

Dear users, functional setting of this device requires some expertise. Therefore, please carefully read and fully understand the instruction before use.

# DashCam Installation and debug manual

(APP: iCalibration)

Applicable models: MVR-DSC-AI2



Thank you for choosing our product. Difference between models or product upgrading may result in appearance or features different from those described in the instruction; thus, it all depends on the actual product or you can contact the manufacturer. Information contained herein is subject to irregular change without prior notice.

## Catalog

I.	<u>Product description</u> .....	4
1.	<u>Product introduction</u> .....	4
2.	<u>Product features</u> .....	4
3.	<u>Product interface</u> .....	5
4.	<u>Product size</u> .....	6
II.	<u>Equipment and installation</u> .....	7
1.	<u>SIM card, TF card installation</u> .....	7
2.	<u>MVR-DSC-AI2 host installation</u> .....	8
3.	<u>MVR-DSC-AI2 camera installation</u> .....	9
III.	<u>Software debugging</u> .....	10
1.	<u>Log in to the Operation and Maintenance APP</u> .....	10
1.1	<u>Simulation speed setting</u> .....	11
2.	<u>Streaming</u> .....	11
3.	<u>DSM algorithm</u> .....	12
3.1	<u>DSM calibration</u> .....	13
3.1.1	<u>Correct the camera position</u> .....	13
3.1.2	<u>Frame drawing</u> .....	13
3.1.3	<u>Start calibration</u> .....	14
3.1.4	<u>Frame drawing</u> .....	15
3.2	<u>DSM parameter</u> .....	15
4.	<u>ADAS algorithm</u> .....	18
4.1	<u>ADAS calibration</u> .....	18
4.1.1	<u>Correct the camera position</u> .....	18
4.1.2	<u>Frame drawing</u> .....	20
4.1.3	<u>Enter vehicle parameter information</u> .....	20
4.1.4	<u>Frame drawing</u> .....	21

4.2	<u>ADAS parameters</u> .....	22
5.	<u>Vehicle information</u> .....	24
6.	<u>Date/time</u> .....	25
7.	<u>Network settings</u> .....	26
8.	<u>Authorization</u> .....	27
9.	<u>Display</u> .....	28
10.	<u>Record settings</u> .....	28
11.	<u>Recording plan (need to be set in timing recording mode)</u>	29
12.	<u>Main stream</u> .....	31
13.	<u>Sub-stream</u> .....	32
14.	<u>Sensor</u> .....	33
15.	<u>Speed</u> .....	34
16.	<u>Acceleration</u> .....	35
17.	<u>Other alarms</u> .....	35
18.	<u>Ai alarms</u> .....	37
19.	<u>Device restart</u> .....	38
20.	<u>Configuration management</u> .....	39
21.	<u>Device format</u> .....	40
22.	<u>Left/right turn signal test</u> .....	41
23.	<u>Log configuration</u> .....	42
24.	<u>Wireless</u> .....	42
25.	<u>Video search</u> .....	43
26.	<u>System message</u> .....	44
27.	<u>Algorithm information</u> .....	45

## I. Product description

### 1. Product introduction

The AI Dashcam (MVR-DSC-AI2) is a powerful and easy-installed 1080P AHD recorder for vehicle surveillance with remote monitoring, with ADAS and DSM function optional. This road-facing Dashcam support up to 3 channels of recording, with GPS + 4G + Wi-Fi function, and extended up to 2 channels of 720P AHD in-cabin cameras. It supports H.265 / H.264 compression and decompression with Dual TF card storage (256 GB each), recording real-time video, GPS, and alarm data.

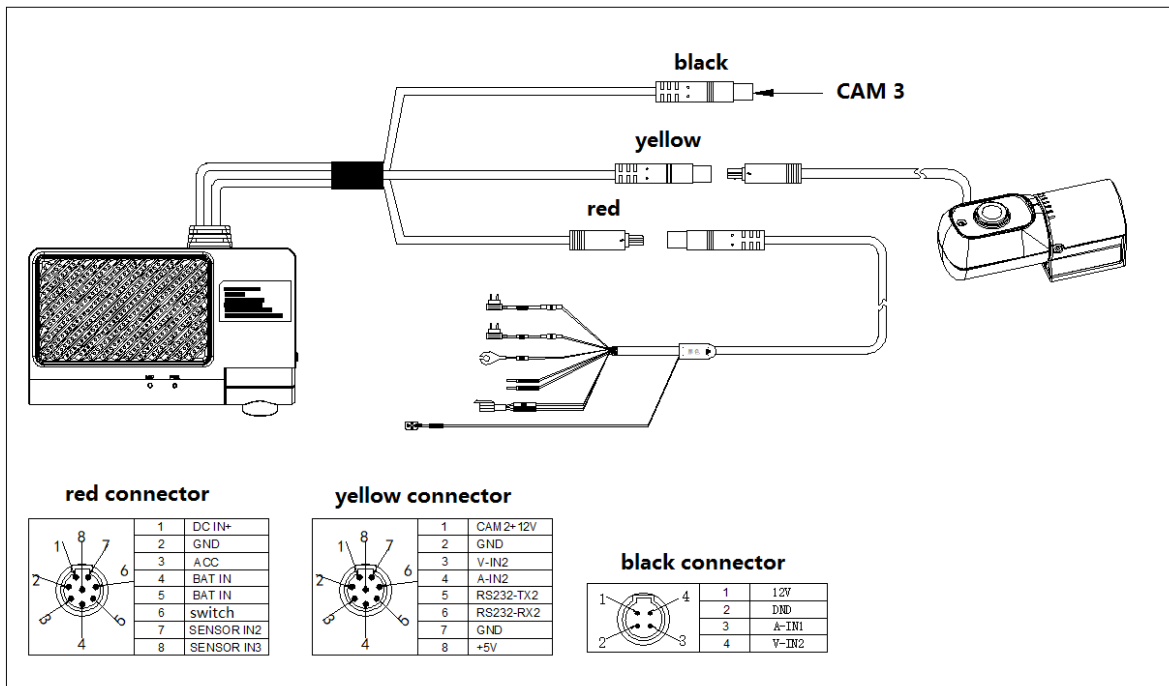
Suitable for online car-hailing, taxis, minivans, private cars, etc.

### 2. Product features

- ▶ Hidden antenna design, without external antenna installation.
- ▶ Special integrated design to the external GPS module/antenna or in-cabin camera (MVR-DSC-AI2) with built-in antenna and provides better GPS signal and performance than other regular dashcam designs, help the interference to the GPS signal from the recorder circuit.
- ▶ Support up to 3 channels AHD camera inputs, with 1 channel 1080P AHD + 2 channels 720P AHD full-frame recording.
- ▶ Optional with ADAS, DSM, face recognition function (if ADAS, DSM algorithm is supported, the device only supports 2 channels).
- ▶ Dual TF cards video storage, the single card supports up to 256GB.
- ▶ Compatible with H.265 / H.264 video encoding.
- ▶ Built-in Wi-Fi as a hotspot, used for wireless connection between mobile phones and devices, using mobile APP settings to view device parameters, status, playback video, and other functions.
- ▶ Support MIC & speaker
- ▶ Built-in 1-way yellow and blue bi-color indicator light to indicate the device's working status, hidden design avoids interfering with the driver's sight.
- ▶ Support an emergency alarm button.
- ▶ Support an integrated 3-axis accelerometer (G-Sensor) and 3-axis gyroscopes (total 6 axis), to detect a crash, harsh braking, acceleration, and cornering.

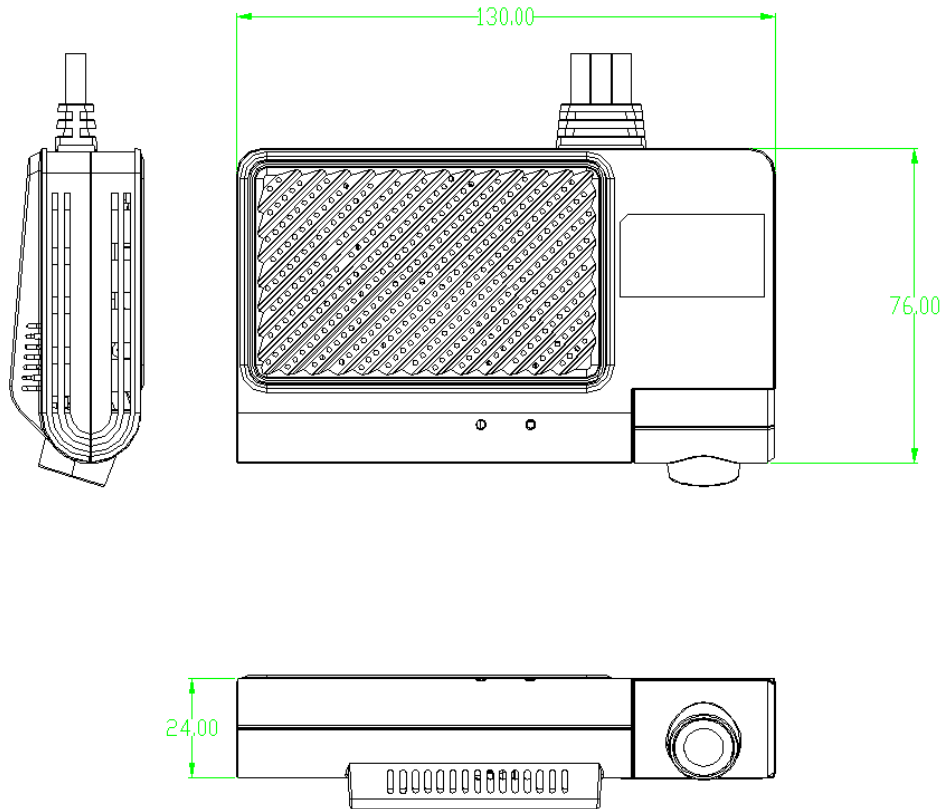
- ▶ With a built-in Mini USB 2.0 for export of recorded data and equipment maintenance.
- ▶ Support low voltage protection, when the voltage is lower than 8.5V, the device will automatically shut down (shutdown voltage value can be set, the default value is 8.5V).
- ▶ 9V-36V DC power supply.
- ▶ Operating Temperature -25°C~ + 75°C, Storage temperature -40°C~+80°C.

### 3. Product interface

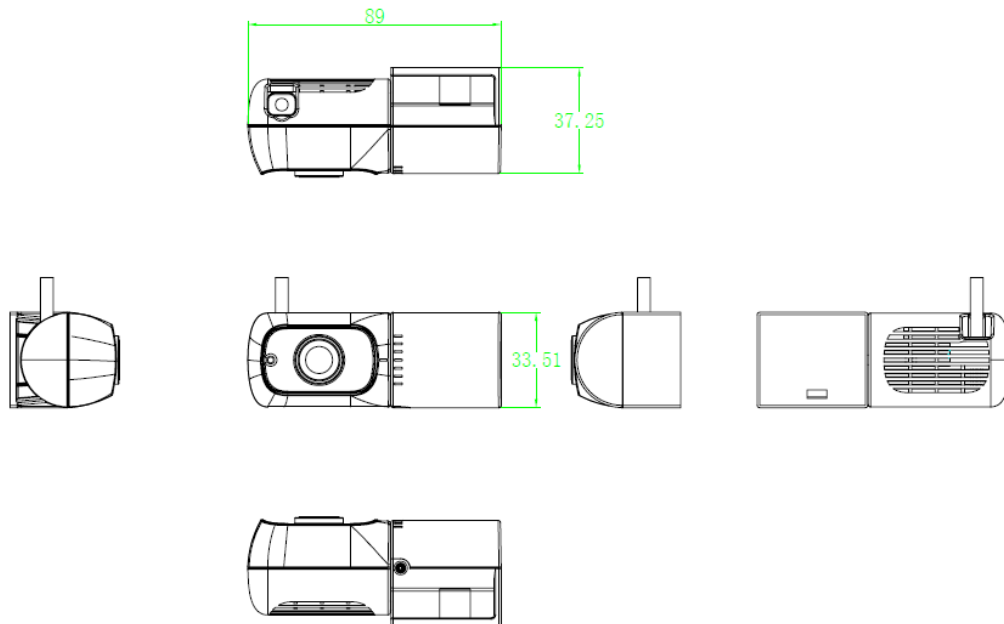


#### 4. Product size

MVR-DSC-AI2:



MVR-DSC-AI2:



## II. Equipment and installation

### 1. SIM card, TF card installation

Open the flip cover and insert it into the TF/SIM slot on the side of the main unit. Note: If you pull out the TF/SIM card, press to eject the TF/SIM card.



## 2. MVR-DSC-AI2 host installation

### a. Installation location

For small cars, the front-view camera should be installed in the upper middle of the windshield, As shown below, within 20cm on the left and right of the center axis of the vehicle.

Before installation, you can use the mobile phone operation and maintenance APP to calibrate the screen, and then use 3M glue to paste after confirming the angle and installation position.

Installation reference diagram:



### b. Installation method

- \* Use alcohol cotton to wipe clean the pre-installed area of the windshield.
- \* Remove the 3M glue and lens protective film of the front view camera
- \* Preliminarily adjust the camera angle before sticking and fixing. If the front windshield is perpendicular to the ground, you need to install a bracket; if the angle between the front windshield and the ground is less than 90°, adjust the tilt angle as appropriate, and stick the front camera horizontally Upper windshield (can be installed with the help of a square ruler or a



spirit level).

