Network Keyboard 5000 Series

Quick Start Guide

V2.0.0

Foreword

General

This document mainly introduces appearance, functions and operations of network keyboard (hereinafter referred to be "the keyboard").

Models

NKB5000, NKB5000-F

Safety Instructions

The following categorized signal words with defined meaning might appear in the manual.

Signal Words	Meaning
DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
TIPS	Provides methods to help you solve a problem or save you time.
NOTE	Provides additional information as the emphasis and supplement to the text.

Revision History

Version	Revision Content	Release Time
V2.0.0	● Add audio adjustment, task management, plan tour and channel group configuration to local preview module. ● DSS-PRO, DSS-C9100 and DSS-Express platforms support TV wall and live view. ● Add safety baseline V1.4 needs. ● Lock the screen with one button.	October 2019
V1.1.0	● Update the program	December 2018
V1.0.0	● First Release	October 2017

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others, such as face, fingerprints, car plate number, Email address, phone number, GPS and so on. You need to be in compliance with the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures, including but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.

About the Manual

- The manual is for reference only. If there is inconsistency between the manual and the actual product, the actual product shall prevail.
- We are not liable for any loss caused by the operations that do not comply with the manual.
- The manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper manual, CD-ROM, QR code or our official website. If there is inconsistency between paper manual and the electronic version, the electronic version shall prevail.
- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the manual. Please contact the customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in print. If there is any doubt or dispute, please refer to our final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and the company names in the manual are the properties of their respective owners.
- Please visit our website, contact the supplier or customer service if there is any problem occurred when using the device.
- If there is any uncertainty or controversy, please refer to our final explanation.

Important Safeguards and Warnings

The following description is the correct application method of the device. Please read the manual carefully before use, in order to prevent danger and property loss. Strictly conform to the manual during application and keep it properly after reading.

Operating Requirement

- Do not place and install the device in an area exposed to direct sunlight or near heat generating device.
- Do not install the device in a humid, dusty or fuliginous area.
- Keep its horizontal installation, or install it at stable places, and prevent it from falling.
- Do not drip or splash liquids onto the device; do not put on the device anything filled with liquids, in order to prevent liquids from flowing into the device.
- Install the device at well-ventilated places; do not block its ventilation opening.
- Use the device only within rated input and output range.
- Do not dismantle the device arbitrarily.
- Transport, use and store the device within allowed humidity and temperature range.

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and EMC Directive 2014/30/EU. Operation of this device in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Power Requirement

- Use batteries according to requirements; otherwise, it may result in fire, explosion or burning risks of batteries.
- To replace batteries, only the same type of batteries can be used!
- The product shall use electric wires (power wires) recommended by this area, which shall be used within its rated specification.
- Use standard power adapter matched with this device. Otherwise, the user shall undertake resulting personnel injuries or device damages.
- Use power supply that meets SELV (safety extra low voltage) requirements, and supply power with rated voltage that conforms to Limited Power Source in IEC60950-1. For specific power supply requirements, please refer to device labels.
- Products with category I structure shall be connected to grid power output socket, which is equipped with protective grounding.
- Appliance coupler is a disconnecting device. During normal use, keep an angle that facilitates operation.

Table of Contents

1 Introduction

1.1 Overview

The network keyboard can add TV wall, display videos on the TV wall, and carry out PTZ control.

For appearance of network keyboard, see Figure 1-1. For details, see Table 1-1.

Figure 1-1 Appearance

Table 1-1 Icon description

No.	Icon	Function
1	Power	Working power indicator light. Green light turns on when working power of network keyboard is normal.
	Network	Network indicator light. Green light turns on when the keyboard is connected to network normally.
	Alarm	Alarm indicator light. Red light turns on in case of alarms.
2	/	Zoom in/zoom out PTZ lens.
	/	Increase/decrease the focus of PTZ lens.
	/	Increase/decrease the iris of PTZ lens.
		Shortcut key to control speed dome light.
		Shortcut key to control speed dome wiper.
3	—	Touch screen, showing keyboard screen menu.

No.	Icon	Function
4		Navigation bar.
		Homepage.
		Return.
5	Fn	Function key. It is line scanning by default.
	Preset	Make PTZ control, and configure preset point.
	Tour	Make PTZ control, and tour between points.
	Aux	Auxiliary key. It is pattern by default.
6	—	Includes remote control lever, auxiliary menu and function operation.

1.2 Key Module

- Key module is not available in platform preview mode.
- F1 cannot be called in platform TV wall mode.

After key module is connected to network keyboard through USB or Bluetooth successfully, green light at the upper right corner will be on for 10s and then turn off. For appearance of key module, see Figure 1-2. For details, see Table 1-2.

When key module is connected with network keyboard, turn on main switch at the side of key module. For Bluetooth connection, default Wi-Fi network name is "KEYBOARD".

Figure 1-2 Key module

Table 1-2 Key description

Key	Example	Function
F1	Number 1 to 16 +F1	Call No. 1 to 16 plans quickly. It applies to preview and TV wall functions. View the plan numbers on the **Plan Management** interface.
F2	Number 1 to 16 +F2	Call No. 1 to 16 MAC plans quickly. View the Mac plan numbers on the **MAC** interface.
F3	Press F3	Reserved.
F4	Press F4	Reserved.

Key	Example	Function
Mode	Operation mode switch. It is operation mode at present.	Reserved.
0–9	Number 0–9	—
Screen	123 + Screen	Select screen.
Window	3 + Window	Focus on the third window of present screen.
Split	4 + Split	Divide present screen into 4 splits.
⌫	Press	Delete 1 digit from number buffer zone. The icon is similar to squares.
(Camera group)	123 +	Drag No. 123 camera group onto the current window for automatic tour of videos in the channel.
(Camera)	567 +	Drag No. 567 camera onto present window. 0 + camera means to turn off present video source.
Preset	2 + Preset	Call No. 2 preset.
Tour	5 + Tour	Call No. 5 tour.
PTZ	—	In case of USB power supply, press and hold the button to turn on and off the backlight.
Scan	3 + Scan	Call No. 3 scan.
Pattern	4 + Pattern	Call No. 4 pattern.
Rotate	Press	Press it once to start rotation, and then press it again to stop rotation.
Exit	—	Reserved.
Confirm	—	Reserved.
(Switch) previous channel	KEY_ previous channel	Present focus window channel reduces by 1. The icon is similar to squares.
(Next channel)	KEY_ next channel	Present focus window channel adds by 1. The icon is similar to squares.
	2+	Play back videos of No. 2 channel.

1.3 Port Introduction

1.3.1 Rear Panel Ports

For rear panel ports, see Figure 1-3. For details, see Table 1-3.

Figure 1-3 Rear panel port

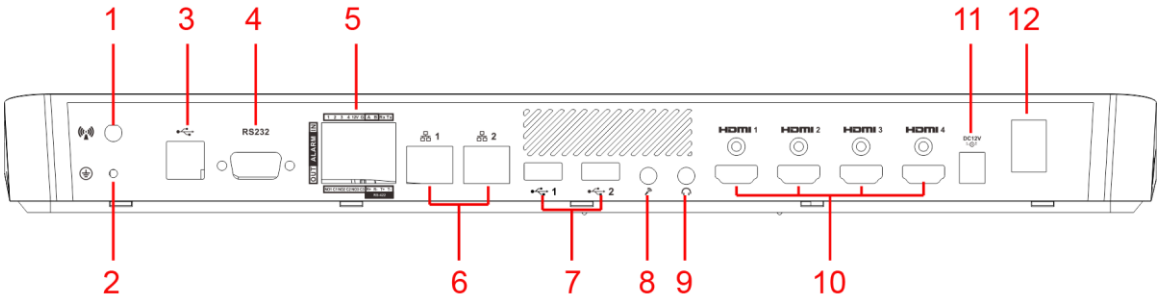


Table 1-3 Rear panel port description

Number	Name	Description
1	Wi-Fi port	Connect Wi-Fi antenna.
2	Grounding stud	Grounding.
3	USB2.0	Connect mouse and USB.
4	RS–232	Connect serial port.
5	Alarm input/output port	For details, see Table 1-4.
6	Network port	Connect the network.
7	USB3.0	Connect mouse and USB.
8	Microphone	Connect microphone.
9	Earphone	Connect earphone.
10	HDMI1–HDMI4	Connect devices with HDMI port, such as display screen.
11	Power port	Connect power cord to supply power.
12	Power button	Turn on and off the power supply.

For alarm input and output port, see Figure 1-4. For details, see Table 1-4.

Figure 1-4 Alarm input and output port

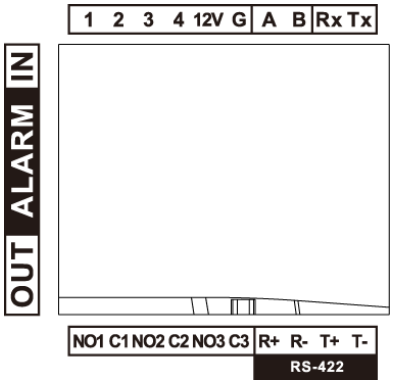


Table 1-4 Alarm input and output port description

Name	Description
1–4	Alarm input port. Reserved. The software does not support at present.
12V	12V DC 4A power.
G	Grounding.
A, B	Connect PTZ through RS–485.

Name	Description
Rx, Tx	RS-232 receiving and sending port.  Reserved. The software does not support at present.
NO1C1, NO2C2, NO3C3	3 groups of alarm output port.  Reserved. The software does not support at present.
R+, R-, T+, T-	RS-422 port.  Reserved. The software does not support at present.

1.3.2 Side Panel Port

There are three keys on the side panel, including mute key, volume up key and volume down key.

2 Start and Shutdown

2.1 Start

Connect the power, press power button, and boot up the network keyboard. The system displays login interface after it is booted up successfully. Its interface can be operated with touch screen and external mouse.

2.2 Shutdown

Step 1 Shutdown.

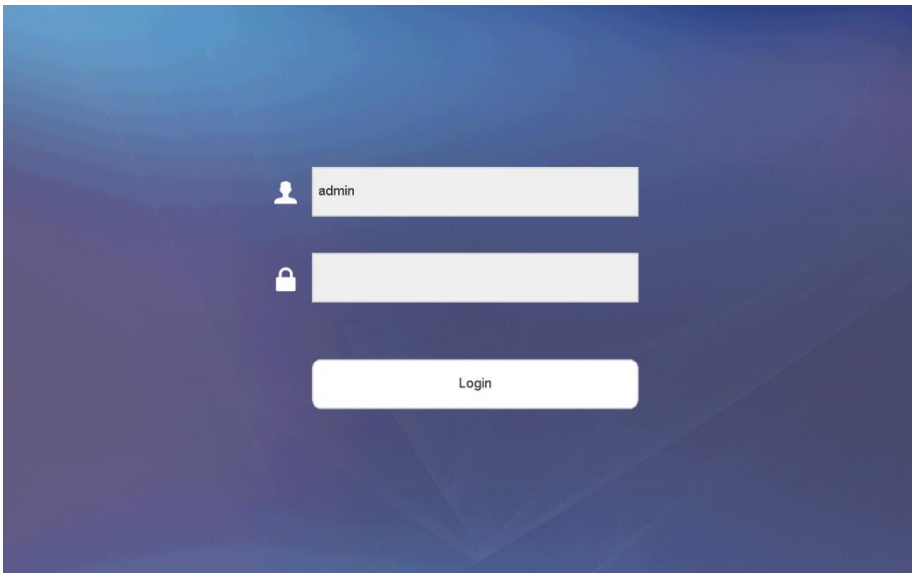
- Method 1: Click  at the upper right corner of main interface, and then select **Shutdown** to exit the system.
- Method 2: Press power button on the rear panel.

Step 2 After exiting the system, unplug the power cable to turn off the device.

2.3 Lock Screen

Press and hold  at the lower left corner of the keyboard. The keyboard will lock screen, and displays the login interface. See Figure 2-1.

Figure 2-1 Login interface



3 Quick Configuration

3.1 Initialization

Initialize the device for the first use.

On the login interface, press and hold at the lower left corner of the keyboard for 15 s.

The interface prompts that "Do you want to clear all of the configurations?" Click **OK** to initialize the device.

All configurations will be cleared after initialization. Be cautious.

Step 1 Boot up the device.

The **End-User License Agreement** interface is displayed.

Step 2 Read the agreement, and select I have read and agree to all terms.

Step 3 Click **Next**.

The **Device Initialize** interface is displayed.

Step 4 Enter password and confirm password.

The password must consist of more than 8 characters, and must be the combination of numbers and letters.

Step 5 Click **OK**.

The initialization succeeds.

Step 6 Click **OK**.

The login interface is displayed.

3.2 Login Interface

After booting up, the login interface is displayed.

Step 1 Enter password. Default password of the system is admin.

Step 2 Click **Login**.

After successful login, the main interface is displayed.

Please modify admin password timely after login.

3.3 Main Interface

Main interface consists of preview, TV wall, playback, platform, settings and extension. See Figure 3-1. For details, refer to Table 3-1.

Figure 3-1 Main interface

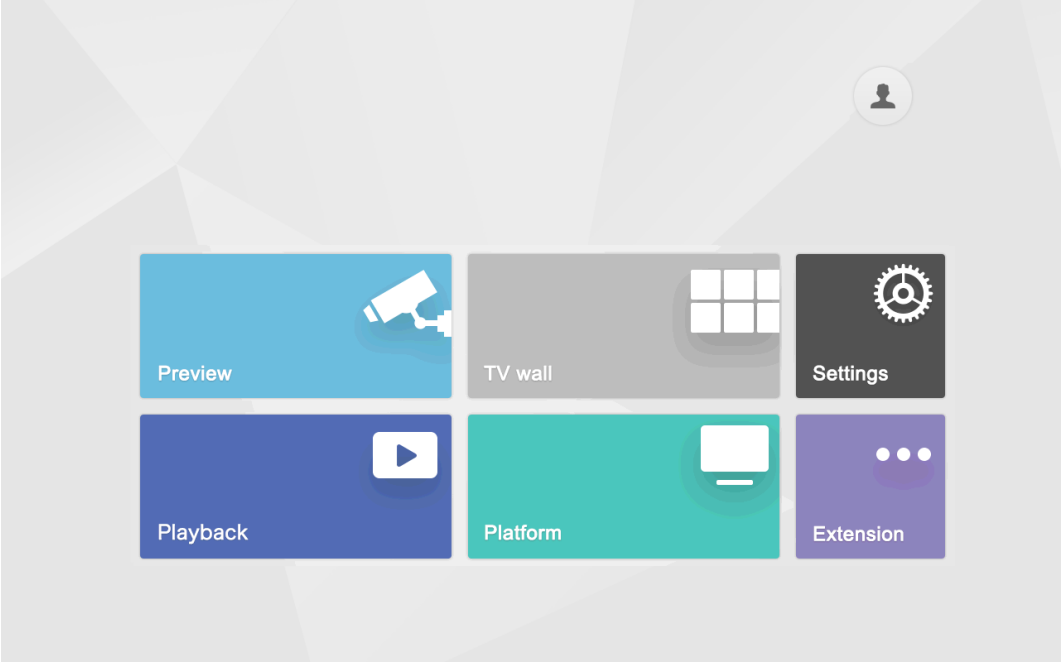


Table 3-1 Main interface description

Name	Description
Preview	Decode and preview local encoding devices and corresponding operations.
TV wall	Control the locally added decoder, matrix and TV wall.
Playback	Play back videos in local added recording device.
Platform	After connecting to the platform, network keyboard is able to control devices on the platform.
Settings	There are four modules, including device, general, account and system.
Extension	Control the devices with direct physical connection with network keyboard. At present, it only supports to control speed dome with RS-485 port.

