

# Mobile DVR

## —Instructions—

H.265

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# 1 Precautions

- **Before installation and use, please read the instruction manual carefully so that you can use and protect your machine correctly. The front part of this manual is for precautions and installation and use instructions, please read it first.**
- **Precautions**
  - To protect your rights, please read this manual carefully before installing and using this product.
  - This product is a device used in the car. To prevent the danger of short circuit or electric shock, please do not place the machine in the rain or in a humid environment.
  - In the unlikely event that any solid or liquid enters the case, please immediately disconnect the machine from the power supply and ask a qualified technician to check it before starting it again.
  - This product is a high-tech equipment, and there is almost no original part that can be repaired by the user. In the event of a malfunction, you must ask a qualified technician to check and repair it, or contact the dealer.
- **Installation Environment**
  - This video recorder uses a DC 12~36V power supply, and the local power supply voltage must be confirmed before use;
  - If you do not use the machine for a long time, it is best to completely disconnect the power supply of the video recorder;

- Please choose an appropriate installation position so that air can circulate freely around the machine to prevent the machine from overheating;
- The machine should not be installed near heat sources such as radiators, ventilation ducts, or where there is direct sunlight, excessive dust, or mechanical vibration or shock.

## 2 Product specifications

**MDVR** is a cost-effective, highly scalable device specially developed for video surveillance and remote monitoring of cars and trains. It uses HiSilicon high-speed processor and embedded **Linux** platform development, combined with the most advanced **H.265** video compression/decompression technology in the **IT** field. With SD card as the storage medium, **MDVR** can realize 4-channel 1080P, 720P **CIF**, **HD1** and **D1** format audio and video recording, and car driving information recording functions. **MDVR** products have the characteristics of simple appearance, super anti-vibration, flexible and convenient installation, powerful functions and high reliability.

**MDVR** The product specifications are shown in the table below:

Features:

- Built-in HiSilicon high-performance image processing chip, H.265 encoding, high compression ratio, clear image;
- Support 4 channels AHD million HD/analog SD video and audio input, 1 channel video and audio synchronization output, 1 channel VGA output
- Support 4-channel 1080P high-definition real-time local recording;
- Support 4 channels of high-definition remote video transmission;

#### power supply:

- Professional vehicle power supply design 8-36V DC wide voltage input design;
- Various protection circuits such as undervoltage, short circuit, reverse connection, etc., suitable for various car models;
- Support intelligent power management recognition, automatic shutdown at low power, low power consumption when flameout;

#### data storage:

- Adopt a special file management mechanism to encrypt data to effectively protect data security;
- Proprietary SD card bad track detection technology, which not only guarantees the continuity of recording, but also extends the life of the SD card;
- Built-in super capacitor to avoid data loss and SD card damage due to abnormal power failure;
- Support 256GB large capacity SD card;

#### Interface transmission:

- Support GPS/BD positioning, high sensitivity, fast positioning;
- Built-in 3G/4G module, support LTE/HSUPA/HSDPA/WCDMA/EVDO

| Product Specifications: |                      |                                                                  |
|-------------------------|----------------------|------------------------------------------------------------------|
| project                 | Device parameters    | Performance                                                      |
| system                  | Main processor       | Hi3520DV400                                                      |
|                         | operating system     | Embedded Linux operating system                                  |
|                         | Operating language   | Chinese / English                                                |
|                         | Operation interface  | Graphical menu operation interface, support mouse operation      |
|                         | Password security    | Two-level management of user password and administrator password |
| Audio and video         | Video format         | PAL/NTSC                                                         |
|                         | Compression standard | H.265                                                            |
|                         | Image Resolution     | 1080P/720P /960H/D1/CIF                                          |
|                         | Playback quality     | 1080P/720P /960H/D1/CIF                                          |
|                         | Combination method   | 4ch 1080P/4ch 720P/4ch 960H/2ch 720P+2ch 960H                    |
|                         | Decoding ability     | 4ch 1080P real-time                                              |
|                         | Video quality        | Level 1 to 6 can be equipped                                     |
|                         | Screen display       | Support 1, 4 screen display                                      |
|                         | Audio compression    | G.726                                                            |

|                        |                        |                                                                   |
|------------------------|------------------------|-------------------------------------------------------------------|
|                        | Recording method       | Synchronous recording of sound and video                          |
| Recording and playback | Video mode             | Manual, alarm                                                     |
|                        | Video bitrate          | Full frame 4096Mbps, 6-level image quality optional               |
|                        | Audio bit rate         | 8KB/s                                                             |
|                        | Storage medium         | SD card storage                                                   |
|                        | Video query            | Search by channel and video type                                  |
|                        | Local playback         | Playback by file                                                  |
| software upgrade       | Upgrade mode           | Manual upgrade, automatic upgrade, remote upgrade                 |
|                        | Upgrade method         | USB interface, wireless network                                   |
| interface              | Audio and video input  | 4-way aviation head interface                                     |
|                        | Audio and video output | 1 VGA video output, 1 aviation audio and video output             |
|                        | Alarm input            | 4 level signal inputs, 2 outputs                                  |
|                        | USB interface          | 1 USB 2.0 (support full mouse operation, USB delayed self-test)   |
|                        | Ignition input         | 1 channel ACC signal                                              |
|                        | LED indicator          | PWR/GPS/REC/NET                                                   |
|                        | SD card lock           | 1 piece                                                           |
| extensions             | GPS/BD                 | GPS or Beidou positioning                                         |
|                        | 3G/4G                  | Support CDMA/EVDO/GPRS/WCDMA/FDD LTE/TDD LTE                      |
| other                  | power input            | DC: 8V~36V                                                        |
|                        | Power Output           | 12V/2A                                                            |
|                        | Power consumption      | Standby 3mA<br>Maximum power consumption 18W @12V 1.5A @24V 0.75A |
|                        | Operating temperature  | -20 --- 70℃                                                       |
|                        | storage                | 720P 1G/hour/channel<br>960H 750M/hour/channel                    |
|                        | size                   | 147mm*124mm*41mm                                                  |

Table 1: MDVR product specification list

**The basic electrical parameters of MDVR are as follows:**

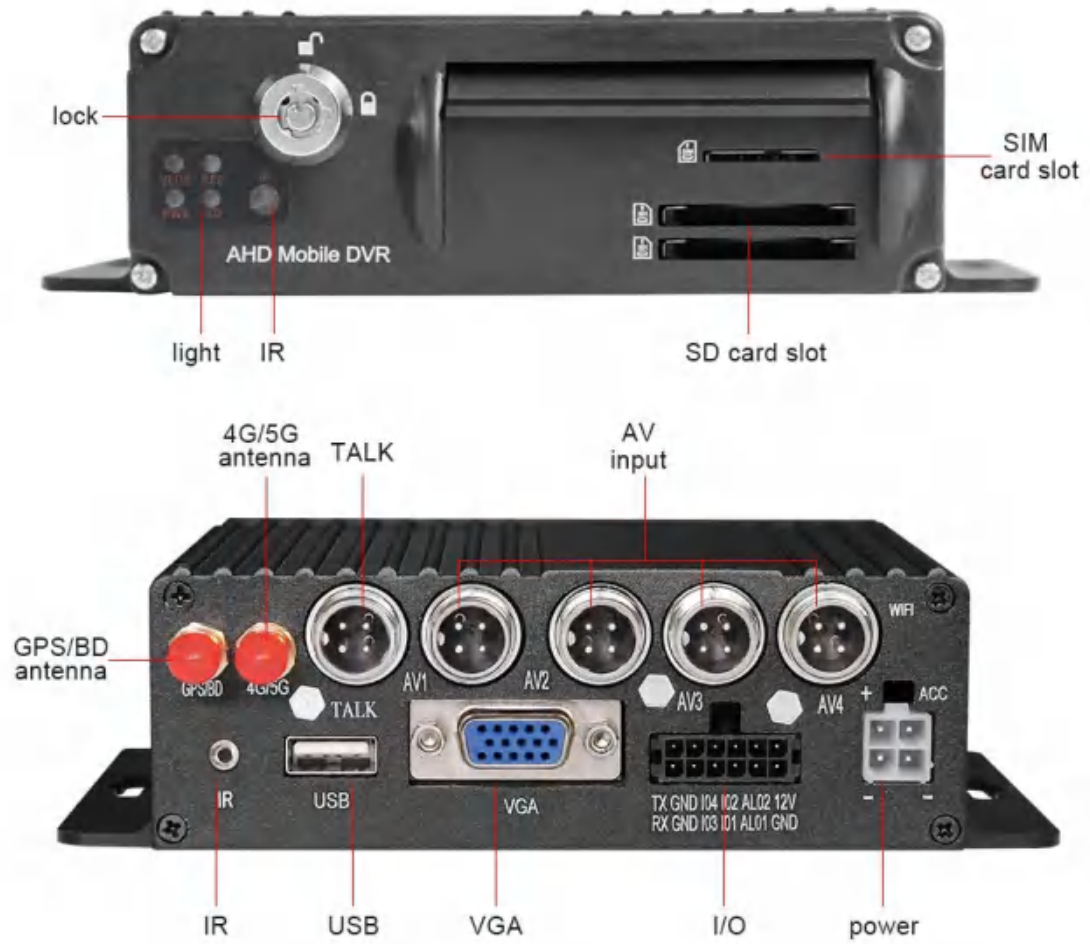
| project     | parameters | Description                                                                                                                                                                                |
|-------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| power input | 8—36V      | The input voltage is +8V~+36V, if the voltage is lower than 8V for a long time, or higher than 36V for a long time, the device will automatically shut down and enter the protection mode. |

|                       |          |                                                                                                                |
|-----------------------|----------|----------------------------------------------------------------------------------------------------------------|
| Power Output          | 12V      | The output voltage is 12V (+/-0.2V), and the maximum current is 2A.                                            |
| Video input impedance | 75Ω      | Each video input impedance is 75Ω.                                                                             |
| Video output voltage  | 2Vp-p    | Output a 2Vp-p CVBS analog signal, and the input impedance of the display device needs to be matched with 75Ω. |
| I/O interface         | 0—4V     | It is low level alarm.                                                                                         |
|                       | >4V      | It is high level alarm.                                                                                        |
| Operating temperature | -40℃-80℃ | Refers to the ambient temperature under well-ventilated conditions.                                            |

Table 2: MDVR basic electrical parameters

## 3 Product parameter

### 1. Baffle picture



## 4 Accessories description

### 4.1 Remote control instructions



Figure 1 Remote control

There are no direct control buttons on the MDVR product panel, you need to use the remote control or mouse to cooperate with the operation.