Angle adjustment:

After the camera is installed on the glass surface of the car, the angle of the camera can be adjusted by adjusting the internal screw of the camera with an inner hexagonal tool;

### 3. MVR-DSC-AI2 camera installation

First use a rag to clean and wipe the glass surface, and then apply a layer of adhesion promoter. After about 10 seconds, stick the 3M sticker and press for 30 seconds.

Finally, press the camera firmly on the glass (slowly press the side on the glass to avoid blisters), and do not move it for 20-30 seconds. After 20-30 seconds, the camera will stand tightly on the glass.

**Note: Do not tear off after sticking it, and then sticking it on again, you must ensure that it is in place once. If you tear off and repost it, you need to use a new 3M sticker and follow the installation steps again**

Installation angle diagram:

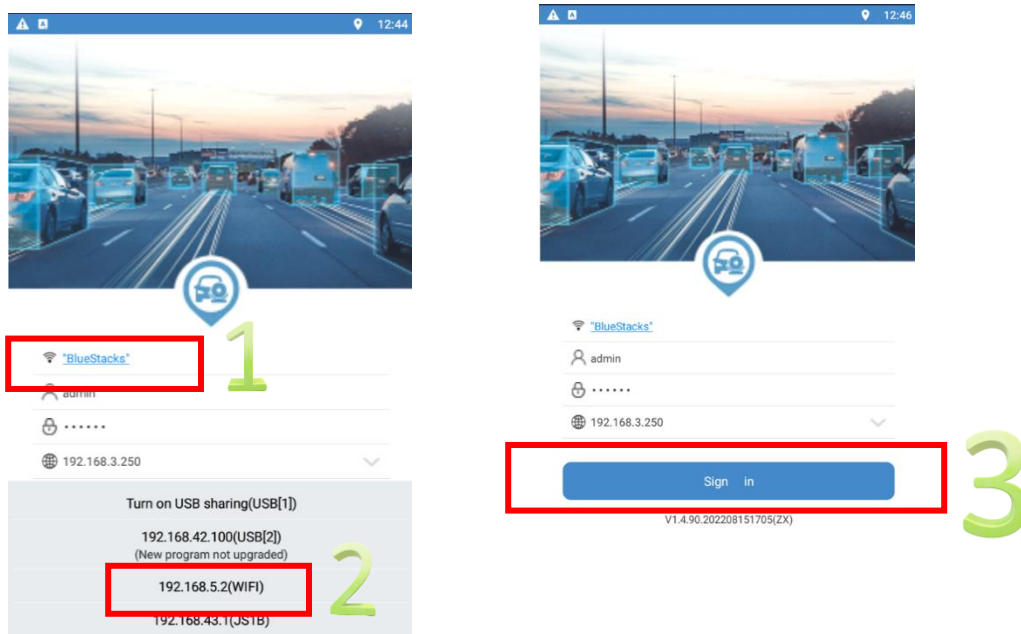


## MVR-DSC-AI2 can customize DSM function

### III. Software debugging

#### 1. Log in to the Operation and Maintenance APP

1. When the device is started, the MVR-DSC-AI2 terminal will automatically share the hotspot with **icar\_MAC** and **icar88168** as the SSID and password (the terminal will broadcast the IMEI number after the device is powered on).
2. Open the operation and maintenance software, connect to the MVR-DSC-AI2 terminal WIFI, select the IP server address of the WIFI login mode, and click login (the default account password, if you cannot log in, please contact our technology to obtain the account password), the **default account: admin, password: 888888** ;As shown below:



\* Open the operation and maintenance software, as shown in the figure:

**Note: The software will be updated from time to time. Due to the different versions of the APP installed, some UI functions may be different.**

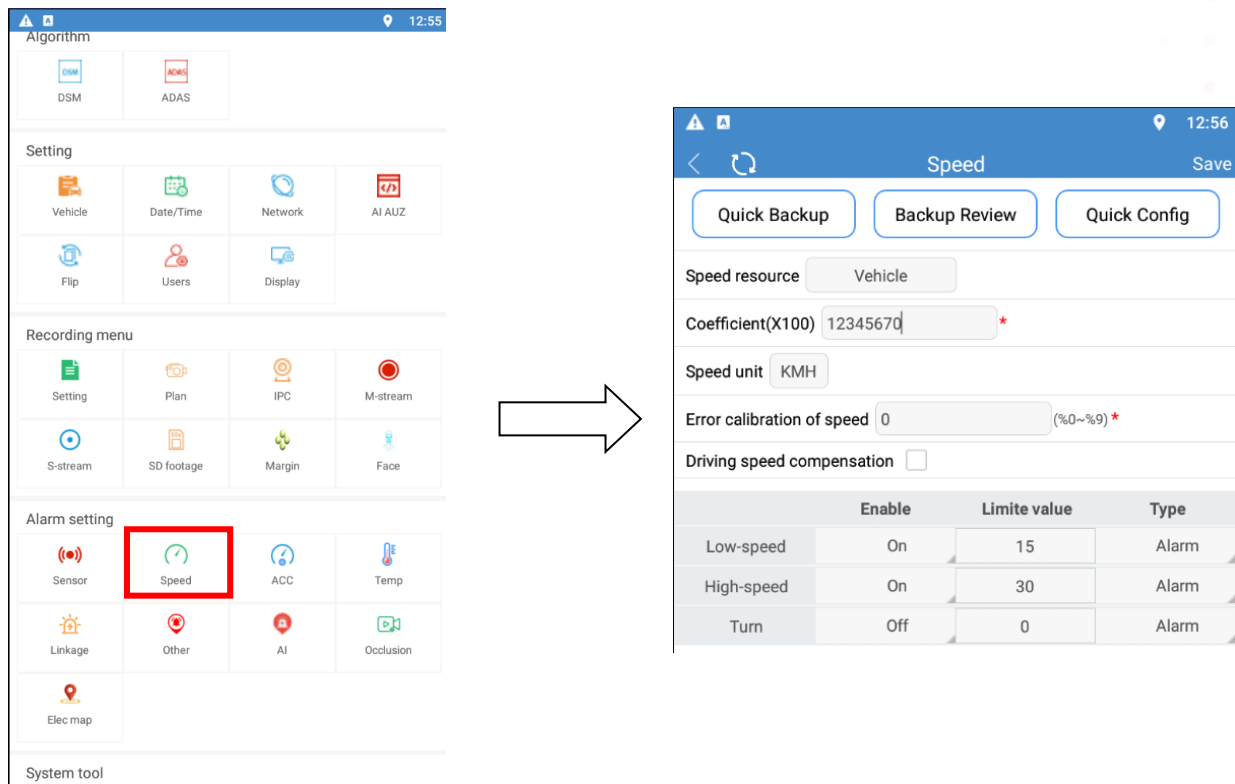
## 1.1 Simulation speed setting

### Simulation speed method:

Select Vehicle as the speed acquisition method, and set the coefficient to 123456+xx(the speed you want to set,cannot more than 100), such as set 12345670, then it will show 70km/h at video side(Office test).

If it is installed in a vehicle test, there is no need to set the simulated speed, and the device will generate a DSM/ADAS alarm based on the actual speed.

The speed interface refers to Article 15 of Part III:



The image shows two screenshots from a mobile application. The left screenshot is the main settings menu, with the 'Speed' option under 'Alarm setting' highlighted with a red box. The right screenshot is the 'Speed' configuration screen, which includes the following fields and a table:

- Speed resource: Vehicle
- Coefficient(X100): 12345670 \*
- Speed unit: KMH
- Error calibration of speed: 0 (%0~%9) \*
- Driving speed compensation:

	Enable	Limite value	Type
Low-speed	On	15	Alarm
High-speed	On	30	Alarm
Turn	Off	0	Alarm

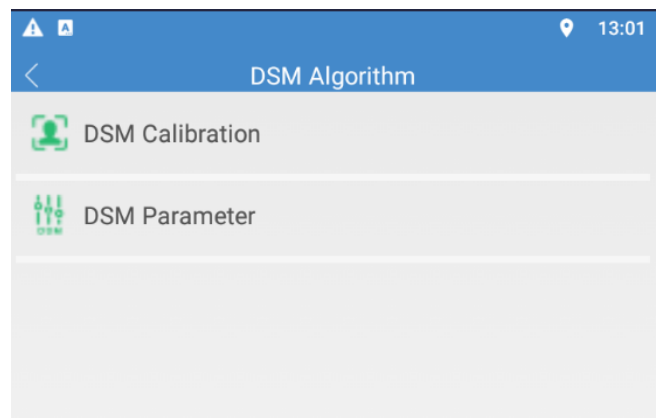
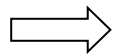
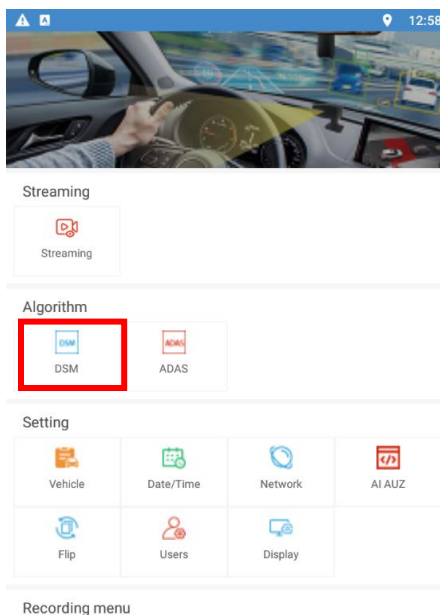
## 2. Streaming

The mobile phone preview screen through iCalibration software is mainly used to adjust the installation position of the camera.



### 3. DSM algorithm

After entering the iCalibration APP software, click [DSM algorithm], including DSM calibration and DSM parameter settings, as shown in the figure:



### 3.1 DSM calibration

#### 3.1.1 Correct the camera position

- After entering the calibration interface, start the first step of calibration. Drag the calibration frame to the face position, install the mode **【select left/right according to the actual use】**
- Click **【Cancel】** to cancel the calibration and return to the initial interface of DSM;
- Click on the **【Help】** floating window at the top right, and a prompt box will pop up **【Adjust the camera position to make sure your seat is within 30 degrees of the front】**. When you are finished, click **【Next step】**, and follow the prompts to complete Correction. After completion, click the **【Cancel】** button to return to the calibration interface.

#### 3.1.2 Frame drawing



### 3.1.3 Start calibration

- After entering the second step of the calibration interface, the voice broadcast: **【Please look straight ahead, keep your position still, and make sure that your face is in the center of the current interface】** ; the server returns to **【Calibration Start】** , and the voice broadcast: **【Calibration, please Wait patiently】** ;
- If the calibration is successful, it will play **【Calibration Successful】** and voice broadcast **【Calibration Successful】** ;
- Click **【Previous Step】** to return to the previous step, that is, the interface of correcting the camera position;
- Click the **【Help】** floating window at the upper right, and a prompt box will pop up **【Please look straight ahead, keep your position still, and make sure that your face is in the center of the current interface】** , and you can complete the correction according to the prompts. After completion, click the **【Close】** button to return to the calibration interface.
- If the calibration fails, the user needs to calibrate again.
- According to the failure reason returned by the server, the user is prompted and the calibration is restarted:
  1. The server returns **【Calibration failed, abnormal face orientation】** : Voice broadcast **【Calibration failed, please adjust camera angle and restart calibration】** , prompt **【Calibration failed, camera angle is too large】** ;
  2. The server returns **【Calibration failed, there is no face frame in the calibration】** : Voice broadcast **【Calibration failed, please place the face in the center of the blue frame, restart the calibration】** , prompt **【Calibration failed, please place the face in the center of the blue frame】** ;
  3. Unknown reason of failure: Voice broadcast **【Calibration failed, please restart**

calibration】 , prompt 【Calibration failed, please restart calibration】 .

### 3.1.4 Frame drawing



### 3.2 DSM parameter

Through the DSM parameter setting, the specified DSM alarm can be configured. Such as closed eye alarm: alarm enable open/close, alarm trigger speed, alarm high and low speed critical value, alarm duration, alarm time gap, etc.

image detection and rendering switch (ON/OFF) : AI algorithm box is displayed on the screen (ON) , AI algorithm box is not displayed on the screen (OFF) .

