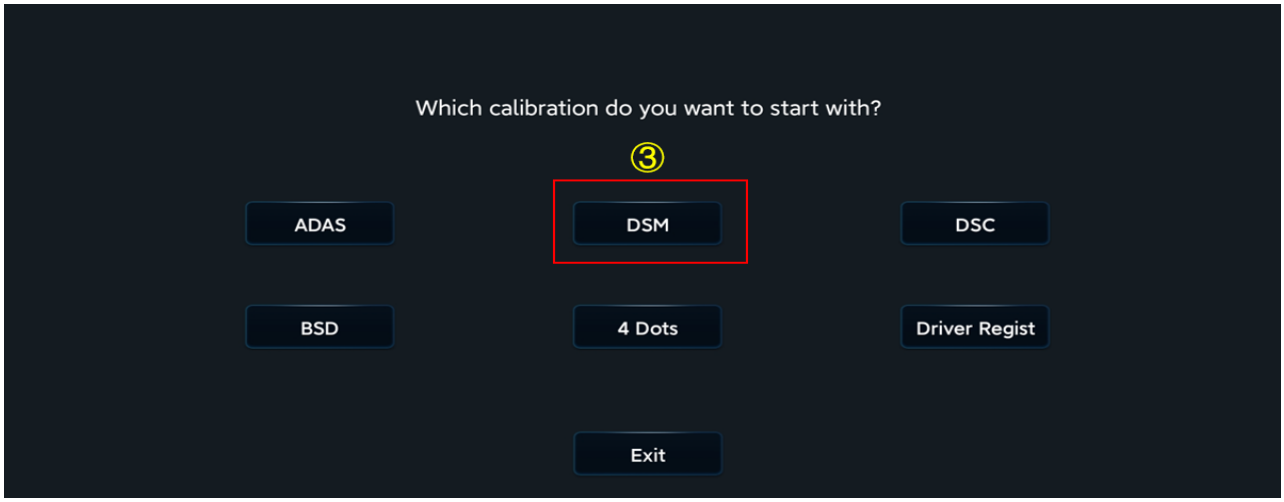


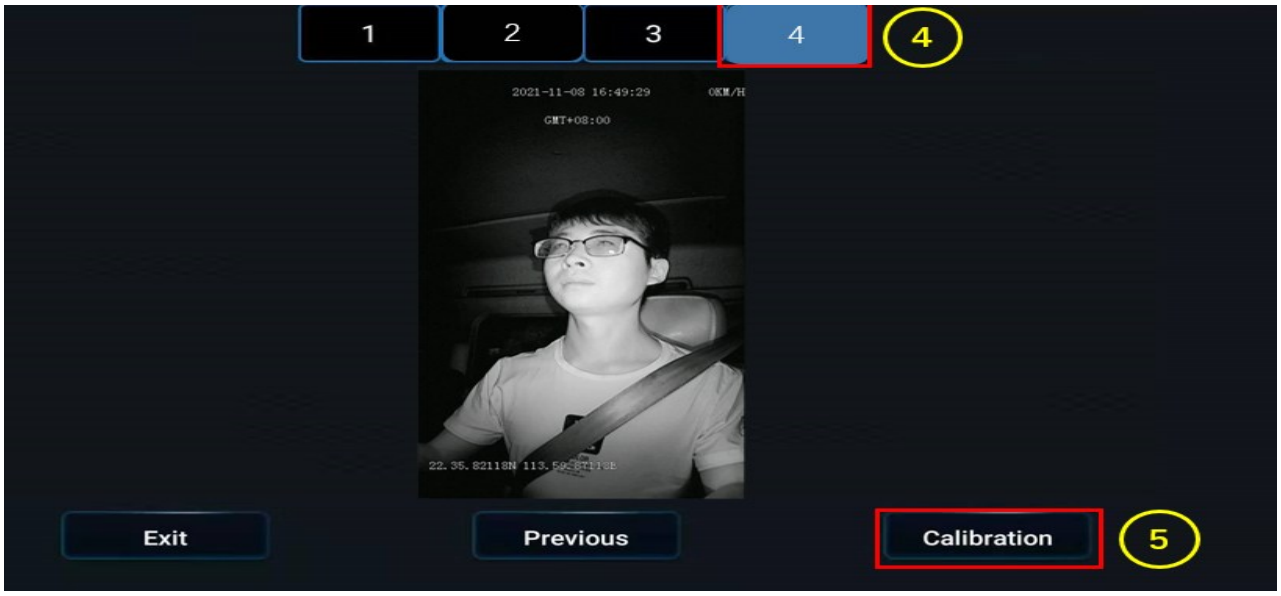
③Select [DMS] for calibration.

④Select the channel corresponding to the DMS camera, with CA29M defaulting to channel 2.

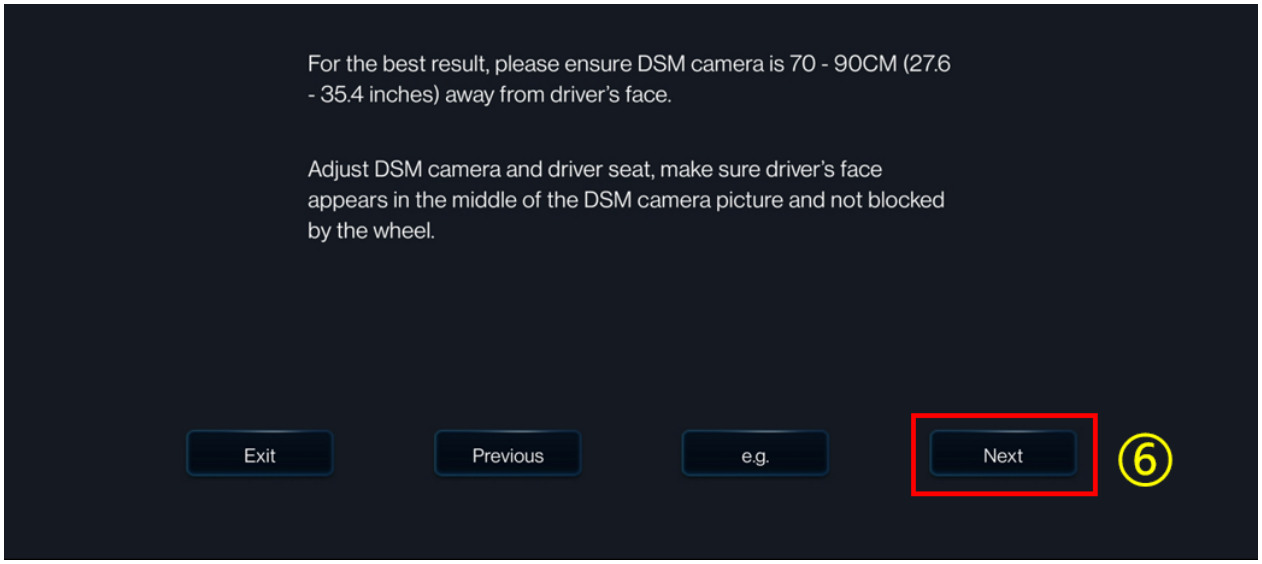
⑤Click [Calibration] to proceed to the next step.

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⑥Confirm the prompt and click [Next] to continue.



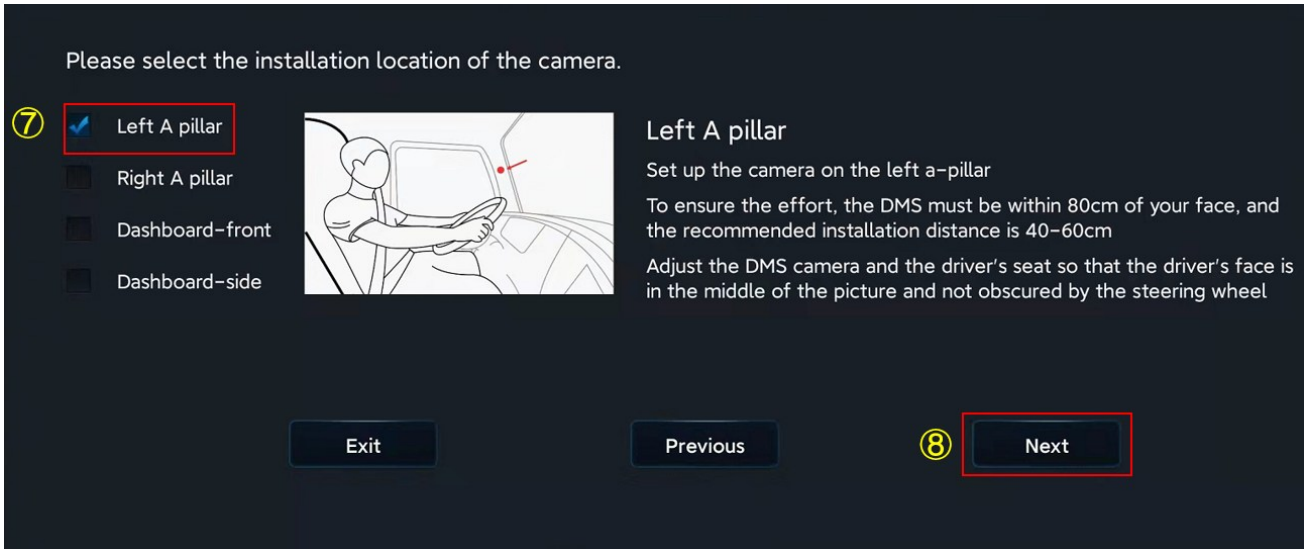
⑦Choose the DMS camera installation position: left A-pillar, right A-pillar, front dashboard,

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or side dashboard. If unsure, click each option in turn and refer to the illustrations and explanations on the right side.

After selecting the installation method, the software will automatically associate the calibration method with the installation method: left A-pillar (against the glass), right A-pillar (against the glass), and side tabletop are side calibrations, while front tabletop is front calibration.

Special Note: This step is crucial. Ensure the installation method selected matches the actual installation method.



Special Note: Before clicking [Next] to start formal calibration, the driver should sit in the normal driving position, facing forward.

⑧Click [Next] to proceed to automatic face calibration.

During calibration, maintain a normal driving position and face forward without moving.

The intelligent algorithm will automatically learn the driver's face angle and feature data positions during side calibration. If the face moves during calibration, the process will restart automatically.

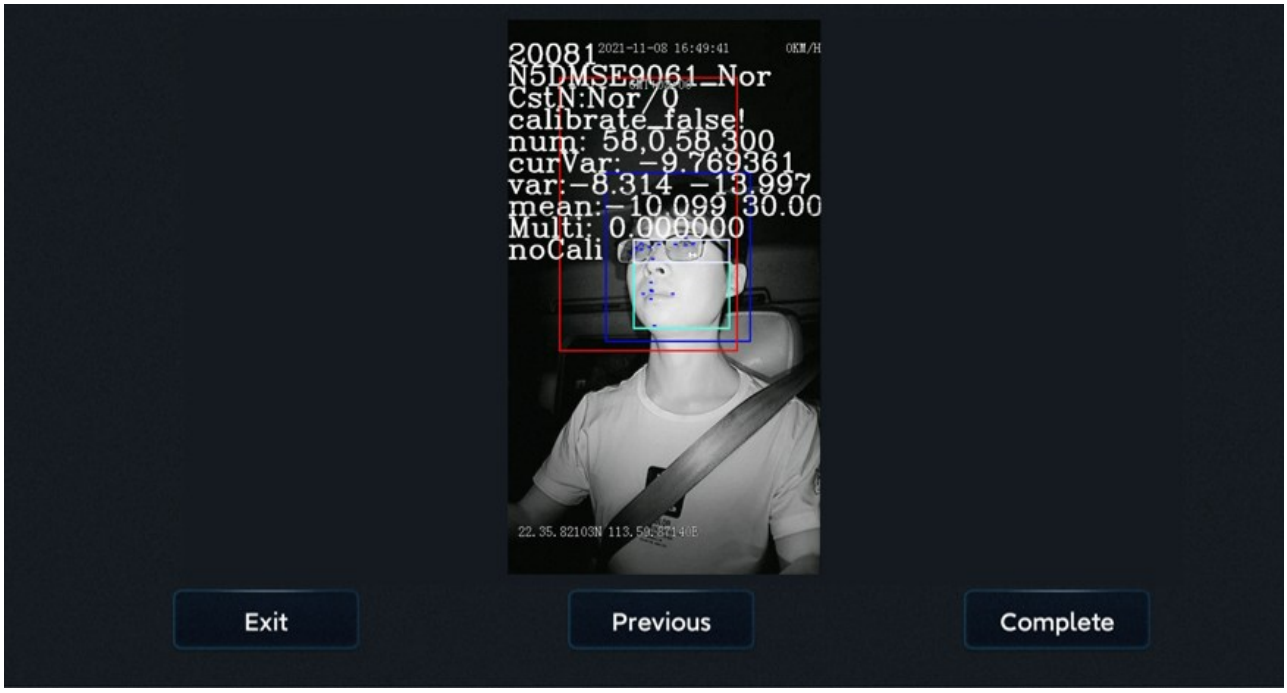
Special Note: For left A-pillar, right A-pillar, and side tabletop installations, there must be an angle between the face and the camera to complete calibration. For front tabletop installations,

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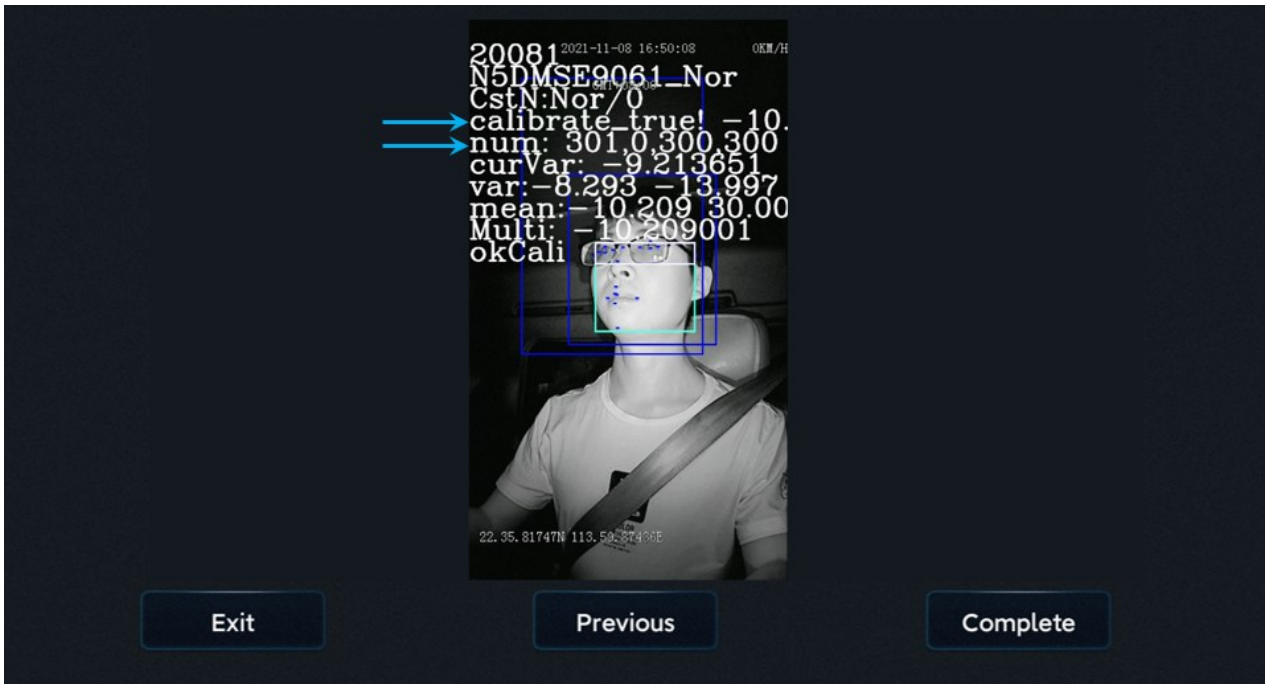
the face must be directly in front of the camera to complete calibration.

Wait for the device to complete automatic calibration. In side calibration, when the NUM value reaches 301 (51 for front calibration), and the calibration frame changes from red to blue, the calibration is complete.

During calibration:



After calibration:



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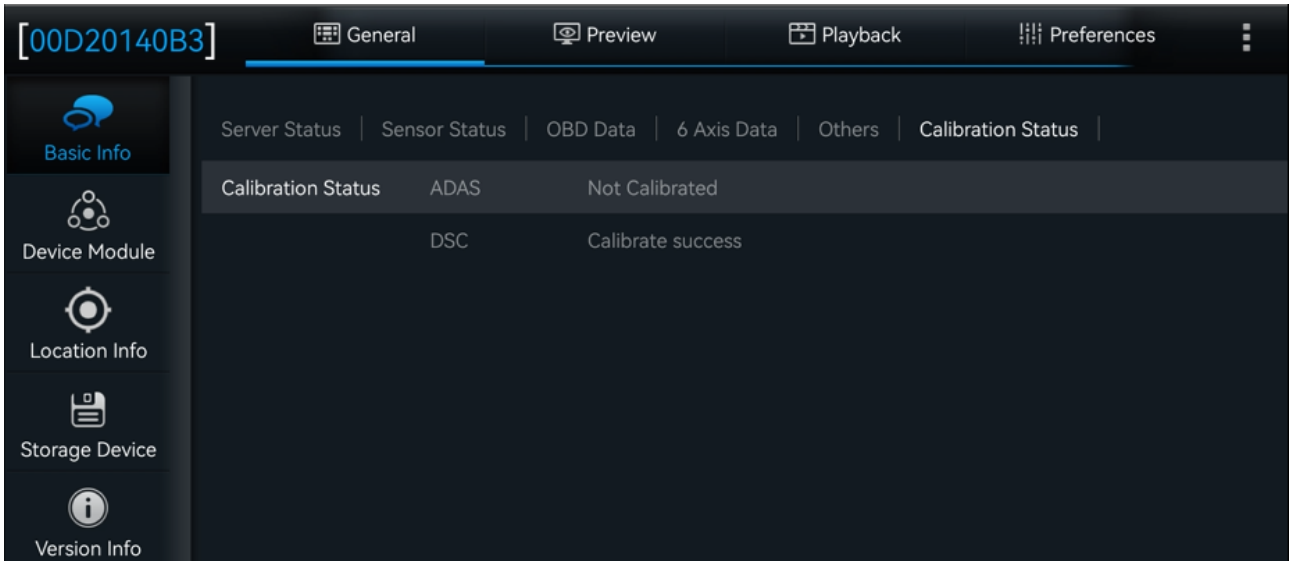
Click the [Complete] button to finish calibration and exit calibration mode.

After calibration, you can verify success through Veyes. Click [General] > [Basic Info] > [Calibration Status] to check if each channel has been successfully calibrated.

Special Notes:

1）Only channels with the algorithm enabled will display calibration status, which can be either not calibrated or calibrate success.

2）ADAS and DSC are auto-calibrated, requiring the vehicle to drive for some time to complete. Therefore, even if parameters are configured, ADAS and DSC calibration success cannot be immediately confirmed.



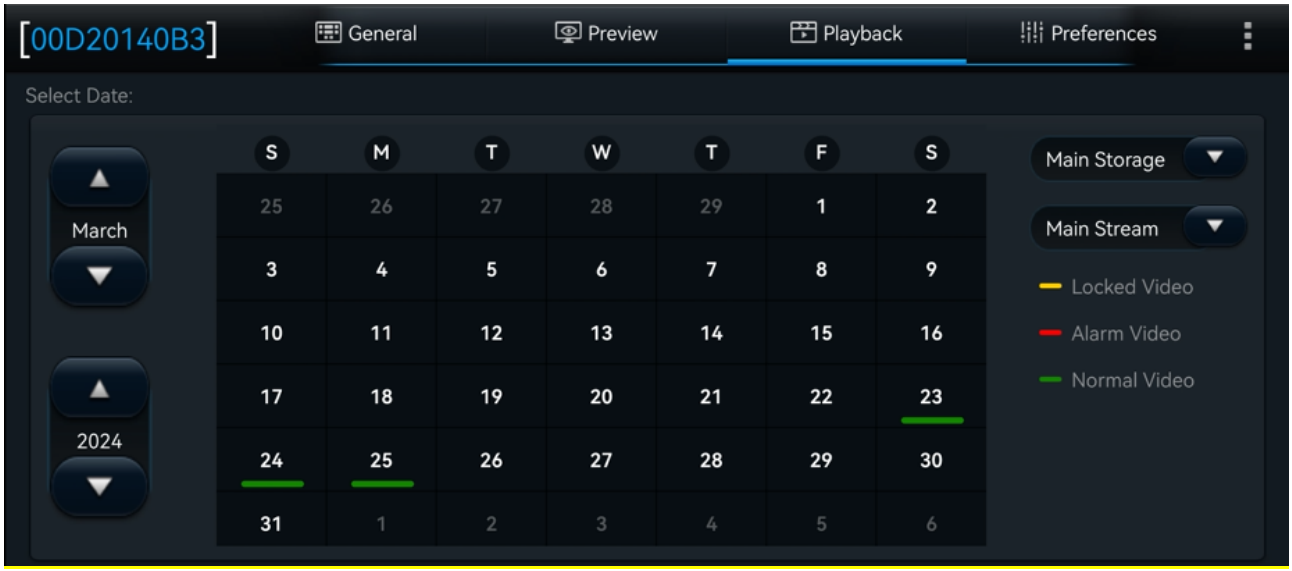
Warning: DMS camera installation and calibration must strictly follow the "C6 Lite2.0 Series Installation Guide." The installation distance from the lens to the face must be 50-100cm, and the lens must be lower than the driver's face. Otherwise, the DMS cannot effectively distinguish the driver's eye closure state, resulting in decreased alarm accuracy. Our company is not responsible for any false alarms caused by improper installation or calibration.

5.6 Video Playback

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5.6.1 Video Playback

The playback interface allows you to search for main/sub recordings in the main/sub storage on a specific date. When selecting sub-stream recordings and using two Micro SD cards, the sub-stream will be stored in the sub-storage. You need to select the sub-storage sub-stream recording to search for sub-streams (refer to the appendix for main/sub-stream usage scenarios).

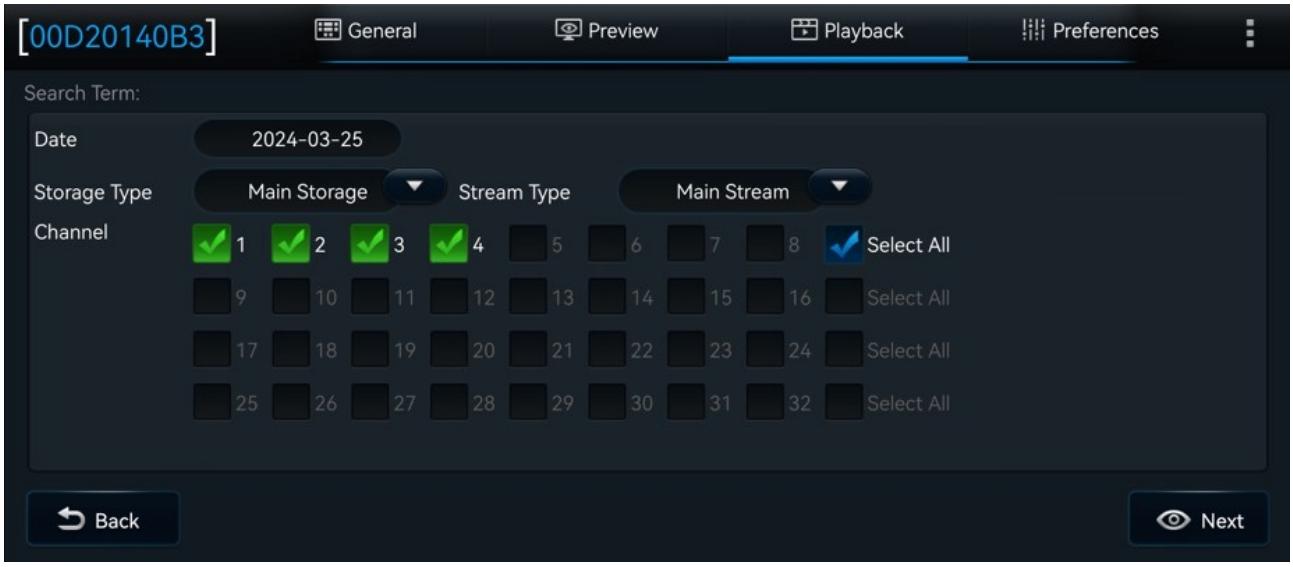


In the playback interface, use the calendar to select the date for playback. On the left side of the interface, you can select the year and month. Click  to choose different years and months. The color bars at the bottom of the dates in the calendar indicate the presence of recordings for that day. The color codes are as follows:

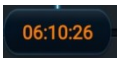
No Color Bar	No recordings for that day
Green	Normal recordings for that day
Red	Alarm recordings for that day
Yellow	Alarm recordings with files automatically locked (locked recordings)

Click on the date in the calendar to view recordings, which brings you to the interface below. You can select the channel to view, as well as reselect the date and type of recording to view. After selection, click Next.

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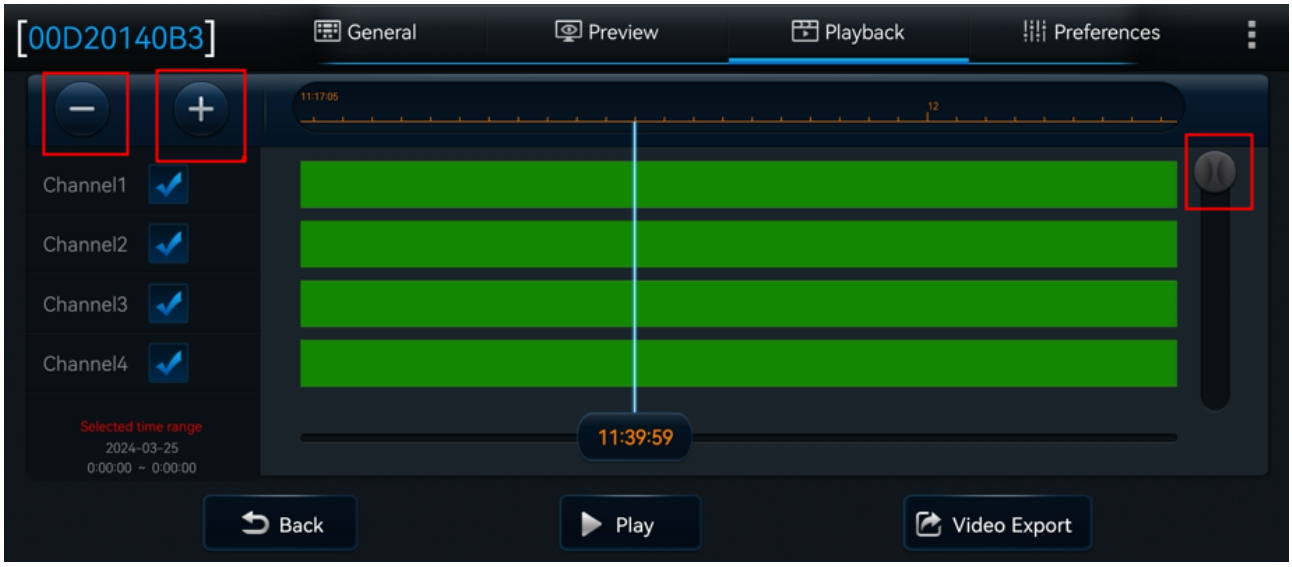


After selecting the channel, you can drag the timeline to select the playback time and click [Play] to play the recording. During playback, you can choose playback operations, and double-clicking the screen hides the operation interface and enlarges the playback screen.

- Timeline:
  1) The top timeline shows time in 1-hour intervals.
  2) The bottom timeline can be dragged 

to any position.
  3) Clicking the button  on the top left of the interface can zoom out the time interval; clicking  can zoom in the time interval. This function helps quickly locate a specific time segment for further playback/export operations when there are many recording segments.
- Channel Number:
  1) Each channel's color bar indicates the type of recording files available at specific times.
  2) When there are many recording channels, you can scroll up and down  on the right side of the interface to view the recording status of each channel.
  3) Select one or more channels, choose a timeline, and you can playback/export the recordings for the selected channels within the chosen time.

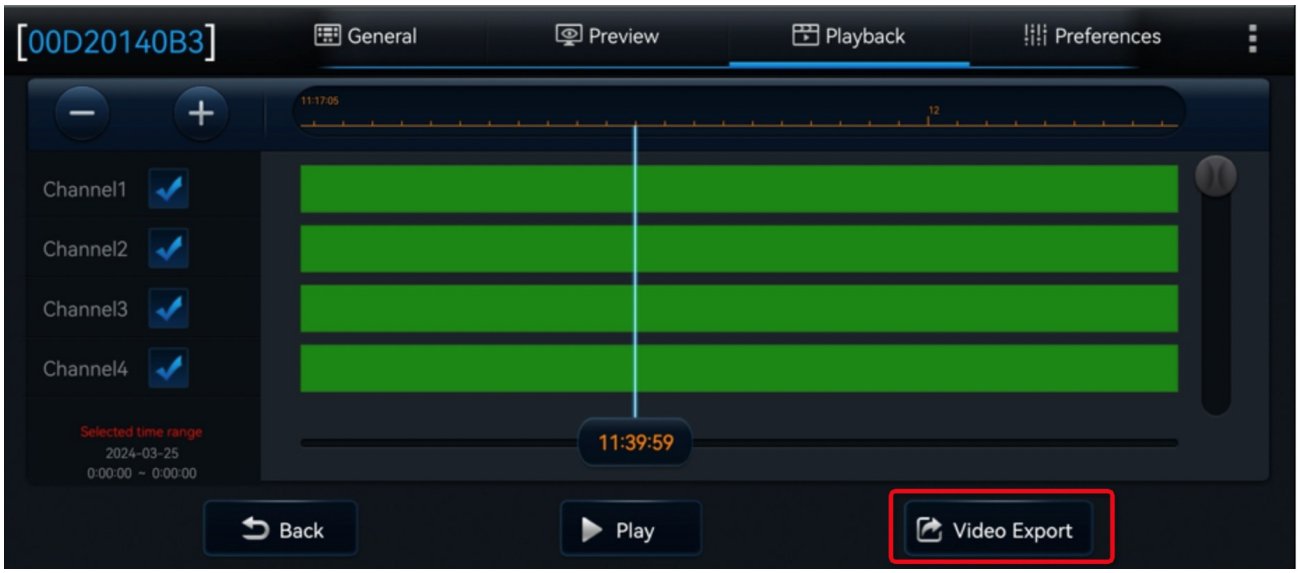
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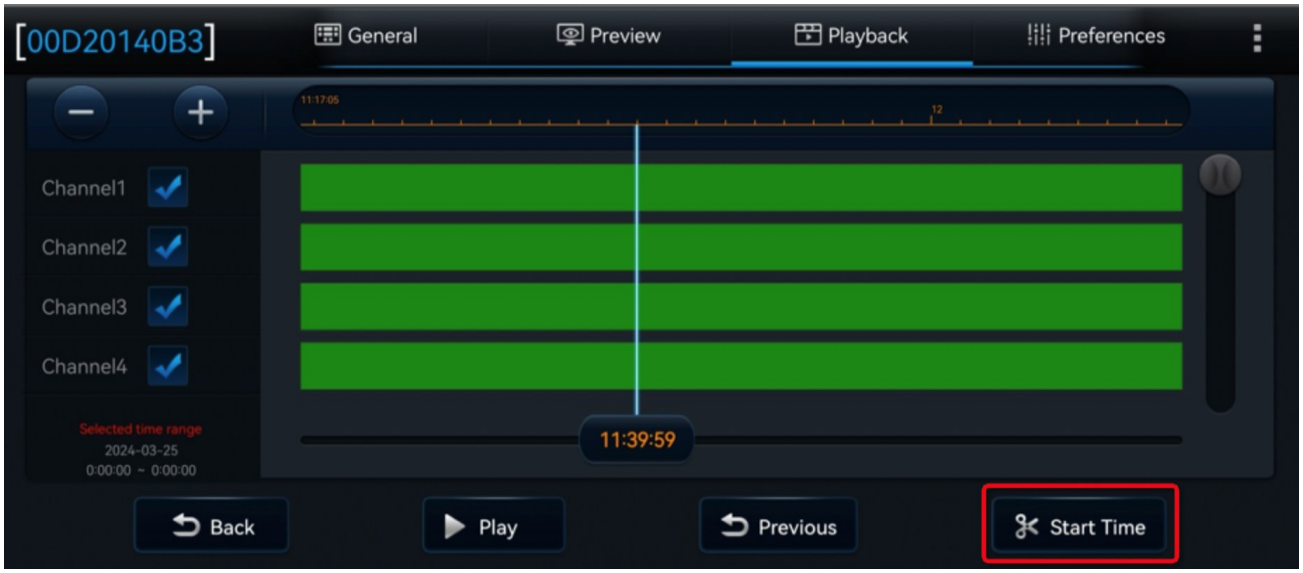
5.6.2 Video Export

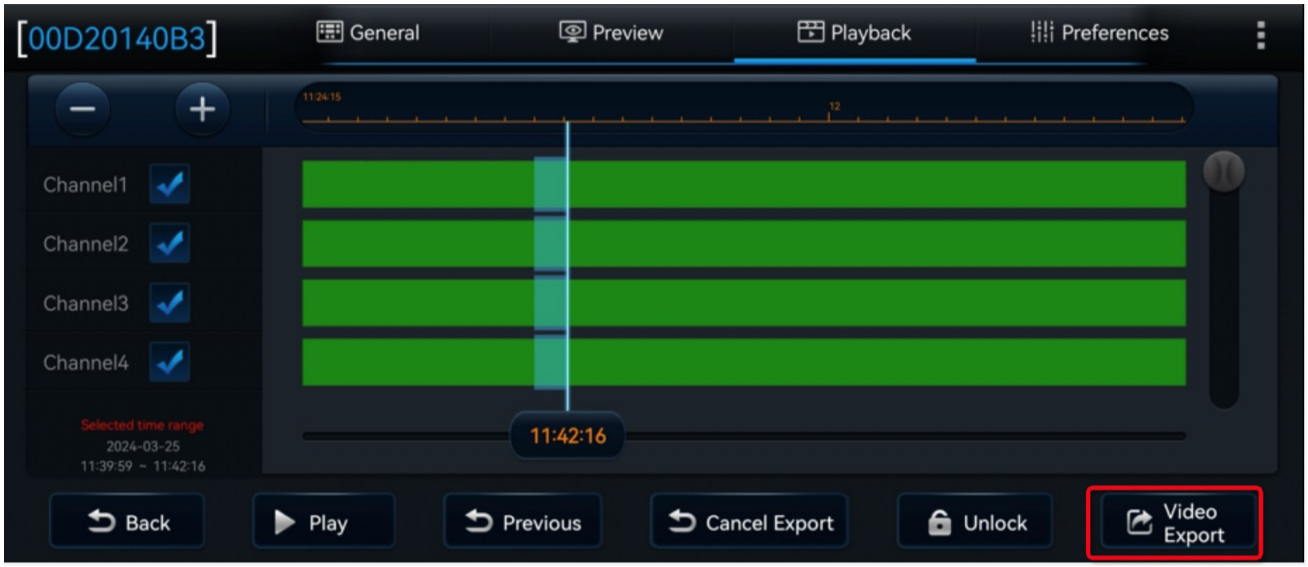
You can also export recordings for a selected time period.

