8-Channel All-in-one Machine

Manual

Contents

1、Precautions....3
2、Product Specifications....4
3.Product Appearance Characteristics....9
3.1 Video Surveillance....11
3.1.1 Info Status Information....12
3.1.2 Split Screen Settings....12
3.2 Video Playback....14
3.2.1 Video....14
3.3 Intelligent Driving....15
3.3.1 BSD Camera Settings....15
3.3.2 BSD Camera Calibration....16
3.4 System Settings Menu....17
3.4.1 System Settings....17
3.4.2 Language Settings....18
3.4.3 Recording Settings....19
3.4.4 Remote Monitoring....21
3.4.5 WiFi Settings....22
3.4.6 Disk Management....23
3.4.7 Alarm System....24
3.4.8 Display Setting....25
3.4.9 Image Settings....26
3.4.10 Parking Monitoring....26
3.4.11 Voice Settings....27
3.4.12 Sound Settings....28
3.4.13 Network Settings....29
3.4.14 license Plate Settings....30
3.4.15 Serial Port Settings....30
3.4.16 Preview Screen....31
3.4.17 4G Network....32
3.4.18 User Management....33
3.4.19 System Maintenance....34
3.4.20 Log Information....35
3.4.21 System Upgrade....36
4、4G Platform Installation Instructions....36

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 the precautions and introduction to installation and use, please read it first.

➢ Precautions

- In order to protect your rights, please read this manual carefully before installing and using this product.
- This product is used in the car, in order to prevent the danger of short circuit or electric shock, please do not put the machine in rain or humid environment.
- This product is a high-tech device, and there are almost no original parts in the machine that the user can repair. In the event of a malfunction, a qualified technician must be called for overhaul, or contact the dealer.

➢ Installation Environment

- This equipment uses DC 9~36V power supply, and the local power supply voltage must be confirmed before use;
- If the machine will not be used for a long time, it is best to completely disconnect the power supply of the recorder;
- Please choose an appropriate installation location so that the air can circulate freely around the machine to prevent the machine from overheating;
- The machine cannot be installed near heat sources such as radiators and ventilation ducts, or in places with direct sunlight, excessive dust, mechanical vibration or shock.

2、Product Specifications

The 8-way all-in-one machine is a cost-effective and highly scalable all-in-one machine specially developed for video surveillance and remote monitoring of heavy trucks and engineering vehicles. It is developed with high-speed processor and embedded **Linux** platform, with built-in AI algorithm, to assist drivers in driving safety, combined with the most advanced **H.265** video compression/decompression technology in the IT field, using **TF card** as storage medium, the eight-way integrated machine can achieve 8-channel 1080P audio and video recording and car driving information recording function.

Product Specifications:

Features:

- Support 1-8 channels of AHD million high-definition / analog standard definition video and audio input;
- Support 8-channel 1080P/720P HD real-time local recording;
- Support 8-channel high-definition remote video transmission;
- Image automatically recognizes camera resolution;
- Support one-key photo function;

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 models;
- Support intelligent power management identification, automatic shutdown when low power, low power consumption after flameout;

Data Storage:

- Adopt special file management mechanism to encrypt data to effectively protect data security;
- Proprietary TF card bad track detection technology not only ensures the continuity of video recording, but also prolongs the service life of TF card;
- Built-in super capacitor to avoid data loss due to abnormal power failure;
- Support TF dual card storage, the maximum capacity of a single card supports 512G;

Extensions:

- Support GPS/BD positioning, high sensitivity, fast positioning;
- Built-in 3G/4G module, support CDMA/EVDO/GPRS/WCDMA/FDD LTE/TDD LTE;
- Built-in WIFI module;

Algorithm:

Support extended RJ45 interface, built-in ADAS, BSD, DSM algorithm (optional);

Peripherals:

- Supports docking of peripherals such as temperature control, passenger flow, oil sense, forward and reverse rotation, and load.

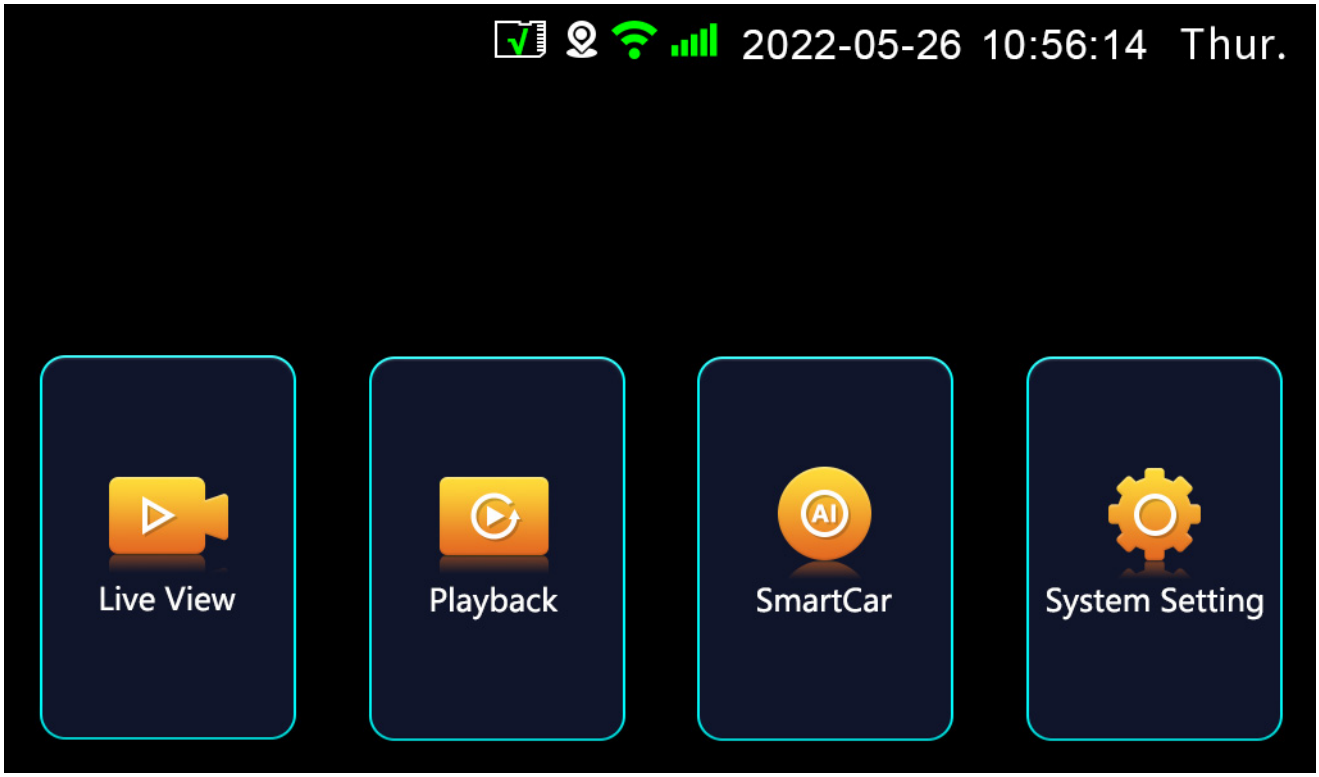
Product Specifications:		
Project	Device parameters	Performance
Show	Display Size	10.1 inches
	Resolution	1024*600
	Brightness	600 Brightness IPS
System	Main Processor	ARM Cortex A7
	Operating System	Embedded Linux operating system
	Operating Language	Chinese/English/Traditional Chinese /Russian/Japanese/ Italian/Spanish/French
	Operation Interface	Graphical menu operation interface, support touch and voice control operation
Audio and Video	Video Format	PAL/NTSC
	compression standard	H.265
	Image Resolution	1080P/720P
	Video Quality	Levels 1 to 6 are available
	Combination	Various combinations
	Decoding capability	8ch 1080P/720P real-time
	Screen Display	Support 1, 4, 5, 6, 8, 9 screen display
	Audio compression	G.726
	Recording method	Synchronized recording of sound and video
Recording and Playback	Video recording	Manual, alarm
	Video bit rate	Full frame 4096Mbps
	audio bit rate	8KB/s
	storage medium	TF card storage
	Video query	Search by channel and recording type
	local playback	Playback by file
Software Upgrade	Upgrade mode	Manual upgrade, remote upgrade
Interface	audio input	1 channel
	video input	8 channel
	Alarm input	4-channel alarm input by default, 6-level signal input can be customized
	Alarm Output	1 channel alarm output
	Ignition Input	1 channel ACC signal
	Serial Port	1 485 interface (can be customized)

Extensions	GPS/BD	GPS or BD, GLONASS
	3G/4G	Support CDMA/EVDO/GPRS/WCDMA/FDD LTE/TDD LTE
	WIFI	Support 2.4G WIFI
Other	Power Input	DC：8V~36V
	Power consumption	Standby 3mA Maximum power consumption 18W @12V 1.5A @24V 0.75A
	Operating temperature	-20~70℃
	Compressed storage capacity	1080P 0.8G/hour/channel 720P 500MB/hour/channel D1 250MB/hour/channel

Table 1: 8-CH All-in-One Product Specification List

3.Product Appearance Characteristics

Main Menu



Figure_Home

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

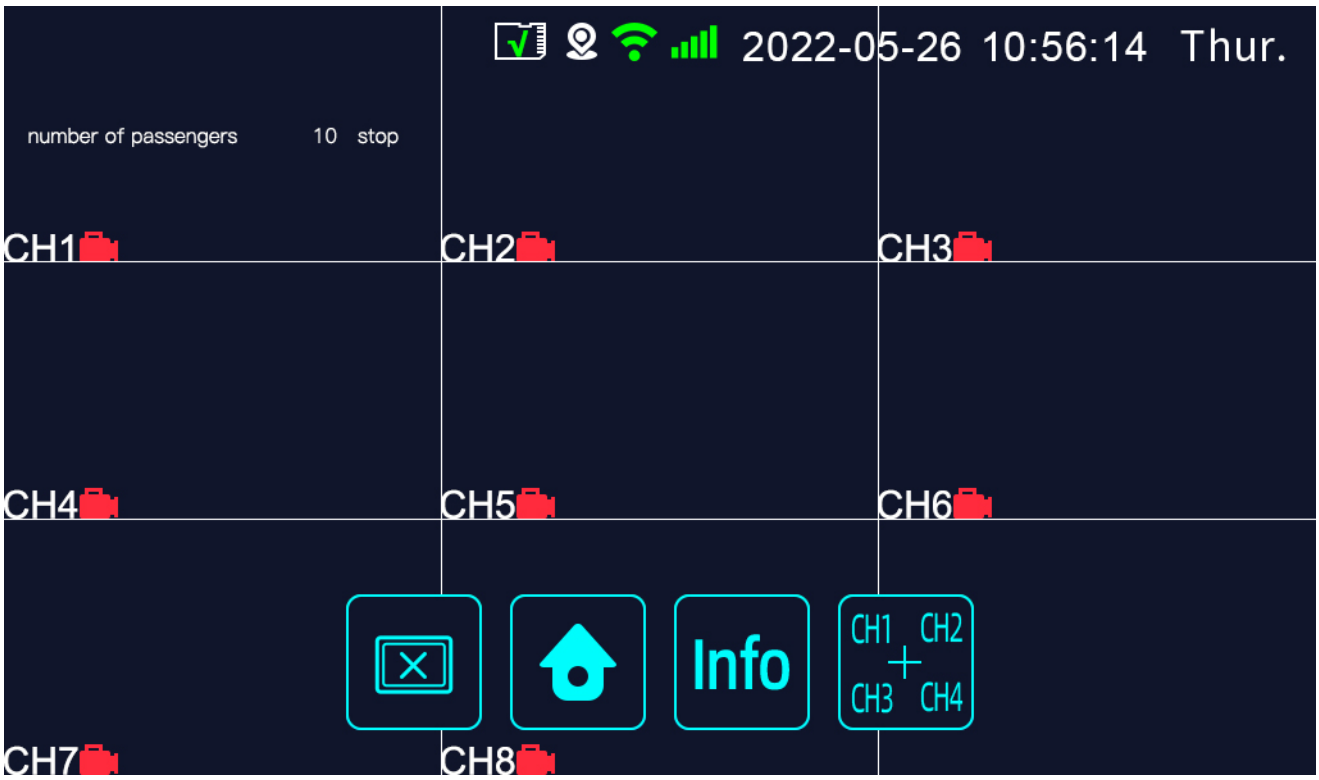
〈Video Surveillance〉: Watch real-time video, image snapshot, view network status information, set split screen display;

〈Video Playback〉: Play back the video, view the video file and the captured picture and related operations;

〈Intelligent Driving〉: BSD camera enablement, calibration, settings;

〈System Settings〉: System function settings;

3.1 Video Surveillance



Figure_Video Surveillance

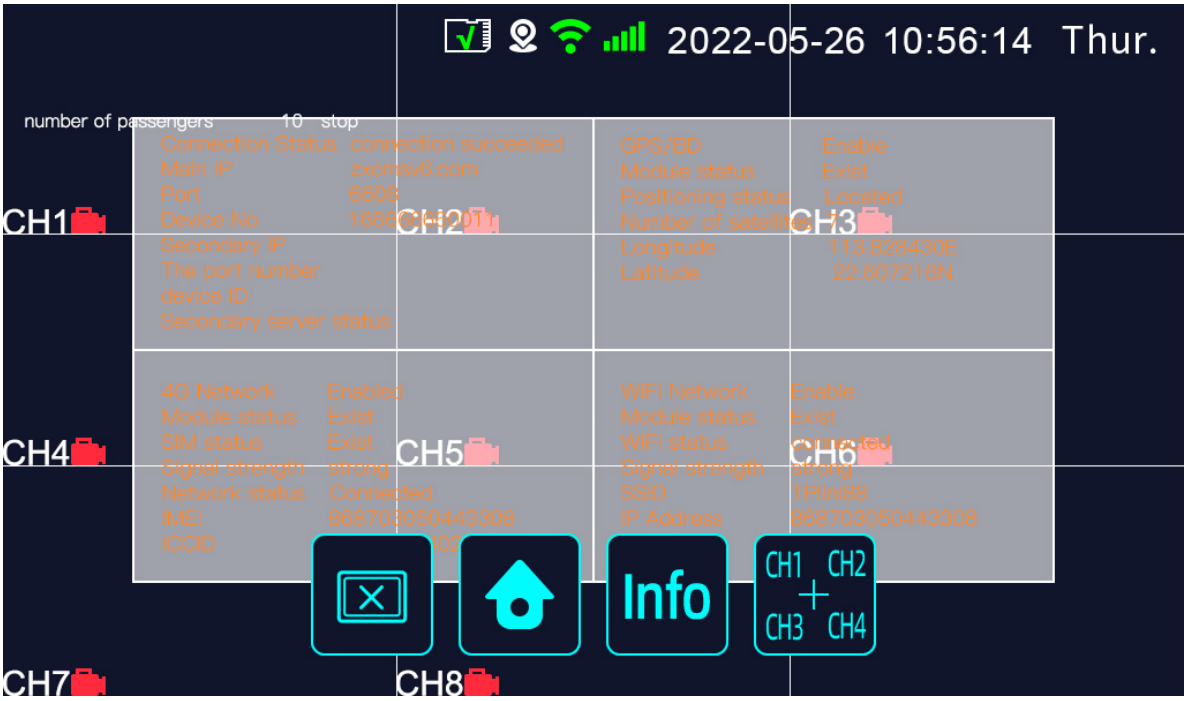
〈Turn Off The Screen〉: turn off the screen;

〈Menu Home〉: Back to Menu Home;

〈Info〉: View IP address, 4G network, location, wireless network and other status information;

〈Split Screen Display〉: Set the video screen split screen display.