3.4 Settings Interface

On the main interface, click **Settings** to enter the interface. See Figure 3-2. For details, refer to Table 3-2.

Figure 3-2 Settings

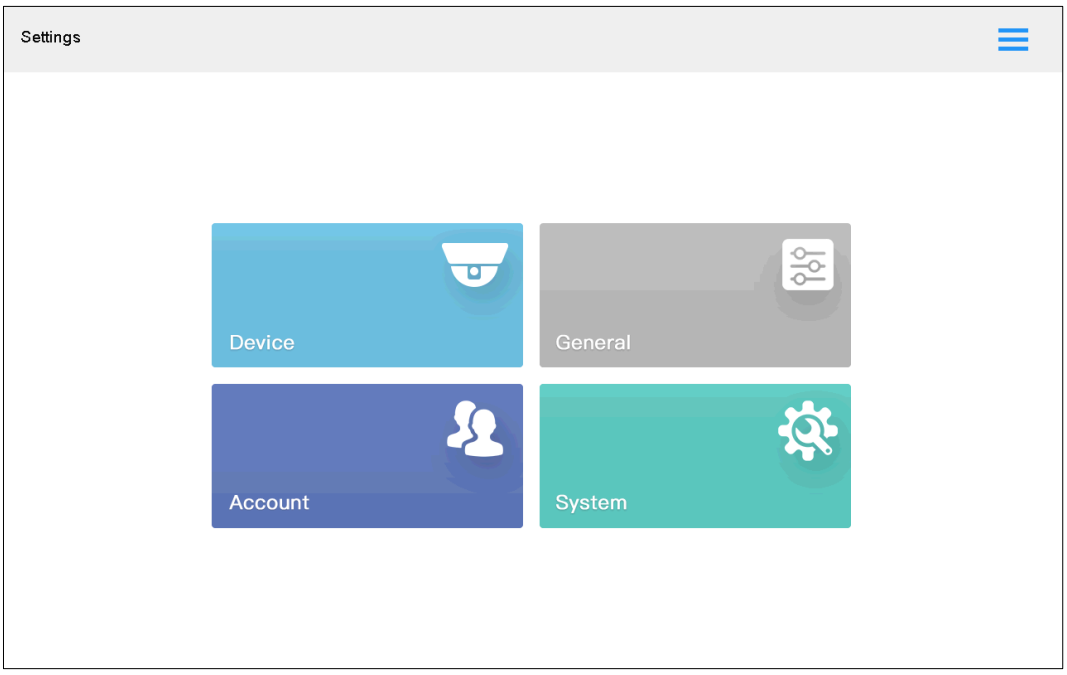


Table 3-2 Settings description

Name	Description
Device	Add, modify and delete devices; view input channel, and modify input channel number.
General	Set network, Bluetooth, serial port, date, time, hardware and MAC.
Account	Add, delete and modify role information and account information.
System	View program version and upgrade.

Click at the upper right corner, and a navigation bar appears in the page. With navigation bar, quickly return to preview, device, settings, playback, extension and homepage interfaces.

3.5 Network Settings

It includes wired network and Wi-Fi settings.

3.5.1 Wired Network

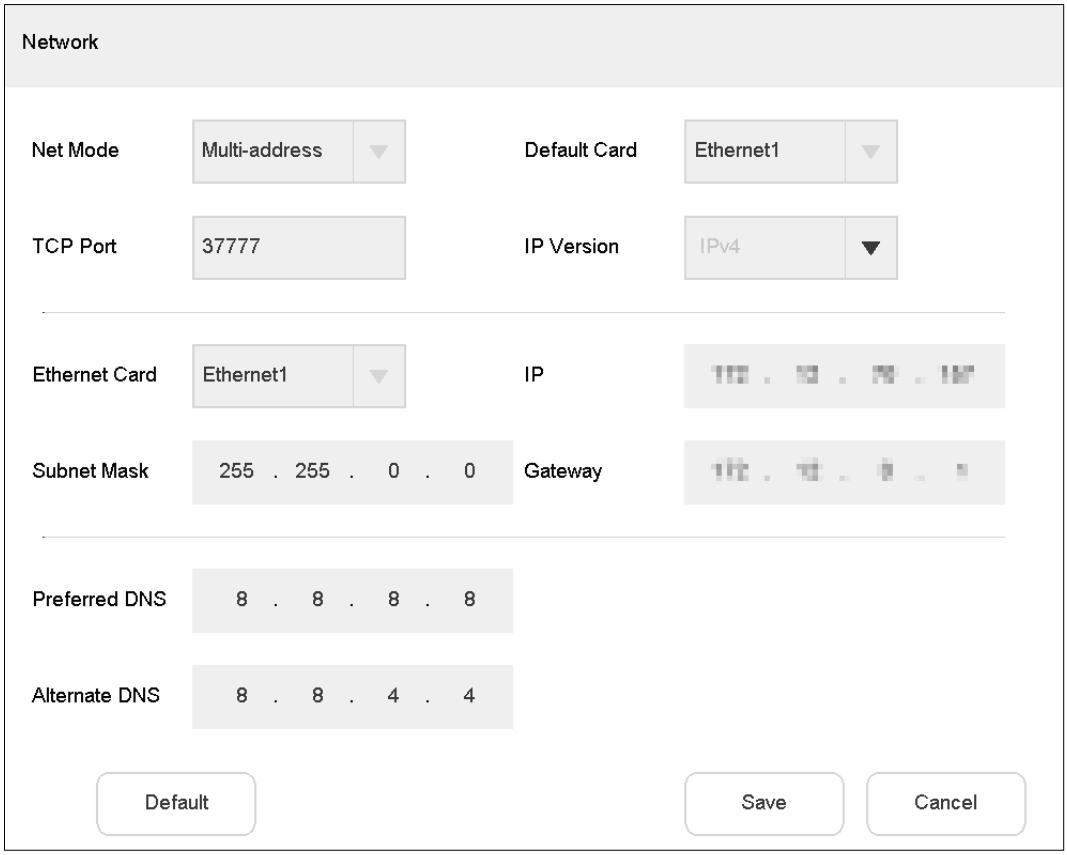
Configure IP address and DNS server of network keyboard to connect other devices in the networking.

Before setting network parameters, ensure that the network keyboard is connected to network correctly.

Step 1 On the **Settings** interface, click **General**.

The **Network** interface is displayed. See Figure 3-3.

Figure 3-3 Network



Step 2 Set the parameters. For details, see Table 3-3.

Table 3-3 Wired network parameter description

Parameter	Description
Net mode	It includes multi-address, fault tolerance and load balance. ● Multi-address: Two Ethernet cards are used independently. During network status detection, network is deemed to be disconnected if one Ethernet card is disconnected. ● Fault tolerance: Two Ethernet cards use one IP address. Only one Ethernet card works under normal conditions; if the working Ethernet card breaks down, the other Ethernet card starts to work automatically, so as to ensure smooth network. During network status detection, network is deemed to be disconnected only when both Ethernet cards are disconnected. Both Ethernet cards shall be in the same LAN. ● Load balance: Two Ethernet cards use one IP address and work together to bear network load. Their network throughput is basically the same. If one breaks down, the other one still works normally. During network status detection, network is deemed to be disconnected only when both Ethernet cards are disconnected. Both Ethernet cards shall be in the same LAN.
Default card	When Net Mode is set to be **Multi-address** and multiple Ethernet cards are bound, one Ethernet card can be designated to be default working Ethernet card.
TCP port	Keep the default value.

Parameter	Description
IP version	Keep the default value.
Ethernet card	Select Ethernet card.
IP address	Enter numbers to modify IP address, set corresponding Subnet Mask and Gateway. Default IP address of network keyboard is 192.168.1.108.
Subnet mask	
Gateway	
Preferred DNS	IP address of DNS server.
Alternate DNS	IP address of alternate DNS server.

Step 3 Click **Save**.

3.5.2 Wi-Fi

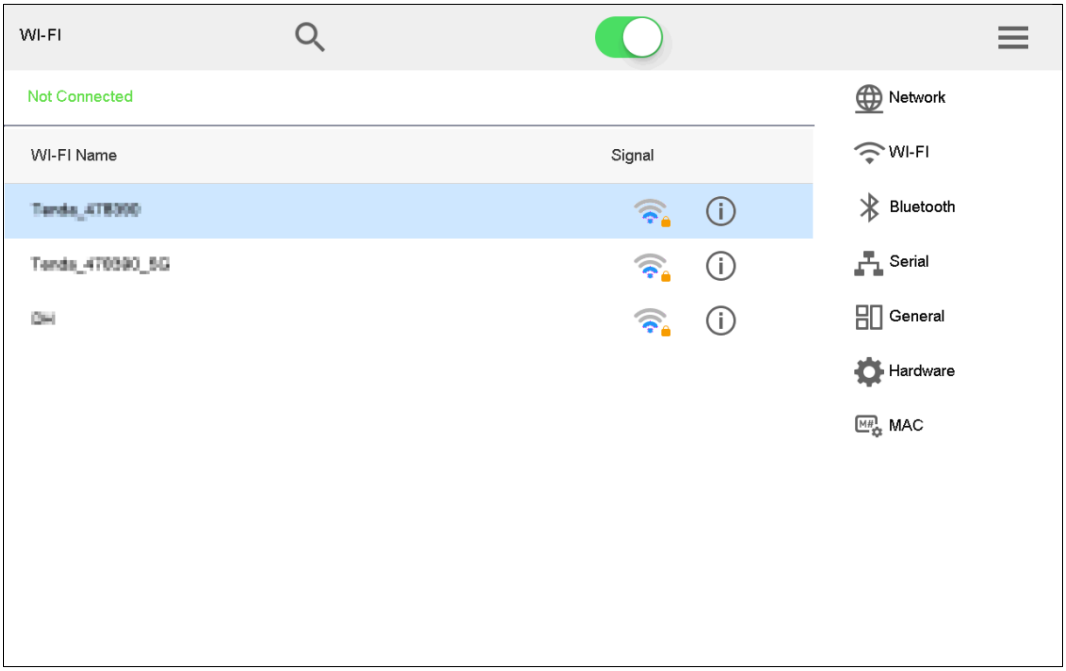
On the **General** interface, click the **Wi-Fi** tab to enter the interface.

Automatic Search for Wi-Fi

Click to enable Wi-Fi function.

The system will search Wi-Fi automatically and display results. See Figure 3-4. Click to refresh.

Figure 3-4 Automatic search for Wi-Fi

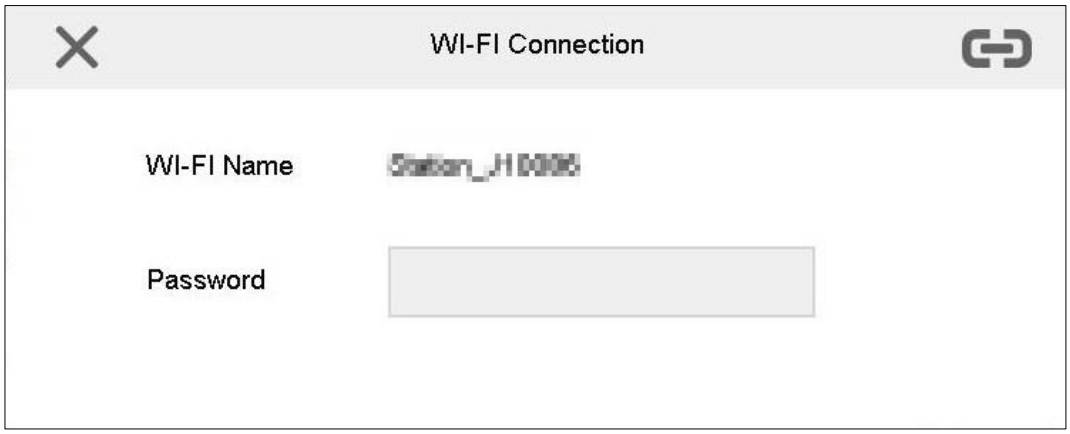


Wi-Fi Connection

Step 1 Double-click Wi-Fi name or signal strength.

The **Wi-Fi Connection** dialog box pops out. See Figure 3-5.