Click [Video Export] at the bottom of the playback interface, select the start and end times, then click [Video Export]to export the recordings. Click [Unlock] to lock or unlock recordings for the selected time period.



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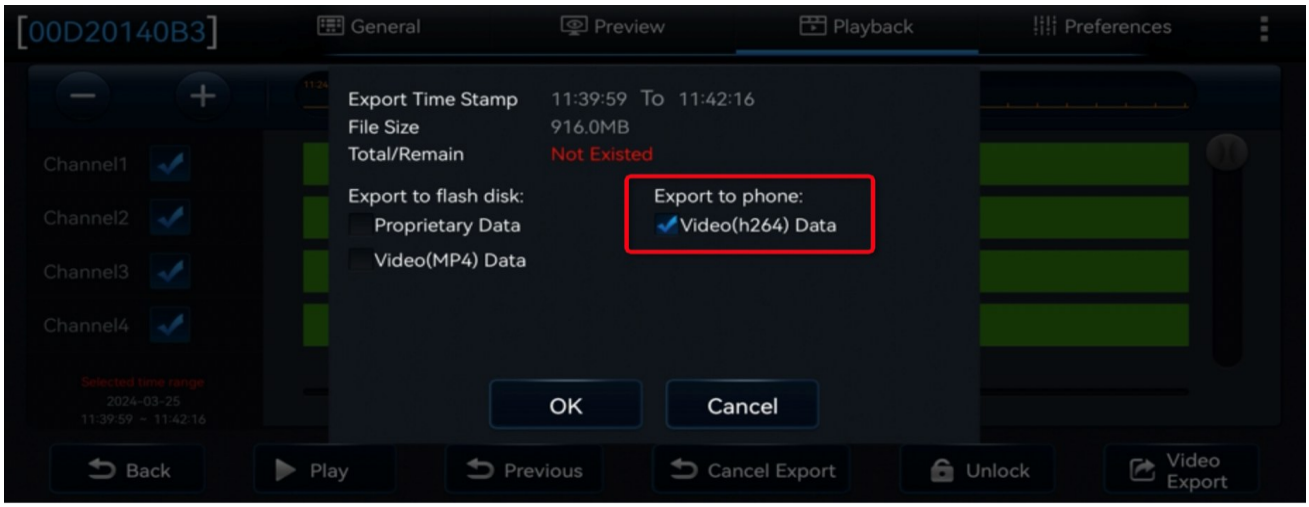




In the video export options, you can choose to export the clipped video to an external USB drive or mobile phone, allowing maintenance personnel to quickly obtain and share videos.

Special Note: Exporting in MP4 format allows playback using a regular player, while H264 format requires a proprietary player (CEIBA2 client). The H264 format contains more original data, facilitating troubleshooting. If there are issues requiring after-sales troubleshooting, choose to export in H264 format.

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5.7 Basic Configuration

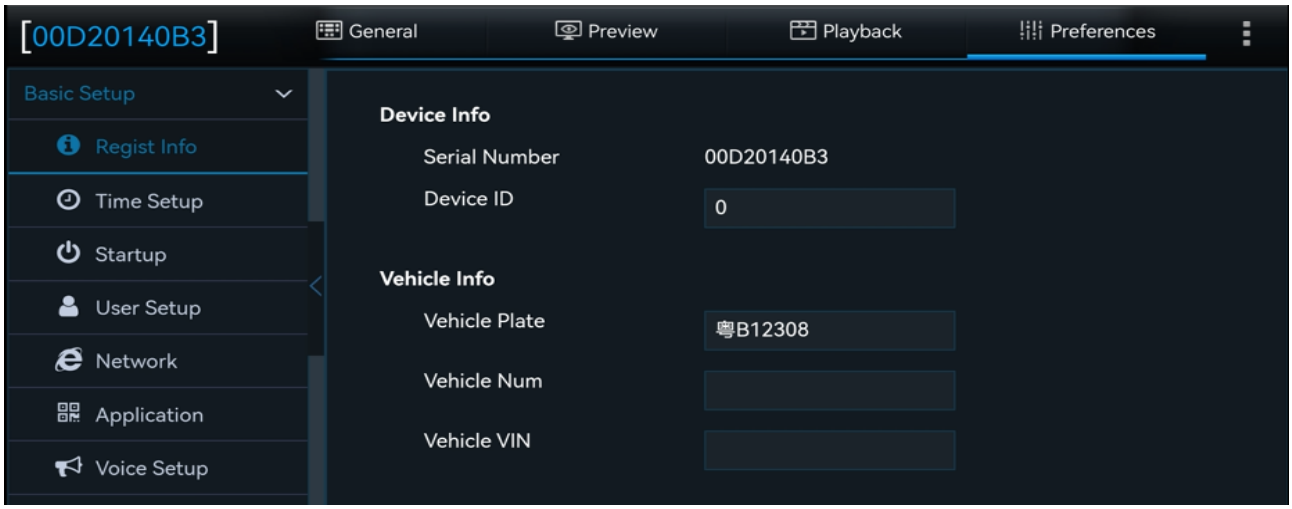
Note: In all configuration parameter interfaces, click [Save] to save the parameters after modification. To restore a parameter to its default value, click [Default] at the bottom of the interface.

5.7.1 Registration Information

In this interface, you can set device information (Device ID), vehicle information (license plate number, driver's license number, vehicle VIN number), and driver information (driver ID, driver name). Once the license plate number is set here, the WiFi hotspot name will be named after the license plate number when connecting to the device hotspot using Veyes.

Note: When the license plate number changes, the WiFi hotspot name changes, requiring reconnection and re-login to Veyes.

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5.7.2 Time Settings

- Date and Time Format: The time settings section allows you to set the time display format and time zone.

1. Date Format: Options are Year/Month/Day, Month/Day/Year, Day/Month/Year; reflected in the pass-through and recording OSD.

2. Time Format: Options are 24-hour and 12-hour formats; reflected in the pass-through and recording OSD.

3. Cross Time Zone Enable: Controls whether to use the cross time zone scheme. If your vehicle and platform are in different time zones, enable this to maintain normal communication between the device and platform. When enabled, the time zone parameter is grayed out and not settable, allowing only the local time zone to be set. The local time zone refers to the vehicle's location. When disabled, only the time zone parameter can be set to match the vehicle's location.

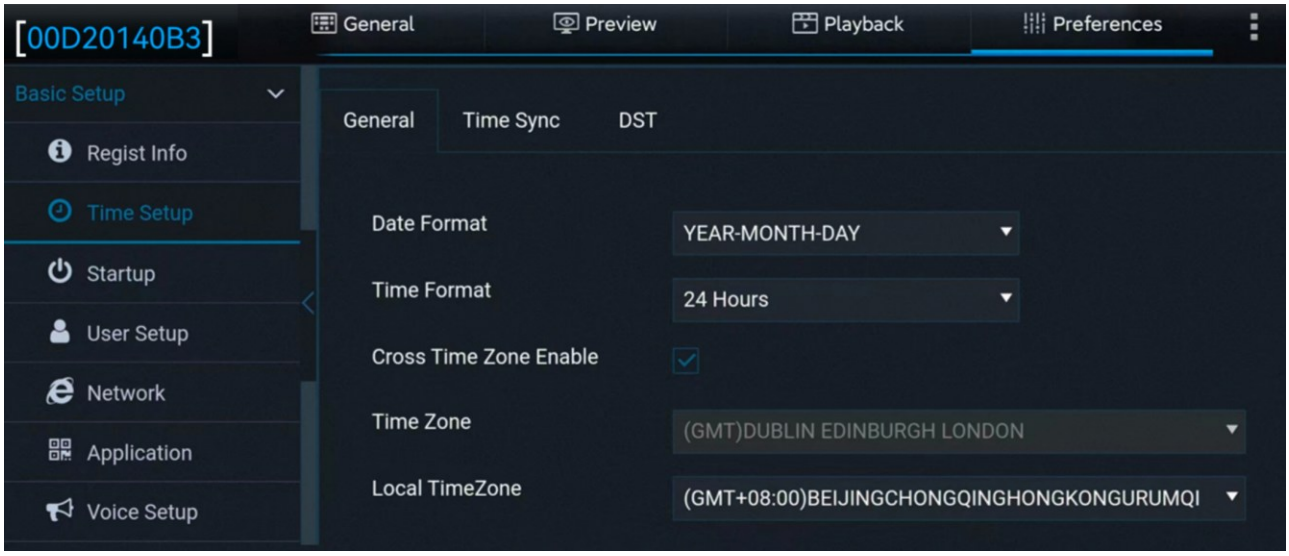
Warning: For devices using the CEIBA2 platform, cross time zone enable must be turned off. Users of the FT platform can enable cross time zone functionality as needed.

4. Time Zone: Supports time zone selection. This parameter can only be set when cross time zone enable is turned off; otherwise, it defaults to the zero time zone and is not settable.

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5. Local Time Zone: Supports local time zone selection. This parameter is displayed for setting only when cross time zone enable is turned on.

Special Note: When cross time zone functionality is enabled, TimeZone is set to the zero time zone for data exchange between the device and platform, and LocationTimeZone is used for recording overlay time zones. When cross time zone functionality is disabled, TimeZone can be set and used for recording overlay time zones.



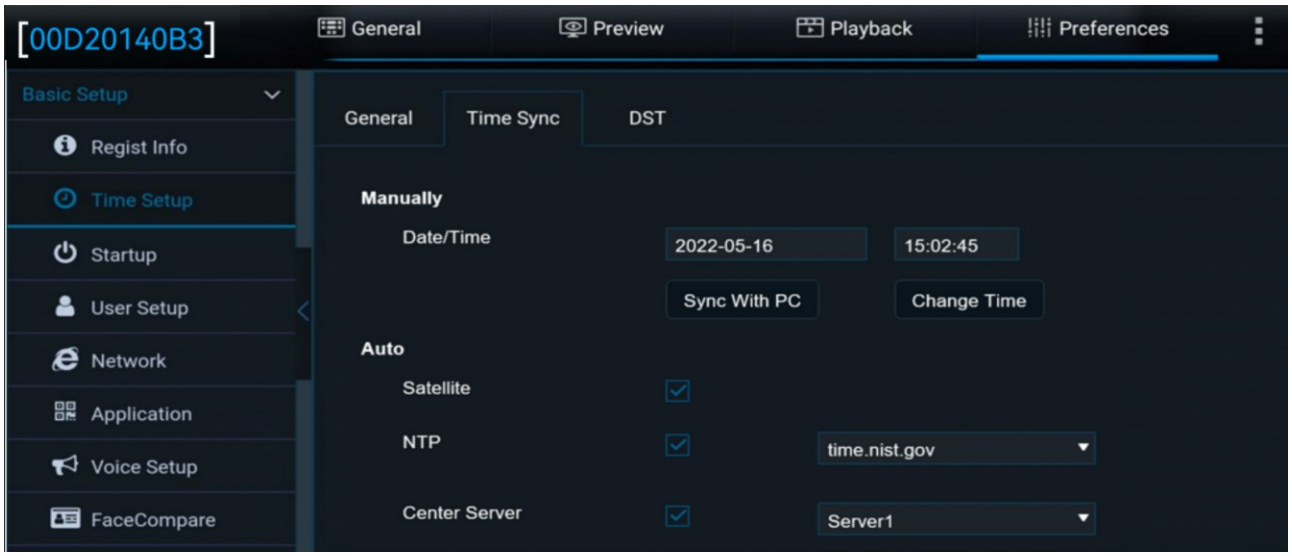
- Time Synchronization Method:

When there is a discrepancy between the system time and actual time, automatic time synchronization will occur. The automatic time synchronization settings can be manually input or configured.

1. You can manually modify the date and time by clicking [Change Time].
2. Satellite Synchronization: Use GPS to correct the time.
3. NTP Synchronization: Use the network time from the WAN; you can choose different WAN servers.
4. Central Server Synchronization: Use the reported platform time. When reporting to multiple platforms, you can choose different platforms.
5. If multiple synchronization methods are selected, they will be prioritized in the order of Satellite, NTP, and Central Server. Once synchronization is successful, the next method will

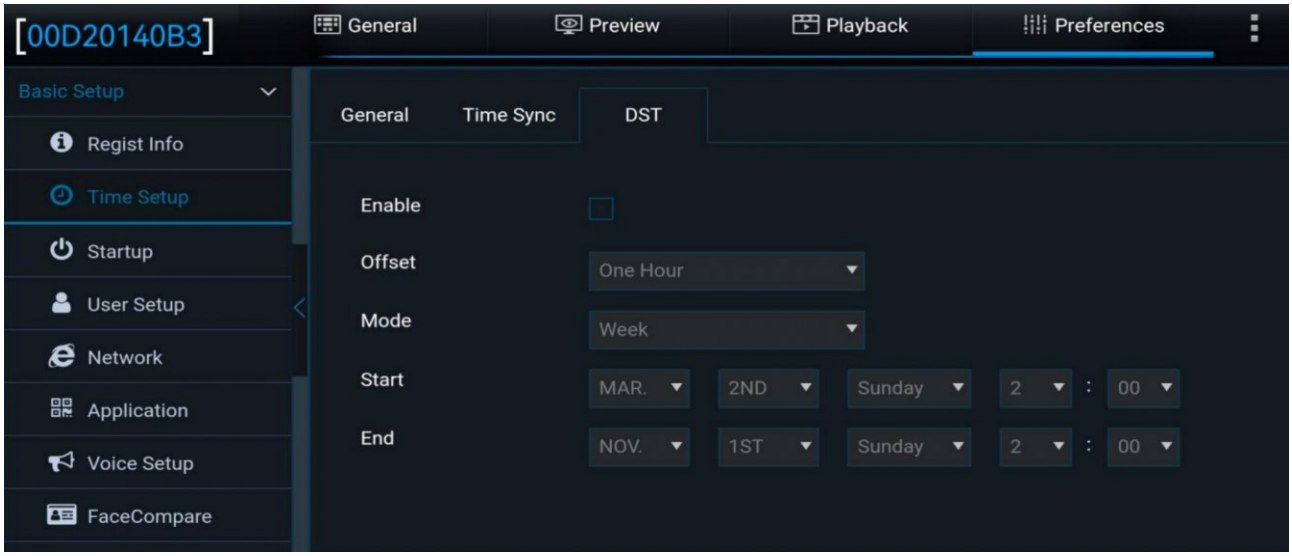
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not be used.



- Daylight Saving Time (DST) Support:

For some regions, daylight saving time needs to be set. When DST is enabled, the device time will be advanced by 1 or 2 hours. Click [Preferences] > [Basic Setup] > [Time Setup] > [DST]. The interface is as follows:



1. [Enable]: Users can choose to enable or disable the DST function, which is disabled by default.
2. [Offset]: Advance the time by 1 or 2 hours.
3. [Mode]: Supports Week or Date mode.
4. Week Mode: Set the start and end of DST based on the month, week, and time.

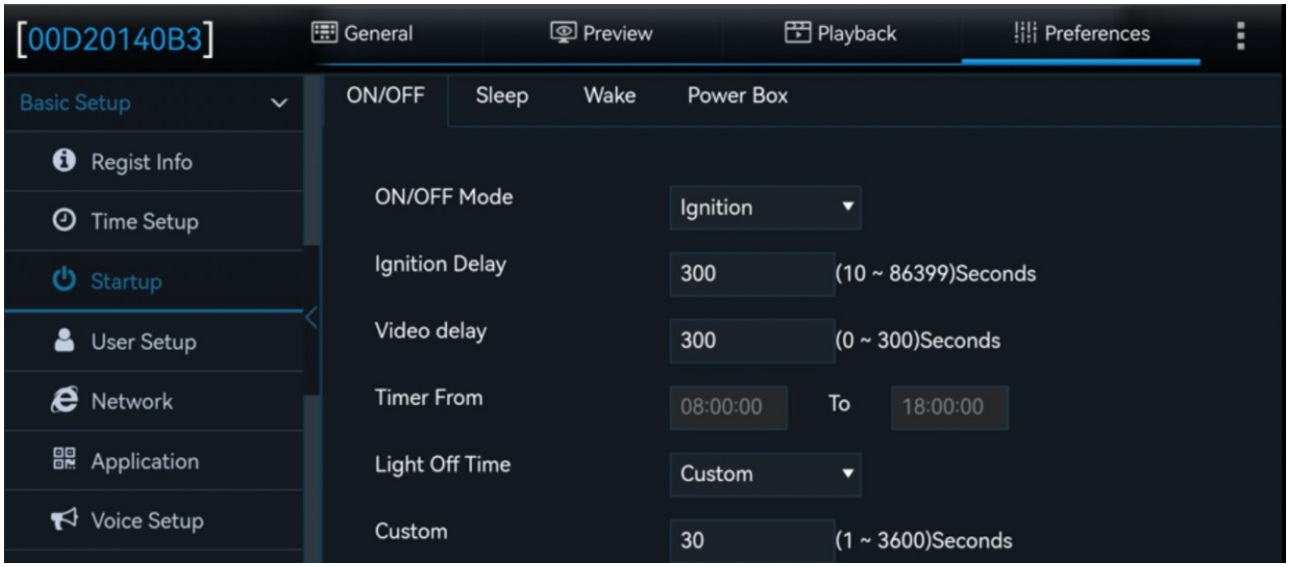
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5. Date Mode: Set the start and end of DST based on the date and time.

5.7.3 Startup Settings

- Power On/Off Settings

Click [Preferences] > [Basic Setup] > [Time Setup] > [ON/OFF]. The interface is as follows:



1. Power On/Off Method: Select the [Ignition Mode] for power on/off (i.e., turn on the device by starting the vehicle).

2. Ignition Off Delay: Set the delay time for shutting down after the ignition is turned off. The range is 0~86399 seconds, with a default of 300 seconds.

3. Recording Delay: Set the delay time for recording after ignition off. The recording delay time will be within the ignition off delay time. The maximum recording delay is less than or equal to the ignition off delay time.

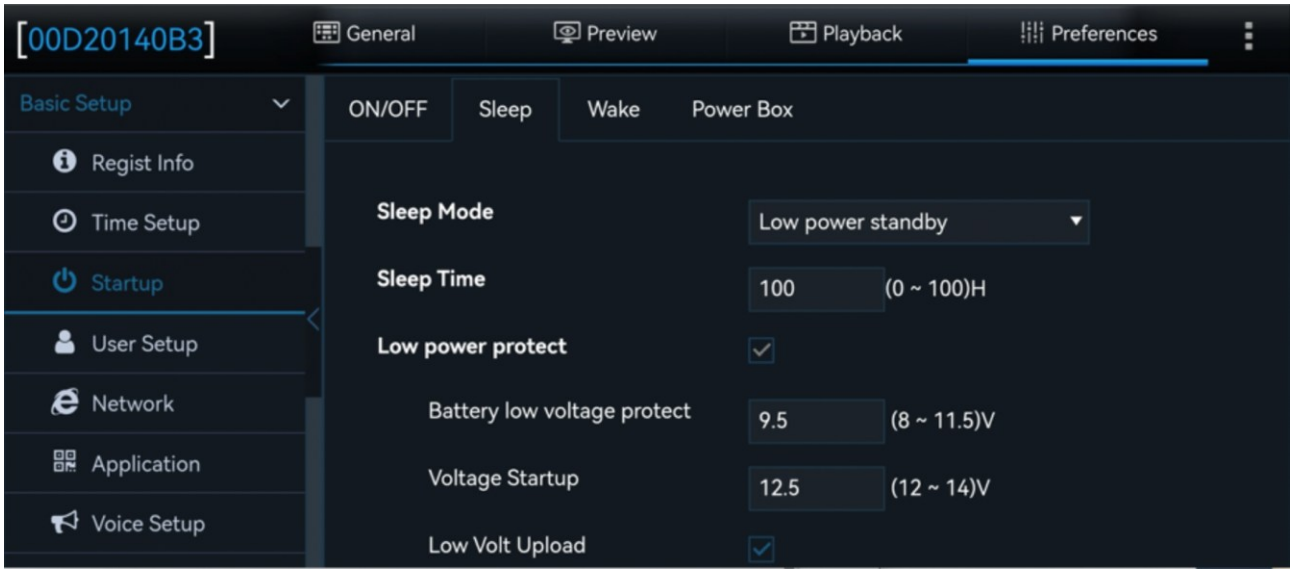
4. Scheduled Power On Time: Choose the scheduled power on time period (currently not available for scheduling power on/off).

5. Backlight Off Time: When an external display is connected, you can configure the screen backlight off time. Options are Never or Custom, with a range of 1~3600 seconds.

- Sleep Mode

Click [Preferences] > [Basic Setup] > [Time Setup] > [Sleep]. The interface is as follows:

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Use Case: Select low-power standby mode (sleep) if you need the platform to still obtain vehicle positioning information and remotely wake up the device to download data or playback video after parking and turning off the engine. Otherwise, select zero-power standby mode. In the freight industry, it is recommended to use phone or SMS wake-up for remote waking. If the SIM card used does not support SMS and phone services, use the platform remote wake-up function. CEIBA2 and FTCloud currently support platform remote wake-up.

1. Sleep Mode: Set to low voltage standby or zero power standby.
   - [Zero Power Standby]: The device will not wake up after turning off in this sleep mode.
   - [Low Power Standby]: In this mode, the system can be woken up by IO alarm, phone call, or SMS, starting the main unit.
2. Sleep Time: Set the sleep duration (0~100 hours), default is 100 hours. Sleep time is the duration in low power standby before the device enters zero power standby if it hasn't been woken up or started.
3. Low Voltage Protection: Enable low voltage protection.
4. Battery Low Voltage Protection: To protect the car battery, the device will enter sleep mode when the battery voltage is below the set value with the ignition on, and shut down with the ignition off.
5. Voltage Startup: In sleep mode, when the battery voltage is above the set value, the device will resume normal power on state.

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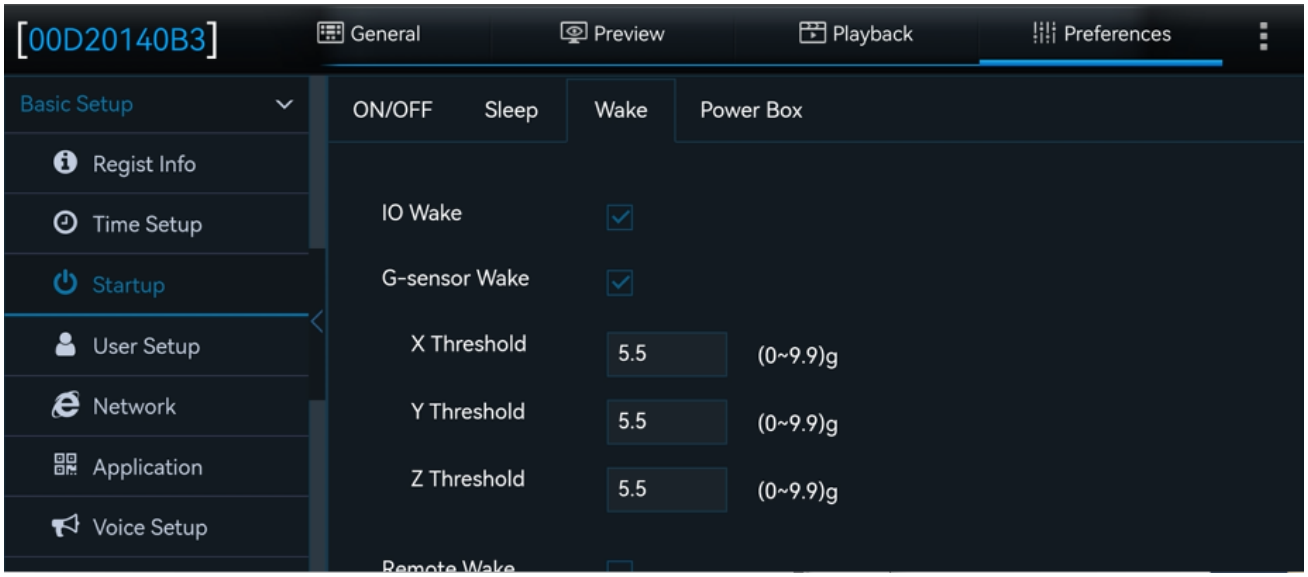
6. Low Voltage Upload: When enabled, low voltage protection triggers will automatically report to the platform.

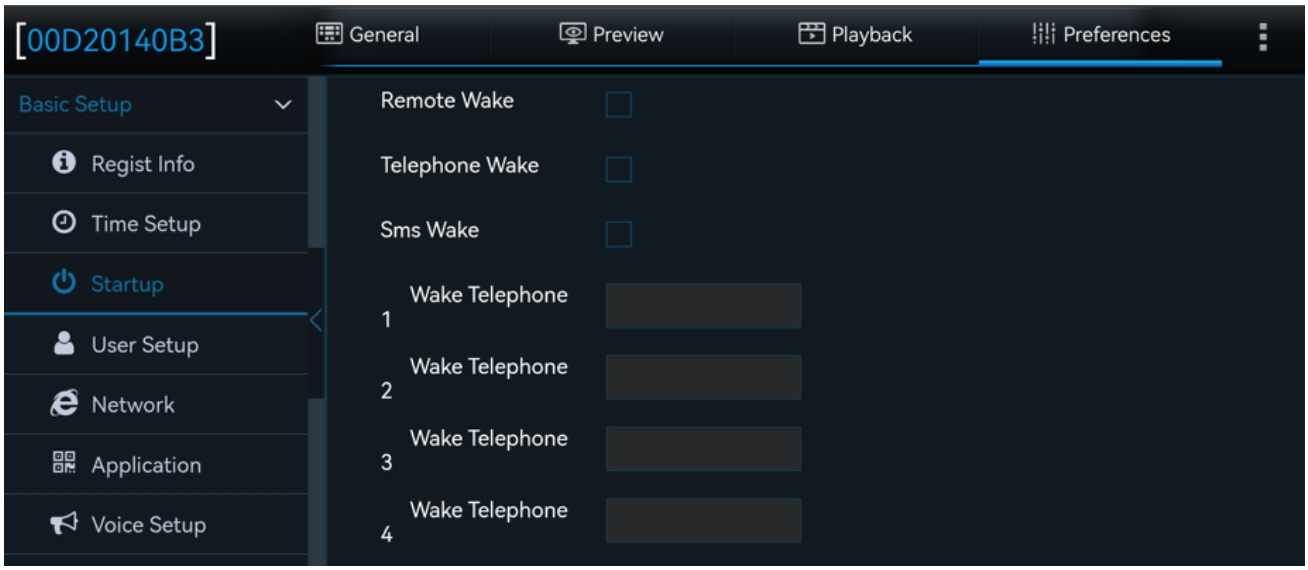
7. Active Mode: When enabled, GPS data will be uploaded to the platform at set intervals during sleep mode.

Special Note: When low voltage protection is not enabled, the default low voltage protection threshold is 7V.

- Sleep Wake-Up

Click [Preferences] > [Basic Setup] > [Time Setup] > [Wake]. The interface is as follows:





Enable wake-up methods by selecting the checkboxes:

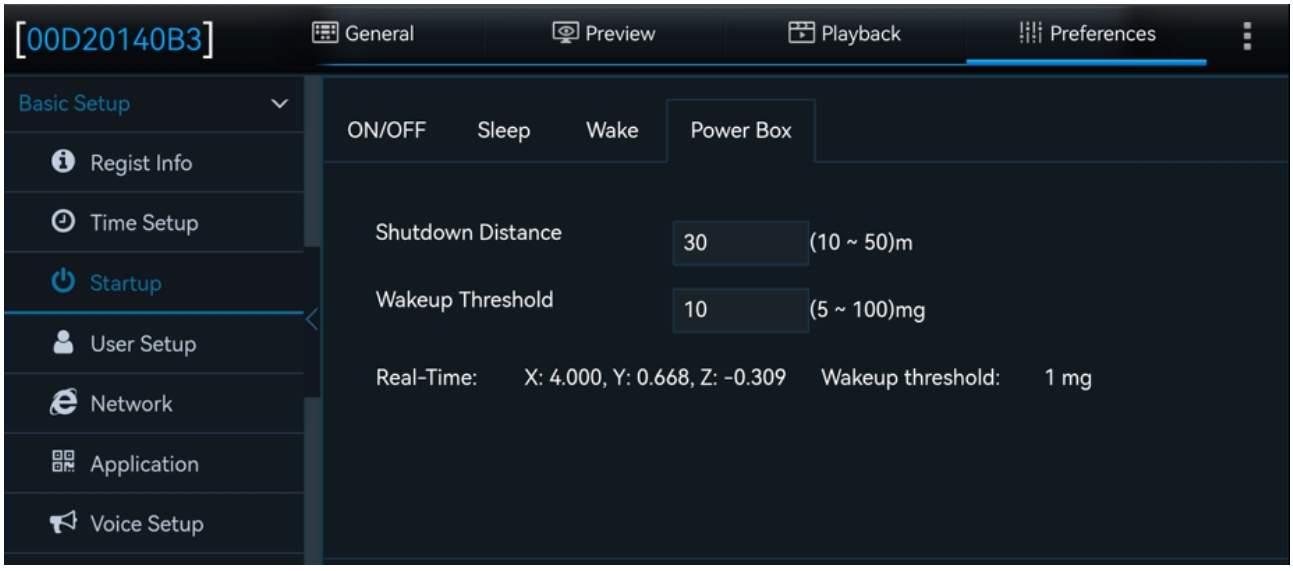
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1. IO Wake-Up: Wake up the main unit by triggering an IO alarm.
2. G-Sensor Wake-Up: Wake up the main unit when the device detects movement in the X/Y/Z directions exceeding the threshold value. The default wake-up threshold for all axes is 5.5g.
3. Remote Wake-Up: Wake up the device remotely through platform commands. This is supported by CEIBA2 and FTCloud, and only supports the first N9M server.
4. SMS Wake-Up: Wake up the main unit by sending an SMS with the content "WAKEUP" to the device, after setting up the supported phone numbers.
5. Phone Call Wake-Up: Wake up the main unit by calling the device, after setting up the supported phone numbers.

Special Note: Both SMS and phone wake-up functions require the SIM card in the device to support SMS and phone services.

- Power Box

Click Preferences > Basic Setup > Startup > Power Box. The interface is as follows:



Set the shutdown and wake-up thresholds controlled by the power box:

1. [Shutdown Distance]: This measures the vehicle's movement distance within one minute to determine if it meets the shutdown conditions. If the distance is below the threshold, the device will initiate the shutdown countdown. The range is 10~50m, with a default of 30m.

