Streamax

2 Channels AI Dashcam

DS100

User Manual

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Preface

About This Product Manual

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Abbreviation Explanation

Acronym	Full Name
ADAS	Advanced Driver Assistance System
DSC	Driver Safety Cockpit
LDW	Lane Departure Warning
HMW	Headway Monitoring Warning
FCW	Forward Collision Warning
PCW	Pedestrian Collision Warning

Product Overview

Product Name Description

DS100 is the dual-lens model with one built-in road-facing camera and one built-in cabin-facing camera.

Product Introduction

The DS100 is an AI-powered dashcam designed to enhance driver safety and improve fleet management efficiency. Leveraging advanced AI technology, it actively detects risky driving events and unsafe behaviors, providing real-time alerts to drivers to help avoid potential hazards. The system also uploads event data to the fleet management platform for driver training purposes. Additionally, it transmits real-time vehicle location and operational data to the platform, offering high-quality remote communication and video playback to streamline fleet management and boost overall efficiency.

Product Features

- Built-in forward high-definition road camera supporting 1080P video recording.
- Built-in in-cabin ultra-wide-angle lens supporting up to 1080P video recording.
- Supports H.264/H.265 encoding.
- Supports up to 1*1TB external Micro SD card storage, and Built-in 1*eMMC storage（Up to 256GB）allowing simultaneous storage of both main and sub-streams.
- Built-in 4G communication module (eSIM supported), and GNSS positioning module.
- Audio and video data supports AES-256 encryption, data transmission uses encrypted TLS 1.3 protocol.
- Supports 2-channel input,1-channel output, 1-channel CAN and 1-channel RS232.
- Compact design, does not obstruct the driver's view on both large and small vehicles.
- Supports OBD power supply, convenient and quick installation.
- Built-in ADAS features (3.85 mm road-facing lens), support lane departure warning, forward collision warning, pedestrian collision warning and headway monitoring warning.
- Built-in DSC function, supports detection of poor driving behavior.
- Supports echo suppression algorithm to improve two-way intercom quality
- Supports sleep mode and remote wake-up.
- Built-in 6-axis gravity sensor, supports detection of rapid acceleration, rapid deceleration, sharp turns, and collisions.
- Built-in WIFI/Bluetooth, supports Bluetooth IoT peripherals such as fuel level sensor, tire pressure sensor, speed sensor, etc.
- Supports 2 sets of button functions: one set of emergency alarm buttons and one set of function buttons.

AI Features

The DS100 uses advanced video analysis technology and machine vision to automatically detect road hazards and unsafe driver behaviors. The system continuously monitors and triggers both visual and auditory alerts to remind the driver to pay attention to safety. Additionally, relevant alarm footage is automatically uploaded to the cloud for real-time monitoring and review.

- **ADAS Features**

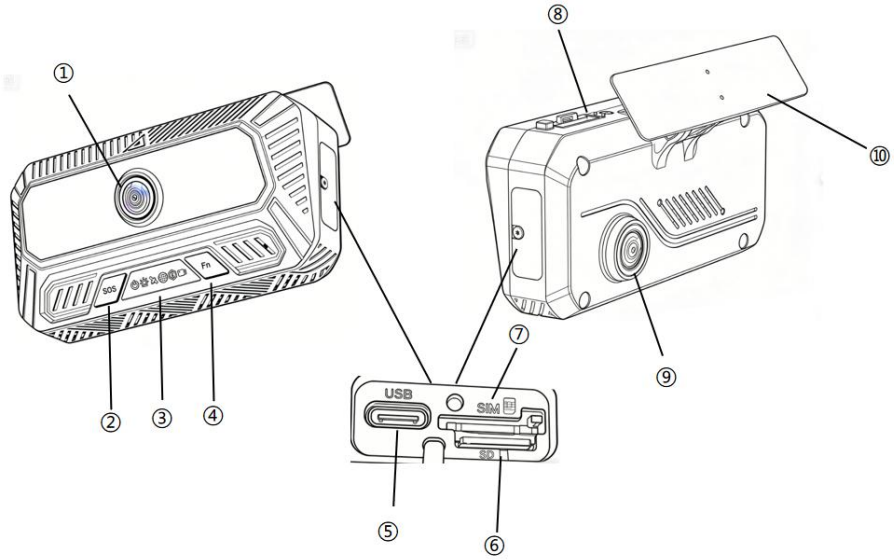
LDW	**HMW**	**FCW**	**PCW**

- **DSC Features**

Lens Covering	**Yawning**	**Phone**	**Smoking**
Distraction	**No Driver**	**Seat belt**	

Product Appearance and Component Names

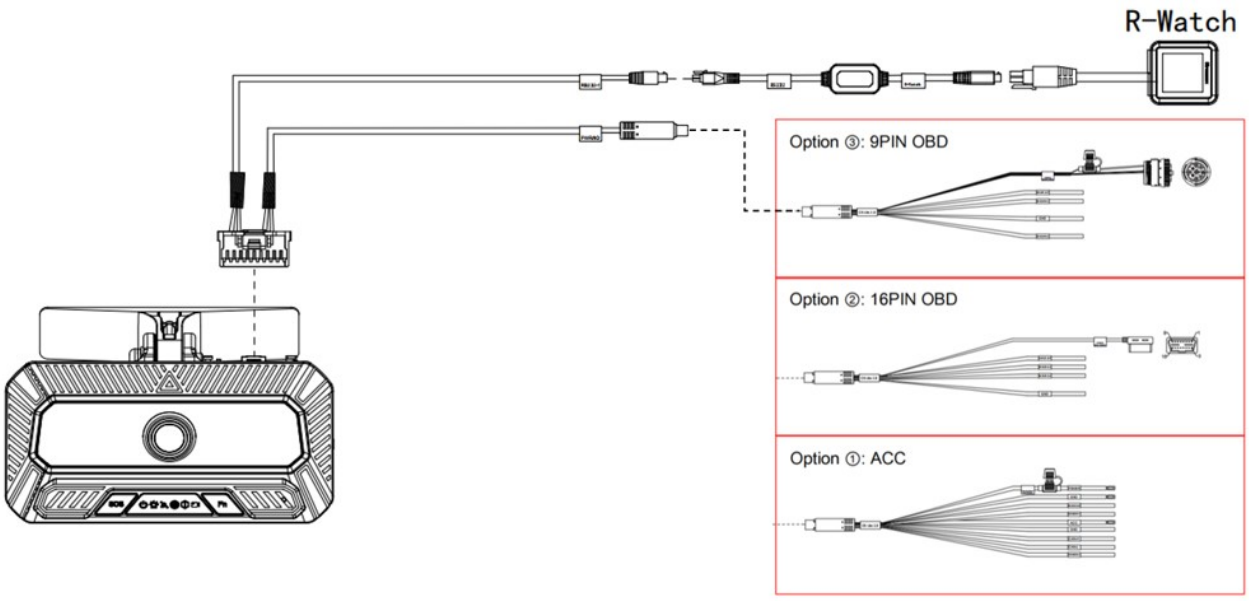
➢ DS100 Front & Side View



<table>
<tr><th>No.</th><th>Name</th><th>Description</th></tr>
<tr><td>1</td><td>Cabin-facing Camera</td><td>A rear-mounted, ultra-wide-angle cockpit camera that supports up to 1080P HD recording. The main unit integrates a DSC algorithm capable of detecting various driver behaviors.</td></tr>
<tr><td>2</td><td>Emergency Alarm Button</td><td>Click to trigger an emergency alarm.</td></tr>
<tr><td>3</td><td>Status Indicator Light</td><td>
<table>
<tr><th>Indicator Light</th><th>Icon</th><th>Off</th><th>On / Flashing</th></tr>
<tr><td>Power Indicator</td><td>⏻</td><td>No power supply</td><td>● Power supply normal</td></tr>
<tr><td>Alarm Indicator</td><td></td><td>No alarm currently</td><td>○ (Flashing) Alarm triggered</td></tr>
<tr><td>GPS Signal Indicator</td><td></td><td>GPS positioning normal</td><td>● Positioning error
○ (Flashing) Poor positioning quality</td></tr>
<tr><td>Network Status Indicator</td><td></td><td>Connected to server</td><td>● Not connected to server
○ (Flashing) Airplane mode</td></tr>
<tr><td>WiFi Status Indicator</td><td></td><td>WiFi is in Disable or Client mode</td><td>● AP mode
● WiFi error</td></tr>
<tr><td>Recording Status Indicator</td><td></td><td>Normal recording</td><td>● Recording stopped / Malfunction</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>Function Button</td><td>
<table>
<tr><th>Double Click</th><th>Long Press</th></tr>
<tr><td>Activate AP Mode</td><td>Enable/Disable Privacy Mode</td></tr>
</table>
</td></tr>
</table>

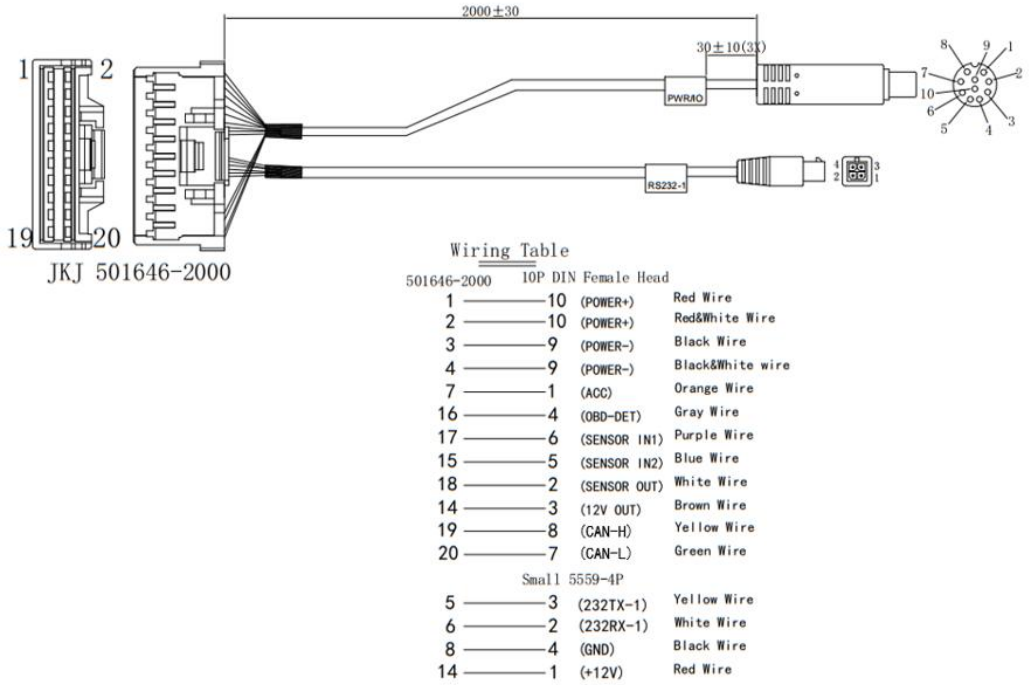
5	**USB Type C Port**	Primarily used for maintenance purposes such as firmware updates, device configuration, export video or troubleshooting.
6	**Micro SD Card Slot**	Supports single Micro SD card storage (up to 1TB), allowing simultaneous recording of both the primary and secondary video streams, thereby offering flexible storage options for data recording.
7	**SIM Card Slot**	Features an integrated 4G communication module, enabling real-time data upload and remote access via the 4G network.
8	**Cable fixing clip**	Insert the included power cable into this port to connect to the vehicle's power supply.
9	**Road-facing Camera**	Equipped with a wide-angle front lens that supports up to 1080P HD recording. The main unit includes an ADAS algorithm capable of detecting road conditions.
10	**Installation Bracket**	A mounting bracket designed to secure the camera installation. It is equipped with 3M adhesive for firm attachment to glass, is compatible with various vehicle cockpit interiors, and is easy to install. The bracket's adjustable angle ensures an optimal field of view.

System Connection Diagram

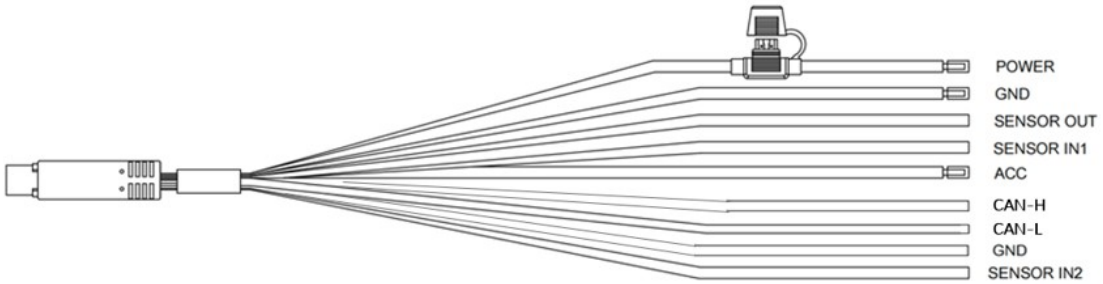


Note	● **R-Watch**: A peripheral device used for **driver safety alerts** through visual and audible warnings.

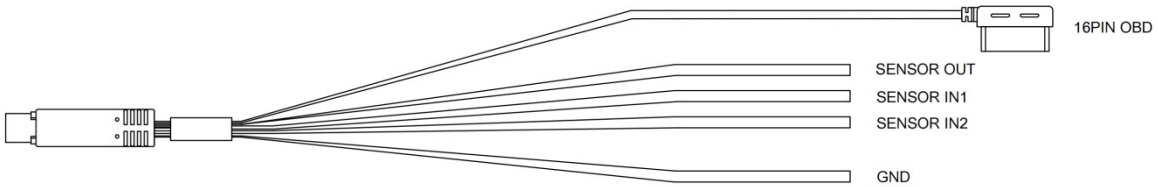
Cables



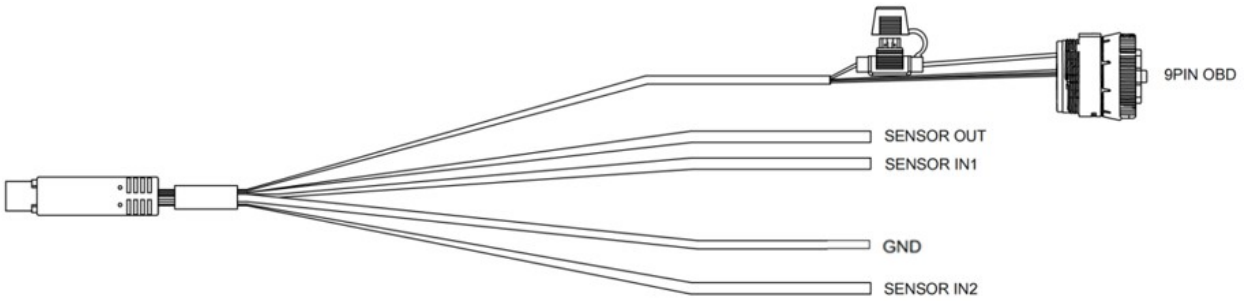
Power Cable



ACC Power Cable



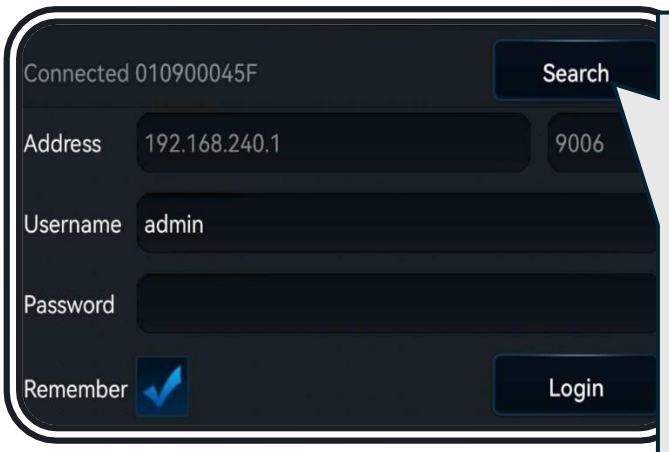
16PIN OBD Power Cable — Optional



9PIN OBD Power Cable

Device Login

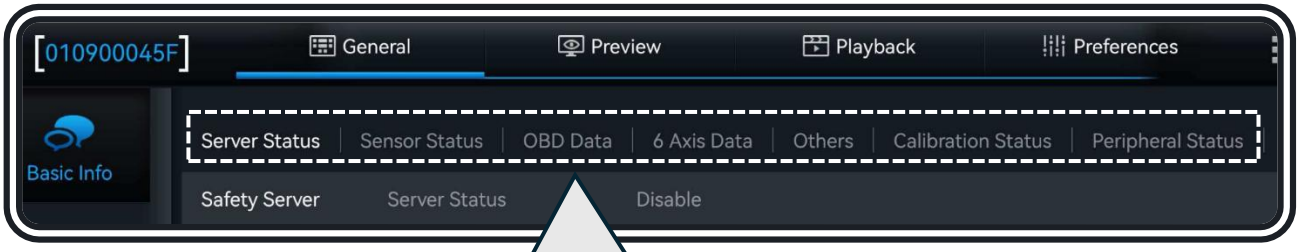
Note	**AP Mode**: To connect to the device's Wi-Fi hotspot, the device must be in AP mode. The device will be in AP mode for the first 3 minutes after startup. You can also manually switch to AP mode at any time by double-clicking the function button on the device.
	Mobile App Installation: ● For Android users, search for Veyes in Google Play to download ● For iPhone users, search for Veyes in the App Store to download



1. Click **[Search]** to enter the Wi-Fi settings. Select the corresponding device hotspot and connect. The initial hotspot name will be the device's **Serial Number**, which can be found on the label on the device
2. Enter the **username** and **password**, The default credentials are: **admin/admin**
3. Click **[Log in]** to access the operation interface

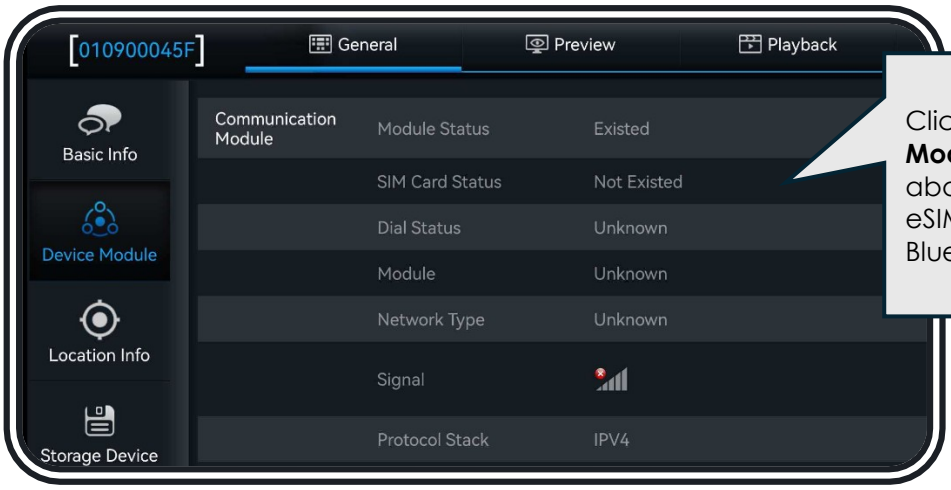
1. Click the top-right corner to view information such as the APP version and other details
2. **[Acceptance]**: Acceptance Mode. This mode is used for testing or accepting the device in a static environment. It triggers AI alerts based on a preset vehicle speed

General Information Viewing

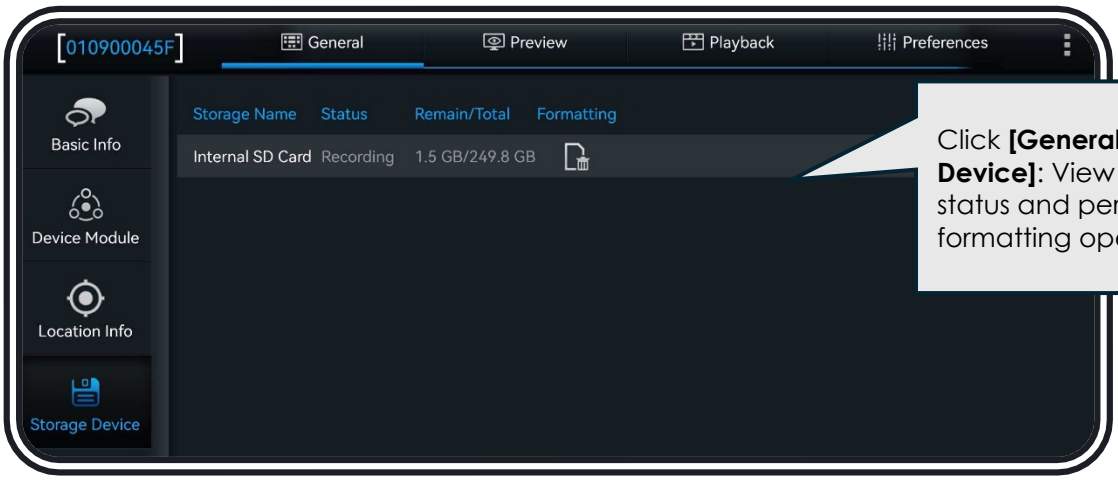


Click **[General]** → **[Basic Info]** to view the device's basic information:

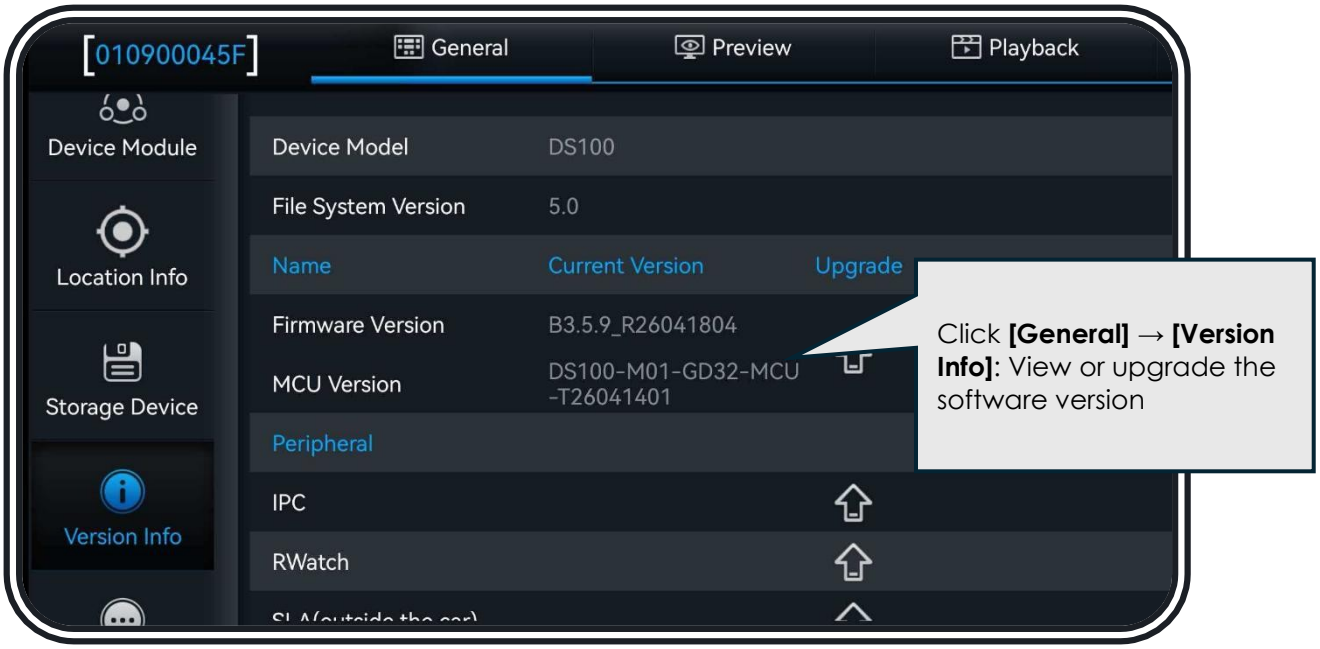
1. **[Server Status]**: View the server connection status
2. **[Sensor Status]**: View the high/low voltage status and usage of the I/O
3. **[OBD Data]**: View the vehicle data read by the device from the OBD port
4. **[6 Axis Data]**: View the G-Sensor's six-axis data
5. **[Others]**: View the ACC status, pulse status, and device status
6. **[Calibration Status]**: View the AI algorithm calibration status
7. **[Peripheral Status]**: View all peripheral device status

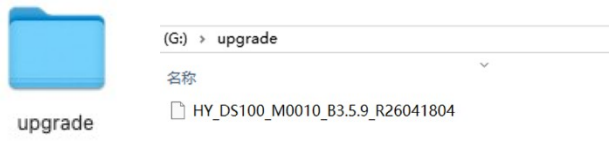


Click **[General]** → **[Device Module]**: View information about the device's Wi-Fi, 3/4G, eSIM, Positioning, and Bluetooth modules

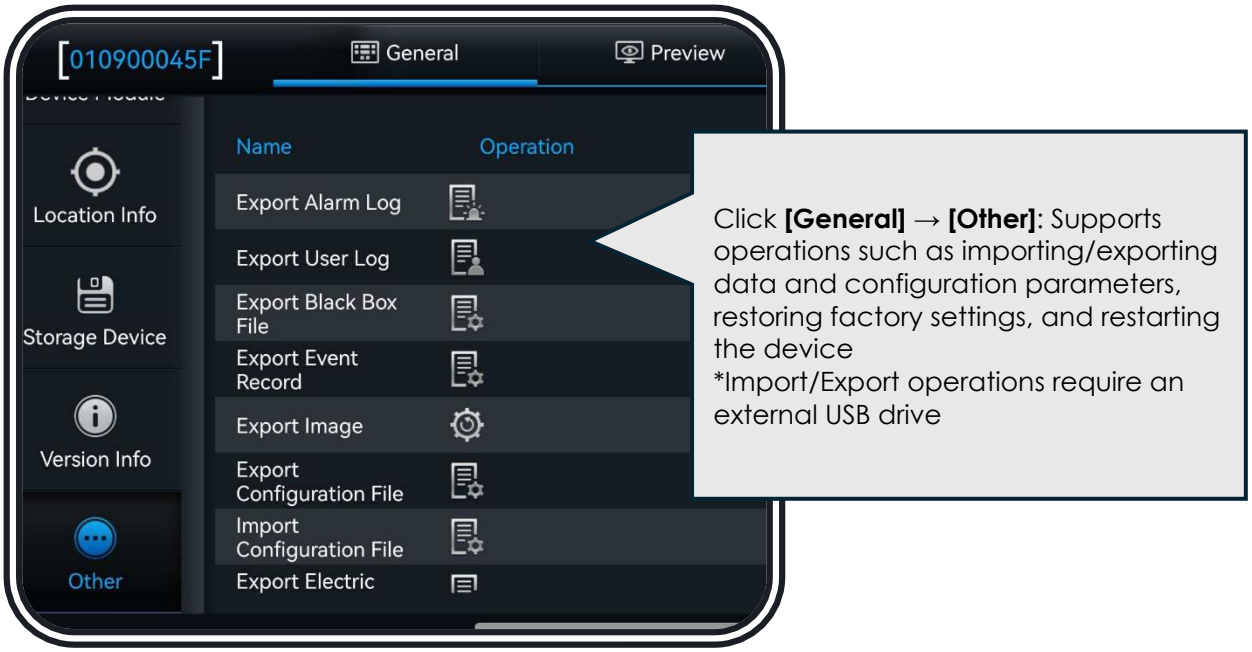


Click **[General]** → **[Storage Device]**: View the storage status and perform formatting operations

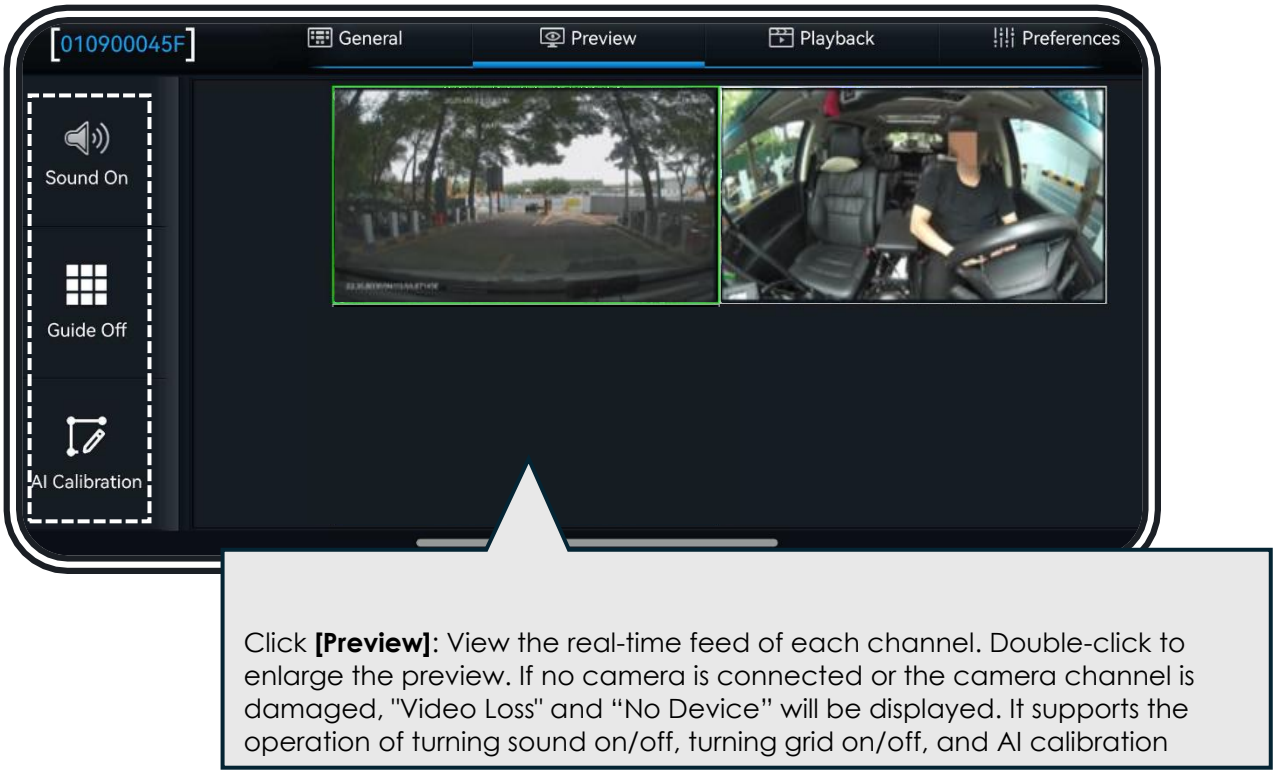


Upgrade Steps	Image Explanation
1. Prepare a **USB flash drive** and create a folder named **upgrade** in the root directory. Then place the upgrade package into the folder	
2. Connect the USB flash drive to the device via the **maintenance cable** （The USB flash drive with a Type-C interface does not require this cable）	
3. Click **Upgrade**	

Note	The above steps outline the local upgrade process via Veyes. The device also supports online upgrades through the FT platform. For details, please refer to the platform documentation or consult relevant personnel.

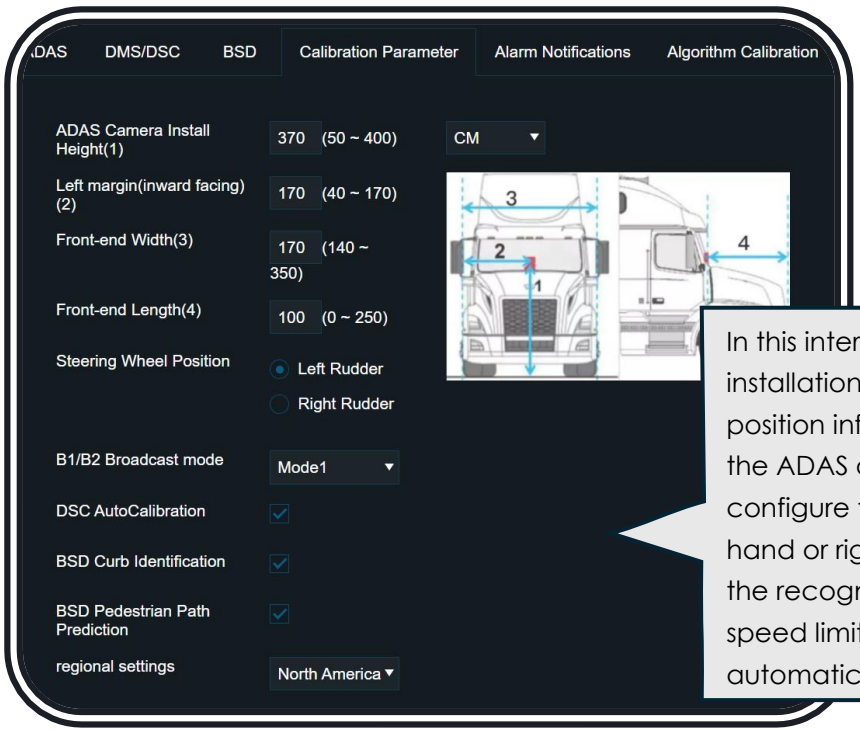


Video Preview

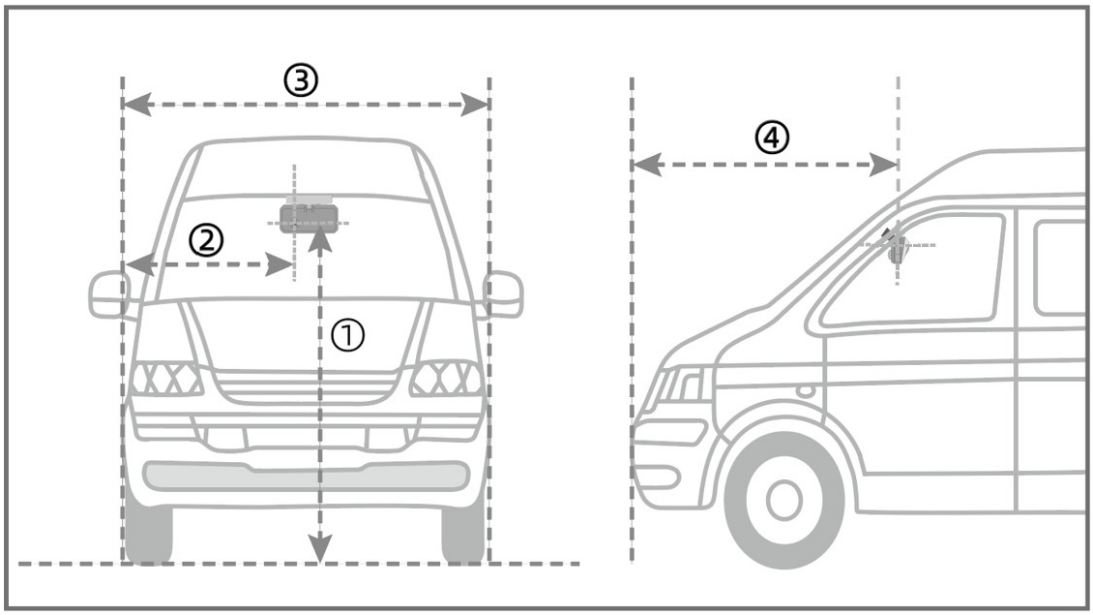


AI Calibration

Click **[Preferences] – [Alarm] – [AI APP] – [Calibration Parameters]**: DS100 supports ADAS and DMS auto-calibration. Enter parameter information as instructed.



In this interface, you can configure the installation position of the dashcam. Accurate position information improves the accuracy of the ADAS algorithm. Additionally, you can configure the steering wheel position (left-hand or right-hand drive), region (to enhance the recognition accuracy of stop signs and speed limit signs), and whether to enable DSC automatic calibration



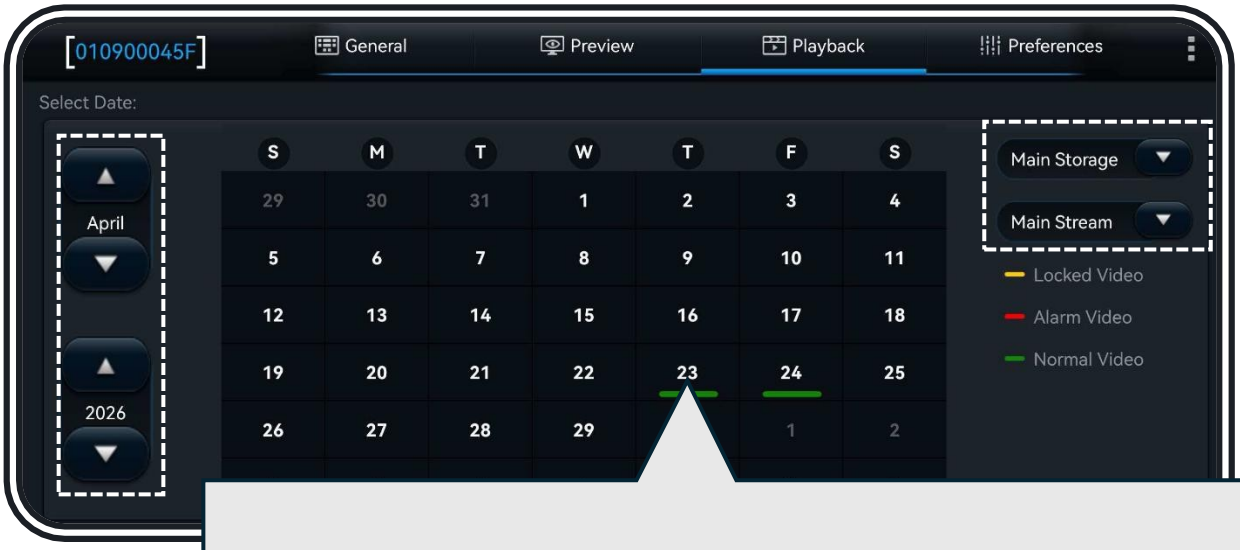
① Vertical distance from the camera to the ground
② Horizontal distance from the camera to the outer side of the vehicle's left front wheel
③ Horizontal distance between the outer sides of the vehicle's front wheels
④ Distance from the camera to the front of the vehicle

Note	**Auto-Calibration Instructions** After initial installation, angle adjustment, and parameter input, DS100 will Auto-Calibrate if these conditions are met: 1. Speed >15 km/h, following a vehicle 10–40 m ahead in the same lane for >5 sec. 2. Speed >50 km/h on a road with clear, long lane markings, staying centered in the lane (both lane lines clearly visible) for >5 sec. Auto-Calibration runs in real time once speed, distance, and road conditions are satisfied.

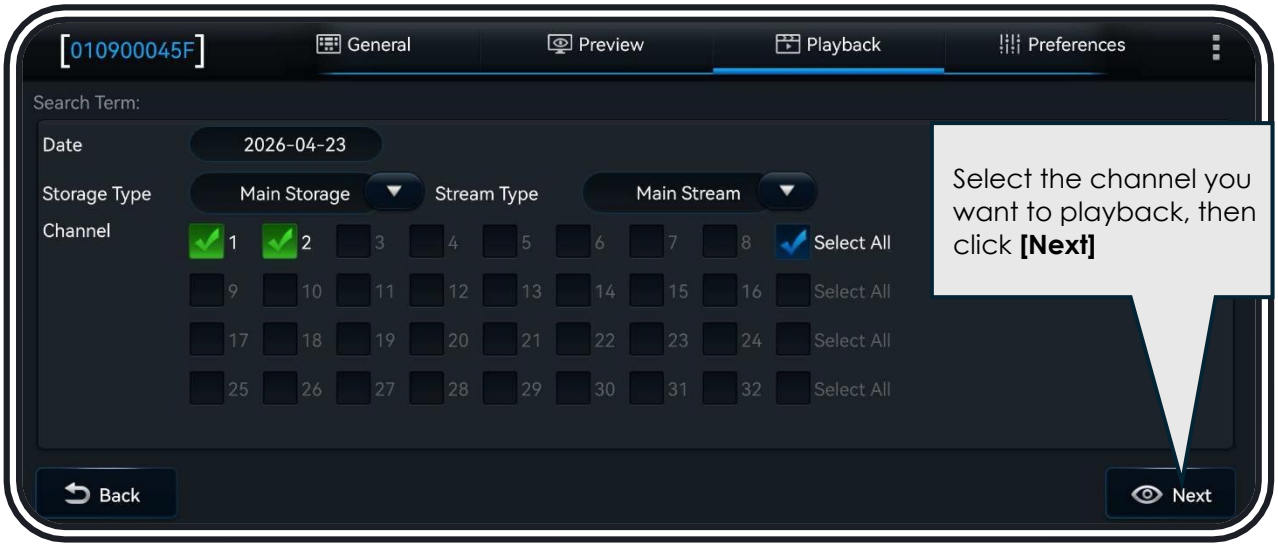
Warning	**Auto-Calibration Failure Causes:** ● Installation issue: Excessive vertical angle or misalignment of the device installation. ● Incorrect calibration parameters: Improper parameter input may trigger false alarms. ● Unmet conditions for auto-calibration: Required speed, distance to preceding vehicle, or road conditions were not satisfied. ● No speed signal: No speed input source (GPS, pulse, etc.) was detected during operation. Please troubleshoot based on the above causes. If unresolved, please contact Streamax technical support for evaluation.