## DSM parameter

13:05
< ↻
DSM parameter setting

Restore default

Quick Backup

Backup Review

Quick Config

Image detection and rendering Switch

Eyeclose alarm <span style="float: right; color: #0070C0;">Save</span>	Phone call alarm <span style="float: right; color: #0070C0;">Save</span>
Eyeclose alarm enable <input checked="" type="checkbox"/>	Phone alarm enable <input checked="" type="checkbox"/>
Eyeclose alarm speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">30.0</span> km/h	Phonecall alarm speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">30.0</span> km/h
Eyeclose high-low critical speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">50.0</span> km/h	Phonecall high-low speed critical speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">50.0</span> km/h
Duration alarm close eye low speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">3.0</span> s (1.0~40.0)	Duration alarm phone low speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">3.0</span> s (1.0~40.0)
Duration alarm close eye high speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">3.0</span> s (1.0~40.0)	Duration alarm phone high speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">3.0</span> s (1.0~40.0)
Eyeclose interval <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">15</span> s (>=3)	Mobile phone interval <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">60</span> s (>=3)
Yawn alarm <span style="float: right; color: #0070C0;">Save</span>	Smoking alarm <span style="float: right; color: #0070C0;">Save</span>
Yawn alarm enable <input checked="" type="checkbox"/>	Smoking alarm enable <input checked="" type="checkbox"/>
Yawn alarm speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">30.0</span> km/h	Smoking alarm speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">30.0</span> km/h
Yawn alarm high-low critical speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">50.0</span> km/h	Smoking high-low speed critical speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">50.0</span> km/h
Duration alarm yawn low speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">3.0</span> s (1.0~40.0)	Duration alarm smoking low speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">2.0</span> s (1.0~40.0)
Duration alarm yawn high speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">3.0</span> s (1.0~40.0)	Duration alarm smoking high speed <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">2.0</span> s (1.0~40.0)
Yawn interval <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">15</span> s (>=3)	Smoking interval <span style="float: right; border: 1px solid #ccc; border-radius: 5px; padding: 2px;">180</span> s (>=3)



## DSM parameter

Driver distraction alarm	Save
Driver distraction alarm enable	<input checked="" type="checkbox"/>
Distraction alarm speed	30.0 km/h
Driver distraction high-low speed critical speed	50.0 km/h
Duration alarm left head low speed	4.0 s (2.0~40.0)
Duration alarm left head high speed	3.0 s (2.0~40.0)
Duration alarm right head low speed	4.0 s (2.0~40.0)
Duration alarm right head high speed	3.0 s (2.0~40.0)
Duration alarm up head low speed	4.0 s (2.0~40.0)
Duration alarm up head high speed	3.0 s (2.0~40.0)
Duration alarm down head low speed	4.0 s (2.0~40.0)
Duration alarm down head high speed	3.0 s (2.0~40.0)
Driver distraction interval	30 s (>=3)
Left angle setting	45.0 (0.0~90.0)
Right angle setting	-45.0 (-90.0~0.0)
Degree of lookup setting	30.0 (0.0~90.0)
Degree of bow setting	-30.0 (-90.0~0.0)

DSM parameter setting	
Face lost alarm	Save
Face lost alarm enable	<input checked="" type="checkbox"/>
Face loss alarm speed	30.0 km/h
Face lost high-low speed critical speed	50.0 km/h
Duration alarm face loss low speed	30.0 s (1.0~40.0)
Duration alarm face loss high speed	30.0 s (1.0~40.0)
Face lost interval	300 s (>=3)
Camera lost alarm	Save
Camera block alarm enable	<input checked="" type="checkbox"/>
Camera block alarm speed	30.0 km/h
Camera block high-low speed critical speed	50.0 km/h
Duration alarm block low speed	30.0 s (1.0~40.0)
Duration alarm block high speed	30.0 s (1.0~40.0)
Camera block interval	300 s (>=3)
Infrared block alarm	Save
Infrared block alarm enable	<input checked="" type="checkbox"/>
Infrared sunglasses block alarm speed	30.0 km/h
Infrared block high-low critical speed	50.0 km/h

**Restore default:** restore all algorithm parameters to factory defaults

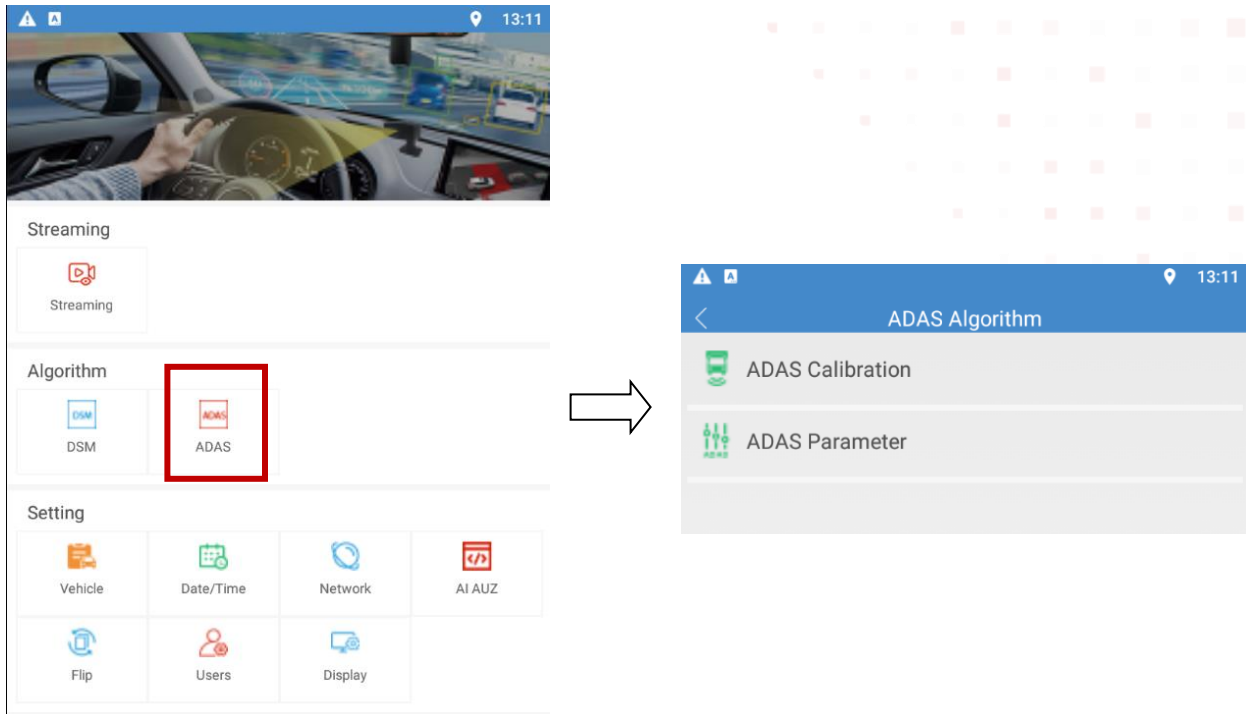
**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

**Backup Review:** view the parameter settings that have been backed up

**Quick config:** set the backup parameters to the current device (suitable for batch setting calibration)

#### 4. ADAS algorithm

After entering the iCalibration APP software, click [ADAS algorithm], including ADAS calibration and ADAS parameter settings, as shown in the figure:

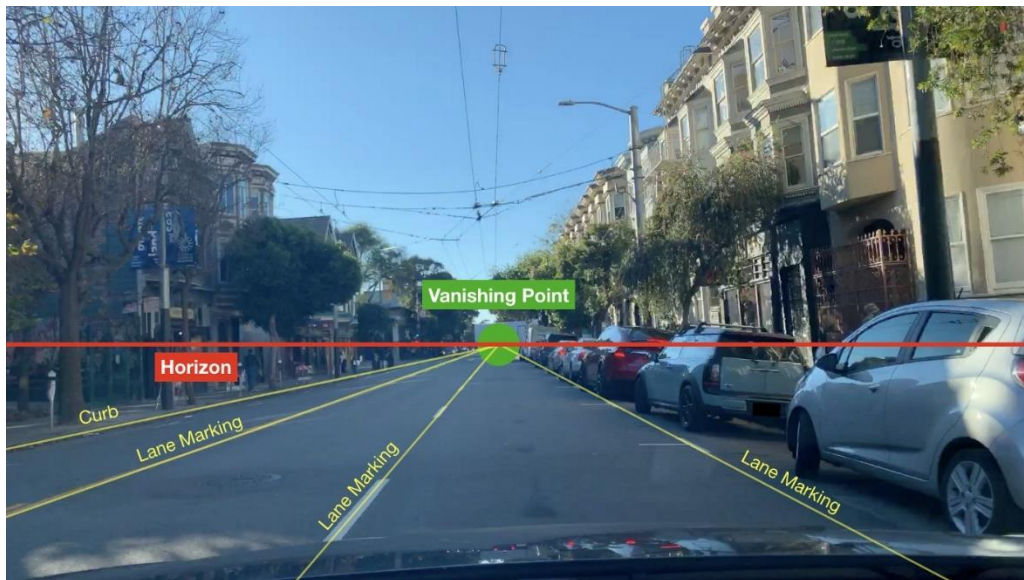


#### 4.1 ADAS calibration

##### 4.1.1 Correct the camera position

- After entering the second step of the calibration page, the voice broadcast **【Move the yellow cross so that the center point of the cross is at the vanishing point of heaven and earth; you can also use the four direction buttons to fine-tune, and click Next when finished.】**
- Click **【Cancel】** to return to the previous calibration interface to correct the camera position;
- Click **【Next step】** to enter the next step, enter vehicle parameter information;

- You can click the **【Help】** button to pop up a prompt box **【Move the yellow cross, so that the center point of the cross is at the vanishing point of heaven and earth; you can use the four direction buttons to fine-tune.】** Follow the prompts to complete the calibration. After completion, click the **【Finish】** button to return to the calibration interface.
- ① Install the camera, try to ensure that the sky and the earth in the picture each account for 50%. It is recommended that the camera be installed in the center of the vehicle.
  - ② Measure the vertical height from the camera to the ground (in m).
  - ③ Move the cross point to the vanishing point on the mobile phone calibration APP. The method of confirming the vanishing point is as follows:
    - 1> Measure 4 to 5 meters directly in front of the camera lens.
    - 2> The point where the vertical direction of the position in the figure is equal to the height of the camera lens is the vanishing point. As shown below:
    - 3>

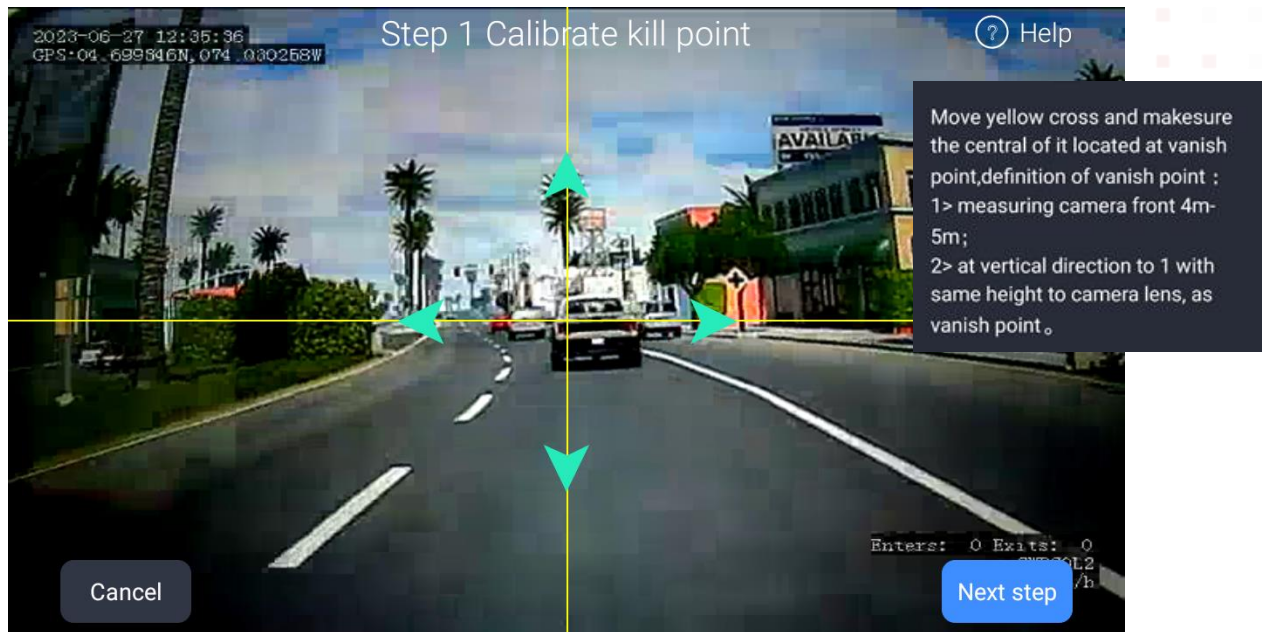


- ④ Measure the horizontal width of the car and fill it (unit: m).
- ⑤ Measure the horizontal distance from the camera to the front bumper and fill it (unit: m).
- ⑥ Fill the height of the camera in ② (unit: m) and select the camera resolution.
- ⑦ Measure the camera to the center of the vehicle and fill it. When installed to the center position, fill in 0. If the camera is located to the left of the center position, select "Center

Left", and if the camera is located to the right of the center position, select "Center Left" and then set the corresponding deviation value.