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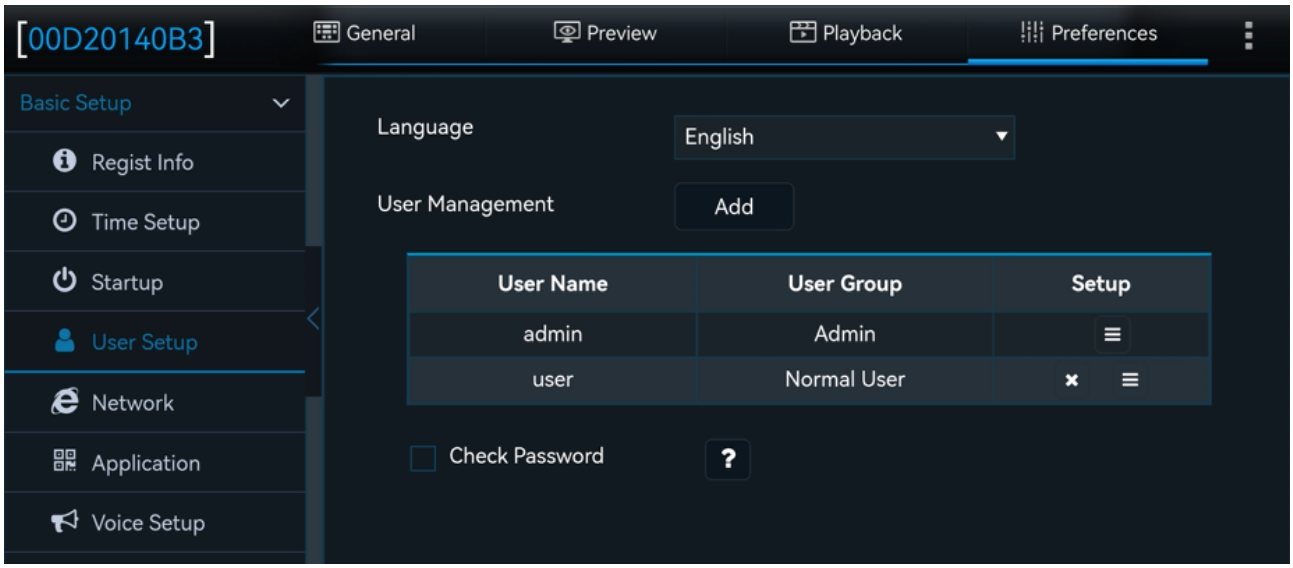
2. [Wake-Up Threshold]: Based on the G-Sensor's detected acceleration, the main unit is woken up if any axis exceeds the threshold value. The range is 5~100mg, with a default of 10mg. Adjust this value based on vehicle type to prevent false triggers.

Warning: G-sensor based wake-up might delay device start-up due to small vehicle vibrations or cause shutdown at idle (adjust the shutdown delay to solve idle shutdown at traffic lights).

3、Real-Time Data: The real-time display of 3-axis data and current wake-up value is shown below.

5.7.4 User Setup

Click [Preferences] > [Basic Setup] > [User Setup]. The interface is as follows:



In the user settings interface, you can configure language, MP3 voice options, and login user account information. If password complexity is required, you can check the password complexity requirement box.

1. Language and MP3 Voice Options: You can select from Simplified Chinese, Traditional Chinese, English, Latin American Portuguese, Latin American Spanish, European Spanish, French, Russian, and Japanese (8 countries in total). Note that Simplified and Traditional Chinese only differ in interface display, with identical voice

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prompts. Latin American and European Spanish have different voice prompts but identical interface displays. In Veyes, users can only set the voice prompts; the interface language follows the phone system language and is not affected by this setting. After setting and saving in Veyes, the function takes effect.

2. Click the [Add] button to add a regular user and set the account password for the new regular user.

3. Click the button in the user settings section to set the login account password.

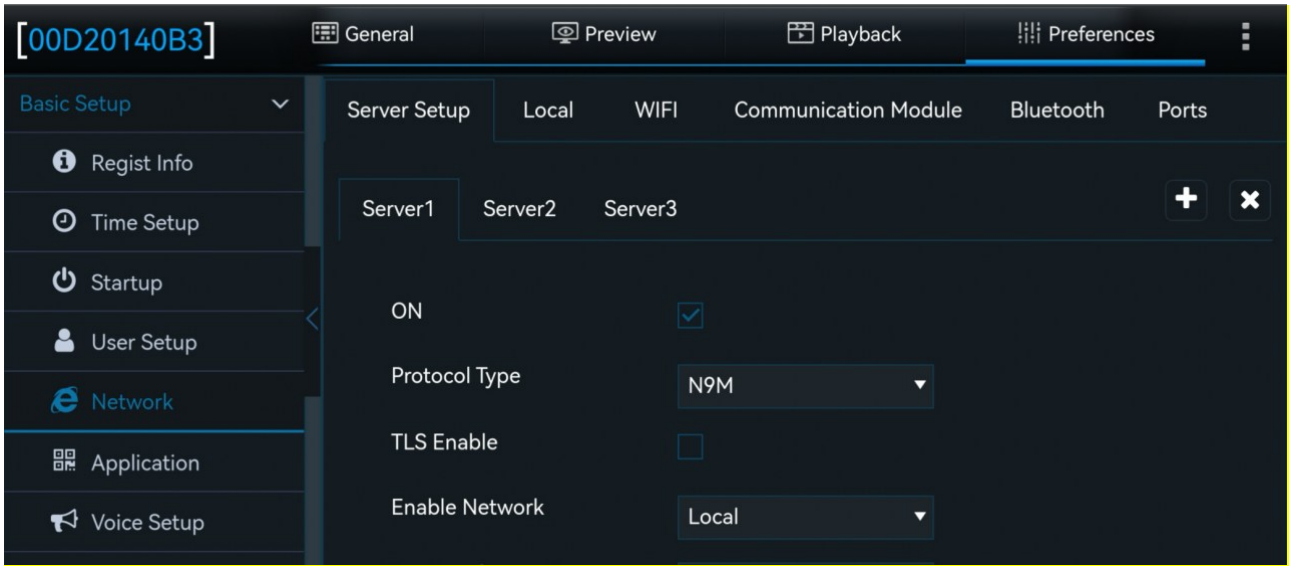
4. admin (Administrator): The system comes with a default administrator account. It has permissions to add/delete regular users and set parameters. It can add up to two regular users.

5. user (Regular User): The system comes with a default regular user account with query and settings permissions only.

5.7.5 Network Settings

- Server Settings:

Click [Preferences] > [Basic Setup] > [Network] > [Server Setup]. The interface is as follows:



1. Click the button on the right to add a server. Click the button to delete the server in the current interface (server 1 cannot be deleted).

2. Enable: Check to enable the server, supporting up to 4 servers simultaneously.

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Uncheck to stop reporting to that server, but the server parameters will be saved.

3. Protocol Type: Options are N9M and 808.
   - [N9M]: Protocol type used for reporting to the CEIBA2 or FT Cloud video monitoring platform.
   - [808]: Protocol type used for reporting to the 808 platform (not used in overseas freight).

4. Enable Network: Options are Wired Network, WiFi, Communication Module, and Adaptive. Adaptive means the system automatically selects the available network to connect to the platform, with the priority of WiFi > Wired Network > Communication Module.

5. Registration Server Address: Enter the IP address or domain name of the registration server for reporting.

6. Registration Server Port: Enter the corresponding port for the registration server.

7. TLS Encryption Port Number: During normal operation, data interaction between the device and platform is transmitted via TLS encryption, ensuring data security. Enable TLS and configure the encryption port number. Currently, only FTCloud supports TLS encryption.

Warning: TLS encryption is not supported in sleep mode.

8. Media Server Address: Enter the IP address of the media server for reporting.

9. Media Server Port: Enter the corresponding port for the media server.

The default address and port for the registration server and media server are the same.

10. Support SMS Modification of Server Parameters: If the server address changes or becomes abnormal, the device will disconnect from the server, stopping all remote services. To avoid this, the server's IP address and port can be modified via SMS.

The SMS content consists of the following 8 types, separated by commas and ending with an exclamation mark. Send the SMS with the actual parameters. Example:

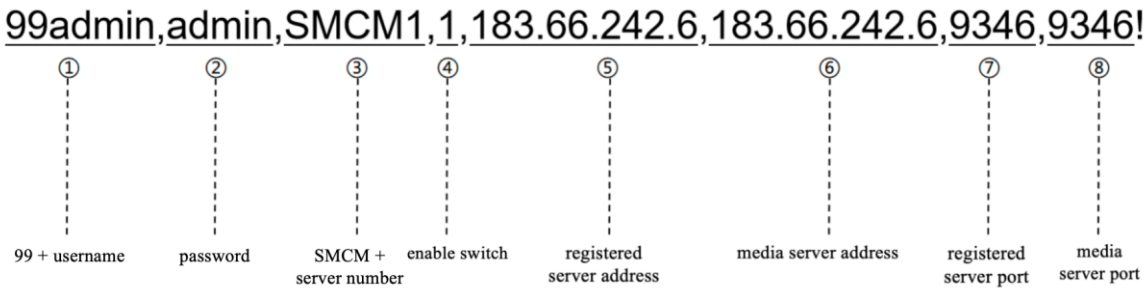
Example: 99admin,admin,SMCM1,1,183.66.242.6,183.66.242.6,9346,9346!

This indicates changing the server 1 parameters for a device with both username and

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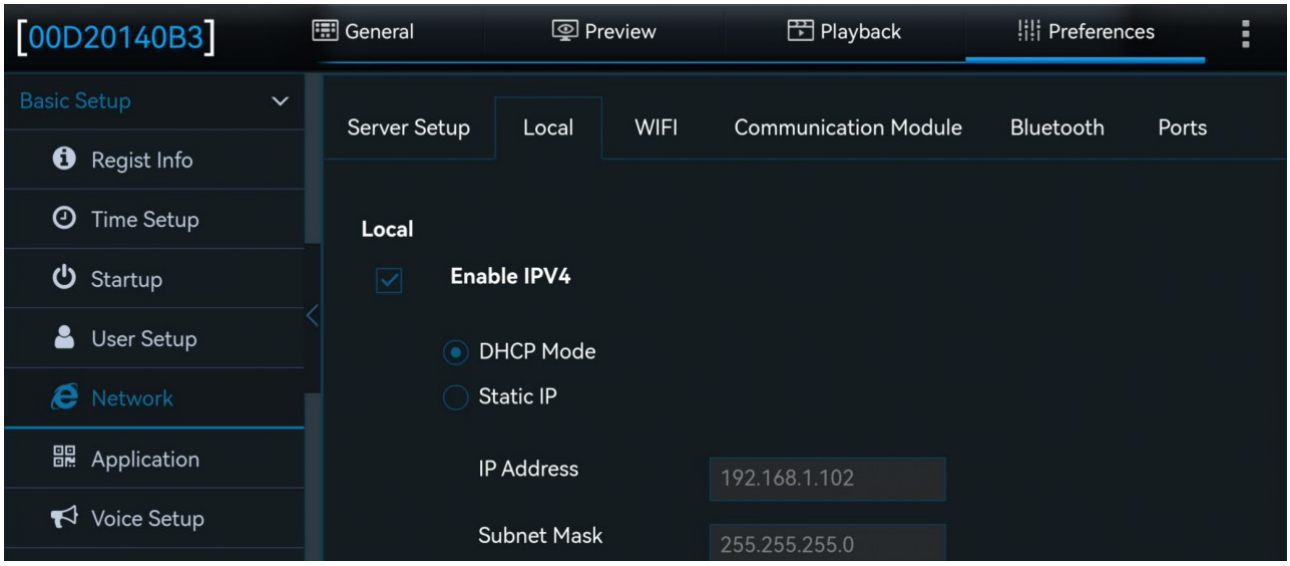
password as admin, setting the registration/media server IP to 183.66.242.6 and the port to 9346.

Special Note: After sending the SMS to modify server parameters, a confirmation result will be received. The result content "99SMCM Succeed!" indicates successful parameter modification.

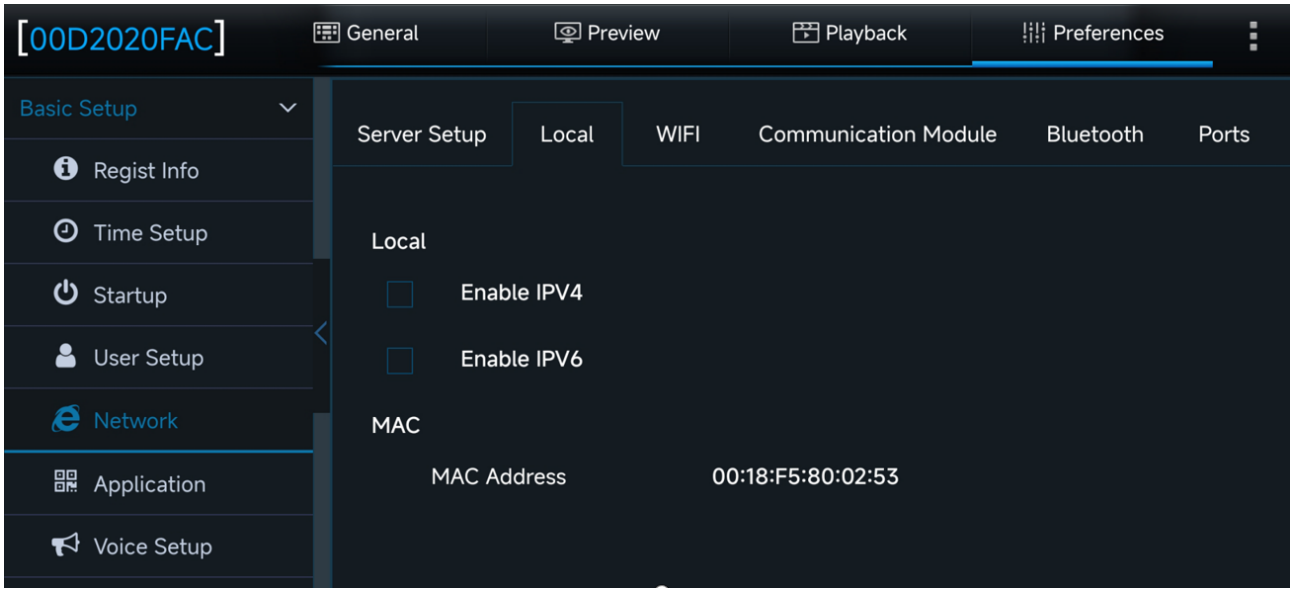


- Wired Network (The C6 Lite2.0/C6 Lite2.0-S does not support an Ethernet port, therefore this interface exists but is not functional):

  Click [Preferences] > [Basic Setup] > [Network] > [Local]. The interface is as follows:



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In the local network settings interface, to avoid IP address conflicts and expand the address space, the IPV6 network protocol has been added in addition to IPV4. The IP address, default gateway, preferred DNS server, and alternate DNS server fields support input up to 128 bytes. When recognized as an IPV6 address, there is no subnet mask, and it supports the input of letters, numbers, and symbols.

1. [Enable IPV4]: Check the IPV4 enable box to display the corresponding parameter setting interface.

   [DHCP Mode]: Automatically obtain an IP address. When checked, the network automatically assigns a dynamic IP address, with DNS being either dynamic or static.

   [Static IP]: Use a static IP address. Use the set static IP address, subnet mask, and default gateway. In this case, DNS must be statically assigned.

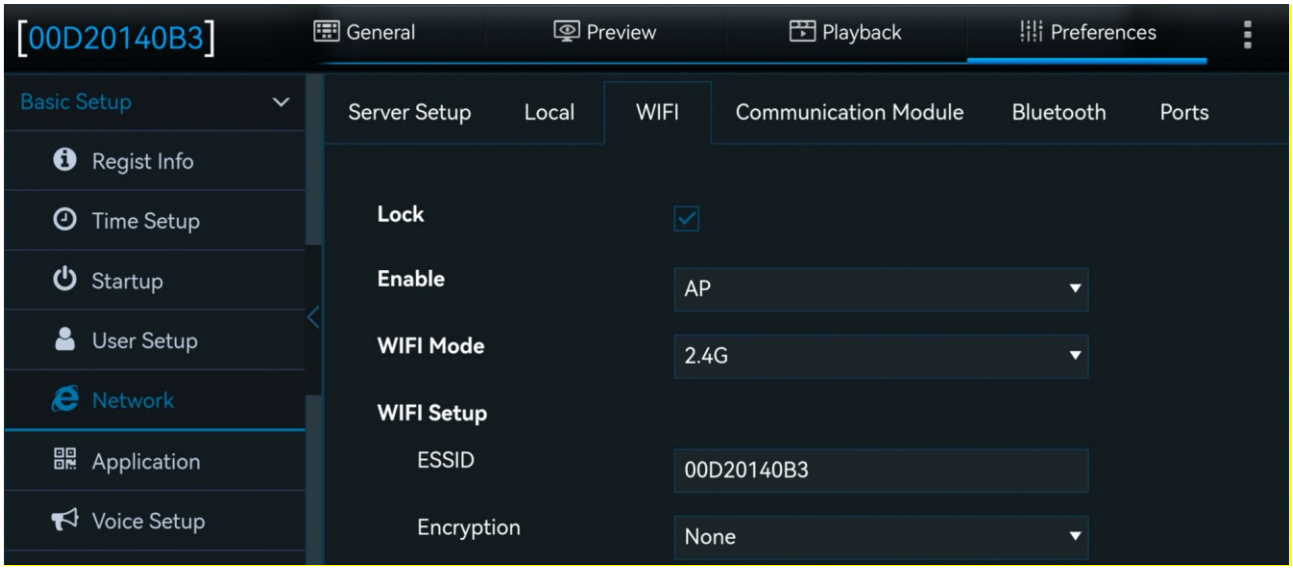
2. [Enable IPV6]: Check the IPV6 enable box to display the corresponding parameter setting interface. The parameter descriptions are the same as for IPV4.

3. [MAC]: Displays the MAC address, showing the default address.

- WIFI Settings：

Click [Preferences] > [Basic Setup] > [Network] > [WIFI]. The interface is as follows:

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1. [Lock]: Enable switch for modifying WIFI hotspot parameters. When enabled, WIFI hotspot-related parameters will not be modified during parameter import.

2. [Enable]: WIFI connection mode. Options are AP mode, Client mode, and Disable mode, with Disable mode as the default.

- AP: When configured in AP mode, the WIFI name automatically associates with the vehicle's license plate number, displayed in this interface without modification and no password setting. The device always remains in hotspot mode upon boot and thereafter.
- Client: When configured in Client mode and the ESSID and password for nearby valid WIFI are set, the device can automatically search for and connect to nearby valid WIFI hotspots. After a successful connection, WIFI can be used to report to the platform. The device will automatically reconnect when re-entering the area. When configured in Client mode, the device defaults to AP mode upon boot, switching to Client mode after 3 minutes (default, configurable) if no Veyes connection is established. When using Client mode to report to the platform, set the duration for the AP mode upon boot to quickly report to the platform. Configure an appropriate duration for AP mode based on actual usage (0~180 seconds). If the AP mode duration is set, the device will switch to Client mode and report to the platform after the duration elapses if no Veyes connection is made.

  Note: The AP mode duration parameter is displayed only when WIFI mode is set to Client or Disable and controls only the AP mode duration after boot. AP mode entered via button press is not affected by this parameter. To switch to AP mode

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during normal operation, double-press the button; if no Veyes connection is made within 3 minutes, the device will switch back to Client mode.

- Disable: When configured in Disable mode, WIFI is not used, and Client mode is disabled. The device defaults to AP mode within 3 minutes of boot (this device has an AP mode switch button; pressing the button switches to AP mode. If no Veyes connection is made within 3 minutes, the device exits AP mode, and the module sleeps).

3. [WIFI Mode]: When WIFI mode is set to AP mode, you can set the WIFI band, choosing between 2.4G, or Adaptive.

4. [ESSID]: In AP mode, this is the hotspot name used when the device is a hotspot and the WIFI name used when a mobile terminal connects to the device (no longer the serial number). In Client mode, this is the WIFI name used when the device connects to external WIFI.

5. [Encryption Method]: In AP mode, the encryption method can be None, WEP, WPA/WPA2-PSK. In Client mode, it can be None, WEP, WPA/WPA2-PSK, WPA2.ENTERPRISE.

6. [Password]: In AP mode, this is the password for connecting to the device's hotspot. A correct password is required to connect to WIFI (if the hotspot name and password are not set, no password is needed; connect by clicking the serial number or license plate number). In Client mode, this is the password for connecting to external WIFI.

7. [Hotspot]: Enable this to support network access via the device's AP hotspot; disabling it supports only Veyes for maintenance.

8. [WIFI Whitelist]: When the whitelist is not enabled, connecting to the device's AP hotspot allows access to all networks. When enabled, access is restricted to the IP list.

Enabling this requires filling in the relevant IP addresses in the IP list, supporting up to 5 IP addresses. Only the networks of the listed IP addresses can be accessed; if the IP list is empty, no networks can be accessed.

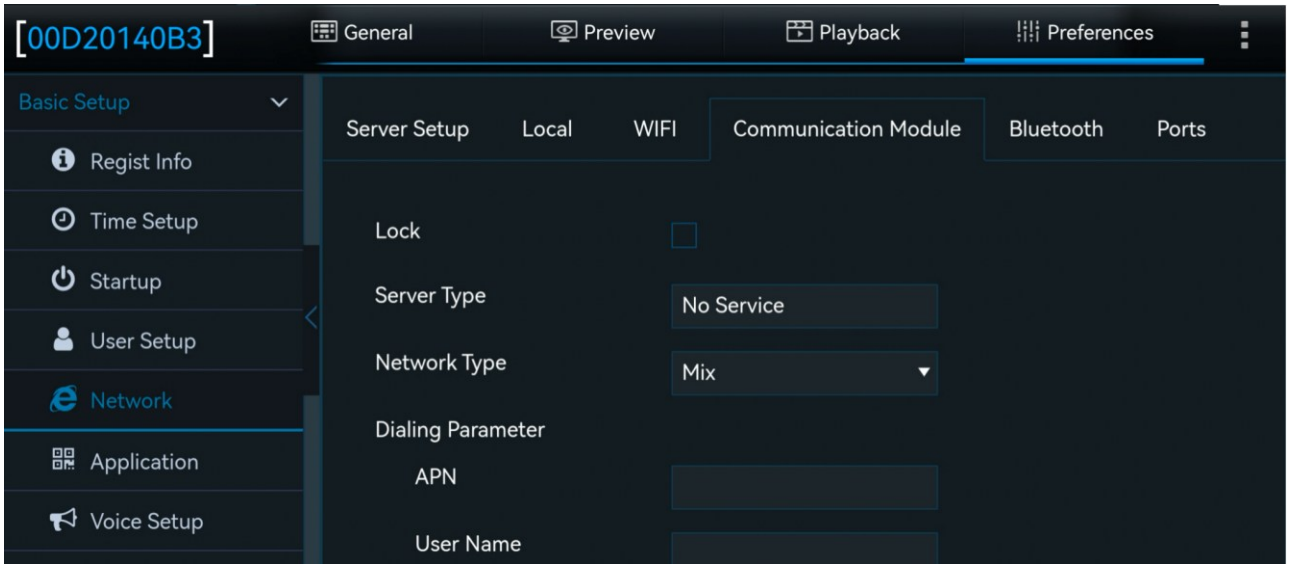
Note: The whitelist currently only supports IP address restrictions, not URLs or domain

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names.

- Communication Module:

Click [Preferences] > [Basic Setup] > [Network] > [Communication Module]. The interface is as follows:



1. [Import Lock]: Enable this option to prevent importing parameters and restoring factory settings for all parameters in the communication module interface.

2. [Server Type]: When a SIM card is inserted, the device will automatically detect and display the communication module type. It shows "No service" when there is no module.

3. [Network Type]: Default is hybrid mode, meaning the communication module supports 2G/3G/4G.

4. Dialing Parameters: Includes access point, username, password, data service number, and authentication method (None, PAP, CHAP, or Mixed). Enter the parameters provided by the SIM card manufacturer. The default is empty, using built-in parameters for dialing if left blank.

5. [Dialing Activation Mode]: The network module can be activated through external conditions. The dialing activation modes are: Always Connected Mode, Phone or SMS Activation Mode.

   1) [Always Connected Mode]: The network module automatically starts dialing and connects to the server after the device starts.

   2) [Phone or SMS Activation Mode]: The network module does not work after the device

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starts; it only activates and starts dialing by calling or texting the device's phone number, then connects to the server. Supports configuring up to 3 phone numbers.

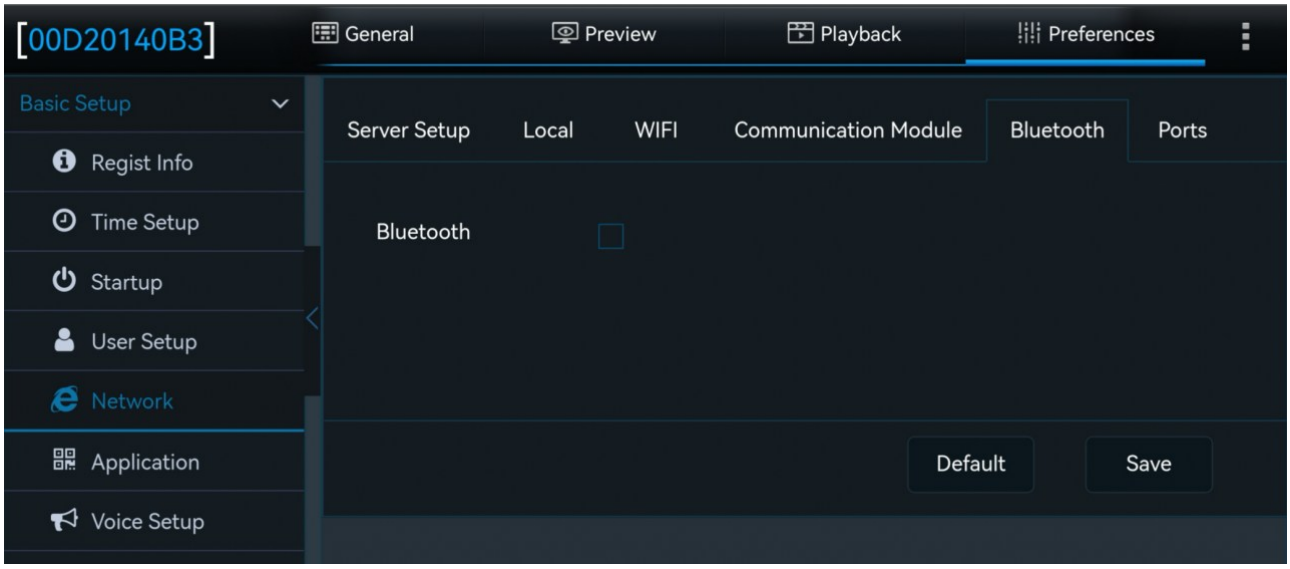
3) [Switch Activation]: The network module does not work after the device starts; it only activates and starts dialing by triggering the IO sensor, then connects to the server.

4) [SIM Card MTU Value]: The interface supports setting the MTU value for the SIM card, default is 1500.

- Bluetooth:

Click [Preferences] > [Basic Setup] > [Network] > [Bluetooth]. The interface is as follows:

Set the Bluetooth switch enable to on or off. The Bluetooth function is currently unavailable.



- Ports

WEB Port: The default is 80. This port is used when accessing via Internet Explorer.

RTSP Port: The default is 554. After logging in with the correct username and password, the main unit uses a fixed IP address to perform real-time video preview and playback via RTSP.

Warning: Each stream only supports one RTSP request simultaneously.

RTSP Stream Formats:

a. Main streaming video : rtsp://user:pwd@IP:554/mainstreamX

b. Sub streaming video: rtsp:// user:pwd@IP:554/substreamX

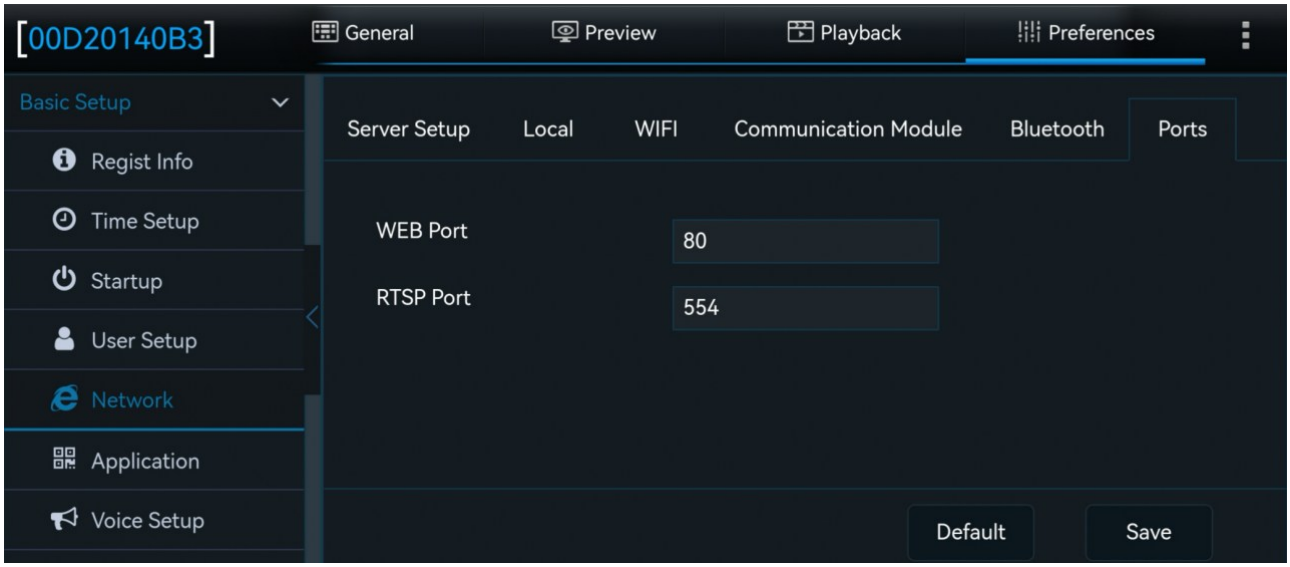
X is Channel number， Start from zero

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Examples:

rtsp://admin:admin@10.20.112.17:554/mainstream0

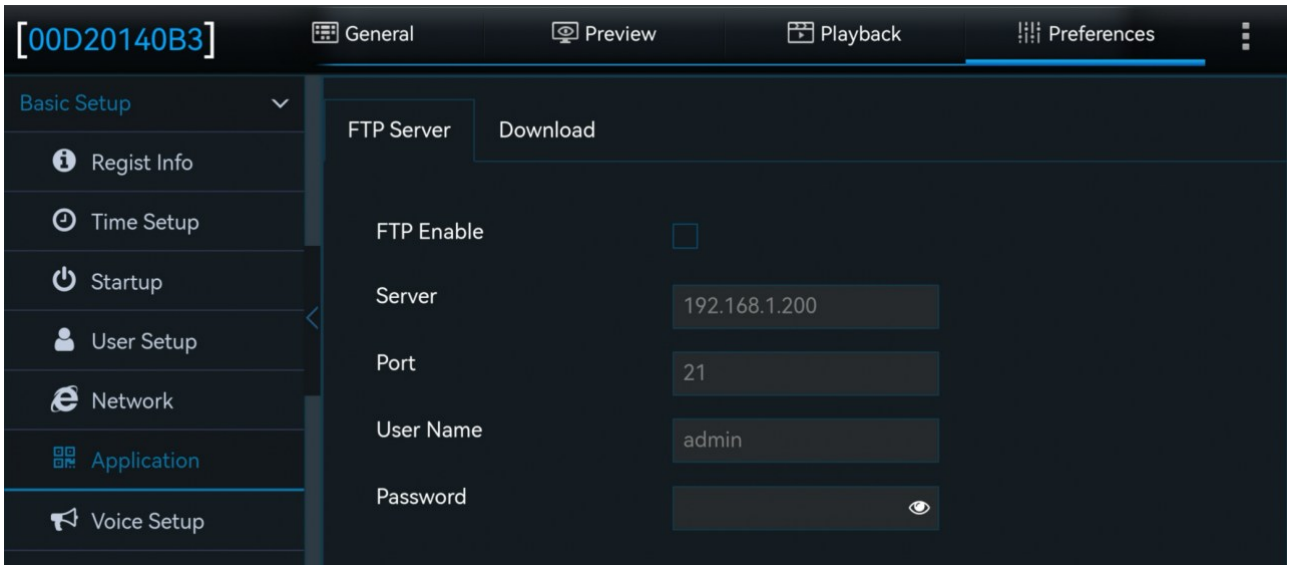
rtsp://admin:admin@10.20.112.17:554/substream1



5.7.6 Network Applications

- FTP Server：

The device supports connecting to an FTP server. After configuring the IP, port, username, and password of an established FTP server, the device can connect to the FTP server to upload images or download files. Click [Preferences] > [Basic Setup] > [Application] > [FTP Server]. The interface is as follows:

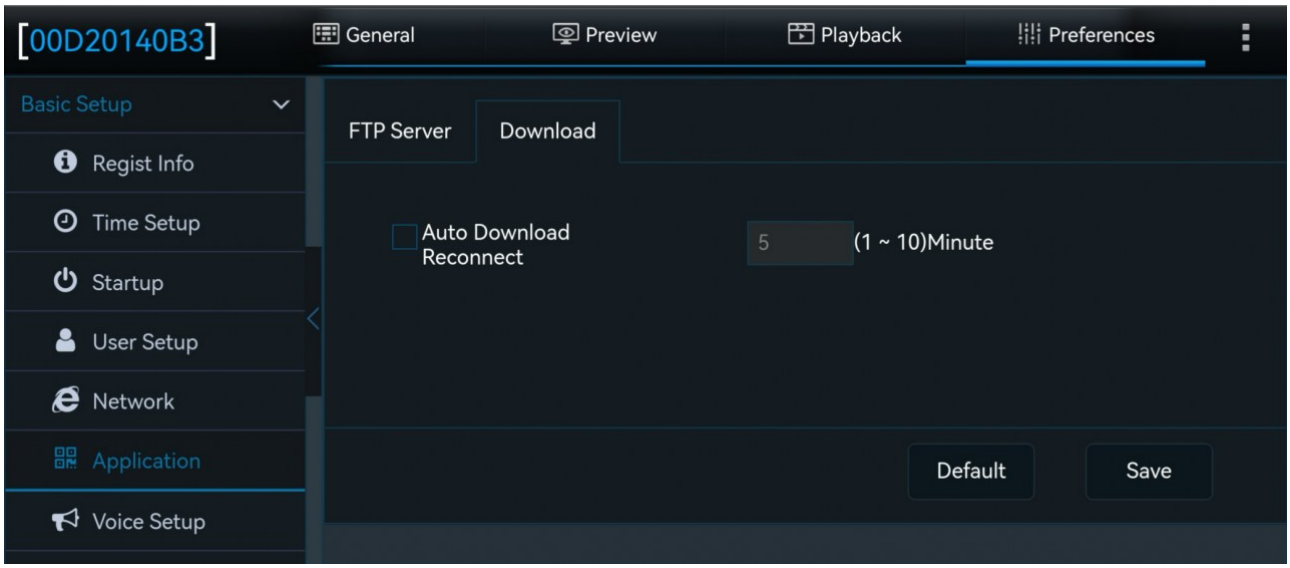


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- Automatic Download Reconnection: The automatic download function is used in conjunction with the CEIBA2 platform. CEIBA2 creates automatic download tasks, managing downloads for the device, such as which vehicles to download, and which network (4G, WIFI) to use. For WIFI networks, it specifies which WIFI-AP each vehicle should use for downloading, and how many vehicles each AP can connect to simultaneously for downloading.