At this point, ADAS/DMS calibration is complete

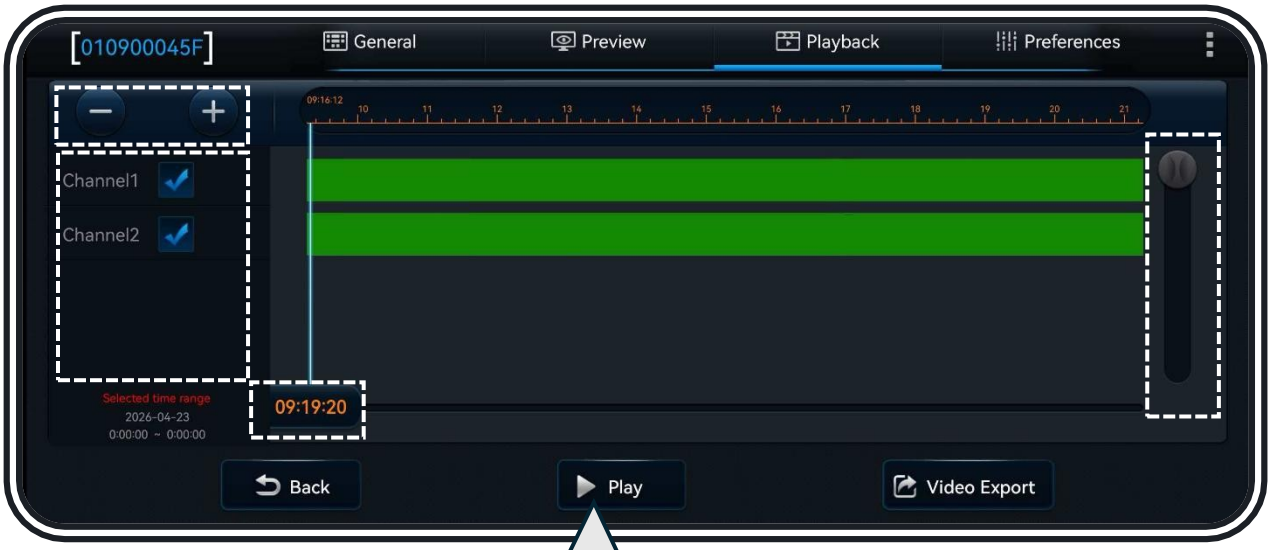
Video Playback



1. Click **[Playback]**, and you can select the **year and date** on the left side of the screen. In the calendar, the color bar under each date indicates that there is video recorded on that day, with different colors representing different types of videos
2. On the right side of the screen, you can select the **Main/Sub Storage** (The DS100 supports one Micro SD card and built-in one eMMC card). In the storage, you can choose between **Main/Sub stream**:
   - **Main Stream**: HD quality, primarily used for video recording storage, providing video evidence
   - **Sub Stream**: SD quality, mainly used for remote preview and can also be used for long-duration video storage



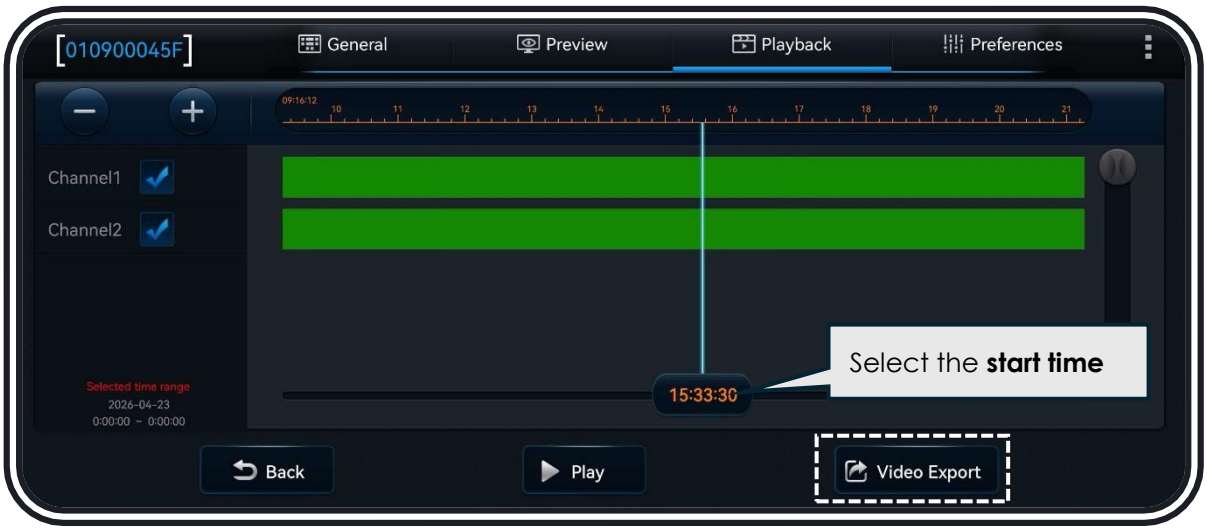
Select the channel you want to playback, then click **[Next]**

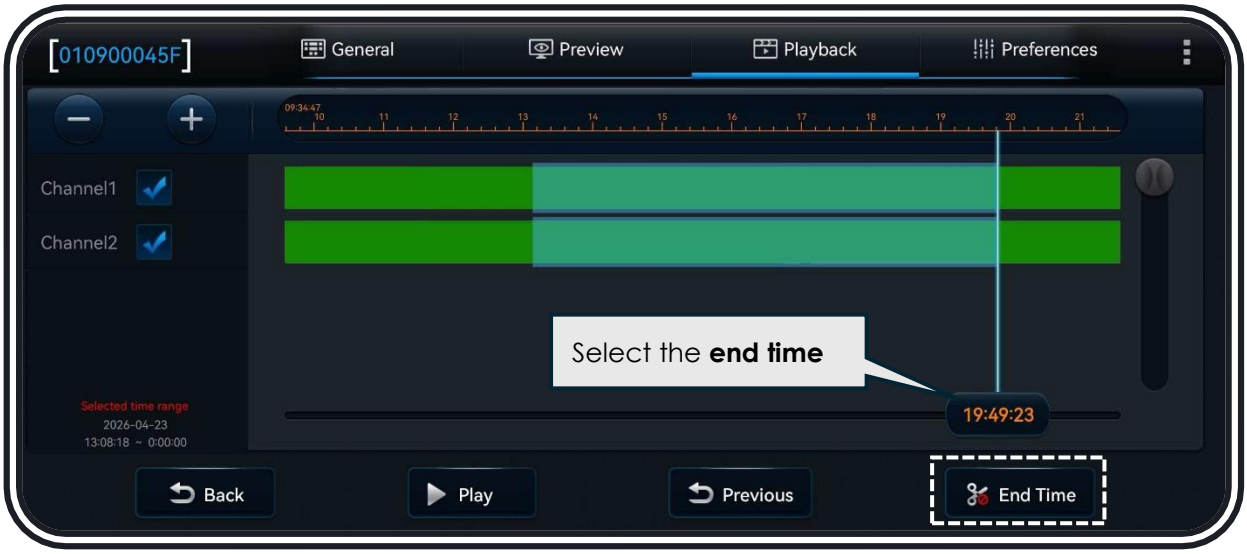


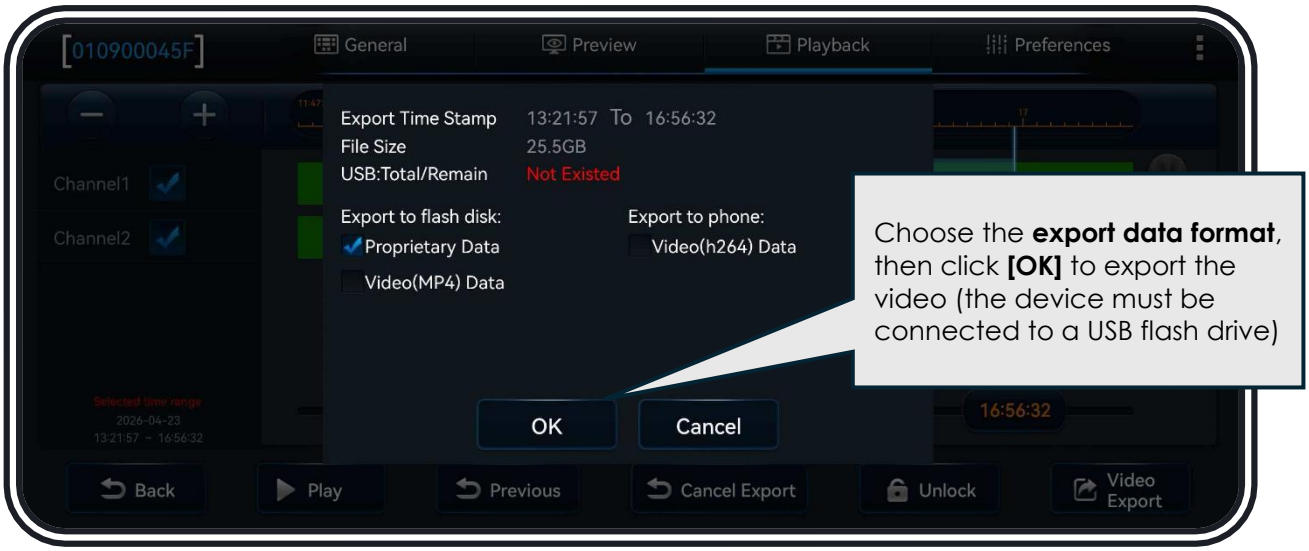
1. The top section shows the timeline. You can zoom in/out the timeline by clicking the button in the top-left corner
2. Check the box for the channel you want to playback
3. The color bar on each channel represents the type of video recorded during a specific period
4. Drag the timeline to start the playback from a specific time point
5. Drag the channel axis on the far right to view the corresponding channels for CH1 to CH2
6. Click **[Play]** to start the playback

Video Export

Refer to the last page of the previous section's diagram, then click **[Video Export]**:







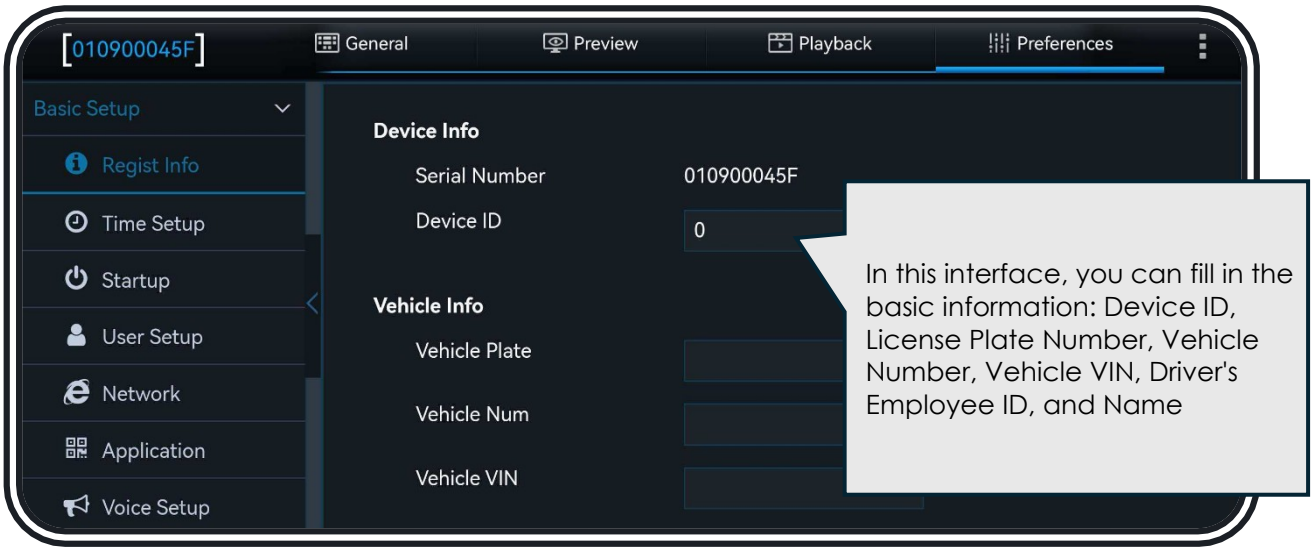
Warning	Exporting in **MP4 format** allows playback on regular media players. Exporting in **H264 format** requires a dedicated player (CEIBA2 client). The H264 format contains more raw data, which is helpful for troubleshooting. If you require after-sales support, please choose to export in H264 format

Basic Configurations

Note	In all configuration parameter interfaces, after modifying the parameters, click the **[Save]** button at the bottom of the screen to save the changes. Click **[Default]** to restore all the default parameters on that interface
Warning	Due to the wide range of features of this product, this user manual only covers the most used settings. If you have any other questions, please feel free to contact us

Registration Information

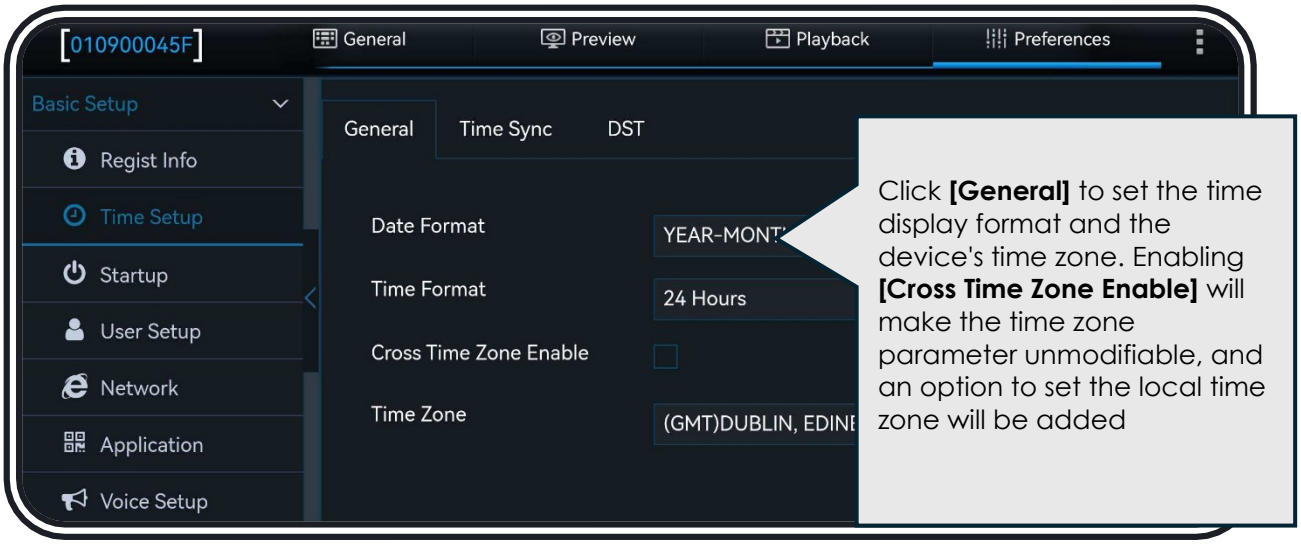
Click [Preferences] – [Basic Setup] – [Regist Info]:



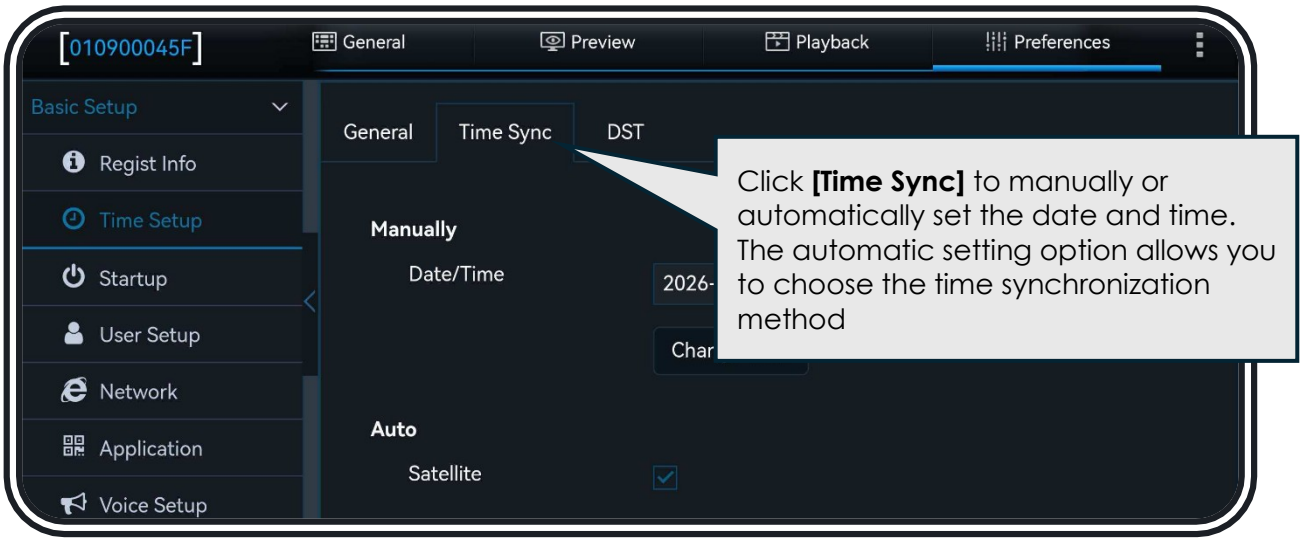
Note	Once you enter the license plate number, the Wi-Fi hotspot name will be renamed to the license plate number. You will then need to reconnect to the Wi-Fi and log in to Veyes again

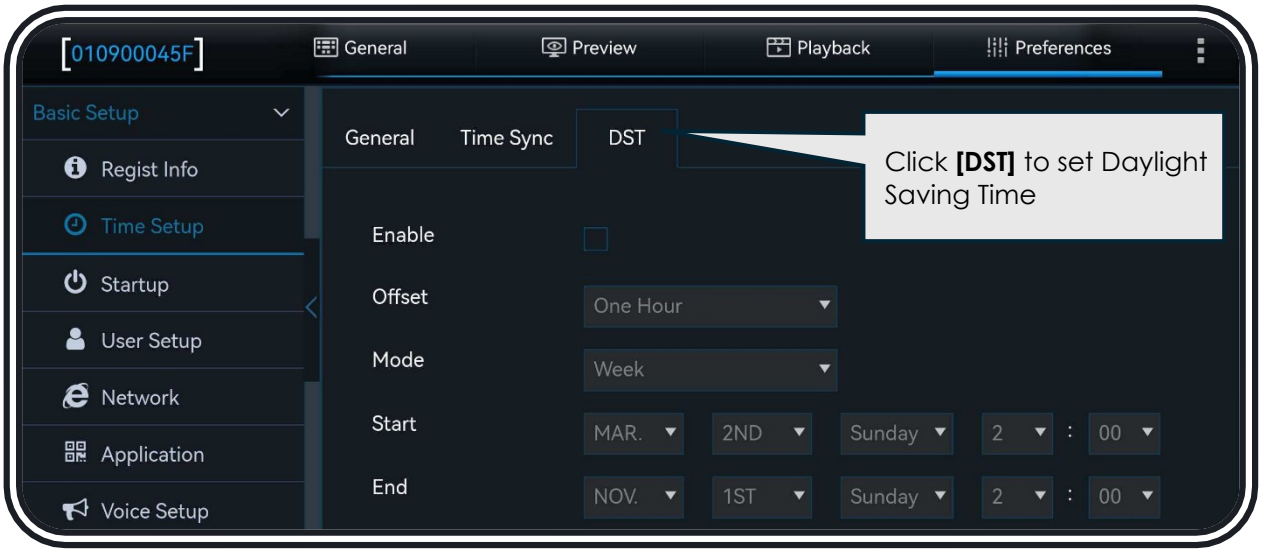
Time Setup

Click **[Preferences] – [Basic Setup] – [Time Setup]**:



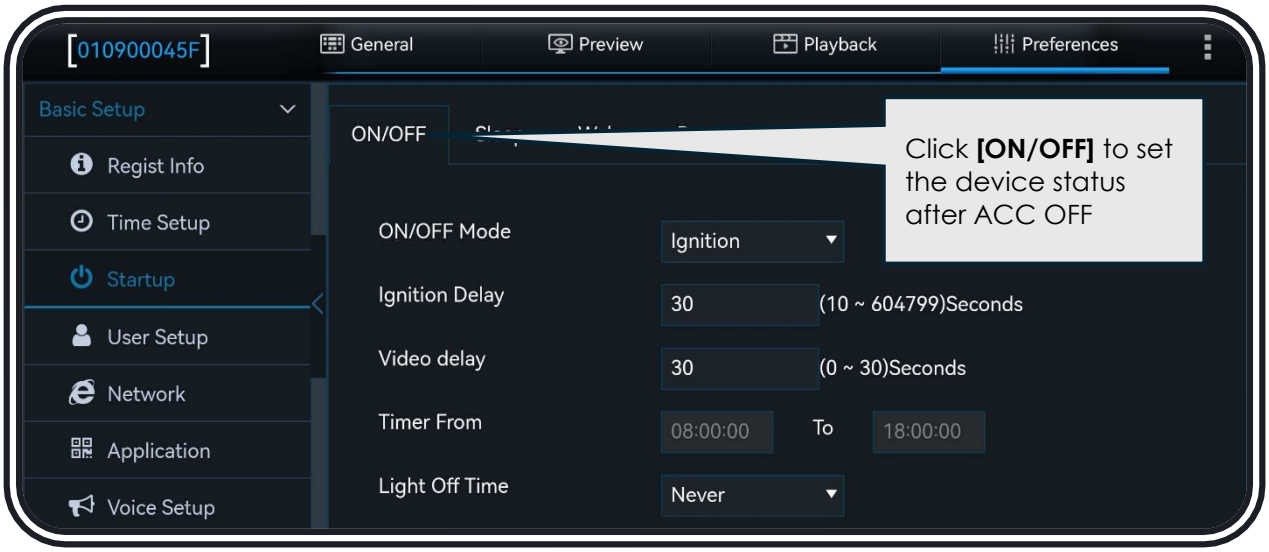
Note	**Cross Time Zone Enable:** When the vehicle and platform are in different time zones, enable this option to maintain proper communication between the device and the platform. Once enabled, the **[Time Zone]** setting becomes unmodifiable, and both the platform and the device will use the UTC (Zero) time zone for data exchange. A **[Local Time Zone]** setting is added to be used for overlaying time zones on the video recordings



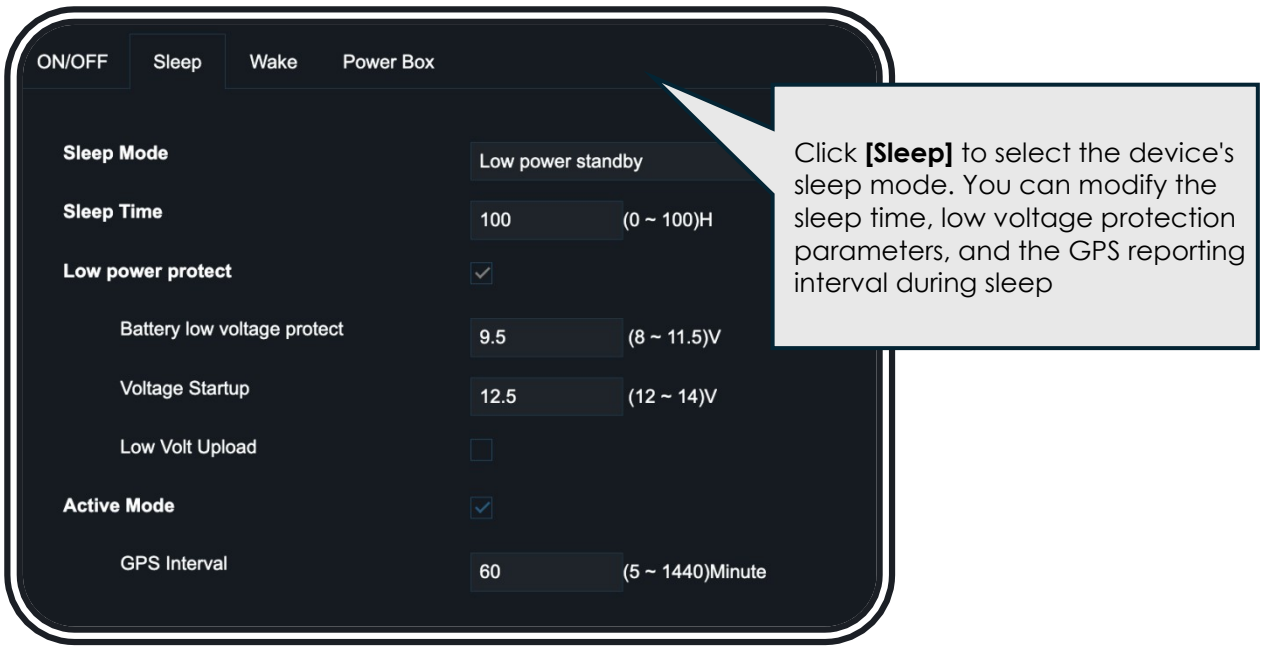


Startup Setup

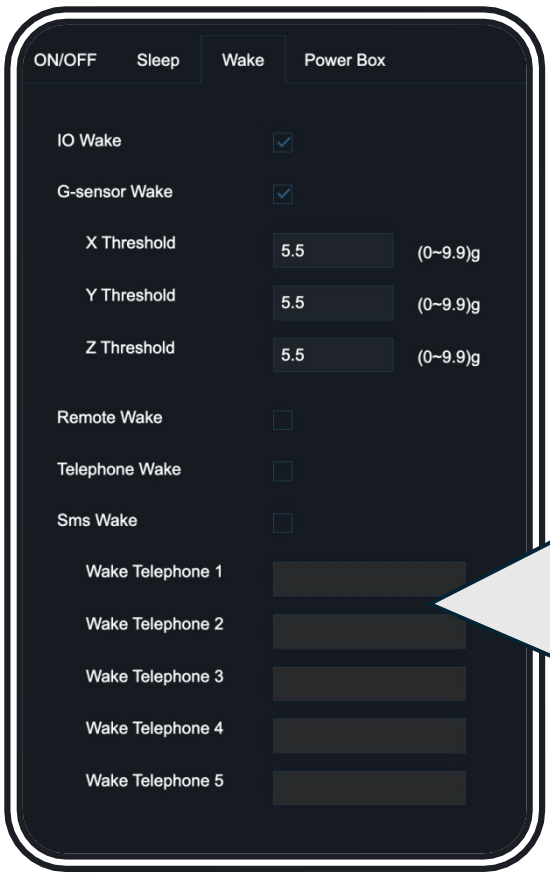
Click **[Preferences] – [Basic Setup] – [Startup]**:



Note	1. **[ON/OFF Mode]:** Select the [Ignition] for power on/off (that is, start the device by turning on the car key). 2. **[Ignition Delay]:** Set the time for delayed shutdown after the car key is turned off. It can be set from 0 to 86399 seconds, with the default being 300 seconds. 3. **[Video Delay]:** Set the time for delayed video recording after ignition shutdown. The video recording delay time ≤ the ignition shutdown delay time. 4. **[Timer From]:** Select the period for timed power-on. 5. **[Light Off Time]:** When an external display screen is connected, you can configure the time for the screen backlight to turn off. 6. **[Reboot Delay]:** When enabled, the device will automatically restart once after the set time, and then start the shutdown countdown again.



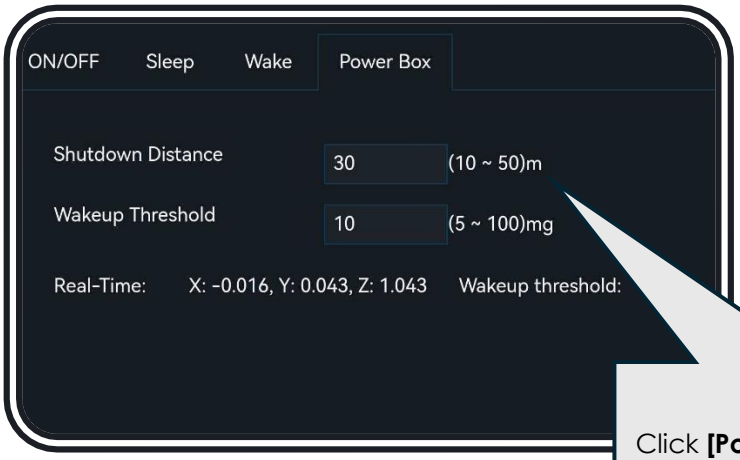
Note	1. **No consumption standby**: Zero power standby (i.e., off). The device will not be awakened, and it cannot interact with the platform 2. **Low power standby**: The device is in low power standby mode, where it can be awakened and interact with the platform 3. **[Sleep Time]**: This parameter indicates the duration the device stays in low power standby mode without being awakened or started. After this time, the device will enter zero power standby 4. **[Battery low voltage protect]**: When the battery voltage falls below the set value, the device will enter low power standby mode when ACC ON and zero power standby mode when ACC OFF 5. **[Voltage Startup]**: In low power standby mode, when the battery voltage exceeds the set value, the device will return to normal startup mode 6. **[Low Volt Upload]**: When enabled, the device will report to the platform when the low voltage protection is triggered



Click **[Wake]** to select the device's wake-up method:

- **IO Wake**: The device will be awakened after an IO alarm is triggered
- **G-Sensor Wake**: The device will be awakened when its **motion** exceeds the threshold
- **Remote Wake**: The device will be remotely awakened by issuing a command from the platform
- **Call Wake**: The device will be awakened by a phone call, requiring a pre-configured phone number that supports wake-up
- **SMS Wake**: The device will be awakened by sending a text message to the device, with the message content as "WAKEUP". The phone number that supports wake-up must be pre-configured

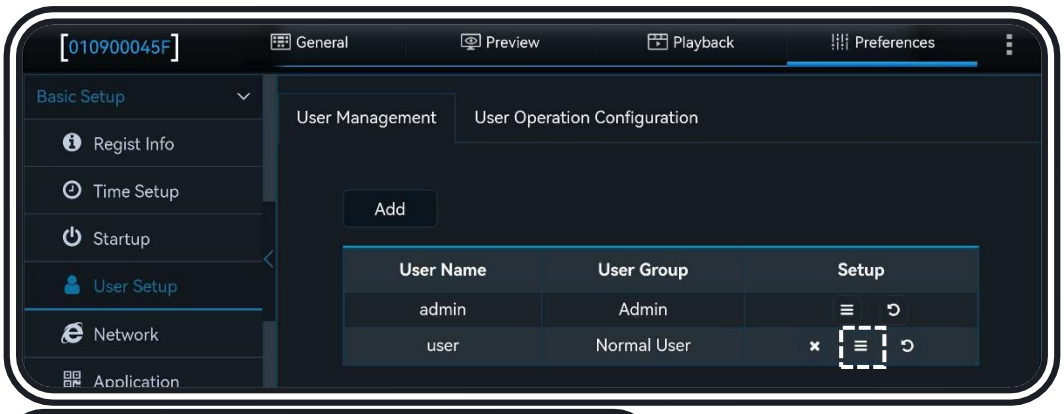
* The Call Wake and SMS Wake functions require the SIM card in the device to support SMS and voice call services



Click **[Power Box]** to select waking up via the power box. You can also modify the threshold for triggering wake-up of the power box. This feature requires connection to a power box

User Setup

Click **[Preferences] – [Basic Setup] – [User Setup]**:

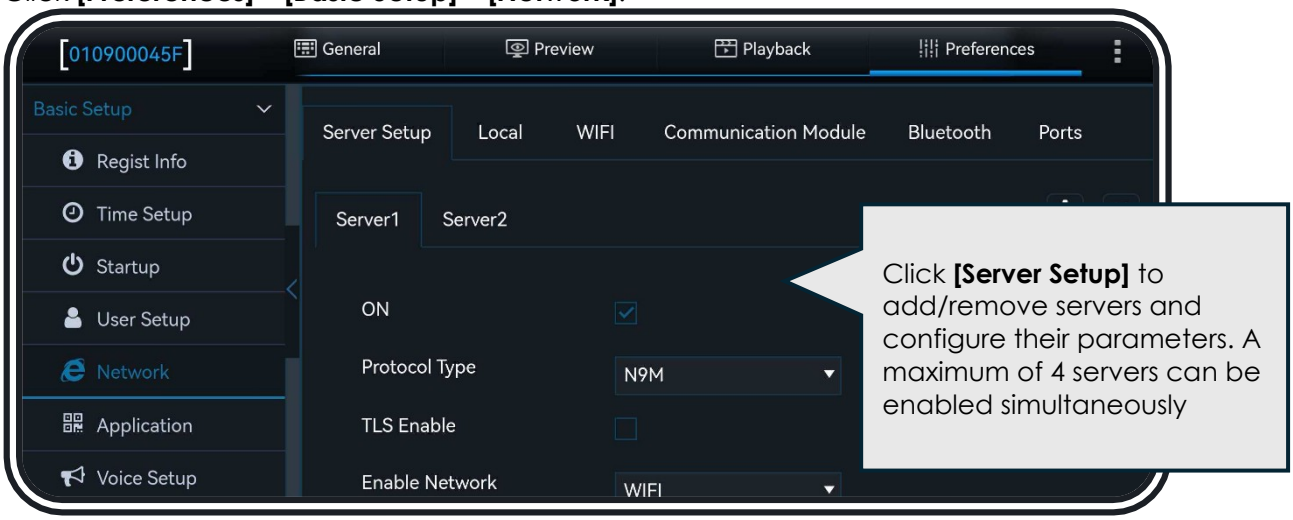


In this interface, you can configure the login user information, including modifying the username and password.

Warning	1. **Admin**: There is only one admin account, which has the permission to add/delete normal users and set parameters. A maximum of two normal users can be added 2. **Normal User**: A default normal user account is created, which only has permission to view settings

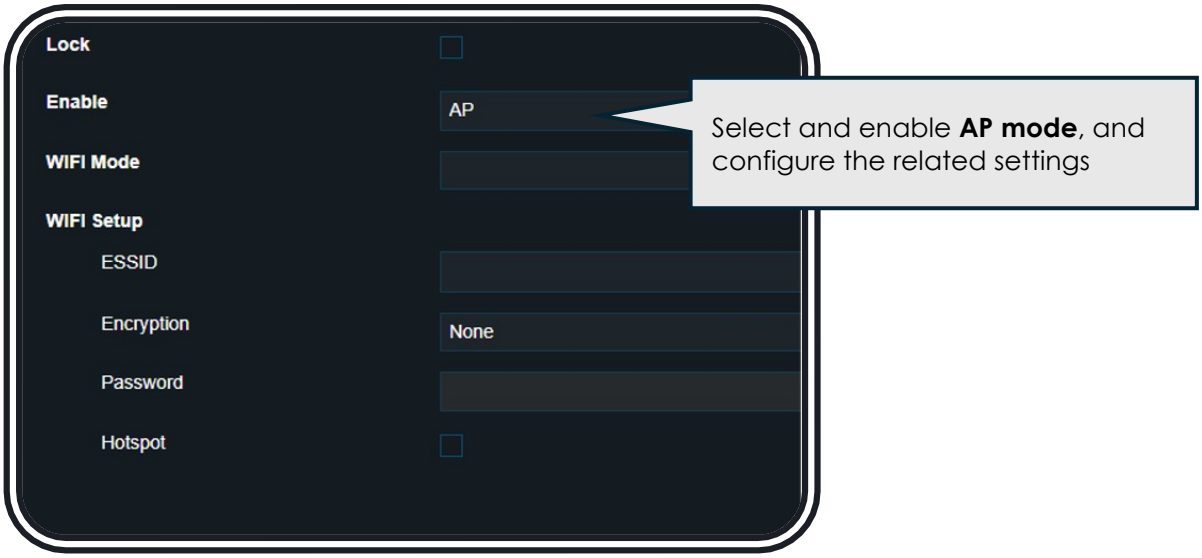
Network Setup

Click **[Preferences] – [Basic Setup] – [Network]**:



Note	1. **[Enable Network]**: You can choose between wired network, Wi-Fi, communication module, or adaptive. Adaptive means the system will automatically select the available network for platform connection, with priority given to Wi-Fi > Wired Network > Communication Module 2. During normal device operation, data between the device and the platform can be transmitted via TLS encryption to ensure the security of the interaction. (TLS encryption is unavailable in sleep mode.) 3. The registration server and media server addresses and ports must be the same 4. SMS commands can be used to modify the server parameters. For specific usage, please consult the relevant personnel

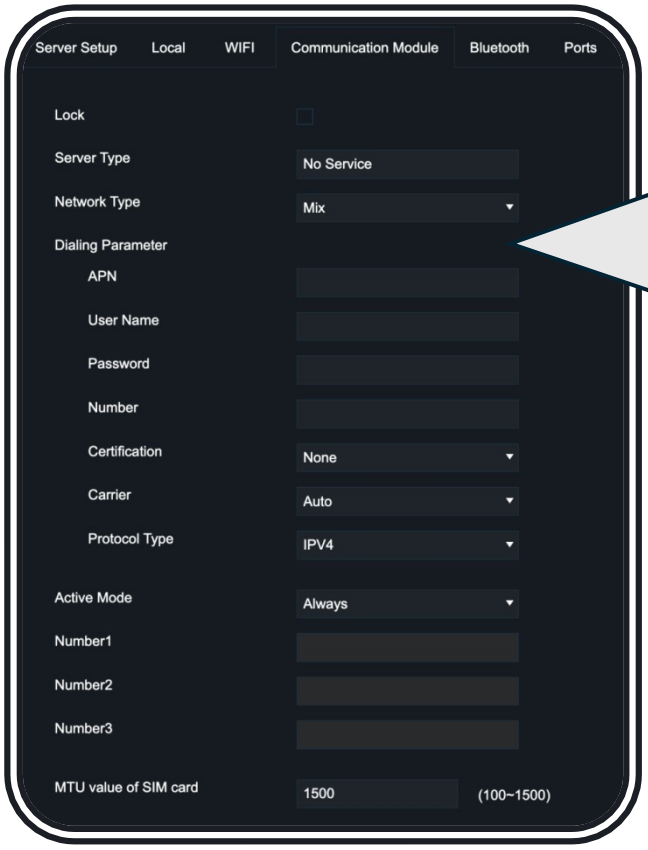
Server Setup
Local
WIFI
Communication Module
Bluetooth
Ports
Local
Enable IPV4
DHCP Mode
Static IP
IP Address
000:000:000:000
Subnet Mask
000:000:000:000
Gateway
000:000:000:000
Auto Get DNS
Use Following DNS
Preferred DNS Server
000:000:000:000
Alternate DNS Server
000:000:000:000
Enable IPV6
MAC
MAC Address
00:18:F5:7D:15:D4
Click [Local] to configure both IPv4 and IPv6 network protocols. Users can select automatic IP (DHCP mode) and DNS retrieval or manually set the IP address, gateway, and DNS.
The MAC address info is also displayed here


Lock
Enable
AP
WIFI Mode
WIFI Setup
ESSID
Encryption
None
Password
Hotspot
Select and enable AP mode, and configure the related settings

Note

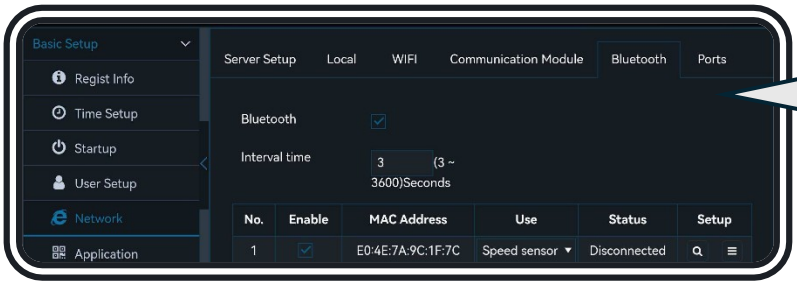
- **[Lock]:** When enabled, the Wi-Fi parameters cannot be imported or modified, and will not be affected by factory reset
- **[Enable]:**

Disable	Wi-Fi is disabled. The device defaults to AP mode within 3 minutes (configurable) after power on. If no Veyes connection is made within 3 minutes, the device will exit AP mode, and the module will enter sleep mode
AP	**[WIFI Mode]**:2.4G default; **[ESSID]**: The name of the device's hotspot (defaults to the serial number) **[Hotspot]**: After enabling the hotspot, mobile devices can connect to the device's hotspot for internet access. You can configure the encryption method **[Whitelist]**: Only mobile devices with IP addresses in the list are allowed to connect. You can add up to 5 IP addresses
Client	**[ESSID]:** The ID and password of an available external Wi-Fi network. The device will automatically search for nearby valid Wi-Fi networks and report to the platform through that network. You can configure the encryption method

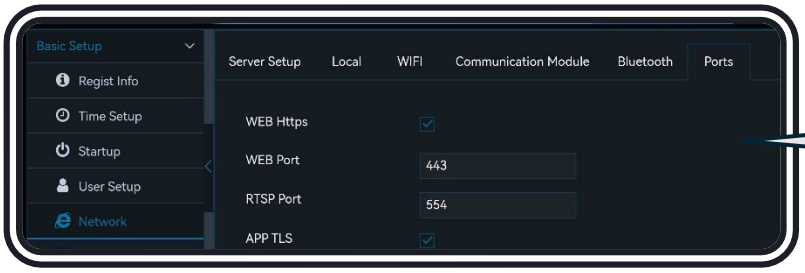


Click **[Communication Module]** to configure the communication module settings:

- **[Lock]**: Same as above, see **[WIFI] – [Lock]**
- **[Dialing Parameter]**: Enter the parameters provided by the SIM card manufacturer. By default, this field is empty, and if left empty, the device will use the default dialing parameters
- **[Active Mode]**: Select **[Always]** for constant connection mode; select activation via phone call/SMS, with a maximum of 3 available phone numbers; also select **[Sensor]** switch activation, where the network module will only be activated to dial after triggering the IO sensor
- **[MTU value of SIM card]**: Default is **1500**; the data is configurable



Click **[Bluetooth]** to search for and connect to Bluetooth sensors.