3.1.1 Info Status Information



Figure_Info status information

3.1.2 Split Screen Settings

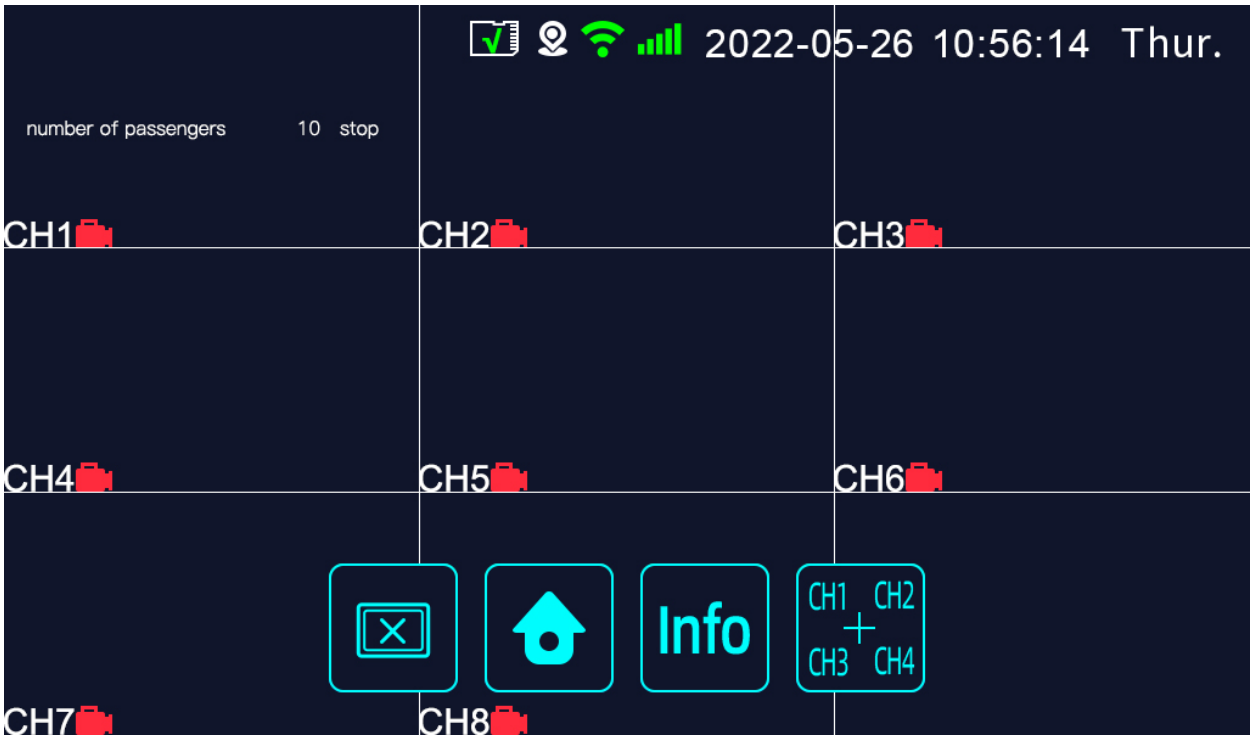


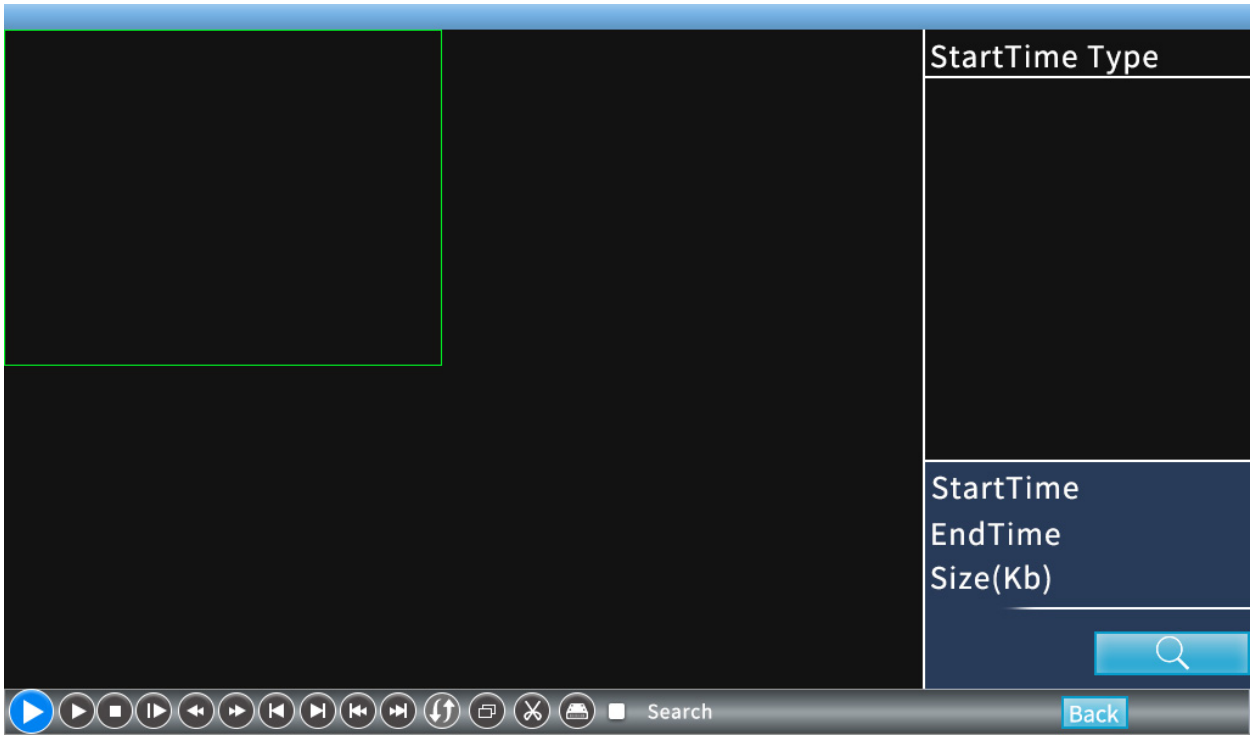
Figure_8 channel display

Figure_Six channel display

Figure_Two channel display

3.2 Video Playback

3.2.1 Video



Figure_Video playback

	Play Button		Previous File
	Rewind Button		Next File
	Stop button		Loop
	Slow down button		Full-screen Display
	Rewind button		Start Editing
	Fast forward button		Search for recorded files

3.3 Intelligent Driving

3.3.1 BSD Camera Settings

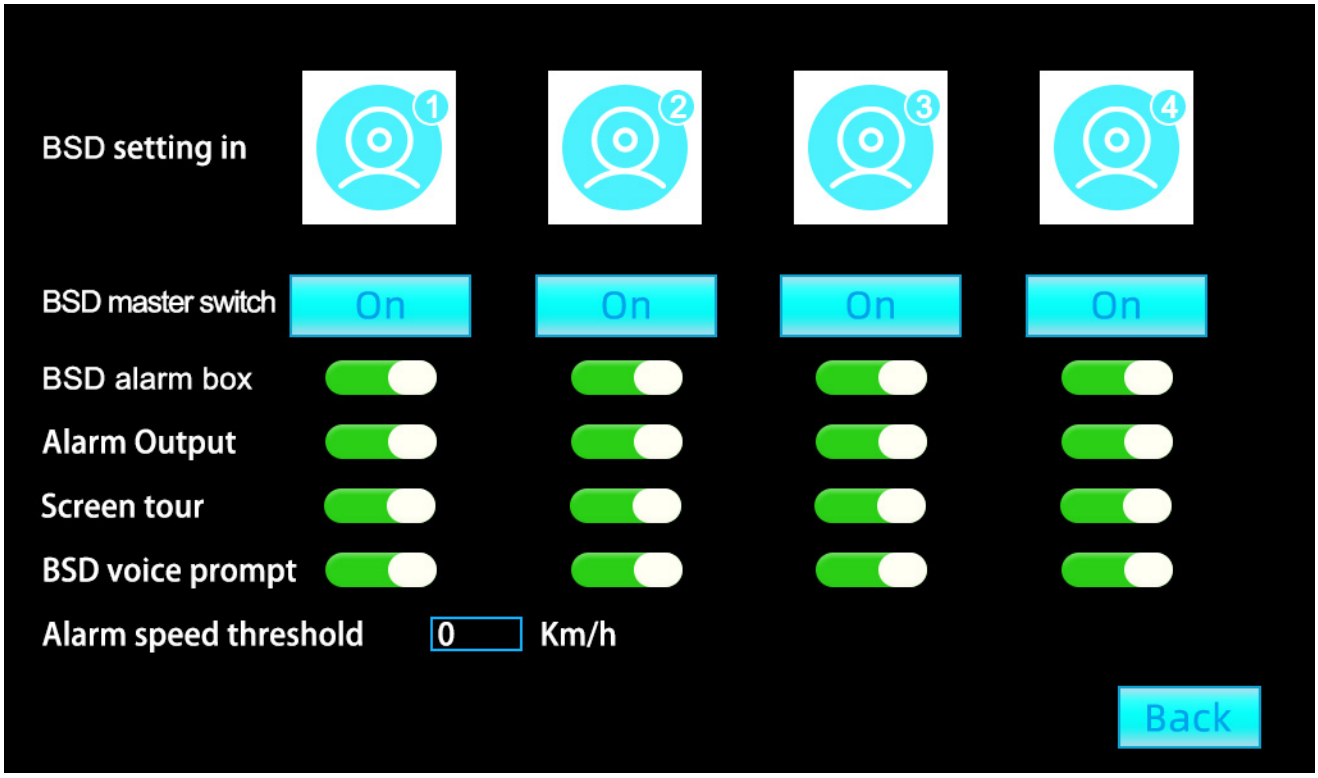


Figure _BSD camera settings

〈BSD Camera Settings〉: Front, Rear, Left and Right Cameras;

〈BSD Master Switch〉: Open/Close;

3.3.2 BSD Camera Calibration

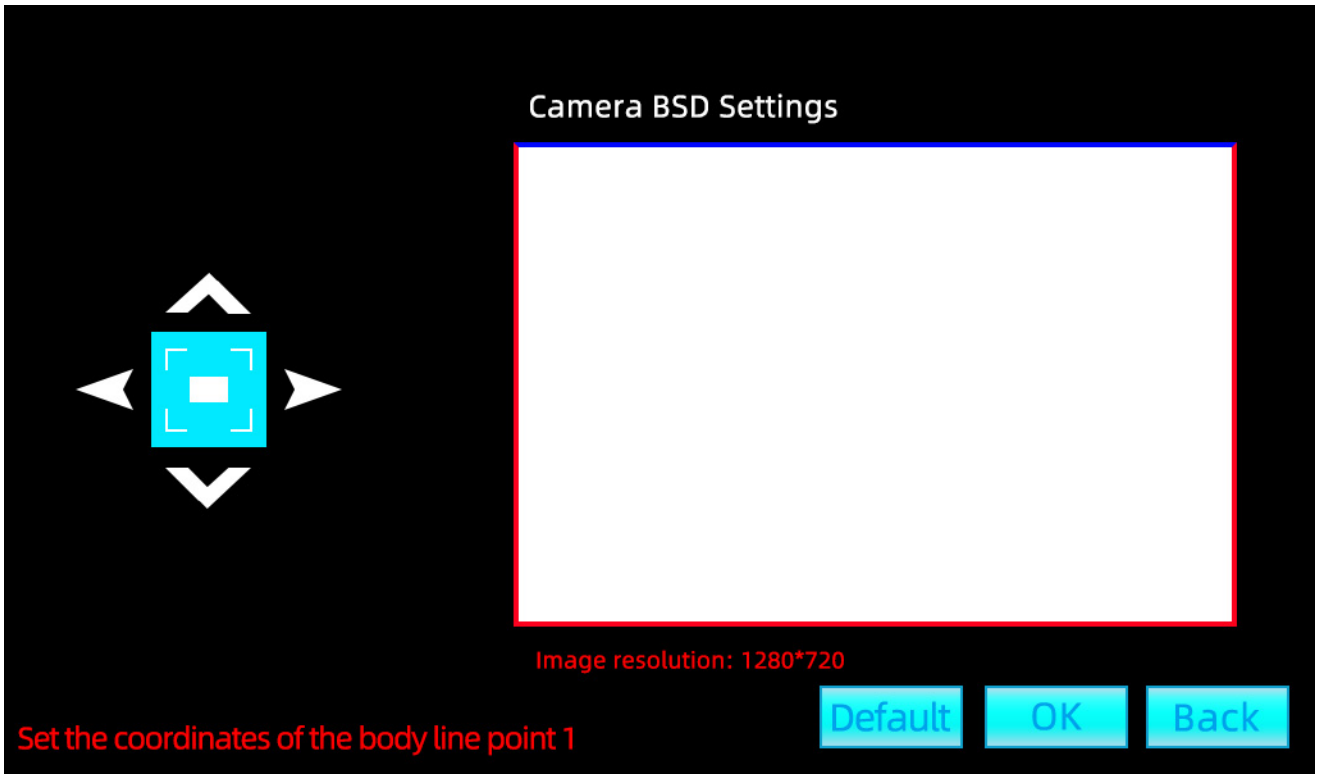


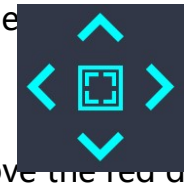
Figure _BSD camera calibration

Here is a schematic diagram of the BSD calibration:

The red arrow icon is used to move the red line up and dow The green arrow icon is used to move the green line left and right,

The yellow arrow icon is used to move the yellow line up and down. Click "Next" to continue calibration.