Automatic download reconnection means that when a vehicle returns to the station and cannot connect to the service, it will enter sleep mode, wait for a certain period, then restart and attempt to download again. When download tasks are full or the set AP reaches its limit, the platform will notify the device to enter sleep mode and specify how long to sleep before restarting. This avoids wasting resources while waiting in queue for upgrades

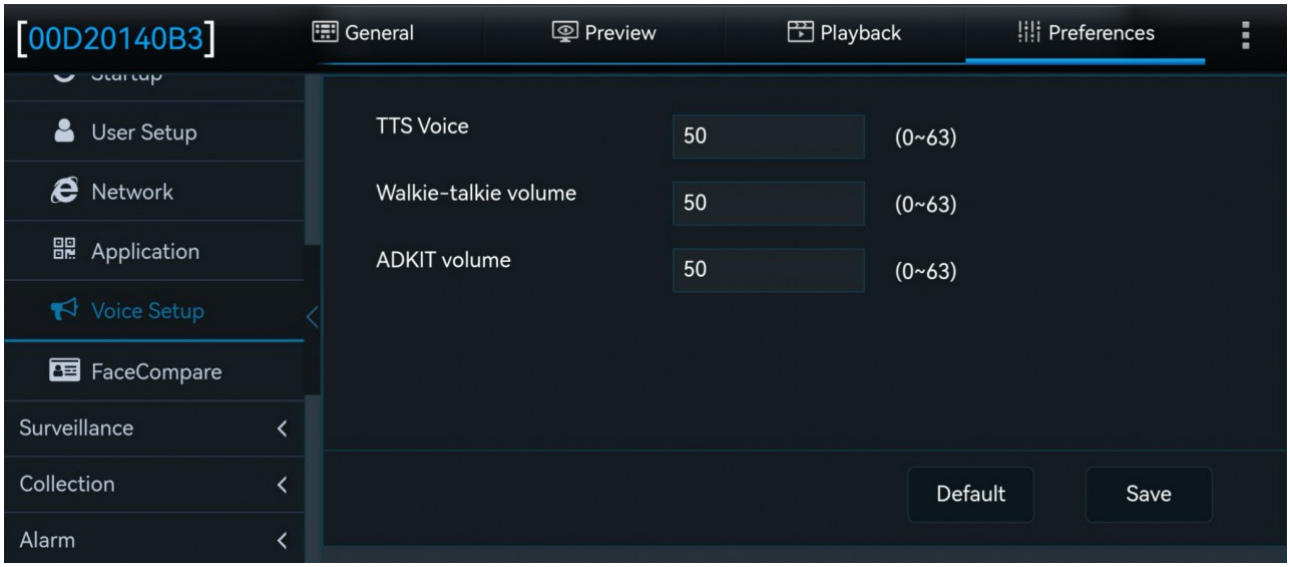
Check the box to enable automatic download reconnection and set the reconnection time, which can be 1-10 minutes (default is 5 minutes).



5.7.7 Voice Setup

Click [Preferences] > [Basic Setup] > [Voice Setup] to manually set the volume for intercom (including MP3 playback volume) and TTS voice. The selectable range is 0-63, with a default of 55. The interface is as follows:

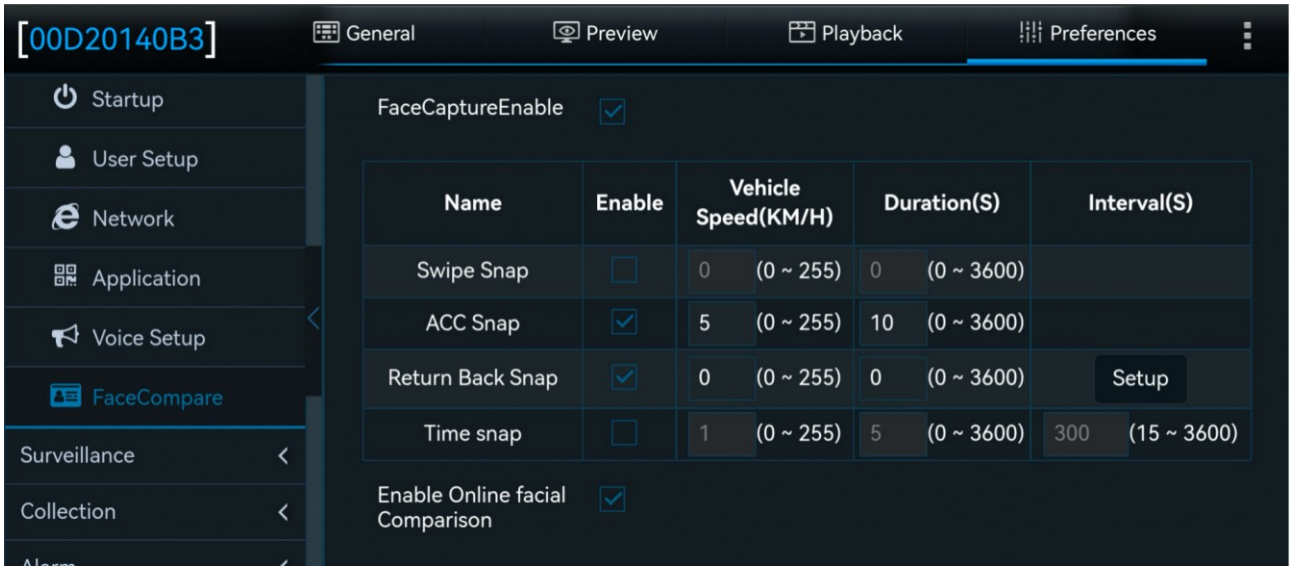
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Warning: TTS currently supports only Chinese and English.

5.7.8 Face Compare

Click [Preferences] > [Basic Setup] > [FaceCompare] to set driver face comparison parameters. This function requires the FT Cloud platform. The interface is as follows:



1. [FaceCaptureEnable]: Enable the face comparison function by checking this option.
2. [Enable Online Facial Comparison]: Enable online facial recognition by checking this option to perform face comparison through the platform. Uncheck for offline face comparison.
3. Face Capture Methods:

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- Swipe Snap: Not supported for online face recognition, hence not detailed here.
- ACC Snap: Requires ACC to go from off to on and provide speed for the device to capture.
- Return Back Snap: From no driver to driver present, meeting the leave and return trigger conditions for the device to capture.
- Time Capture: Set the interval time, ranging from 60 to 3600 seconds, with a default of 300 seconds.

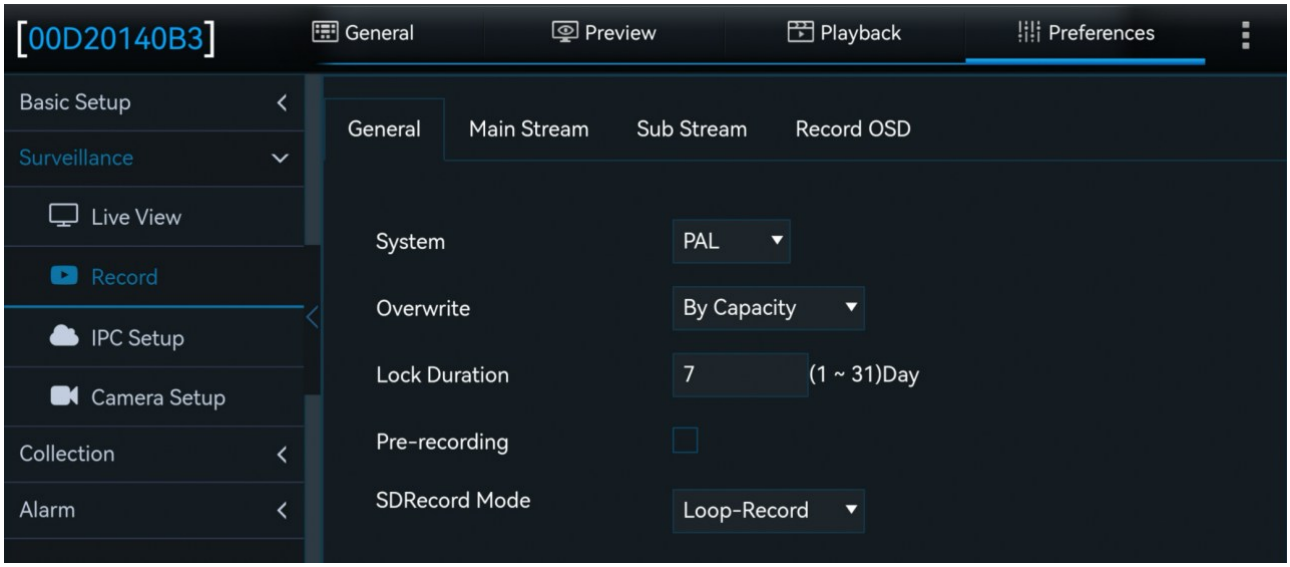
Special Note: The online face comparison function requires the FT Cloud platform. Please contact your local dealer or technical support for activation.

5.8 Recording Settings

5.8.1 Recording

2.7.2.1 **Recording General Settings:**

This function includes selecting system format, auto-overwrite function, recording lock days, pre-recording for alarm recordings, and SD card recording mode. Click Preferences > Surveillance > Record > General. The interface is as follows:



1. [System Format]: Includes PAL and NTSC.

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Warning: The system format must match the video source (camera format) for the device to recognize the camera.

2. [Auto Overwrite]: Options are capacity overwrite, day overwrite, minute overwrite, or never overwrite.

Special Note: Locked recordings can only be overwritten or deleted after the protection time expires or they are manually unlocked.

- Default Capacity Overwrite:
  1) Capacity overwrite means that when the remaining storage space is insufficient, the system will automatically overwrite historical recordings to store new ones. This usually starts when less than 1% of storage is left. Capacity overwrite is based on storage blocks, which vary in size depending on the storage capacity. Users do not need to be concerned with the detailed specifics.
  2) For multiple storage devices, if cyclic recording is selected, capacity overwrite will occur across storage devices. For example, after Storage 1 is full, Storage 2 will be used for recording. When Storage 2 is full, historical recordings in Storage 1 will be overwritten.
  3) Capacity overwrite will always prioritize the oldest recordings. Locked recordings will be overwritten once their lock duration expires or they are manually unlocked.
- Day Overwrite:
  1) Day overwrite means overwriting based on the number of days configured for storage. Configurable range is 1-31 days.
  2) If configured to 1 day, recordings are only saved for one day. If configured to 31 days, recordings are saved for 31 days before starting to overwrite.
  3) Recording retention of 31 days assumes sufficient storage capacity. If the actual recording capacity is only 7 days, the SD card will start overwriting after 7 days.
- No Overwrite: Main stream recordings, mirror streams, sub-streams, and alarm streams

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will not be overwritten. Recording stops when storage is full.

- Minute Overwrite:

  Minute overwrite can be set from 1-1440 minutes, with a default of 30 minutes.

  Recordings will be overwritten after the set duration, with a precision of about 1 minute.

  For example, setting it to 30 minutes means the recording duration will not exceed 31 minutes.

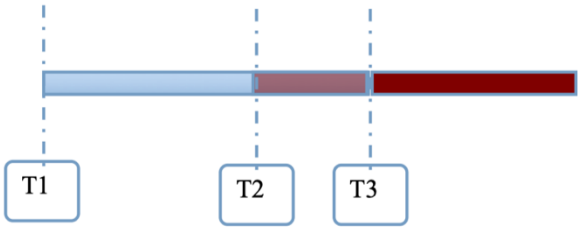
3. [Recording Lock]:

Recording Lock Days: Provides time protection for locked recordings to prevent early deletion. The default retention is 7 days. For setting locked recordings, refer to [Preferences] > [Alarm].

4. Alarm Recording Pre-record

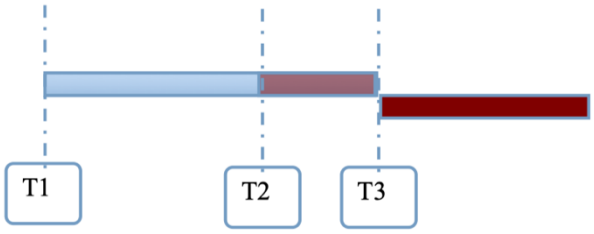
During alarm recording, the system extracts video footage from a set period before the alarm event to facilitate event analysis. The default pre-recording time is 15 minutes, with an adjustable range of 1-60 minutes.

1）If regular recording is active, when an alarm occurs, the system will extract a segment of the regular recording according to the pre-recording time set in the alarm linkage and mark it as alarm recording. T1 to T3 are regular recordings. When an alarm occurs at T3, the segment from T2 to T3 in the regular recording will be marked as alarm recording, and recordings after T3 will be marked as alarm recordings.

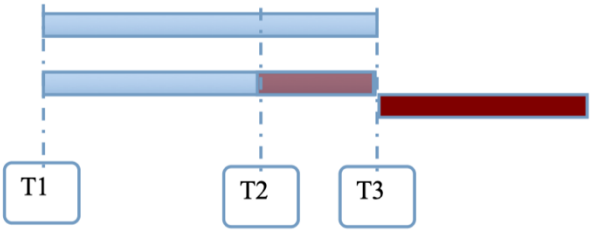


2）If there is no regular recording and the pre-recording switch is on, the device will create a pre-recording stream segment when powered on. When an alarm occurs at T3, the segment from T2 to T3 in the pre-recording stream will be marked as alarm recording.

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3）When non-alarm recordings are I-frame recordings: after powering on, the device creates two stream segments, an I-frame stream segment and a pre-recording stream segment. When an alarm occurs, the segment from T2 to T3 in the pre-recording stream will be marked as alarm recording.

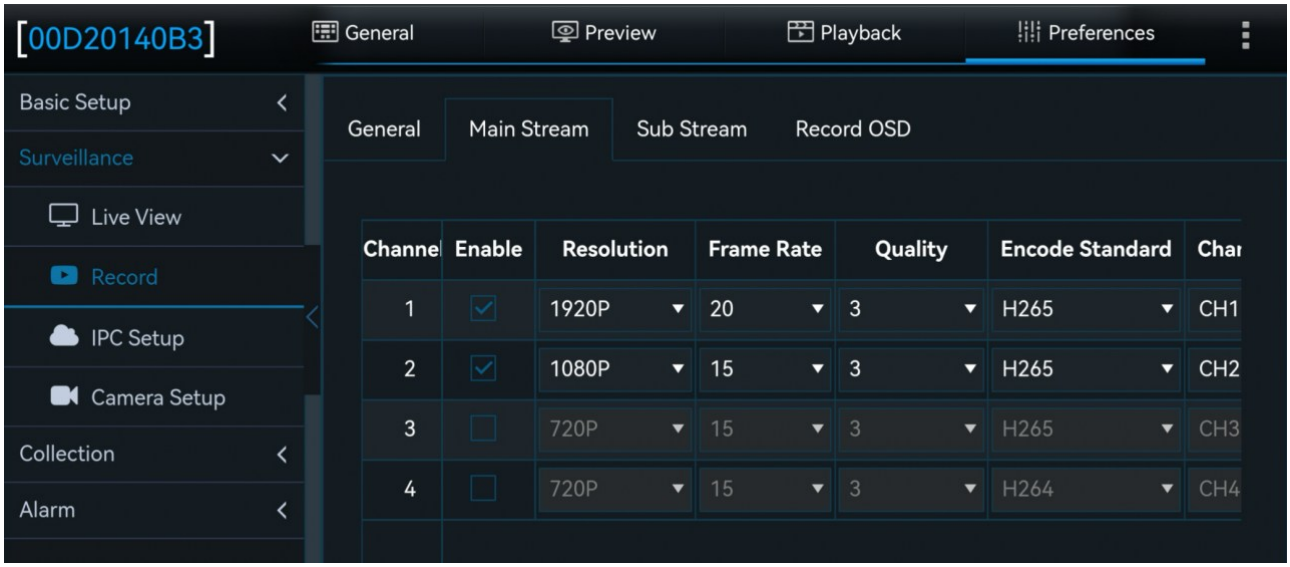


5. [SD Card Recording Mode]: Optional SD card secondary card recording mode, supporting sub-stream recording, mirror recording, alarm recording backup, and loop recording.
   - [Sub-stream Recording]: Stores sub-stream recordings in the SD card.
   - [Mirror Recording]: Mirror recording parameters all adopt main stream parameters; mirror recording data includes video data, log information, and black box data. If the main stream video channel is closed, mirror recording for that channel is also unavailable.
   - [Alarm Recording Backup]: Only stores recordings when an alarm occurs.
   - [Loop Recording]: For dual SD cards, this refers to loop recording.

2.7.2.2 Main Stream Settings

This interface allows you to set the recording mode, recording parameters, and audio parameters for each channel. Click [Preferences] > [Surveillance] > [Record] > [Main Stream], and the interface is as shown below:

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Explanation: Each channel can be individually set for recording mode.

Once the recording mode is selected, it will be applied to both sub-stream and mirror recording modes simultaneously.

1. Enable Recording: Checking this option will enable the main stream recording function.
2. Resolution Settings: If a digital camera is connected, 720P and 1080P are available by default (selectable resolutions depend on the digital camera's support). If an analog camera is connected, CIF/WCIF/HD1/WHD1/D1/WD1/720P/960P/1080P are available.

Note: The ADAS channel (channel 1) of C6 Lite 2.0 can select up to 1920P.

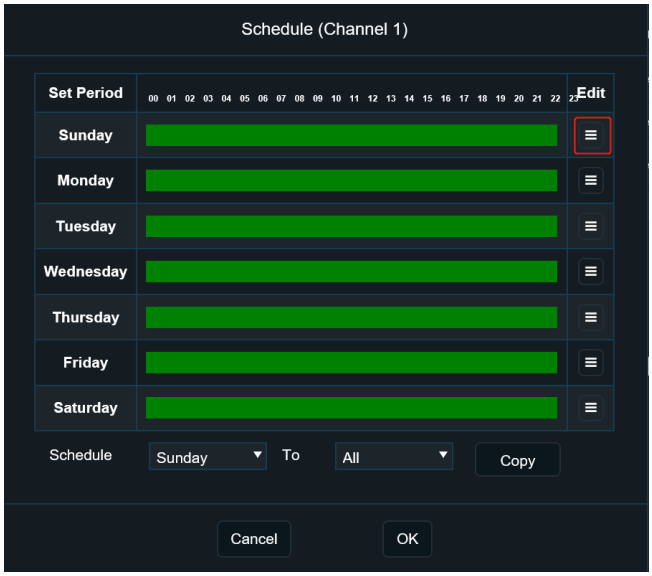
3. Frame Rate: The recording frame rate, i.e., the number of frames played per second. P standard cameras can select 1-25 frames, N standard cameras can select 1-30 frames.
4. Image Quality: The recording image quality, selectable from 1 to 8, where the smaller the number, the better the image quality, with quality 1 being the best.
5. Encoding Standard: Selectable between H264 and H265, with H265 as the default.
6. Channel Name: The channel name can be customized.
7. Recording Mode: Selectable between Boot Recording, Scheduled Recording, and Alarm Recording.

- Boot Recording: With an SD card and recording enabled, boot recording means the device continuously records in the startup state.
- Alarm Recording: Recording starts when the device alarms. Alarm recording settings can

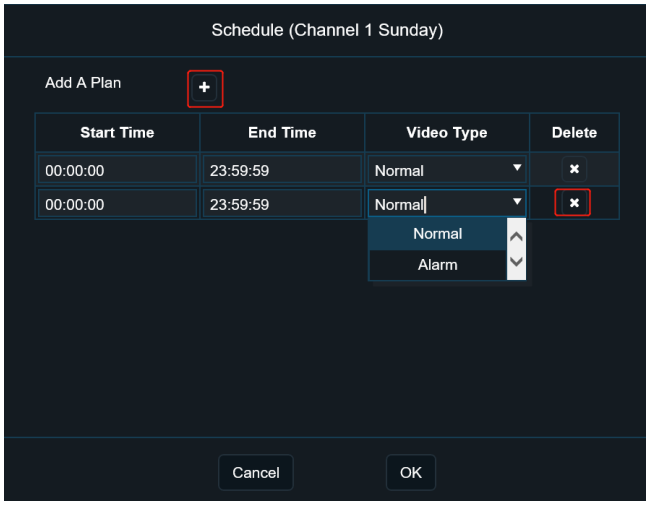
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be found under [Preferences] > [Alarm]; pre-recording before the alarm is also possible.

- Scheduled Recording: Recording follows a set time schedule. Click the button next to scheduled recording to enter the interface below. Click the setting button corresponding to a specific day to add a scheduled recording plan.

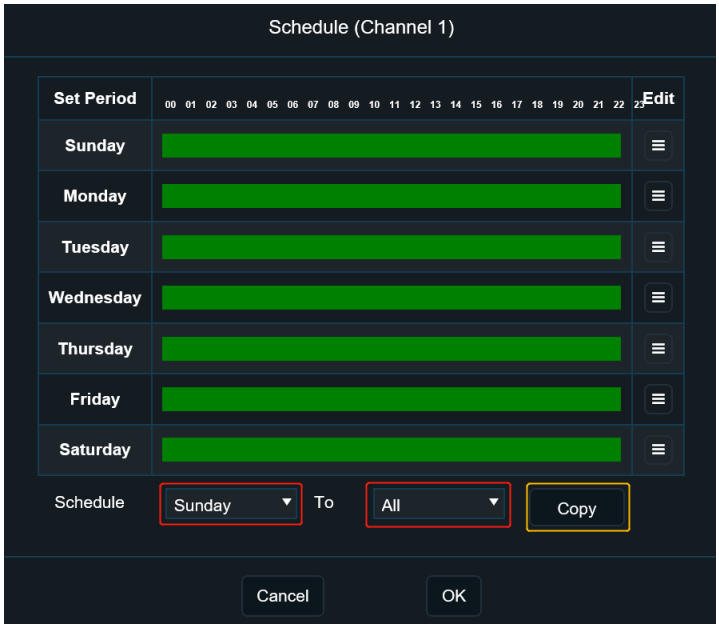


Add a scheduled recording plan on the following interface. Click to add a time plan, and click on the right side of the plan to delete the time plan. On this interface, you can specify whether the recording is a regular recording or an alarm recording.



After setting up the scheduled recording plan for a specific day, you can click the [OK] button to return to the previous step. Use the [Copy] button to copy the scheduled recording plan for one day to other dates, as shown below:

All rights reserved



8. [Recording]

Note: Separate audio recording is not supported.

- Recording: Indicates whether to record audio simultaneously during video recording; options are record audio or not record audio, with the default being record audio.
    1) Record audio: Always record audio during video recording.
    2) Do not record audio: Never record audio during video recording.

9. [Alarm Recording Quality]: Configures the video quality for alarm recordings. The smaller the number, the better the quality, with the default quality being 3.

10. [Encoding Mode]: The video encoding format can be selected as VBR or CBR, with the default being VBR.

11. [Audio Encoding Format]: The options are G711A, G711U, ADPCM, and G726, with the default being ADPCM.

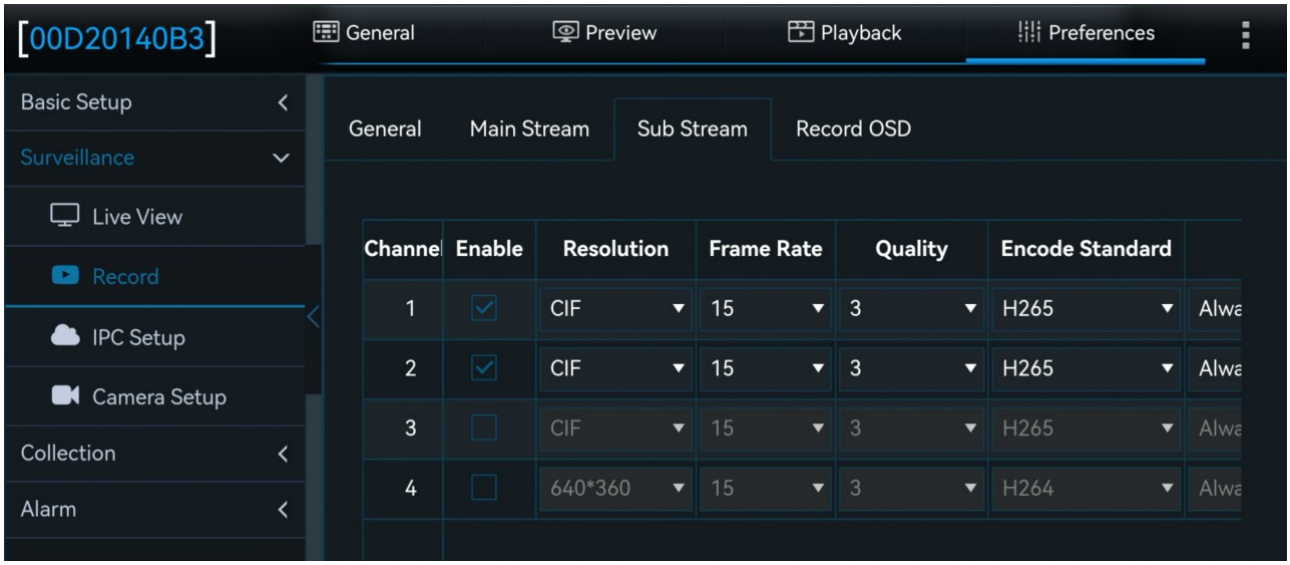
2.7.2.3 **Sub Stream Settings**

This interface allows setting the sub-stream recording parameters and audio recording parameters for each channel.

Note: Sub-stream recording is only possible if the recording mode is set to sub-stream recording and the second slot has a Micro SD card.

Click [Preferences] > [Surveillance] > [Record] > [Sub Stream], the interface is as follows:

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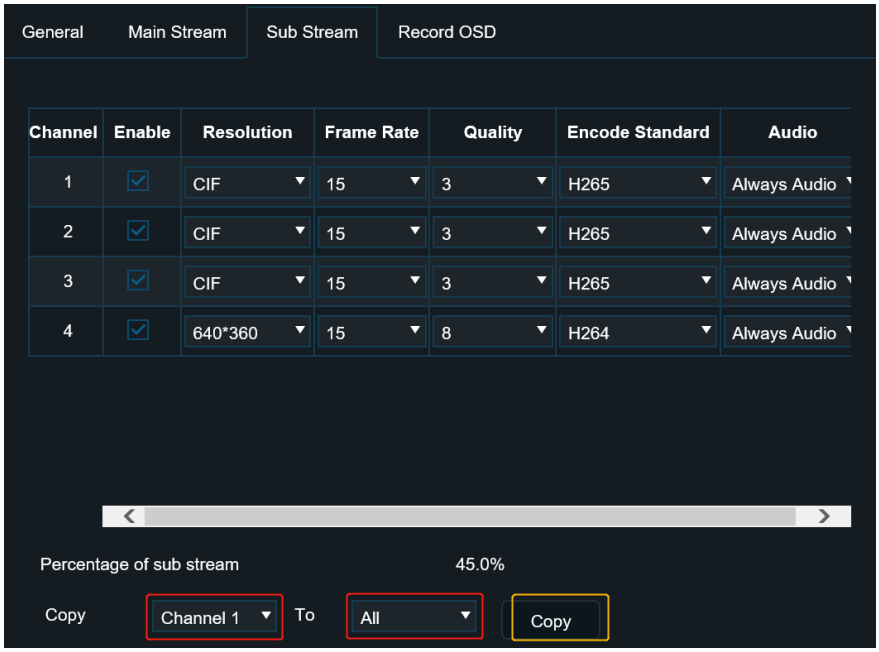
1. [Enable Recording]: Checking this box will enable the sub-stream recording function for the corresponding channel.

Special Note: When the main stream is disabled, it will shut down the entire video input. Enabling the sub-stream will not record the sub-stream in this case.

2. [Resolution Settings]: If an analog camera is connected, options are CIF/HD1/D1; if a digital camera is connected, options are QVGA/640*360.
3. [Frame Rate]: The recording frame rate, which is the number of frames played per second. PAL cameras can choose 125 frames, NTSC cameras can choose 130 frames. The sub-stream frame rate defaults to 15 frames.
4. [Quality]: The recording quality, selectable from 1-8, with smaller numbers indicating better quality, and quality 1 being the best.
5. [Encoding Standard]: The options are H264 and H265, with the default being H264.
6. [Recording]: Indicates whether to record audio simultaneously during video recording; options are record audio or not record audio.

Click the [Copy] button below to copy the sub-stream settings of one channel to other channels, as shown below:

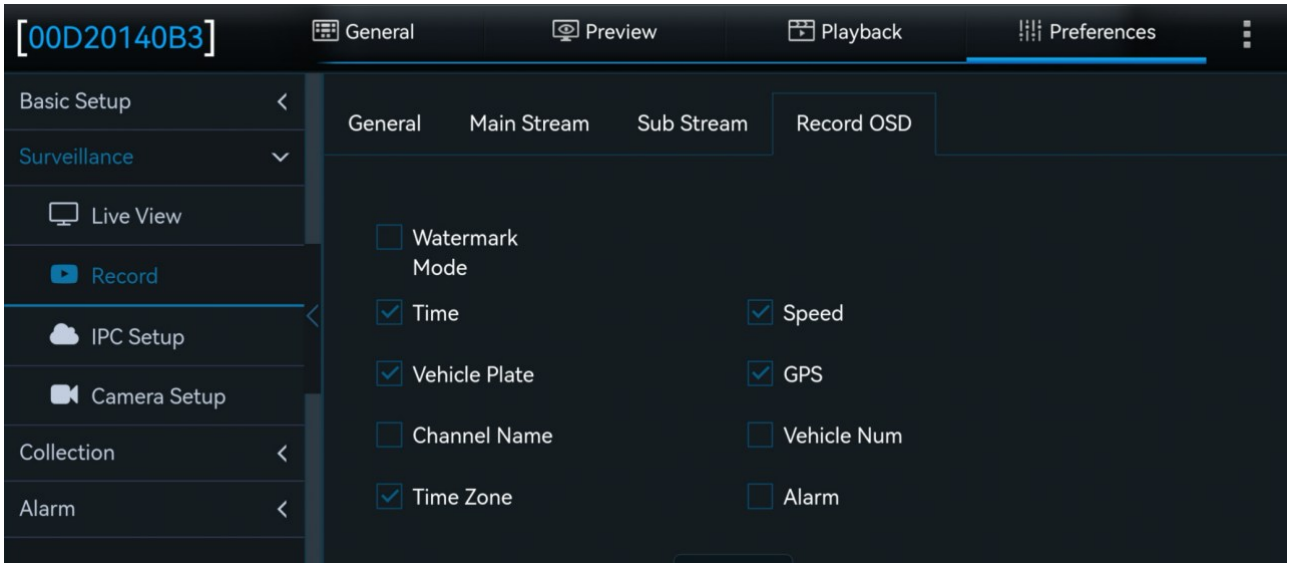
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Special Note: The user manual package includes a stream calculation tool, which can conveniently calculate the required disk size based on the desired recording specifications. The capacity calculated by this tool is theoretical and for reference only.