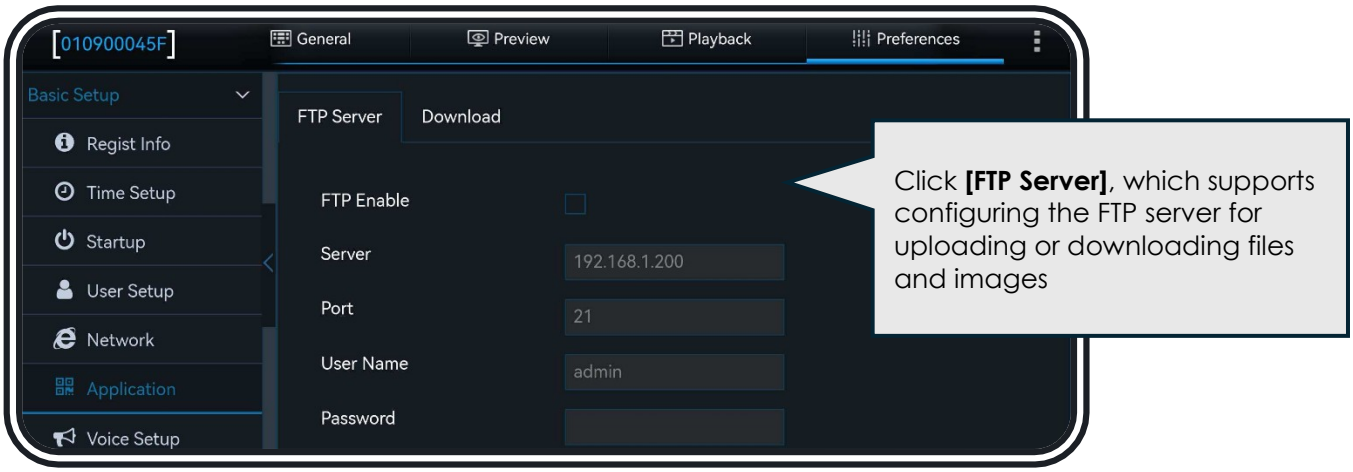


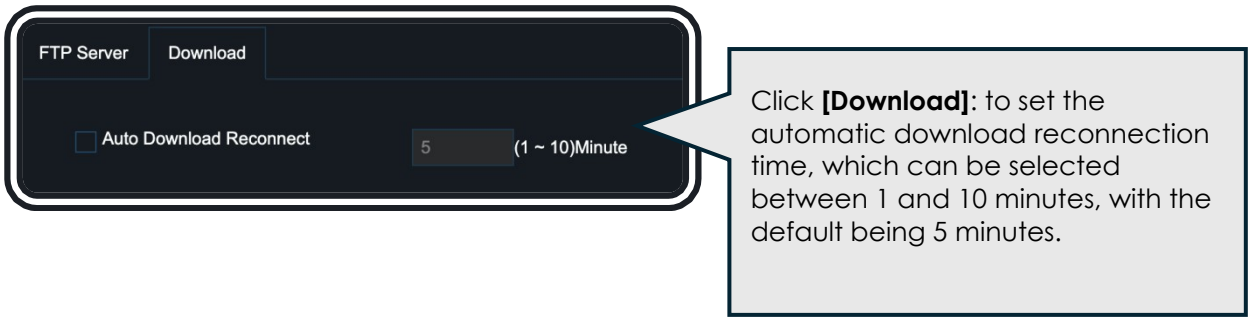
Click **[Ports]**:This interface can change the port number.

Note	**WEB Port**: The default is 80, which is used for access via IE. **RTSP Port**: The default is 554, supporting real-time preview and playback through RTSP with a fixed IP. ● RTSP Streaming Format: rtsp://user:pwd@IP:554/mainstreamX (X is the channel number, starting from 0, such as mainstream0) ● Example: rtsp://admin:admin@10.20.112.17:554/mainstream0

Application Setup

Click **[Preferences] – [Basic Setup] – [Application]**:



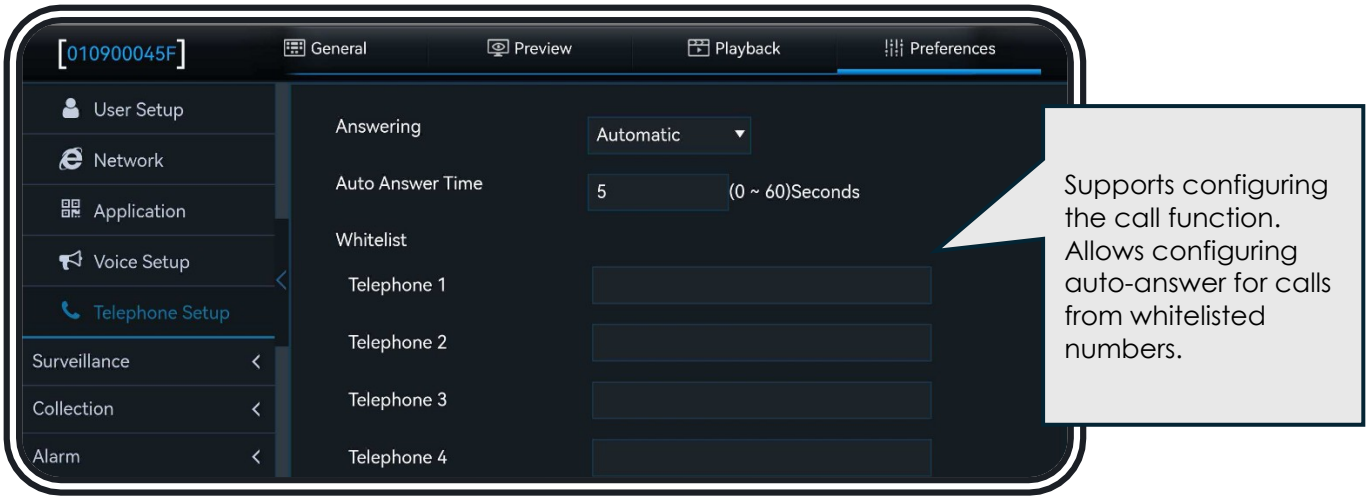


Sound Setup

Click **[Preferences] – [Basic Setup] – [Voice Setup]**:

Telephone Setup

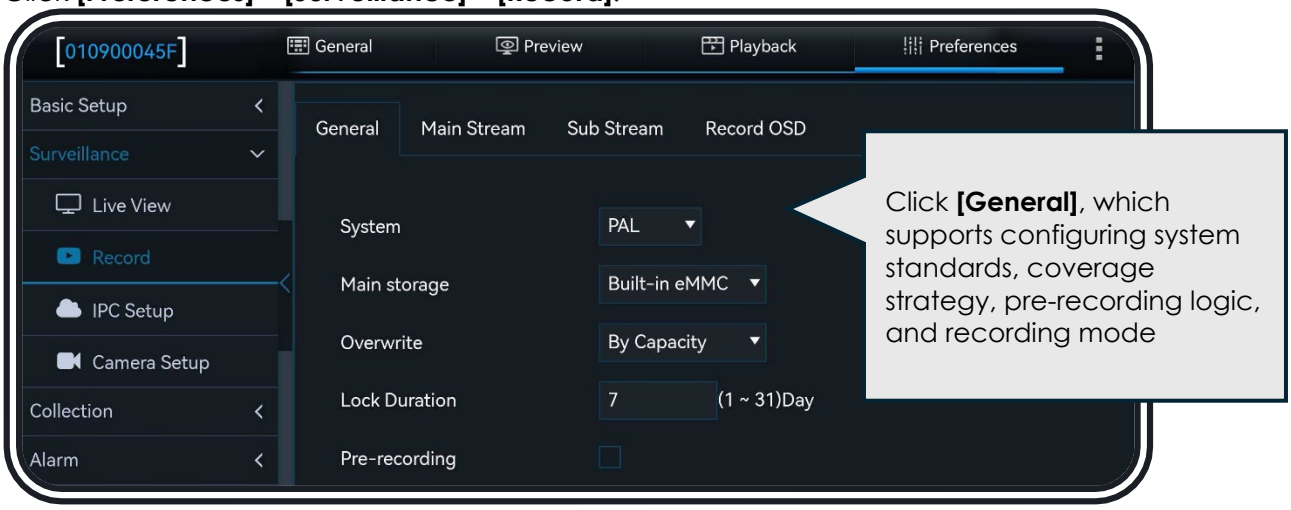
Click **[Preferences] – [Basic Setup] – [Telephone Setup]**:



Video Surveillance

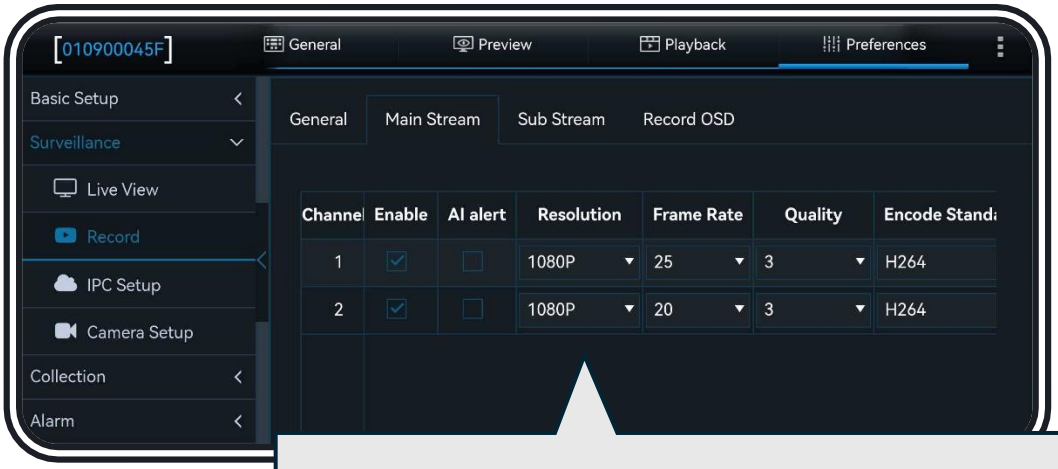
Recording Setup

Click **[Preferences] – [Surveillance] – [Record]**:

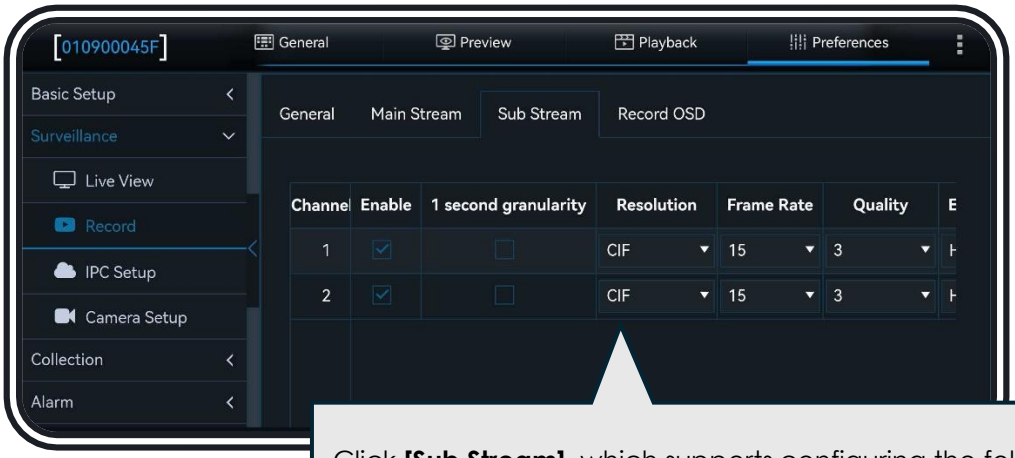


Warning	**[System]**: The system format includes PAL and NTSC. The system format must match the external camera format, otherwise, the device will not recognize it

Note	**[Main Storage]:** Used to select the main card recording type. Since DS100 supports two storage methods for video recording: built-in eMMC and external Micro SD, the specific options are as follows: 1. 【**Built-in eMMC**】**:** Set the eMMC as the main storage card 2. 【**External Micro SD**】**:** Set the Micro SD card as the main storage card . **[Overwrite]:** **1. [By Days]**: Overwrite by days, storing recordings for n days. If the SD card is full before n days, overwriting will occur in advance **2. [By Capacity]**: Overwrite by capacity, automatically overwriting old recordings when the remaining capacity is less than 1% 3. **[Never]**: No overwriting, recording will stop when the storage is full **4. [By Minutes]**: The logic is the same as **[By Days]** **[Pre-recording]**: When in alarm recording, it will link the recordings from a specified time before the alarm trigger (configurable) for event analysis **[SDRecord Mode]**: Set the recording mode for the secondary card. The definition of the secondary card is determined by the 【**Main storage** 】configuration. If External Micro SD is selected as the Main storage, the built-in eMMC will be the secondary card. The following description takes the built-in eMMC as the secondary card as an example: ● **[Sub-Record]**: The secondary card (built-in eMMC) stores sub-stream video recordings. ● **[Mirror Record]**: The secondary card (built-in eMMC) stores main-stream video recordings, following the settings of the main card (Micro SD). ● **[Alarm Backup]**: When an alarm is triggered, the secondary card (built-in eMMC) stores main-stream video recordings. ● **[Loop-Record]**: The secondary card (built-in eMMC) is in the same state as the main card (Micro SD) and can be regarded as a single storage device. Both cards perform cyclic recording, with old files automatically overwritten, and both store main-stream video recordings



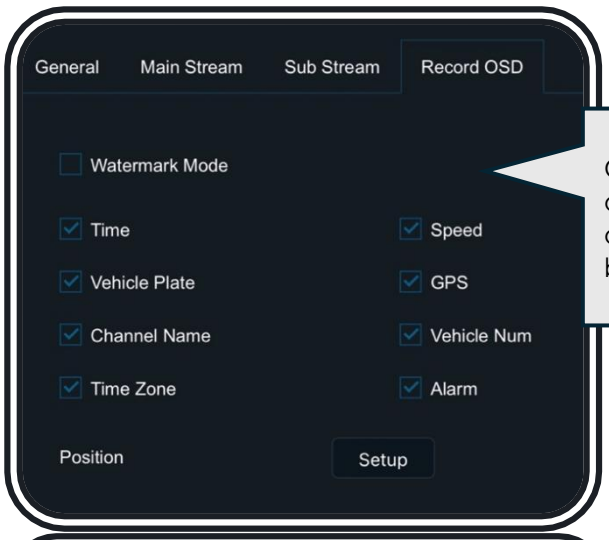
Click **[Main Stream]**, which supports configuring the following parameters for each channel in main stream recording



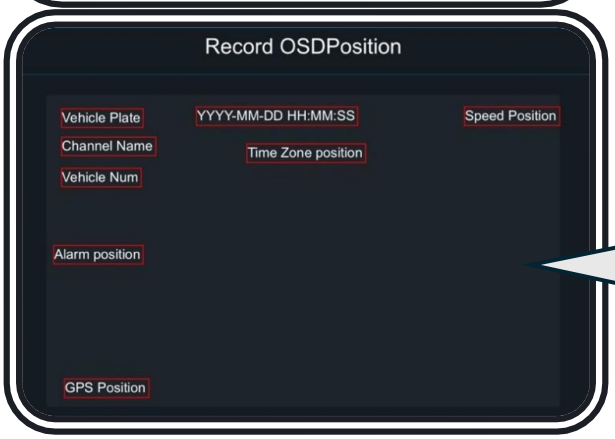
Click **[Sub Stream]**, which supports configuring the following parameters for each channel in sub stream recording

Note	1. **[Resolution]**: Selectable video resolution 2. **[Frame Rate]**: Selectable video frame rate 3. **[Quality]**: Selectable video quality, 1-8 4. **[Encode Standard]**: Selectable video compression standard, H264/H265 5. **[Channel Name]**: Modifiable channel name 6. **[Record Mode]**: Selectable recording mode, startup recording/timed recording/alarm recording 7. **[Audio]**: Select whether to enable audio recording 8. **[Alarm Quality]**: Selectable alarm video quality, 1-8 9. **[Encode Mode]**: Selectable video encoding mode, CBR/VBR 10. **[Audio Coding Format]**: Selectable audio compression method

Warning	When the main stream is disabled, the whole video input will be shut down. At this time, even if the sub-stream is enabled, it won't record the sub-stream.



Click **[Record OSD]**, which supports overlaying the selected information onto the recording screen, and it can be displayed in the platform preview



Click **[Setup]**, which supports dragging to set the overlay position of each piece of information

Camera Setup

Click **[Preferences] – [Surveillance] – [Camera Setup]**:

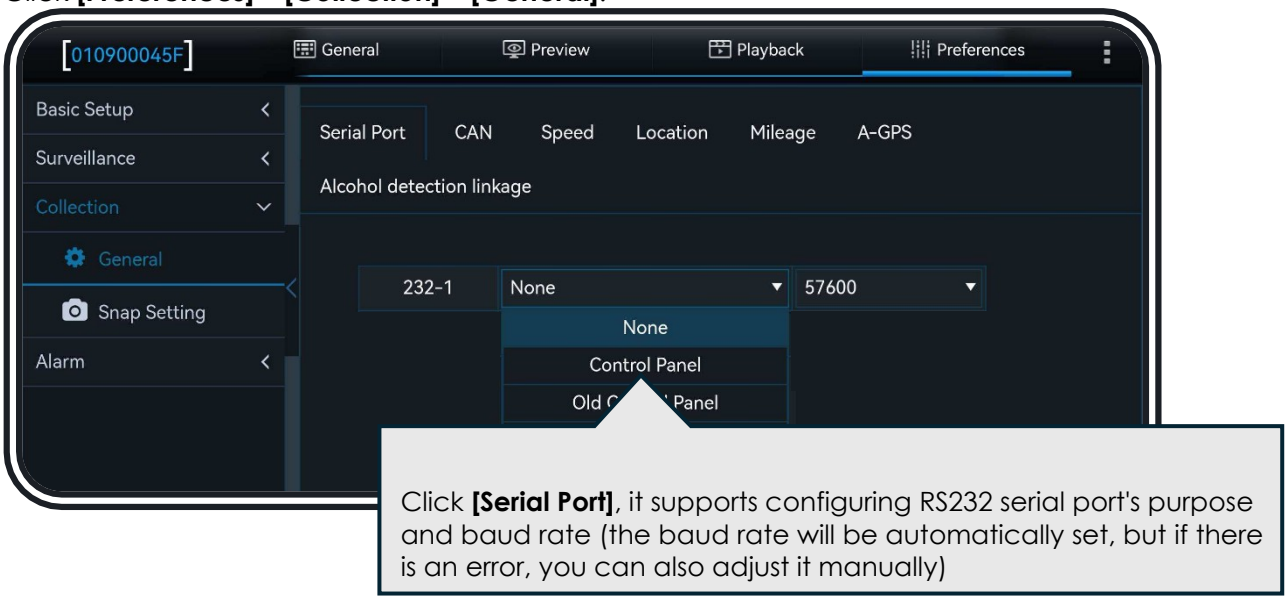
You can set the rotation angle, mirroring, and (vertical) flipping for IPC channel's screen

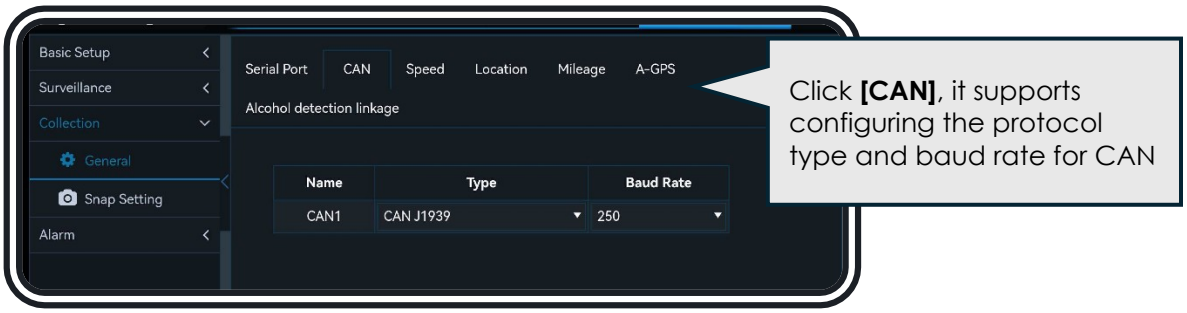
Warning	The device's default ADAS and DSC screen angles have been set to the optimal angles at the factory and currently do not support modification.