The area of the left and right boxes is the alarm area, and the box can be set.

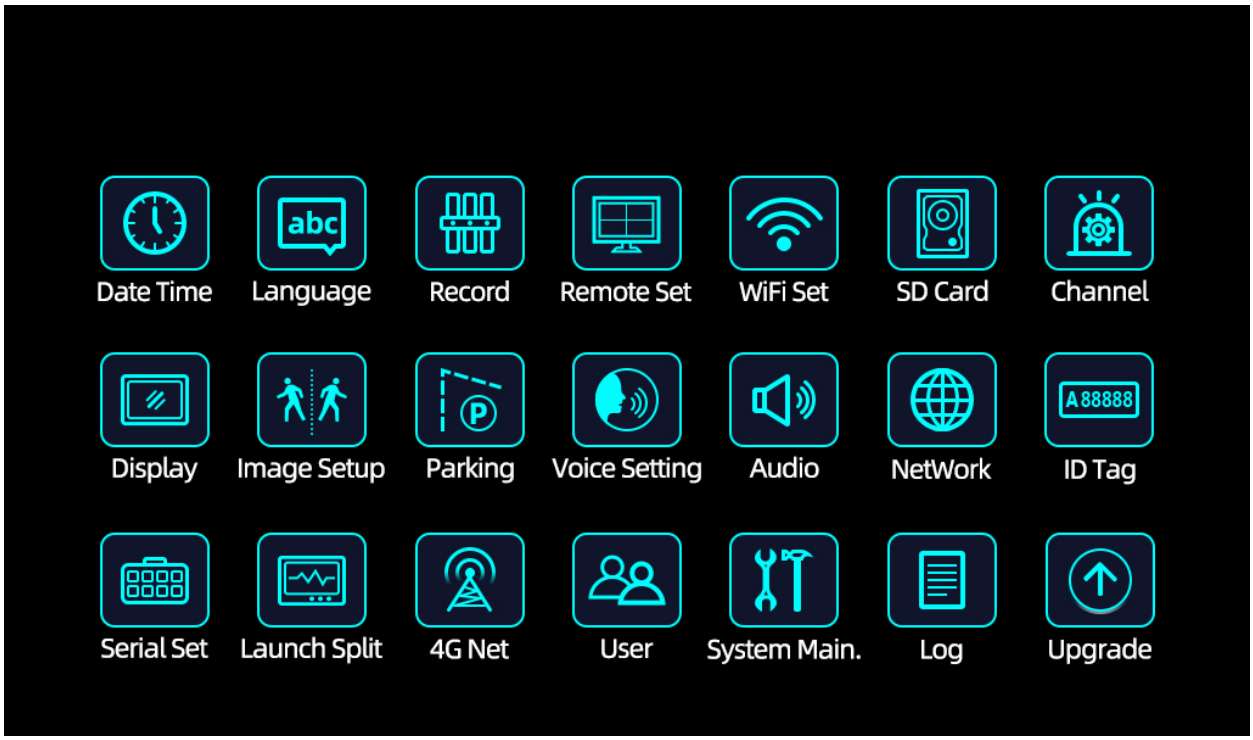
Setting method: There is an adjustable red dot on each corner of the box, through the arrow on the 

You can move the red dot up, down, left and right。

click Toggle red point, adjust next red point.

Click the "Save Results" icon when the calibration is complete.

3.4 System Settings Menu



Figure_System Settings Menu

3.4.1 System Settings

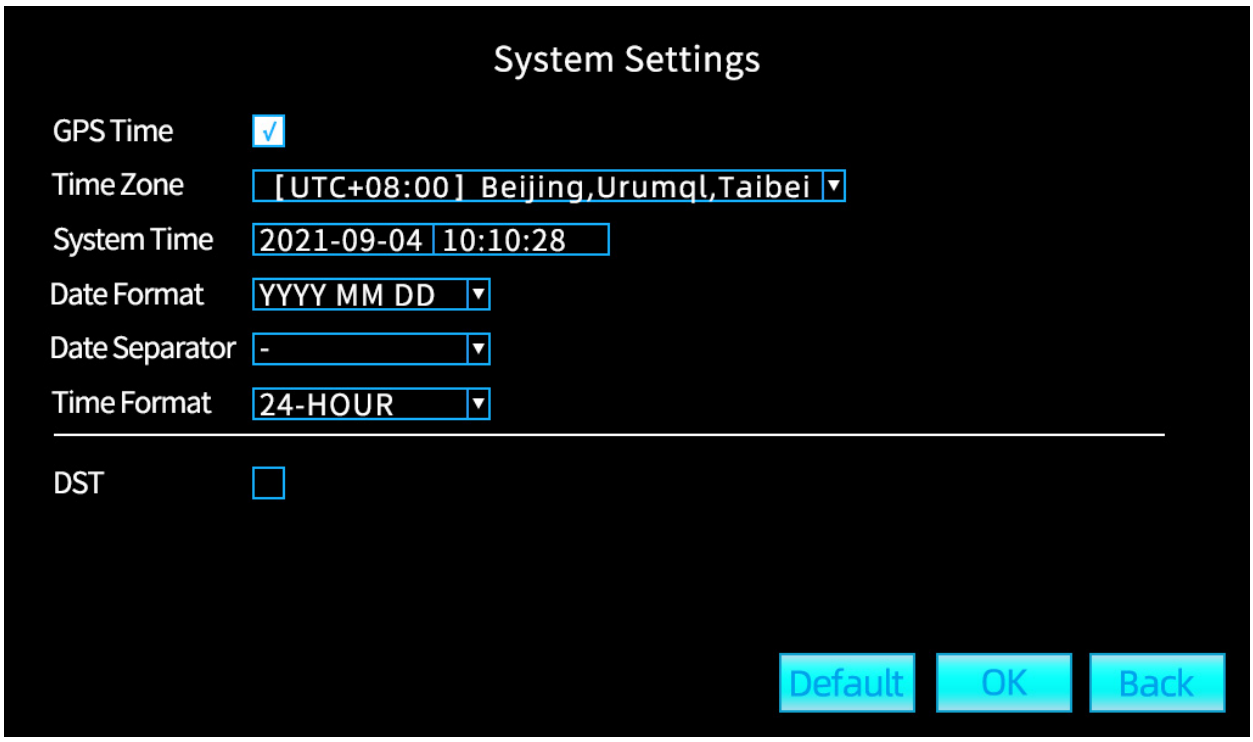


Figure 1 System Settings

〈GPS Time〉: If this function is enabled, the device will automatically check the time after each boot and 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〉: 24-hour clock and 12-hour clock;

〈Summer Time〉:

3.4.2 Language Settings

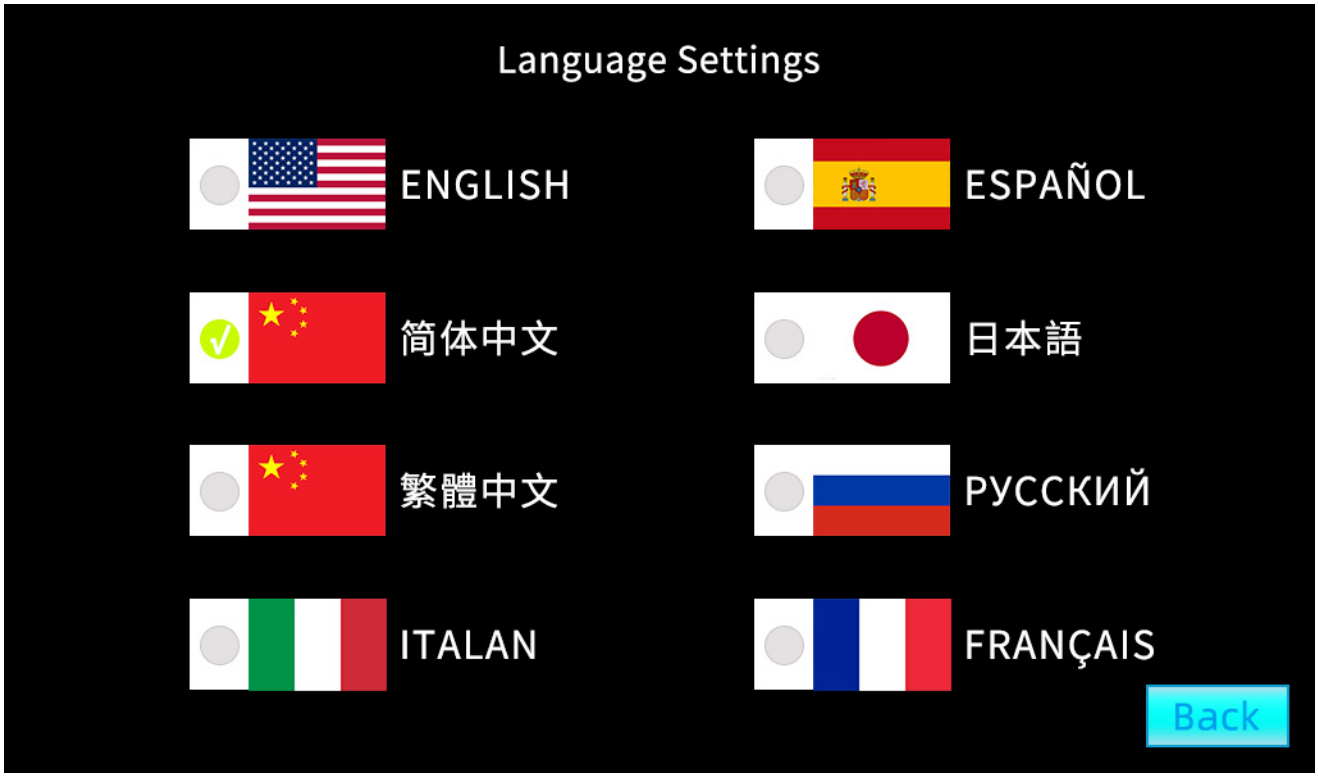


Figure 2 Language settings

〈Language Settings〉: Supports multiple languages. Click to select the corresponding flag.

3.4.3 Recording Settings

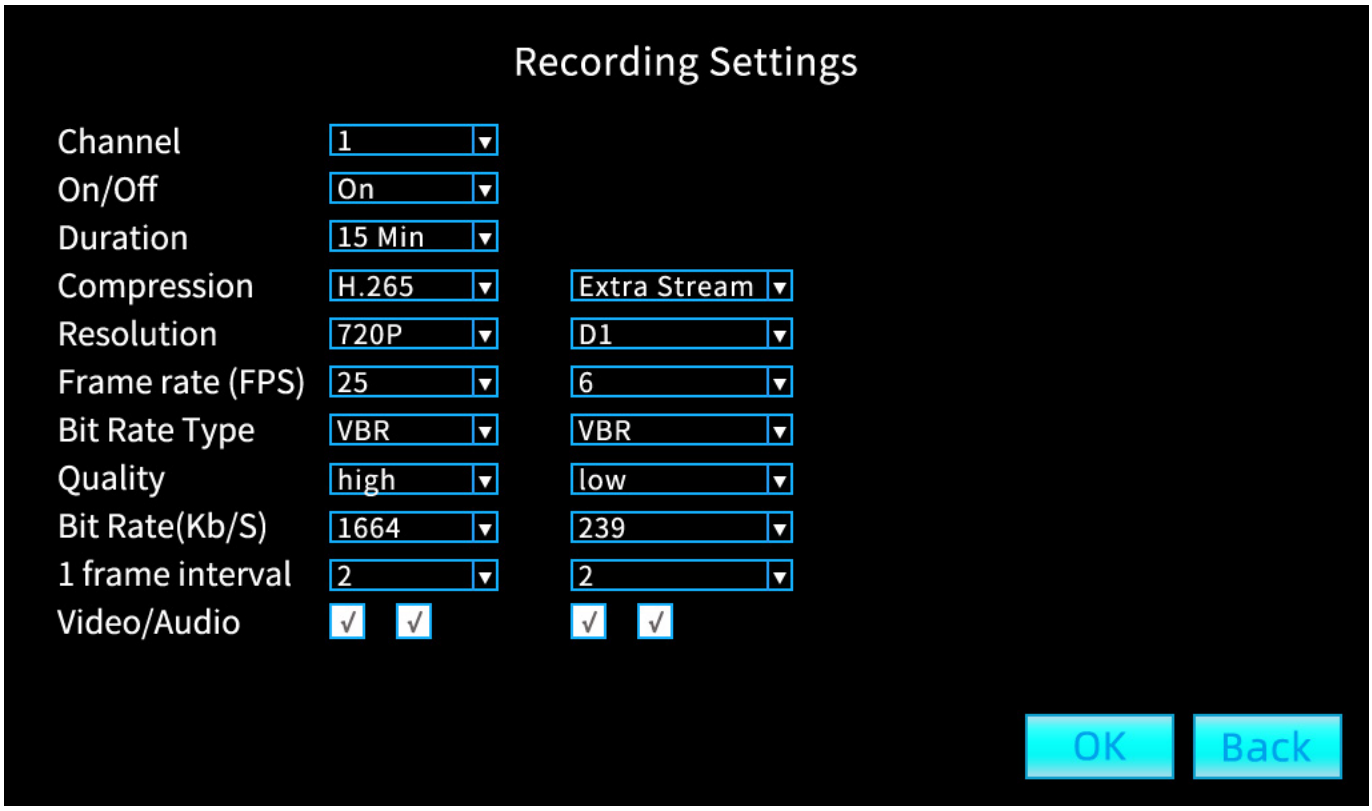


Figure 3 Recording settings

〈Channel〉: Select channels 1, 2, 3, 4, 5, 6, 7, 8, and All;