Figure 3-5 Wi-Fi connection



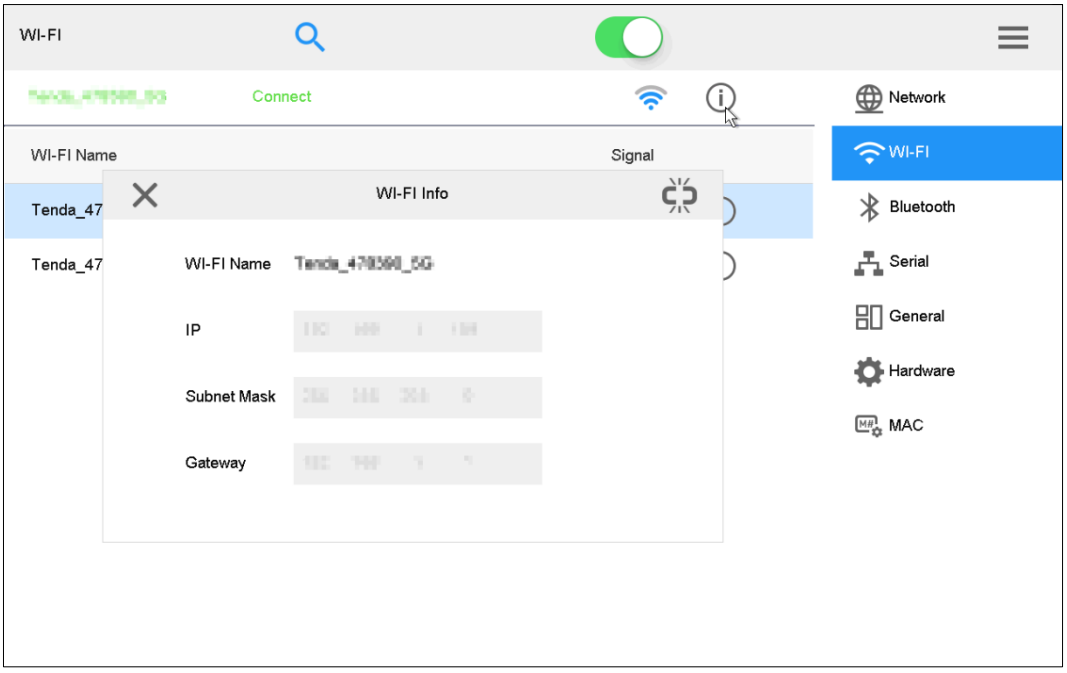
Step 2 Enter correct password, and then tap .

In case of successful connection, the connected Wi-Fi Name and **Connected** will be displayed at the upper-left corner.

Disconnect Wi-Fi

Click on the right of connected Wi-Fi and click **Disconnect** in the pop-up dialog box. See Figure 3-6. Click to disconnect the Wi-Fi.

Figure 3-6 Disconnect

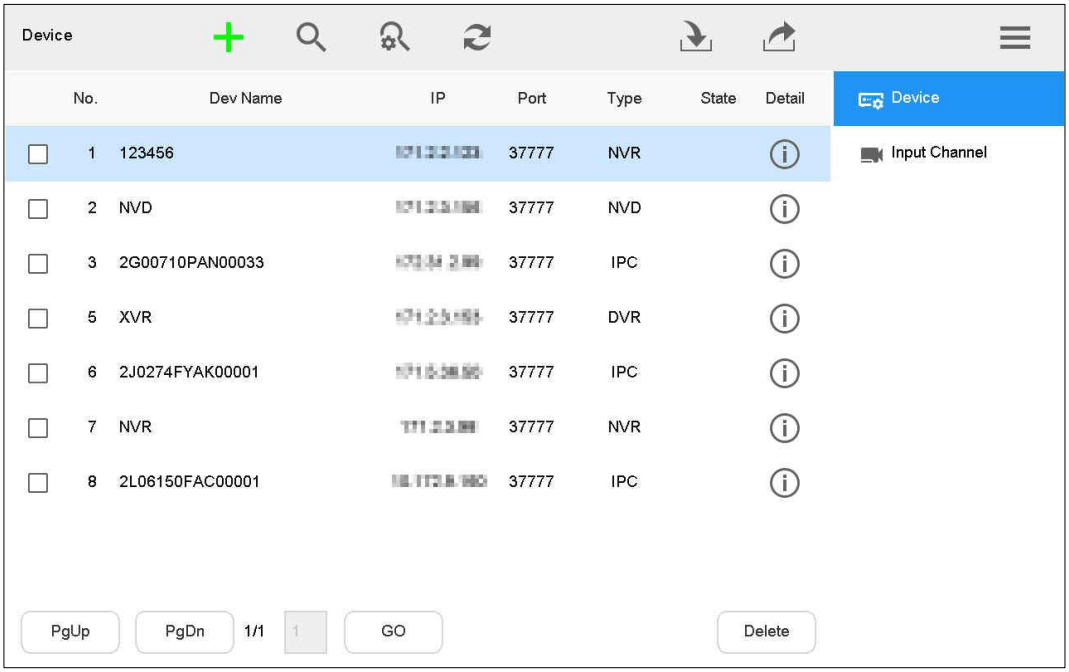


3.6 Adding Device

It includes manual adding and auto search.

On the **Settings** interface, click **Device**. The **Device** interface is displayed. See Figure 3-7.

Figure 3-7 Device



3.6.2 Manual Add

Step 1 On the **Device** interface, click .

The **Manual Add** dialog box is displayed.

Step 2 Select **Protocol**.

The **Protocol** interface is displayed. See Figure 3-8.

Figure 3-8 Manual add (Private)

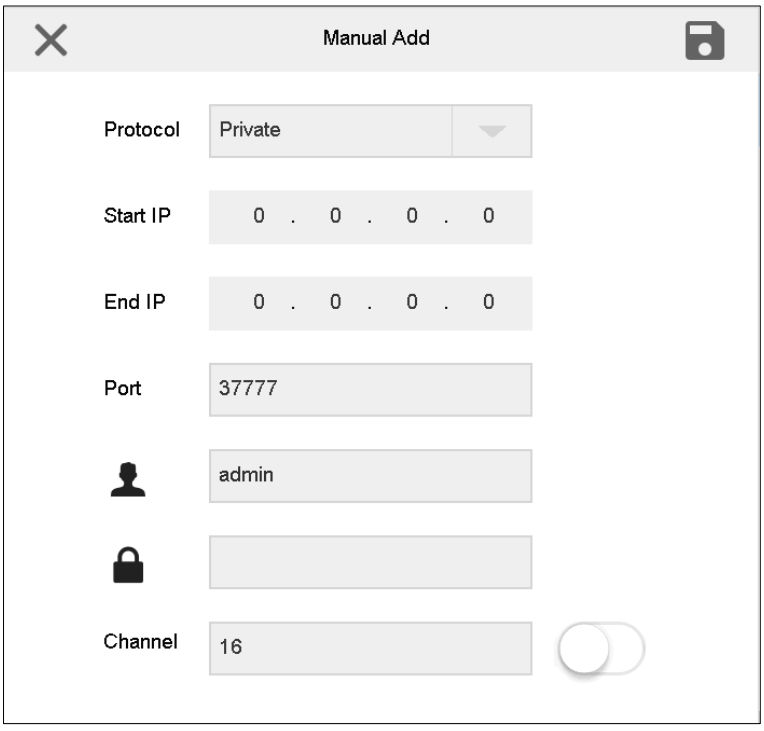
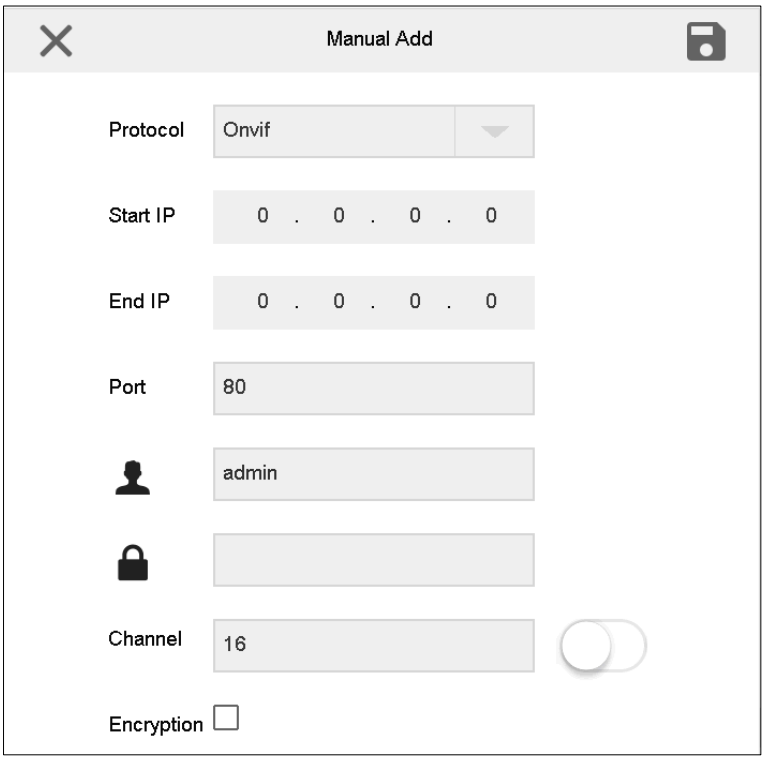


Figure 3-9 Manual add (ONVIF)



Step 3 Set the parameters. See Table 3-4.

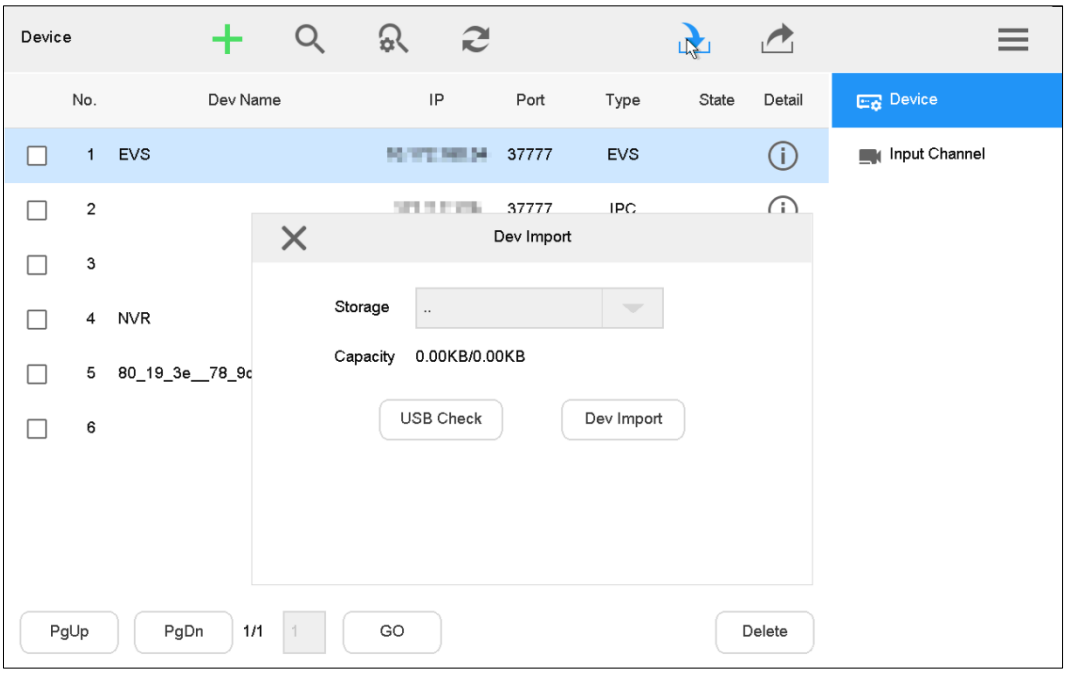
Table 3-4 Manual add parameter description

Parameter	Description
Protocol	Select protocol type. It supports **Private** and **Onvif** at present. With ONVIF protocol, PTZ control only supports rotation and zoom function in the fixed speed mode, rather than other auxiliary PTZ functions.
Start IP and End IP	● Enter start IP and end IP when one IP segment is added. ● Enter start IP when one IP is added.
Port	Enter port number. It is usually default value.
Username and password	Enter username and password.
Channel	Enter channel quantity. means that it is enabled, while means that it is disabled. ● For example, total channel quantity of the device is 48. ● When it is enabled, you can set the channel quantity to display 1st channel –16th channel. ● When it is disabled, display the total acquired channels.
Encryption	It is supported by Onvif protocol only. ● When it is encrypted, port number is 443 by default. ● When it is not encrypted, port number is 80 by default. Cameras shall enable HTTPS function.

Step 4 Click .

- Click  . The **Dev Import** interface is displayed. See Figure 3-10.
  - ◇ Click **USB Check** to check USB capacity.
  - ◇ Click **Dev Import** to import device files.

Figure 3-10 Dev Import



- Click  . The **Dev Export** interface is displayed. Click **USB Check** to check whether USB flash drive is inserted, and then click **Dev Export** to export files.
  - ◇ Select **Dev Export Encryption** to export encrypted files. See Figure 3-11.
  - ◇ If **Dev Export Encryption** is not selected, export unencrypted files. See Figure 3-12.

Figure 3-11 Dev Export (Encrypted)