Data Collection

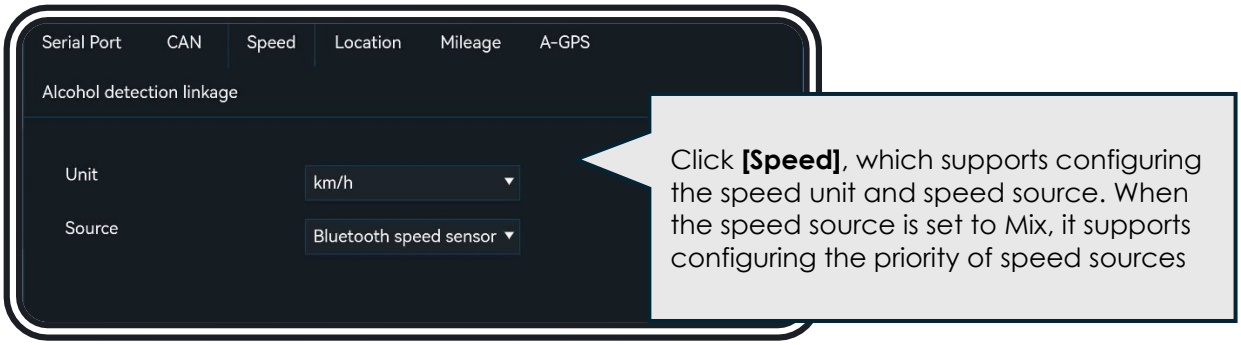
General Setup

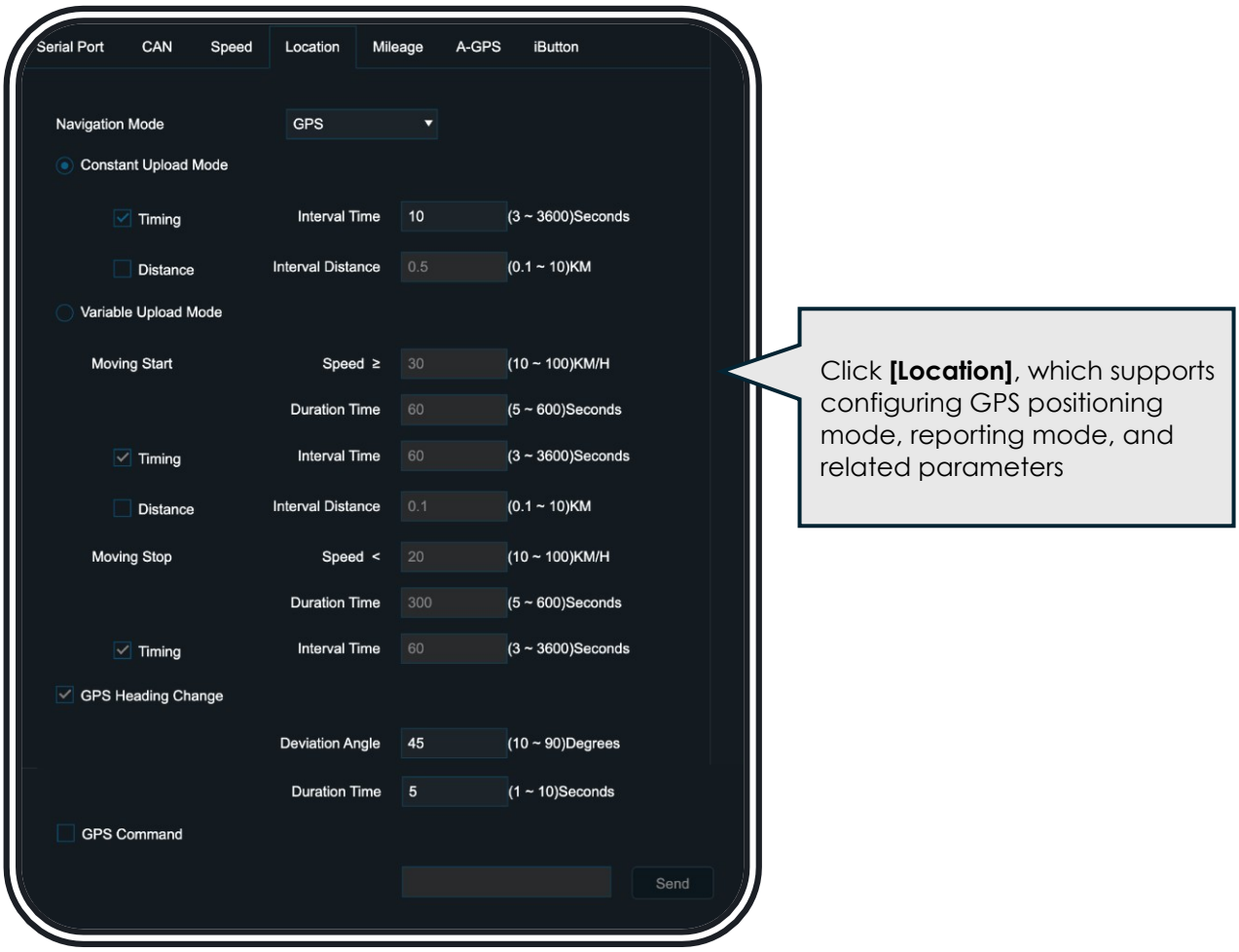
Click **[Preferences] – [Collection] – [General]**:





Note	The device supports the standard J1939 protocol. As vehicle manufacturers may customize certain data fields, the actual obtainable data depends on real tests. If the needed data isn't supported, you can provide the protocol for integrated development. For multi-vehicle model adaptation or diverse data requirements, an OBD power box plus can be optionally configured to analyze relevant CAN data.



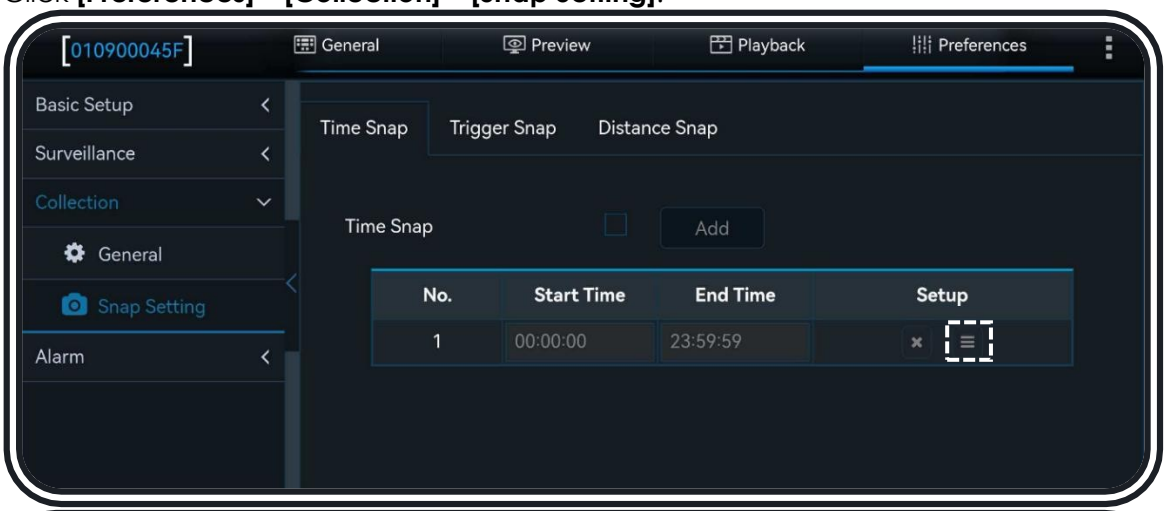


ACC Status	Fixed Reporting	Conditional Reporting
ACC ON	• **Timed Reporting**: The reporting interval can be configured • **Distance-Based Reporting**: The reporting distance can be configured. Both of the above options can be selected at the same time	Configure **[Moving Start]** and **[Moving Stop]**, as described below
ACC OFF	Sleep Reporting: For more details, please refer to the **[Startup Setup]**	

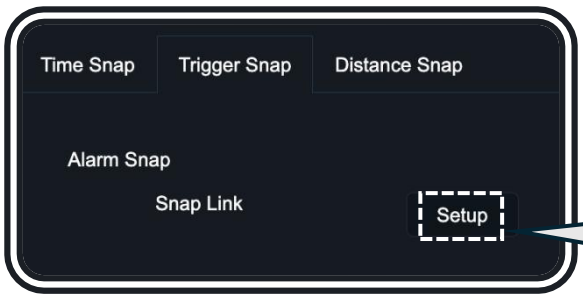
Note	• **[Moving Start]**: When the vehicle speed exceeds a certain value and stays above it for a specific period, the vehicle is considered to have started, and reporting will follow the configured time or distance logic under this option. • **[Moving Stop]**: When the vehicle speed drops below a certain value and stays below it for a specific period, the vehicle is considered to have stopped, and reporting will follow the configured time logic under this option. • **[GPS Heading Change]**: Reporting will occur when a significant change in vehicle heading is detected. The angle and reporting interval can be configured. • The vehicle's ACC status will be reported along with the GPS information.

Snap Setup

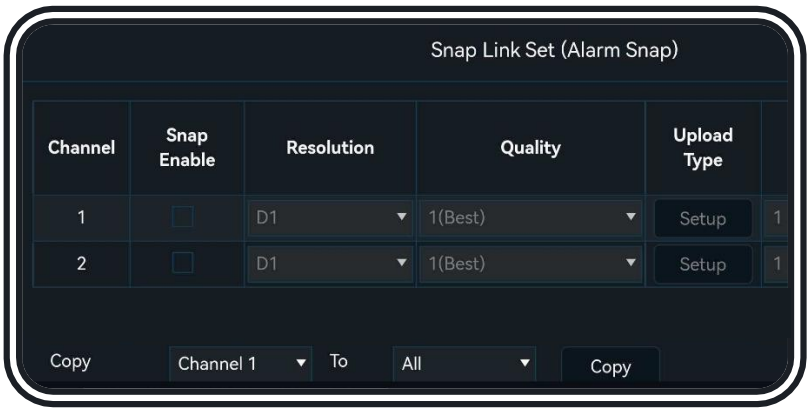
Click **[Preferences] – [Collection] – [Snap Setting]**:



Click **[Time Snap]**, which supports configuring a timed switch strategy. Each time period can be configured with its own snap parameters: channel, resolution, image quality, upload method, number of snapshots, and snapshot interval. A maximum of 8 time periods is supported

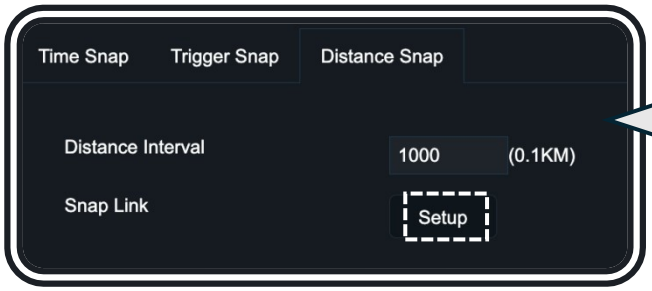


Click **[Trigger Snap]**, which supports configuring ordinary alarm snapshots. The configuration parameters are the same as those in [Time Snap]

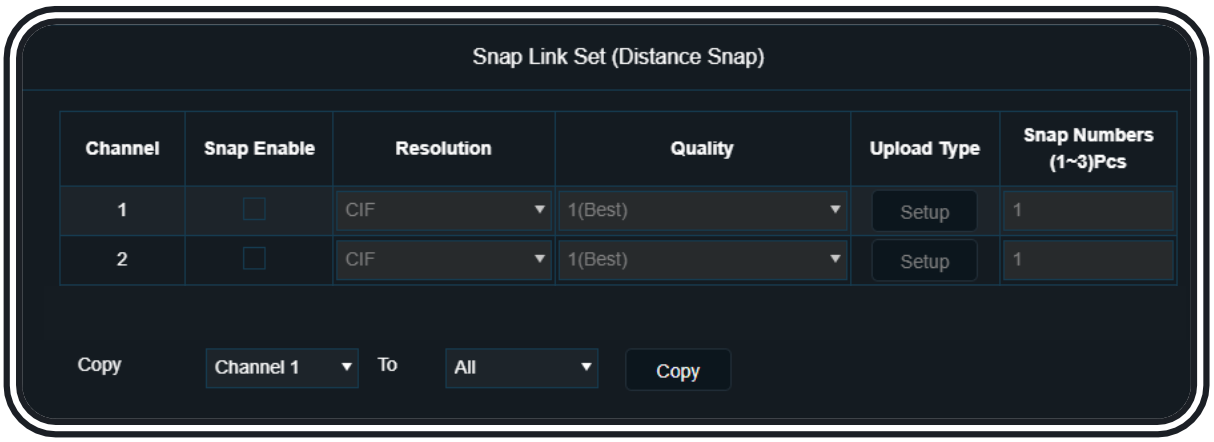


Note

This interface is only related to general(non-AI) alarms, such as IO alarms, GPS loss alarms, etc. Snapshots will be taken after the alarm is triggered. AI alarms have a separate snapshot logic and interface, which is unrelated to this configuration interface.



Click **[Distance Snap]**, which supports configuring distance-based snapshots. The configuration parameters are basically the same as those in [Time Snap], with the only difference being that distance-based snapshots do not have a time interval setting



Warning	The snapshot function consumes system resources. The average snapshot frequency of all channels is limited to a maximum of 3 snapshots within 5 seconds. Streamax will not be held responsible for any system resource issues caused by frequent snapshotting that exceeds this limit.

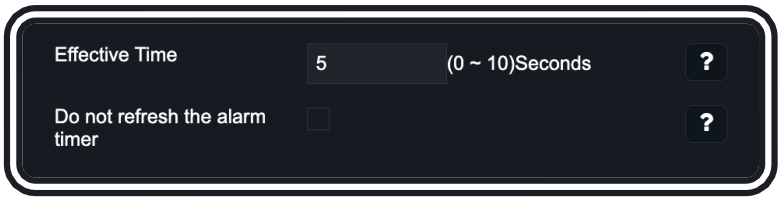
Alarm Setup

Explanation of General Items for Alarms

All alarms can be configured with two **[Alarm Type]** options. To avoid repetitive information, the explanation is provided here:

Alarm Type	Explanation
Alarm	When the type is set to Alarm, the device will record the alarm data and report it to the platform.
Event	When the type is set to Event, the device will record the alarm data but will not report it to the platform.

Trigger:



Linkage:

All alarms (including both non-AI alarms and AI alarms) can be configured with **[Trigger]** and **[Linkage]**. Some options are common configurations. To avoid repetitive information, the explanation is provided here:

Configuration	Common Options	Explanation
Trigger	**Effective Time**	Select a time range. Multiple alarms of the same type triggered within this time range will be considered as a single alarm
Trigger	**Do not refresh the alarm timer**	By default, this option is unchecked, meaning that multiple alarms of the same type occurring within a certain time range (Effective Time) will be considered as a single alarm, and the Effective Time will reset accordingly When checked, multiple alarms of the same type occurring within the same time range will still be considered as a single alarm. However, the Effective Time will not reset. This means that if the total duration of the alarm exceeds the Effective Time, the alarm will end, and the total duration will be recorded as the Effective Time. After the Effective Time has passed, a new alarm entry will be recorded, starting from the end of the previous alarm
Linkage	**Channel**	After an alarm ends, one or more channels can be selected, and these channels will be marked as alarm recordings
Linkage	**Post Recording**	After an alarm ends, the selected channel's video will be delayed for a certain period and marked as an alarm recording
Linkage	**Lock**	Locked alarm recordings cannot be overwritten until the recording protection period ends or until manually unlocked. Even if the storage space is full, they will not be overwritten
Linkage	**Linkage Screen**	Configures which camera channel an external monitor will automatically display when alarms occur
Linkage	**Alarm Snap**	This option is only available for non-AI alarms. When checked, it will trigger image capture based on the previously configured [Snap] settings. For details, refer to the [Snap] section

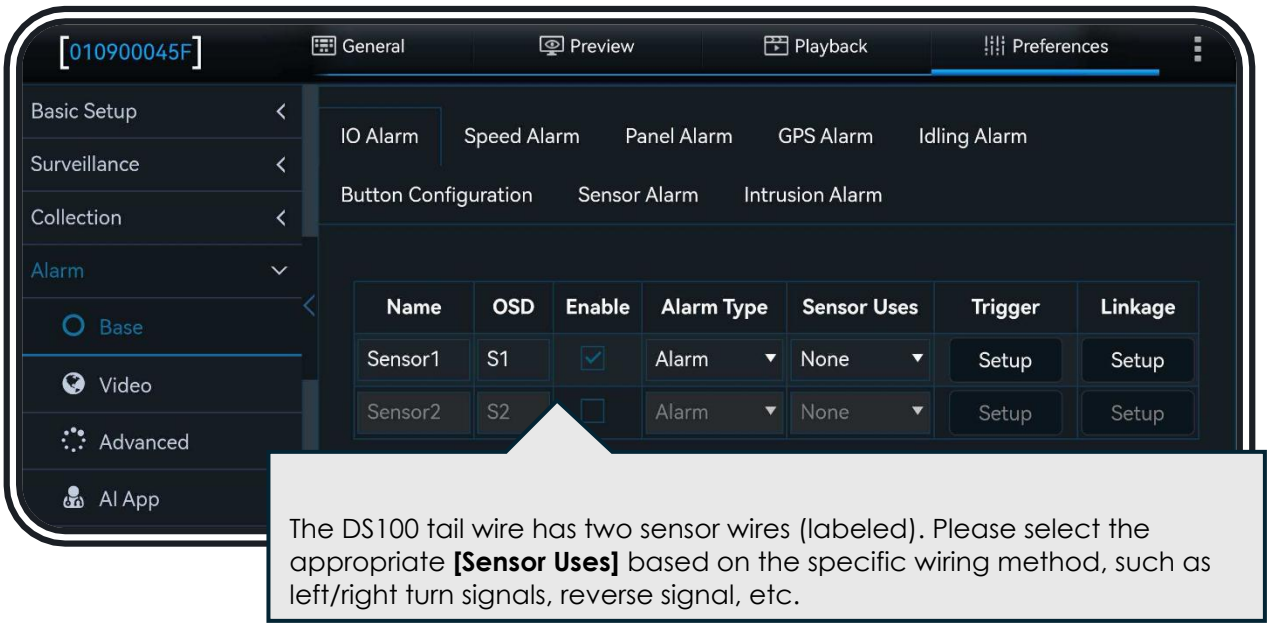
For AI alarms, in addition to some general options already mentioned above, there are also options that are specific to AI alarms only. To avoid redundant information, the explanation is provided here:

Configuration	Common Options	Explanation
Trigger	**Lvl1 Speed Range**	Some AI alarms assess the danger level based on speed values, categorizing them into Level 1 and Level 2, which will be differentiated in the audio alerts
Trigger	**Lvl2 Speed Range**	Some AI alarms assess the danger level based on speed values, categorizing them into Level 1 and Level 2, which will be differentiated in the audio alerts
Trigger	**Sensitivity**	Determine the trigger sensitivity of the alarm

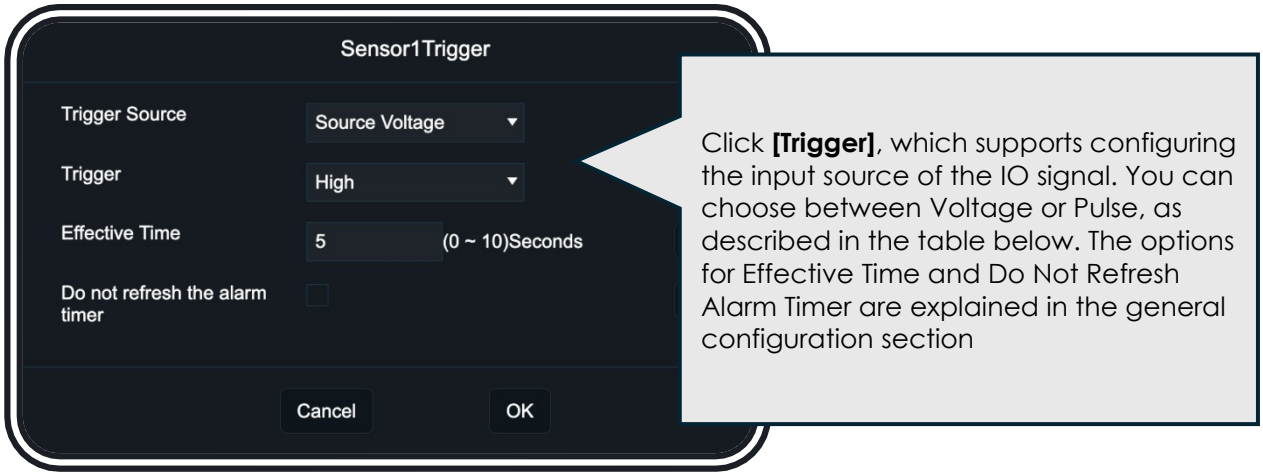
Basic Alarms

Click **[Preferences] – [Alarm] – [Base]**:

IO Alarm



The DS100 tail wire has two sensor wires (labeled). Please select the appropriate **[Sensor Uses]** based on the specific wiring method, such as left/right turn signals, reverse signal, etc.