2.7.2.4 **Recording OSD Overlay**

Click [Preferences] > [Surveillance] > [Record] > [Record OSD] to enter the recording overlay settings interface, as shown below:



The OSD overlay here is a recording function that allows the selected information to be overlaid on the recorded display, different from the direct preview OSD overlay information. The

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recording OSD supports enabling selection for 8 areas and position settings. In addition, to provide better OSD overlay capabilities and effects on the platform end, especially for overlaying AI processing information, a recording watermark mode function has been added to this interface. When this enable option is checked, watermark information can be overlaid on the video of the analog channel.

5.8.2 Camera Settings

In the camera settings interface, you can perform operations such as flipping, mirroring, and rotating the cameras for each channel. Click [Preferences] > [Surveillance] > [Camera Setup], and the interface appears as shown below:



In the lower left corner of the interface, select the channel whose image you want to adjust. In the upper right corner of the interface, you can set the rotation angle, whether to mirror, and whether to flip the camera image vertically.

Warning: Generally, the default factory settings for DashCam are the correct image angles. Please do not modify the image angle and mirror flip arbitrarily; otherwise, the company is not responsible for any abnormal image issues caused.

5.9 Data Collection

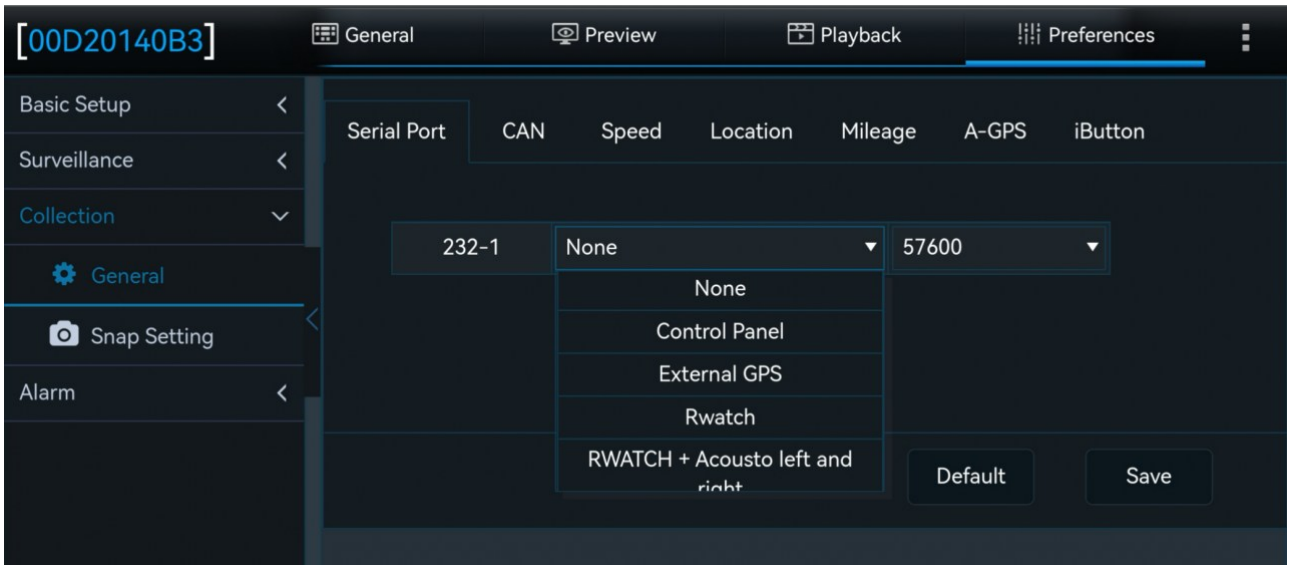
All rights reserved

The data collection interface allows you to set parameters for serial port, CAN, speed, positioning, mileage, and capture.

5.9.1 General Settings

The general settings interface is mainly used to set parameters for serial port, CAN, speed, positioning, mileage, and A-GPS.

1） Click [Preferences] > [Collection] > [General] > [Serial Port] to enter the serial port settings interface:

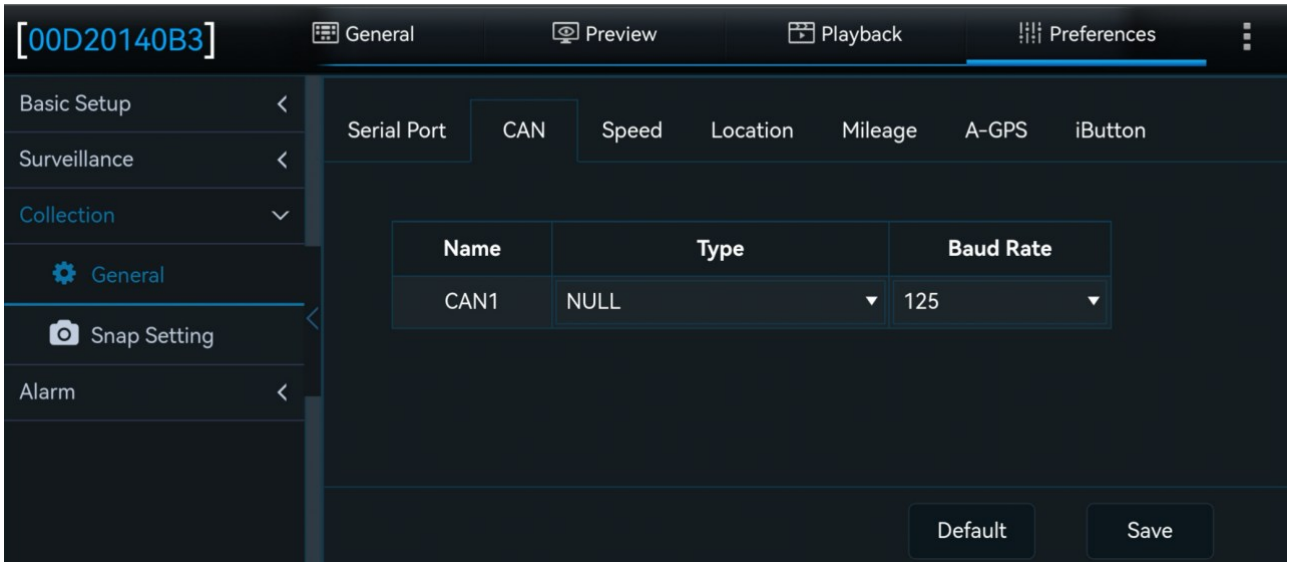


Serial Port: You can select the peripheral to be connected, and the baud rate will automatically switch to the corresponding value. If incorrect, it can also be adjusted manually.

Note: If an R-Watch is connected, configure the purpose of the 232-1 serial port as Rwatch in this interface (RS232 model supports this function)

2） Click [Preferences] > [Collection] > [General] > [CAN] to enter the following interface:

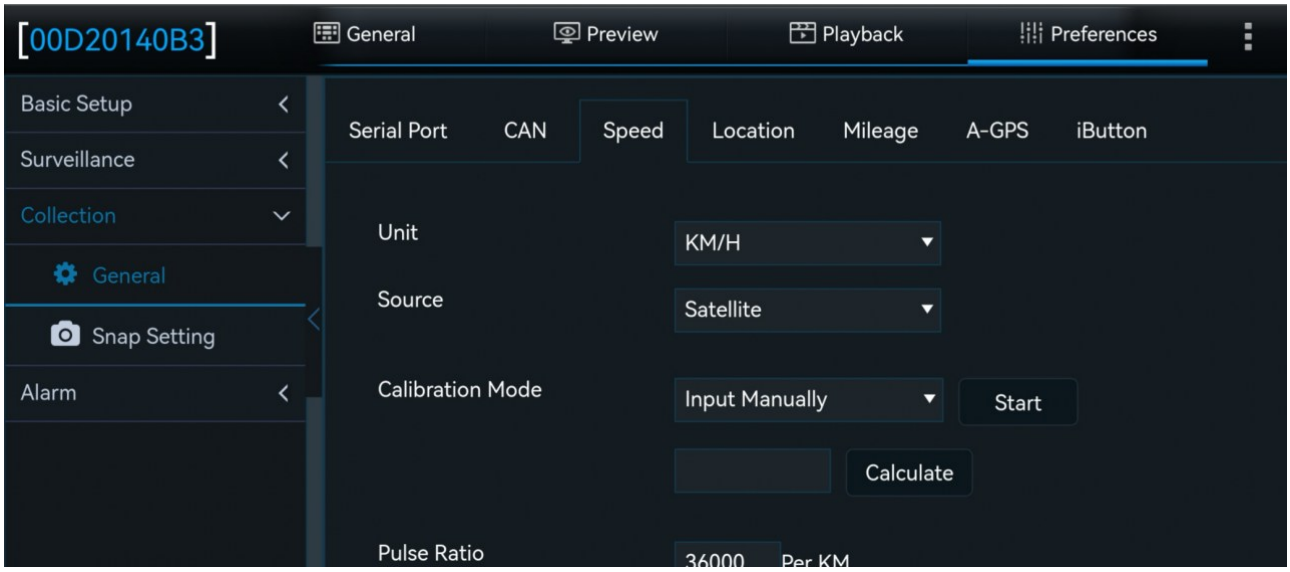
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In this interface, you can configure the function type and baud rate for accessing CAN.

Warning: The standard J1939 protocol is supported. Since vehicle manufacturers may customize some data fields, the actual data obtained is subject to practical tests. If the required data is not supported, the protocol can be provided for integration development. If there is a need for multi-vehicle model adaptation or data diversity, an optional OBD power box can be selected for related CAN data parsing. Device hardware distinction: If you select an RS232 device, the CAN functionality cannot be used; If you select a CAN device, the RS232 functionality cannot be used; CAN version devices do not support connection to Power Box Plus.

3） Click [Preferences] > [Collection] > [General] > [Speed] to enter the following interface:

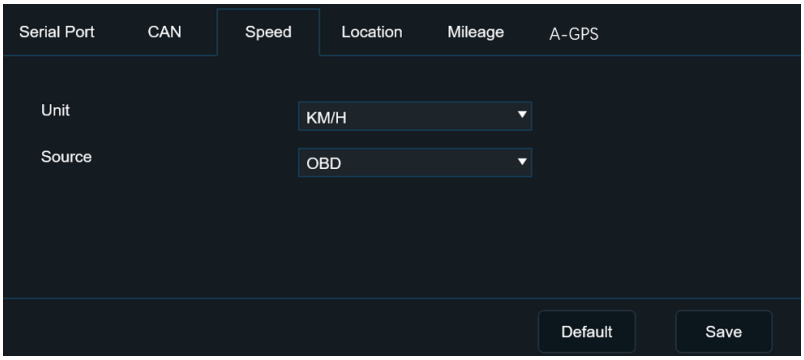


1. [Speed Unit]: Set the unit of speed: KM/H and MPH.

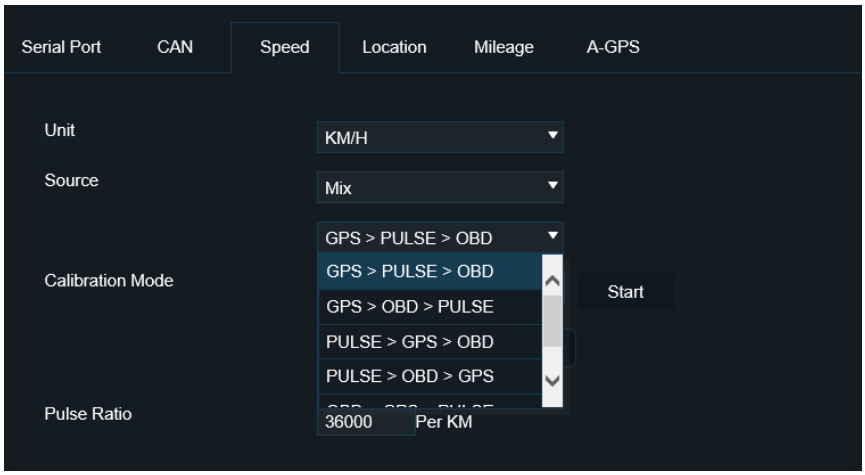
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2. [Speed Source]: Options are Satellite, Mix, OBD, CAN.

➢ When the speed source is set to Satellite, OBD, or CAN, the interface appears as shown below:



When the speed source is set to Mix, the priority of the speed source can be set, with 6 priority sorting options available. The interface appears as shown below:



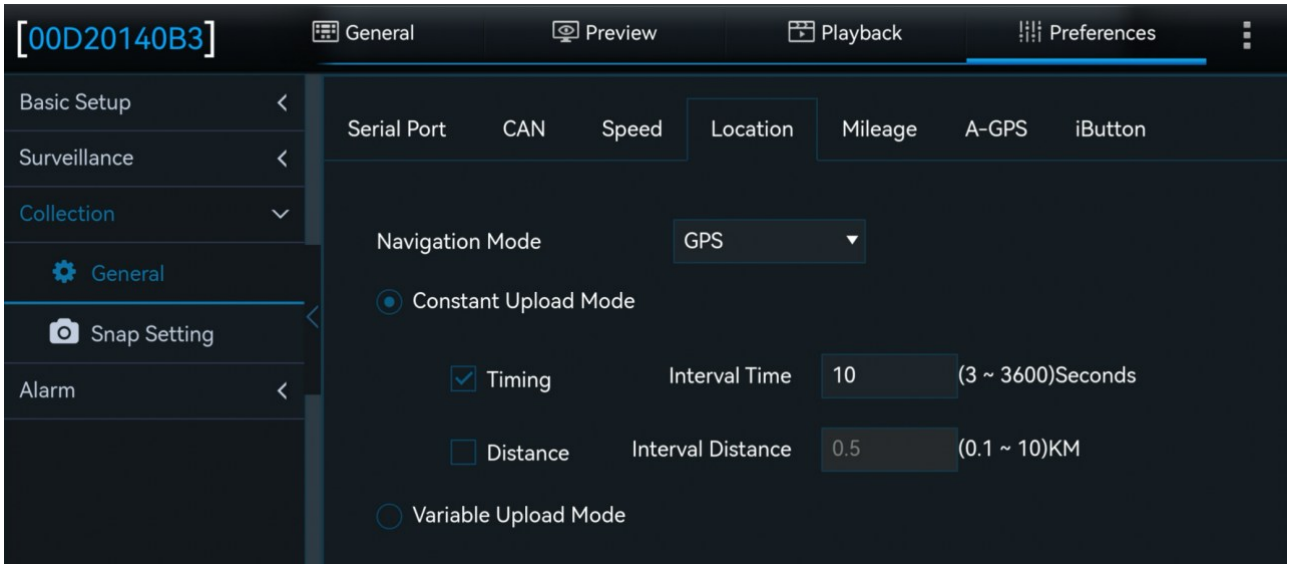
Special Note: The C6 Lite2.0 device does not support the pulse function.

4） Click [Preferences] > [Collection] > [General] > [Location] to enter the GPS reporting strategy settings interface. Different methods for uploading GPS signals can be selected according to market needs.

5） Warning: This interface will only be displayed to support parameter settings when the device detects a GPS module.

Warning: This interface for setting parameters will only be displayed when the device detects a GPS module.

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GPS reporting is divided into three states based on the ACC status: Fixed Reporting, Conditional Reporting, and Sleep Reporting:

ACC Status	Fixed Reporting	Conditional Reporting
ACC ON	1、Timed reporting, the interval can be manually modified, selectable from 3 to 3600 seconds, default is 10 seconds. 2、Distance-based reporting, the interval can be manually modified, selectable from 0.1 to 10 km. 3、Both timed and distance-based reporting can be selected simultaneously.	See detailed description below. Note that only one can be selected between fixed reporting and conditional reporting. Once fixed reporting is selected, conditional reporting cannot be selected, and fixed reporting is the default.
ACC OFF	Sleep Reporting	

1、Detailed Description of Conditional Reporting:

First, define two states: "moving start" and "moving stop". Conditional reporting is based on the changes between these two states.

- Moving Start Definition: When the vehicle's speed exceeds a certain value and remains above that value for a specific duration, the vehicle is considered to be moving. The default

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speed is 30 km/h, and the default time is 60 seconds.

- Moving Stop Definition: When the vehicle's speed drops below a certain value and remains below that value for a specific duration, the vehicle is considered to be stopped. The default speed is 20 km/h, and the default time is 5 minutes.

Reporting Methods:

- From Moving Stop to Moving Start:

Timed Reporting: The interval can be manually modified, with a default value of 60 seconds.

Distance-based Reporting: The interval can be manually modified, with a default value of 0.1 km.

- Timed Reporting: The interval can be manually modified, with a default value of 60 seconds.

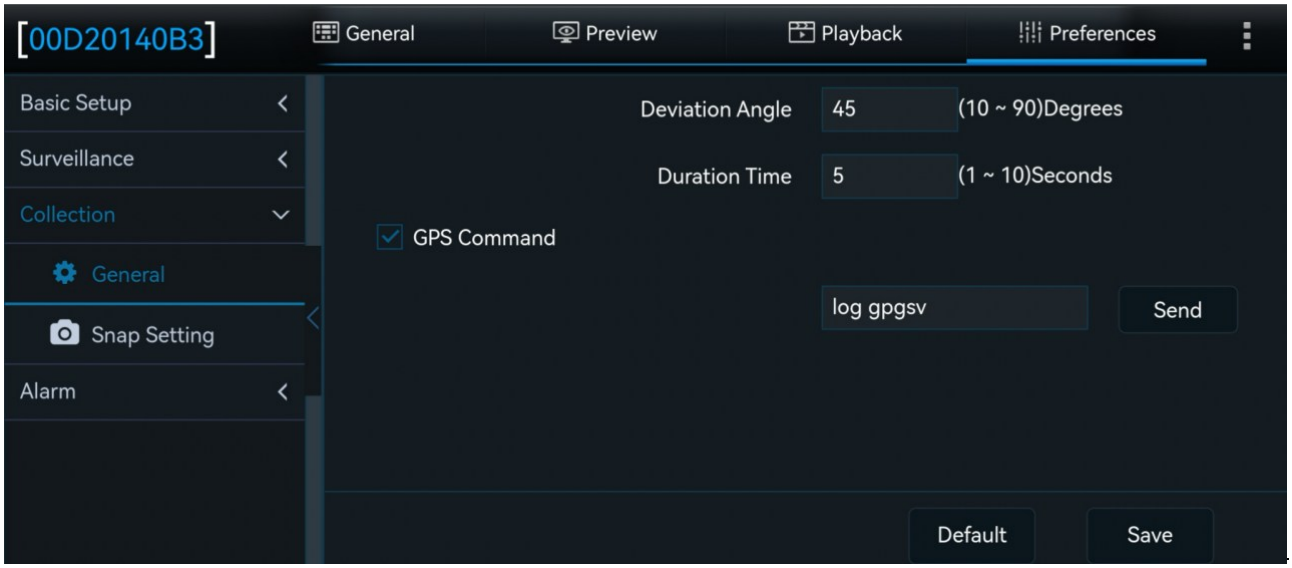
2、Multiple Reports During Significant Changes in Driving Angle: The angle can be set by the user, with a default setting to report GPS data when the angle changes by 45°.

3、ACC Status Information Reporting: ACC status information is reported simultaneously when GPS information is uploaded.

4、Sleep Reporting Function: See [Preferences] > [Basic Setup] > [Time Setup] for switch on/off instructions.

~~GPS command: To ensure raw GPS data can be obtained for analysis when the inertial GPS encounters issues, a command to acquire raw GPS data has been added. Enter log gpgsv in the command input box under [Location] > [GPS Command], click send and save to enable raw GPS data recording. These data will be logged in the device's black box and can be retrieved locally or remotely from the platform for analysis. The raw GPS data recorded in the black box includes RMC, GGA, GSA, GSV, and GPATT, as shown below:~~

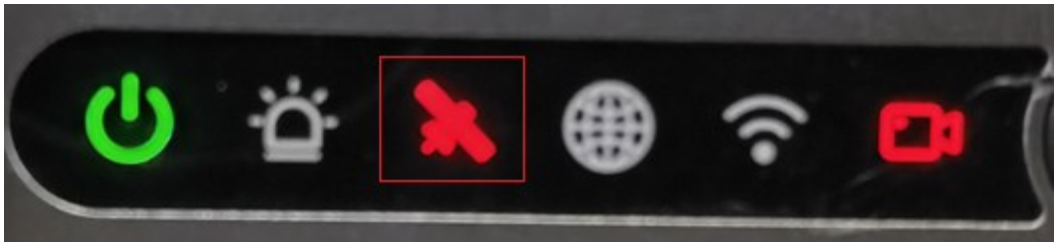
All rights reserved



~~After sending the log gpgsv command, the general information display interface of Veyes will show the satellite positioning signals received by the device. Under [General] > [Location Information], you can view the number of satellites and the corresponding satellite signal quality.~~

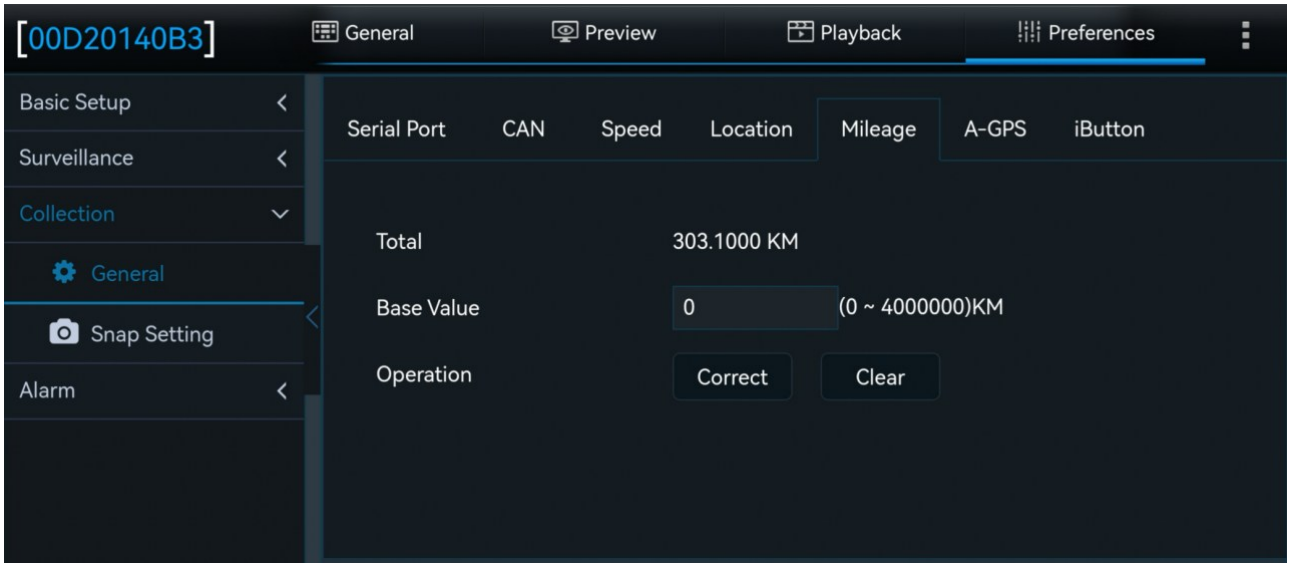
~~To manually stop recording raw GPS data, you can disable the GPS command or enter unlog gpgsv in the command box, click send and save. This will stop recording raw GPS data to the black box.~~

~~To manually stop recording raw GPS data, you can disable the GPS command or enter unlog gpgsv in the command box, click send and save. This will stop recording raw GPS data to the black box.~~



5、Click [Preferences] > [Collection] > [General] > [Mileage] to enter the mileage settings interface. You can set the base mileage value and calibrate or reset the mileage, as shown below:

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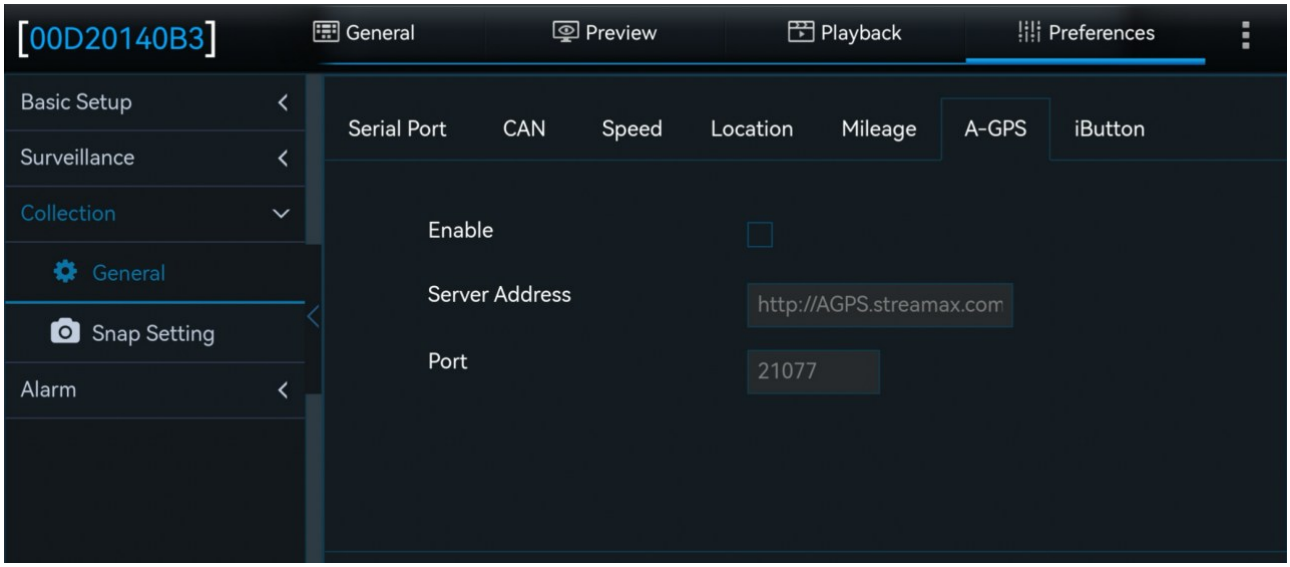


6、 Click [Preferences] > [Collection] > [General] > [A-GPS] to enter the A-GPS settings interface.

In a strong signal environment, an autonomous GNSS receiver can cold start and locate within about 30 seconds. However, in weak signal environments (such as under overpasses, shaded paths, among tall buildings, just out of tunnels, just out of underground garages, etc.), a receiver without external assistance captures satellites very slowly and struggles to retrieve messages from them, making it take a long time or even fail to locate. AGNSS (AGPS) service provides the necessary auxiliary information for positioning, such as messages, rough location, and time. These can significantly reduce the first positioning time in both strong and weak signal environments, achieving quick startup and positioning.

When in use, the AGPS proxy server regularly acquires all ephemeris data from various chip manufacturers and stores it on the server. The device connects to the proxy server using the default IP/domain and port (parameters can be manually modified). Upon booting up, the device checks whether the AGPS auxiliary information file is expired (different chip files have different expiration times). If expired, it requests the latest ephemeris data from the AGPS proxy server and downloads it locally in an overwriting manner. If it fails to acquire the data, it continues to try.

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Warning: The use of this function requires server deployment, which is not yet officially open for commercial use. The servers are expected to be officially deployed to support commercial use by Q4 2024. Additionally, the common positioning module (Quectel LC26G module) does not support the A-GPS function.

5.9.2 Snap Setting

2.8.2.1 **Time Snap**

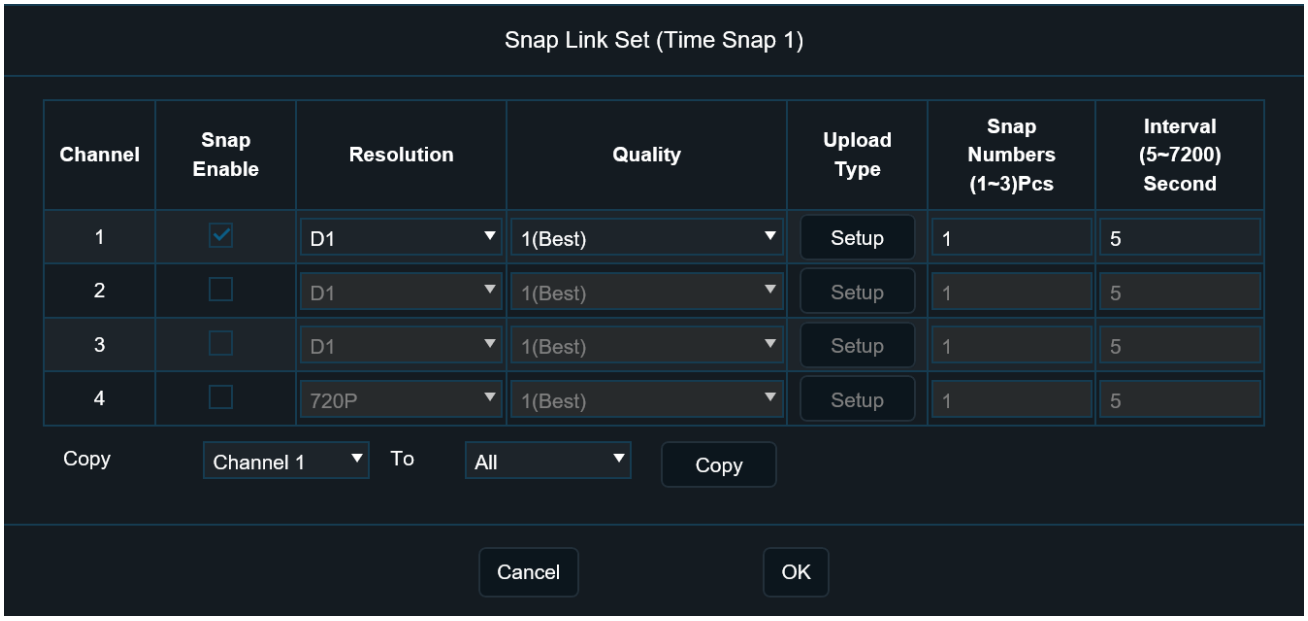
Supports setting time periods during which snapshots are automatically taken at regular intervals. Click [Preferences] > [Collection] > [Snap Setting] > [Time Snap]. The timed snapshot settings interface is shown below:

- Enable Switch: Check the enable switch to turn on timed snapshot. Click the [Add] button to add a timed snapshot period.
- Start/End Time:
    1) Set a time period during which the snapshot function is enabled.
    2) The timed snapshot period is within one day.
    3) A maximum of 8 timed snapshot periods can be supported per day.

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4) You can add, delete, and edit time periods.

- Each time period can have independent snapshot parameters. Click [Operation] to enter the snapshot linkage interface, as shown below:

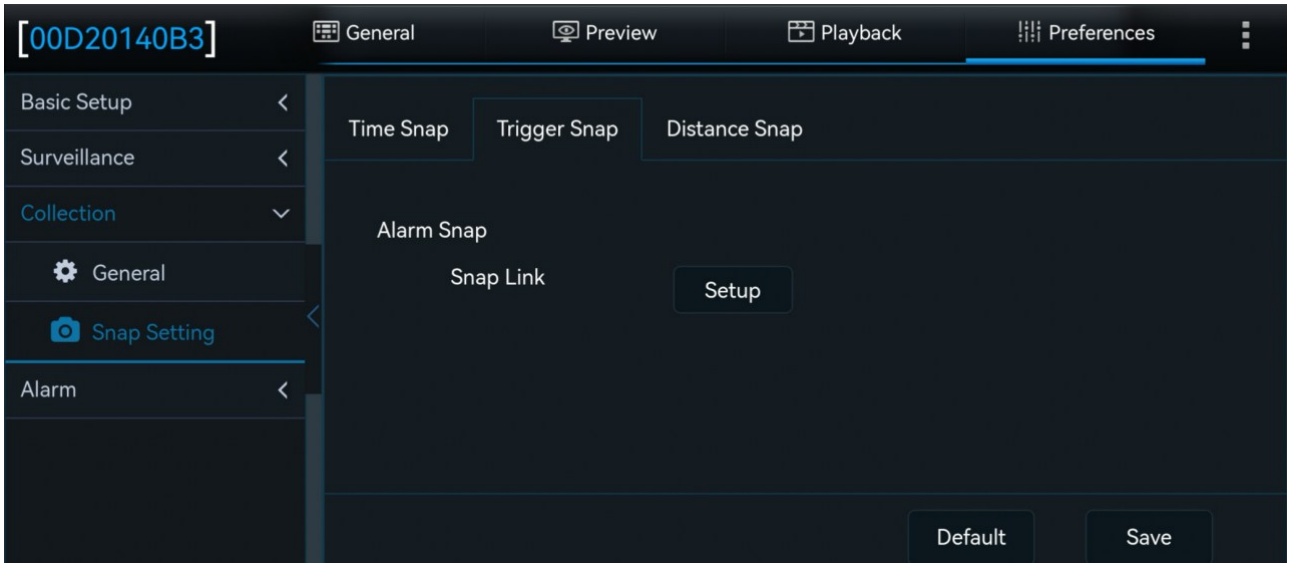


1) Channel: Select the camera channel for snapshots.
2) Enable Snapshot: Check to enable the timed snapshot function for the selected channel.
3) Resolution: Choose the snapshot resolution.
4) Quality: Select the quality from 1-8, with 1 being the best quality.
5) Upload Method: Supports FTP upload and HTTP upload. Snapshots can be automatically uploaded via FTP, with FTP settings found under [Preferences] > [Basic Setup] > [Application] > [Communication Module] > [FTP Server]. When HTTP snapshot is selected, the snapshots will be uploaded to a specified platform via HTTP. HTTP parameters are empty by default, and the HTTP address is issued by the platform.
6) Number of Snapshots per Trigger: Can be set to 1-3 shots.
7) Snapshot Interval: The interval in seconds between snapshots within the time period.
8) Copy Style: Allows copying settings to other video channels.