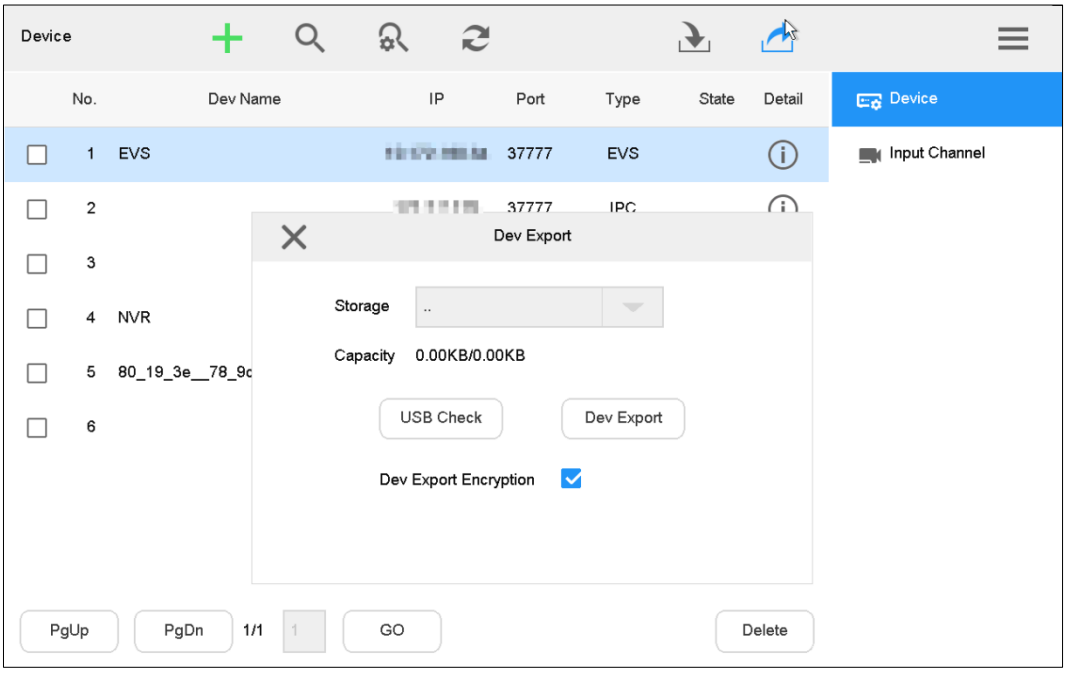
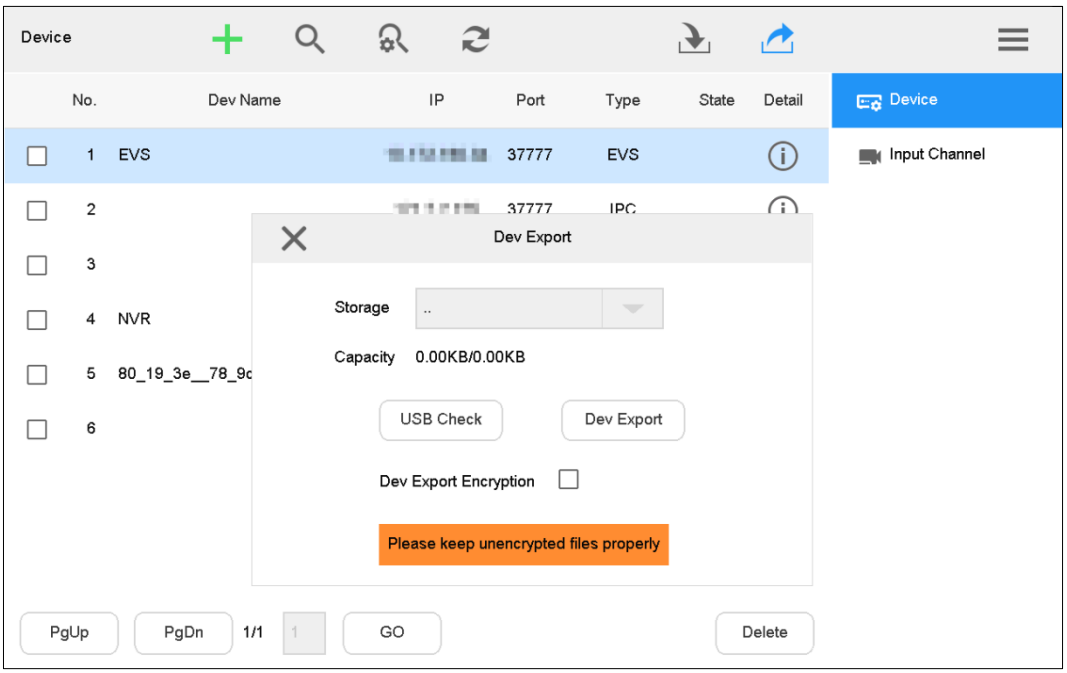


Figure 3-12 Dev Export (Unencrypted)



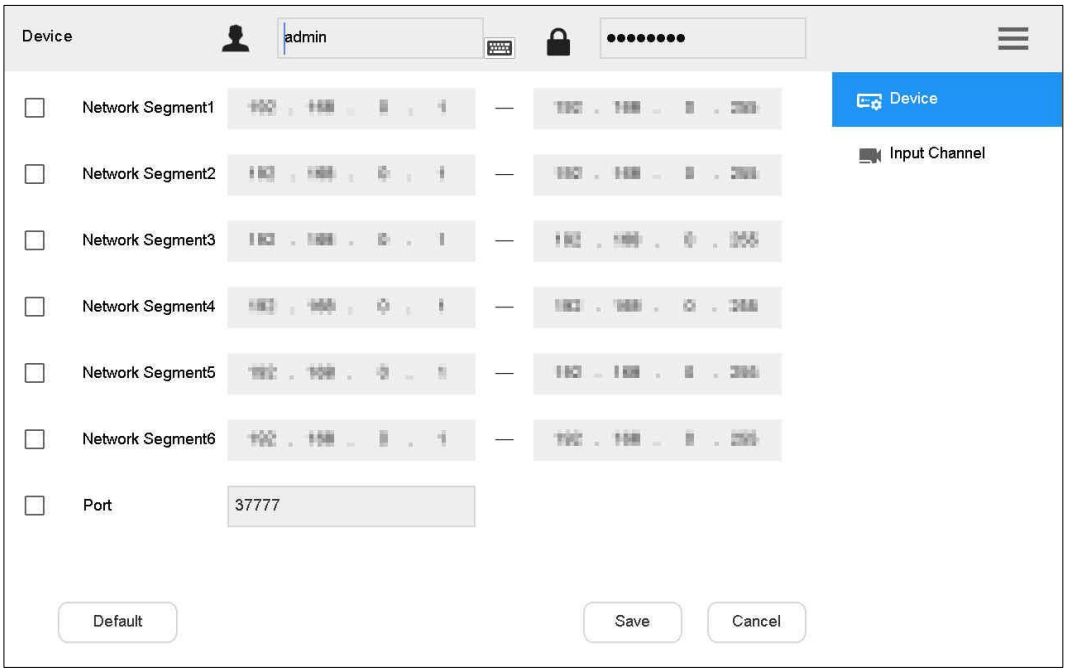
- Click  to refresh the interface.

3.6.3 Auto Search

Step 1 On the **Device** interface, click  .

The auto search interface is displayed. See Figure 3-13.

Figure 3-13 Auto search setting



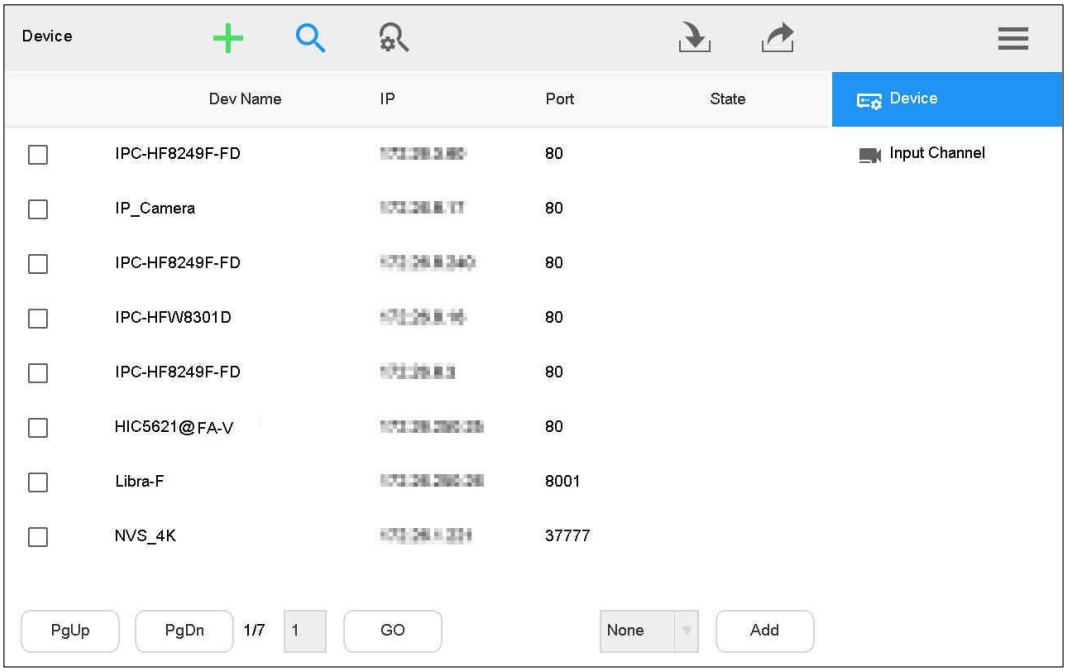
Step 2 Enter IP segment and select the check box.

Step 3 Click **Save**.

The auto search results are displayed. See Figure 3-14.

Alternatively, click to view search results.

Figure 3-14 Auto search result



Step 4 Select the check box in the line of a device, and then click to add the device.

4 System Configurations

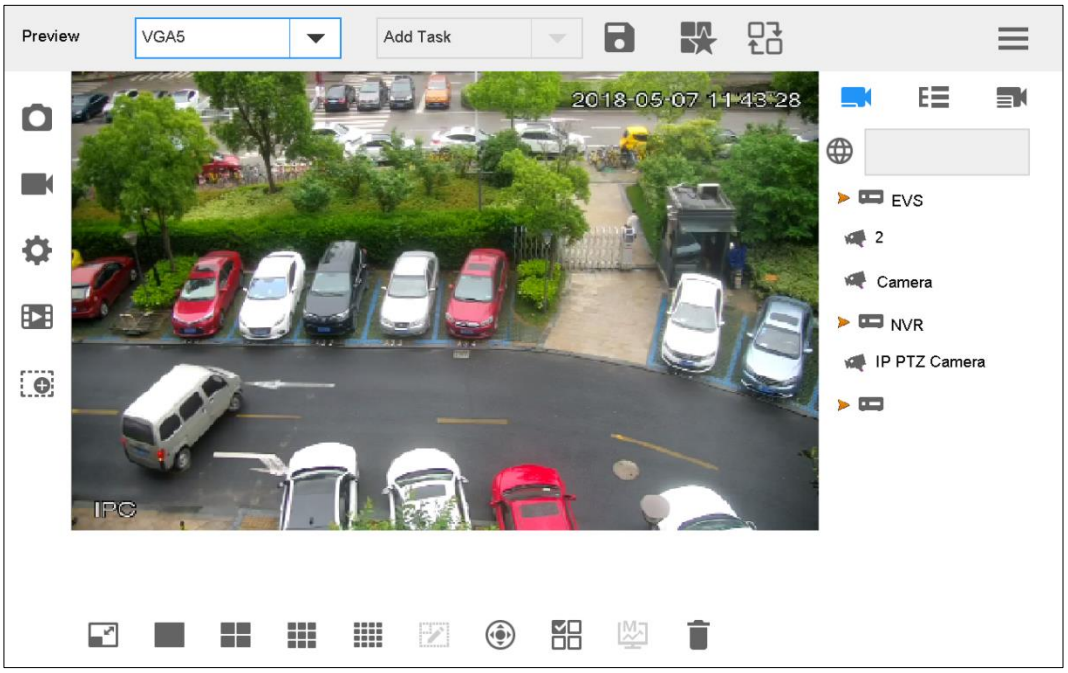
4.1 Preview

Preview local devices, video on wall, PTZ control, snapshot and recording.

There are 3 buttons on the side panel, including mute button, volume up button and volume down button, to adjust the volume of local preview interface.

Click **Preview** on the main interface. The **Preview** interface is displayed. See Figure 4-1. There are five modes, including HDMI1–HDMI4 and VGA5.

Figure 4-1 Preview



4.1.1 Icons of Preview Interface

Table 4-1 Preview interface icon description

Icon	Description	Icon	Description
Add Task	Select a task.		Add a task.
	Plan management.		Enable plan tour.
	Snapshot and screenshot, and store in flash drive.		Manual recording.
	Snapshot and recording settings.		Play back recording.

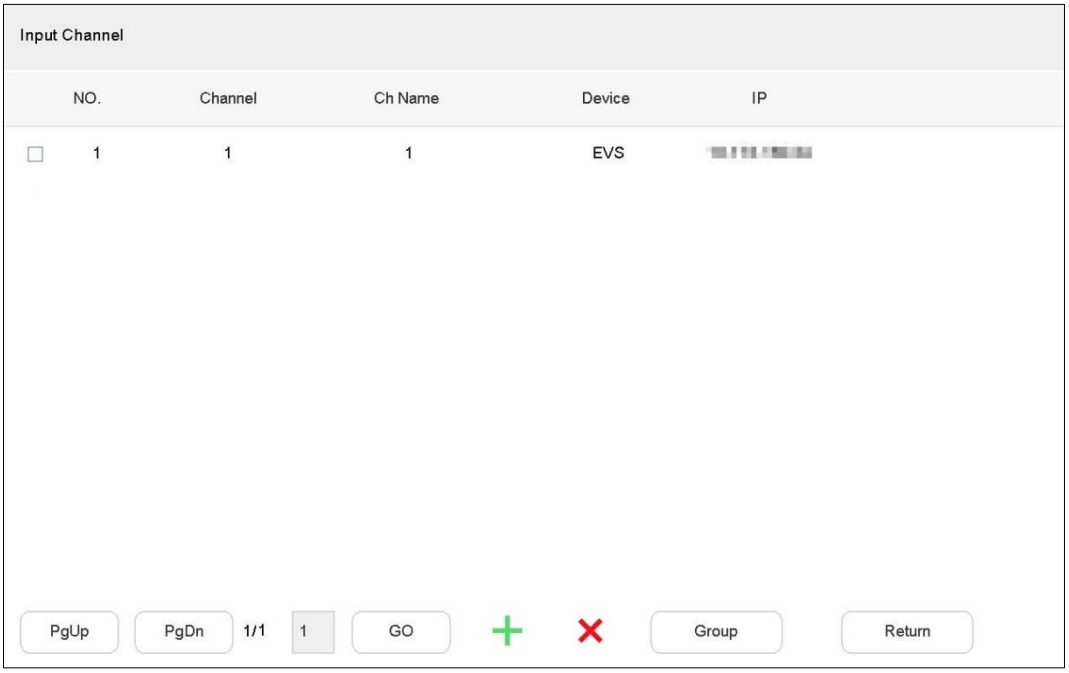
Icon	Description	Icon	Description
	Maximize and restore the window.		Single split.
	4-split.		9-split.
	16-split.		Custom split.  Local preview interface does not support custom split.
	PTZ.		Select window/all windows on the screen.  This button is used with deletion button.
	Smart stream mode.  ● Switch main and sub streams on the local preview interface. ● Manual switch is not needed on the local preview interface.		Delete.

4.1.2 Channel Grouping

Step 1 On the **Preview** interface, click  .

The **Input Channel** interface is displayed. See Figure 4-2.