**Note: Choose the left or right center to fill in the deviation value correspondingly, there is no difference between positive and negative.**

#### 4.1.2 Frame drawing



#### 4.1.3 Enter vehicle parameter information

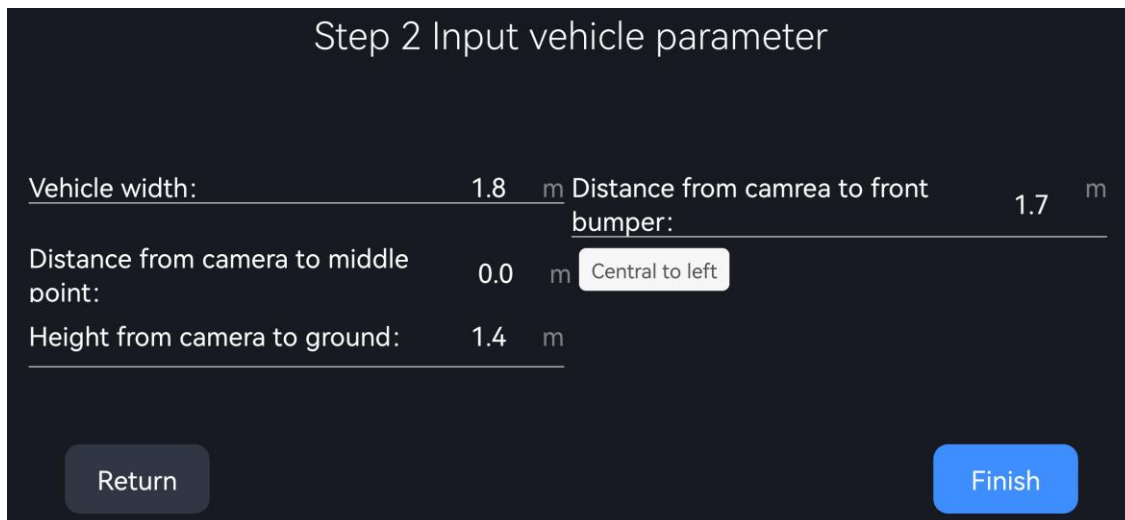
Enter the third step calibration interface, you need to enter the following parameters;

- ▶ Vehicle width, in m (Note: Take the distance from the outside of the left front wheel of the vehicle to the outside of the right front wheel of the vehicle);
- ▶ The distance from the camera to the front bumper, in m (Note: the horizontal distance from the camera installation position to the front bumper);
- ▶ The height of the camera from the ground, in m (Note: the vertical height from the camera installation position to the ground);
- ▶ The distance between the camera and the center of the vehicle, in m (0m). When installed to the center position, fill in 0. When the camera is located to the left of the center

position, select "Center Left", and if the camera is located to the right of the center position, select "Center Left" and then set the corresponding deviation value, see 5.1.1.1.;

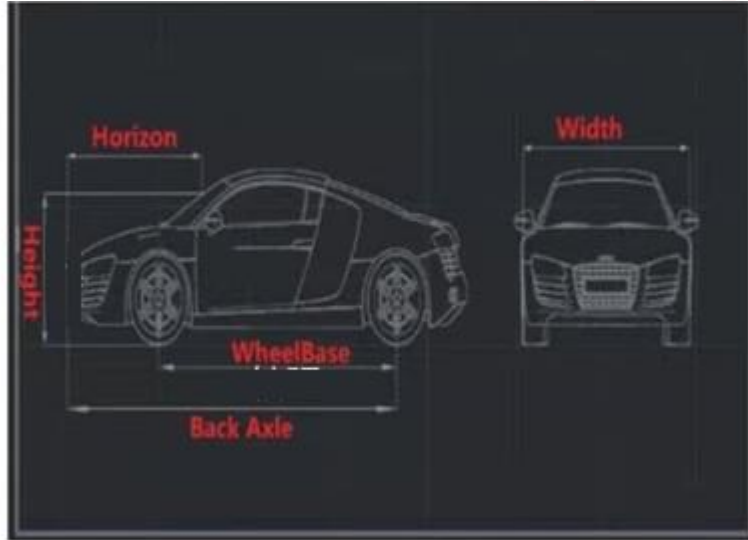
- ▶ Click [Previous Step] to return to the previous calibration interface, that is, step2 calibrate the position of the vanishing point of heaven and earth;
- ▶ Click the [Finish] button: prompt the user [calibration in progress] (voice+toast), after the calibration is successful, prompt the user [calibration successful] (voice+toast), enter the ADAS homepage and start working;
- ▶ The vehicle information is empty the first time it is entered. After the user enters once and clicks, the next time it is entered, it is filled by the user by default, without the need for the user to enter it again, and the user is allowed to modify it. );

#### 4.1.4 Frame drawing

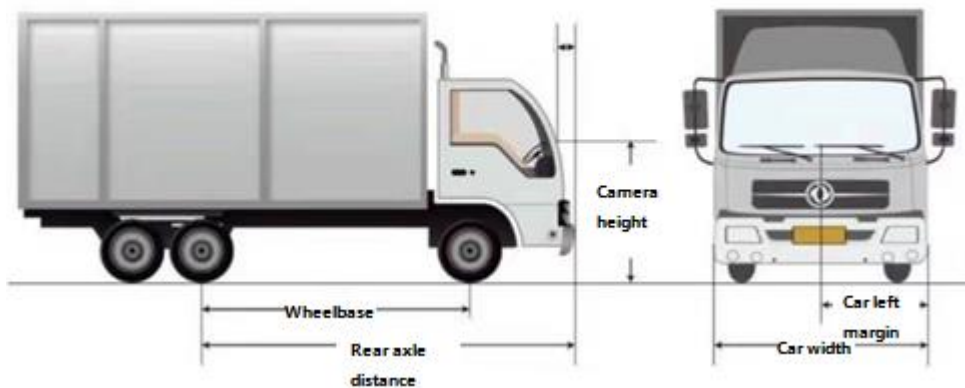


Step 2 Input vehicle parameter

Vehicle width:	1.8 m	Distance from camera to front bumper:	1.7 m
Distance from camera to middle point:	0.0 m	<input type="text" value="Central to left"/>	
Height from camera to ground:	1.4 m		



Example of car parameter measurement



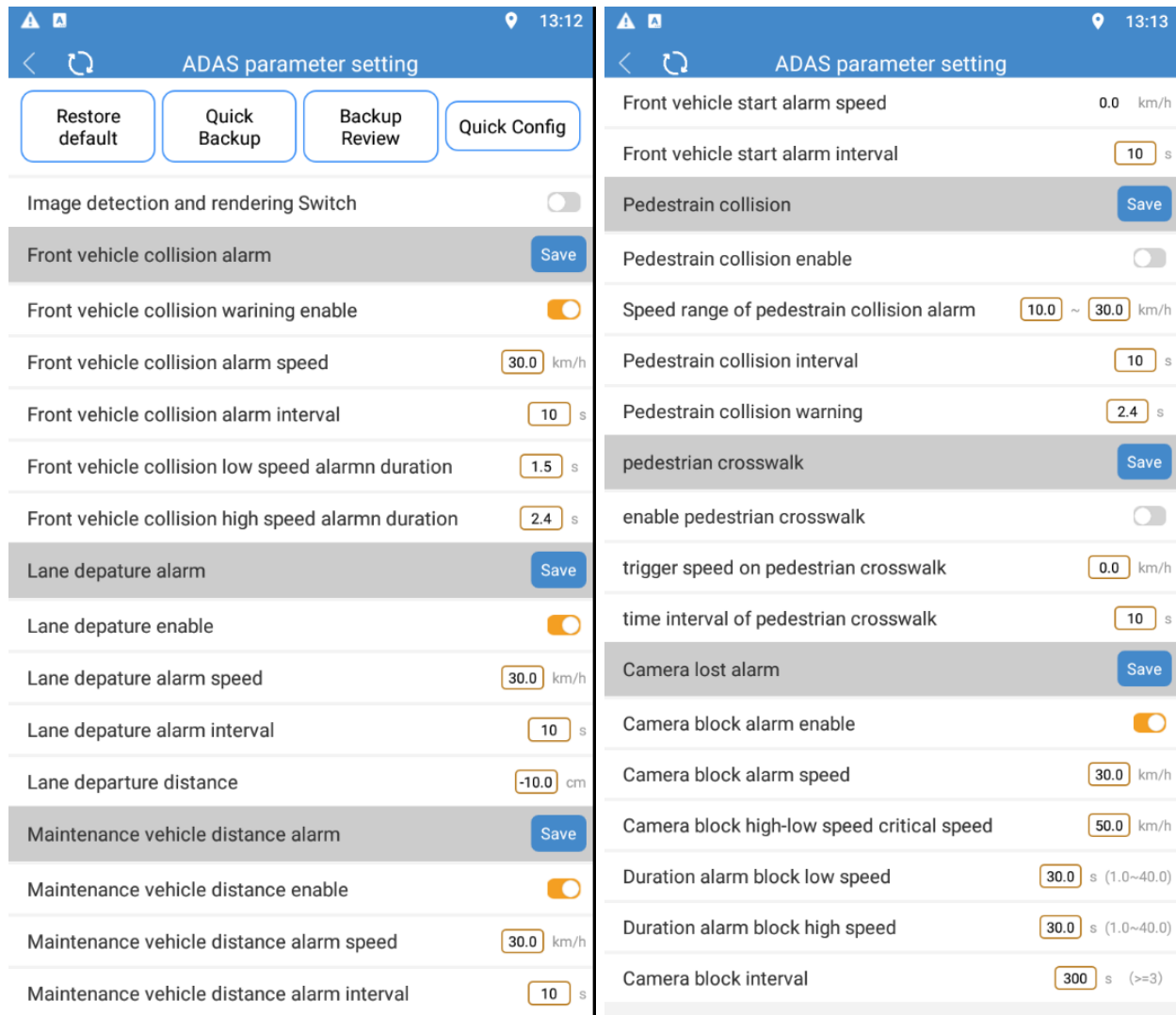
Click the Finish button to complete the ADAS calibration.

## 4.2 ADAS parameters

Through the ADAS parameter setting, the specified ADAS alarm can be configured. Such as the collision alarm of the preceding vehicle: alarm enable open/close, alarm trigger speed, alarm high and low speed critical value, alarm time gap, etc.

image detection and rendering switch (ON/OFF) : AI algorithm box is displayed on the screen (ON) , AI algorithm box is not displayed on the screen (OFF)

## ADAS parameters



The image displays two screenshots of the 'ADAS parameter setting' application interface. The left screenshot shows the main settings menu with buttons for 'Restore default', 'Quick Backup', 'Backup Review', and 'Quick Config'. Below these are various ADAS parameters, each with a 'Save' button and a toggle switch. The right screenshot shows a detailed view of the 'Pedestrian collision' settings, including parameters like 'Front vehicle start alarm speed', 'Pedestrian collision enable', 'Speed range of pedestrian collision alarm', 'Pedestrian collision interval', 'Pedestrian collision warning', 'pedestrian crosswalk', 'enable pedestrian crosswalk', 'trigger speed on pedestrian crosswalk', 'time interval of pedestrian crosswalk', 'Camera lost alarm', 'Camera block alarm enable', 'Camera block alarm speed', 'Camera block high-low speed critical speed', 'Duration alarm block low speed', 'Duration alarm block high speed', and 'Camera block interval'.

**Restore default:** restore all algorithm parameters to factory defaults

**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

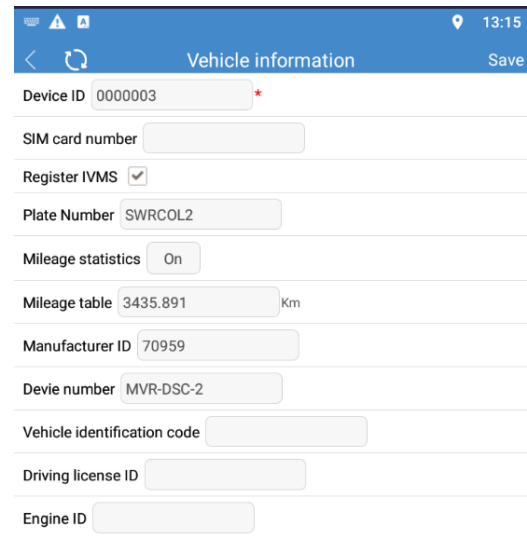
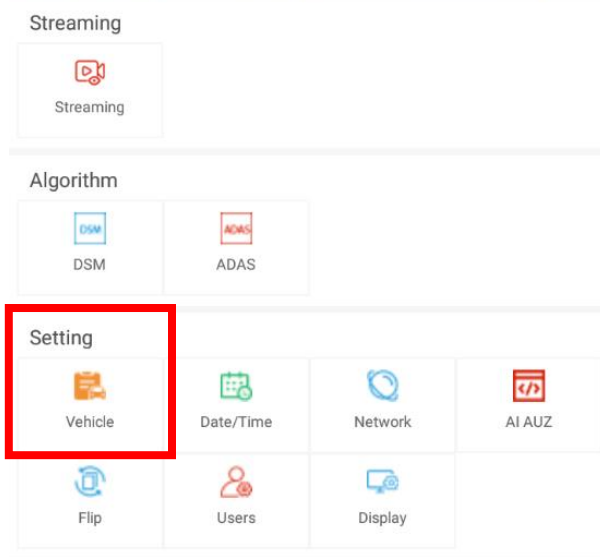
**Backup Review:** view the parameter settings that have been backed up

**Quick config:** set the backup parameters to the current device (suitable for batch setting calibration)

## 5. Vehicle information

Enter the vehicle information setting menu through iCalibration APP. Set the device number, sim card number, license plate number, license plate color, engine number, frame number, and vehicle type. In order to facilitate the unified management of vehicles on the server, it is recommended to input vehicle information in detail, such as the license plate number superimposed on the video during video encoding to form strong video evidence.