1. Info: Check GPS, 3G/4G Internet status

2. Menu: Main menu key

3. number key:

Press the number keys 1, 2, 3, 4, 5, 6, 7, 8 to switch to the single screen CH1, CH2, CH3, CH4, CH5, CH6, CH7, CH8 respectively

4. Settings menu navigation:

▲, ▼: Up and down cursor direction movement keys;

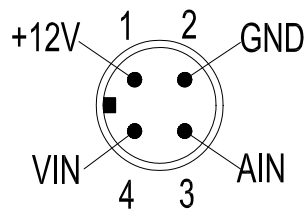
◀, ▶: Left and right cursor direction movement keys;

【OK】: In the setting state, it means to select and save;

5.PTZ: PTZ control keys

6.ESC: Exit key

## 4.2 Interface definition



1、12V: Power the camera and pickup, 2、GND: VIN video, AIN audio common negative wire; 3、AIN: Pickup; 4、VIN: Connect camera video

The rear panel interface definition is as follows:

| interface                        | Name                                | Description                                                                                                                                         |
|----------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Power input interface            | DC8-36V                             | Power input interface (common red wire connects to positive power, black wire to negative power, yellow wire to ignition wire)                      |
| Audio and video input port       | <b>CAM1-4</b><br>( <b>AV1-AV4</b> ) | Audio and video input interface (1 pin +12V, 2 pin GND, 3 pin connected to audio, 4 pin connected to video, power, video, audio share the GND line) |
| Audio and video output interface | AVOUT                               | Aviation audio and video output                                                                                                                     |
| IO/ALARM interface               | RX                                  | /                                                                                                                                                   |
|                                  | TX                                  | /                                                                                                                                                   |
|                                  | GND                                 | common negative wire                                                                                                                                |
|                                  | IO1-IO4                             | Level signal input                                                                                                                                  |
|                                  | ALO1                                | Alarm 1 output                                                                                                                                      |
|                                  | ALO2                                | Alarm 2 output                                                                                                                                      |
|                                  | 12V                                 | 12V output                                                                                                                                          |

### 4.3 Power cord definition



1. Power supply positive (red wire) 2. Power supply negative (black wire) 3. ACC (ignition control wire) (yellow wire)

The power cord is shown in the figure, one end is a 4PIN white plug, which is connected to the 4PIN white connector on the rear panel of the device. The red and black wires are directly connected to the car battery. Connect the red wire to the positive pole and the black wire to the negative pole. The yellow wire is connected to the ignition wire, and the host device will automatically turn on when the car is turned on, and turn off automatically after turning off the car key. The yellow wire is connected to the gear position when the car key turns on all the dashboard lights (the gear position before the car starts the motor).

#### **Note:**

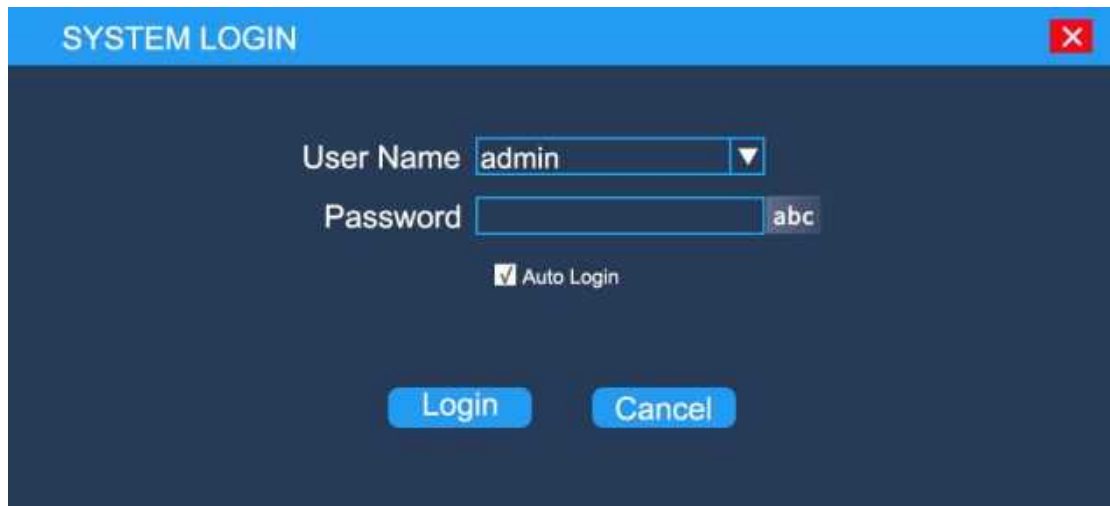
- 1) Before connecting, you need to confirm that the battery voltage is between 8V-36V, otherwise the equipment will be burned out if it exceeds it;**
- 2) After connecting the wires, pay attention to the insulation between the power wires to prevent the power wires from short-circuiting and burning the battery.**
- 3) The yellow wire must be connected to the ignition wire, otherwise the device will not support delayed shutdown and the final video recording will be lost.**
- 4) Note: The on-board machine must be installed with the**

positive and negative poles directly from the battery. Grounding cannot be used as the ground wire. The grounding will produce negative pulses and interfere with the normal operation of the host. The diameter of the power cord used for the positive and negative poles must be  $\Phi 1.5\text{mm}$  or more.



## 5 User login

After the power cord is connected, press the <Menu> button on the remote control to directly enter the login interface (the device is not factory-set with a password):



SYSTEM LOGIN

User Name

Password

☒ Auto Login

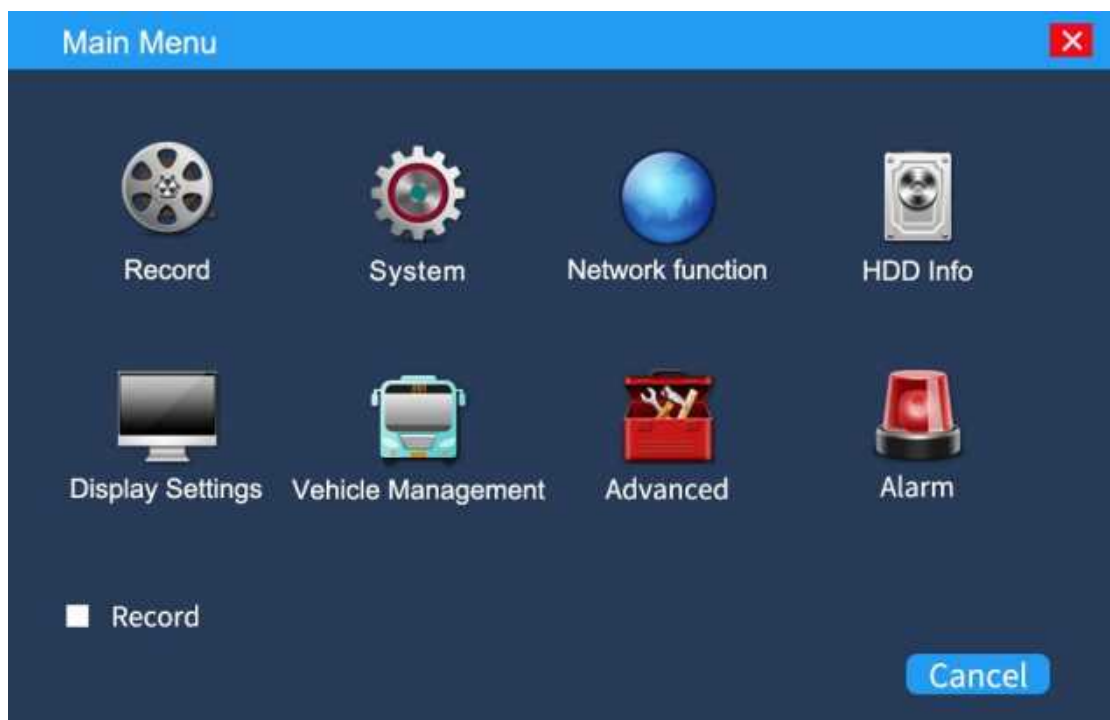
Login Cancel

The system has no password set by default, press <Menu> to enter the main menu directly

User: admin Password: empty

Remember the password: (you don't need to re-enter the password next time)

## 6 Main menu



Main Menu

Record System Network function HDD Info

Display Settings Vehicle Management Advanced Alarm

☒ Record

Cancel

The corresponding functions of each menu item are defined as follows:

〈Record〉 : recording settings, encoding settings, etc.;

〈System〉 : modify the system language, video format, GPS time, time zone, time and date;

〈Network function〉 : 4G, Wifi, network settings, DAS, network status;

〈HDD Info〉: Set overwrite/stop when the storage is full, format the disk partition and view the recording time, etc.;

〈Display Settings〉: Set the name, mirror, flip, and scale of the vehicle information custom channel. Output resolution, color adjustment;

〈Vehicle management〉: vehicle information, CMS settings, department standard platform, switch machine settings, connection status, on-board peripherals;

〈Advanced〉: user management, restore default, import/export, system upgrade, serial port settings, device information, log information, version information;

〈Alarm〉: video loss, alarm input, speed alarm, G-Sensor, abnormal handling, alarm status;

## 6.1 Record



The corresponding functions of each menu item are defined as follows:

〈Video settings〉: video packaging time, video mode, etc.;

〈Encoding Settings〉: Set the video resolution, encoding method, etc.;

〈Video playback〉: video playback, etc.;

〈Video backup〉: backup of video files, etc.;

〈Picture Storage〉: Set fixed screenshots, etc.;

### 6.1.1 Record conf.



The image shows a software window titled "Record > Record Conf." with a red close button in the top right corner. The window contains the following settings:

- SD Card Record**: ☒
- Channel**: 1 (dropdown menu)
- Redundancy**: ☐
- Length**: 60 min
- PreRec**: 5 Sec.
- Mode**: ☒ Schedule ☐ Manual ☐ Stop
- Week**: All (dropdown menu)
- Regular Detect Alarm**: Three columns of checkboxes.

|          | Regular                             | Detect                              | Alarm                               |
|----------|-------------------------------------|-------------------------------------|-------------------------------------|
| Period 1 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Period 2 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Period 3 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Period 4 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

At the bottom of the window are three buttons: "Advanced", "OK", and "Cancel".

〈SD card record〉 : Only select SD card to record. (After selecting, the SD card will be formatted automatically after booting)

〈Channel〉 : After selecting the channel name, set the corresponding parameters of the channel;

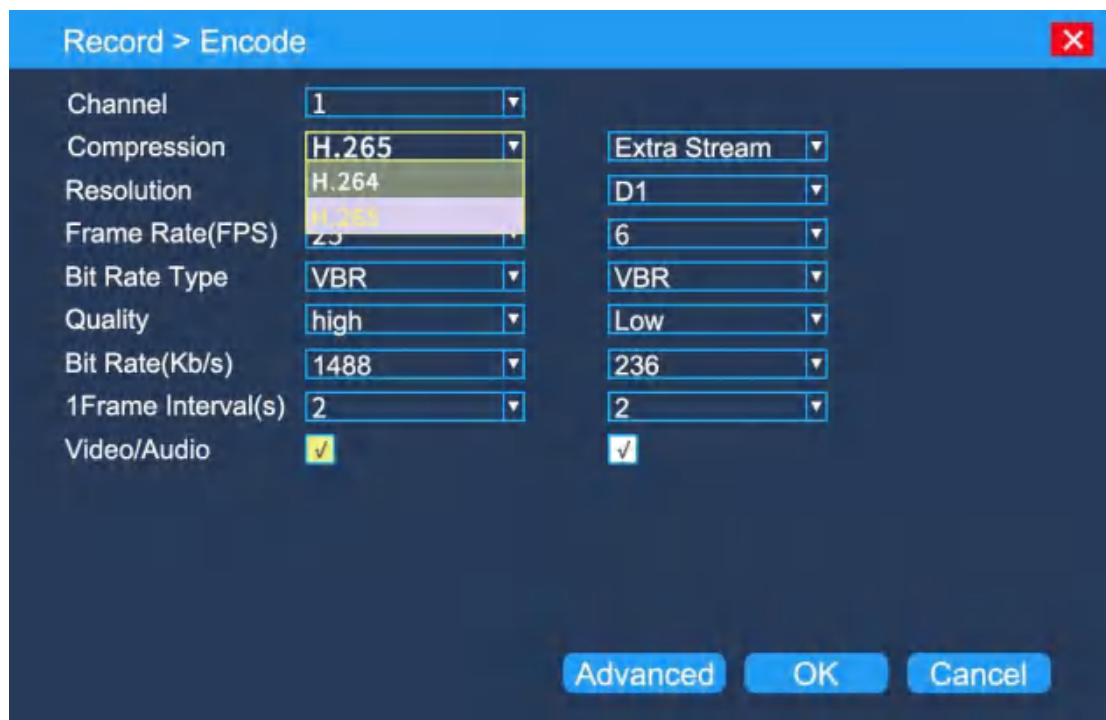
〈Redundancy〉 : Double SD cards can record at the same time after selecting;