〈Video Switch〉: On/Off;

〈The Video Time〉: 15 minutes, 30 minutes, one hour, two hours;

〈Encoding Scheme〉: H.264 and H.265 modes, H.265 saves more memory than H.264 encoding (about half);

〈Resolution〉: The resolution can be set to D1/960H/720P/1080N;

〈Frame Rate FPS〉: 18/19/20/21/22/23/24/25;

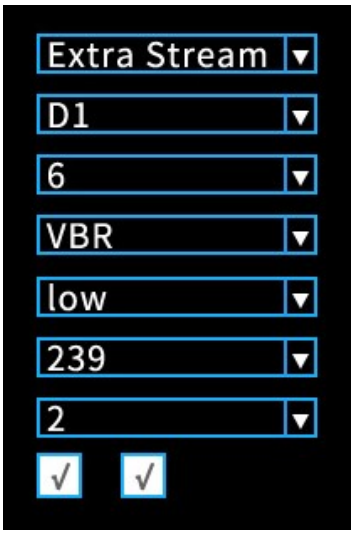
〈Stream Control〉: Limited code stream/variable code stream, the default is variable code stream. According to the image change, the code stream changes with;

〈Picture Quality〉: very poor, poor, average, good, very good, best;

〈code stream value〉: dynamic, not configurable;

〈One Frame Interval Kb/s〉: 1/2/3/4/5/6/7/8/9/10/11;

〈Video/Audio〉: Video/Audio on or off;



Small stream configuration is the stream definition setting for remote video monitoring:

〈Encoding Mode〉: Secondary stream 1;

〈Resolution〉: You can choose CIF/D1, the default is D1;

〈Frame Rate FPS〉: 1/2/3/4/5/6/7/8;

〈Stream Control〉: Limited code stream/variable code stream, the default is variable code stream. According to the image change, the code stream changes with;

〈Picture Quality〉: very poor, poor, average, good, very good, best;;

〈Code Stream Value〉: dynamic, not configurable;

〈One Frame Interval Kb/s〉: 1/2/3/4/5/6/7/8/9/10/11;

〈Video/Audio〉: Video/Audio on or off;

3.4.4 Remote Monitoring

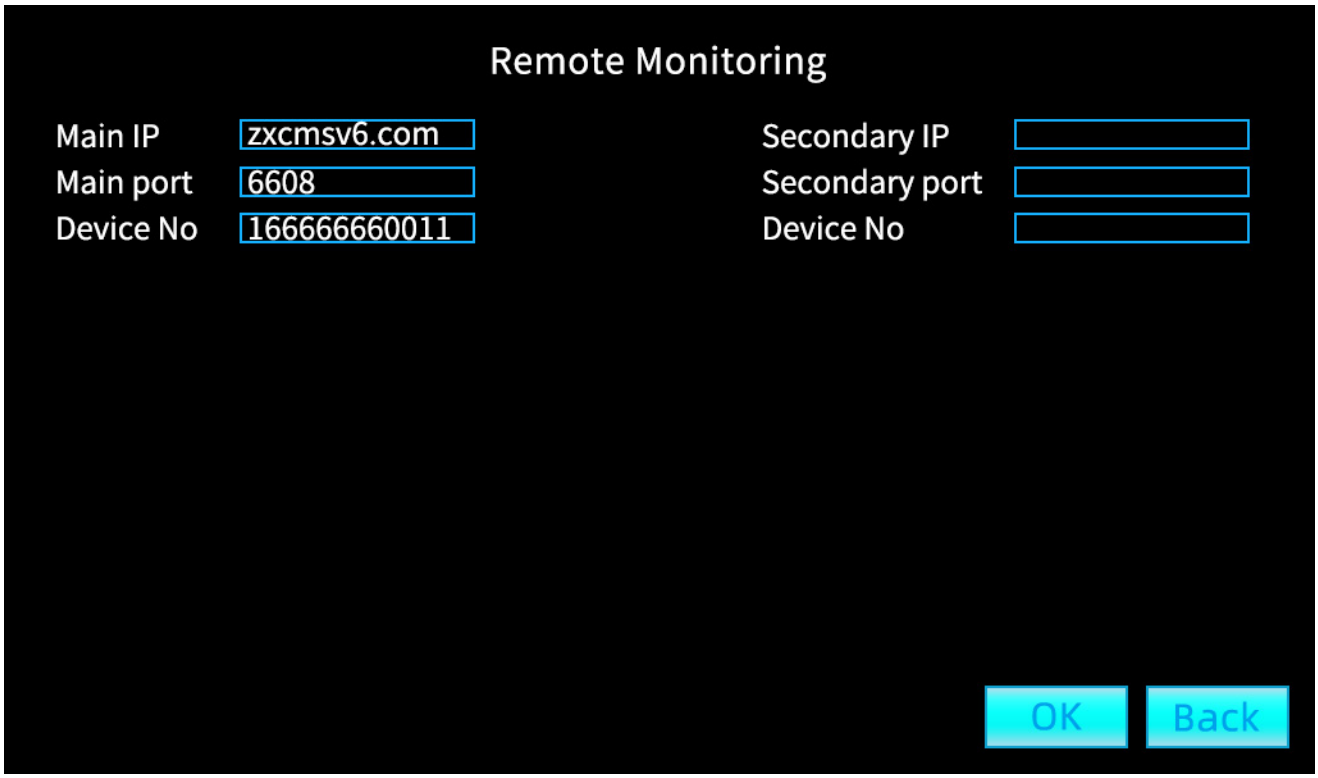


Figure 4 Remote monitoring

〈Primary IP Address〉: Enter the remote platform server IP address;

〈Main Port〉: Enter the corresponding port number;

〈Device No〉: Enter the corresponding device number;

〈Secondary IP address〉:

〈Secondary port〉:

〈Device No〉:

3.4.5 WiFi Settings

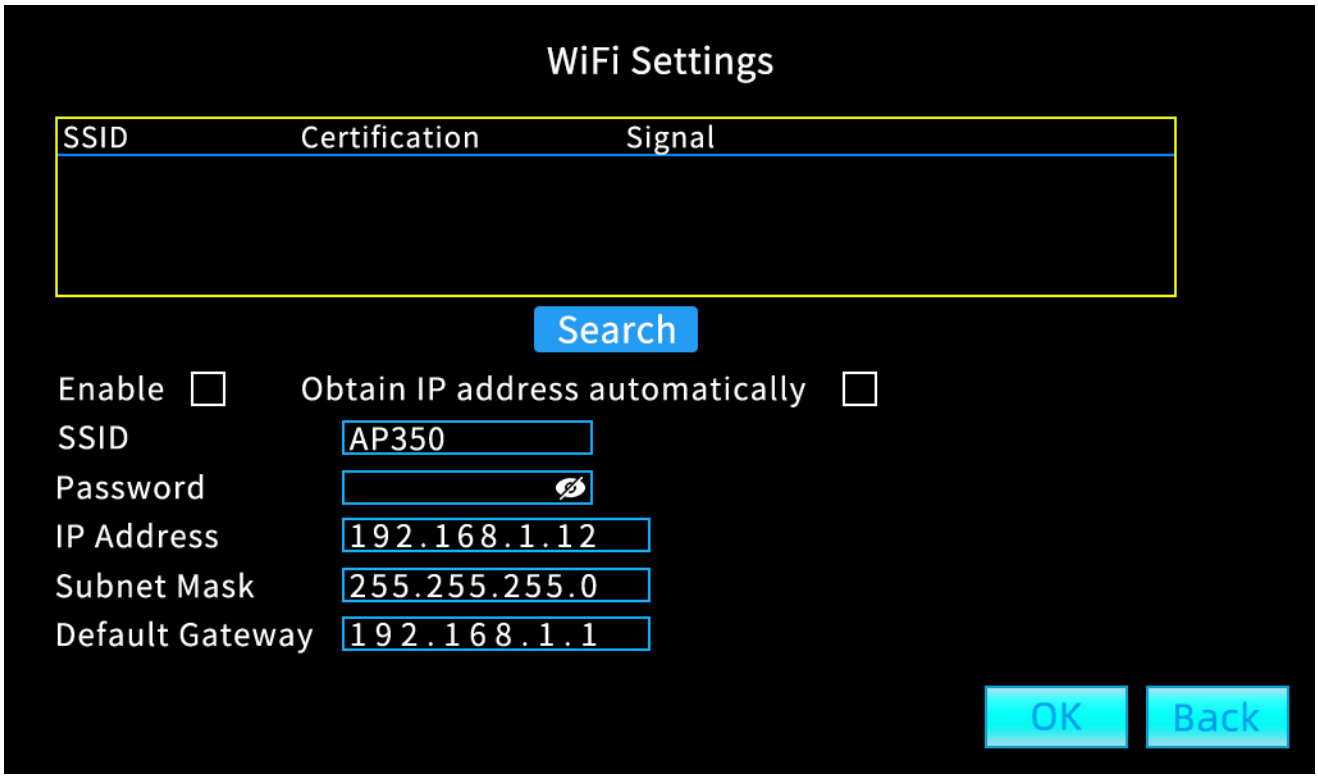


Figure 5 WiFi Settings

〈Search〉: Search for available WiFi;

〈Enable〉: Check to enable this feature;

〈Obtain IP address automatically〉: Check to enable this feature;

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

〈password〉: Enter WiFi password;

〈IP Address〉: IP Address;

〈Subnet Mask〉: Subnet Mask;

〈Default Gateway〉: Default Gateway;

First click the "Search" button to search for WiFi networks, select the WiFi network to connect to, enter the password, and click the "Connect" button to connect.