**Device ID: The server will monitor and manage the vehicle through the device ID. When managing the vehicle through the 3G/4G network, please ensure the uniqueness of the device ID.**

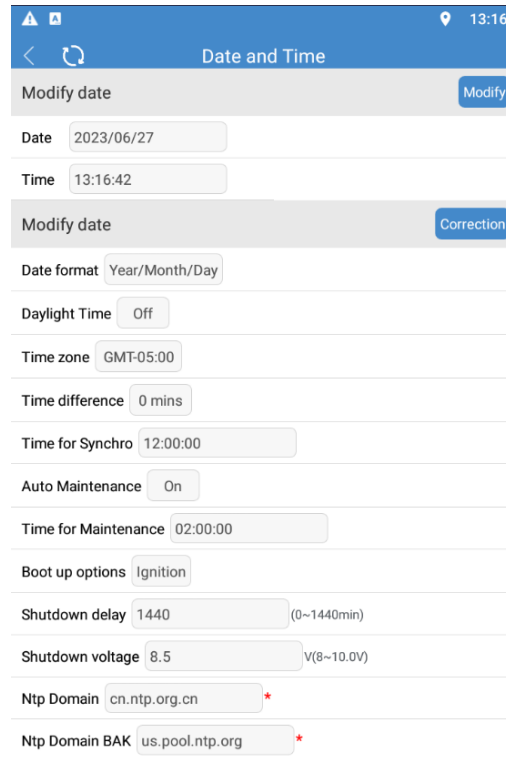
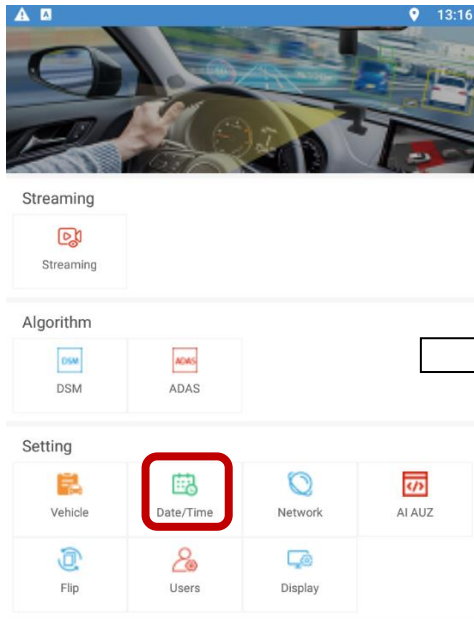


Device ID	0000003
SIM card number	
Register IVMS	<input checked="" type="checkbox"/>
Plate Number	SWRCOL2
Mileage statistics	On
Mileage table	3435.891 Km
Manufacturer ID	70959
Devie number	MVR-DSC-2
Vehicle identification code	
Driving license ID	
Engine ID	



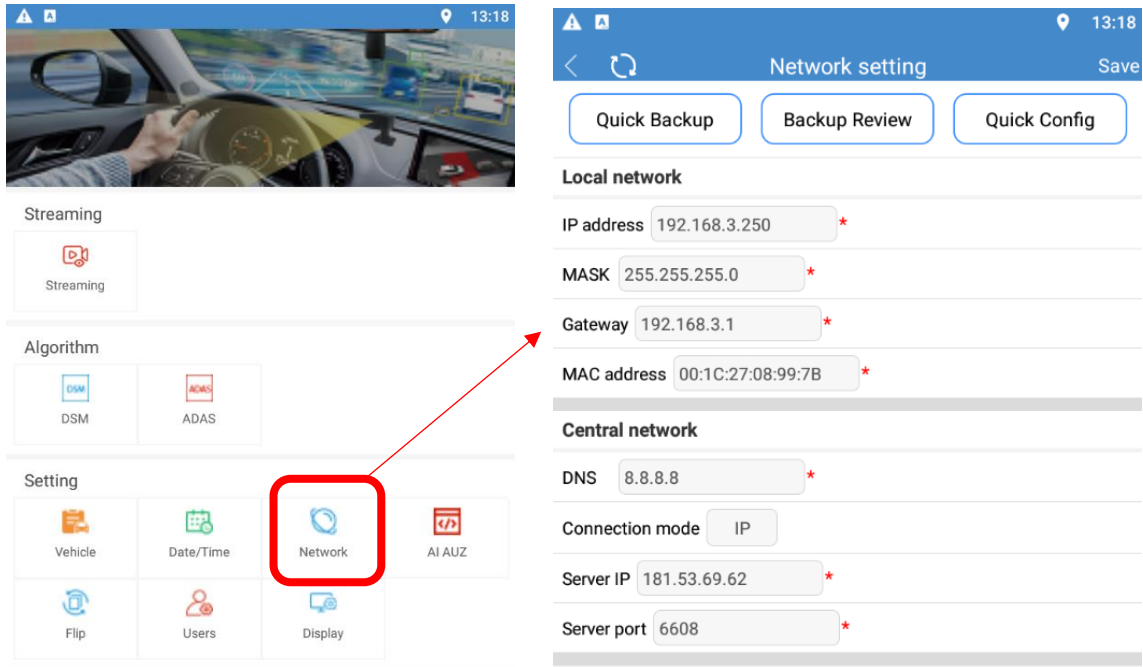
## 6. Date/time

The time, time zone, automatic maintenance time, ACC delayed shutdown, etc. can be set through the iCalibration APP.



## 7. Network settings

Server IP can be set through iCalibration APP (the server IP is the manufacturer's private server, which is convenient for maintenance, upgrades, etc.), and the standard IP port (used by domestic equipment).



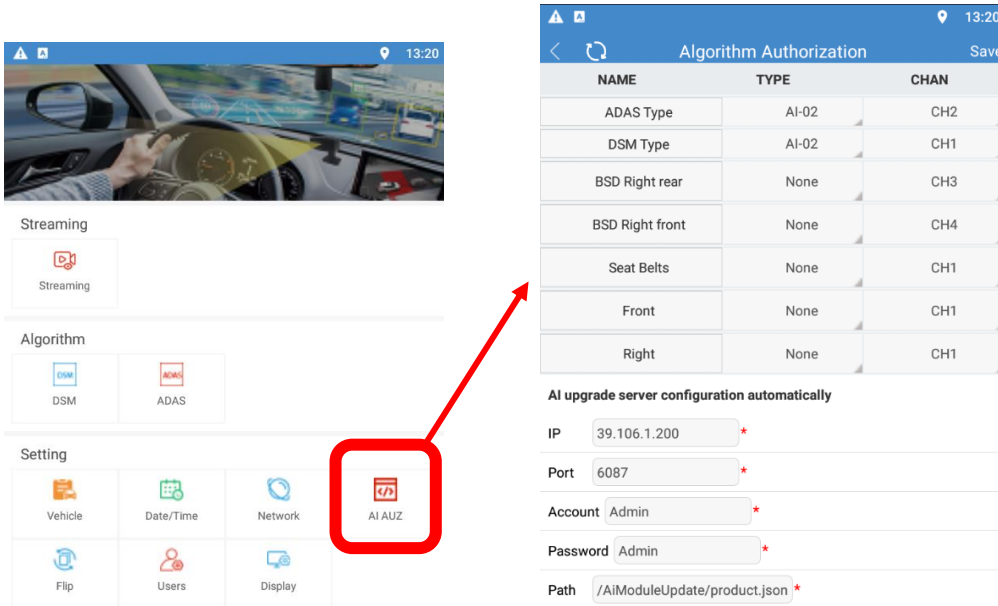
**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

**Backup Review:** view the parameter settings that have been backed up

**Quick configuration:** set the backup parameters to the current device (suitable for batch setting calibration)

## 8. Authorization

This function is used to authorize the DSM/ADAS/BSD algorithm, you need to contact our technical staff for operation. Before the device leaves the factory, the device will be authorized, and there is no need to re-authorize under normal circumstances.



The image shows two screenshots from a vehicle's infotainment system. The left screenshot displays the 'Setting' menu with 'AI AUZ' highlighted in a red box. The right screenshot shows the 'Algorithm Authorization' screen with a table of settings and configuration fields.

NAME	TYPE	CHAN
ADAS Type	AI-02	CH2
DSM Type	AI-02	CH1
BSD Right rear	None	CH3
BSD Right front	None	CH4
Seat Belts	None	CH1
Front	None	CH1
Right	None	CH1

AI upgrade server configuration automatically

IP: 39.106.1.200 \*

Port: 6087 \*

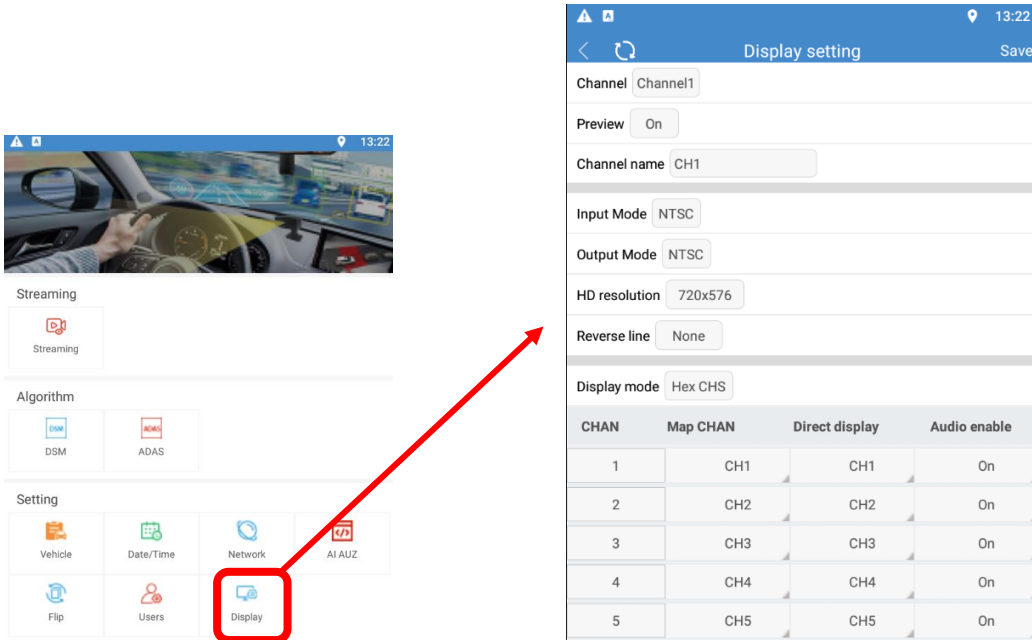
Account: Admin \*

Password: Admin \*

Path: /AiModuleUpdate/product.json \*

## 9. Display

Set camera input mode and host output mode (PAL/NTSC)



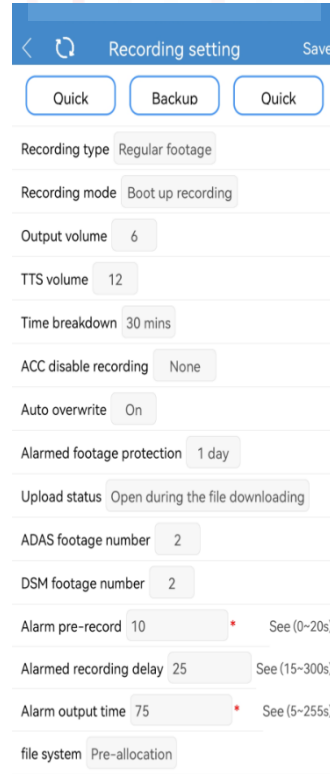
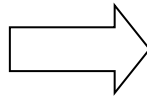
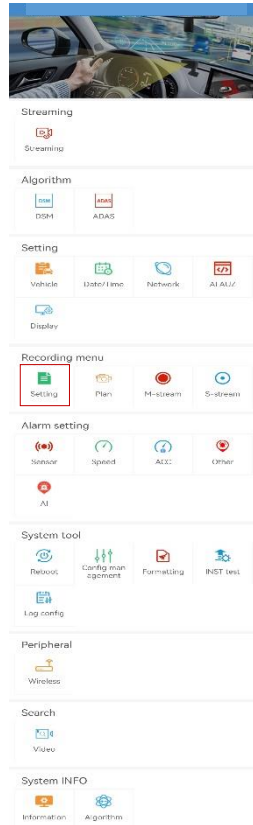
The 'Display setting' screen shows the following configuration:

- Channel: Channel1
- Preview: On
- Channel name: CH1
- Input Mode: NTSC
- Output Mode: NTSC
- HD resolution: 720x576
- Reverse line: None
- Display mode: Hex CHS

CHAN	Map CHAN	Direct display	Audio enable
1	CH1	CH1	On
2	CH2	CH2	On
3	CH3	CH3	On
4	CH4	CH4	On
5	CH5	CH5	On

## 10. Record settings

Enter the recording setting interface through iCalibration APP, and select the appropriate recording mode according to your needs. You can choose boot recording, alarm recording, and timing recording. The volume setting is only effective when the pickup is connected or the camera comes with audio. ADAS、DSM、BSD access channels can be set according to the actual situation. The number of alarm recordings is the number of recordings of the channel when the alarm is generated. When you select alarm recording, you can set the alarm pre-recording time, alarm recording delay time, alarm continuous output time, and alarm recording protection time. When you select timing recording, you need to set the recording plan.



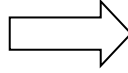
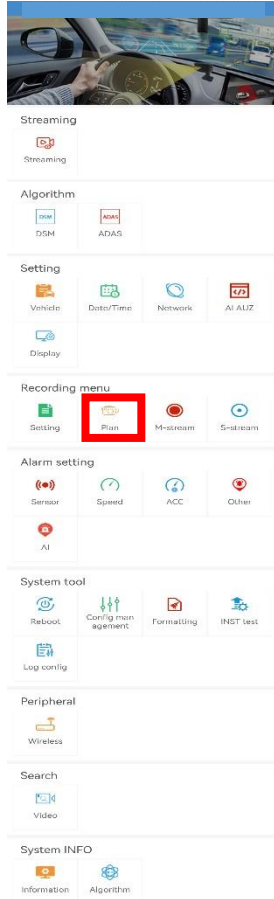
**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

**Backup Review:** view the parameter settings that have been backed up

**Quick configuration:** set the backup parameters to the current device (suitable for batch setting calibration)

### 1.1. Recording plan (need to be set in timing recording mode)

Enter the recording plan interface through the iCalibration APP. If the recording mode in the general recording settings selects the "timed recording" mode (not commonly used), you need to set the time period for the scheduled recording here (2 time periods can be selected).