〈Length〉 : recording packaging time, 30 minutes by default;

〈mode〉 : Configuration refers to automatic recording at power-on. Manual: refers to manually turning on recording. Off: turning off recording

〈Time Period〉 : Represents 24-hour video recording;

## 6.1.2 Encode



〈Channel〉 : select the channel to be set;

〈compression〉 : H.265X and H.265 two modes, H.265X is optimized on H.264 encoding,

〈Resolution〉 : video resolution setting, support 1080P\960P\720P\D1\CIF;

〈Frame rate〉 : The maximum frame rate is 18 frames at 1080P resolution;

〈Bit rate FPS〉 : The default is dynamic code stream, according to the image change, the code stream changes with it;

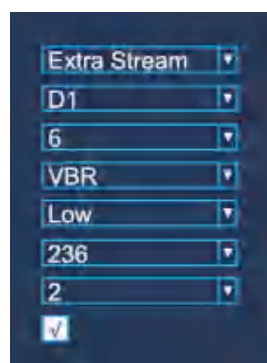
〈Quality〉 : Divided into best, very good, good, and fair;

〈Bit rate Kb/s〉 : dynamic and cannot be set;

〈I frame interval〉 : No need to set;

〈Video/Audio〉 : turn on or off video and audio;

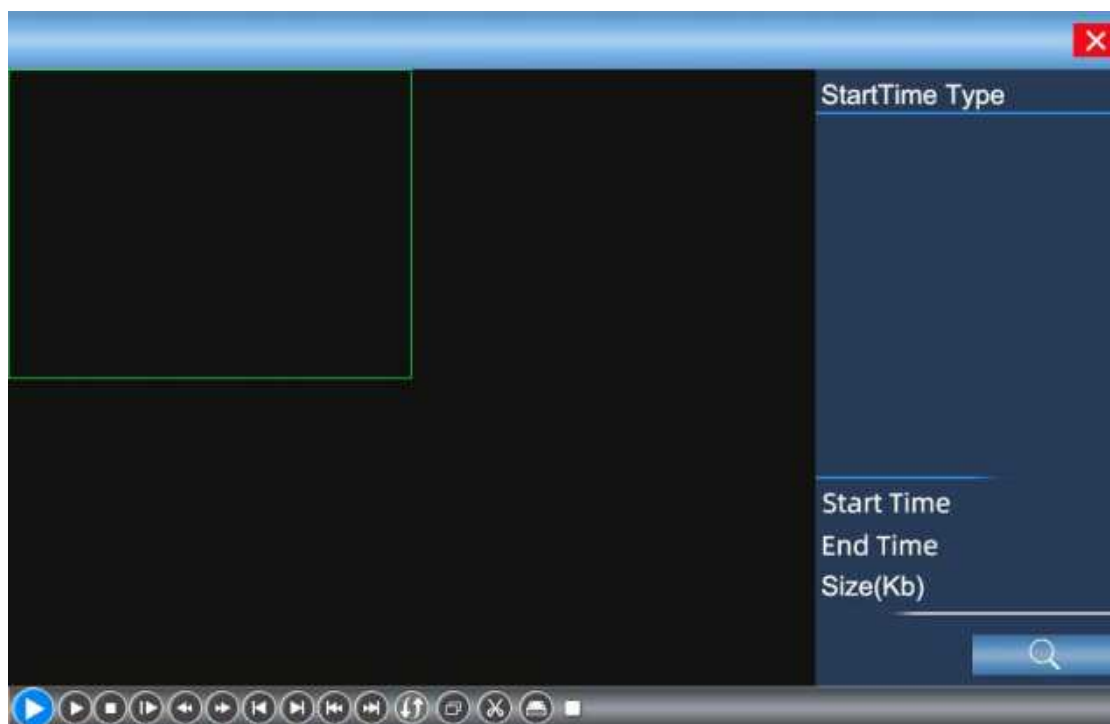
### Small stream settings



The small stream configuration is the stream definition setting for remote video monitoring;

〈Resolution〉 : You can choose CIF\D1, the default is D1;  
 〈Frame rate〉 : The maximum frame rate is 16 frames at D1 resolution;  
 〈Code stream control〉 : The default is dynamic code stream, according to the image change, the code stream changes with it;  
 〈Image quality〉 : Divided into best, very good, good, and fair;  
 〈code stream value〉 : dynamic and cannot be set;  
 〈I frame interval〉 : No need to set;  
 〈Video/Audio〉 : turn on or off video and audio;

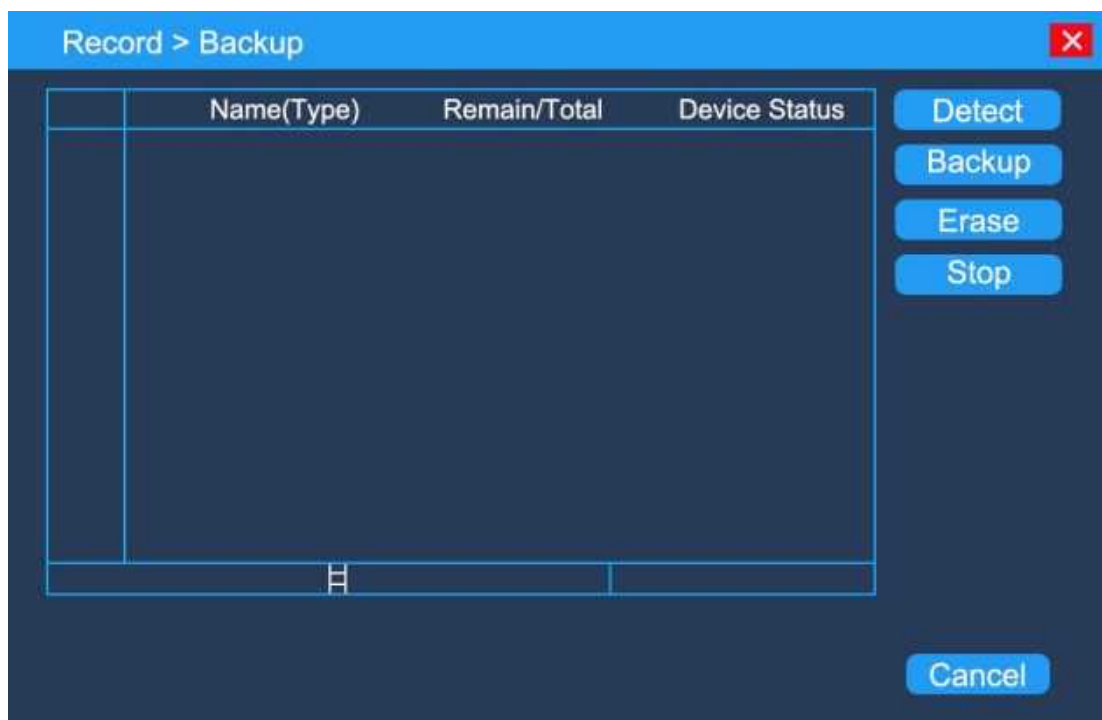
### 6.1.3 Playback



|                                                                                     |                     |                                                                                     |         |
|-------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------|---------|
|  | Play button         |  |         |
|  |                     |  |         |
|  | stop button         |  | Refresh |
|  |                     |  |         |
|  | Rewind button       |  | Edit    |
|  | Fast forward button |  | Backup  |

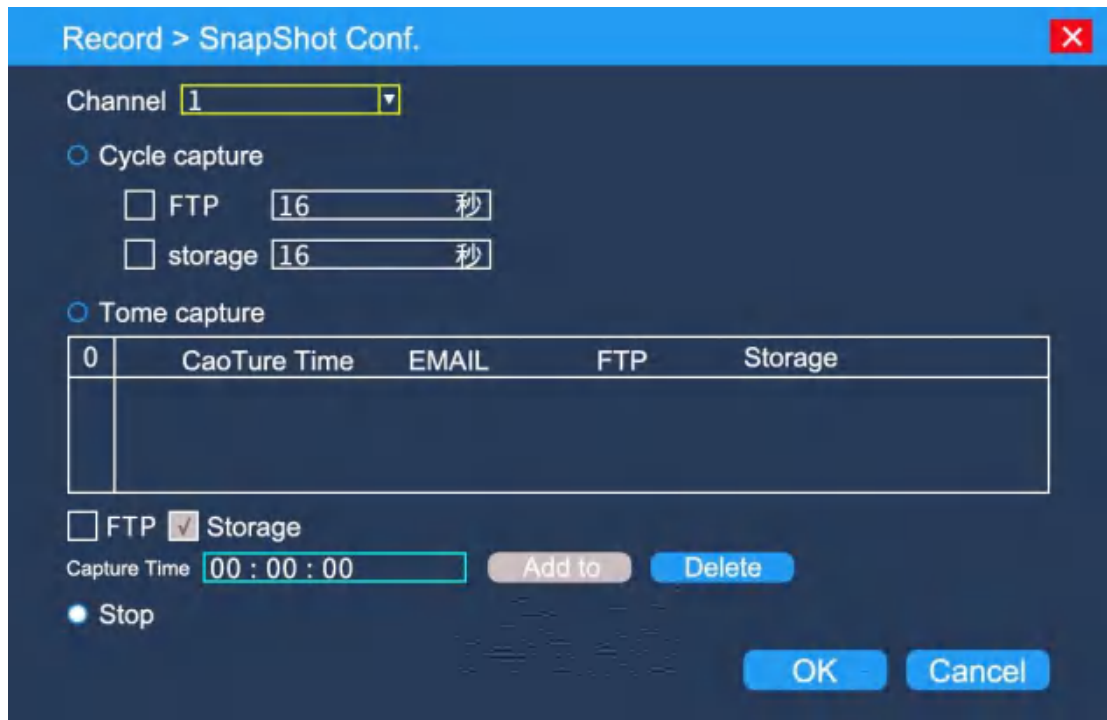
|                                                                                   |               |                                                                                   |                        |
|-----------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|------------------------|
|  | Previous file |  | Search for video files |
|  | Next file     |                                                                                   |                        |

#### 6.1.4 Backup



- 〈Detection〉 : Detect whether the USB memory device exists;
- 〈Backup〉 : select the backup after selecting the memory device;
- 〈Erase〉 : Some functions are not enabled;
- 〈Stop〉 : Stop backup;

### 6.1.5 Snapshot conf.



The dialog box is titled "Record > SnapShot Conf." and has a red close button in the top right corner. It contains the following elements:

- Channel:** A dropdown menu with "1" selected.
- Cycle capture:** A radio button that is currently selected. It includes two sub-options:
  - ☐ FTP: 16 秒
  - ☐ storage: 16 秒
- Tome capture:** A radio button that is currently unselected. It includes a table with the following structure:

| 0 | CaoTure Time | EMAIL | FTP | Storage |
|---|--------------|-------|-----|---------|
|   |              |       |     |         |
- FTP/Storage checkboxes:** ☐ FTP and ☒ Storage.
- Capture Time:** A text field showing "00 : 00 : 00".
- Buttons:** "Add to" (disabled), "Delete" (active), "Stop" (with a blue dot icon), "OK", and "Cancel".