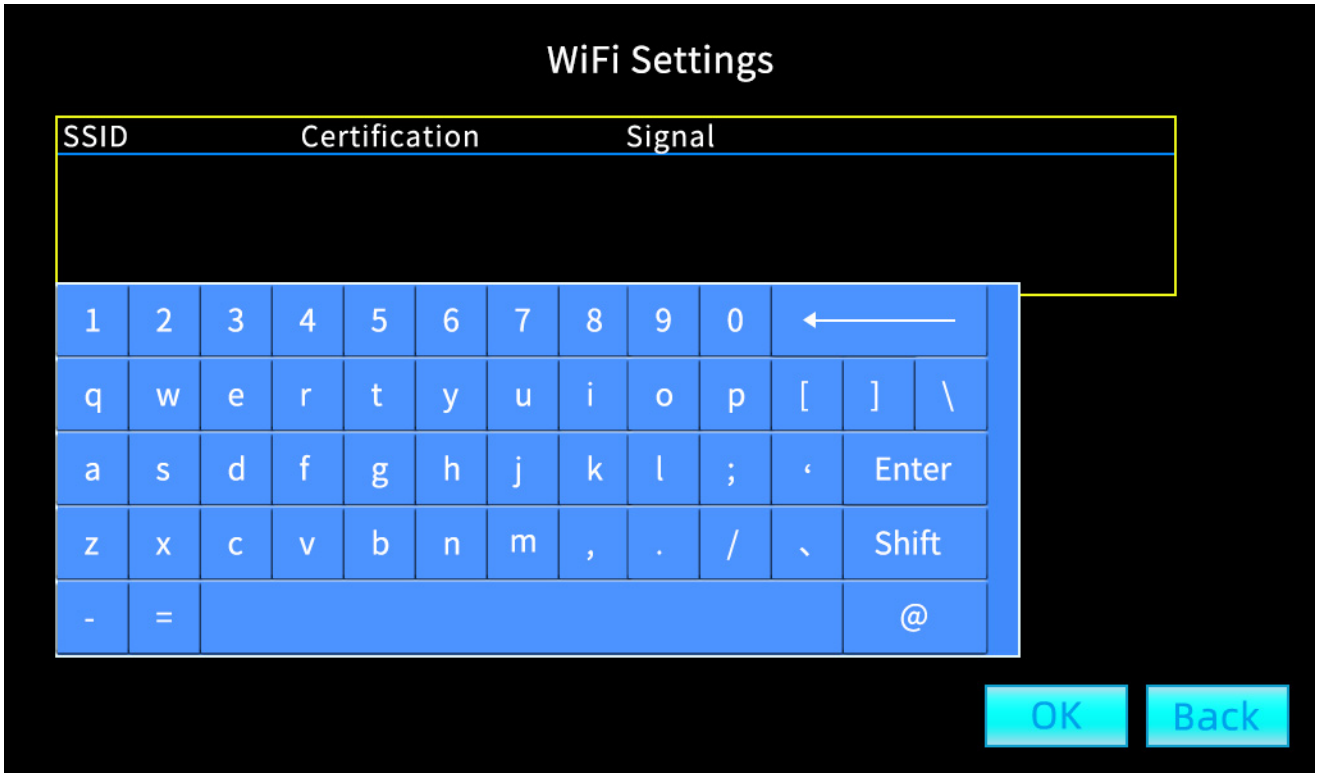


Figure 5_1 WiFi setting keyboard

3.4.6 Disk Management

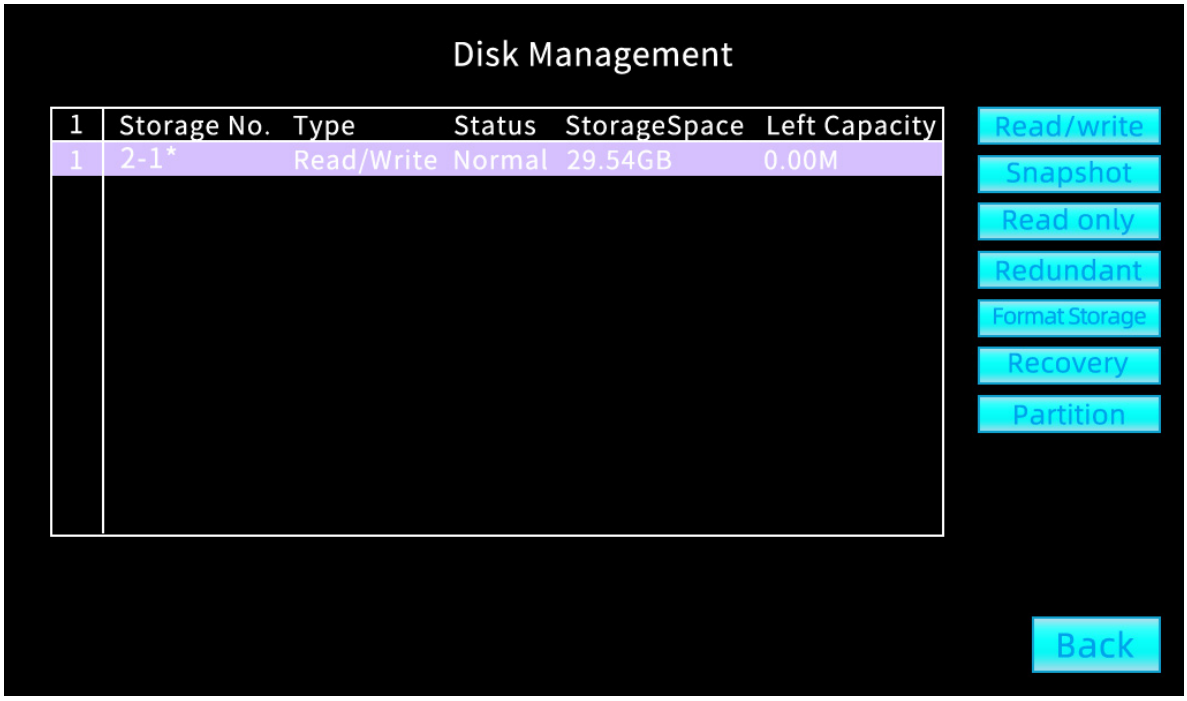


Figure 6 Disk Management

〈Set as read-write disk〉: Select a disk and click Set as read-write disk. Set the disk as read-write disk;

〈Set as snapshot disk〉: Select a disk and click Set as snapshot disk. Set the disk as a

snapshot disk;

〈Set as read-only disk〉: Select a disk and click Make Read-Only Disk. Make the disk read-only;

〈Set as redundant disk〉: Select a disk and click Set as redundant disk. Make the disk redundant;

〈Format the disk〉: Select a disk and click Format Disk. format the disk;

〈Recovery Error〉: Can repair some disk errors;

〈Partition〉: Select a disk to partition the disk;

3.4.7 Alarm System

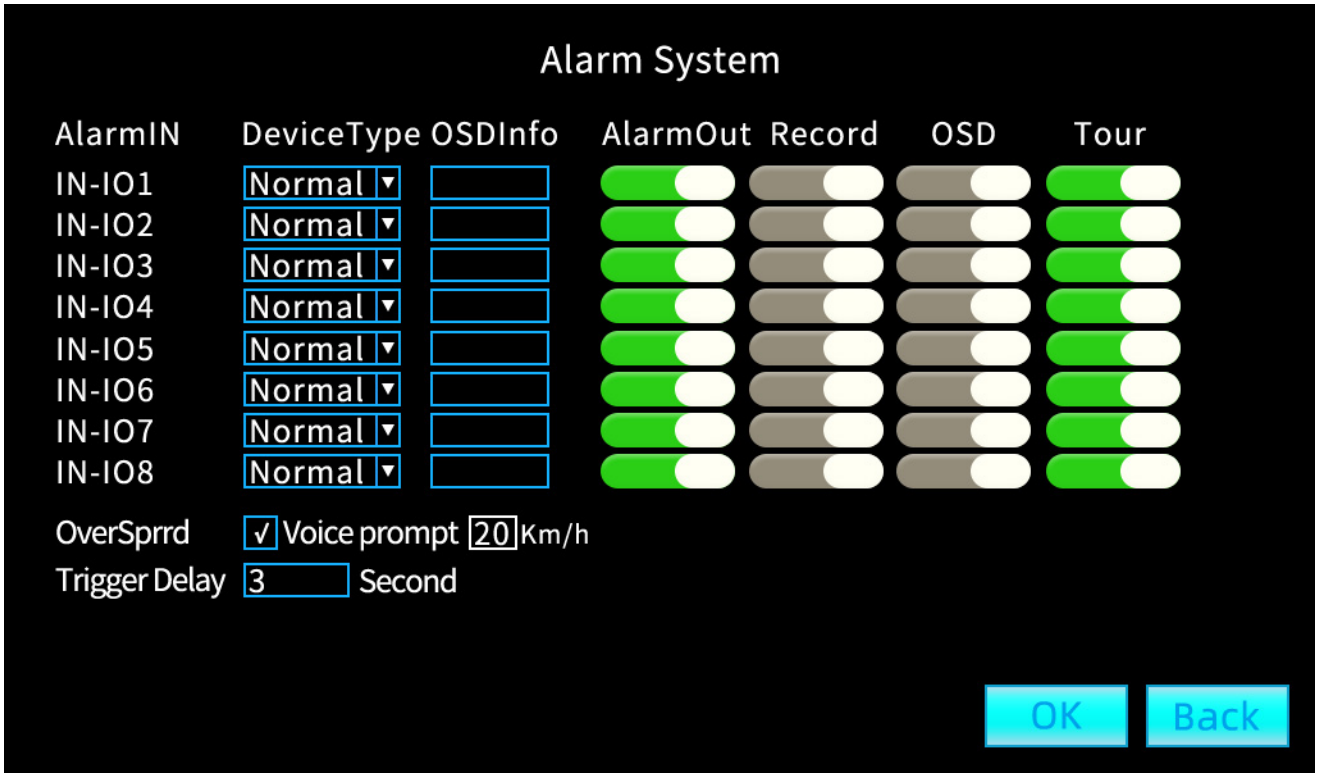


Figure 7 Alarm Settings

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

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

〈Alarm Output〉: When IO alarm signal is input, trigger alarm 1 or alarm 2 to output level signal;

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

〈OSD〉: When the IO alarm signal is input, trigger the OSD information to output on the

screen;

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

〈Speeding〉: Touch to trigger a voice prompt when the preset speed is exceeded;

〈Delay〉: Trigger alarm output time;

3.4.8 Display Setting

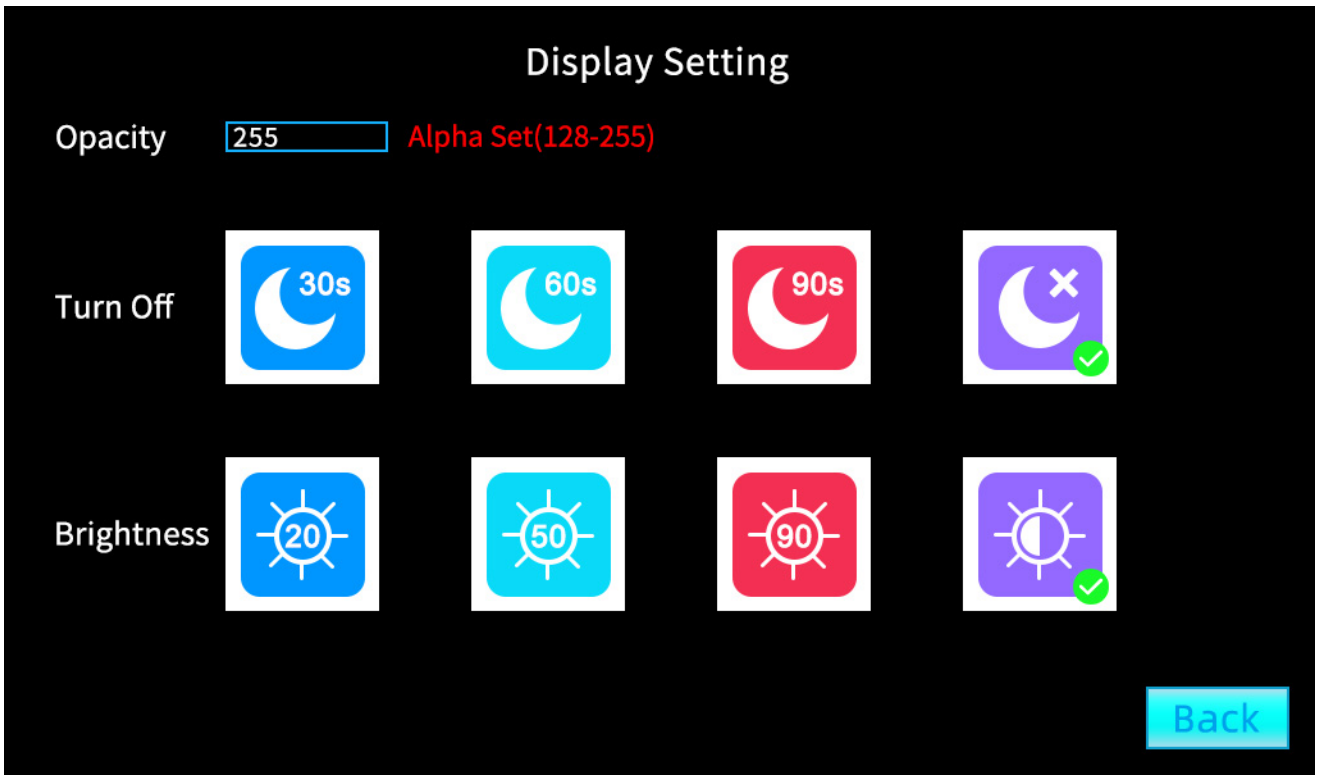


Figure 8 Display Settings

〈Transparency Settings〉: Transparency can be set (128-255);

〈Turn Off The Screen〉: Automatic screen-off time can be set, 30 seconds, 60 seconds, 90 seconds, no setting;

〈Adjust Brightness〉: Screen brightness can be set, 20%, 50%, 90%, automatic;

3.4.9 Image Settings

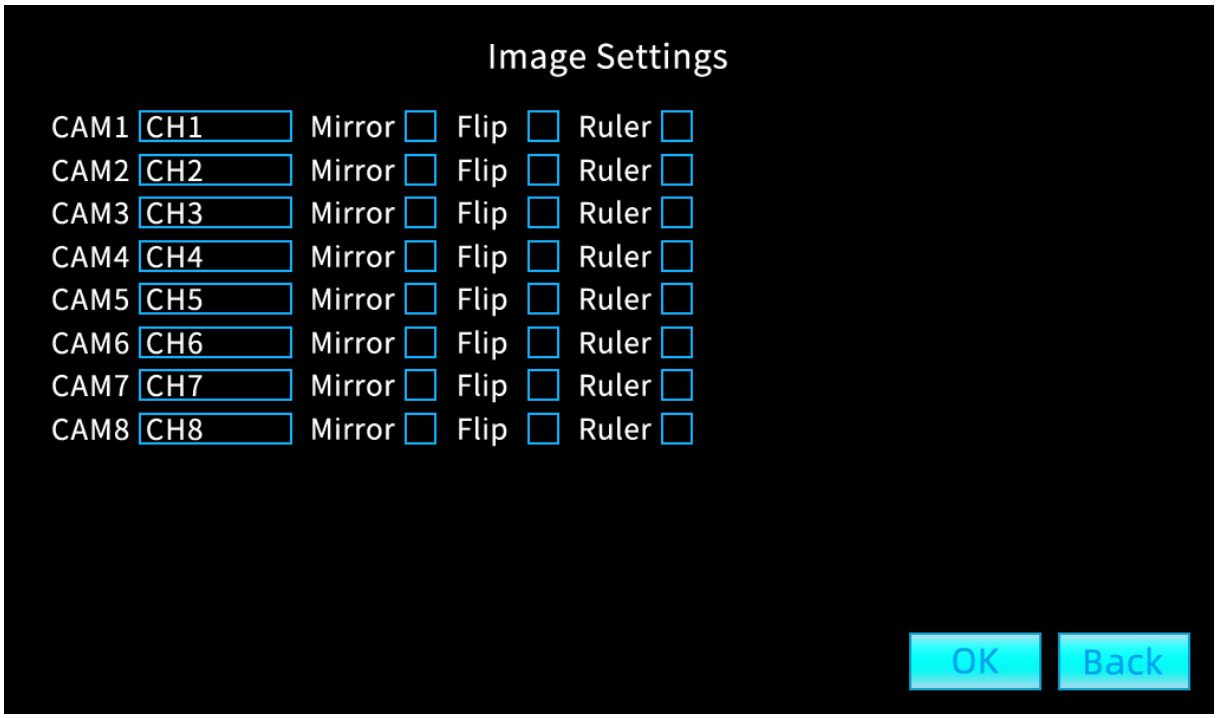


Figure 9 Image Settings

〈Channel〉: Custom channel name, Mirror, Flip, Ruler;