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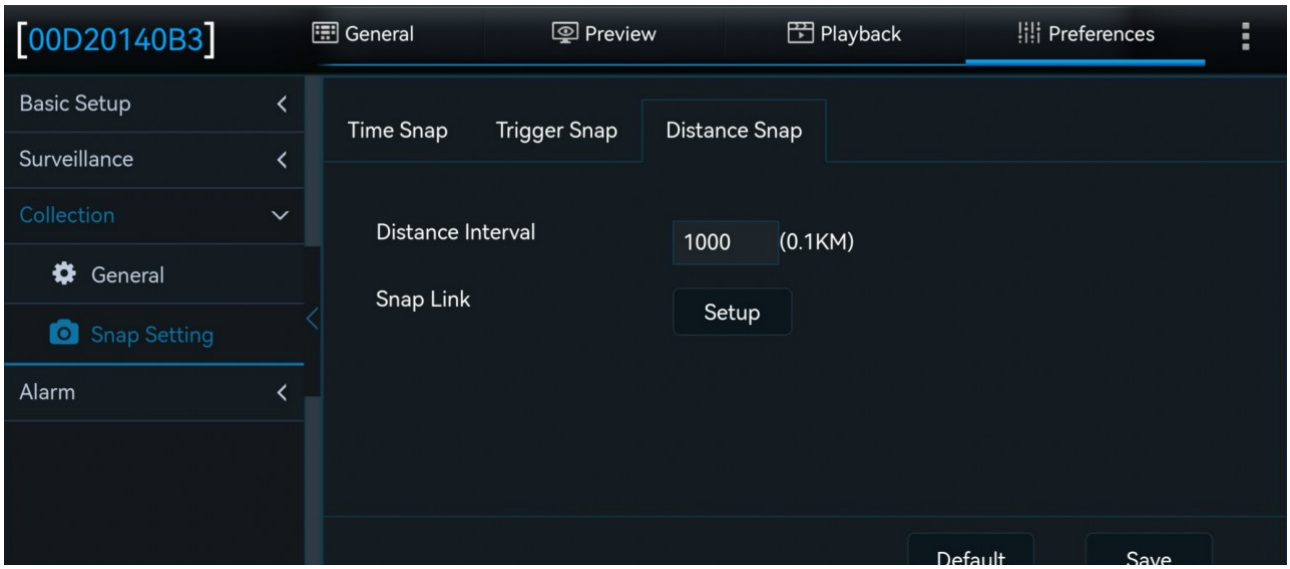
2.8.2.2 **Trigger Snap**

Supports alarm-triggered snapshots, where snapshots are taken upon alarm activation. Click [Preferences] > [Collection] > [Snap Setting] > [Trigger Snap]. The alarm snapshot setting method is the same as for timed snapshots and will not be repeated here.



2.8.2.**3Distance Snap**

Supports distance-based snapshots, where snapshots are taken at fixed distance intervals and uploaded to the platform. Click [Preferences] > [Collection] > [Snap Setting] > [Distance Snap]. Distance snapshot is disabled by default, and the distance unit follows the system unit. The snapshot linkage setting method is the same as for timed snapshots, with the difference being that there is no snapshot interval setting in the distance snapshot settings.



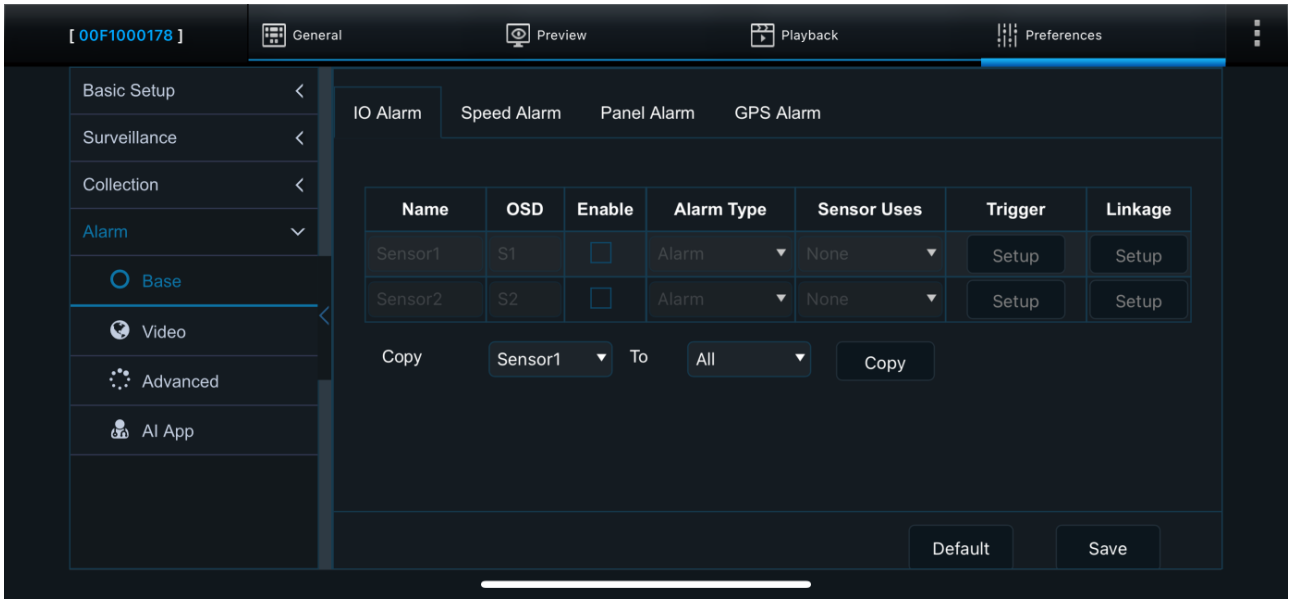
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Warning: The snapshot function consumes certain system resources. The overall limit for various snapshot settings is that the total average snapshot frequency across all channels should not exceed 3 shots every 5 seconds. The company is not responsible for system resource issues caused by frequent snapshots due to snapshot settings.

5.10 Alarm Settings

5.10.1 Base Alarms

In the basic alarm settings interface, you can set IO alarms, speed alarms, panel alarms, and GPS alarms. Click [Preferences] > [Alarm] > [Base] to enter the following interface:



This device supports 2 IO inputs and 1 IO output.

- IO alarm Interface:

1. IO number: Options are Sensor1, Sensor2.
2. IO Name: Customizable IO name, click to modify.
3. Name Abbreviation: Customizable abbreviation for the IO in OSD overlay information.
4. Alarm Type: Alarm or Event.

➢ Alarm:

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1) Alarm can be OSD overlaid on the preview interface and in recordings.

2) Alarm will be uploaded to the platform.

3) Writes to the alarm log.

- Event:

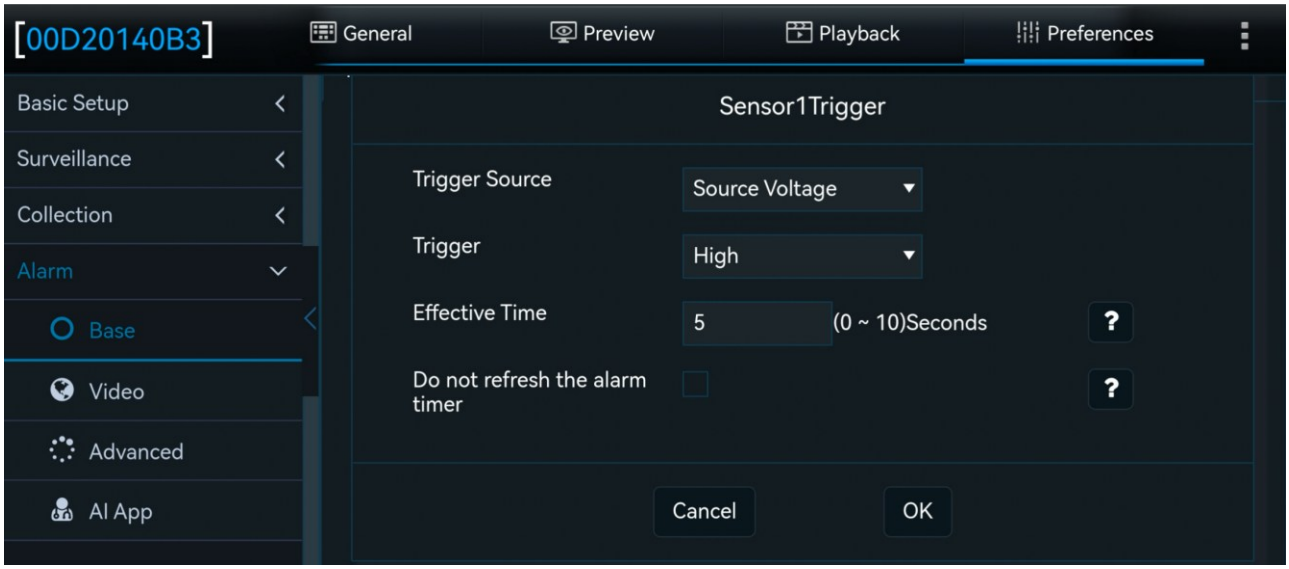
1) Overlays OSD.

2) Will not be reported to the platform.

3) Writes to the alarm log.

5. Sensor Uses: Set the purpose of the sensor, such as left turn, right turn, brake, privacy function.

6. Trigger Condition: Click to set, entering the following interface:



1) [Trigger source]: Options are high/low level or pulse trigger. Left and right turns default to pulse trigger, other uses default to high-level trigger.

High Level: Normally low level, triggered to high level.

Low Level: Normally high level, triggered to low level.

Pulse Signal: Normally low level, triggered by high and low level changes.

Warning: IO port can detect voltage range of 0-36v, below 3.9v is low level, above 3.9v is high level. Use within the detectable range. The company is not responsible for damage caused by exceeding this range.

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2) [Alarm Effective Time]: The effective time is the period within which if the same alarm occurs again after being cleared, it is considered the same alarm. Selectable from 0 to 10 seconds, default is 5 seconds.

For example, if a motion detection alarm occurs at 13:23:30 and is cleared at 13:23:50, and another motion detection alarm occurs within 10 seconds (if the effective time is set to 10 seconds), these two alarms are considered the same, recorded once in the alarm log, and the alarm linkage will stop after the second alarm is cleared.

3) [Do Not Refresh the Alarm Timer]: When enabled, if the same alarm occurs again within a certain time after being cleared, it is considered the same alarm. If the continuous alarm duration exceeds the alarm effective time, a new alarm will be generated.

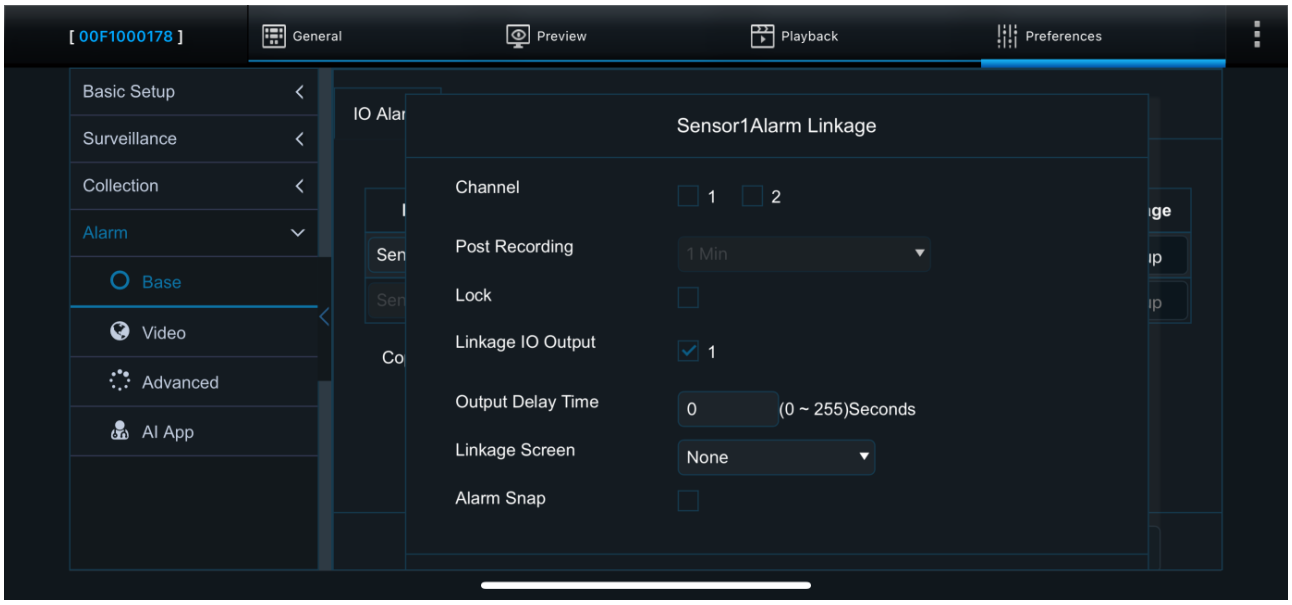
For example:

If not enabled, a motion detection alarm at 13:23:30 cleared at 13:23:50 with an effective time of 10 seconds will consider another alarm within 10 seconds as the same alarm, recorded once in the log, and linkage stops after the second alarm is cleared.

If enabled, a motion detection alarm at 13:23:30 cleared at 13:23:50 with an effective time of 10 seconds, and another alarm until 13:24:02 will consider these as the same alarm, recorded once in the log, and linkage stops after the second alarm is cleared. A new alarm starts at 13:24:00, recorded separately, and linkage stops after the new alarm is cleared.

7. Linkage Content: The functions that can be linked when an alarm occurs. Click to set, entering the following interface

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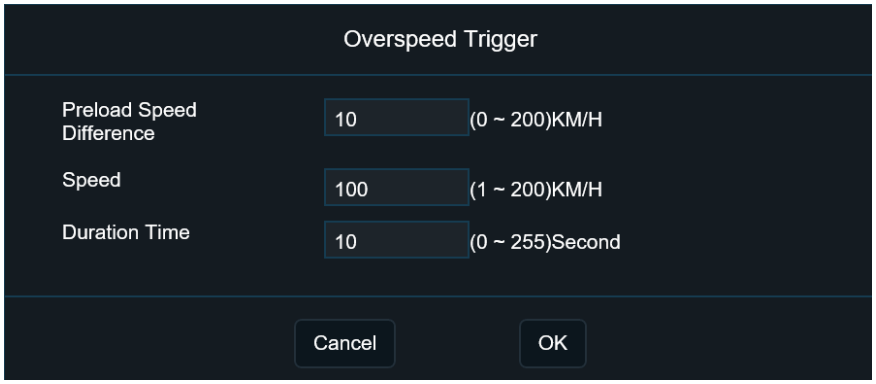


1) [Channel]: The channel that needs to record video when an alarm occurs; these channels will be marked as alarm recording.
2) [Post Recording]: The duration for which recording continues after the alarm is cleared. Selectable from 1 to 30 minutes, default is 1 minute.
3) [Lock]: Set whether the alarm recording should be locked. If checked, the alarm recording triggered by IO alarm will be locked; after the alarm is cleared, the recording lock will end.
4) [Linkage IO Output]: Set IO output when IO alarm is triggered, and set the output delay time, selectable from 0 to 255 seconds.
5) [Linkage Screen]: The display required for direct view when an alarm occurs. Default is not displayed, but can be set to single or four-screen display. (C6Lite 2.0 doesn't have Video Output, so it doesn't support screen linkage. For the interface consistency, this setting still appears, but not functional.)
6) [Alarm Snap]: Whether to take snapshots when an alarm occurs. When the FTP address is set, the channel snapshot will start after the switch quantity alarm is triggered, and the snapshots will be exported via FTP. If the platform is configured with alarm evidence reporting parameters, it can also be reported to the platform.

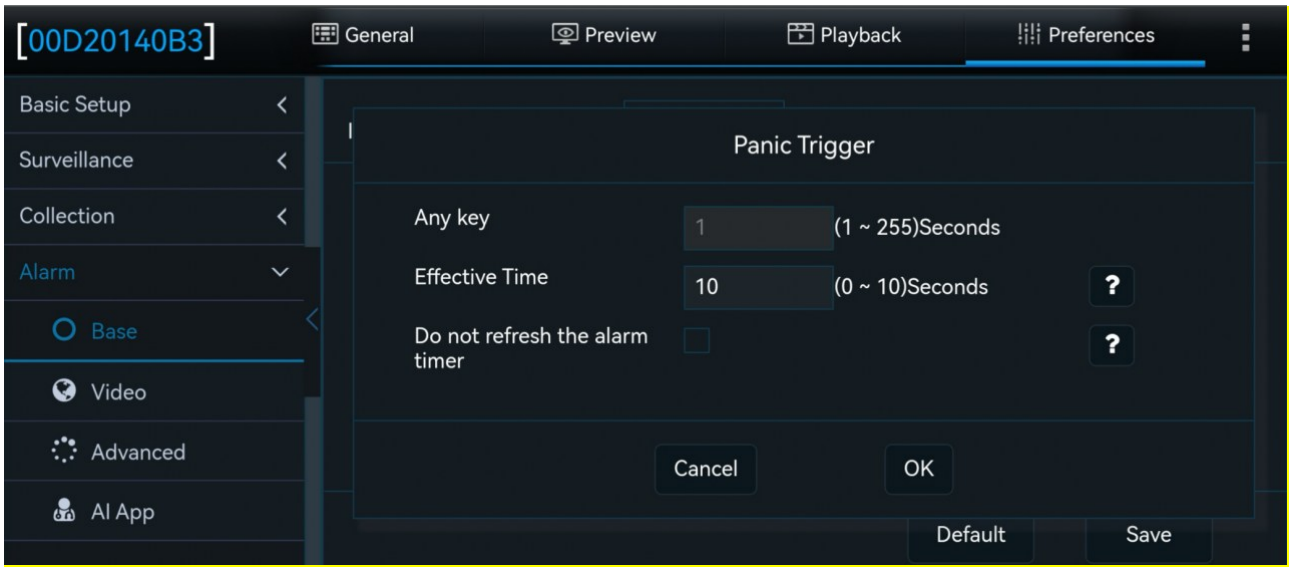
- Speed Alarm Interface: Enable overspeed alarm and set the alarm type as alarm or

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event. In the overspeed alarm settings interface, you can set the Preload Speed Difference, which means when the vehicle speed is less than a certain value below the limit, a warning is generated first, and when the speed exceeds the limit, an overspeed alarm is generated. The alarm voices are different for the two. Other settings are the same as the IO alarm settings.

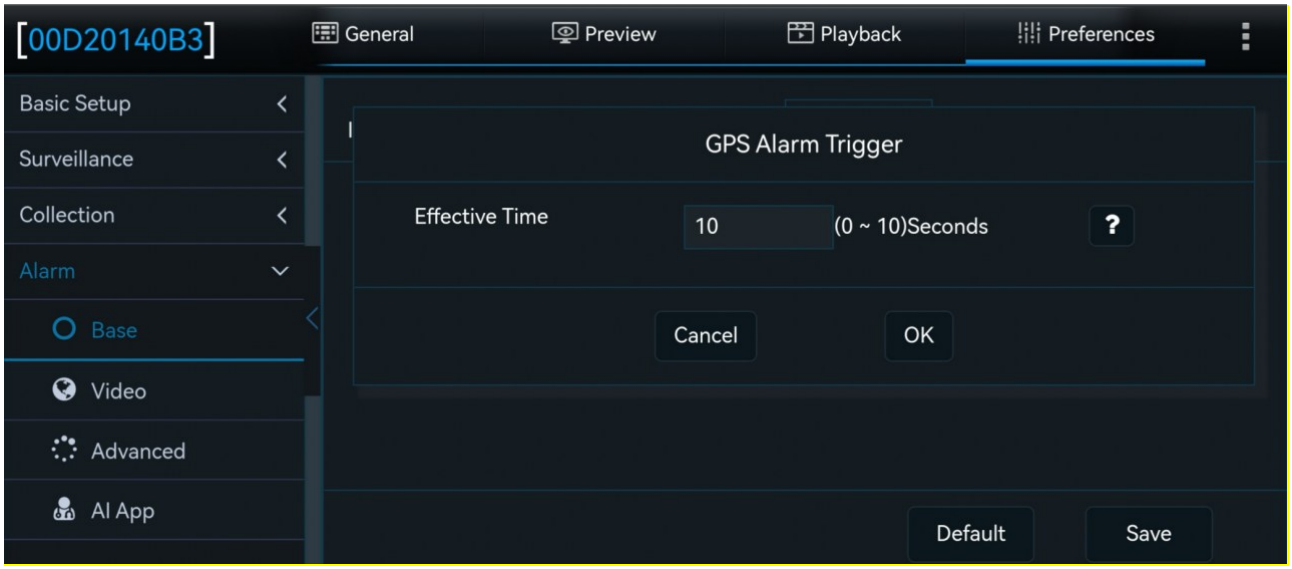


- Panel Alarm Interface: Set the Panic Button alarm enable and linkage parameters. In the alarm trigger settings interface, you can set the trigger time for the panel alarm button, selectable from 1 to 255 seconds, default is 1 second (non-modifiable). Other settings are the same as the IO alarm settings.



- GPS Alarm: Alarm generated when the GPS signal is lost. The settings are the same as the IO alarm.

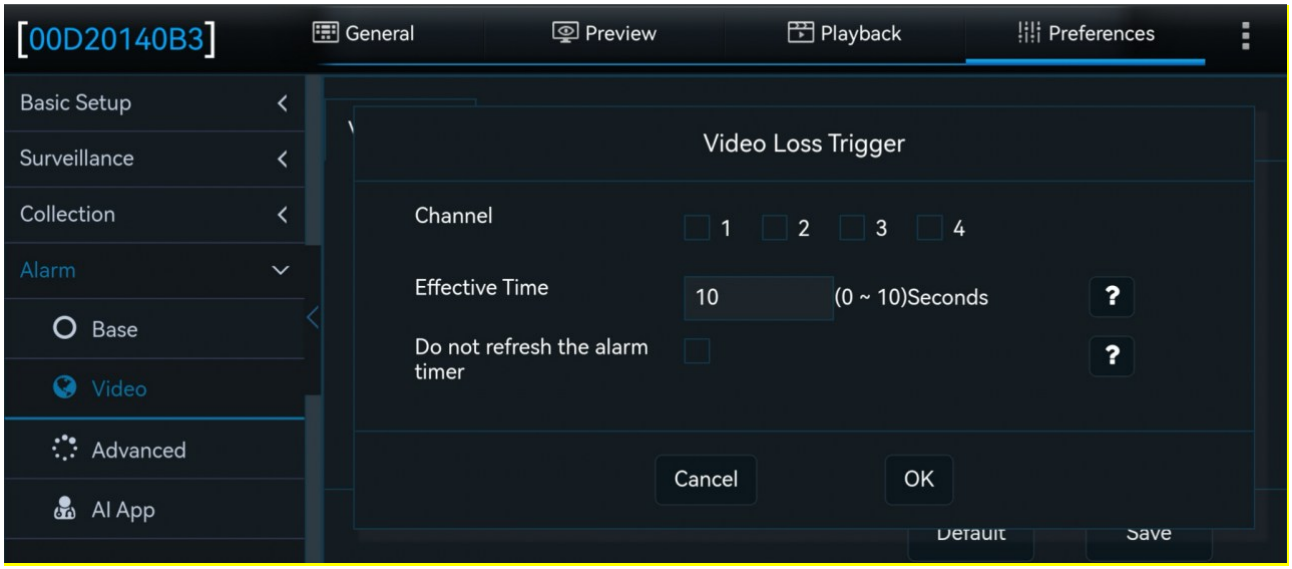
All rights reserved



5.10.2 Video Alarms

- Video Loss:

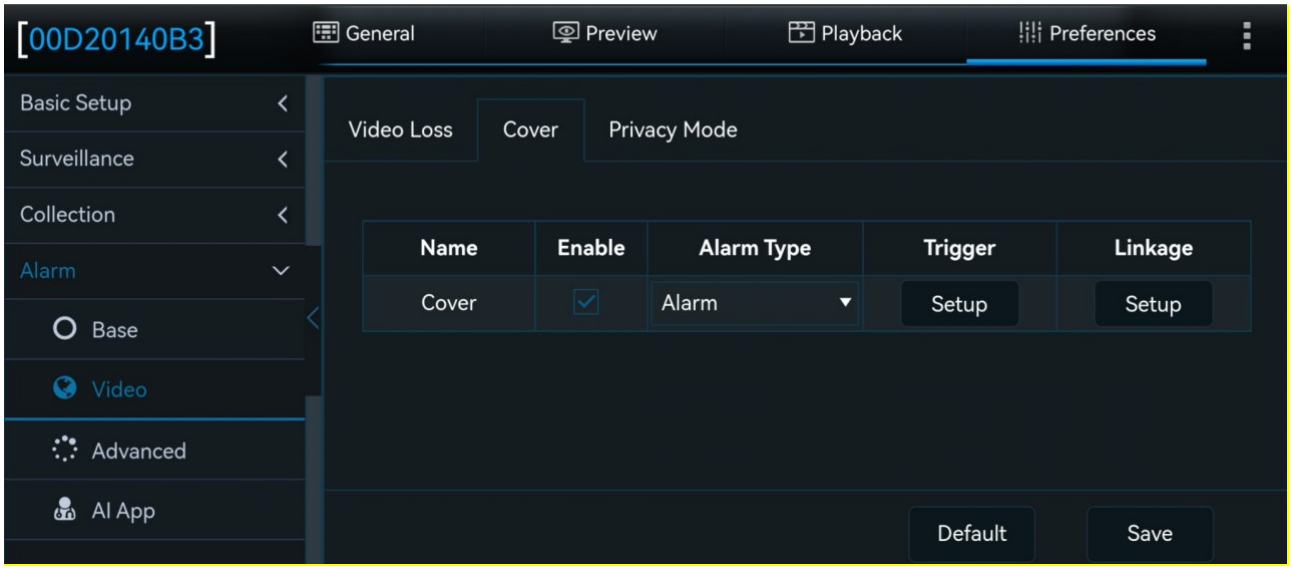
In the video loss interface, you can set video loss alarm parameters. Click [Preferences] > [Alarm] > [Video] > [Video Loss], then click the alarm trigger settings interface, as shown below. You can set the channels for video loss alarms. The linkage settings are the same as the switch quantity alarm settings.



- Lens cover

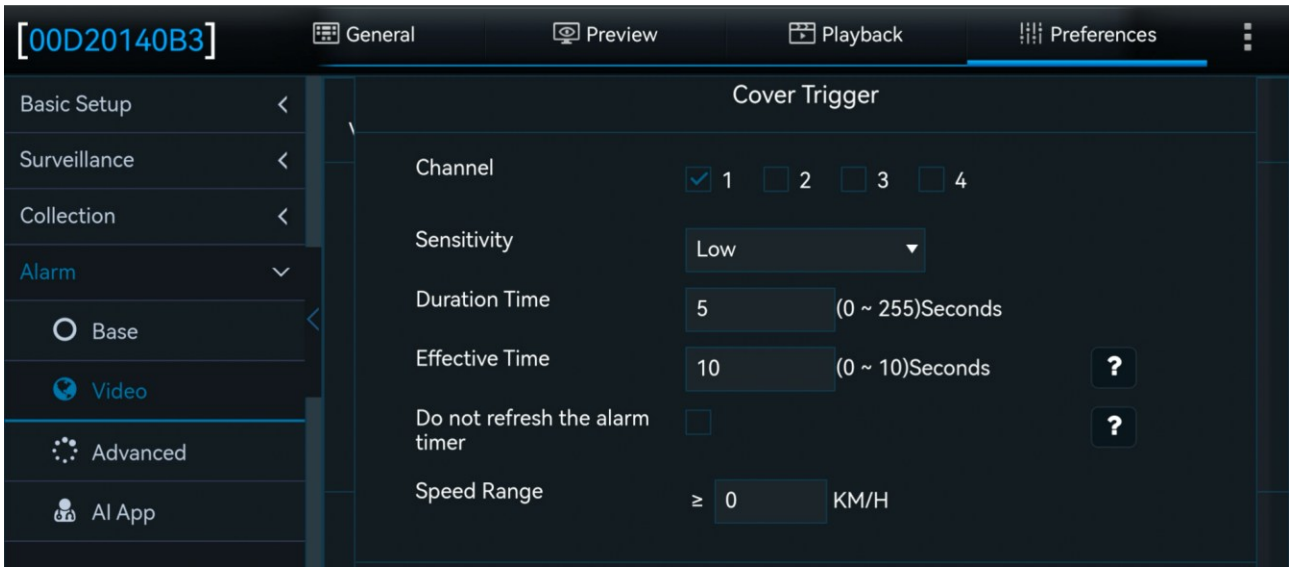
In the camera occlusion interface, you can set camera occlusion alarm parameters. Click [Preferences] > [Alarm] > [Video] > [Cover], enter the following interface:

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Click the alarm trigger settings interface, as shown below. You can set the channels for camera occlusion alarms and the alarm sensitivity, duration, effective time, and speed threshold. AI channels use algorithm detection, while non-AI channels use host judgment. The linkage settings are the same as the switch quantity alarm settings.

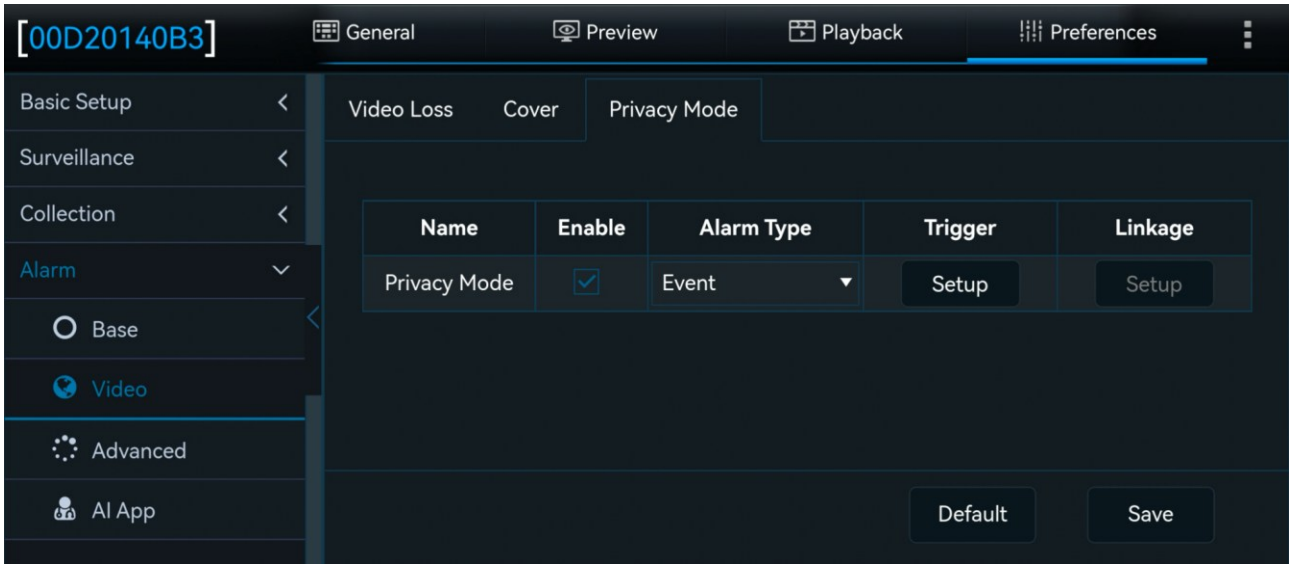
For ADAS channels, occlusion alarms require a speed exceeding 10 km/h and continuous occlusion for 90 seconds to trigger. For DMS/DSC channels, the occlusion alarm duration and speed values use the settings in the occlusion alarm interface.



- Privacy Mode

In the privacy mode settings interface, you can set the trigger and release methods for privacy mode. Click [Preferences] > [Alarm] > [Video] > [Privacy Mode], enter the following interface:

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Click the settings button to enter the interface below, where you can set the privacy channel, privacy mode trigger method, privacy mode release method, and privacy mode voice enable.

Privacy Channel: Enabling the privacy mode for a channel means that the recording and audio for that channel will be turned off. Enable to activate.