〈Channel〉 : 1, 2, 3, 4, all channels are optional;

〈Period Snapshot〉 : Set periodic snapshot;

〈Timed Snapshot〉 : Set timed snapshot;

## 6.2 System

Main Menu > System

Language: ENGLISH

Video Standard: PAL

GPS Timing: ☒

Time Zone: [UTC+08:00] Beijing, Urumqi, Taipei

System Time: 2021-09-04 10:10:28

Date Format: YYYY MM DD

Date Separator: -

Time Format: 24-HOUR

DST: ☐

Default OK Cancel

〈 Language 〉 : Modify the system language Simplified Chinese/English/Traditional Chinese;

〈 Video Standard 〉 : modify the system video format PAL/NTSC format;

〈 GPS Timing 〉 : Calibrate the system time according to GPS or Beidou positioning;

〈 Time zone 〉 : China chooses UTC+8:00 Beijing;

〈 System Time 〉 : modify the corresponding date and time;

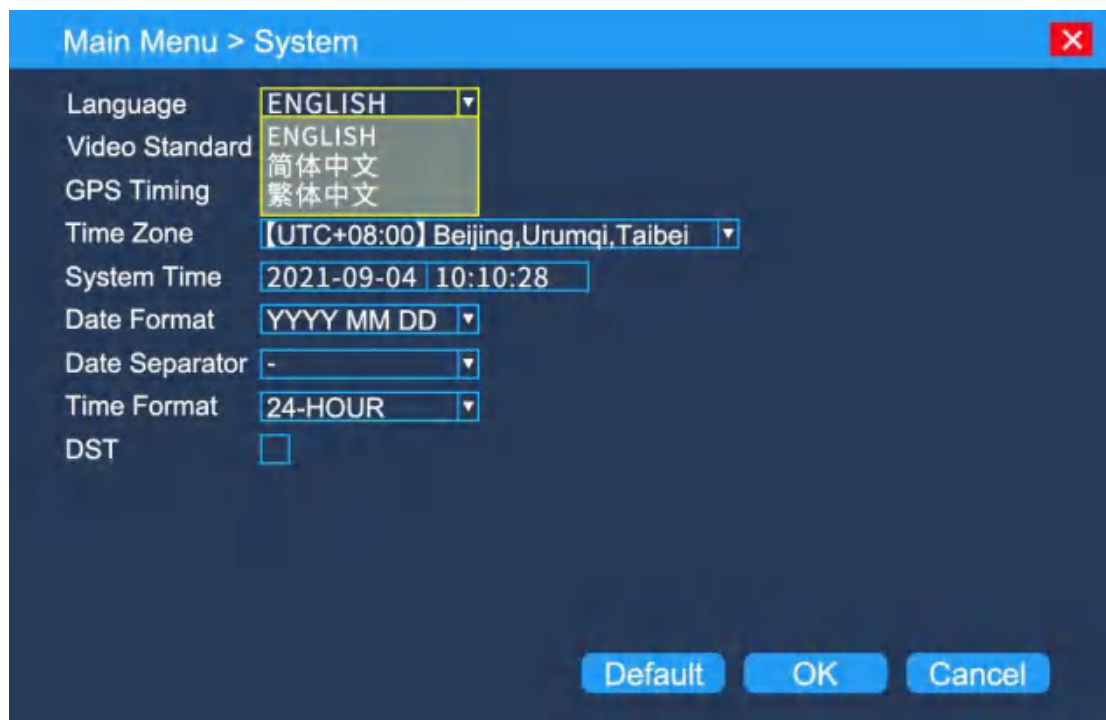
〈 Date Format 〉 : There are multiple formats to choose from;

〈 Date separator 〉 : -;

〈 Time format 〉 : divided into 24-hour system and 12-hour system;

〈 DST 〉

## 6.2.1 language settings



〈Language selection〉 : Modify the system language Simplified Chinese/English/Traditional Chinese;

## 6.3 Network function



〈4G network〉 : Operator APN settings, domestic operators automatically identify and match;

〈Wifi〉 : WIFI connection setting;

〈Network〉 : Set wired network card, IP address, default gateway, preferred DNS, network transmission strategy, network encryption, etc.;

〈DAS〉 : Autonomous platform, which has not been activated yet;

〈Network Status〉 : support the 1078 protocol platform, the department standard platform parameter configuration;

### 6.3.1 4G Network

Network function > 4G Network

Enable ☒

Type 4G

Access Point

Dial Number

User Name ctnet@mycdm

Password .....

IP Address 0.0.0.0

OK Cancel

〈Enable〉 : Check it to enable this function;

〈Type〉 : Operator type;

〈Access point〉 : overseas operators need to fill in the corresponding APN;

〈Dial number〉 : Overseas operators need to fill in the corresponding dial number;

〈User name〉 : overseas operators need to fill in the corresponding username;

〈Password〉 : overseas operators need to fill in the corresponding password;

〈IP address〉 : the IP address obtained after dialing is successful;

### 6.3.1 WiFi

Main Menu > WiFi

| SSID | Authentication | Signal |
|------|----------------|--------|
|------|----------------|--------|

Search

Enable ☐ Get IP address automatically ☐

SSID

password

IP address

Subnet mask

Default gateway

OK Cancel

〈Search〉 : Search for available WiFi;

〈Enable〉 : Check it to enable this function;

〈Automatically obtain IP address〉 : Check this option to enable this function;

〈SSID〉 : select the name of the wireless LAN;

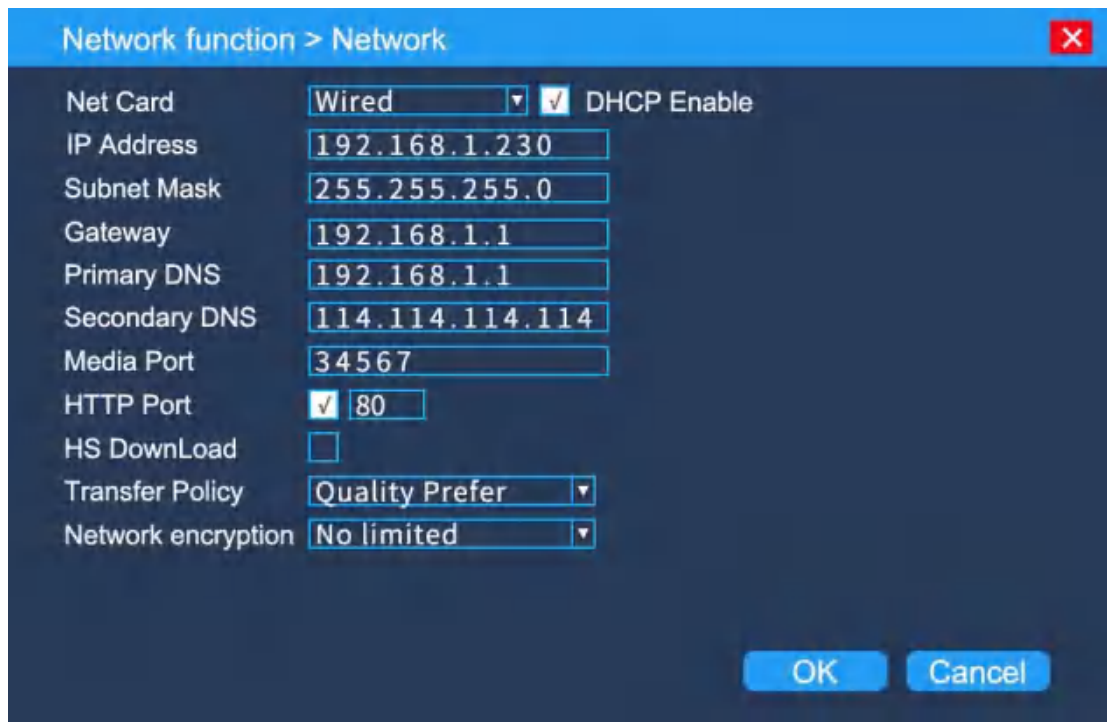
〈Password〉 : Enter the WiFi password;

〈IP address〉 : IP address;

〈Subnet Mask〉 : Subnet mask;

〈Default gateway〉 : Default gateway;

### 6.3.3 Network



The screenshot shows a window titled "Network function > Network" with a red close button in the top right corner. The window contains the following settings:

| Setting            | Value                                                            |
|--------------------|------------------------------------------------------------------|
| Net Card           | Wired (dropdown) <input checked="" type="checkbox"/> DHCP Enable |
| IP Address         | 192.168.1.230                                                    |
| Subnet Mask        | 255.255.255.0                                                    |
| Gateway            | 192.168.1.1                                                      |
| Primary DNS        | 192.168.1.1                                                      |
| Secondary DNS      | 114.114.114.114                                                  |
| Media Port         | 34567                                                            |
| HTTP Port          | <input checked="" type="checkbox"/> 80                           |
| HS DownLoad        | <input type="checkbox"/>                                         |
| Transfer Policy    | Quality Prefer (dropdown)                                        |
| Network encryption | No limited (dropdown)                                            |

At the bottom right, there are "OK" and "Cancel" buttons.

**This function only works on devices with network ports;**

- 〈Net Card〉 : Wired network card;
- 〈IP address〉 : The default IP address of the system is 192.168.1.10 (can be modified by yourself)
- 〈Subnet Mask〉 : The system defaults to 192.168.1.1
- 〈Gateway〉 : The system default is 255.255.255.0
- 〈Preferred DNS〉 : Set according to the actual situation of the user;
- 〈Alternate DNS〉 : Set according to the actual situation of the user;
- 〈Media port〉 : Default 34567, no need to modify;
- 〈HTTP port〉 : 80; no need to modify;
- 〈HS download〉
- 〈Transmission Strategy〉 : Picture quality is prioritized;
- 〈Network encryption〉 : No restriction by default;