3.4.10 Parking Monitoring

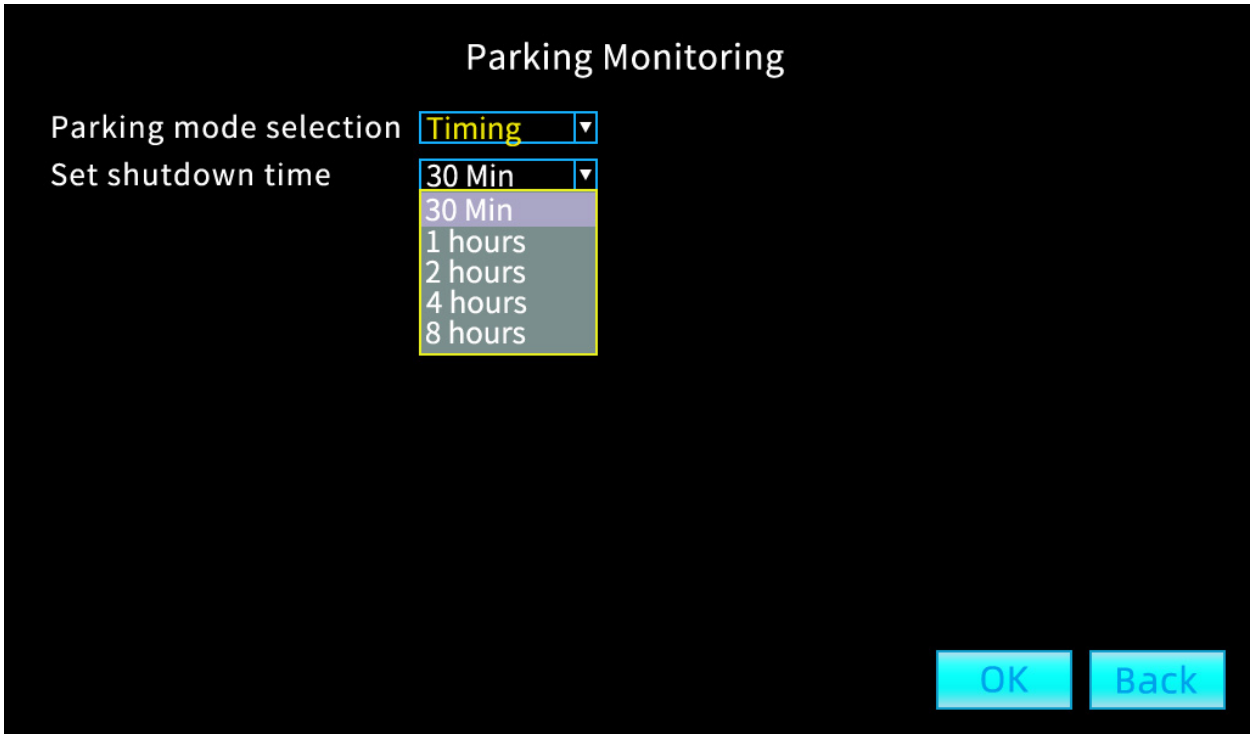


Figure 10 Parking monitoring

〈Parking monitoring mode selection〉: timed/untimed;

〈Set shutdown time〉: The shutdown time can be set to 30 minutes, 60 minutes, one hour, two hours, four hours, eight hours;

3.4.11 Voice Settings

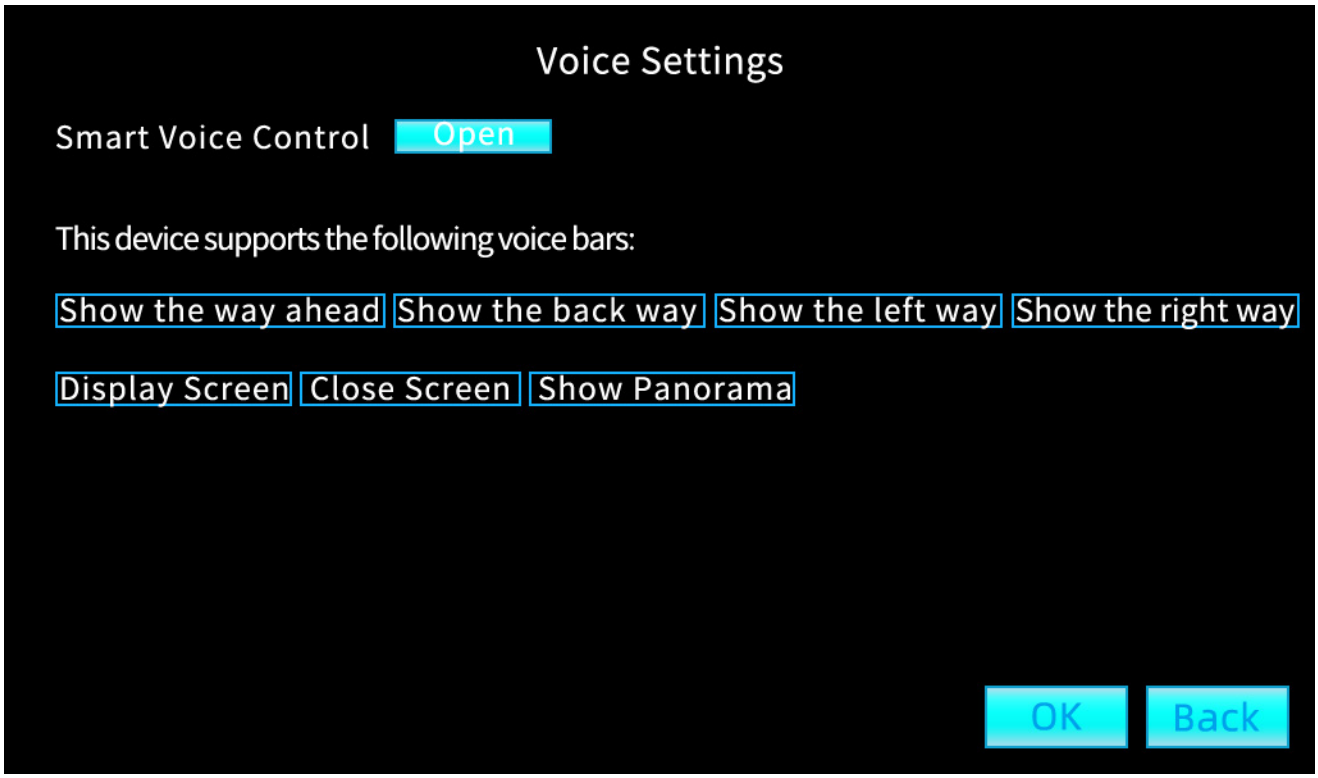


Figure 11 Voice prompt

〈Smart Voice Control〉: On/off;

〈The device supports the following voice bars〉: Show the front road, show the back road, show the left road, show the right road, show the screen, close the screen, display panorama;

3.4.12 Sound Settings

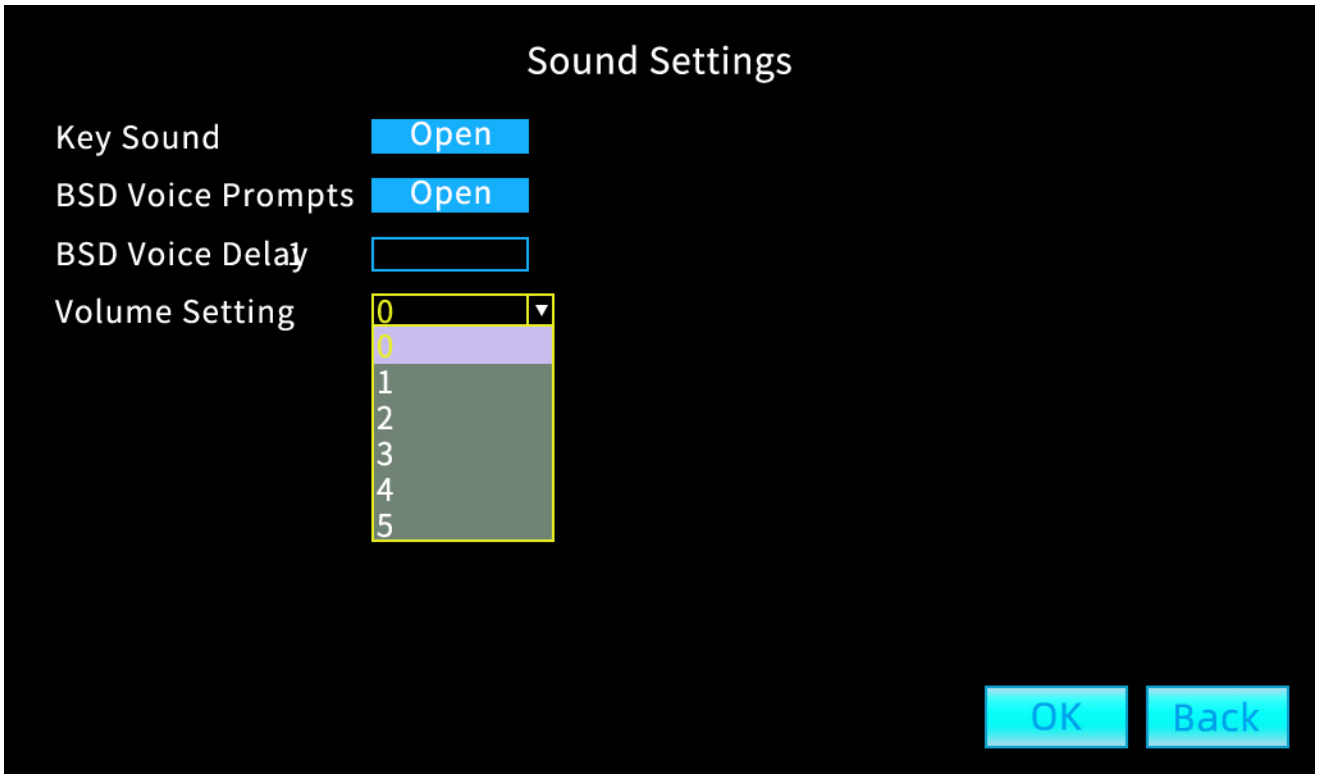


Figure 12 Sound Settings

〈Touch-tone〉: Whether to make a sound when you tap the screen, you can turn the sound on or off;

〈BSD Voice Prompt〉: On/off;

〈Volume Setting〉: Volume size can be set, support 1/2/3/4/5 files;

3.4.13 Network Settings

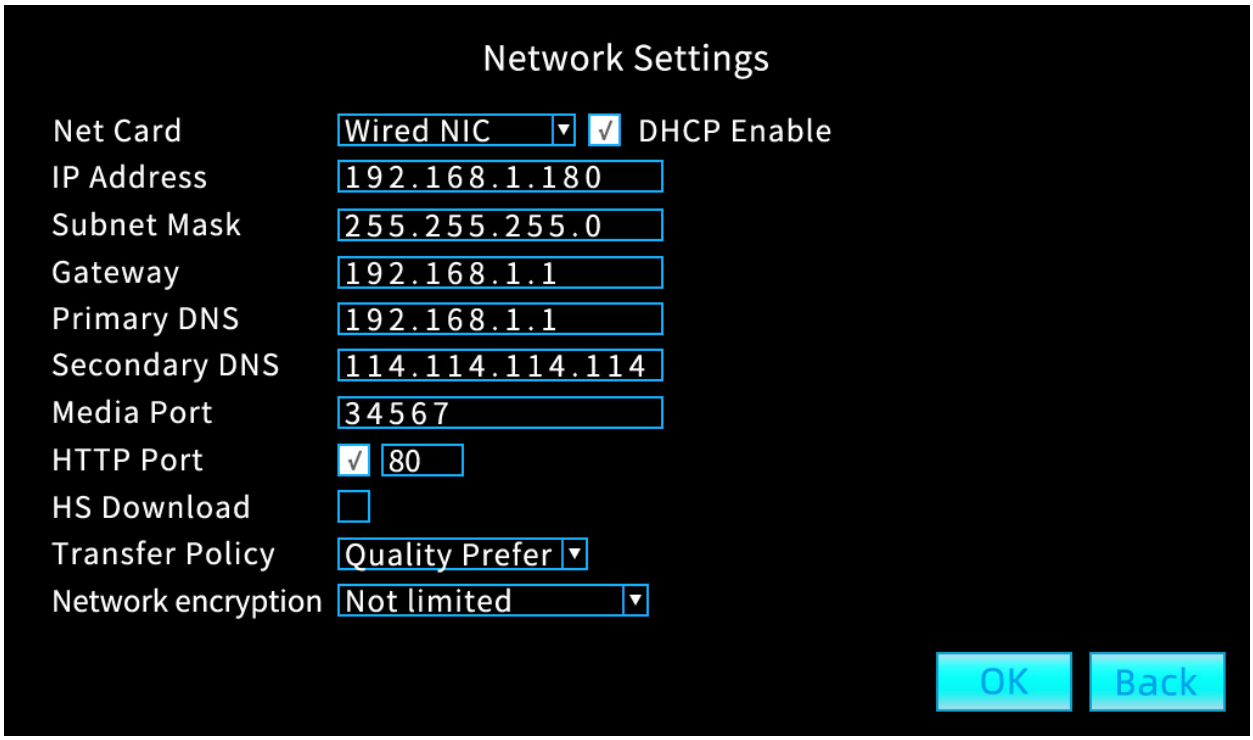


Figure 13 Network Settings

This function only works on devices with a network port:

〈Network Card〉: Wired network card;

〈Obtain IP Address Automatically〉: After selecting, assign an IP address to the device through routing, the following information cannot be manually modified;

〈IP Address〉: The default IP address of the system is 192.168.1.10 (can be modified by yourself);

〈Subnet Mask〉: Change the system default to 255.255.255.0;

〈Default Gateway〉: The system defaults to 192.168.1.1;

〈Preferred DNS〉: Set according to the actual situation of the user;

〈Alternate DNS〉: Set according to the actual situation of the user;

〈Media Port Number〉: The default is 34567, no need to modify;

〈HTTP Port〉: 80; No need for correction;

〈Internet high-speed Download〉:

〈Network Transmission Strategy〉: Image quality priority;

〈Network Encryption〉: Unlimited by default;

3.4.14 license Plate Settings

Figure 14 License plate settings

〈OSD〉: Check to enable this feature;

〈license Plate Settings〉: Set license plate number;