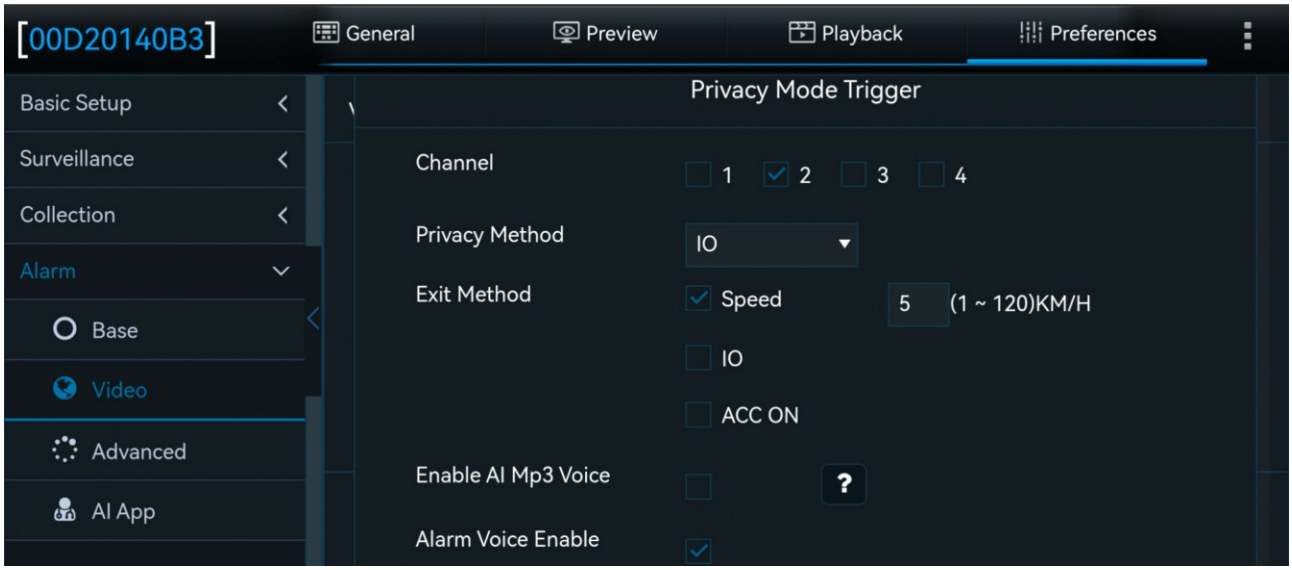
Privacy Mode Trigger Method: Options are IO and ACC. After configuring the IO purpose, triggering the IO can turn the privacy mode on or off. For detailed IO settings, see [Preferences] > [Alarm] > [Base]. The ACC trigger method means that the privacy mode will be activated 10 seconds after the ACC is turned off (stopping recording and audio).

Privacy Mode Release Method: Options are speed and IO, and one of these must be selected. IO settings and usage are the same as for the trigger method; setting up IO can be used for both triggering and releasing. The speed method means that when privacy mode is enabled, it can be deactivated when the vehicle speed exceeds a certain value.

Privacy Mode AI Alarm Enable: To continue normal algorithm detection and have voice reminders in privacy mode, enable this option.

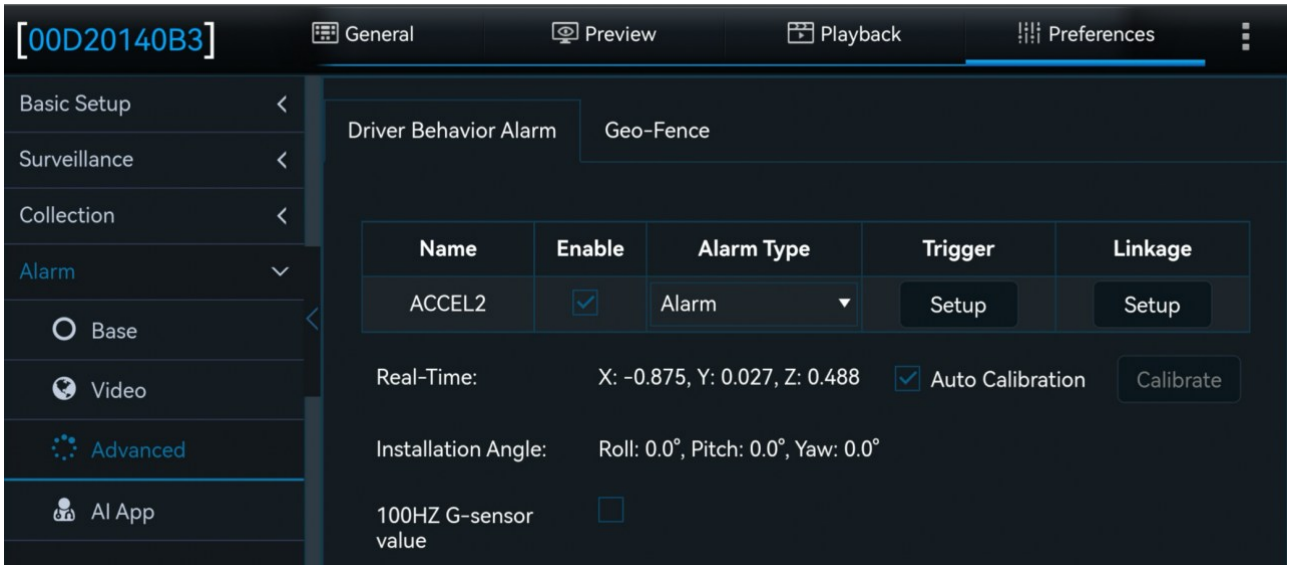
Privacy Mode Voice Enable: This determines whether to broadcast a voice message when privacy mode is triggered or released. This enable option controls the voice for both enabling and disabling privacy mode and cannot be controlled separately.

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5.10.3 Advanced Alarms

In this interface, you can set G-Sensor alarms and geofence alarms. Click [Preferences] > [Alarm] > [Advanced]. As shown below:

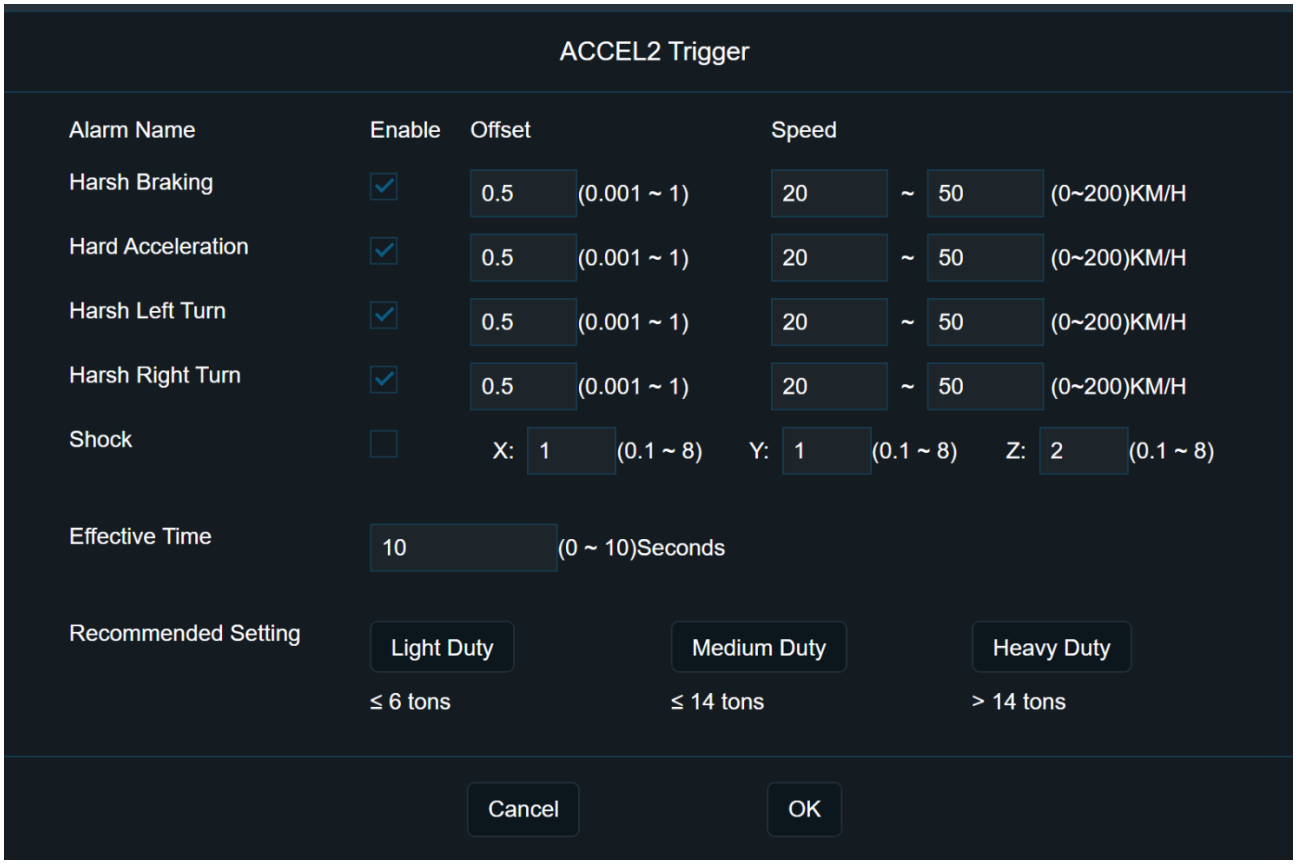


- Driving Behavior Alarm Interface:

1. ACCEL2: This represents the driving behavior alarm algorithm name. Checking it means the algorithm is enabled.
2. Alarm Type: This represents the event type triggered by aggressive driving behavior.
3. Trigger: This represents the driving behavior alarm trigger conditions, including switches and alarm conditions for harsh braking, hard acceleration, and sharp turns, as shown

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below:



[Shock]: This refers to collision detection, using the G-Sensor to determine if a collision occurred. The collision detection threshold can be set here.

Note: In the ACCEL2 Trigger settings, the offset values for Harsh Braking, Hard Acceleration, Harsh Left Turn, and Harsh Right Turn are determined by a complex formula. The general setting logic is to choose based on the vehicle's tonnage recommendation. If the alarm is triggered too easily, increase the offset value; if it is hard to trigger, decrease the offset value. These offset values are not entirely linear. The larger the offset value, the more obvious the driver's perception. The XYZ values for Shock are in gravitational acceleration G, directly representing the threshold of acceleration in the XYZ directions during a collision.

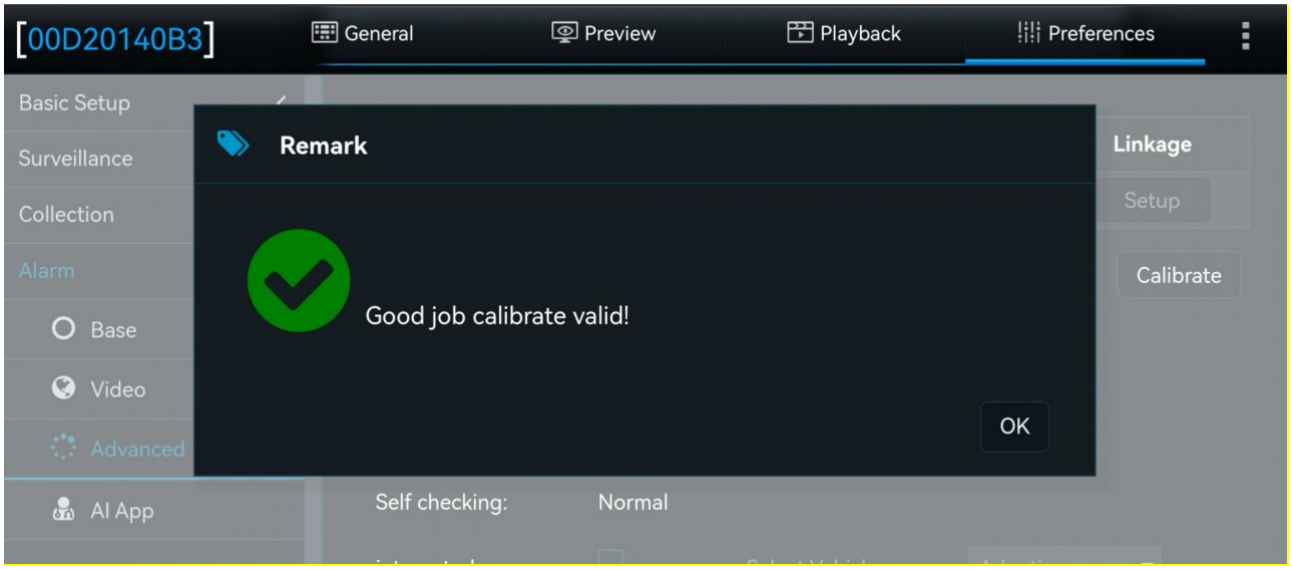
4. Linkage: When an alarm is triggered, it can be linked to some alarm business functions. The setting method is the same as the switch quantity alarm.

5. Support both manual calibration and automatic calibration

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➢ Manual Calibration:

After saving the manual calibration, detecting that the XYZ values are (0,0,1) means the calibration was successful and logs this in the operation log. The log records the Gsensor calibration success status, time, and real-time XYZ values. The interface prompt for successful manual calibration is shown below:



➢ Automatic Calibration:

Following the original calibration logic, after the fifth calibration, if the deviation values of XYZ are within (0,0,1) and less than ±0.1, the calibration is successful. The log records the Gsensor calibration success status, time, and real-time XYZ values. When the device enters the calibration process again and completes the calibration status, it records it again.

➢ Calibration Failure Status Judgment:

Manual Calibration: After saving, if the XYZ values are not within (0,0,1), the calibration failed. However, since manual calibration forcibly sets the calibration values to (0,0,1), the failure rate is almost zero.

Automatic Calibration: As automatic calibration is continuous, if after 5 calibrations the XYZ values are not within (0,0,1) ±0.1 range, the log records automatic calibration status anomalies, time, and real-time XYZ values.

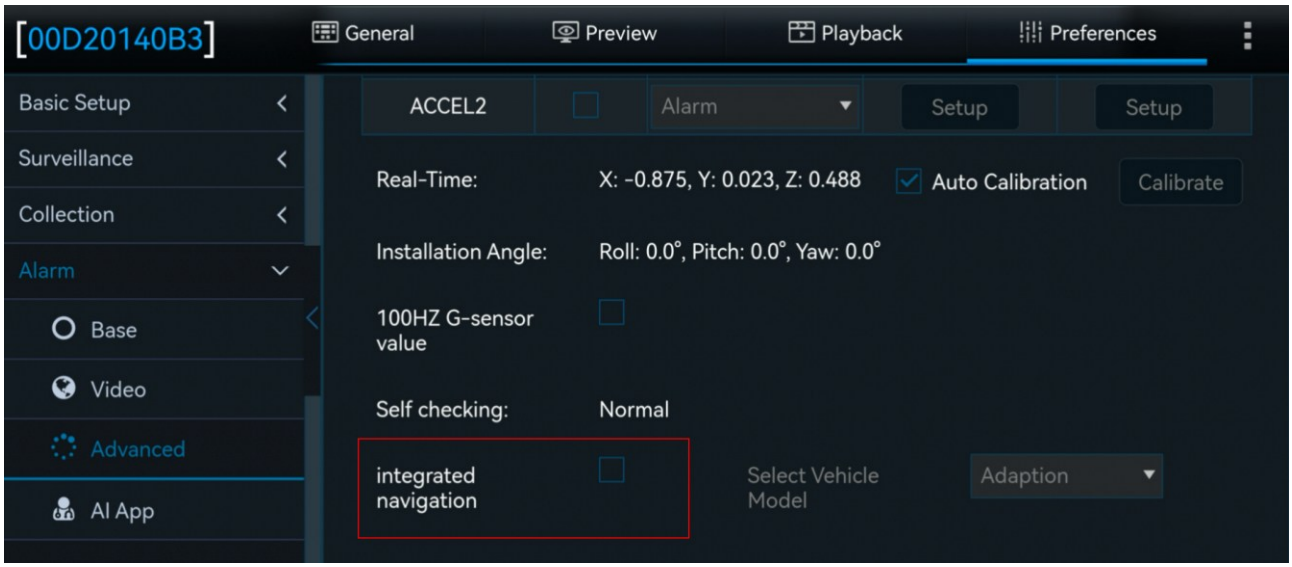
6. Can display the device installation angle.
7. Support 100Hz G-Sensor Data Pass-through: can be enabled or disabled.

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8. Integrated Navigation: If the device is connected to an INS module that supports vehicle attitude detection, this enable option will be displayed. The vehicle attitude output by the INS module is more accurate than the attitude events calculated purely from three-axis/six-axis data, making it useful for judging harsh acceleration, harsh deceleration, sharp left/right turns, acceleration, deceleration, turns, and shock events. When enabled, the device can detect these events through INS.

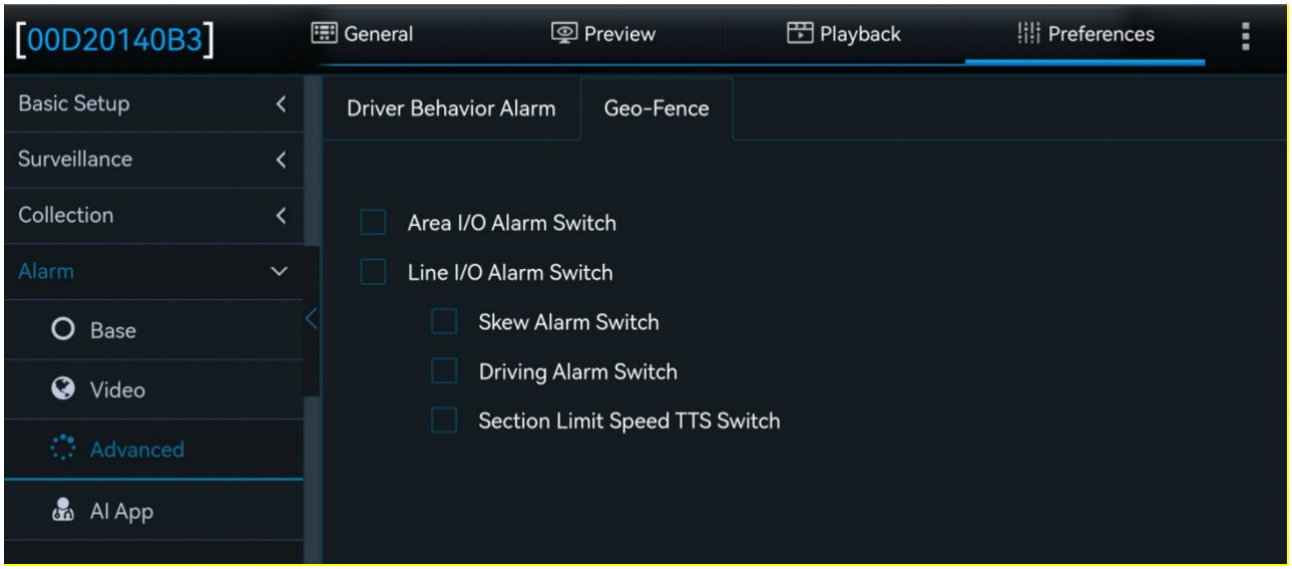
9. Vehicle Type Selection: Choose the corresponding inertia sensor model according to the vehicle type for better detection.

Note: The integrated navigation function is a newly introduced feature that performs well in small vehicles, while large vehicle data is still being optimized through road testing. Because integrated navigation introduces speed changes and G-sensor data for judgment, there is about a 10-second delay in alarms, making it suitable only for post-analysis. This function is expected to be perfected in Q4 2024.



- The geofence interface allows you to choose strategies for handling entering and exiting the geofence/route, which requires the use of the CEIBA2 platform or FT Cloud platform.

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5.10.4 AI Alarms

Supports AI alarm parameter settings through Veyes. Click [Preferences] > [Alarm] > [AI App] to enter the AI alarm settings interface. The AI alarms displayed include:

ADAS Alarms	LDW、FCW、HMW、PCW
DMS/DSC Alarms	Driver Fatigue, No Driver, Handheld Devices, Smoking, Distraction, Yawn, Seatbelt; DSC Functions: Handheld Devices, Seatbelt, No Driver, Smoking, Distraction, Yawn (the single-lens version does not support DSC functions); DMS Functions: Driver Fatigue, No Driver, Handheld Devices, Smoking, Distraction, Yawn, Seatbelt

The parameter setting logic for each AI alarm is basically the same. According to different scenarios, trigger conditions can be set for each alarm. The basic trigger conditions for each alarm generally include: speed range, sensitivity settings, valid time (multiple triggers within this time frame are recorded as one alarm), and duration (how long the triggered alarm lasts). However, there are slight differences in the parameters that can be set for different alarms, as shown in the table below:

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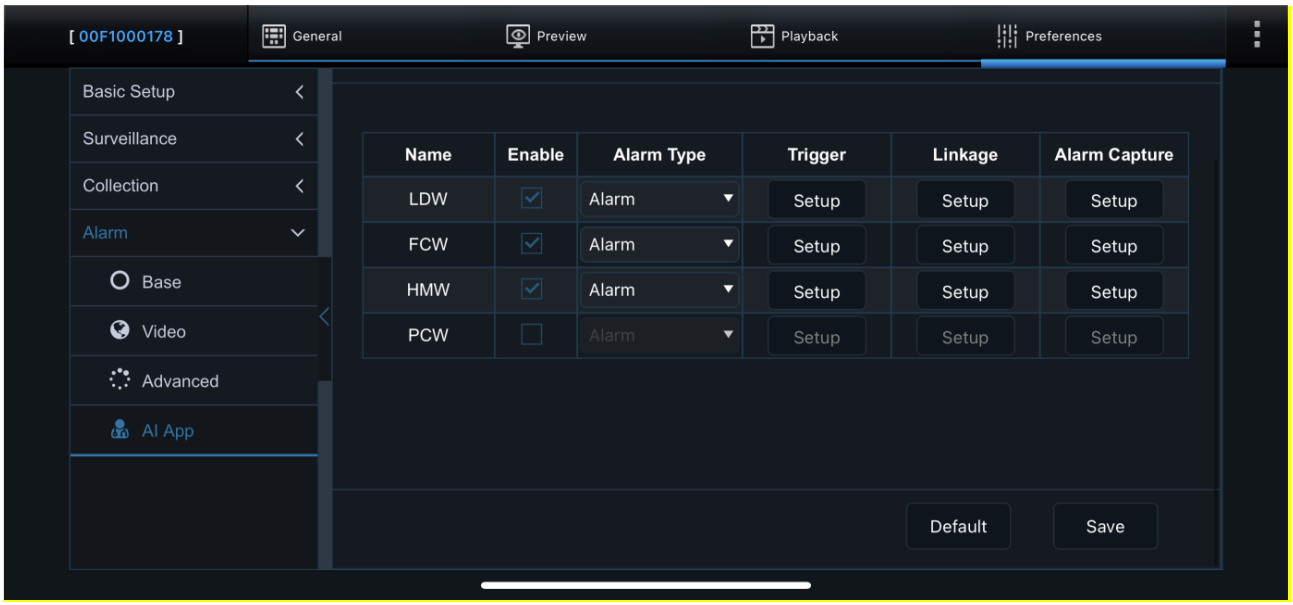
Alarm Category	Alarm Type	Adjustable Parameters					
		Speed Range (Level 1/2)	Sensitivity	Duration	Valid Time	Linkage	Capture
ADAS	LDW	Yes	Yes	No	Yes	Same	Same
	FCW	Yes	No	No	Yes	Same	Same
	HMW	Yes	Yes	Yes	Yes	Same	Same
	PCW	Yes	No	No	Yes	Same	Same
DMS/DSC	Driver Fatigue	Yes	Non-ajustable	No	Yes	Same	Same
	No driver	No	Yes	No	Yes	Same	Same
	Handheld Devices	Yes	Yes	No	Yes	Same	Same
	Smoking	Yes	Yes	No	Yes	Same	Same
	Distraction	Yes	Yes	No	Yes	Same	Same
	Yawn	Yes	Yes	No	Yes	Same	Same
	Seatbelt	Yes	Yes	No	Yes	Same	Same
	No Mask	Yes	Yes	No	Yes	Same	Same
	Infrared Block Alarm	Yes	Yes	No	Yes	Same	Same

Since the parameter setting logic for each AI alarm is basically the same, the HMW alarm is used as an example of a general alarm to illustrate the HMW alarm parameter setting method. Examples from the ADAS alarm (LDW) and DMS alarm (No Driver, Distraction) will highlight the differences in parameter settings between these alarms and other general alarms.

- HMW

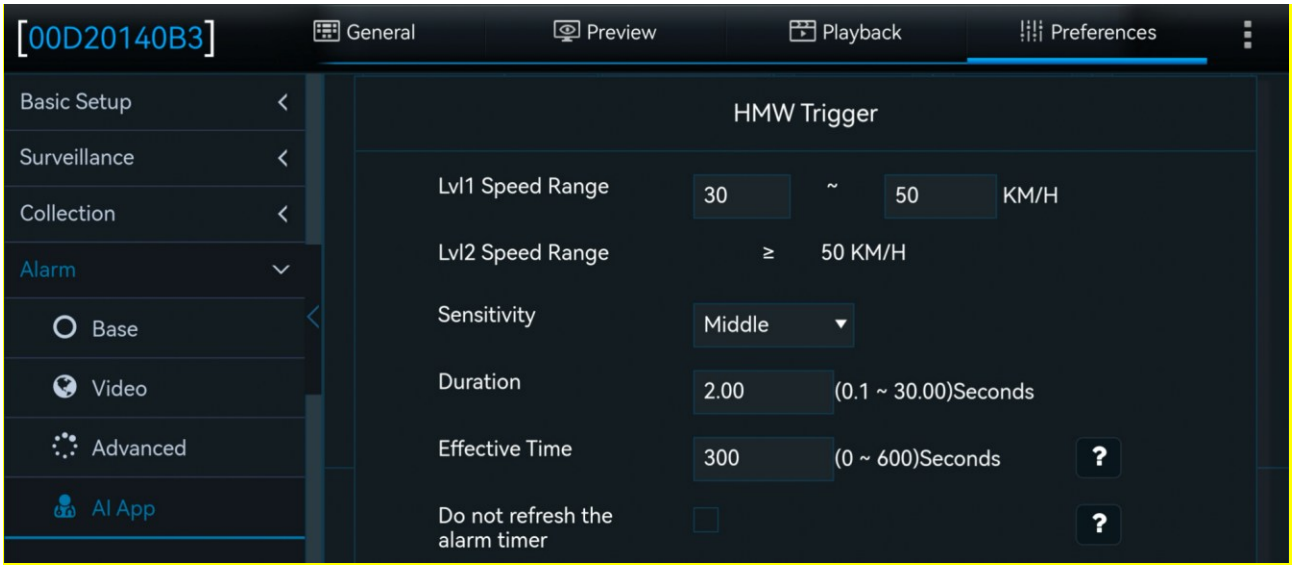
Click [Preferences] > [Alarm] > [AI App] > [ADAS], check the HMW alarm enable switch, as shown:

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[Alarm Type]: Choose between Alarm or Event. Selecting Event means the generated alarm will not be reported to the platform. See section 2.9.1 for detailed differences in basic alarms.

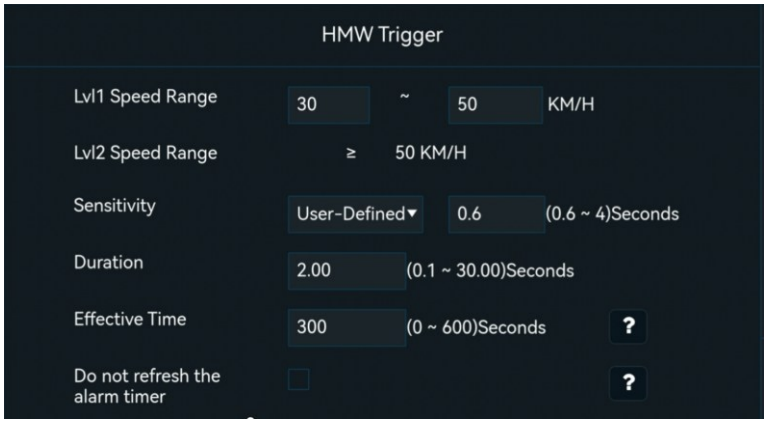
[Trigger]: Click the [Setup] button for trigger conditions to set the alarm trigger conditions, as shown:



- LvI1 Speed Range: Level 1 alarm speed range, default is 20~50 km/h. When a Level 1 alarm occurs, there is an MP3 voice prompt.
- LvI2 Speed Range: Level 2 alarm speed range. The lower limit of the Level 2 alarm is related to the upper limit of the Level 1 alarm. Modifying the upper limit of the Level 1 alarm will change the lower limit of the Level 2 alarm. When a Level 2 alarm occurs, there is only a beeping sound prompt.

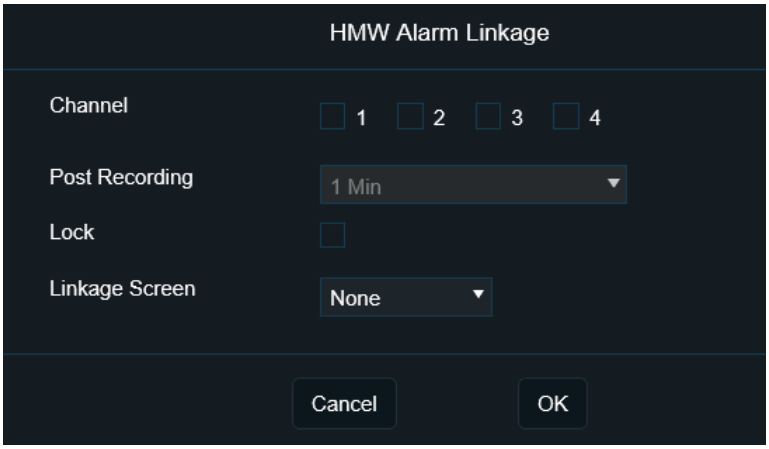
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- Sensitivity: The sensitivity when the alarm is triggered can be set to “Low”, “Medium”, “High”, or “Custom”. The default is “Medium” sensitivity. When “Custom” is selected, a custom value can be manually entered. Only HMW in the open ADAS alarms can have custom sensitivity settings. The custom value range is 0.6~4 (this time is the ratio of relative distance to the vehicle speed, not natural time), as shown:



- Duration: The duration for which the car distance alarm (HMW) lasts. After meeting the conditions for the car distance alarm, the state must be maintained for a certain time before an alarm is generated. The duration range for the car distance alarm can be set between 0.10~10.00, with 2 decimal places. The default is 2s.
- Effective Time: The effective time is the period within which if the same alarm occurs again after being cleared, it is considered the same alarm. Selectable from 0 to 600 seconds.

[Linkage]: Click the [Setup] button in the linkage settings to enter the following interface:



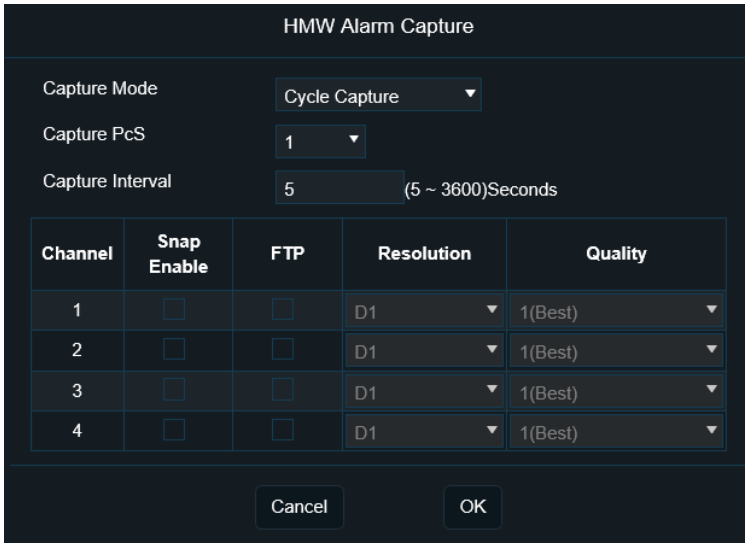
- Channel: The channel that needs to record video when an alarm occurs. These channels

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will be marked as alarm recording.

- Post Recording: The duration for which the alarm recording continues after the alarm is cleared. Selectable from 1 to 30 minutes, default is 1 minute, provided that at least one channel is checked for alarm recording.
- Recording Lock: Set whether the alarm recording should be locked. If checked, the alarm recording triggered by LDW will be locked. After the alarm is cleared, the recording lock will end.
- Linkage IO Output: Set IO output when IO alarm is triggered. The duration of the output IO can be set, selectable from 0 to 255 seconds.
- Linkage Screen: The display required for direct view when an alarm occurs. The default is not displayed, but can be set to single or four-screen display.

[Capture]: Click the [Setup] button under Alarm Capture to enter the following interface:



Previously, setting the alarm snapshot required enabling the alarm snapshot in the AI alarm and setting snapshot parameters such as resolution and number of images in the Collection > Snap Setting interface. To simplify the operation, the alarm snapshot parameter settings are unified into the respective AI alarm setting interface.