6.3.4 DAS

Network function > DAS

Enable

☐

Serial number

123456

Server IP

10.2.1.58

Server Port

9400

User Name

admin

Password

OK

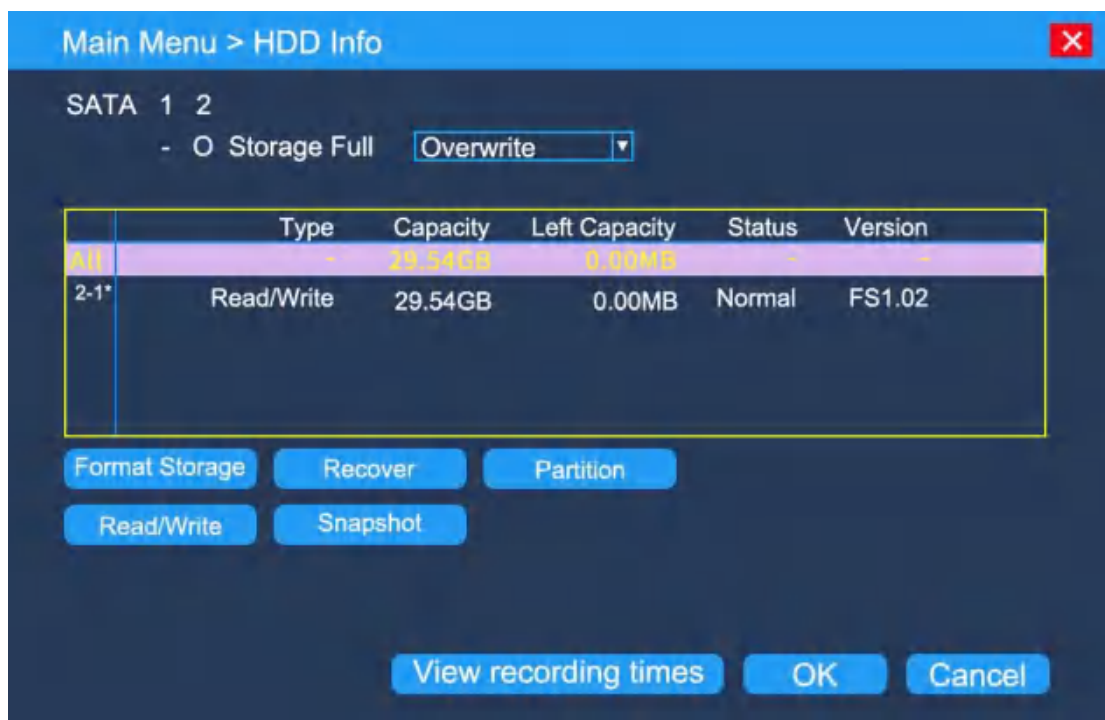
Cancel

6.3.5 Network status

| Network function > Network Status |                  |                   |               |
|-----------------------------------|------------------|-------------------|---------------|
| 4G, 5G Network                    | Enabled          | WIFI              | Enabled       |
| Module status                     | Exist            | Module status     | Exist         |
| SIM status                        | Exist            | Network status    | Connected     |
| Signal strength                   | Strong           | Signal strength   | Strong        |
| Network Status                    | Connected        | SSID              | gision        |
| Module IMEI                       | 5653266465466464 | Sender IP address | 192.168.1.188 |
| SIM                               | 18644473625      |                   |               |

〈4G/5G network〉 : enable/disable  
 〈WiFi network〉 : turn off/enable  
 〈Module status〉 : Exist/not exist;  
 〈Module status〉 : Exist/not exist;  
 〈SIM card status〉 : Exist/nonexistent;  
 〈Network Status〉 : Networked/not networked;  
 〈Signal strength〉 : strong/weak;  
 〈Signal Strength〉 : strong/weak;  
 〈Network Status〉 : Networked/not networked;  
 〈SSID〉 : gision;  
 〈Module IMEI〉 : 5653266465466464;  
 〈IP address〉 : 192.168.1.188;  
 〈SIM card〉 : CCID;

## 6.4 HDD Info



〈When the storage is full〉 : Overwrite when the memory is full, the oldest video file will be automatically overwritten;

〈Format Disk〉 : Select the corresponding disk to format;

〈Recover errors〉 : Some errors of the disk can be repaired;

〈Partition〉 : This function is not enabled;

〈Set as read-write disk〉 : This function is not enabled;

〈Set as Snapshot Disk〉 : This function is not enabled;

〈View storage recording time〉 : It can calculate the recording time of the disk;

**When a new SD card or hard disk is installed on the device, it will prompt to format the storage device the first time the machine is turned on, and the format can be used for normal recording.**

## 6.5 Display settings



〈License plate OSD〉 : superimpose the license plate number or basic information on the screen;

〈GPS OSD〉 : superimpose GPS on the screen;

〈Channel〉 : Customize channel name, mirror image, flip, and scale;

〈Position setting〉 : You can customize the placement of the channel name and license plate number through the mouse;

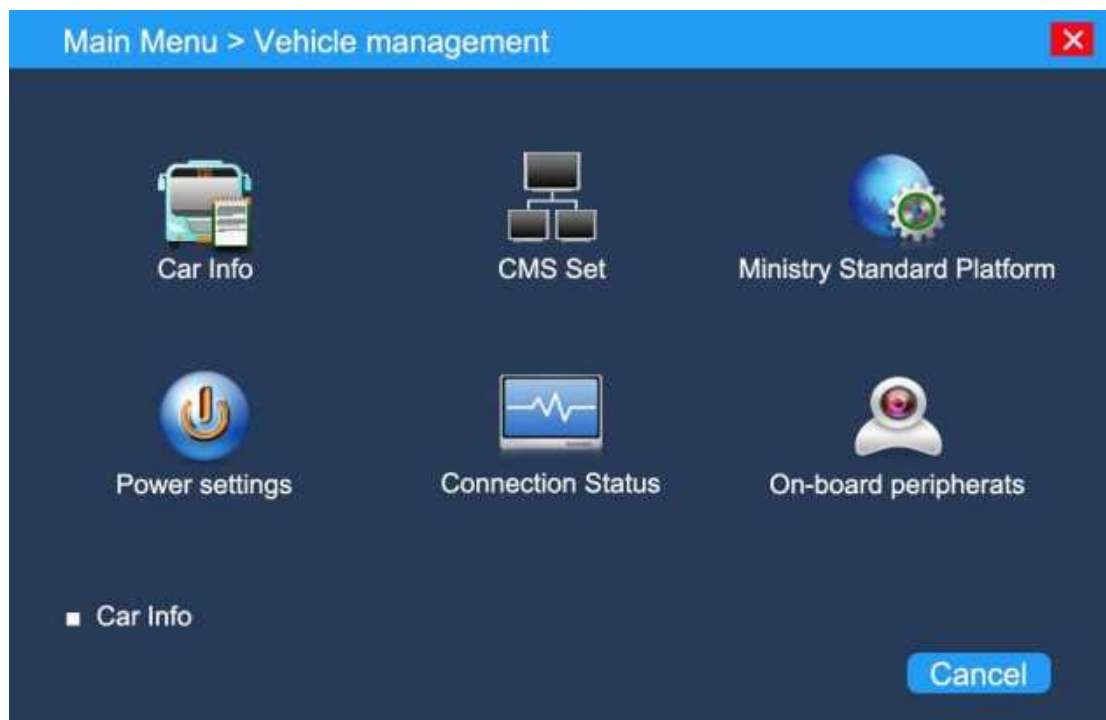
〈Transparency〉 : Adjust the transparency of the menu background color;

〈Output adjust〉 : You can set the color adjustment of the display output;

〈Resolution〉 : the resolution of VGA output;

〈Startup Preview〉 : You can set the number of startup preview channels;

## 6.6 Vehicle management



The corresponding functions of each menu item are defined as follows:

〈Vehicle Info〉 : Set the license plate number, company name, driver name, fleet name, and route number;

〈CMS Set〉 : You can view the basic information of the vehicle through the client CMSV6;

〈Ministry Standard Platform〉 : IP address, port, terminal port, SIMID, license plate number, provincial ID, manufacturer ID, vehicle classification and color;

〈Power settings〉 : Ignition switch, power-on delay, power-off delay, timing switch, set time period to turn on or off;

〈Connection Status〉 :

〈On-board peripherals〉 :

## 6.6.1 Vehicle info

Main Menu > Vehicle management

Vehicle management > Car Info

Number  abc

Company Name

Driver name

Fleet name

Route number

OK Cancel

Car Info

Cancel

Set the license plate number, company name, driver name, fleet name, and route number;

## 6.6.2 CMS settings

Main Menu > Vehicle management

Vehicle management > CMS Set

Server IP  abc

Port

Device ID

Login

Car Info

Cancel

〈Server IP〉 : Enter the server address;  
 〈Port〉 : port name;  
 〈Device ID〉 : Enter the equipment number;

### 6.6.3 Ministry standard platform

Vehicle management > Ministry Standard Platform

|                                                            |                                                                 |
|------------------------------------------------------------|-----------------------------------------------------------------|
| Enable <input checked="" type="checkbox"/>                 | Enable <input checked="" type="checkbox"/>                      |
| Main server IP <input type="text" value="113.96.131.200"/> | Secondary server IP <input type="text" value="113.96.131.200"/> |
| Main port <input type="text" value="7001"/>                | Secondary port <input type="text" value="6608"/>                |
| Terminal ID <input type="text" value="135888400001"/>      |                                                                 |
| Cellphone number <input type="text" value="13588400001"/>  |                                                                 |
| License plate number <input type="text"/>                  |                                                                 |
| Provincial ID <input type="text"/>                         |                                                                 |
| City ID <input type="text"/>                               |                                                                 |
| Manufactory ID <input type="text"/>                        |                                                                 |
| Terminal model <input type="text"/>                        |                                                                 |
| Vehicle classification <input type="text"/>                |                                                                 |
| Vehicle color <input type="text"/>                         |                                                                 |

OK Cancel

〈Ministry Standard Platform〉 : Designed in accordance with the 1078 agreement of the Ministry of Transport, it can connect to all platforms that support the Ministry's standard;  
 〈Enable〉 : enable the rear standard platform to be used normally;  
 〈IP address〉 : Provided by the Ministry of Standards Platform;  
 〈Port〉 : Provided by the Ministry of Standards Platform;  
 〈Terminal ID〉 : Provided by the Ministry of Standards platform provider;  
 〈SIM ID〉 : flow card number;  
 〈License plate number〉 : vehicle license plate number;  
 〈Province ID〉 : the corresponding province ID;  
 〈City ID〉 : the corresponding city ID;  
 〈Manufacturer ID〉 : Manufacturer ID;  
 〈terminal model〉 : equipment model;  
 〈Vehicle classification〉 : truck or passenger car;  
 〈Vehicle color〉 : vehicle color;

## 6.6.4 Power settings

Vehicle management > Power settings

Boot Type

☒ Switch with ignition

Boot delay  min

Shut delay  min

☐ Switch in specified ignition

☒ Period 1

Period 2

OK Cancel

〈Ignition switch〉 : Ignition mode; the positive pole must be connected to a long battery, and the ACC line of the device is connected to the ACC line of the car;

〈Start-up delay〉 : Delay the start-up time after the ACC is powered on;

〈Shutdown Delay〉 : Delayed shutdown time after ACC is turned off;

〈Timer switch〉 : Timing mode; the positive pole must be connected to a long-term battery, and the ACC line of the device is connected to the ACC line of the car;

〈Time period 1〉 : After the ACC signal is disconnected, it enters the scheduled shutdown mode, and it is turned on or off at the set time;

〈Time Period 2〉 : 2 time periods can be set. After the ACC signal is disconnected, it will enter the scheduled shutdown mode, and turn on or off at the set time;

## 6.6.5 Connection status

| Vehicle management > Connection Status |                |                             |                |
|----------------------------------------|----------------|-----------------------------|----------------|
| CMS Module                             |                | GPSBD                       | Enable         |
| Connection Status                      | Connected      | Module status               | Exist          |
| Sender IP address                      | 113.96.131.200 | Positioning status          | Located        |
| Port                                   | 6608           | Number of satellites        | 16             |
| Device                                 | 74222          | Longitude                   | 113.828481E    |
|                                        |                | Latitude                    | 22.607216N     |
| Main standard platform                 | Enable         | Auxiliary standard platform | Enable         |
| Server IP                              | 113.96.131.200 | Slave server                | 113.96.131.200 |
| Port                                   | 7001           | Port                        | 6608           |
| Cellphone number                       | 135888400001   | Connection status           | Connected      |
| Connection status                      | Connected      |                             |                |

〈CMS Module〉

〈GPS BD〉 : enable/disable;

〈connection status〉 : not connected/connected;

〈Module status〉 : Exist/not exist;

〈IP address〉 : 113.96.131.200;

〈Positioning status〉 : Positioned/not positioned;