3.4.15 Serial Port Settings

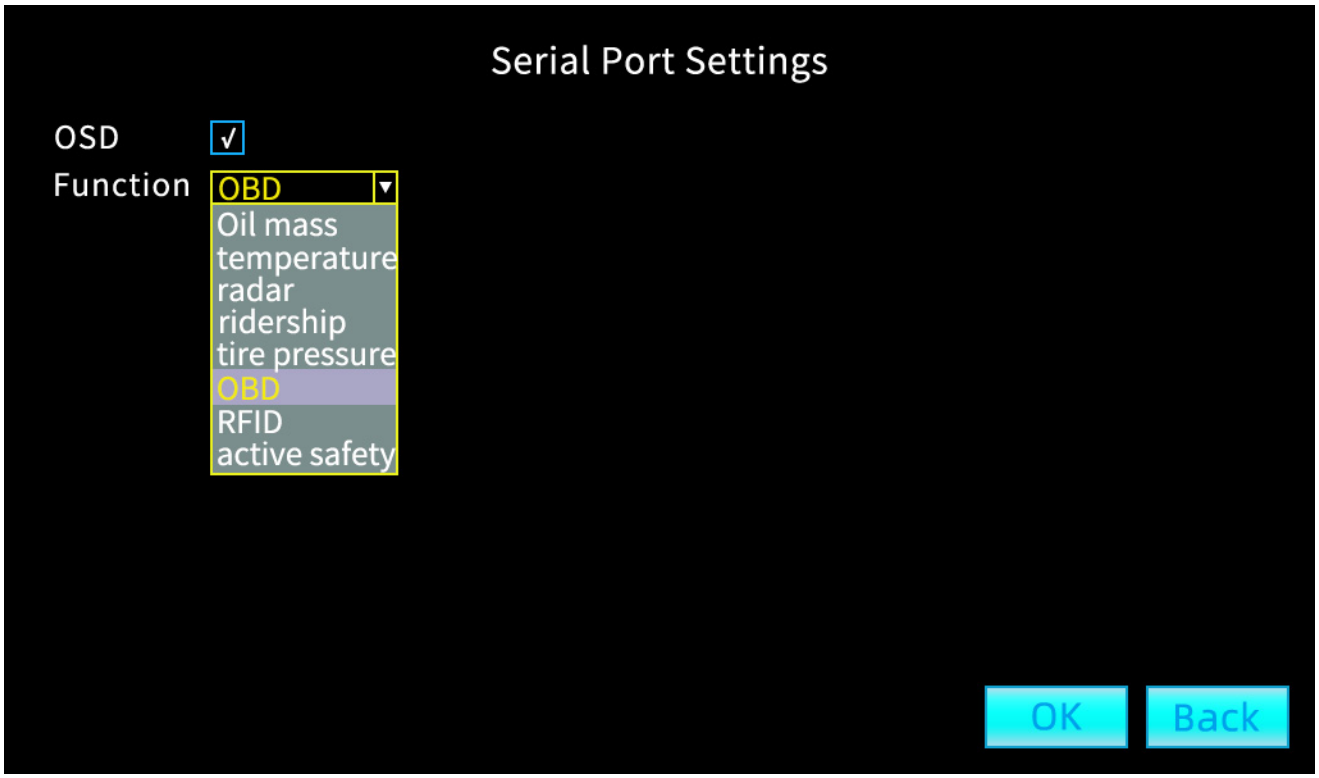


Figure 15 Serial port settings

〈OSD〉: Check to enable this feature;

〈Function〉: Fuel quantity, temperature, radar, passenger flow, tire pressure, OBD, RFID, active safety;

3.4.16 Preview Screen

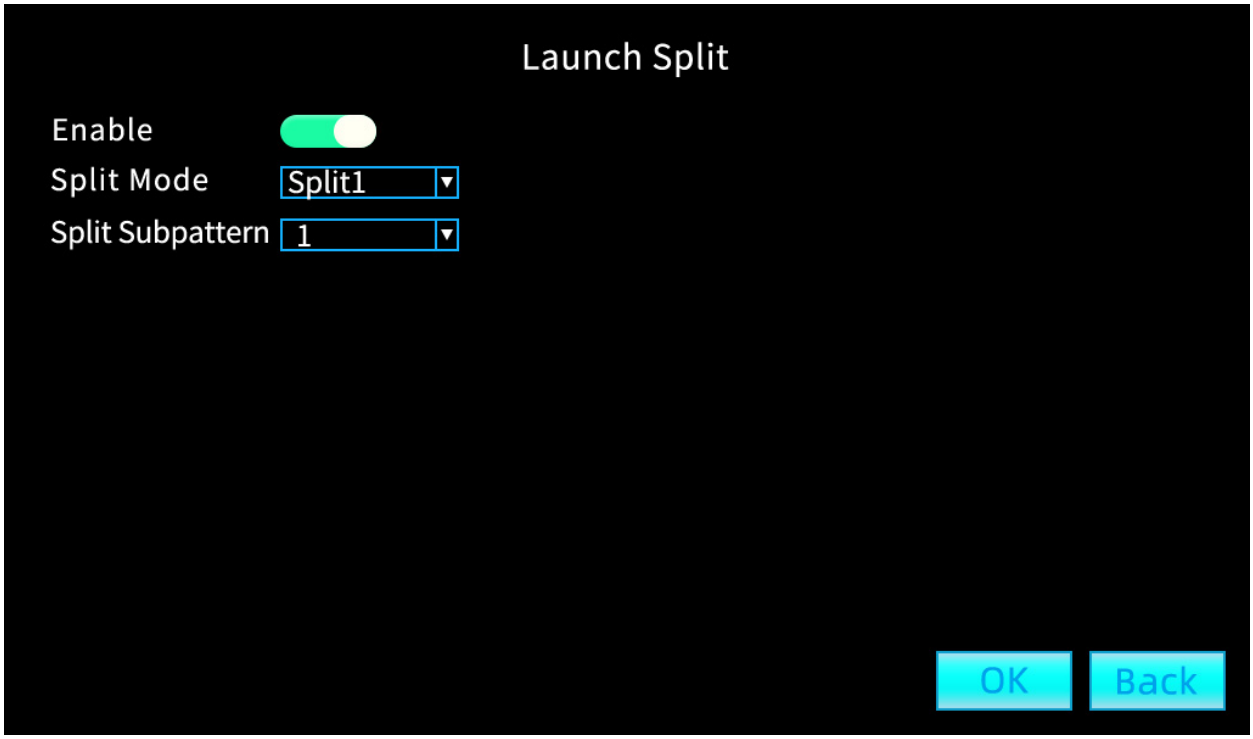


Figure 16 Stop preview screen

〈Enable〉: First indicate that this feature is enabled;

〈Split Mode〉: Split1、Split2、Split3、Split4、Split5、Split6;

〈Split Subpattern〉: 1、2、3、4、5、6;

3.4.17 4G Network

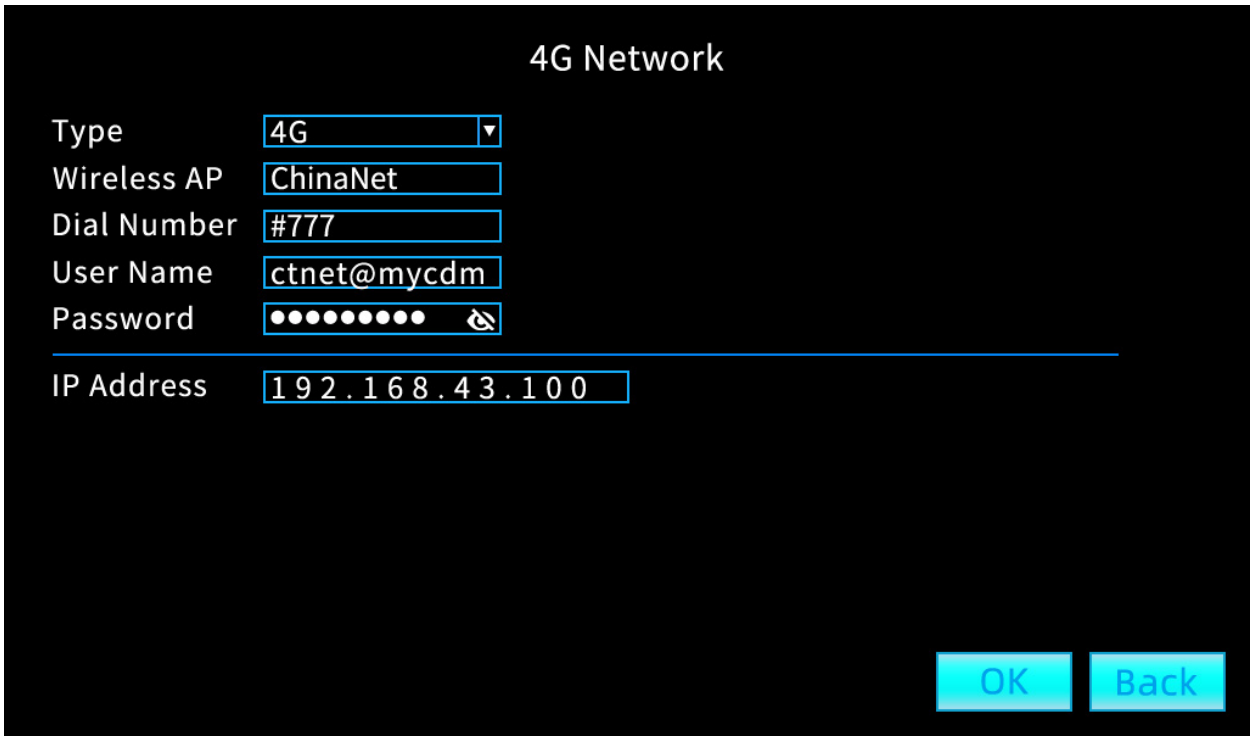


Figure 17 4G network

〈Type〉: carrier type;

〈Wireless AP〉: Overseas operators need to fill in the corresponding APN;

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

〈User Name〉: Overseas operators need to fill in the corresponding user name;

〈IP Address〉: IP address obtained after successful dialing;

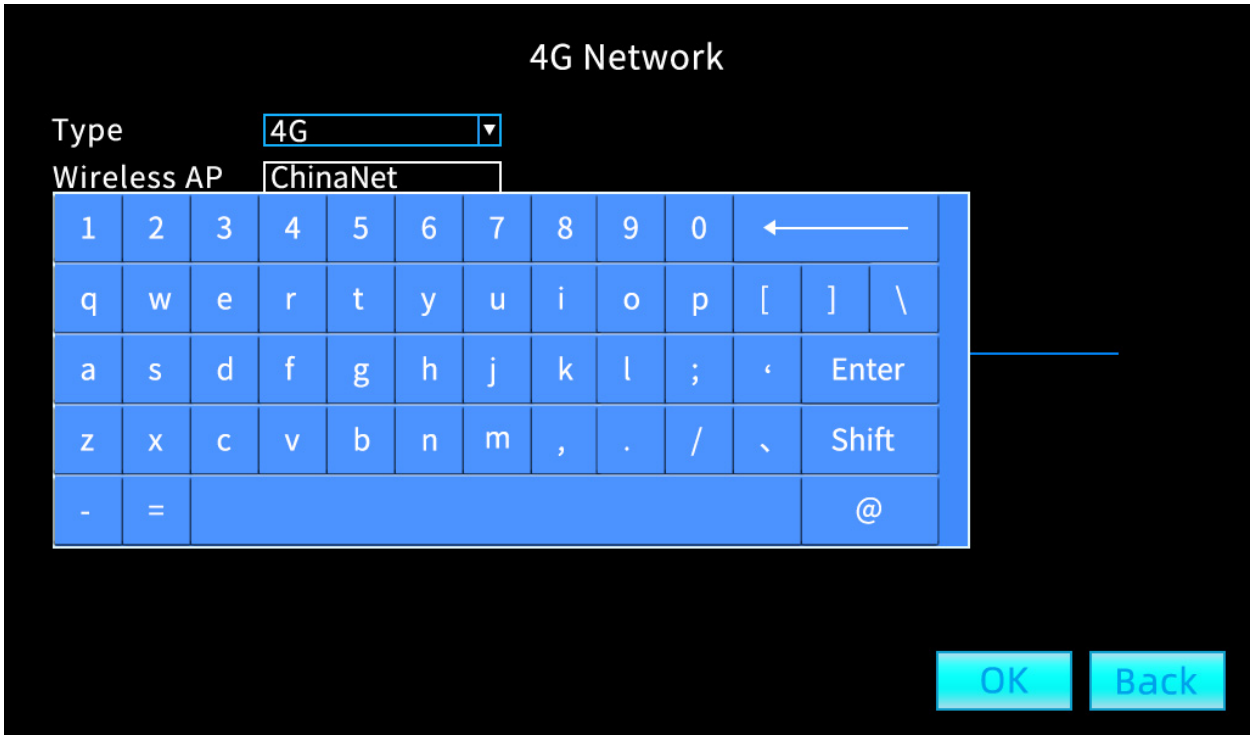


Figure 17_1 4G network keyboard input

3.4.18 User Management

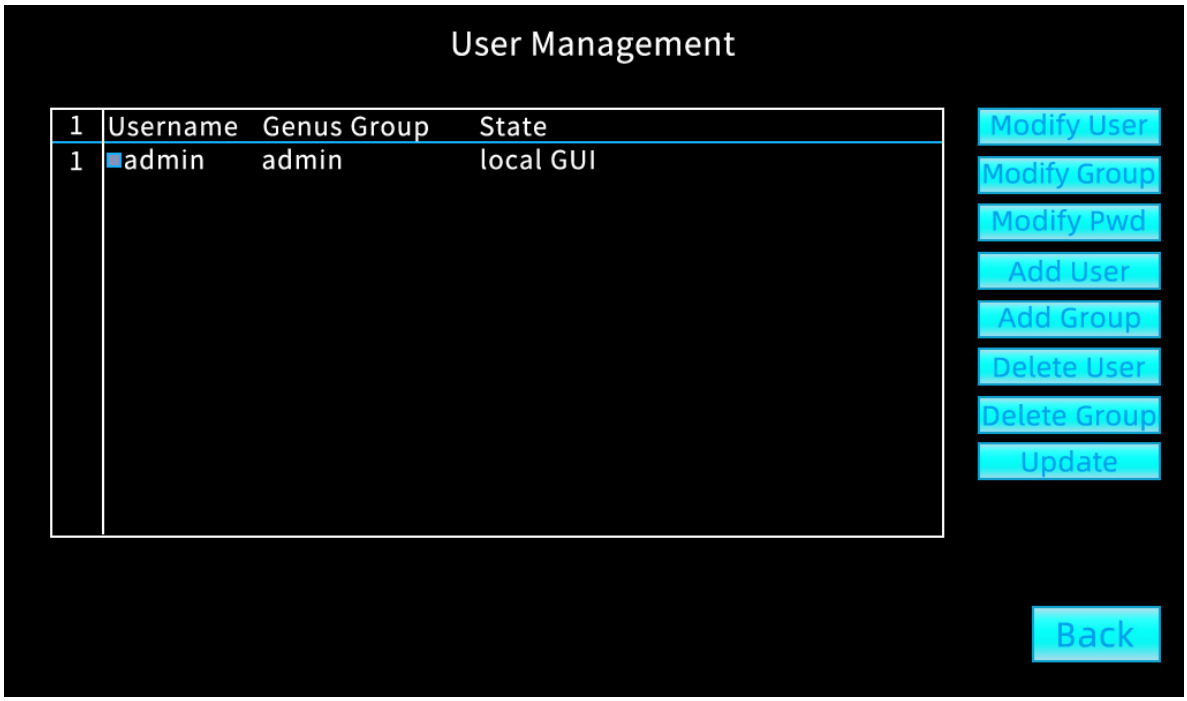


Figure 18 User management

〈Modify User〉: Modify user name;