- Capture Mode: Options are single capture and loop capture. Single capture means only one image is taken each time, and the capture interval time after the first image is determined by the [Capture Interval parameter]. For example, if the single capture number

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is set to 3 and the interval time is set to 1s, one image is taken every second from the alarm time. Loop capture means multiple images are taken each time, and the snapshot interval is followed by another capture, continuing this cycle until the alarm effective time ends. The number of images and the interval time are determined by the [Capture Pieces] and [Capture Interval] parameters. For example, if the capture number is set to 3 and the interval is set to 5s, 3 images are taken simultaneously from the alarm time, then 3 images every 5s, until the alarm effective time ends.

- Capture Pieces: The number of images to be taken per snapshot, selectable from 1 to 3, default is 1.
- Capture Interval: The interval between captures, selectable from 5 to 3600 seconds, default is 5 seconds. For single snapshot, if the number is set to 3 and the interval is set to 5s, the first image is taken at the alarm trigger, the second image after 5s, and the third image after another 5s.
- Capture Channel Settings: Select the channels to take captures when an alarm occurs. Enable the channel, choose the upload method, and set the resolution of the capture images.

- LDW

Click [Preferences] > [Alarm] > [AI App] > [ADAS], check the LDW alarm enable switch, and in the alarm trigger settings interface, click the [Setup] button to configure the alarm parameters, as shown:

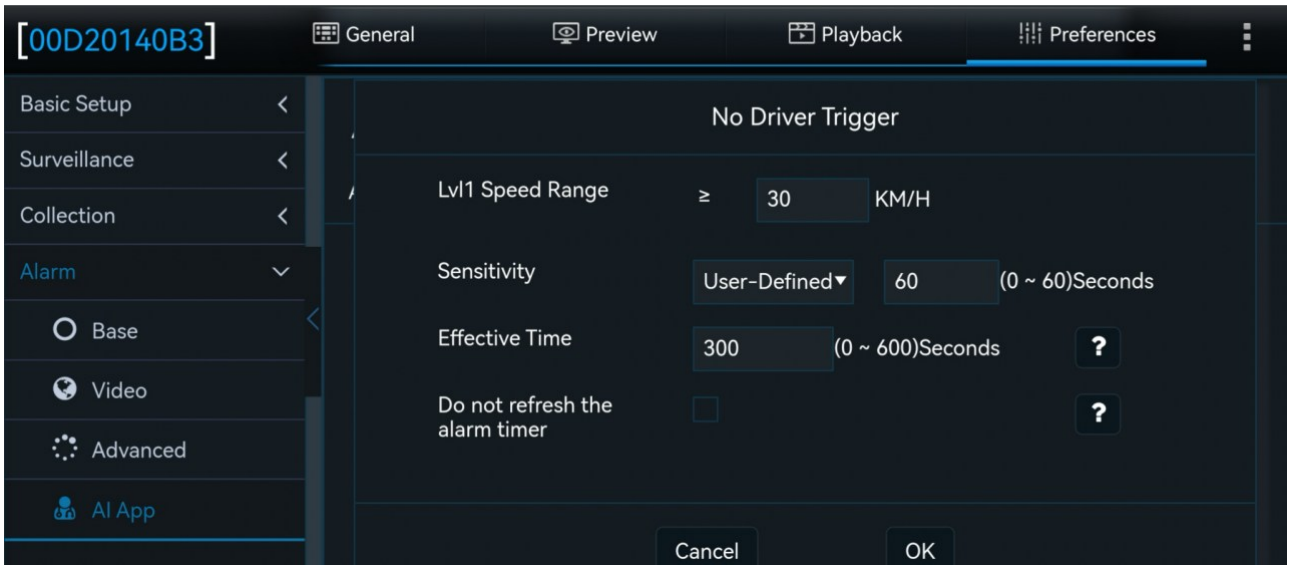
LDW has fewer settings than HMW, lacking the duration setting. FCW lacks sensitivity and duration settings compared to HMW. Other settings are the same as HMW, so they will not be repeated here.

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- No Driver

Click [Preferences] > [Alarm] > [AI App] > [DMS/DSC], check the No Driver alarm enable switch, and click the [Setup] button in the alarm trigger settings interface to enter the following interface:



For the No Driver alarm, there is only a Level 1 alarm, no Level 2 alarm. Therefore, as long as the No Driver alarm is triggered, there will be a voice prompt. The alarm speed value can be customized, with a default of 20 km/h.

Other settings are the same as HMW, so they will not be repeated here.

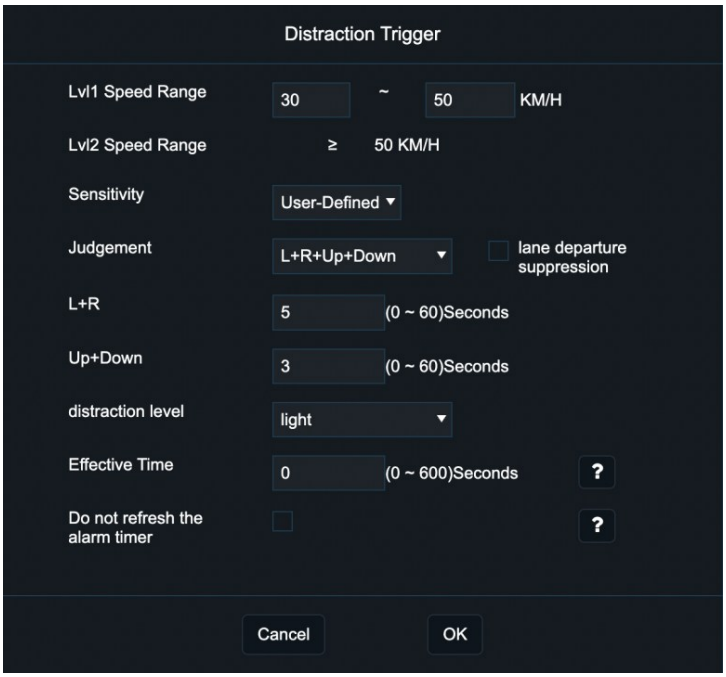
- Distraction

The trigger conditions for Distraction alarms are similar to other alarms, with additional options

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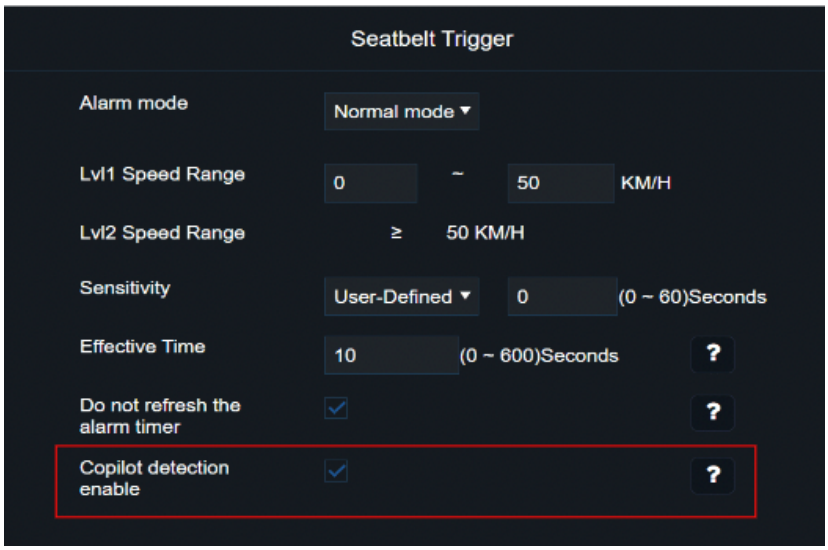
for distraction judgment and distraction angle settings to more accurately control the Distraction alarm scenarios.

- Judgment Condition: Determines whether the driver is distracted by looking to the left or right or by looking down. Different judgment conditions have their own sensitivity threshold settings (requires setting the sensitivity parameter to custom).
- Distraction Angle: Drivers looking at the rearview mirror is considered normal driving behavior. To avoid false distraction alarms when the driver is checking the rearview mirror, the distraction angle parameter allows the driver to turn their head to a certain extent. The distraction angle parameter has three levels: light, medium, and high. Light means a slight head turn triggers the distraction alarm; high means a significant head turn is required to trigger the distraction alarm.
- Lane Departure Suppression for Left/Right Distraction Alarms Enable: To avoid false distraction alarms when the driver turns their head to check the rearview mirror on curves or ramps, enabling this option will suppress left/right distraction alarms in non-straight road scenarios (curves, ramps, roads without lane markings).

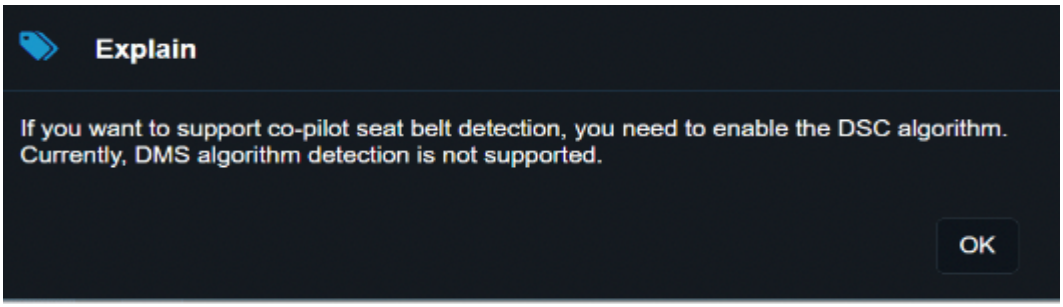


- Seatbelt

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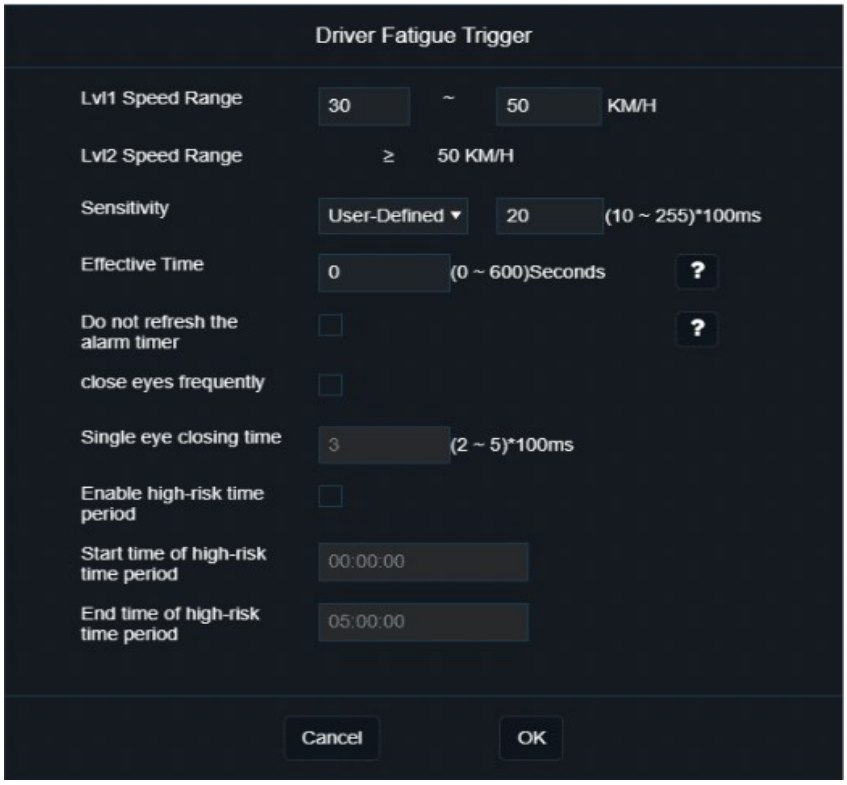


- [Copilot detection enable]: When enabled, the DSC algorithm will also detect whether the front passenger is wearing a seatbelt. If not, a seatbelt alarm will be triggered, similar to the driver's seatbelt alarm.



- Driver Fatigue

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- [Close eyes frequently]: When checked, the system will set the duration of a single eye closure. Accumulating eye closures that meet this duration will trigger an alarm once the threshold is reached.
- [Single eye closing time]: Set the duration for a single eye closure in the frequent eye closure scenario.
- [Enable high-risk time period]: When checked, the alarm threshold will be lowered during the set time period.

Warning: The accuracy of AI alarms relies on standard installation. For example, lane departure alarms may generate many alerts if the driver frequently crosses lane lines, and seatbelt alarms may trigger often due to clothing color or intentional seatbelt obstructions. For alarm applications, it is recommended not to use local reminders and video uploads for lane departure alarms. Instead, use the alarm count as a data evaluation metric for driver behavior. For seatbelt detection, disable local reminders and set up picture uploads for inspection purposes, capturing typical cases of not wearing a seatbelt for training.

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5.10.4.1 Algorithm Parameters

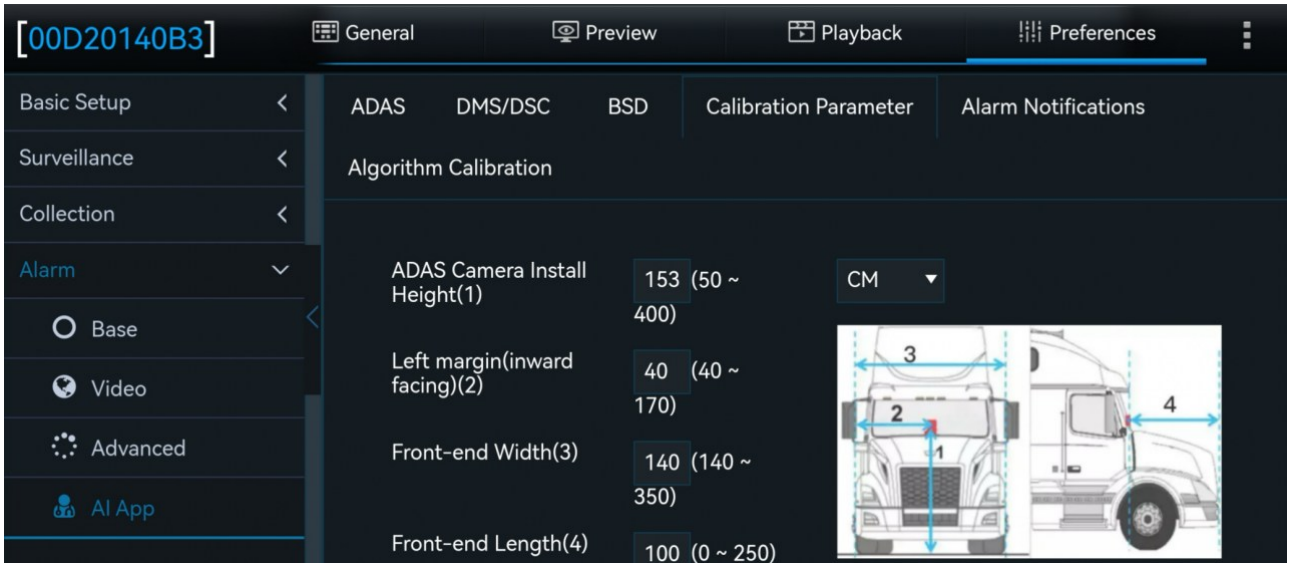
In the AI alarm algorithm parameter settings interface, you can modify ADAS installation height, left margin, vehicle front width, vehicle front length, steering settings, enable/disable AI alarm voice, enable/disable R-Watch (if connected), and enable/disable the sound and light alarm B3 (if connected).

Click [Preferences] > [Alarm] > [AI App] > [Calibration Parameter], as shown below:

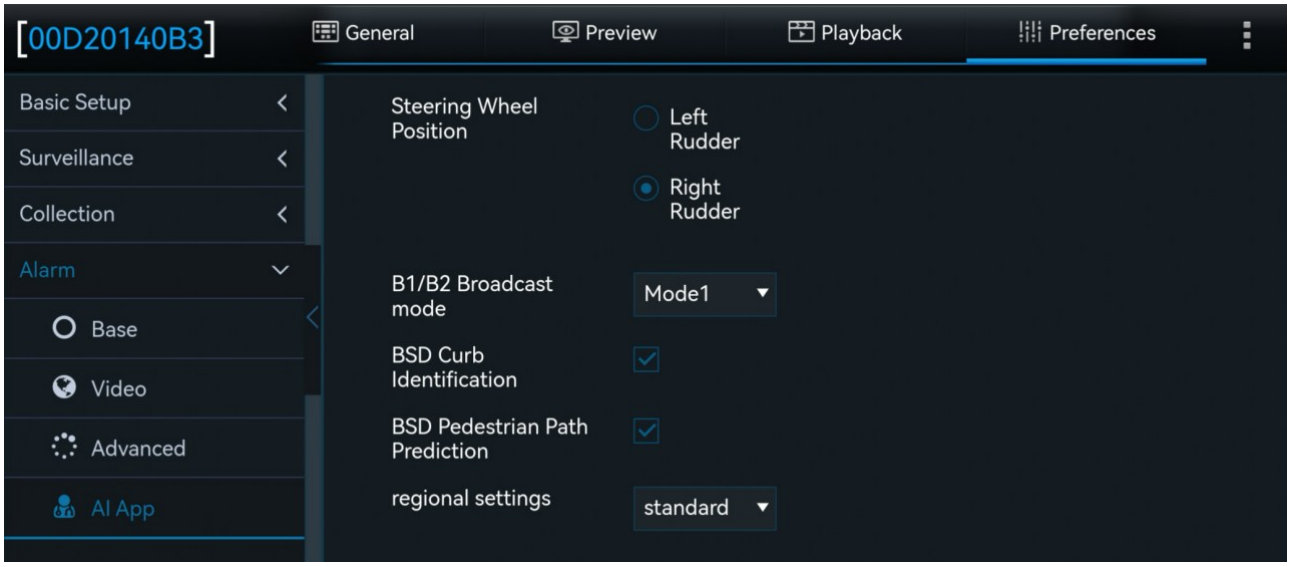
ADAS calibration values can be in centimeters or inches. The value range will automatically change according to the selected unit.

Additionally, a DSC auto-calibration option has been added to this interface, enabled by default. When checked, the device will automatically complete the calibration process during normal use, even without manual calibration.

Note: DSC is currently being promoted as auto-calibration. When auto-calibration is selected, manual calibration in [Preferences] > [Alarm] > [AI App] > [Algorithm Calibration] is not available. Manual calibration is generally used for office calibration testing.



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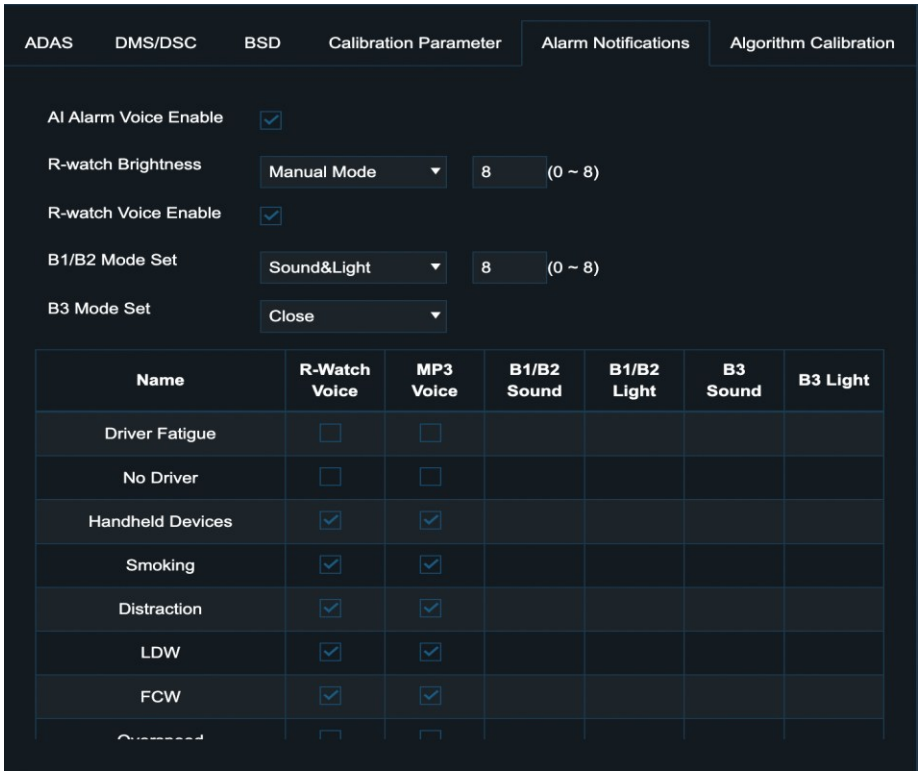
Regional Settings: When enabling parking sign and speed limit sign AI functions, this parameter needs to be set. Select the corresponding region to ensure the algorithm works correctly, avoiding misrecognition due to regional road differences.

5.10.4.2 Voice Control

In the voice control interface, you can uniformly control the voice settings for AI alarms, R-Watch, and sound and light alarms B1/B2. After enabling the master voice control switch, each alarm's individual switch also needs to be turned on (sound and light alarms B1/B2 have no individual switch) to broadcast voice prompts. If the master voice control switch is turned off, no voice prompts will be made, even if each alarm's individual switch is turned on.

Click [Preferences] > [Alarm] > [AI App] > [Voice Setting], as shown below:

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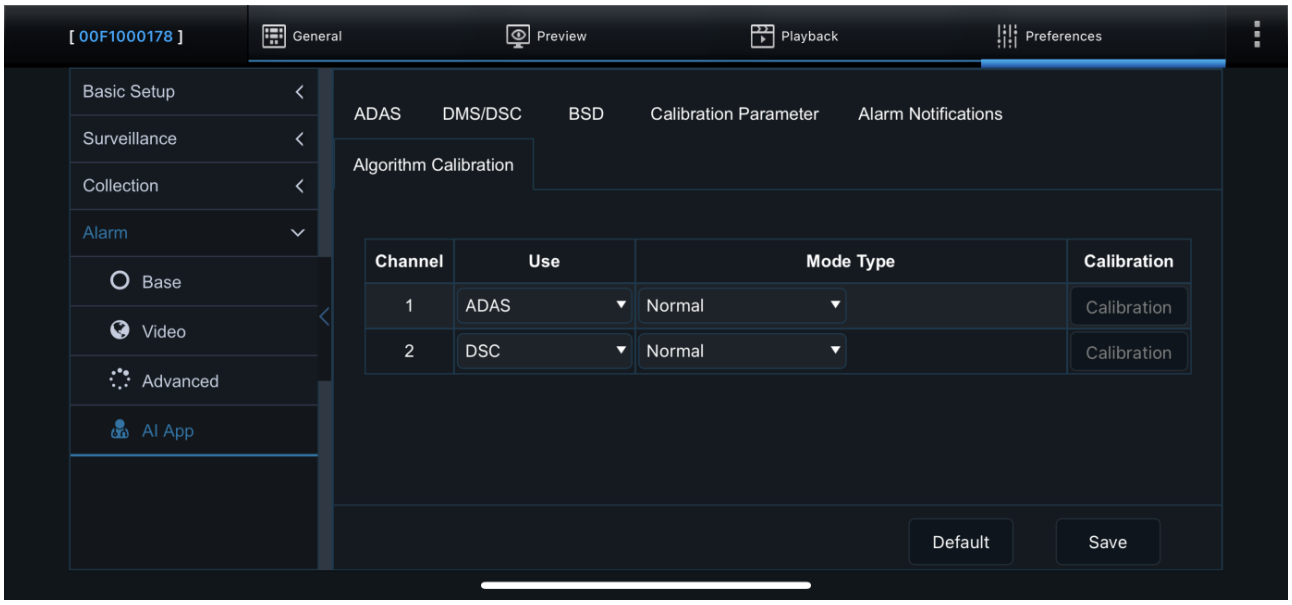
- [AI Alarm Voice Enable]: MP3 alarm voice enable switch. When enabled, the host will play MP3 alarm voice prompts when an alarm is triggered. Level 1 alarm voice is an alarm prompt phrase, and Level 2 alarm is a beeping sound.
- [R-Watch Brightness]: R-Watch brightness settings. Manual mode: 8 levels of brightness adjustment; Auto mode: adjusts brightness according to the external environment.
- [R-Watch Voice Enable]: R-Watch voice switch enable. When enabled and R-Watch is connected, R-Watch will play a beeping sound and display an icon when an alarm is triggered.
- The individual MP3 Voice and R-Watch Voice control switches below can separately control the voice prompts for each alarm.

5.10.4.3 Algorithm Calibration

In the AI alarm algorithm calibration settings interface, you can set the smart algorithms used by each camera channel.

Click [Preferences] > [Alarm] > [AI App] > [Algorithm Calibration], as shown below:

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When the Road Facing Camera is used for advanced driver assistance, the algorithm use for channel 1 needs to be set to ADAS, with the mode type set to normal mode.

When the Cabin Facing Camera is used for the intelligent cabin, the algorithm use for channel 2 needs to be set to DSC, with the mode type set to normal mode.

For C6 Lite2.0-S, when an AHD channel (CH2) is connected to a DMS camera (CA29M) for driver state detection, the algorithm use for channel 2 will default to DMS.

Special Note: Currently, only two AI smart algorithms can run simultaneously, i.e., ADAS+DSC or ADAS+DMS (choose either DSC or DMS). Running three algorithms simultaneously is not supported. Please note this limitation.

6. Special Function Operation Instructions

6.1 Privacy Protection Function Instructions

6.1.1 Function Introduction

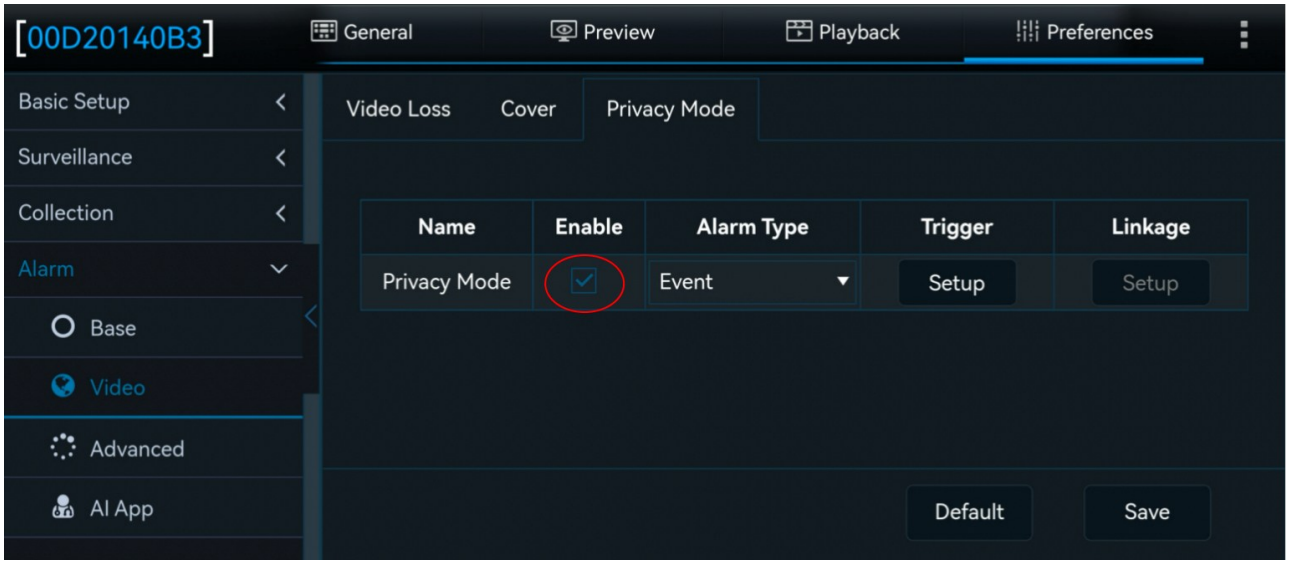
This device places great emphasis on driver privacy protection and has specially designed a

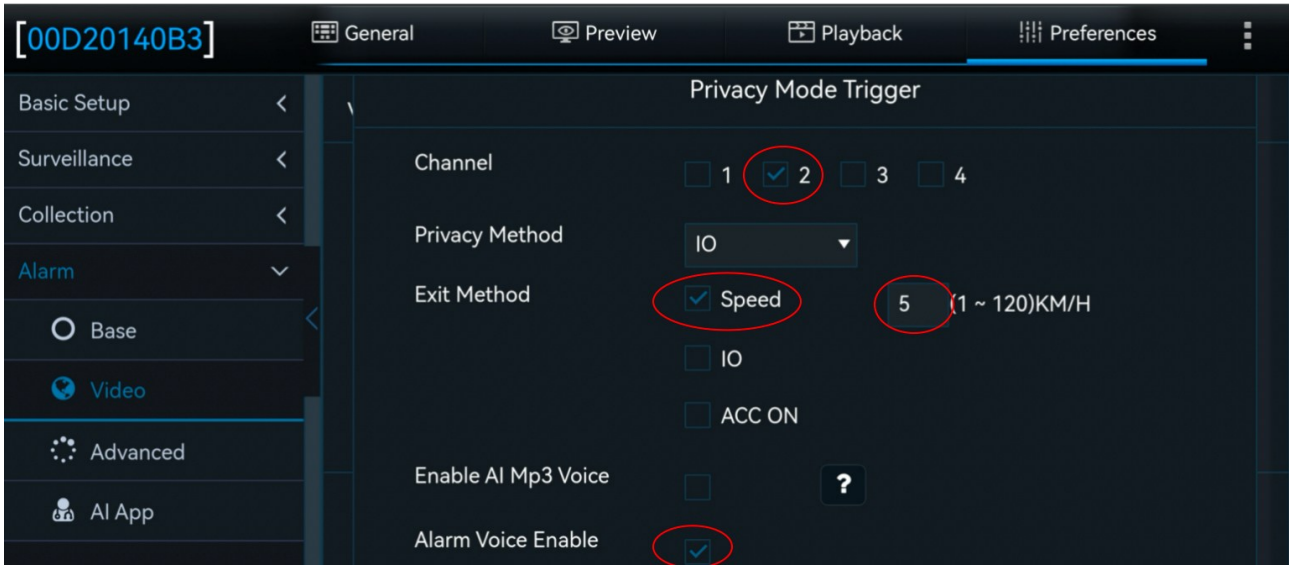
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privacy mode function to ensure that the driver is not remotely viewed or recorded in parking scenarios. Privacy mode allows the driver to manually trigger the device to disable the video function of the corresponding channels. The device supports various triggering methods, automatic privacy mode deactivation, flexible configuration of the video channels to be disabled, and a dedicated panel button for easy operation. Below is a guide on how to quickly configure and use the privacy mode function.

6.1.2 Configuration

Refer to the privacy mode in video alarms, as shown below:





1、 Enable privacy mode.

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2、 Select the channels to be disabled when privacy mode is triggered.

3、 For the deactivation method, select speed and set it to 5 KM/H.

4、 Enable voice reminder.

5、 Save the settings.

6.1.3 Usage

1. Park the vehicle.

2. Press and hold the panel button for 2 seconds, then release it. The device will voice broadcast "privacy mode enable."

3. The privacy channels will now be disabled, protecting the driver's privacy.

4. When the vehicle speed exceeds the threshold, privacy mode will automatically exit, and the device will voice broadcast "privacy mode disable."

5. To manually exit privacy mode: press and hold the panel button for 2 seconds, then release it. The device will voice broadcast "privacy mode disable."

Other methods refer to the privacy mode in video alarms.

7. Troubleshooting

7.1 The Device Cannot Power On

- Check whether the power cable connection is good and whether the fuse is intact and fully inserted.
- According to the system-designed power logic, when the device is powered through OBD, it will only power on when the vehicle is moving (G-sensor acceleration variance >10mg). If the device is installed under normal vehicle power supply, gently shake the device.

7.2 The Device Cannot Connect to the Network After Powering On

- Ensure that the SIM card is inserted before powering on the device. If inserted after powering on, power off and restart the device.

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- Check whether the SIM card is correctly installed.
- Check whether the network signal at the current location is good.
- Confirm whether the SIM card has data.

7.3 The Device Cannot Record After Powering On

- Ensure that the Micro SD card is inserted before powering on the device. If inserted after powering on, power off and restart the device.
- Check whether the Micro SD card is correctly installed.
- After inserting the Micro SD card into the device, format it before use.

7.4 No Display When the Camera is Connected to the Analog Channel

- Check whether the camera's N/P standard matches the current system standard. If not, modify the system standard.
- Check whether the camera cable connection is normal.

8. Appendix

8.1 Terminology Explanation

Main Stream: High-definition stream primarily used for recording storage and post-event evidence analysis.

Sub Stream: Standard-definition stream generally used for remote preview and can also be used for recording storage. When storage capacity is limited and cannot meet storage market requirements, dual storage can be considered to save both main and sub streams. The main stream satisfies general recording storage and evidence analysis, while the sub stream is used for long-term storage.

CEIBA2: The previous generation video service platform based on the CS architecture. The CEIBA2 client is the client software for this platform, supporting playback of H264 (raw data, including black box data, etc.) exported from the device. To obtain this platform software, contact the local technical support for integration.

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