〈Port〉 : 6608;

〈Number of satellites〉 : 16;

〈Equipment Number〉 : 74222;

〈Longitude〉 : 113.828481E;

〈Latitude〉 : 22.607216N;

〈Main part of the standard platform〉 : enable/disable;

〈Auxiliary Standard Platform〉 : enable/disable;

〈Server Address〉 : 113.96.131.200

〈Auxiliary Server Address〉 : 113.96.131.200

〈Port〉 : 7001

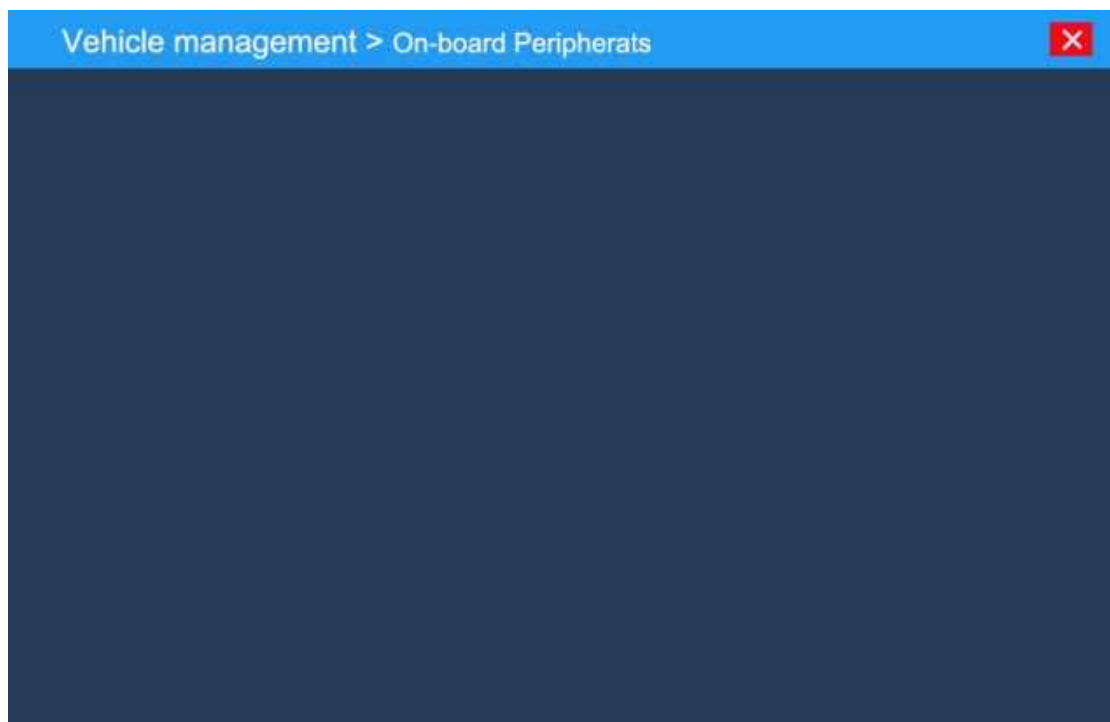
〈Port〉 : 6008

〈Mobile phone number〉 : 135888400001

〈connection status〉 : connected;

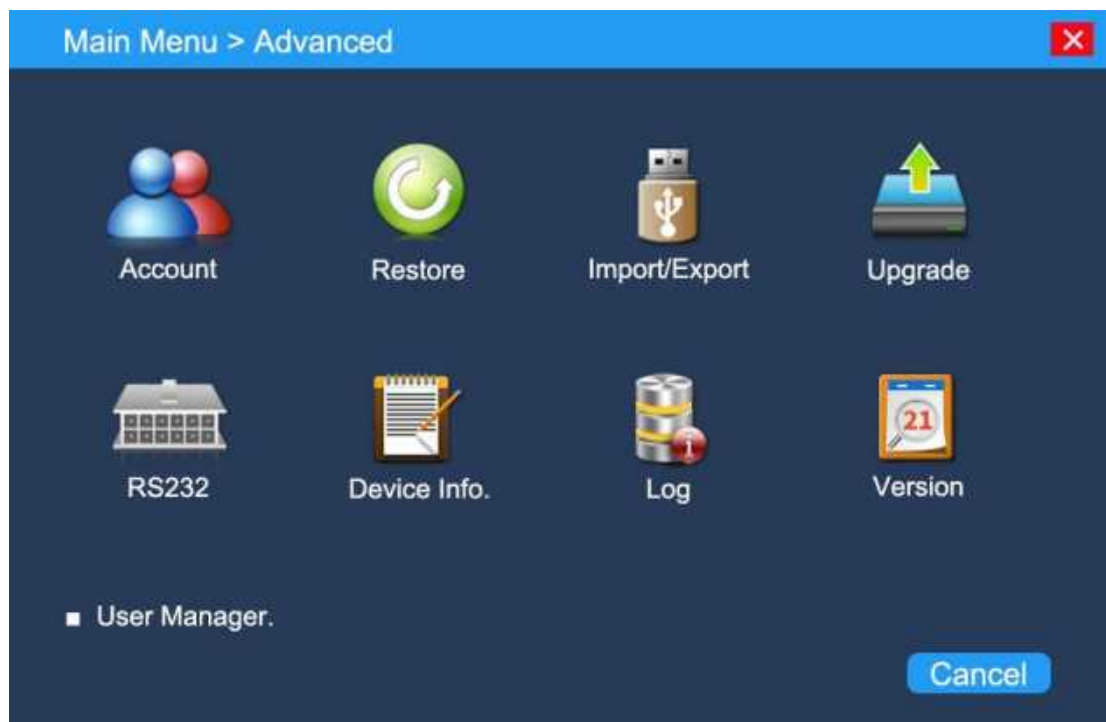
〈connection status〉 : connected;

## 6.6.6 On-board peripherals



〈On-board peripherals〉

## 6.7 Advanced



The corresponding functions of each menu item are defined as follows:

- 〈Account〉 : add login users and set permissions;
- 〈Restore〉 : restore the factory settings of each function parameter;
- 〈Import/Export〉 : log export, parameter import or export;
- 〈Upgrade〉 : System upgrade;
- 〈RS232〉 : GPS module parameter configuration;
- 〈Device Info.〉 : equipment function parameters;
- 〈Log〉 : Divided into all, alarm type
- 〈Version〉 : Display the system software version number;

## 6.7.1 Account

Advanced > Account

| 1 | User Name                      | Group | Status |
|---|--------------------------------|-------|--------|
| 1 | <input type="checkbox"/> admin | admin | GUI    |

Modify User

Modify Group

Modify Pwd

Add User

Add Group

Delete User

Delete Group

Update

Cancel

〈Modify User〉 : modify the user name;

〈Modify Group〉 : You can modify the user group;

〈Modify Password〉 : modify the selected user name and password;

〈Add User〉 : Multiple users can be added;

〈Add Group〉 : You can add multiple user groups;

〈Delete User〉 : You can select to delete unnecessary user names;

〈Delete Group〉 : You can delete unnecessary user groups;

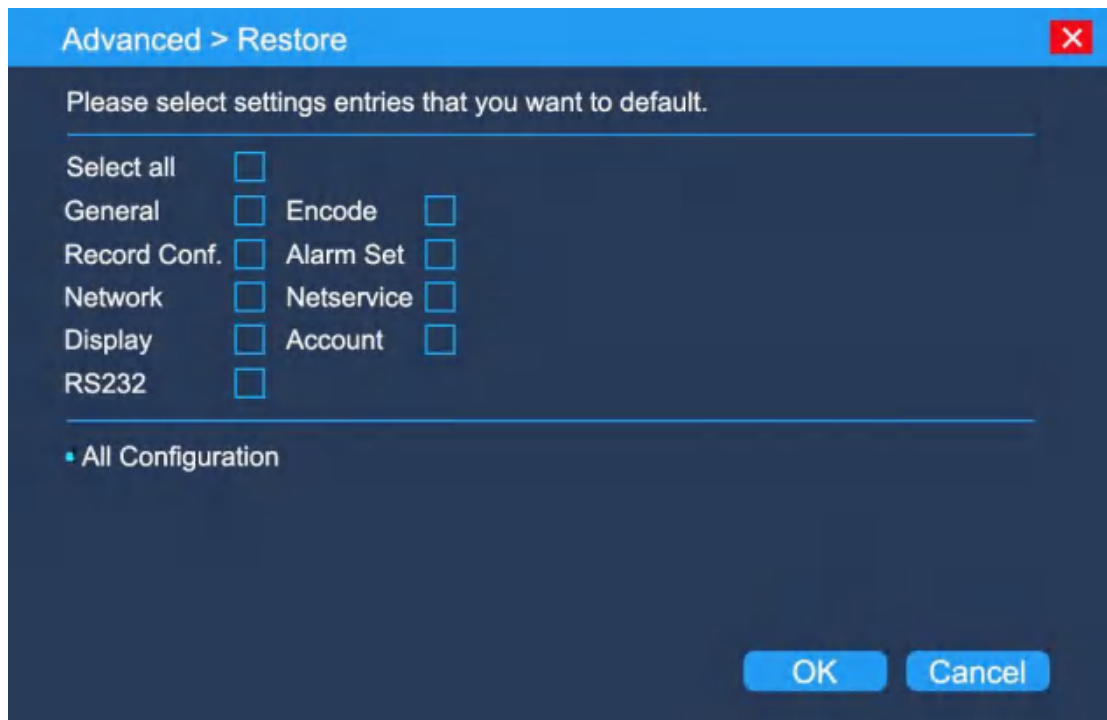
〈Update〉: refresh the interface;

〈Account Security〉 : Add security question and answer;

〈Cancel〉 : Return to the previous menu;

〈Modify Group〉 : modify the function authority of the group;

## 6.7.2 Restore



Advanced > Restore

Please select settings entries that you want to default.