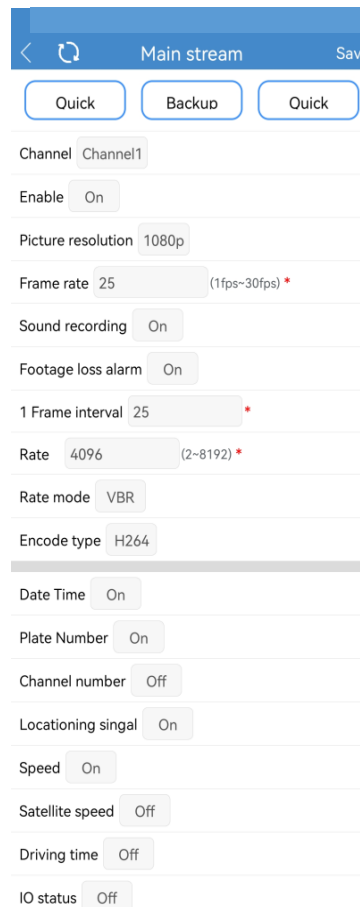
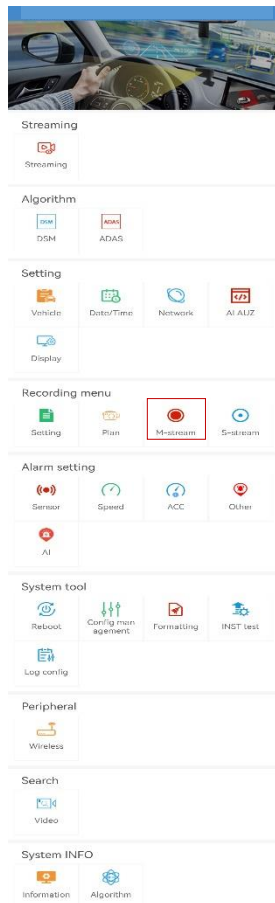
Recording plan		
	Start	End
Everyday	00:00:00	00:00:00
Mon	00:00:00	00:00:00
Tue	00:00:00	00:00:00
Wed	00:00:00	00:00:00
Thur	00:00:00	00:00:00
Fri	00:00:00	00:00:00
Sat	00:00:00	00:00:00
Sun	00:00:00	00:00:00

## 12. Main stream

Enter the main stream interface through iCalibration APP. After entering the main stream setting interface, you can set the main stream parameters of the analog camera, and the resolution can be D1/HD1/CIF/960H/720P/1080P.

1) The frame rate needs to be adjusted according to the image format, the higher the video real-time performance, the better.

PAL is adjustable from 1-25 frames; NTSC is adjustable from 1-30 frames.



**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

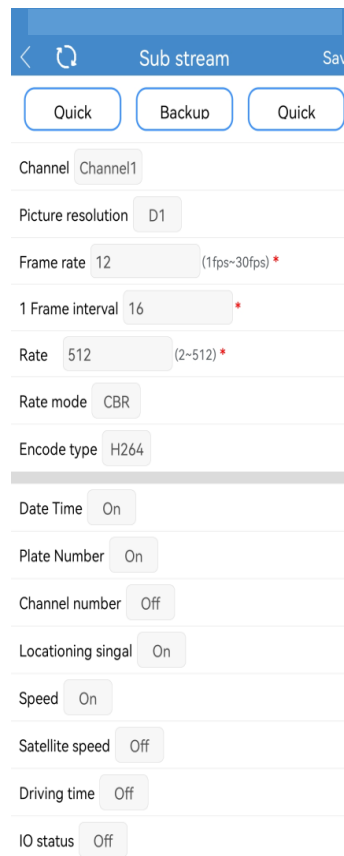
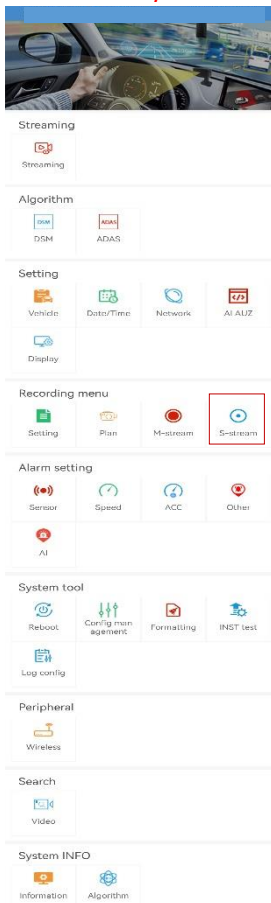
**Backup Review:** view the parameter settings that have been backed up

**Quick config:** set the backup parameters to the current device (suitable for batch setting calibration)

### 13. Sub-stream

Enter the main stream interface through iCalibration APP, and enter the sub stream setting interface. Its setting is related to whether the video on the IVMS platform is clear and smooth. The higher the resolution and bit rate settings, the clearer the video, and the higher the frame rate, the smoother the video, but the larger the space occupied by the video, the higher the network bandwidth requirements. The current 3G/4G network supports CIF real-time network transmission.

1) It can be set to fixed bit rate CBR or dynamic bit rate VBR 16-384kbit/s optional, the default is 128kbit/s.



**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

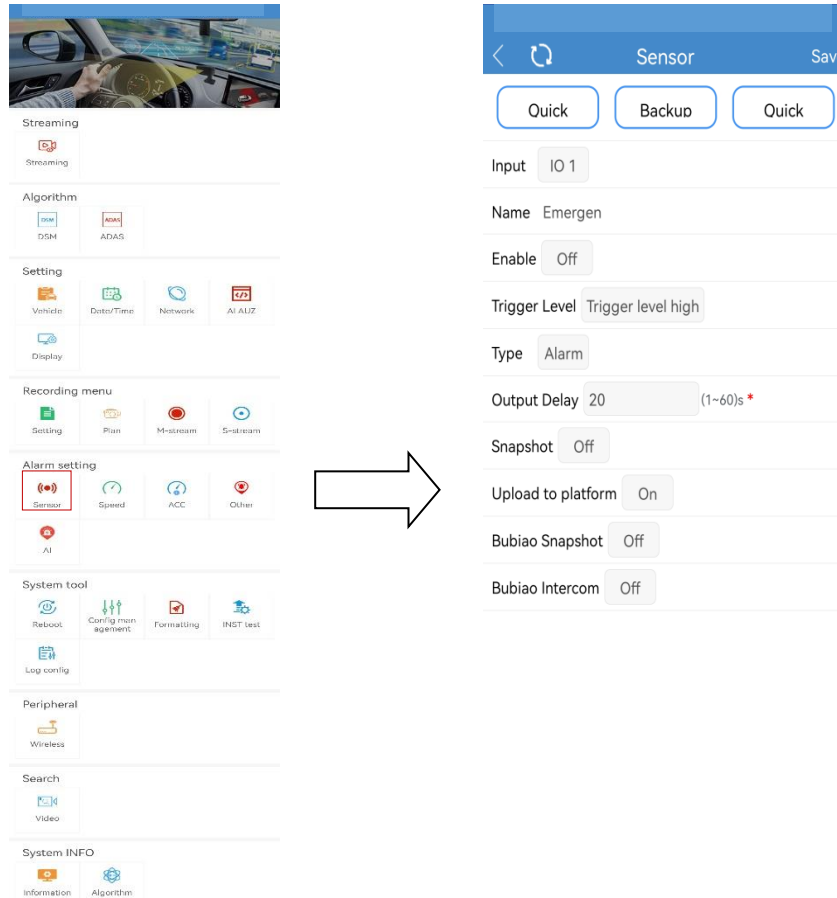
**Backup Review:** view the parameter settings that have been backed up

**Quick config:** set the backup parameters to the current device (suitable for batch setting calibration)



## 14. Sensor

Enter the sensor alarm setting interface through iCalibration APP. This product provides 3 SENOR-IN inputs, which can be set higher than 5V high/lower than 1V low alarm. In the alarm setting menu, set the alarm enable to "on", and set the sensor name according to the actual situation (such as: emergency alarm, brake, far and near light, etc.).



**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

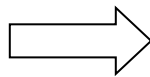
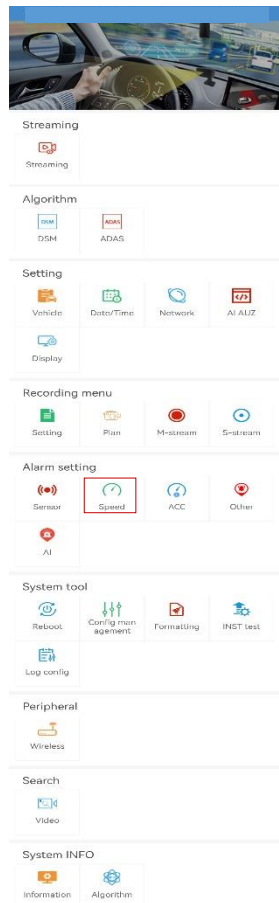
**Backup Review:** view the parameter settings that have been backed up

**Quick config:** set the backup parameters to the current device (suitable for batch setting calibration)

## 15. Speed

Enter the speed alarm setting interface through iCalibration APP. After the alarm function is turned on, when the vehicle speed is abnormal, the device display screen will display "Reminder: abnormal speed", and the voice broadcast "abnormal speed" three times; when the speed is normal, The device will announce "normal speed" 3 times. At the same time, you can also upload overspeed alarm information to the IVMS management platform.

- ▶ The coefficient (X100) means that when you select "vehicle" to obtain the speed, it needs to be determined according to the set speed and the obtained pulse. The coefficient =  $(3600 * \text{pulse number}) / \text{speed KMH}$ , the pulse number is the distance of the vehicle traveling 1 kilometer The number of pulse signals generated in the process;
- ▶ The speed unit can be selected as KMH/MPH. After setting, move the cursor to the "Save" button and press the "ENTER" button to save.



<
Speed
Save

Quick
Backup
Quick

Speed resource Vehicle

Coefficient(X100) 12345670 \*

Speed unit KMH

Error calibration of speed 0 (%0-%9) \*

Driving speed compensation

	Enable	Limite value	Type
Low-speed	Off	15	Event
High-speed	Off	120	Event
Turn	Off	0	Alarm

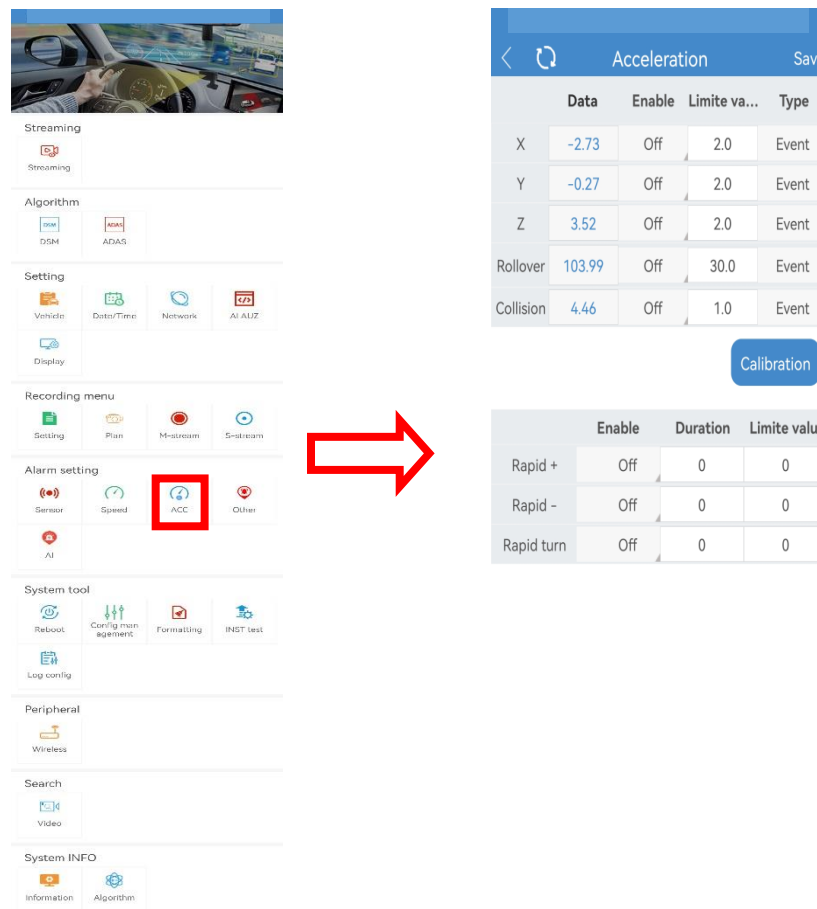
**Quick backup:** back up the currently set algorithm parameters (backup to the current phone)

**Backup Review:** view the parameter settings that have been backed up

**Quick config:** set the backup parameters to the current device (suitable for batch setting calibration)

## 16. Acceleration

Enter the acceleration alarm setting interface through iCalibration APP. When braking, turning, accelerating, and crashing, the instantaneous acceleration is large, which is intuitively reflected in the rapid change of the threshold value. When the PC is played back, the three states of X\Y\Z are displayed in the waveform.