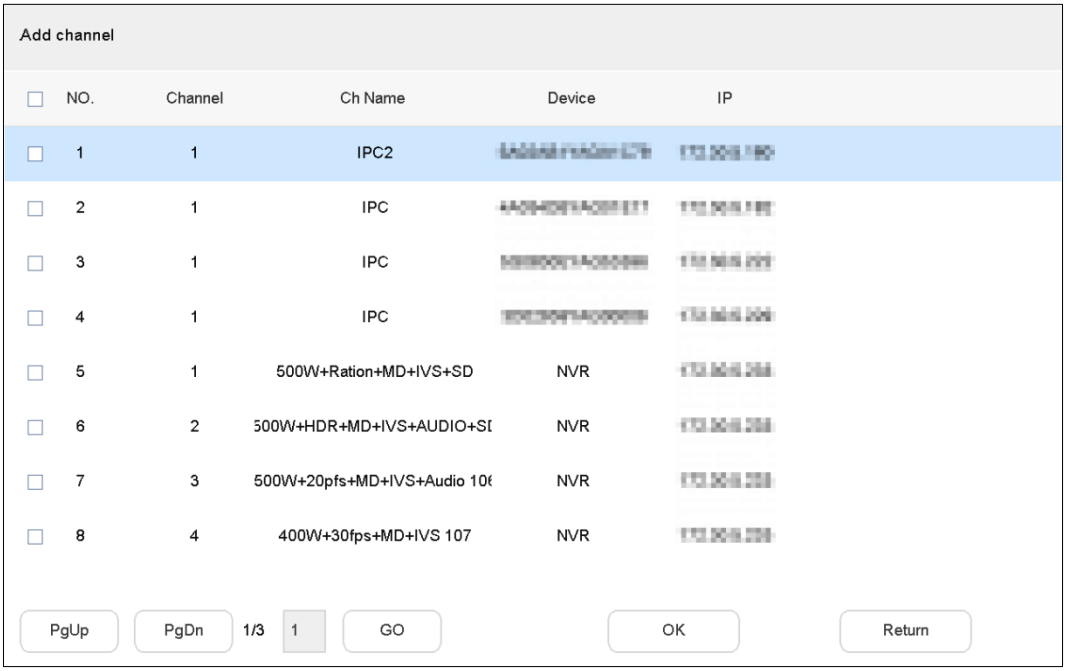
Figure 4-2 Input channel (1)



Step 2 Click  .

The **Add channel** interface is displayed. See Figure 4-3.

Figure 4-3 Add channel



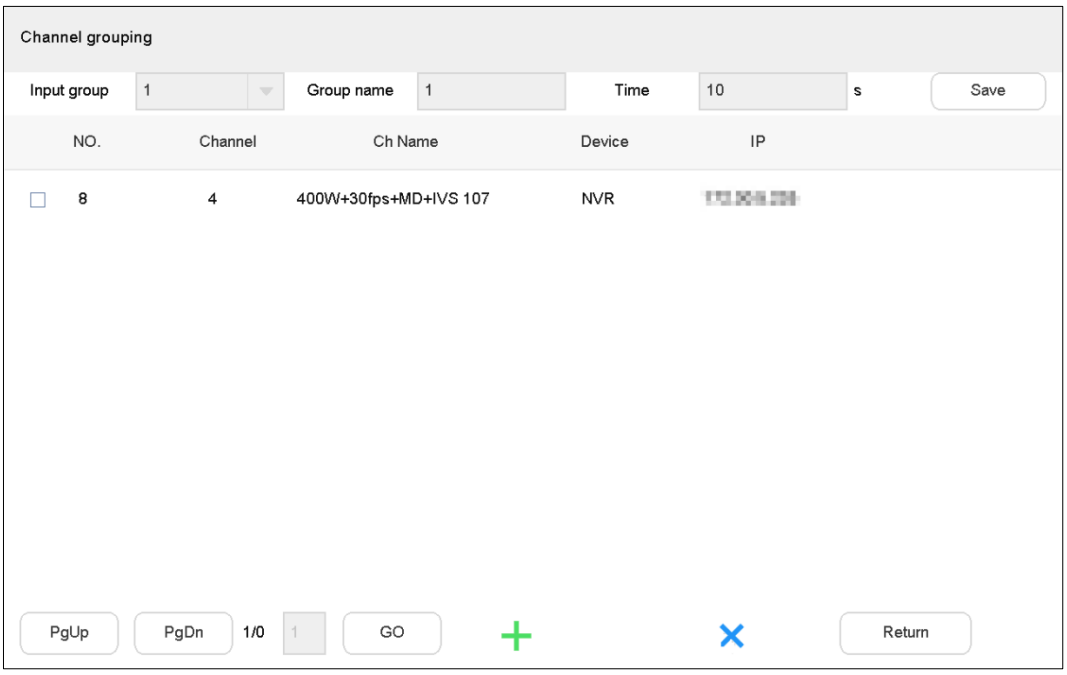
Step 3 Select the channels, and then click **OK**.

The added channels are displayed on the **Input Channel** interface.

Step 4 Click **Group**.

The **Channel grouping** interface is displayed. See Figure 4-4.

Figure 4-4 Channel grouping



Step 5 Select **Input group**, and then configure **Group name** and **Time**.

Step 6 Select the channels that you need.

Click + on the **Channel grouping** interface to add channels.

Step 7 Click **Save** to save the channel group.

4.1.3 Video on Wall

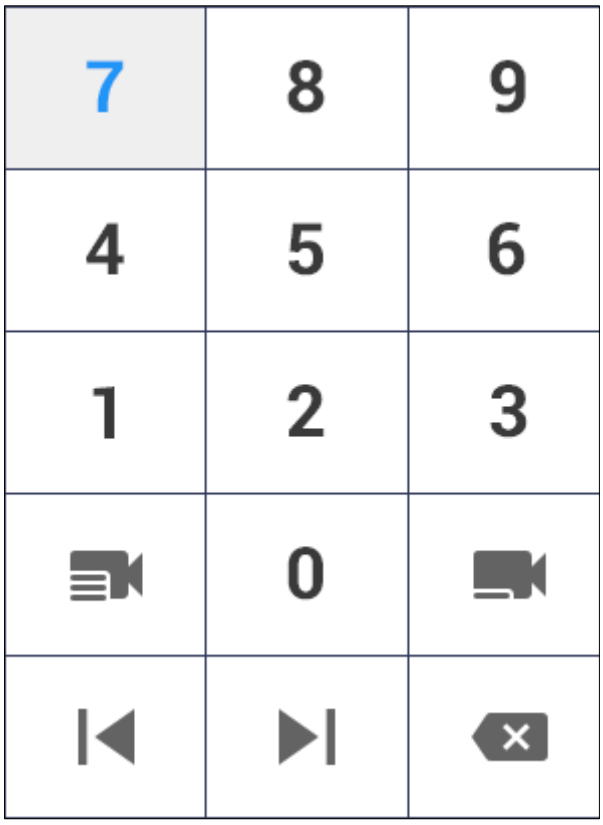
Step 1 On the **Preview** interface, select HDMI1–HDMI4 or VGA5 in drop-down list.

Step 2 Select video source on the right, drag it onto TV wall or double-click the video source.

Quick Video on Wall (Optional)

- Click , and a dialog box pops up. See Figure 4-5. Enter a number (such as 1) + , so video of channel 1 will be displayed on wall quickly.
- Click , and a dialog box pops up. See Figure 4-5. Enter channel group number (such as 123) + , so videos of the channel group No. 123 will be displayed on wall quickly.

Figure 4-5 Short-cut



Refer to "4.6.1.2 Input Channel" to inquire **Number** in the input channel.

Relevant operation

- Click , and channel with the previous number will be displayed on wall. For example, current number is 123, click , and No. 122 channel will be displayed on the wall.
- Click , and channel with the next number will be displayed on wall. For example, current number is 123, click , and No. 124 channel will be displayed on the wall.

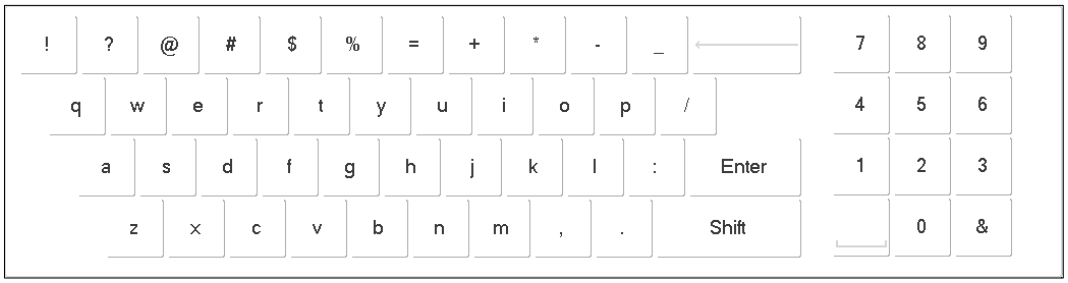
Channel group does not support and at present.

Quick Search for Added Device (Optional)

In the input box after , enter keywords of the added device to search for it.

Click the pop-up keypad. See Figure 4-6. Press Shift key to switch the input method.

Figure 4-6 Keypad



Maximize and Restore Window

Click  to maximize and restore the window.

Single, 4, 9, 16 and Custom Split

Click  ,  ,  ,  or  respectively, representing single, 4, 9, 16 or custom split.

Clearing Video Source

Step 1 Select a window.

- Click  to select the focused window.
- Click again and the icon turns into  to select all windows within present operating screen.

Step 2 Click  .

Smart Stream Mode

- Main stream goes on wall in case of single split.
- Sub-stream goes on wall in case of 9-split and 16-split.
- In case of 4-split, with HDMI1 and HDMI2 preview mode, main stream goes on wall. In other preview modes, sub-stream goes on wall.

4.1.4 PTZ Control

Please refer to "4.5 PTZ Control" for details.

4.1.5 Scheme Management

If you need to view one video channel frequently, save it as a scheme task for convenient calling. Maximum 16 tasks can be configured.

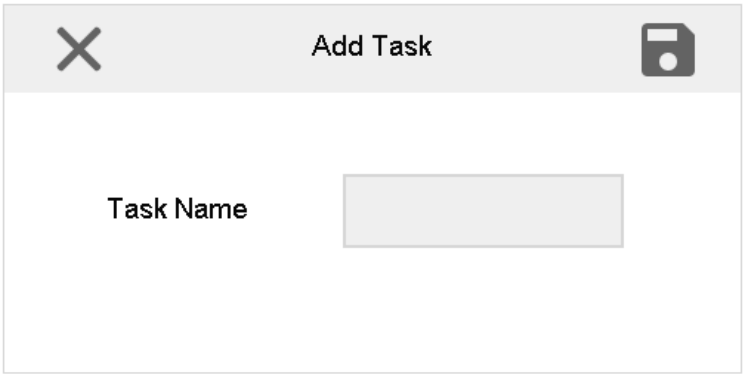
4.1.5.1 Adding Task

Step 1 On the **Preview** interface, select video according to actual needs. For example, play the videos of channel 1 and channel 2.

Step 2 Click on the **Preview** interface.

The **Add Task** interface is displayed. See Figure 4-7.

Figure 4-7 Add Task



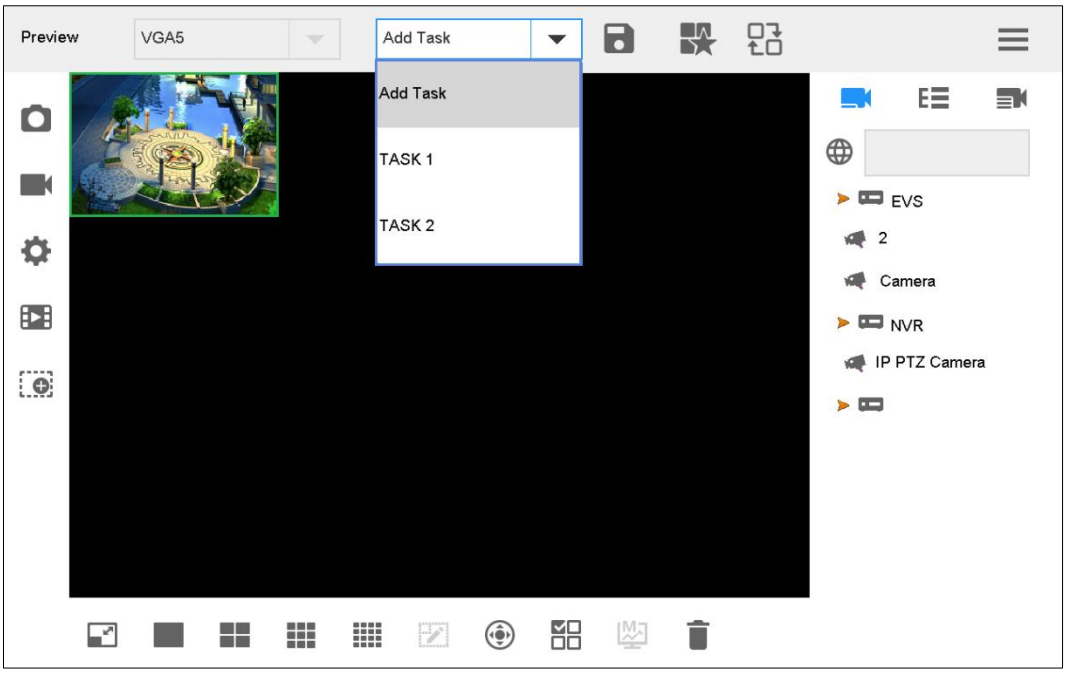
Step 3 Enter task name.

Step 4 Click to save the task.

4.1.5.2 Viewing Task

Select task name from **Add Task** drop-down list. See Figure 4-8. You can view the task.

Figure 4-8 View task

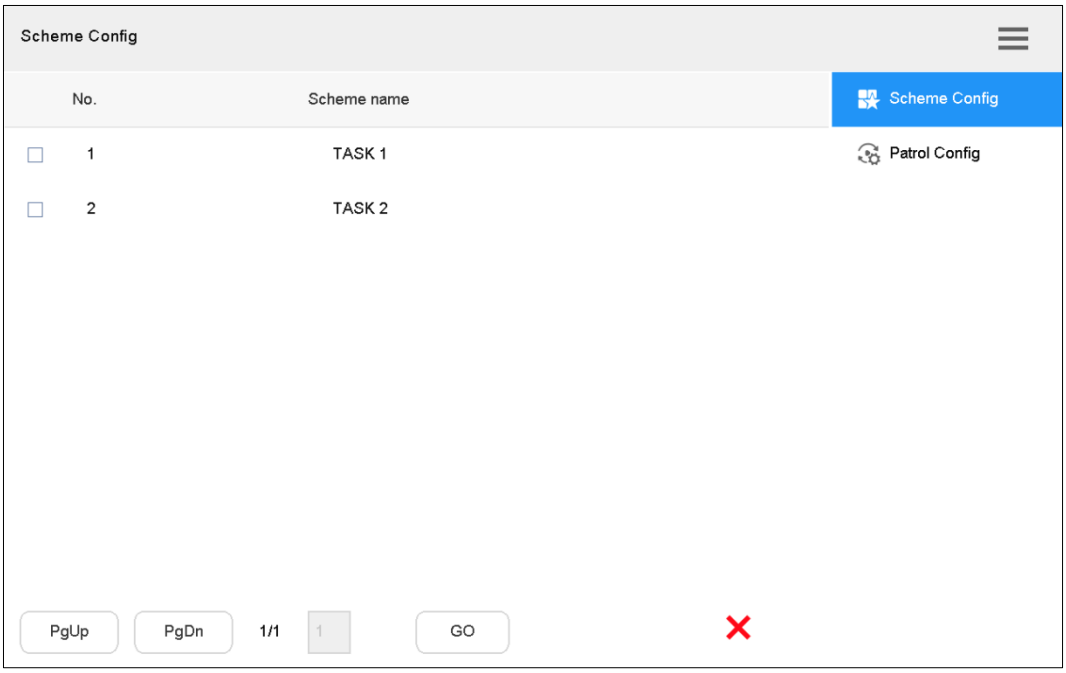


4.1.5.3 Deleting the Scheme

Step 1 Click  .