Select all ☐

General ☐ Encode ☐

Record Conf. ☐ Alarm Set ☐

Network ☐ NetService ☐

Display ☐ Account ☐

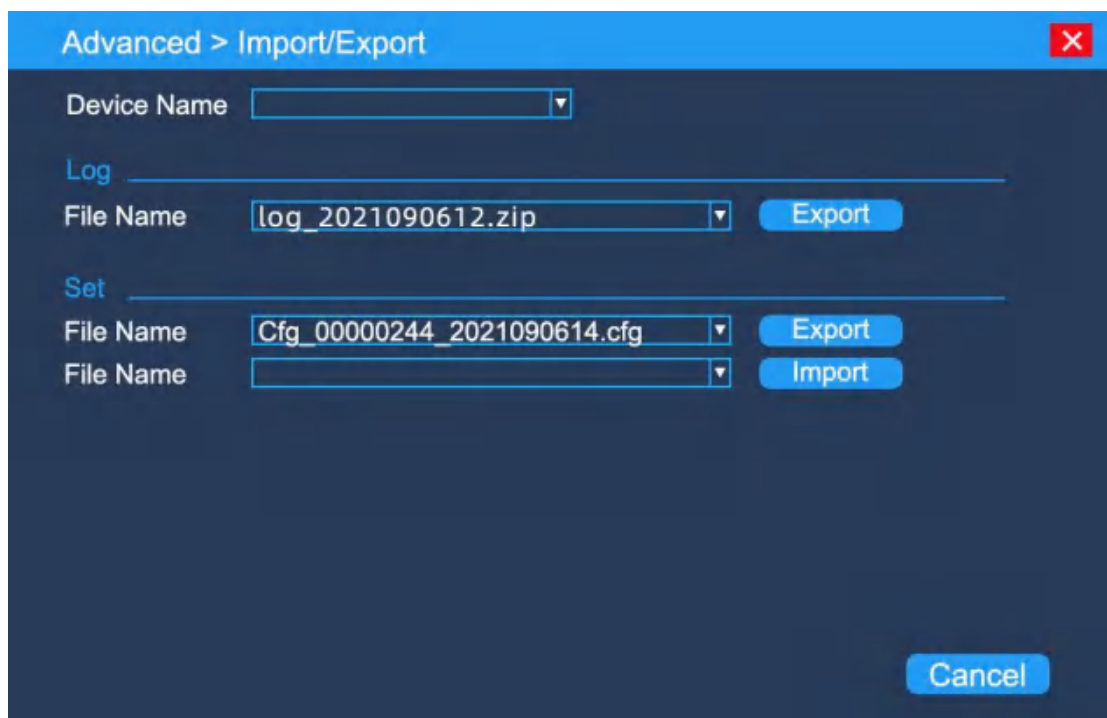
RS232 ☐

• All Configuration

OK Cancel

〈Restore default〉 : refers to restore the corresponding menu parameter to the factory setting value;

## 6.7.3 Import / Export



Advanced > Import/Export

Device Name

Log

File Name  log\_2021090612.zip Export

Set

File Name  Cfg\_00000244\_2021090614.cfg Export

File Name  Import

Cancel

〈Device name〉 : You can set the name of the device to export the log;  
 〈Log information〉  
 〈File name〉 : The file name of the exported log;  
 〈Export〉 : Select the export button to export all log information of the device;  
 〈Set parameter export〉  
 〈File name〉 : The system will automatically generate a file name; export device parameters;  
 〈File name〉 : Select the name of the parameter configuration file that needs to be imported, press the import button, this function can configure devices with the same parameter requirements in batches;

## 6.7.4 Upgrade

The screenshot shows a software window titled "Advanced > Upgrade". It features a blue header bar with a red close button. The main content area is dark blue. Under the "Online Upgrade" section, there is a status message "The latest version is already" followed by a "Command" button. Below this are three checkboxes: "Tip Latest updates" (unchecked), "Automatic upgrade critical updates" (checked), and "Forbid remote upgrade" (unchecked). The "Camera Upgrade" section follows, with a row of buttons labeled "1", "2", "3", "4", and "All". Below these are two rows of input fields: "Upgrade position" and "Upgrade file". The first row has "Upgrade" and "Cancel" buttons. The second row has "Upgrade" and "Cancel" buttons. A large "Cancel" button is located at the bottom right of the window.

〈Upgrade requirements〉 : format the SD card or U disk with a computer into FAT32 format, and copy into the upgrade file;  
 〈Where to upgrade〉 : Insert the SD card or U disk with the upgrade file, and the path will be output automatically;  
 〈Upgrade file〉 : After selecting the name of the file to be upgraded, select the upgrade button;  
 〈Prohibition of remote upgrade〉 : After enabling, remote upgrade is not possible;  
 〈Camera upgrade〉 : The dedicated camera can be upgraded through MDVR equipment;  
 〈Channel〉 : select the name of the channel to be upgraded or select all channels;  
 〈Where to upgrade〉 : Insert the SD card or U disk with the upgrade file, and the path will be output automatically;

〈Upgrade file〉 : After selecting the name of the file to be upgraded, select the upgrade button;

## 6.7.5 RS232



| Function | Baudrate | Data Bits | Stop Bits | Parity |
|----------|----------|-----------|-----------|--------|
| GPS      | 9600     | 8         | 1         | None   |

〈Serial port function〉 : GPS module use;

〈Baud rate〉 : 9600

〈Data bits〉 : 8

〈Stop bit〉 : 1

〈Inspection〉 : None;

## 6.7.6 Device Info.

Advanced > Device Info.

|                        |                                     |
|------------------------|-------------------------------------|
| Audio In Channels      | 0                                   |
| Alarm In Channels      | 4                                   |
| Alarm Out Channels     | 2                                   |
| Remote control Type    | ZhiXin                              |
| Pad Type               | General                             |
| Maximum Playback Large | 2                                   |
| Default Playback Large | <input type="checkbox"/>            |
| Enable Buzzer          | <input checked="" type="checkbox"/> |
| Enable RS232           | <input checked="" type="checkbox"/> |
| Enable PTZ             | <input checked="" type="checkbox"/> |
| Maintain               | <input type="checkbox"/>            |
| Debug Mode             | <input type="checkbox"/>            |

OK Cancel

〈Audio input channel〉 : 0  
〈Alarm input channel〉 : 4  
〈Alarm output channel〉 : 2  
〈Remote control type〉 : ZhiXin;  
〈Panel Type〉 : General;  
〈Maximum number of playback channels〉 2  
〈Default playback channels〉  
〈Enable buzzer〉  
〈Enable serial port function〉  
〈Enable PTZ function〉  
〈Maintenance function〉  
〈Debugging function〉

## 6.7.7 LOG

Advanced > LOG

Type: All

Start Time: 2021-09-06 00:00:00

End Time: 2021-09-07 00:00:00

Pre Page

Next Page

|   | Log Time            | Type               | LOG                                       |
|---|---------------------|--------------------|-------------------------------------------|
| 1 | 2021-09-06 10:28:28 | Save system status | 2021-09-06 10:28:28(2)                    |
| 2 | 2021-09-06 10:28:30 | Shut down          | 2021-09-06 10:28:28(6)                    |
| 3 | 2021-09-06 10:28:27 | Restart            | 2021-09-06 10:28:28                       |
| 4 | 2021-09-06 10:28:28 | Save system status | 2021-09-06 10:28:28                       |
| 5 | 2021-09-06 10:28:23 | WFS1               | 2021-09-06 10:28:28                       |
| 6 | 2021-09-06 10:28:23 | User login         | Wrong user name or passwordadmin<GUI,203> |
| 7 | 2021-09-06 14:28:23 | User login         | admin<GUI>                                |

Search Clear Cancel

〈Type〉 : Divided into all and alarm types;

〈Start Time〉 : Set the start time to be queried;

〈End Time〉 : Set the end time to be queried;

〈Previous page〉 : The previous page where the information content is displayed after the query;

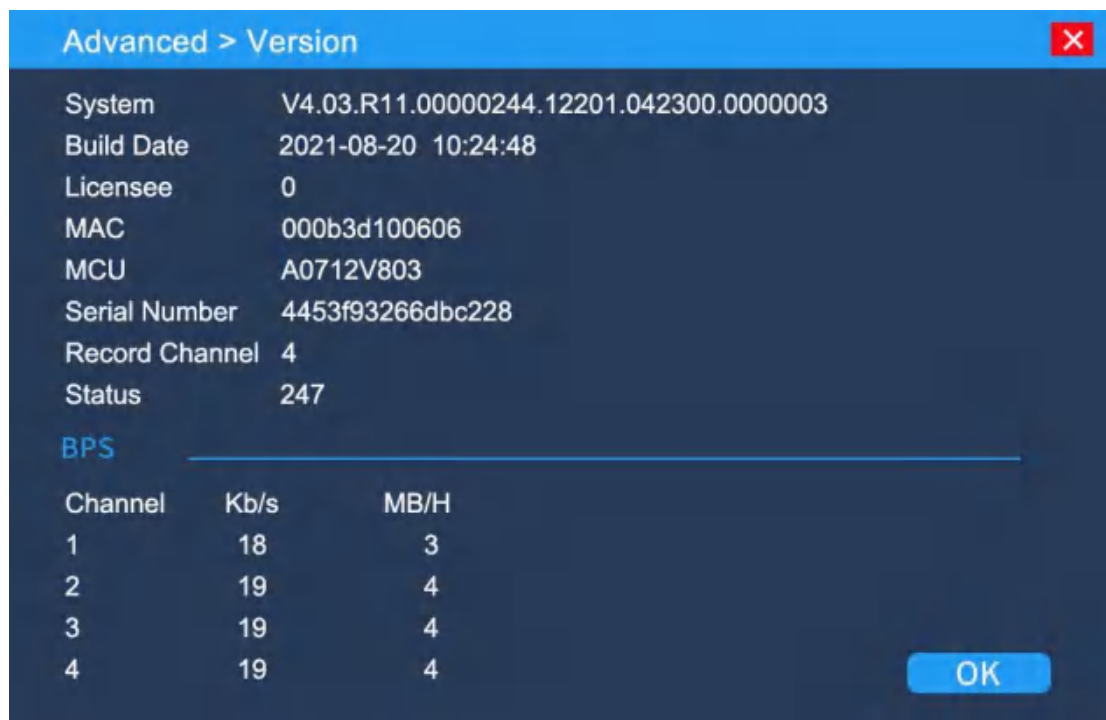
〈Next page〉 : The next page where the information content is displayed after querying;

〈Query〉 : After setting the start and end time, press the query button to start the query;

〈Empty〉 : Clear the query result;

〈Cancel〉 : Return to the previous menu;

## 6.7.8 Version



〈System version〉 : display the system software version number;

〈Release Date〉 : Display the time when the system software was released;

〈Original〉 : 0

〈MAC〉 : MAC address;

〈MCU〉 : Display the time when the system software was released;

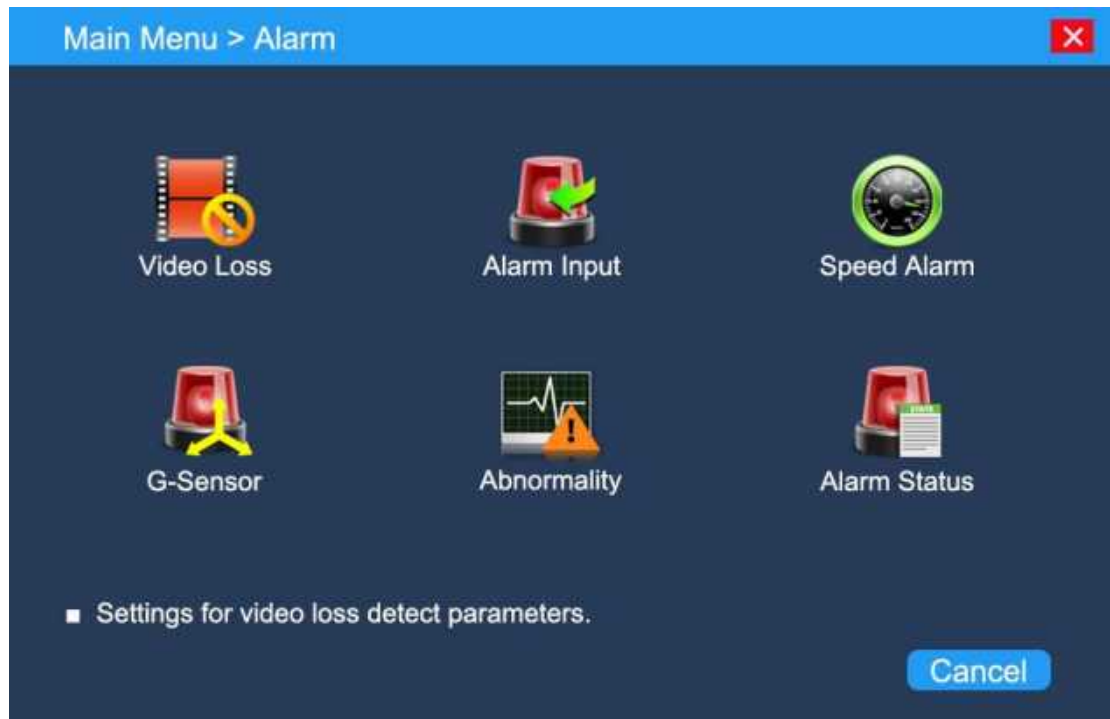
〈Serial Number〉 : Display the time when the system software was released;

〈Video Channel〉 : Display the time when the system software was released;

〈Transition〉 : Display the time when the system software was released;

〈Stream Statistics〉 : Statistics channel code streams;

## 6.8 Alarm



The corresponding functions of each menu item are defined as follows:

- 〈Video Loss〉 : Alarm when the video is lost, etc.;
- 〈Alarm input〉 : Alarm input and output settings, etc.;
- 〈Speed alarm〉 : Overspeed or low speed alarm setting, etc.;
- 〈G-Sensor〉 : Gravity sensor parameter alarm configuration;
- 〈Exception handling〉 : Alarm for information such as hard disk error;
- 〈Alarm status〉 : Alarm prompts for each channel, video loss, alarm input and output, overspeed and low speed, network disconnection events, IP conflicts, storage device errors, insufficient storage space, G-Sensor and other alarm prompts;

## 6.8.1 Video loss

| Channel   | Enable | AlarmOut                            | Tour                                |
|-----------|--------|-------------------------------------|-------------------------------------|
| Channel 1 | Stop   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Channel 2 | Stop   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Channel 3 | Stop   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Channel 4 | Stop   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

---

OutDelay: 10 Sec.