〈Modify Group〉: Can modify user groups;

〈Change Password〉: Modify the selected username and password;

〈Increase User〉: Multiple users can be added;

〈**Increase Group**〉: Multiple user groups can be added;

〈**Delete Users**〉: Optionally delete unwanted usernames;

〈**Delete Group**〉: Can delete unwanted user groups;

〈**Update**〉: refresh the interface;

〈**Back**〉: Return to previous menu;

3.4.19 System Maintenance

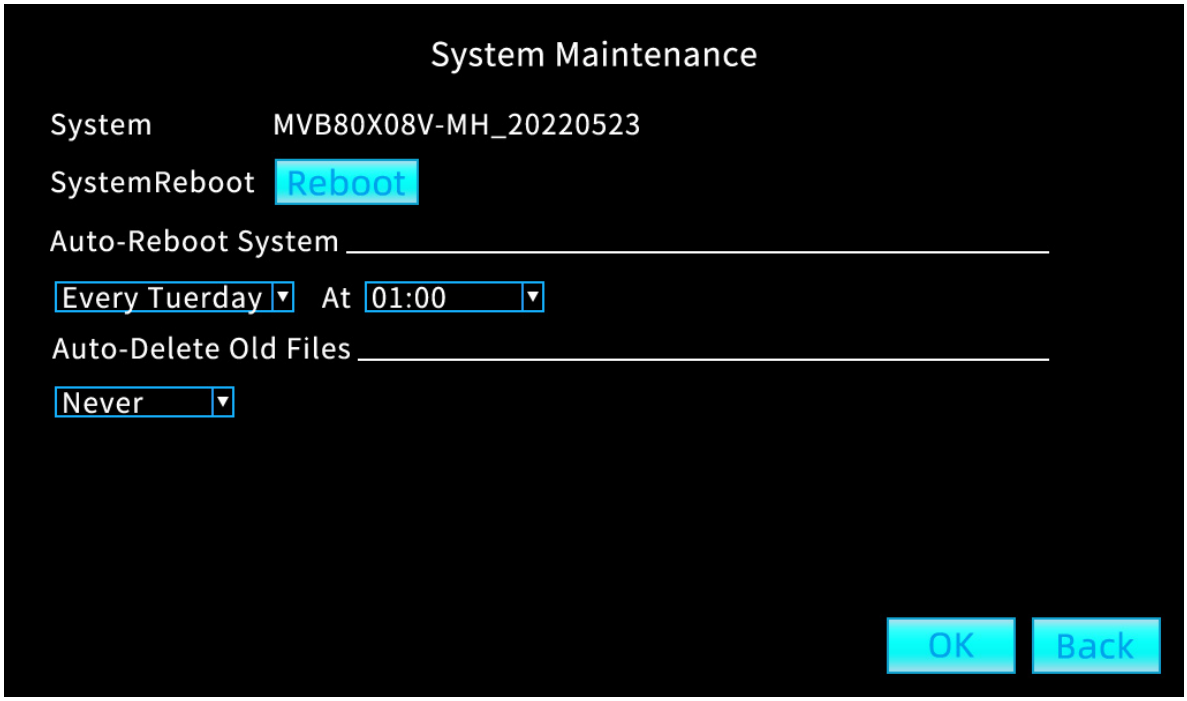


Figure 19 System Maintenance

〈**System**〉: Display system software version number;

〈**System Restart**〉: Click the restart button and it will restart;

〈**Auto-Reboot System**〉: Never, every day, every Monday to every Sunday, 00:00-23:00;

〈**Auto-Delete Old Files**〉: never, custom (a few days ago);

3.4.20 Log Information

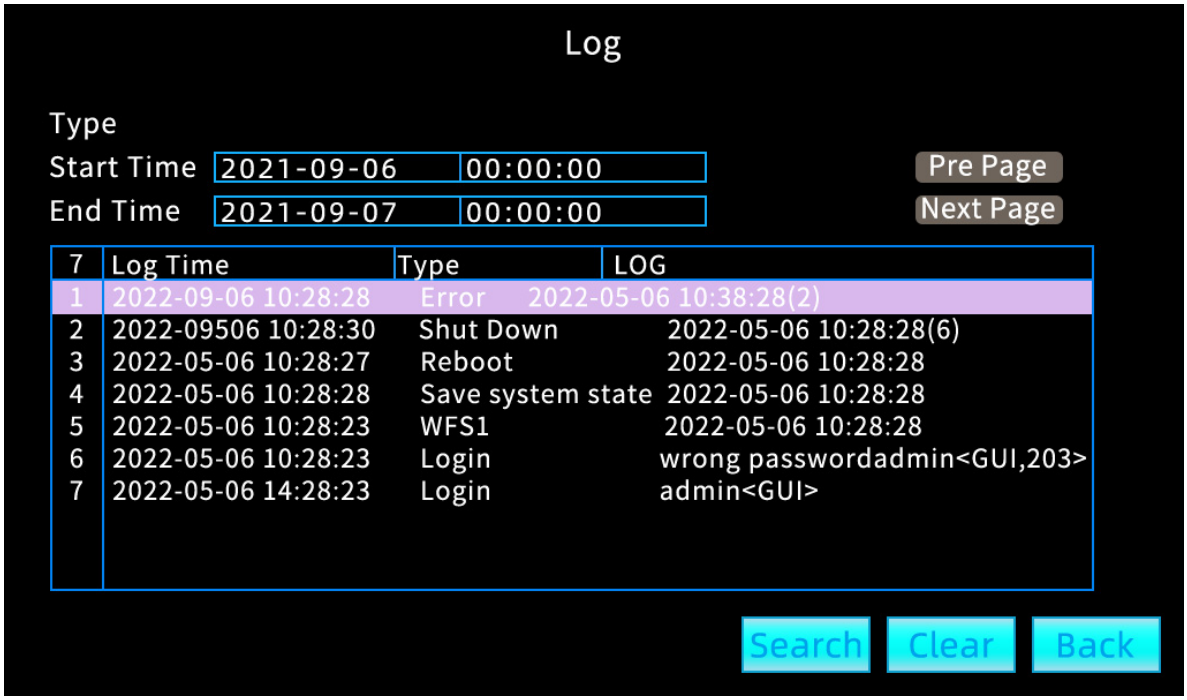


Figure 20 Log information

〈Type〉: Divided into all, system operation, configuration operation, data management, alarm event, recording operation, user management, file operation;

〈Starting Time〉: Set the start time to query;

〈End Time〉: Set the end time to query;

〈Previous Page〉: Query the previous page where the information content is displayed;

〈Next Page〉: Query out the next page where the information content is displayed;

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

〈Clear〉: Clear query results;

〈Back〉: Return to previous menu;

3.4.21 System Upgrade

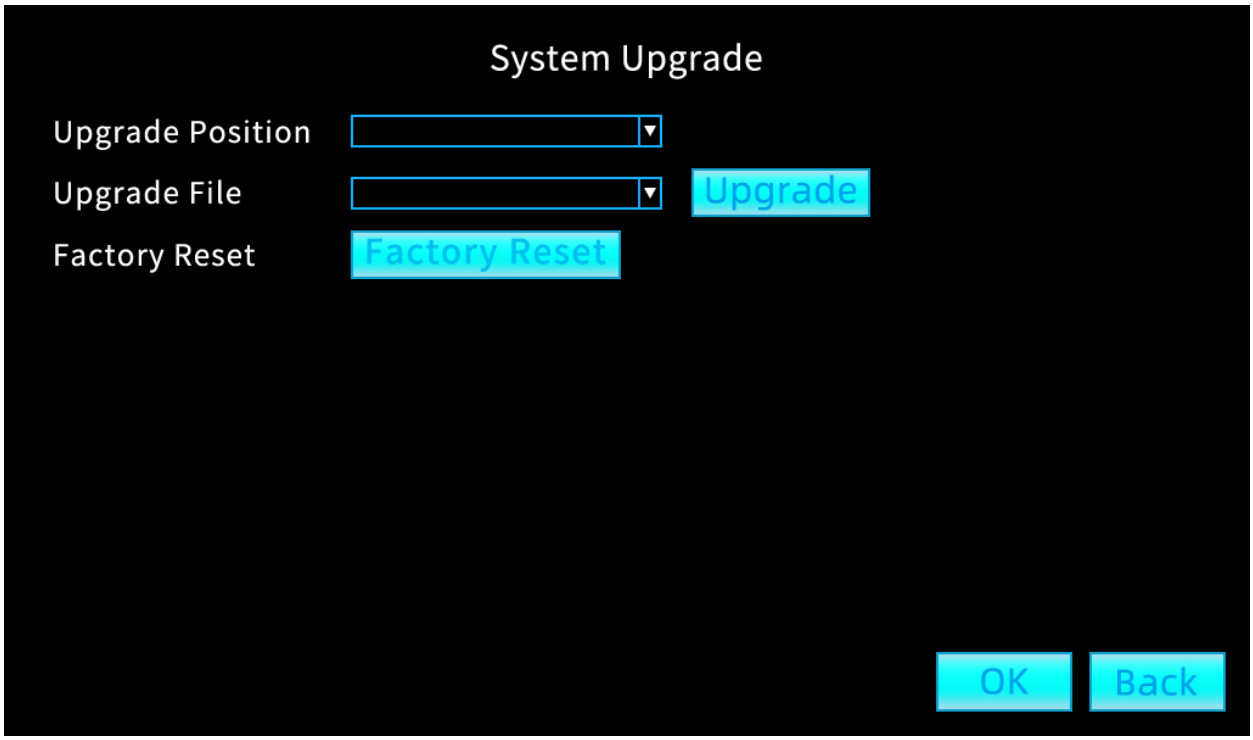


Figure 21 System upgrade

〈Upgrade Position〉: Insert the SD card or U disk with the upgrade file and the path will be output automatically;

〈Upgrade File〉: After selecting the file name that needs to be upgraded, select the Upgrade button;

〈Factory Reset〉: Factory reset resets all data;

4、4G Platform Installation Instructions

1. **Mobile client installation method**:

Search for CMSV6 through the APP Store for Apple mobile phones to install

Android phone searches for CMSV6 through the application market to install

or open via web: **http://zxcmsv6.com** to download

2. **Computer client installation method**:

Open via web: **http://zxcmsv6.com** to download

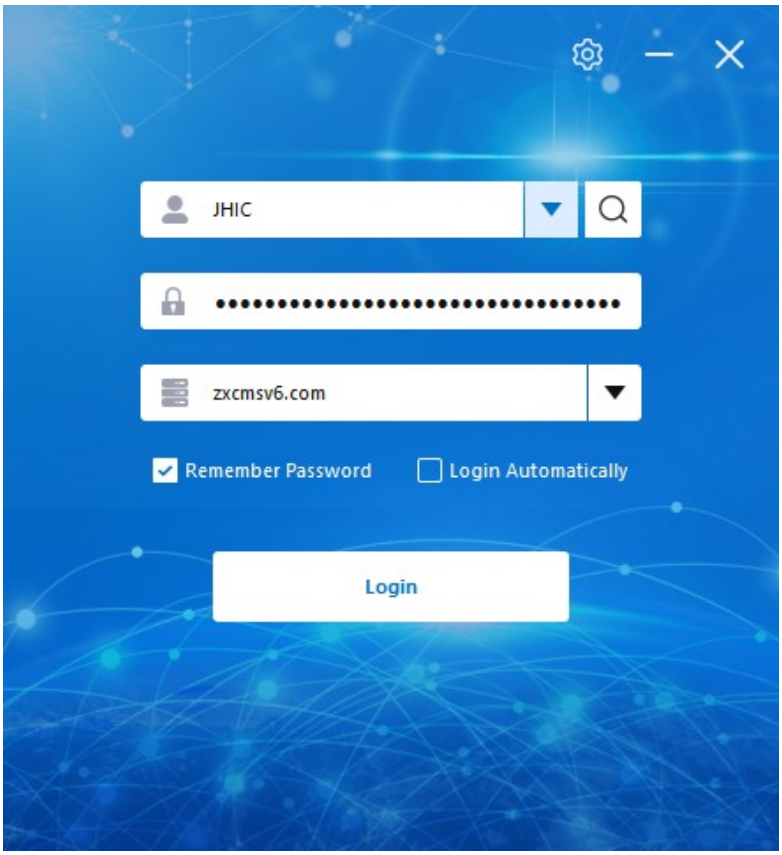


Figure 22 Client login interface

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