The **Scheme Config** interface is displayed. See Figure 4-9.

Figure 4-9 Scheme Config



Step 2 Select the scheme that you want to delete, and then click  to delete it.

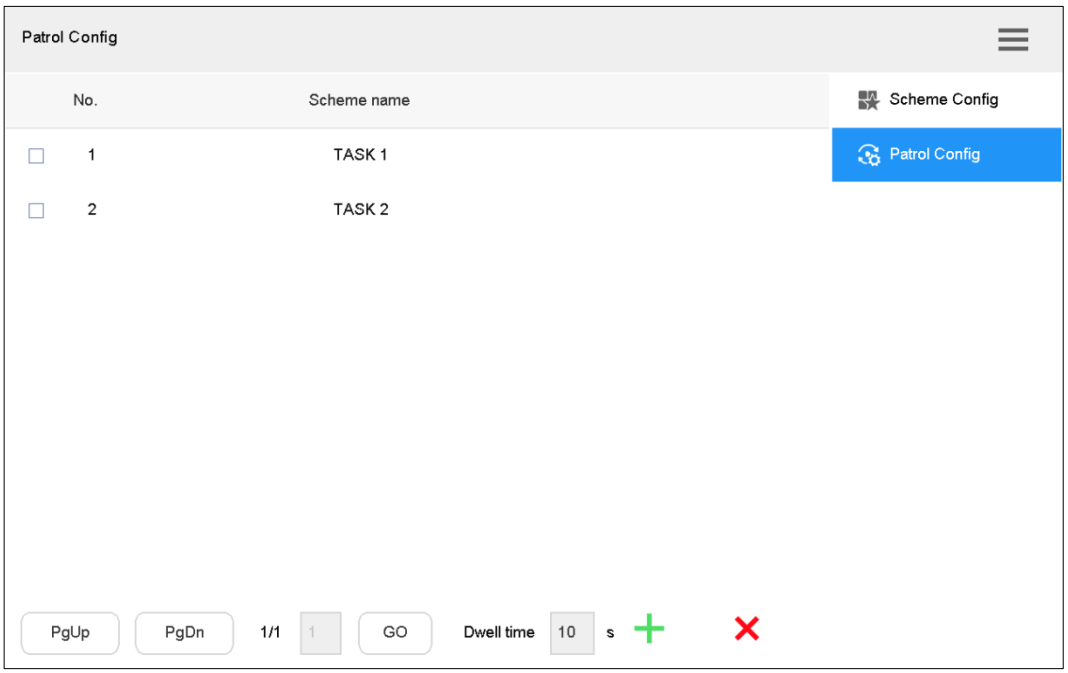
4.1.6 Patrol Config

Carry out patrol according to the sequence of adding scheme to the patrol.

Step 1 On the **Scheme Config** interface, click **Patrol Config**.

The **Patrol Config** interface is displayed. See Figure 4-10.

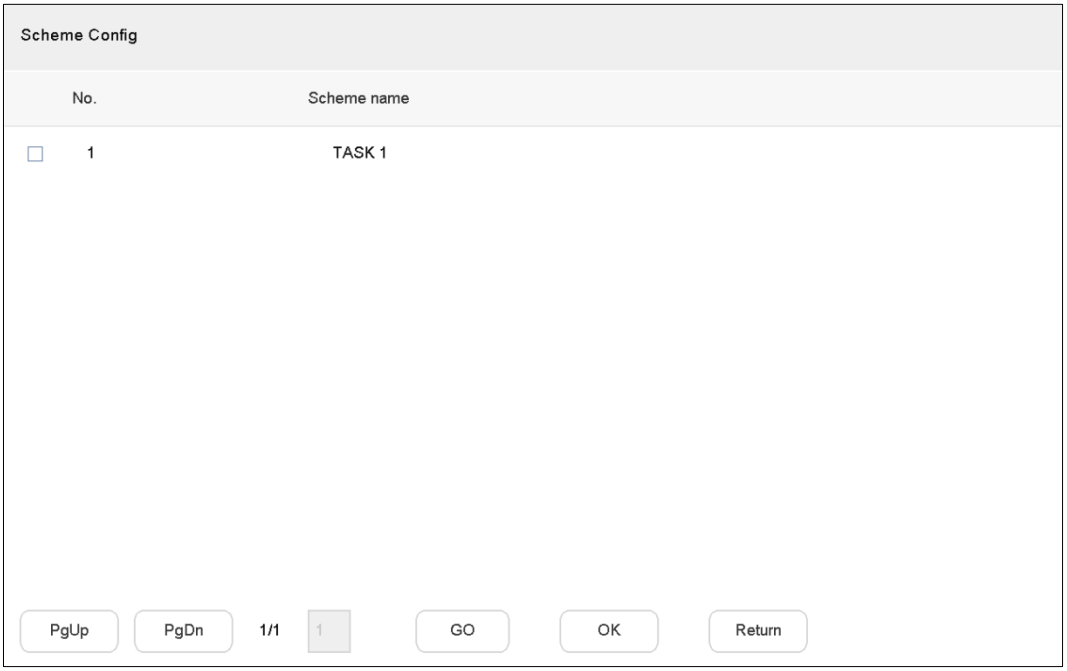
Figure 4-10 Patrol Config



Step 2 Click +.

The **Scheme Config** interface is displayed. See Figure 4-11.

Figure 4-11 Scheme Config



Step 3 Select the scheme, and click **OK**.

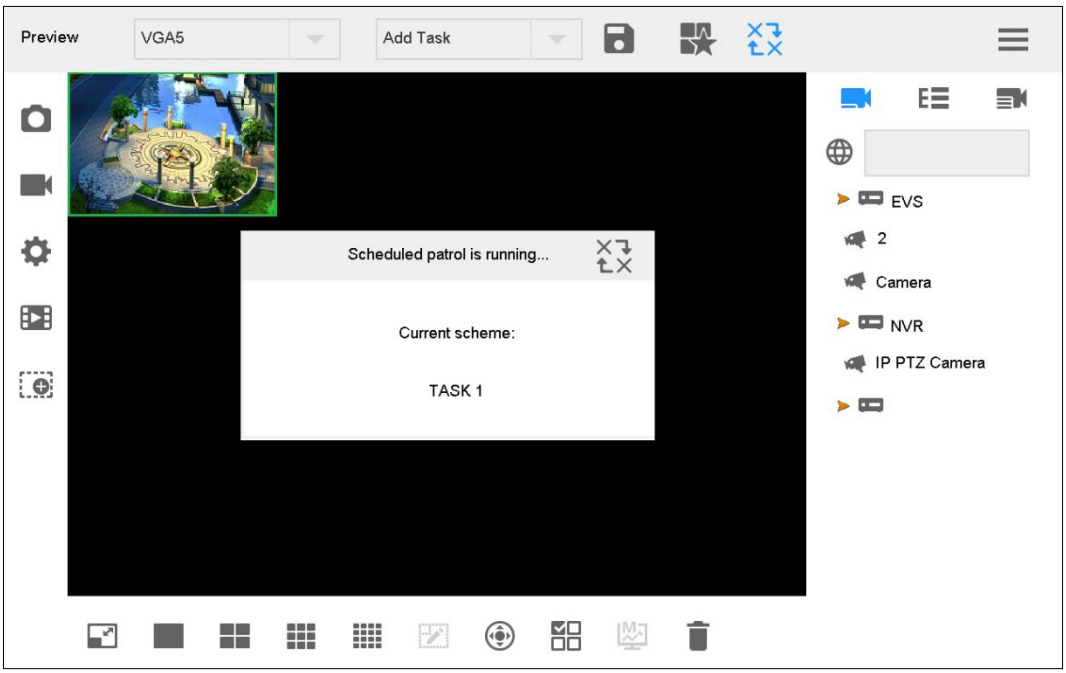
- Scheme can only be added one by one.
- If less than 2 schemes are added, patrol is not available.

Step 4 Click **Return** to configure **Patrol Time**.

Relevant Operation

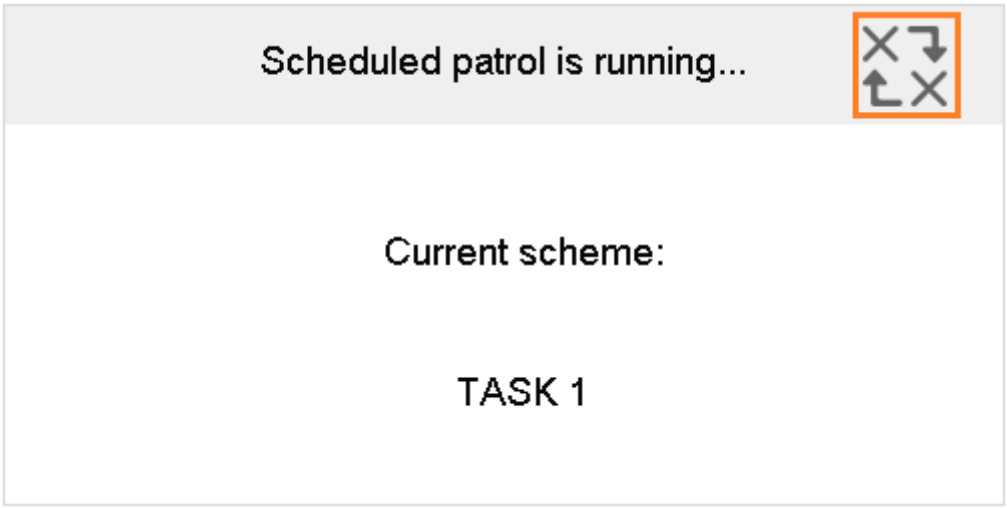
- On the **Preview** interface, click to enable patrol. See Figure 4-12.

Figure 4-12 Patrol



- Click  to stop the patrol. See Figure 4-13.

Figure 4-13 Stop patrol



4.1.7 Snapshot

Step 1 Insert the USB flash drive into network keyboard.

Step 2 On the **Preview** interface, click  .

The **Snap & Record** interface is displayed.

Step 3 Set the snapshot storage path. For details, refer to "4.1.9 Snapshot and Recording Settings."

Step 4 On the **Preview** interface, click  .

You can take a snapshot with joystick buttons.

4.1.8 Recording

Step 1 Insert the USB flash drive into network keyboard.

Step 2 On the **Preview** interface, click .

The **Snap & Record** interface is displayed.

Step 3 Set the recording storage path. For details, refer to "4.1.9 Snapshot and Recording Settings."

Step 4 On the **Preview** interface, click .

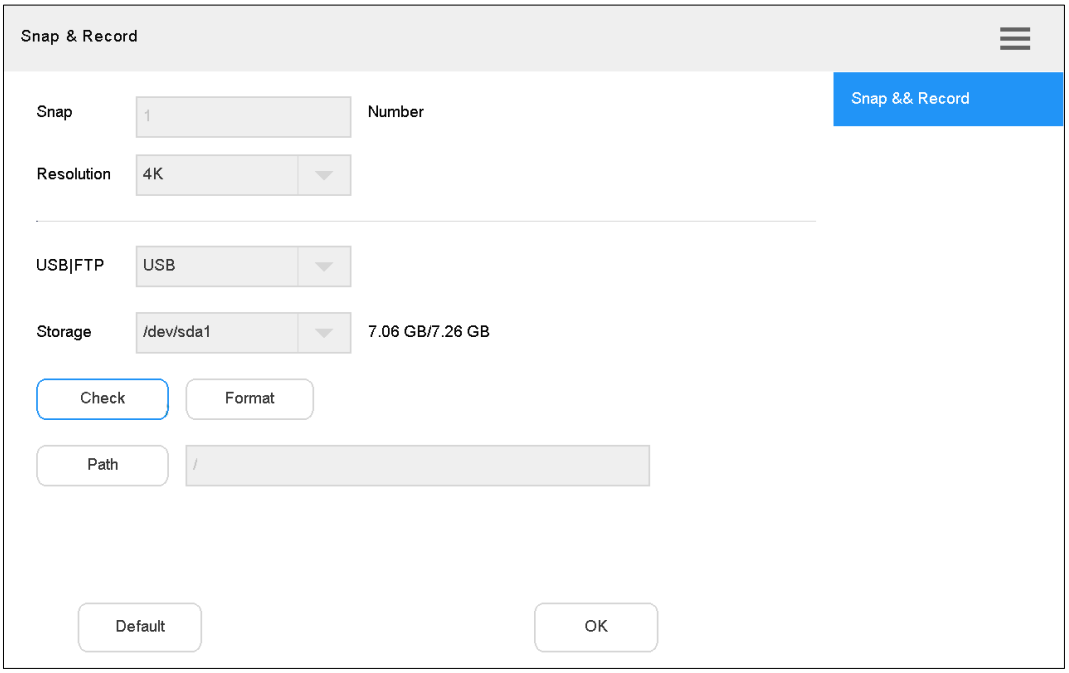
4.1.9 Snapshot and Recording Settings

Store in USD Flash Drive

Step 1 On the **Preview** interface, click .

The **Snap & Record** interface is displayed. See Figure 4-14.

Figure 4-14 Snap & Record



Step 2 Insert USB flash drive into network keyboard.

Step 3 Click **Check**.

The system displays general storage disk name and device capacity.