	Data	Enable	Limite va...	Type
X	-2.73	Off	2.0	Event
Y	-0.27	Off	2.0	Event
Z	3.52	Off	2.0	Event
Rollover	103.99	Off	30.0	Event
Collision	4.46	Off	1.0	Event

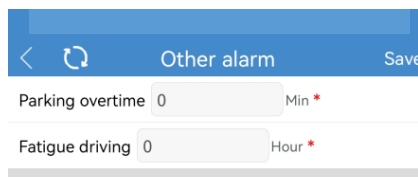
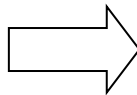
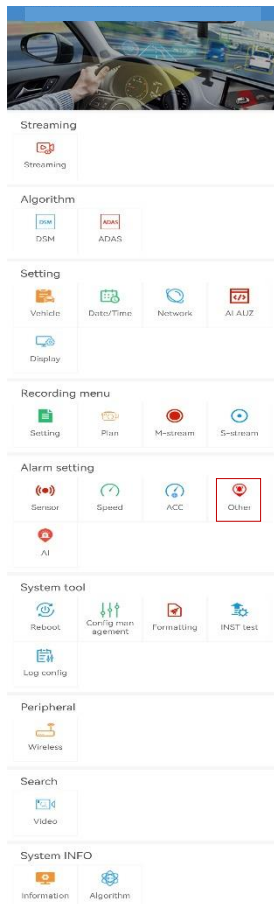
	Enable	Duration	Limite value
Rapid +	Off	0	0
Rapid -	Off	0	0
Rapid turn	Off	0	0

## 17. Other alarms

This product can be reported to our IVMS management platform or ministry standard

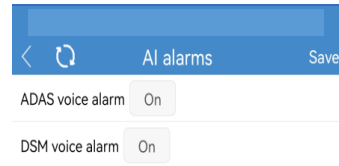
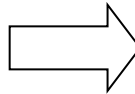
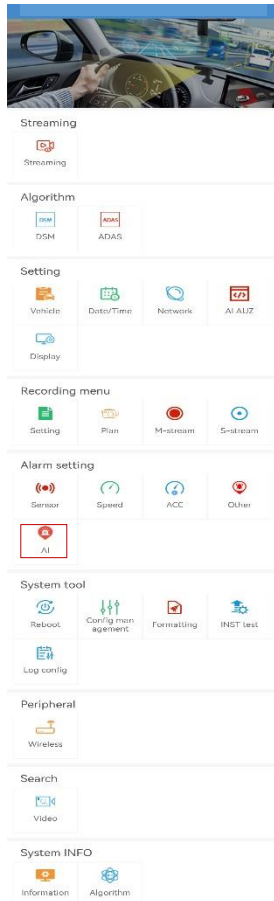
platform, and the IVMS platform supports overtime parking and fatigue driving alarms, can be set according to needs; the report to the platform can be set for overtime parking, fatigue driving, speeding alarm and other parameter settings .

Fatigue rest time means that after driving the vehicle for a long time, you should rest for a certain period of time before continuing to drive the vehicle. The time can be set according to traffic laws; the fatigue warning difference means that a period of time is set to remind the driver of the upcoming fatigue driving time When the fatigue time set by the system is reached, please be prepared to rest.



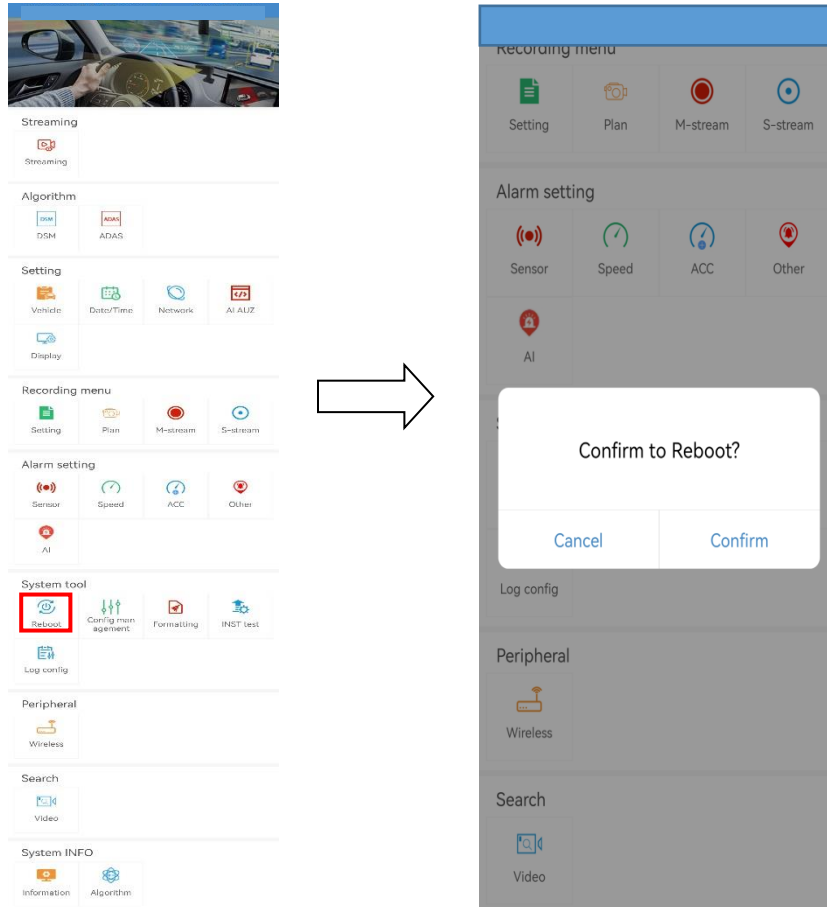
## 18. Ai alarms

DSM, ADAS alarm can be turned on/off through the AI alarm interface.



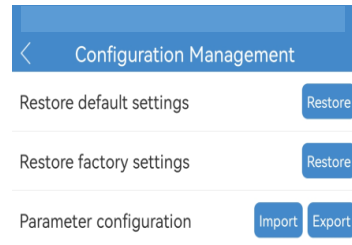
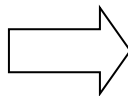
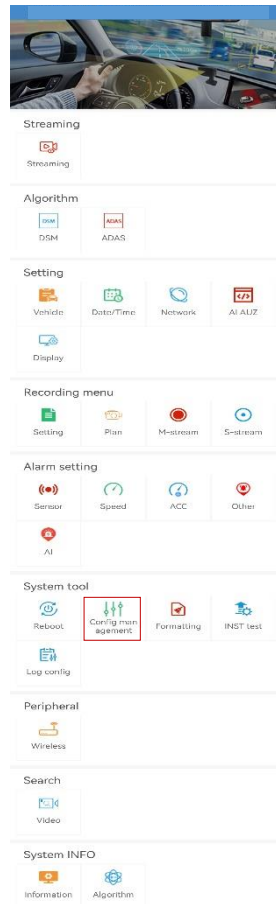
## 19. Device restart

Enter the restart interface through iCalibration APP and click OK to restart the device.



## 20. Configuration management

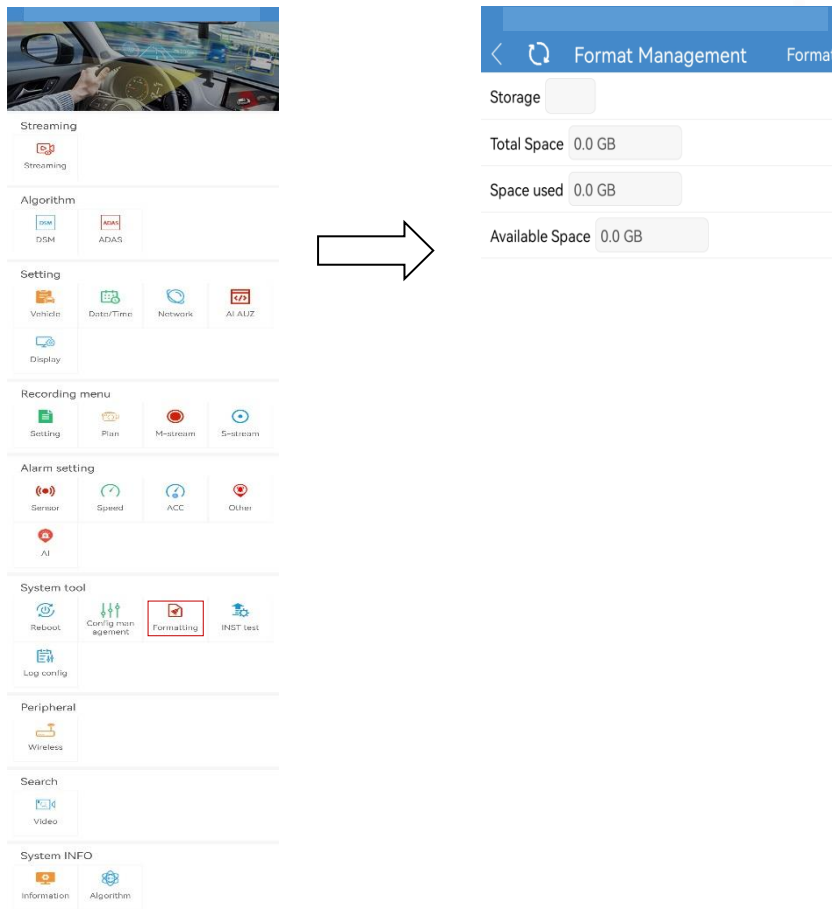
Enter the configuration management interface through the iCalibration APP, you can set to restore the device defaults, and export/import device parameters.



## 21. Device format

Enter the device formatting interface through iCalibration APP, select the storage medium that needs to be formatted, and then select format.

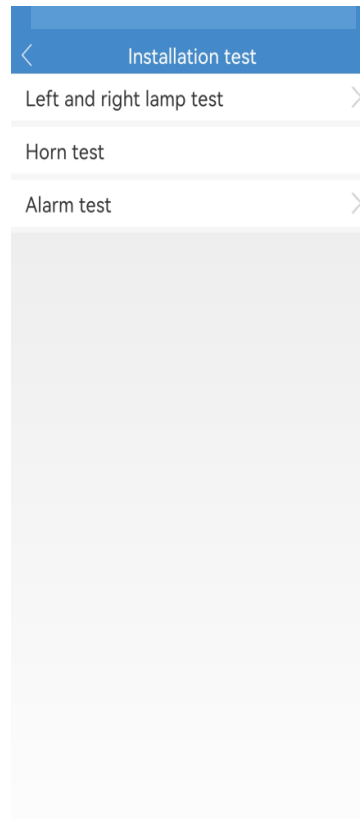
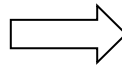
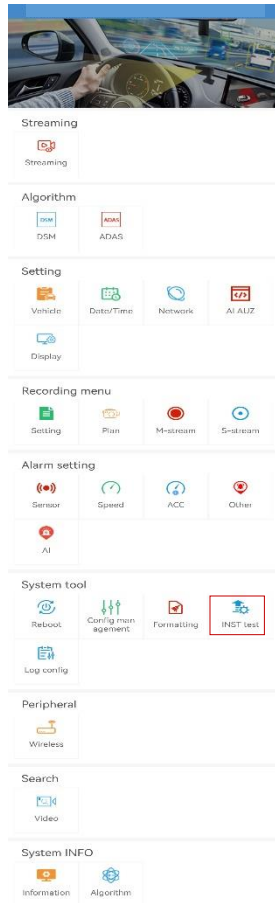
After the host is installed, the TF card needs to be formatted. The TF card used for the first time cannot be used without formatting. The formatting process is about 5-10 minutes, and the power cannot be cut off during the formatting process.





## 22. Left/right turn signal test

Enter the Left/right turn signal test interface through iCalibration APP to perform left and right turn signal test (need to connect to the left/right turn signal function line), horn test and alarm test.