Buzzer: ☐

OK Cancel

〈Enable〉 : After enabling, when the corresponding channel video is lost, it will trigger the alarm output and display the full screen of the channel;

〈Alarm output〉 : When the video is lost, alarm 1 or alarm 2 output can be set;

〈Round Tour〉 : When the video is lost, any channel can be configured to display in full screen;

〈OutDelay〉 : the time of alarm and polling output;

〈Buzzer〉 : When the alarm is triggered, the main board buzzer will sound; (this function has no effect);

## 6.8.2 Alarm input

| Num       | Type            | OSD info                 | Alarm Out                | Video                    | OSD                      | Tour                                |
|-----------|-----------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Channel 1 | Normally open ▼ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Channel 2 | Normally open ▼ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Channel 3 | Normally open ▼ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Channel 4 | Normally open ▼ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

|            |                                 |      |          |                                 |      |
|------------|---------------------------------|------|----------|---------------------------------|------|
| MD Interva | <input type="text" value="1"/>  | Sec. | Pre Rec  | <input type="text" value="5"/>  | Sec. |
| Out Delay  | <input type="text" value="10"/> | Sec. | Post Rec | <input type="text" value="10"/> | Sec. |
| Buzzer     | <input type="text"/>            |      |          |                                 |      |

〈Equipment type〉 : level input signal type, normally open type means no level input, normally closed type means there is always level signal input;

〈OSD information〉 : When an alarm is triggered, the screen displays text information;

〈Alarm output〉 : When the IO alarm signal is input, the alarm 1 or alarm 2 output level signal is triggered;

〈Record〉 : When the IO alarm signal is input, trigger the corresponding channel to record;

〈OSD〉 : When the IO alarm signal is input, the OSD information is triggered to be output to the screen;

〈Route〉 : When the IO alarm signal is input, trigger the full-screen display of the corresponding channel;

### 6.8.3 Speed alarm

Alarm > Speed Alarm

|         |                          |         | Alarm Out                           | Video                               | OSD                                 | Tour                                |
|---------|--------------------------|---------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| H-Speed | <input type="checkbox"/> | 80 Km/h | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| L-Speed | <input type="checkbox"/> | 0 Km/h  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

---

MD Interva 1 Sec.      Pre Rec 5 Sec.  
Out Delay 10 Sec.      Post Res 10 Sec.  
Buzzer ☐

OK Cancel

- 〈Overspeed〉 : Turn on or off, the maximum speed can be set, the default is 80KM/H;
- 〈Low speed〉 : turn on or off; the minimum speed can be set, the default is 0KM/H;
- 〈Alarm output〉 : When the speed reaches 80KM/H, trigger alarm 1 or alarm 2 output;
- 〈Video〉 : When the speed reaches 80KM/H, trigger the corresponding video recording;
- 〈OSD〉 : When the speed reaches 80KM/H, text can be displayed on the screen;
- 〈Route〉 : When the speed reaches 80KM/H, trigger the full-screen display of the corresponding screen;
- 〈Interval time〉 : The effective time interval when the overspeed alarm is triggered;
- 〈Pre-recording〉 : Trigger alarm recording pre-recording time;
- 〈Delay〉 : Trigger the alarm output time;
- 〈Recording delay〉 : The recording delay time after triggering the alarm and stopping;
- 〈Buzzer〉 : After triggering an alarm, the buzzer will sound;

## 6.8.4 G-Sensor

Alarm > G-Sensor

X: 0.00 g  g Enable ☐

Y: 0.00 g  g Calibration

Z: 0.00 g  g

---

Alarm Out  Out Delay  Sec.

Record Channel

Tour

Time Intervals  Sec. Pre Rec  Sec.

Post Rec  Sec. Buzzer

OK Cancel

〈Enable〉 : G-Sensor can be activated only after it is enabled;

Note: The device should be placed flat on the car with the panel facing the rear of the car and fixed;

X:

Y:

Z:

〈Alarm output〉 : Trigger alarm 1 or alarm 2 output;

〈Delay〉 : Alarm output time;

〈Recording channel〉 : alarm trigger channel recording;

〈Route〉 : Full screen display of alarm trigger channel;

〈Time interval〉 : The effective interval time of alarm signal triggering;

〈Pre-recording〉 : Trigger recording pre-recording time;

〈Delay〉 : Trigger recording delay time;

〈Buzzer〉 : The buzzer will sound after the alarm is triggered; (this function is not enabled)

## 6.8.5 Abnormality

Alarm > Abnormality

Event Type No Storage ▾

Enable ☒

---

Timed ALarm ☒ 60 Sec.

Show Message ☐

Mobile Reported ☒

OK Cancel

〈Event type〉 : trigger an alarm when there is no storage device;

〈Enable〉 : The prompt message can only be triggered after it is enabled;

〈Timed Alarm〉 : After triggering the corresponding event, the screen will display the corresponding prompt information;

〈Show Message〉 : The buzzer will sound after the alarm is triggered; (this function is not enabled)

〈Mobile report〉 : This function is not enabled;

## 6.8.6 Status

| Index                | 1                        | 2                        | 3                        | 4                        |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Video Loss           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alarm In             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alarm Out            | <input type="checkbox"/> | <input type="checkbox"/> |                          |                          |
| H-Speed              | <input type="checkbox"/> |                          |                          |                          |
| L-Speed              | <input type="checkbox"/> |                          |                          |                          |
| Net Disconnection    | <input type="checkbox"/> |                          |                          |                          |
| IP Conflict          | <input type="checkbox"/> |                          |                          |                          |
| Storage Device Error | <input type="checkbox"/> |                          |                          |                          |
| Storage No Space     | <input type="checkbox"/> |                          |                          |                          |
| G-Sensor             | <input type="checkbox"/> |                          |                          |                          |

OK

〈Index〉 : Represents the channel name

〈Video loss〉 : When there is no video image in the channel, the corresponding channel will give an alarm;

〈Alarm in〉 : When the IO alarm signal enters, the corresponding channel will give an alarm;

〈Alarm out〉 : When there is an alarm message, the corresponding alarm channel can be triggered to output an alarm prompt;

〈H-Speed〉 : When the vehicle exceeds the set alarm value, an alarm will be triggered;

〈L- Speed〉 : When the vehicle is lower than the set alarm value, an alarm will be triggered;

〈Network disconnection〉 : When the network is disconnected, an alarm will be triggered;

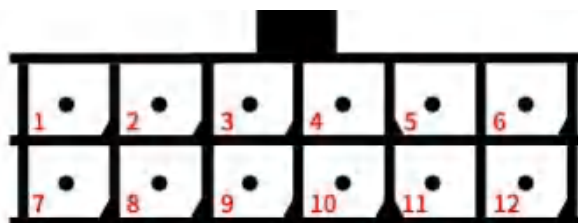
〈IP conflict〉 : When the device IP is the same as other IPs in the LAN, an alarm will be triggered;

〈Storage device error〉 : When the SD card or hard disk error occurs, an alarm will be triggered;

〈storage no space〉 : When the SD card or hard disk is full and automatic overwriting is not selected, an alarm will be triggered;

〈G-Sensor〉 : When the device direction or the set value is triggered when the device is under gravity, an alarm will be triggered;

## 7 IO Interface definition



|    |     |     |     |      |     |
|----|-----|-----|-----|------|-----|
| 1  | 2   | 3   | 4   | 5    | 6   |
| TX | GND | IO4 | IO2 | ALO2 | 12V |
| 7  | 8   | 9   | 10  | 11   | 12  |
| RX | GND | IO3 | IO1 | ALO1 | GND |

The device has 4 alarm input interfaces and 2 alarm output interfaces. Alarm input detection is level detection, which can be connected to various vehicle driving conditions, such as steering. The schematic diagram of detection when turning is shown in the figure below. When the direction light is turned on, the MDVR can detect the high level, and the catalyst sends the corresponding channel to display a single screen or video.

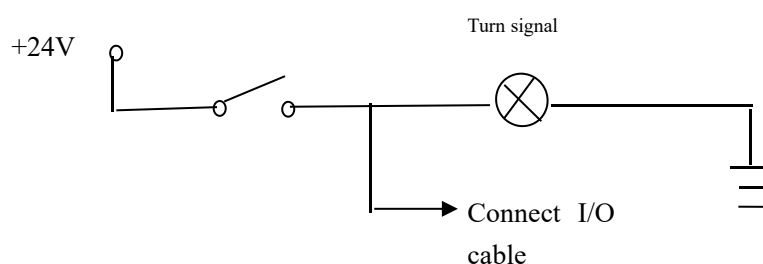


Figure 6 Schematic diagram of direction light detection

The alarm output is all level output, and the drive capacity is 200mA. If you want to drive a device with a larger power, you must connect an external relay. The wiring diagram of the alarm output photoelectric alarm is shown in the figure below.

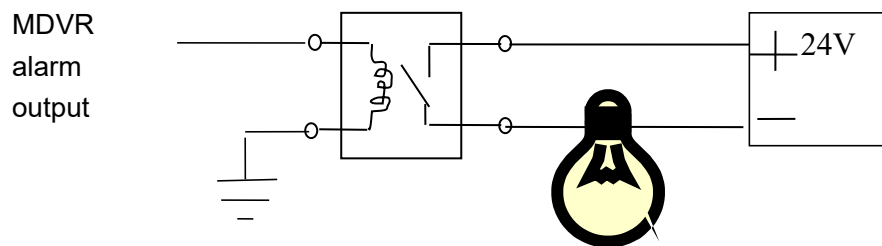


Figure 34 Alarm output schematic diagram

## 8 3G/4G Platform installation instructions

### 1、Installation method of mobile client:

Apple mobile phone search CMSV6 through the APP Store to install

Android phones are installed by searching CMSV6 in the application market

Or open through the web page: <http://113.96.131.200> to download

### Computer client installation method:

Open web page: <http://113.96.131.200> to download

On the login interface, the user name and password are affixed on the label of each device or provided by the supplier.