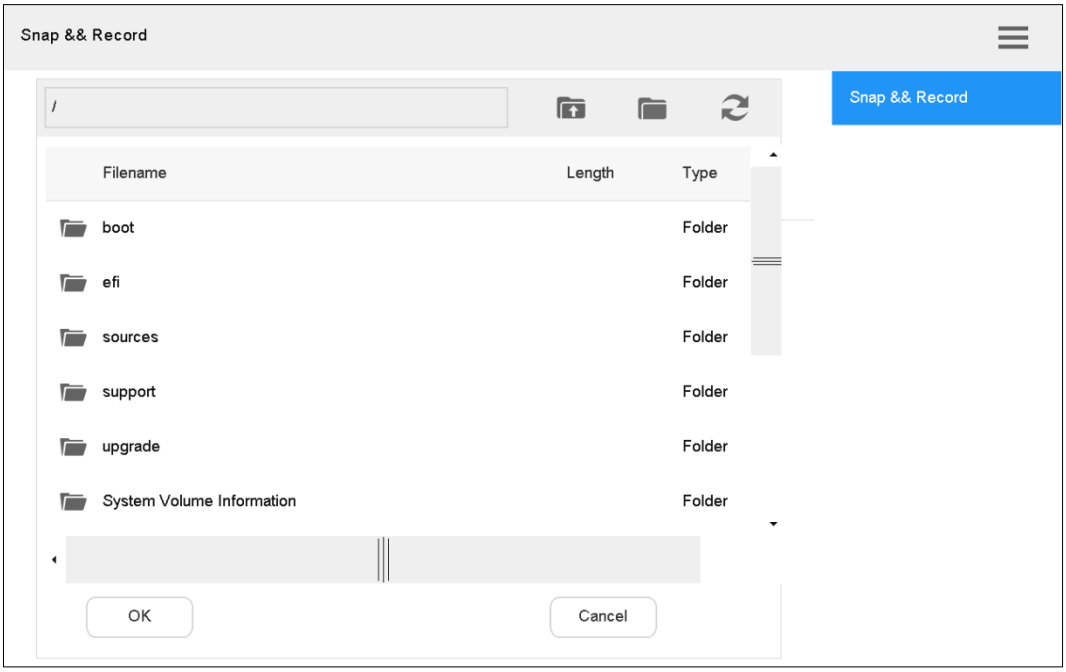
Step 4 Set the parameters. See Table 4-2.

Table 4-2 Snap & record parameter (USB flash drive)

Parameter	Description
Snap	It supports only 1 snapshot at present.

Parameter	Description
Resolution	Select resolution. ● When video resolution is > the set resolution, snapshot image adopts the set resolution. ● When video resolution is < the set resolution, snapshot image adopts actual video resolution.
USB|FTP	USB is enabled for storage by default.
Format	Click this button to format USB flash drive.
Path	Click this button to select snapshot storage path. See Figure 4-15. ● Click to return to the upper level of folder. ● Click to create a folder. ● Click to refresh the interface.

Figure 4-15 Snap storage



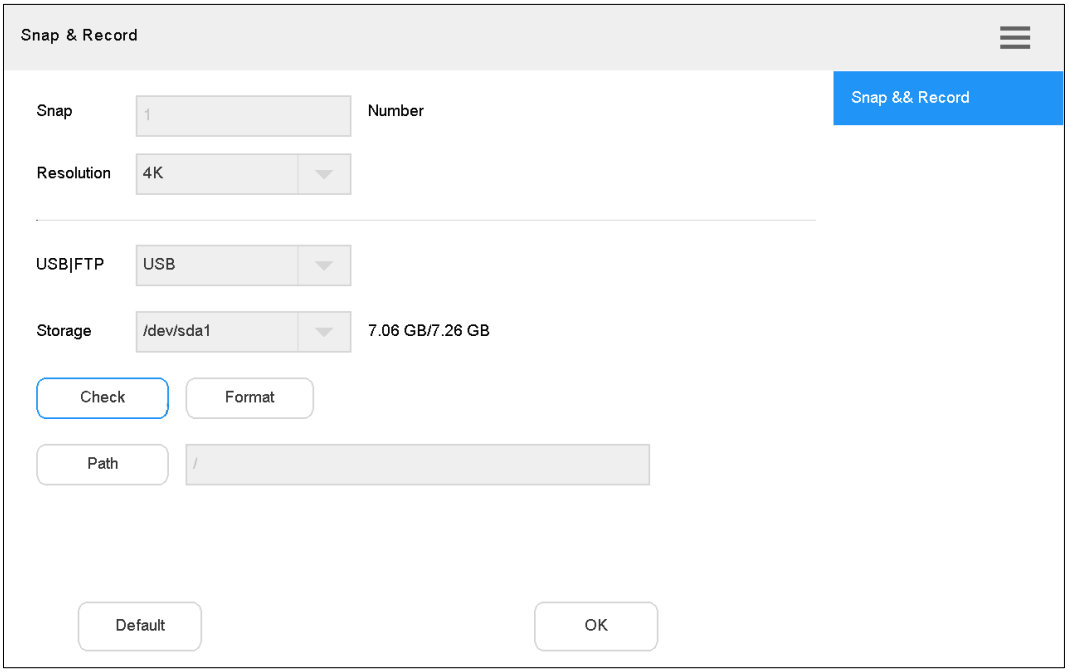
Step 5 Click **OK**.

Store in FTP

Step 1 On the **Preview** interface, click .

The **Snap & Record** interface is displayed. See Figure 4-16.

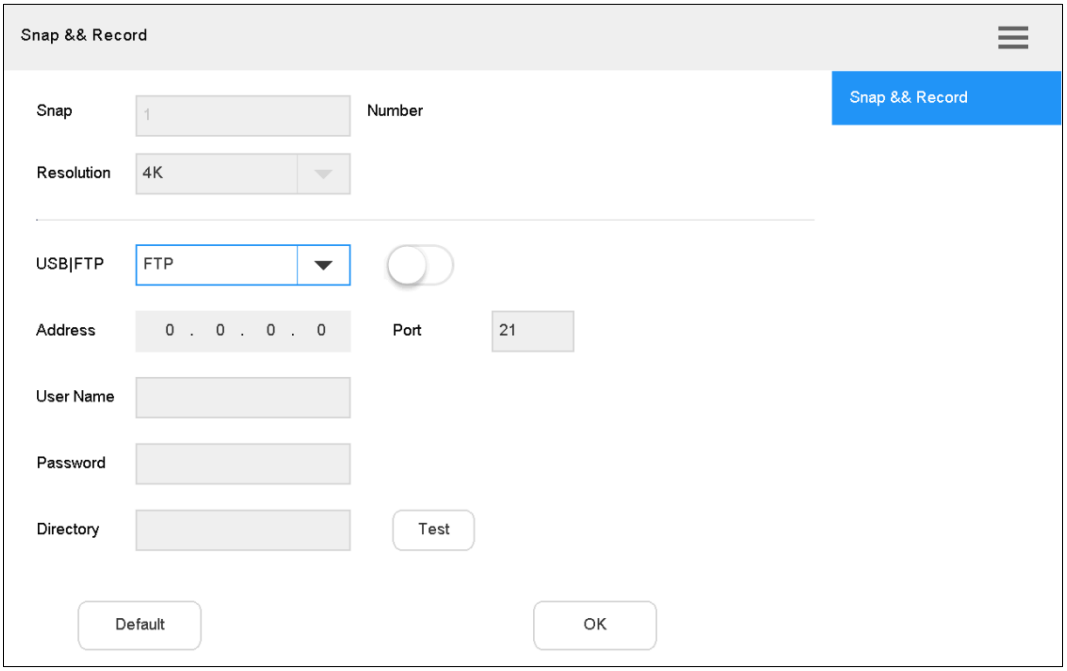
Figure 4-16 Snap & Record



Step 2 In the **USB|FTP** drop-down list, select **FTP**.

The **FTP** interface is displayed. See Figure 4-17.

Figure 4-17 FTP



Step 3 Click to enable FTP storage.

Step 4 Configure parameters. For details, see Table 4-3.

Table 4-3 Snap & record parameter (FTP)

Parameter	Description
Snap	It supports only 1 snapshot at present.

Parameter	Description
Resolution	Select resolution. ● When video resolution is > the set resolution, snapshot image adopts the set resolution. ● When video resolution is < the set resolution, snapshot image adopts actual video resolution.
USB|FTP	Select FTP.
Address	Set FTP address.
User Name	● FTP user name.
Password	● FTP login password.
Directory	● Set directory name.
Test	● Click this button to test whether FTP is available.

Step 5 Click **OK**.

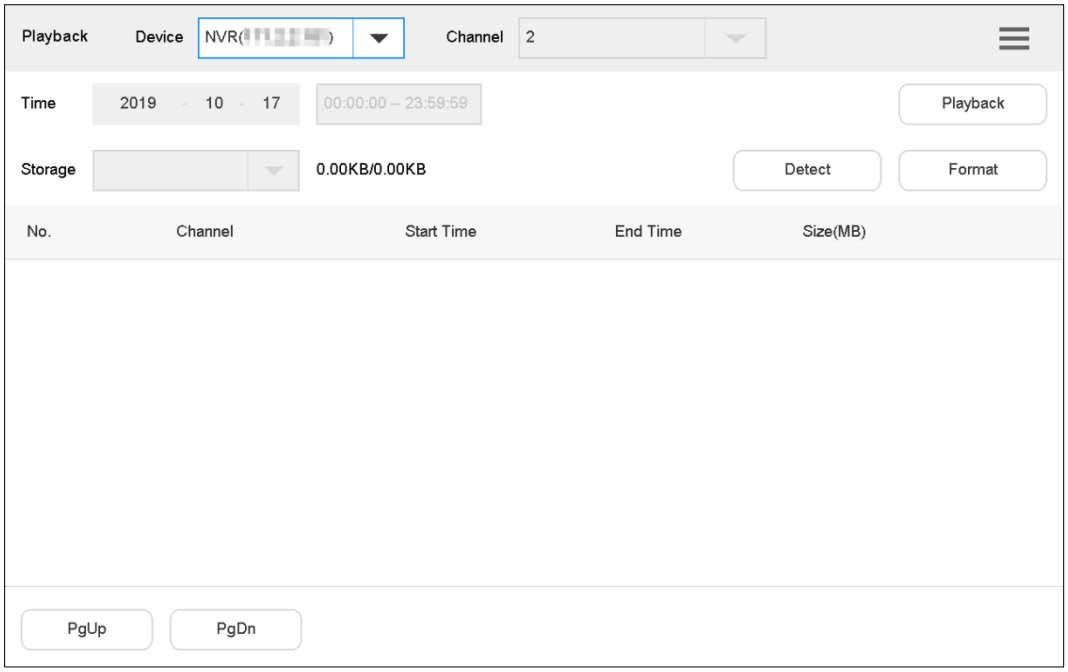
4.1.10 Playback of Recorded Videos

This function is supported by NVR devices that have recorded videos, rather than IVSS device.

Step 1 On the **Preview** interface, click  .

The **Playback** interface is displayed. See Figure 4-18.

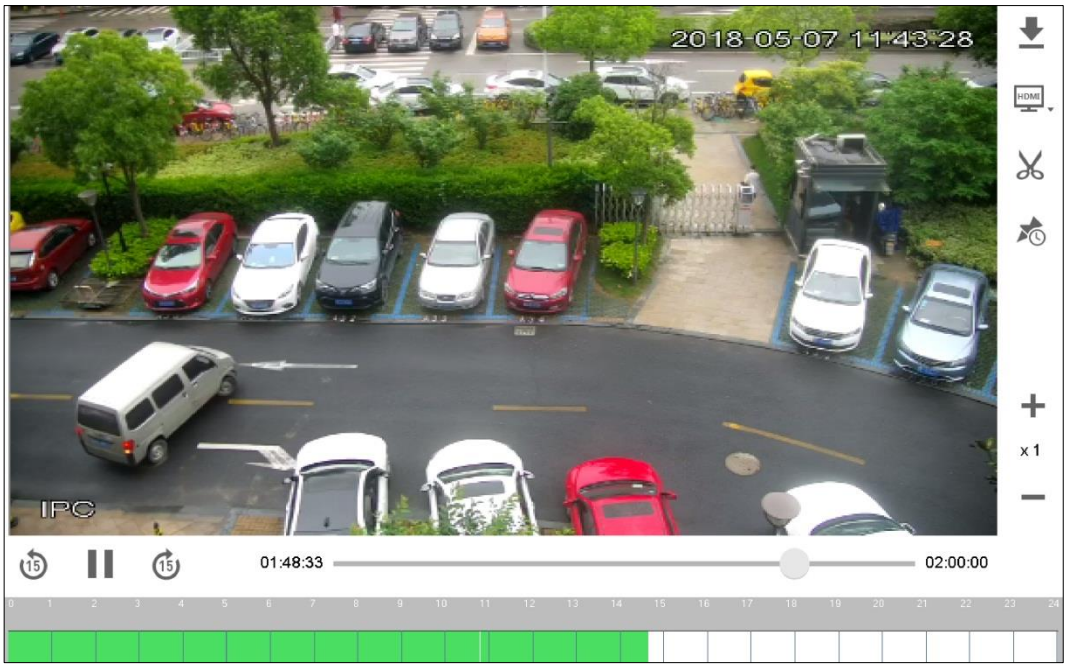
Figure 4-18 Playback



Step 2 Select playback device and channel, configure time and click **Playback**.

The system starts to play back recorded videos. See Figure 4-19.