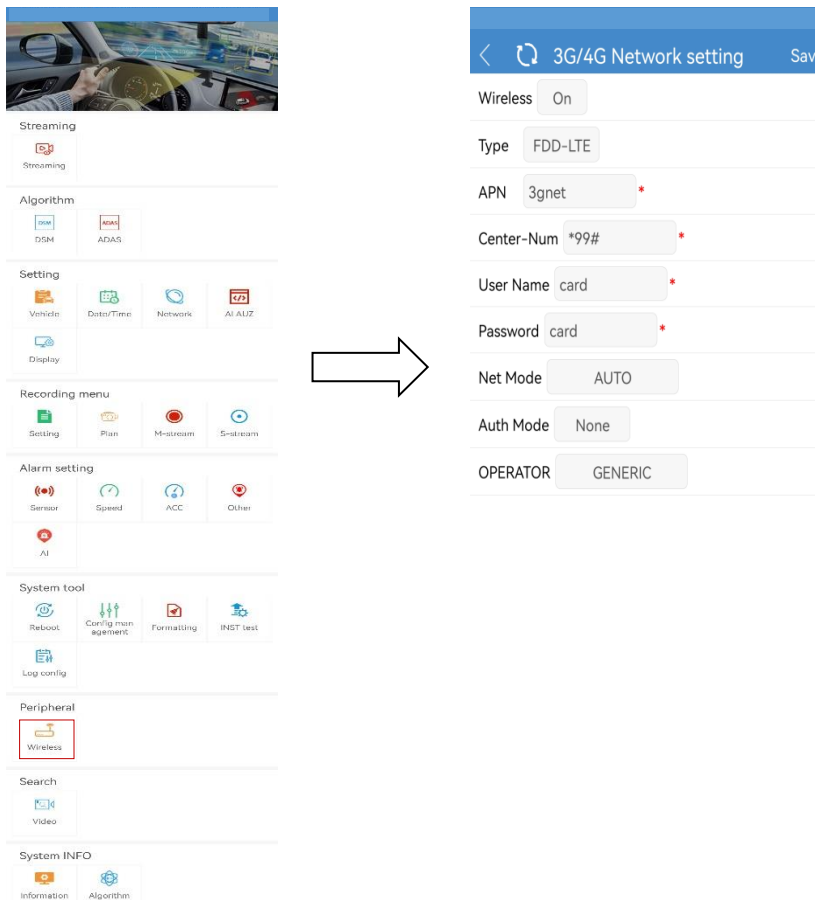


## 23. Log configuration

This interface is the factory debugging function interface, no need to configure

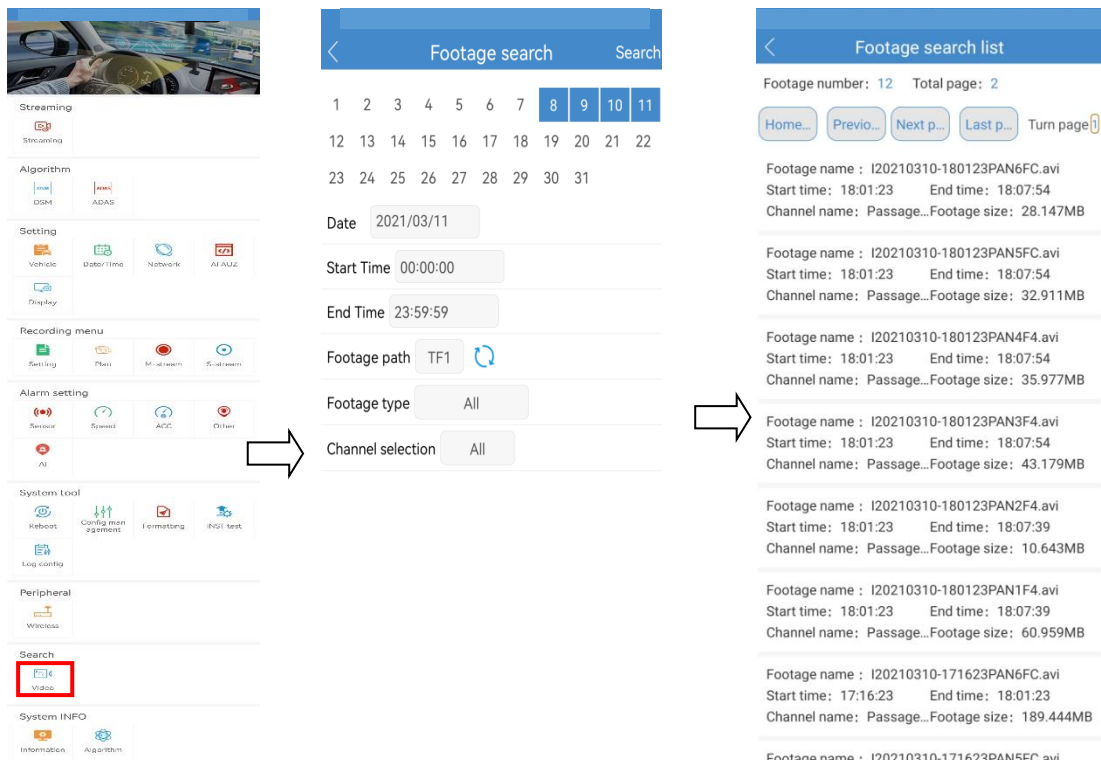
## 24. Wireless

Enter the Wireless Setup menu. When 3G/4G SIM card is used in MDVR and information is reported to the platform via 3G/4G, wireless dial-up shall be enabled, and a proper communication type shall be selected according to operator's network format. There are some differences between 3G/4G software versions, as shown in following figure. Use the default settings for domestic subscribers (the following figure shows default settings for China Unicom and China Telecom). For foreign subscribers, fill these fields with information provided by your local mobile network operator.



## 25. Video search

Enter the video interface through the iCalibration APP, and you can select the video file for playback and other operations in the search results. The calendar with a green background means that there is a log. You can search by selecting the date, time, video type and corresponding channel (the searched video file cannot be video playback temporarily).

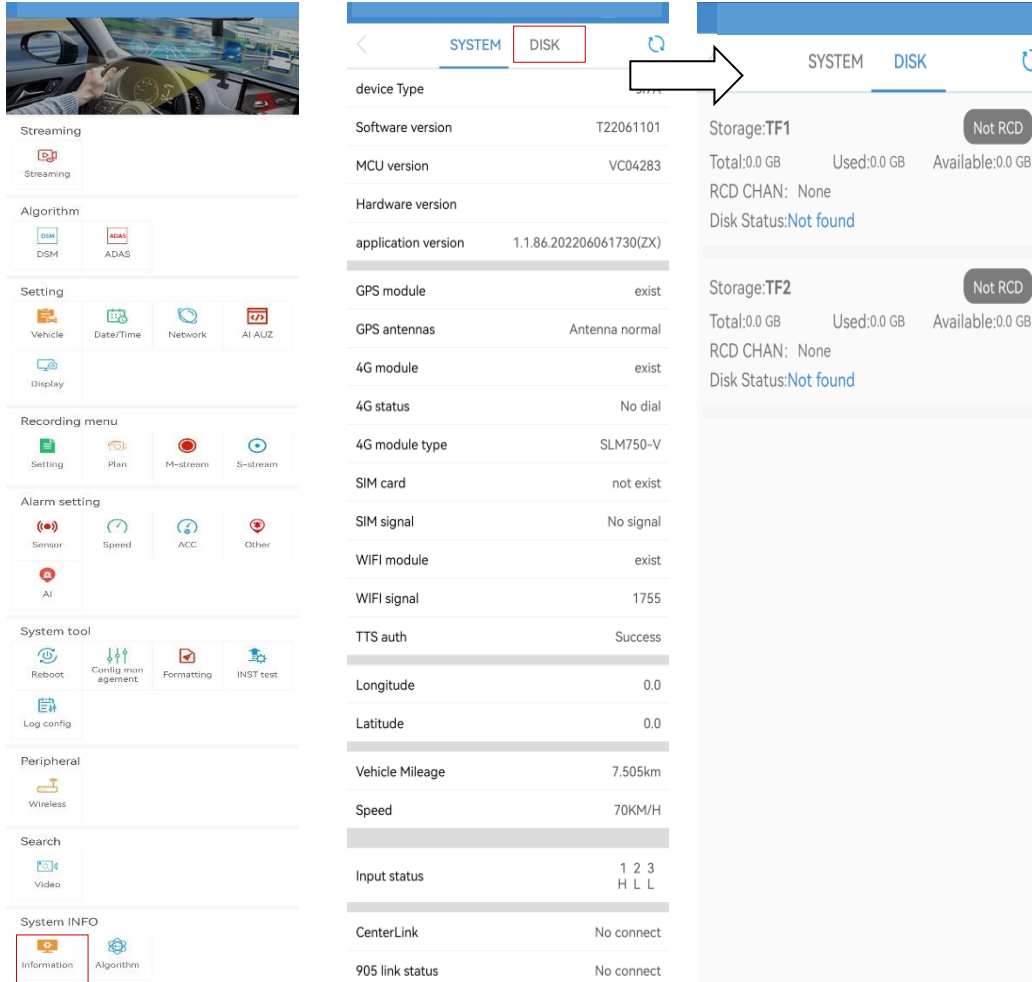


The screenshot illustrates the video search workflow in the iCalibration APP. It is divided into three main sections:

- Left Panel (Main Menu):** A grid of settings and system options. The 'Search' option at the bottom is highlighted with a red box, indicating the starting point for video search.
- Middle Panel (Footage search):** A search configuration screen. It includes a calendar view where the date 2021/03/11 is selected. Below the calendar, users can specify the Start Time (00:00:00), End Time (23:59:59), Footage path (TF1), Footage type (All), and Channel selection (All).
- Right Panel (Footage search list):** A list of search results. It shows 12 footages with details such as Footage name (e.g., I20210310-180123PAN6FC.avi), Start time, End time, and Channel name. The list is paginated, showing 'Page 1 of 2'.

## 26. System message

Enter the system information interface through the iCalibration APP, you can view the software version, GPS status, 4G status, platform online status, TF card status and other information.

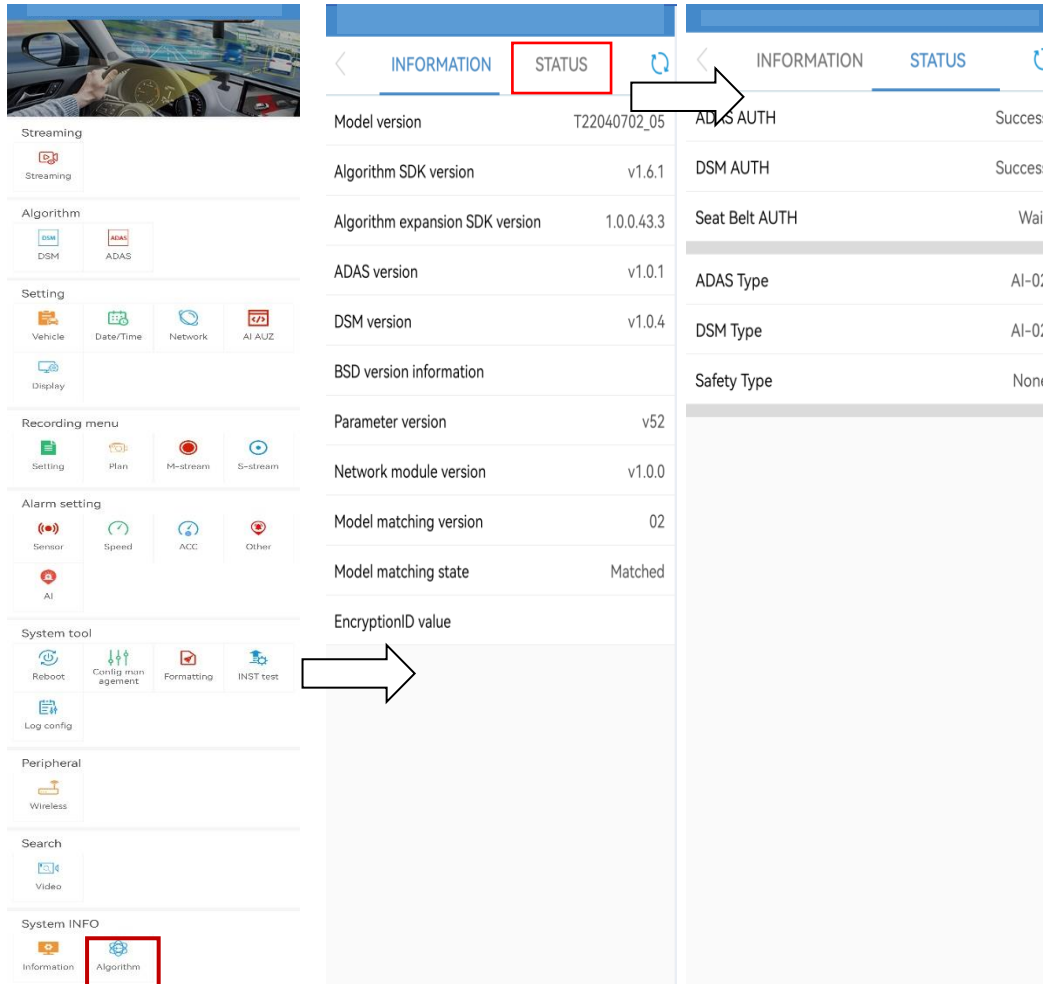


The screenshot shows the iCalibration APP interface. On the left is a navigation menu with categories like Streaming, Algorithm, Setting, Recording menu, Alarm setting, System tool, Peripheral, Search, and System INFO. The 'System INFO' section at the bottom has a red box around the 'Information' icon. On the right, the 'SYSTEM' and 'DISK' tabs are visible. The 'DISK' tab is highlighted with a red box, and an arrow points to it from the 'SYSTEM' tab. Below the tabs, there are two sections: 'Storage:TF1' and 'Storage:TF2'. Both sections show 'Total:0.0 GB', 'Used:0.0 GB', and 'Available:0.0 GB', with 'Disk Status:Not found'.

Category	Value
device Type	...
Software version	T22061101
MCU version	VC04283
Hardware version	...
application version	1.1.86.202206061730(ZX)
GPS module	exist
GPS antennas	Antenna normal
4G module	exist
4G status	No dial
4G module type	SLM750-V
SIM card	not exist
SIM signal	No signal
WIFI module	exist
WIFI signal	1755
TTS auth	Success
Longitude	0.0
Latitude	0.0
Vehicle Mileage	7.505km
Speed	70KM/H
Input status	1 2 3 H L L
CenterLink	No connect
905 link status	No connect

## 27. Algorithm information

Enter the algorithm information interface through iCalibration APP, you can query and view the algorithm software version, algorithm status and other information, which is convenient for maintenance.



The screenshot displays the iCalibration APP interface. On the left is a sidebar menu with categories: Streaming, Algorithm, Setting, Recording menu, Alarm setting, System tool, Peripheral, Search, and System INFO. The 'Algorithm' icon in the 'System INFO' section is highlighted with a red box. An arrow points from this icon to the 'STATUS' tab in the main view. The 'STATUS' tab is also highlighted with a red box. The main view shows a list of algorithm information items:

Model version	T22040702_05	ADAS AUTH	Success
Algorithm SDK version	v1.6.1	DSM AUTH	Success
Algorithm expansion SDK version	1.0.0.43.3	Seat Belt AUTH	Wait
ADAS version	v1.0.1	ADAS Type	AI-02
DSM version	v1.0.4	DSM Type	AI-02
BSD version information		Safety Type	None
Parameter version	v52		
Network module version	v1.0.0		
Model matching version	02		
Model matching state	Matched		
EncryptionID value			

An arrow points from the 'EncryptionID value' row to a greyed-out area below the table.