Click **[Trigger]**, which supports configuring the input source of the IO signal. You can choose between Voltage or Pulse, as described in the table below. The options for Effective Time and Do Not Refresh Alarm Timer are explained in the general configuration section

High Voltage	Normally low level, triggered by high level
Low Voltage	Normally high level, triggered by low level
Pulse	Normally low level, triggered by a high-to-low or low-to-high level change

Click **[Linkage]** to configure the linkage function of IO signals. The DS100 tail wire is equipped with a Sensor Out wire (labeled 12V out, which can drive the seat shaker). Configuring [Linkage IO Output] and [Output Delay Time] allows setting the IO output and its duration after an IO alarm is triggered. For details on other options, please refer to the description of general items.

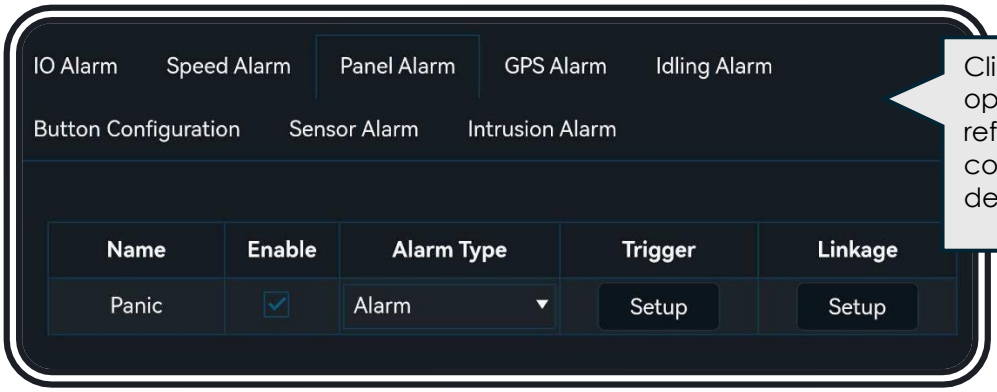
Speeding Alarm

Note	This alarm is different from the **[Overspeed Alarm]** (also known as Speed Limit Sign Alarm)

Click **[Trigger]**, when the vehicle speed exceeds the configured **[Speed] - [Preload Speed Difference]**, a pre-warning and voice alert will be triggered. If the vehicle speed exceeds the configured **[Speed]**, a voice alert will be triggered. If the driver does not slow down within the configured **[Duration Time]**, the alarm will be reported to the platform

Click **[Linkage]**, for option details, please refer to the general configuration description

The DS100 panel has an Emergency Alarm Button, which can trigger a panel button alarm with a single press.

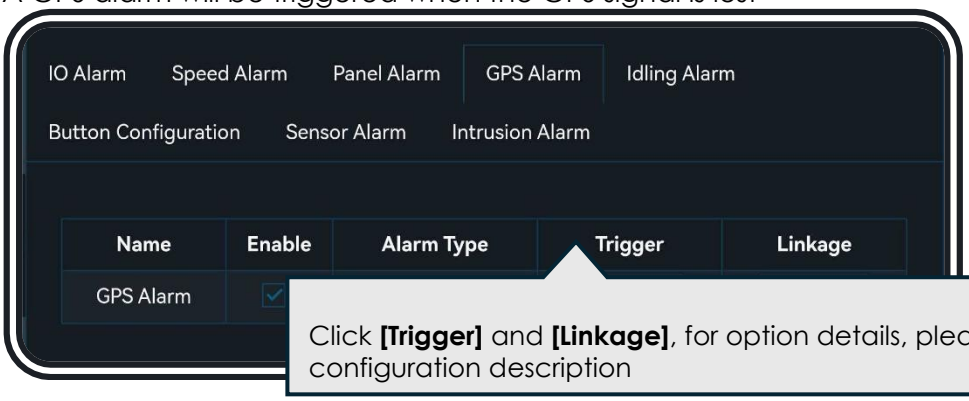


Click **[Trigger]**, for option details, please refer to the general configuration description

Click **[Linkage]**, you can set the panel button alarm duration using **[PB Alarm Duration]**. Checking **[MP3 Voice]** will enable a voice prompt when the alarm is triggered. For other options, please refer to the general configuration description

GPS Alarm

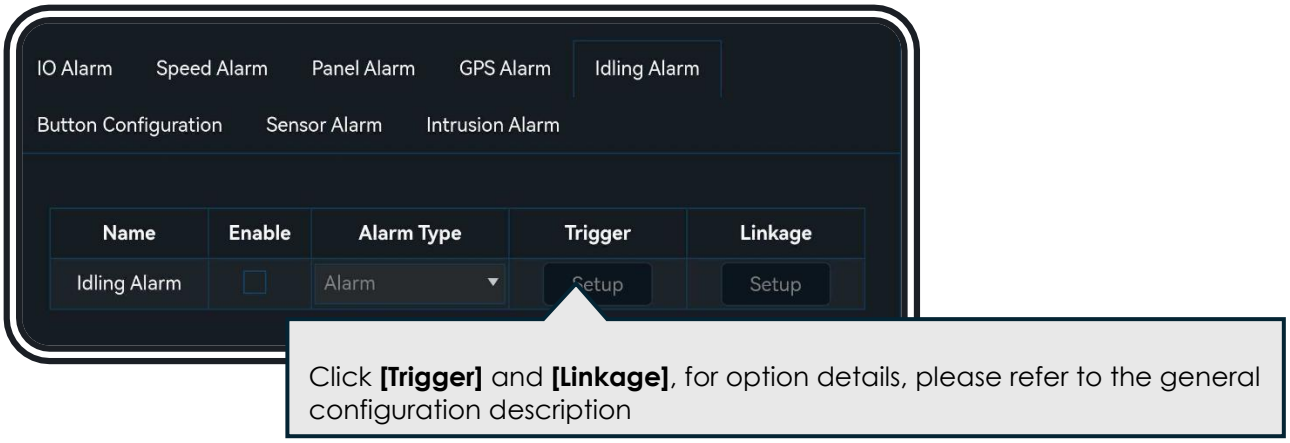
A GPS alarm will be triggered when the GPS signal is lost



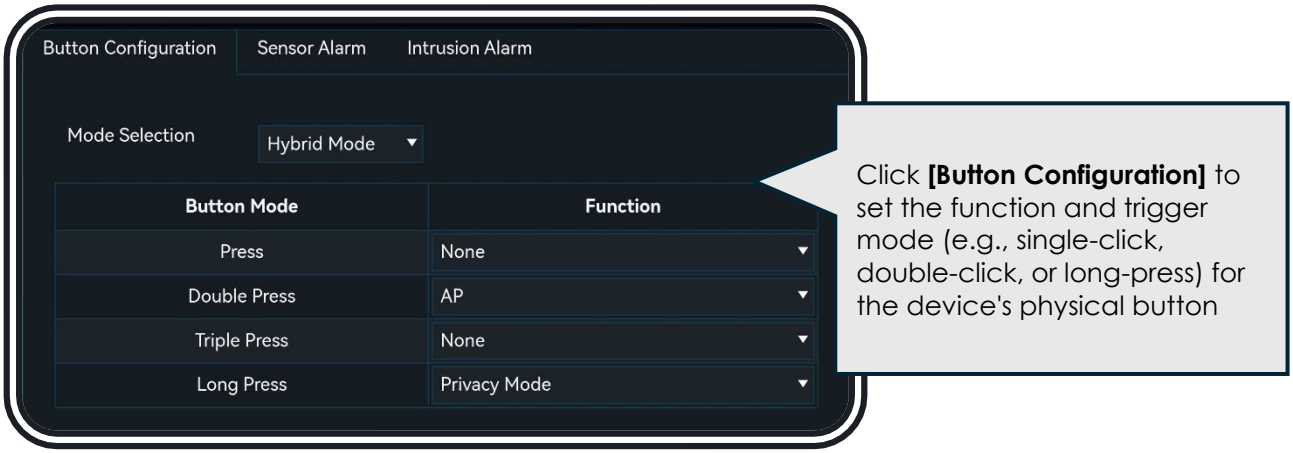
Click **[Trigger]** and **[Linkage]**, for option details, please refer to the general configuration description

Idling Alarm

An Idling alarm will be triggered when the vehicle is idling



Button Configuration



Note	The Emergency Alarm Button is independent and requires no extra setup—any press (single, double, or long-press) will activate the alarm.

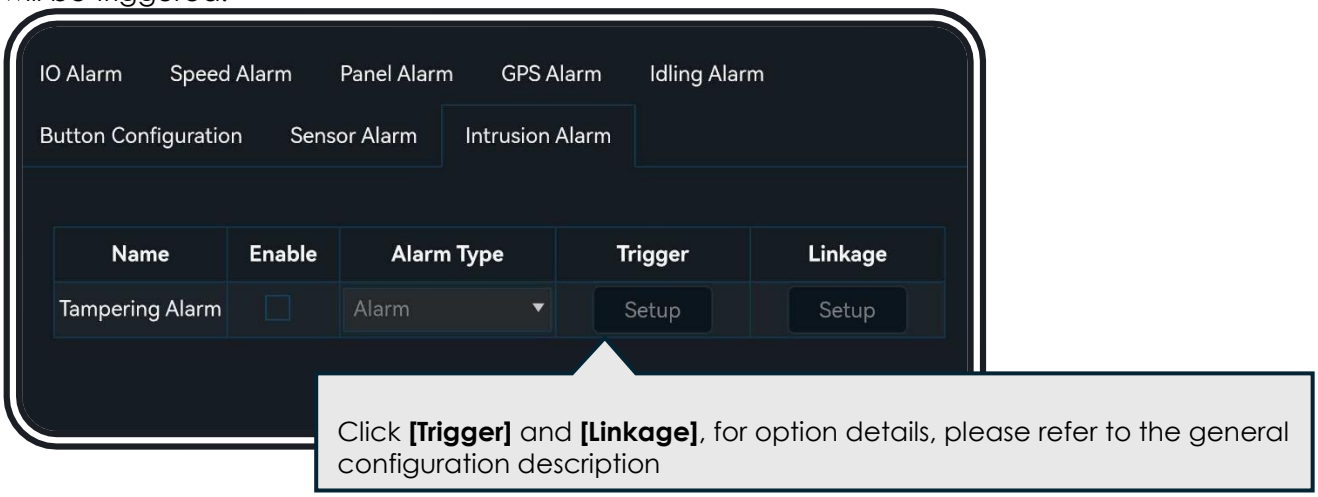
Sensor Alarm

When the truck door is abnormally opened, an "abnormal door opening alarm" will be triggered.

Click **[Trigger]** and **[Linkage]**, for option details, please refer to the general configuration description

Intrusion Alarm

When the device experiences violent shaking (e.g., removing the device), a tampering alarm will be triggered.



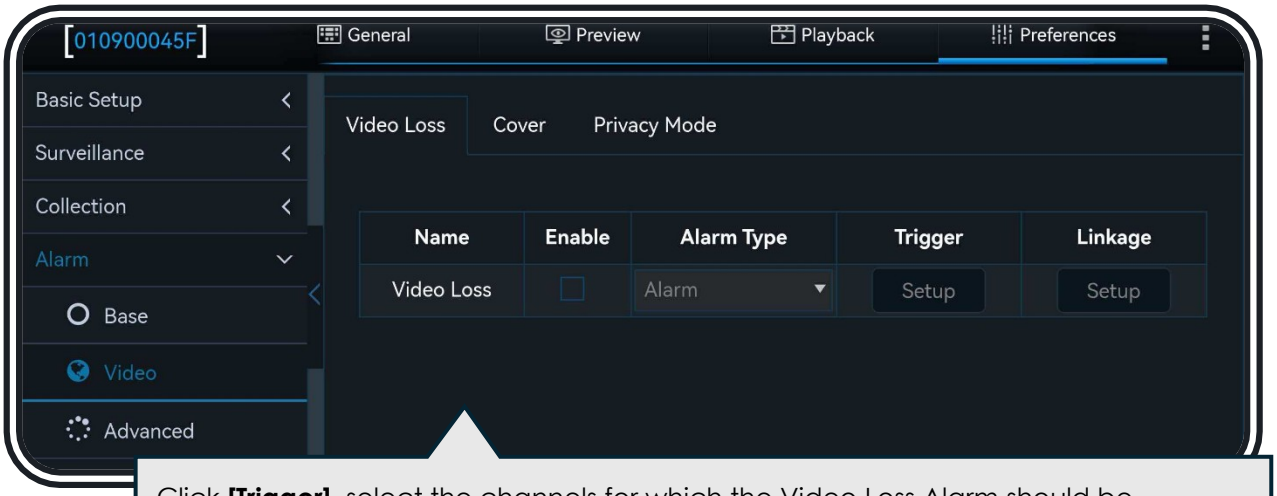
Click **[Trigger]** and **[Linkage]**, for option details, please refer to the general configuration description

Video Alarms

Click **[Preferences] – [Alarm] – [Video]**:

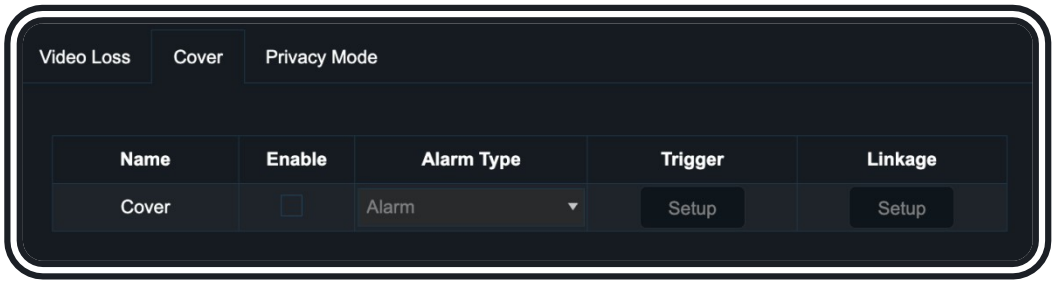
Video Loss Alarm

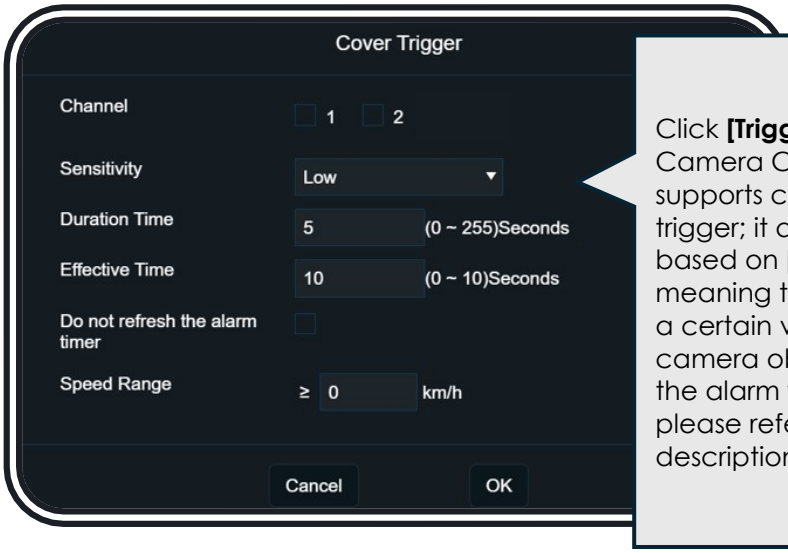
A Video Loss Alarm will be triggered when the camera experiences a malfunction or is physically disconnected



Click **[Trigger]**, select the channels for which the Video Loss Alarm should be enabled. For other options, please refer to the general configuration description. Click **[Linkage]**, for option details, please refer to the general configuration description

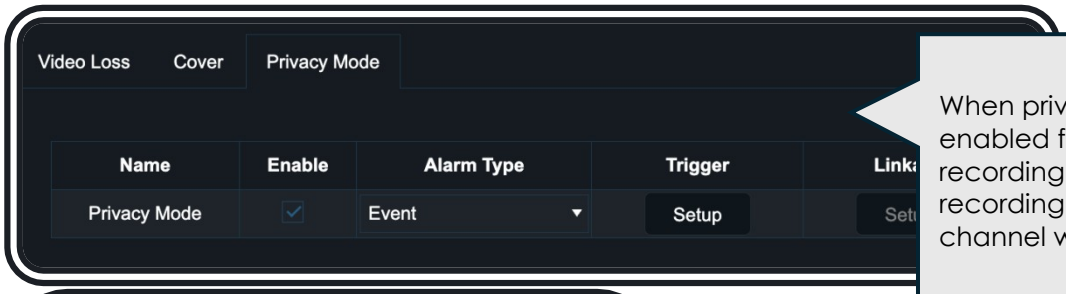
Camera Cover Alarm





Click **[Trigger]**, select the channels for which the Camera Cover Alarm should be enabled. It supports configuring the sensitivity of the alarm trigger; it also supports setting the alarm trigger based on **[Duration Time]** and **[Speed Range]**, meaning that when the vehicle speed exceeds a certain value and the device detects camera obstruction for a specified duration, the alarm will be triggered. For other options, please refer to the general configuration description

Privacy Mode



When privacy mode is enabled for a channel, recording and audio recording for that channel will be turned off

Click **[Trigger]**, select the channels for which privacy mode should be enabled. You can choose the entry/exit method for privacy mode, enable **[AI Mp3 Voice]** to allow AI algorithm detection and AI alarms with voice prompts while in privacy mode, and enable **[Alarm Voice Enable]** for voice announcements when entering/exiting privacy mode

Note

Privacy Mode Entry Methods:

- If IO is selected, the IO function must be set to privacy mode. For details, refer to the **[IO Alarm]** section
- If ACC OFF is selected, privacy mode will be activated when the vehicle's ACC is turned off

Privacy Mode Exit Methods:

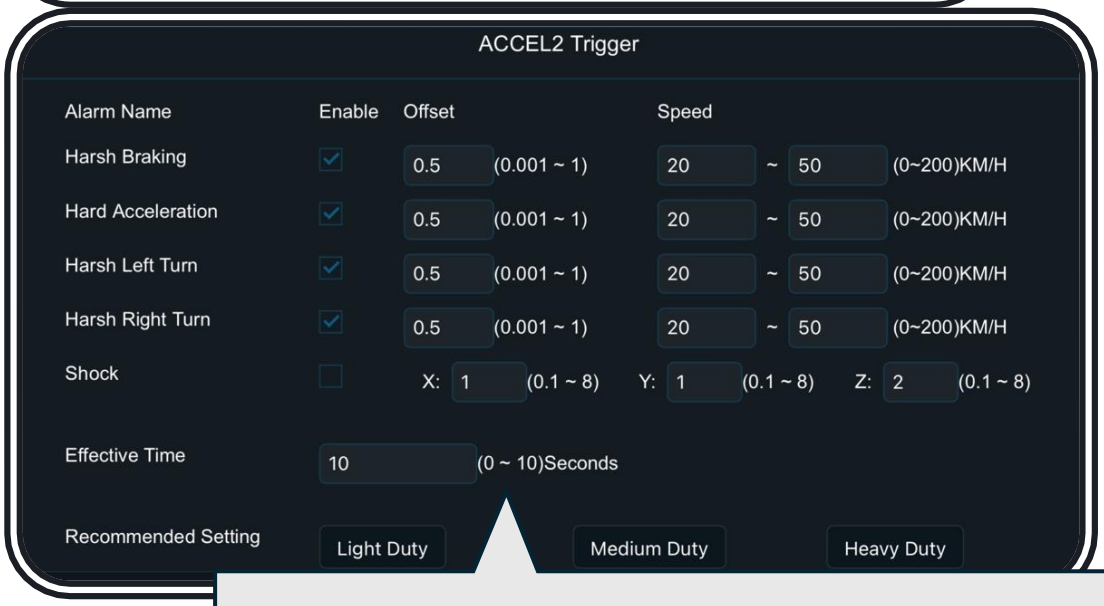
- If Speed is selected, a speed value must be configured, meaning privacy mode will be disabled when the vehicle speed exceeds the set value
- If IO is selected, the IO function must be set to privacy mode. For details, refer to the **[IO Alarm]** section
- If ACC ON is selected, privacy mode will be disabled when the vehicle's ACC is turned on

Advanced Alarms

Click **[Preferences] – [Alarm] – [Advanced]**:

Harsh Driving Alarm

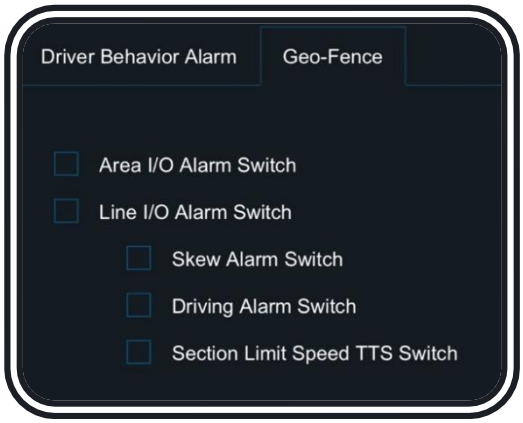
ACCEL2 (Aggressive Driving Alarm) is triggered by the G-Sensor which supports automatic or manual calibration for optimal sensitivity. For improved accuracy, enable the [Integrated Navigation] button to select the vehicle type, allowing the system to assess alerts more precisely based on combined sensor data



Click **[Trigger]**, you can adjust the **[Offset]** value to modify the sensitivity of each alarm: the smaller the offset value, the more sensitive the alarm detection. You can also select the vehicle type to use the corresponding inertial sensor model for optimal detection performance. For other options, please refer to the general configuration description

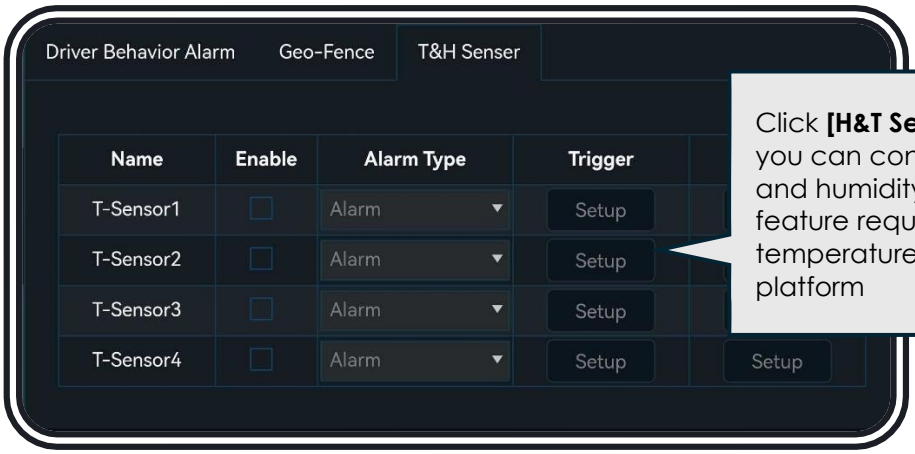
Click **[Linkage]**, for option details, please refer to the general configuration description

Geo-Fence Alarm



Click **[Geo-Fence]**, in this interface, you can select the entry/exit fence or route handling strategy. This feature requires integration with the CEIBA2 platform or FT Cloud platform

Temperature and Humidity Alarm

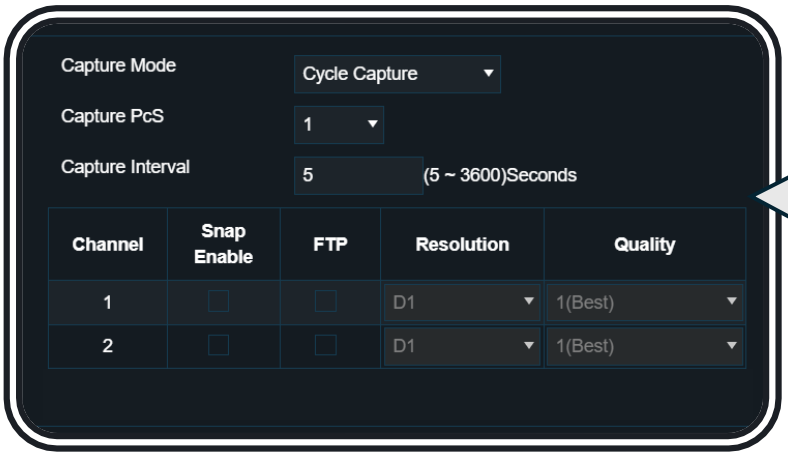


Click **[H&T Sensor]**. In this interface, you can configure the temperature and humidity alarm thresholds. This feature requires connection to a temperature and humidity sensor. platform

AI Alarms

Click **[Preferences] – [Alarm] – [AI App]:**

You can set the snapshot logic when an AI alarm is triggered. AI alarms have their own **snapshot logic**, which is independent of the **Snap Setting** section. For each AI alarm, click **[Alarm Capture]** → **[Setup]**:

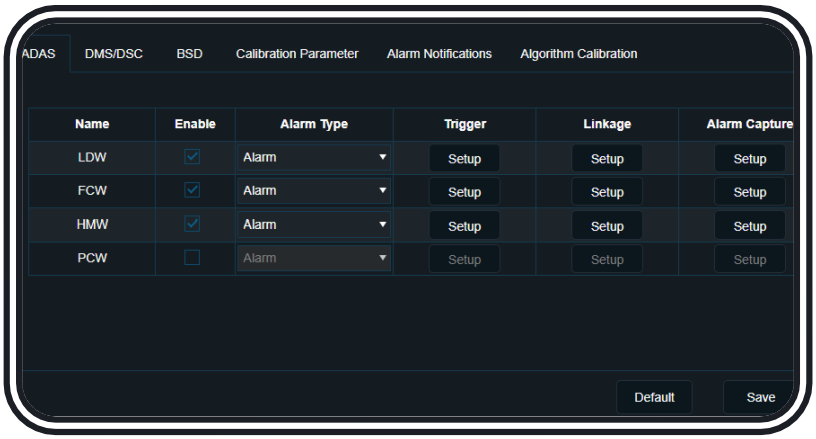


In this interface, you can set the snapshot mode, number of snapshots, snapshot interval, snapshot channel, and the resolution and quality of the snapshot images

Note	**Capture Mode:** ● **Single Capture**: Only one snapshot will be taken each time, and the total number of snapshots is determined by [Capture PcS], while the interval between each snapshot is determined by [Capture Interval] ● **Cycle Capture**: The number of snapshots taken each time is determined by [Capture PcS], and the interval between each snapshot is determined by [Capture Interval], until the alarm ends

ADAS Alarms

Click **[Preferences] – [Alarm] – [AI App] – [ADAS]:**



LDW Alarm

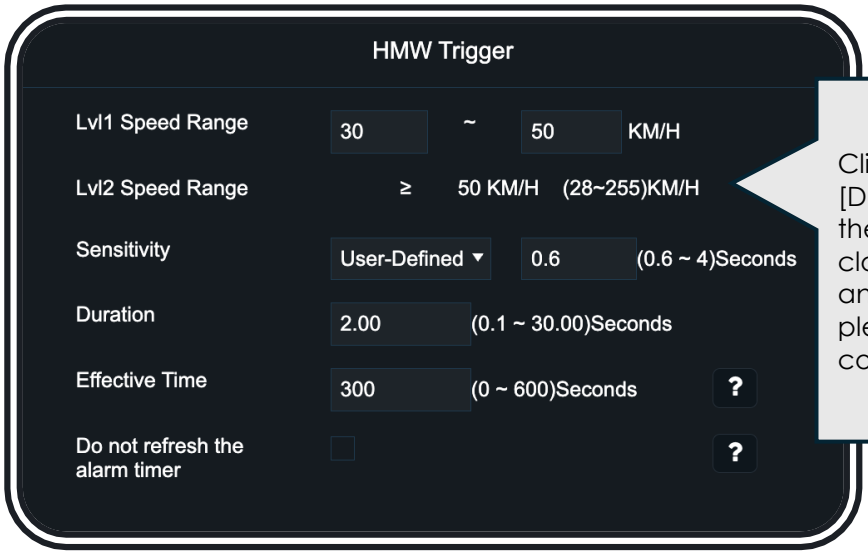
Click **[LDW]-[Trigger]**, option details, please refer to the general configuration description

Click **[LDW]-[Linkage]**, for option details, please refer to the general configuration description

FCW Alarm

Click **[Trigger]** and **[Linkage]**, for option details, please refer to the general configuration description

HMW Alarm



Click **[Trigger]**, you can set [Duration] to determine how long the vehicle should maintain a close distance before triggering an alarm. For other options, please refer to the general configuration description

Click**[HMW]-[Linkage]**, for option details, please refer to the general configuration

PCW Alarm

Click **[Trigger] and [Linkage]**, for option details, please refer to the general configuration description

DMS/DSC Alarms

ADAS | DMS/DSC | BSD | Calibration Parameter | Alarm Notifications | Algorithm Calibration

Name	Enable	Alarm Type	Trigger	Linkage	Alarm Capture
Driver Fatigue	☑	Alarm	Setup	Setup	Setup
No Driver	☐	Alarm	Setup	Setup	Setup
Handheld Devices	☑	Alarm	Setup	Setup	Setup
Smoking	☑	Alarm	Setup	Setup	Setup
Distraction	☑	Alarm	Setup	Setup	Setup
Yawn	☑	Alarm	Setup	Setup	Setup
Seatbelt	☐	Alarm	Setup	Setup	Setup
No Mask	☐	Alarm	Setup	Setup	Setup
Infrared block alarm	☐	Alarm	Setup	Setup	Setup

Driver Fatigue Alarm

Driver Fatigue Trigger

Lvl1 Speed Range	30	~	50	KM/H
Lvl2 Speed Range	≥	50 KM/H		
Sensitivity	User-Defined	20	(10 ~ 255)*100ms	
Effective Time	0	(0 ~ 600)Seconds	?	
Do not refresh the alarm timer	☐			
close eyes frequently	☐			
Single eye closing time	3	(2 ~ 5)*100ms		
Enable high-risk time period	☐			
Start time of high-risk time period	00:00:00			
End time of high-risk time period	05:00:00			

Click **[Trigger]**, you can enable frequent eye-closure detection and set the duration of a single eye closure. If the set threshold is met, an alarm will be triggered. You can also enable high-risk time periods and set a time range, during which the alarm sensitivity will increase, and the threshold will be lowered. For other options, please refer to the general configuration description.

Click **[Linkage]**, for option details, please refer to the general configuration description

No Driver Alarm

Click **[Trigger] and [Linkage]**, for option details, please refer to the general configuration description

Handheld Device Alarm

Click **[Trigger] and [Linkage]**, for option details, please refer to the general configuration description

Smoking Alarm

Click **[Trigger] and [Linkage]**, for option details, please refer to the general configuration description

Distraction Alarm

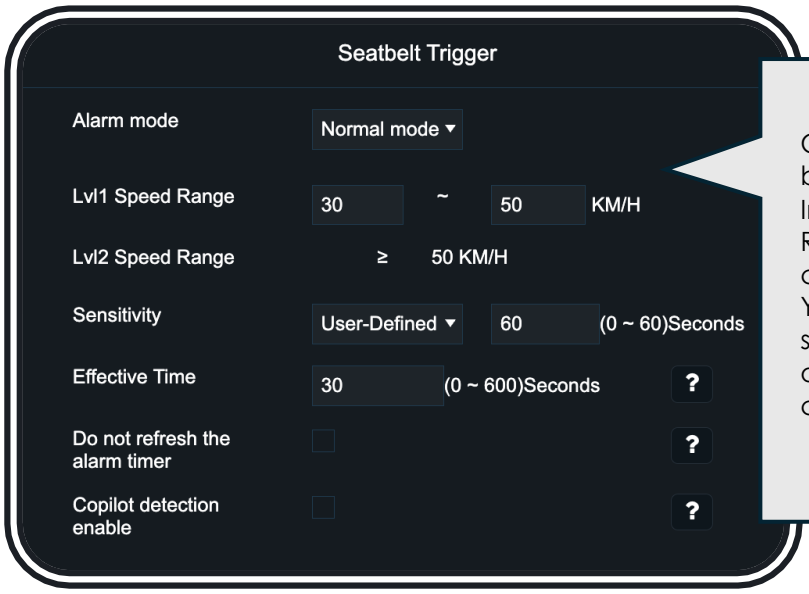
Click **[Trigger]**, you can set the criteria for determining driver distraction, whether it is left/right distraction or up-down distraction, and you can configure individual sensitivity settings respectively. You can also check **[Lane Departure Suppression]** to reduce false alarms caused by the driver turning their head to check mirrors or road conditions during large turns. For other options, please refer to the general configuration description.

Click **[Linkage]**, for option details, please refer to the general configuration description

Yawn Alarm

Click **[Trigger] and [Linkage]**, for option details, please refer to the general configuration description

Seatbelt Alarm



Click **[Trigger]**, you can choose between Normal Mode or Regular Inspection Mode. When selecting Regular Inspection Mode, you can configure the detection interval. You can also enable copilot seatbelt detection. For other options, please refer to the general configuration description

Click **[Linkage]**, for option details, please refer to the general configuration description

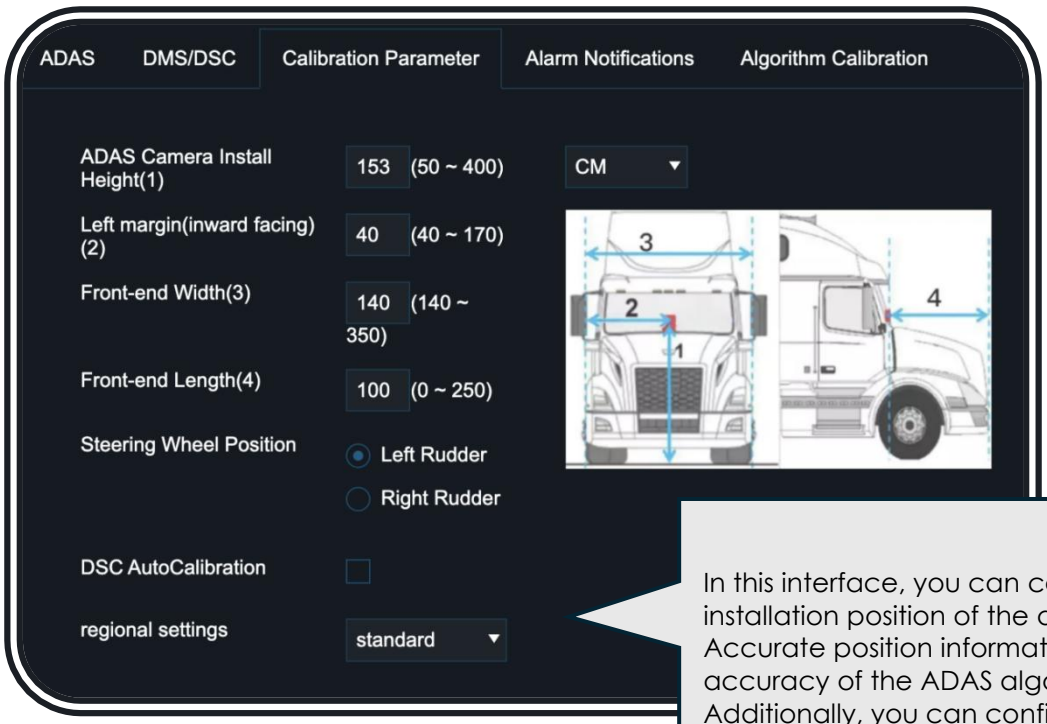
No Mask Alarm

Click **[Trigger] and [Linkage]**, for option details, please refer to the general configuration description

Infrared Block Alarm

Click **[Trigger] and [Linkage]**, for option details, please refer to the general configuration description

Calibration Parameter

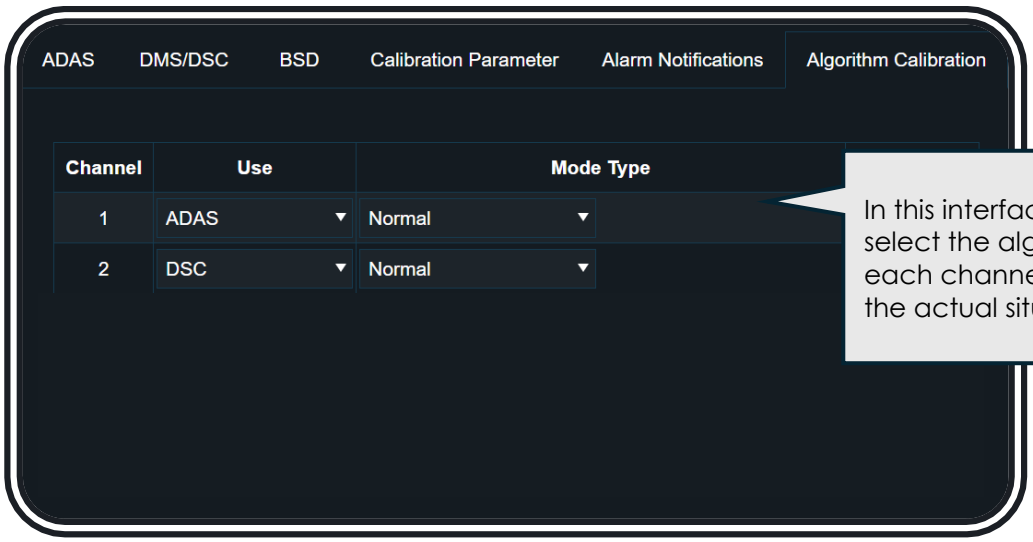


In this interface, you can configure the installation position of the dashcam. Accurate position information improves the accuracy of the ADAS algorithm. Additionally, you can configure the steering wheel position (left-hand or right-hand drive), region (to enhance the recognition accuracy of stop signs and speed limit signs), and whether to enable DSC automatic calibration

Alarm Notification

In this interface, you can enable the alarm voice for the main unit. You can also enable the voice and configure the brightness for the external R-Watch sound and light alarm. Additionally, you can individually enable voice prompts for all AI alarms in the lower table

Algorithm Calibration



In this interface, you need to select the algorithm usage for each channel according to the actual situation

Special Note

This product needs to be installed by professionals to prevent the risk of it falling off.
When this product is in direct sunlight, the surface temperature will exceed 60 degrees . Please do not touch it to prevent burns.
This device complies with Part 15 of the FCC Rules. Operation is subiect to the following two conditions: (1) this device may not cause harmful interference(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.