Figure 4-19 Playback of recorded video



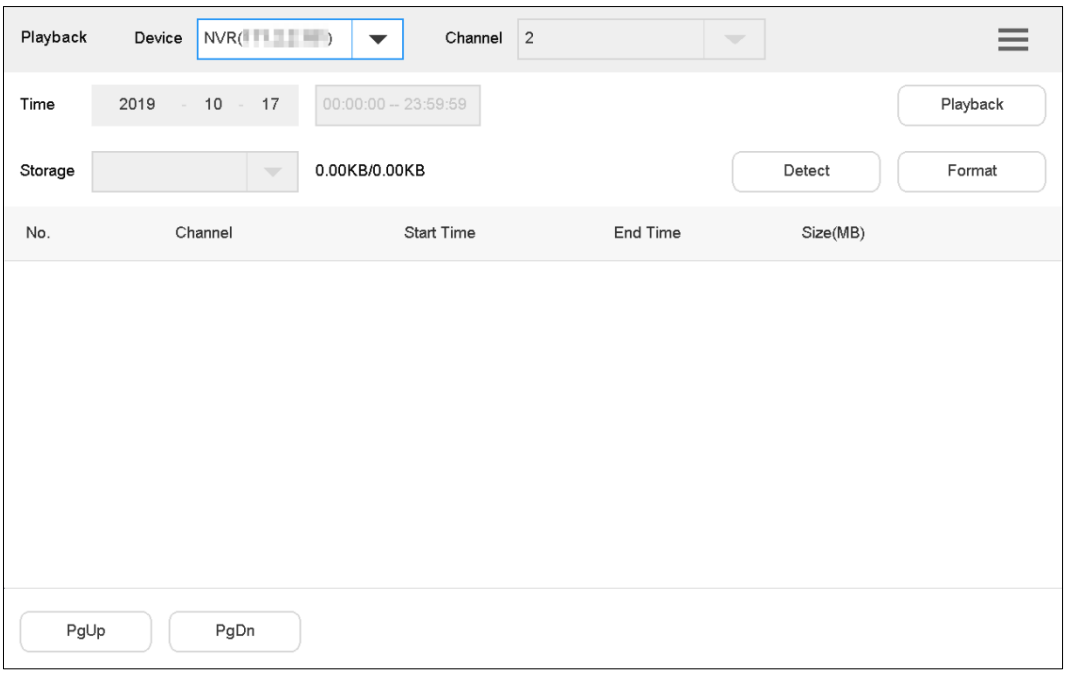
4.2 Playback

Play back the recorded videos.

Step 1 On the main interface, click **Playback**.

The **Playback** interface is displayed. See Figure 4-20.

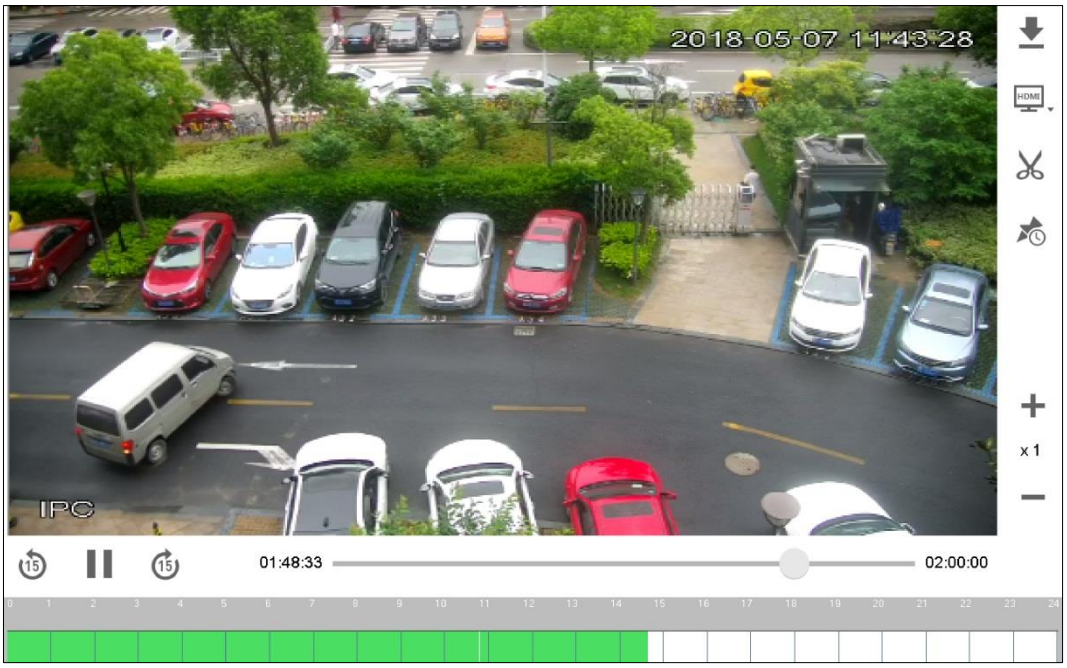
Figure 4-20 Playback (2)



Step 2 Select playback device and channel, configure time and click **Playback**.

The system starts to play back recorded videos. See Figure 4-21.

Figure 4-21 Playback of recorded video



During playback, you can control the playback speed, download the video and display the video on the TV wall. For details, see Table 4-4.

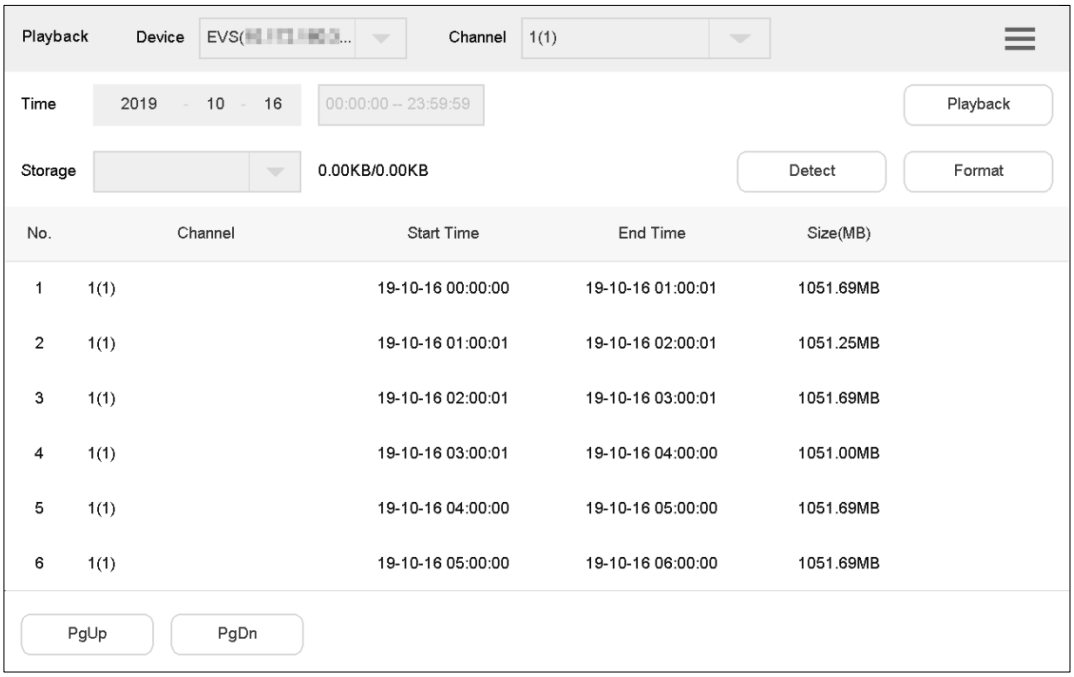
Table 4-4 Playback icon description

Icon	Description	Icon	Description
	Download the video to USB flash drive.		With HDMI port, display the video onTV wall and then view the video.
	Clip the video and saveit to USB flash drive. The playback is paused during clipping.		Configure the play time.
	During playback, click this icon to start fast forward mode, such as ×2 and ×4.		During playback, click this icon to slow down the play, such as ×1/2 and ×1/4 .
,	Play/pause During playback, click this icon to play or pause .	,	Go back to previous 15s/Fast forward 15s and then play.
	Click green area at the bottom to adjust play period.	–	–

Step 3 Click on the network keyboard panel.

The system returns to **Playback** main interface. See Figure 4-22.

Figure 4-22 Playback (3)



- Click **Detect** to search external USB flash drive.
- Click **Format** to format the storage device, and all files in the storage device will be cleared. Please be careful.

4.3 TV Wall

In platform TV wall mode, it does not support calling with F1 number.

Control decoder, matrix and TV wall.

Devices can be added only through WEB client. For details, refer to "4.3.1 Adding TV Wall through Matrix Web Interface" and "4.3.2 Adding TV Wall through Decoder Web Interface."

There are two ways to add TV wall on the web interface:

- Matrix web interface (support multiple TV walls).
- Decoder web interface (only one TV wall).

The display control baseline version (VMP and NVD) supports multiple TV walls.

TV walls can be added in TV wall configuration of keyboard. For details, see "4.3.8 Configuring TV Wall."

4.3.1 Adding TV Wall through Matrix Web Interface

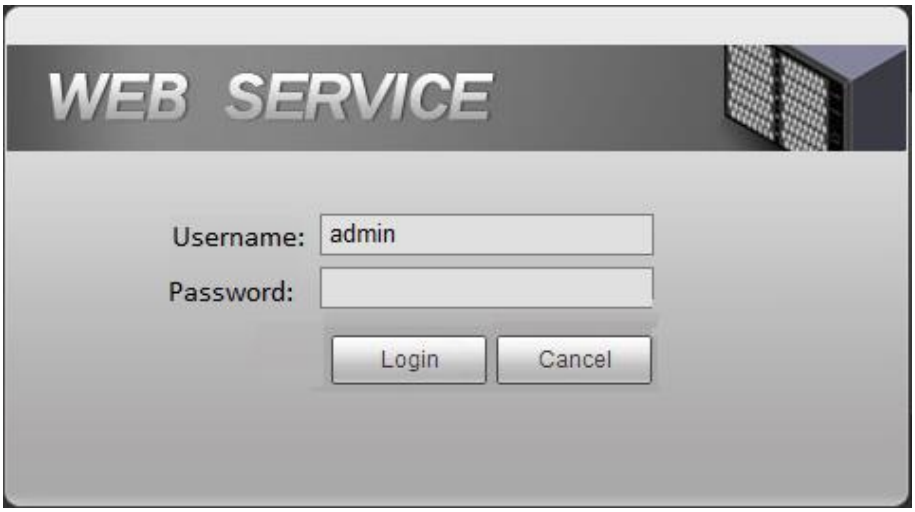
This part takes matrix web interface as an example.

- This part is operated at matrix web interface.
- For more specific configurations, refer to matrix user's manual.

- This part also applies to TV wall device.

Step 1 Enter IP address of matrix at address bar of the browser, and then press Enter. Matrix login interface is displayed. See Figure 4-23.

Figure 4-23 Matrix login interface



Step 2 Enter username and password.

Step 3 Click **Login** to enter web interface.

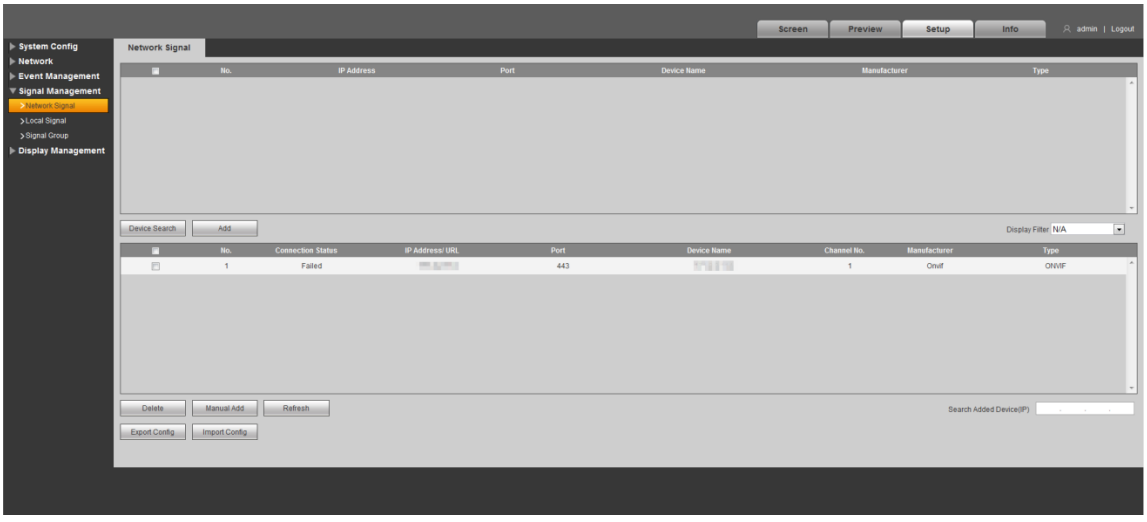
4.3.1.1 Adding Network Signal

Search or add network signals manually.

Step 1 Select **Setup > Signal Management > Network Signal**.

The **Network Signal** interface is displayed. See Figure 4-24.

Figure 4-24 Registration



Step 2 Add network signals.

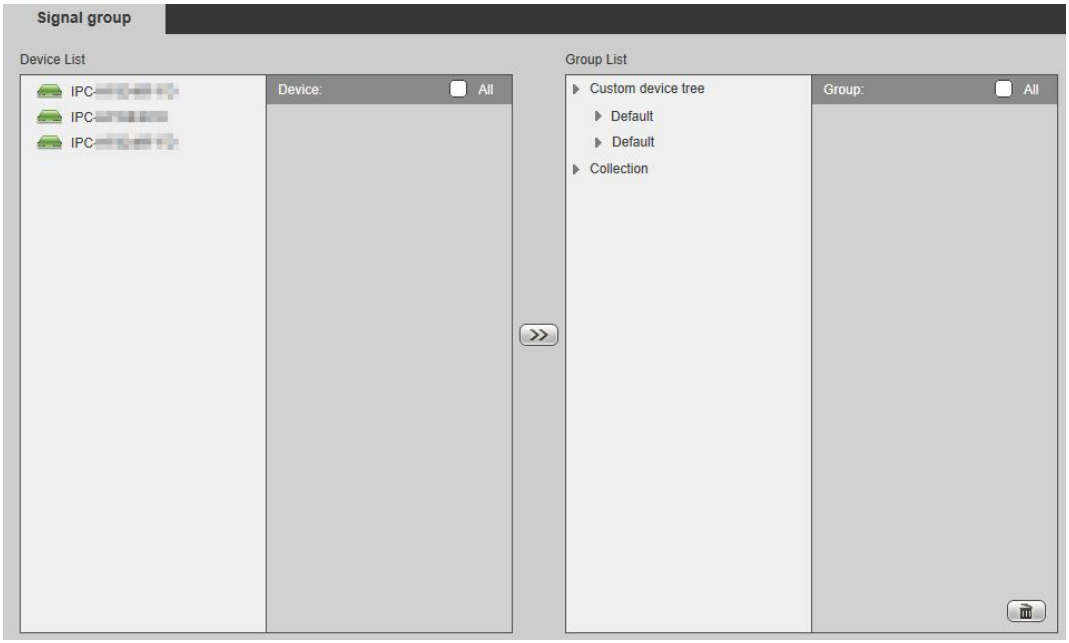
- Click **Device Search** to show search results, select the needed device and then click **Add**.
- Click **Add** to set parameters in the pop-up dialog box.

4.3.1.2 Signal Group

Select **Setup > Signal Management > Signal Group**.

The **Signal Group** interface is displayed. See Figure 4-25. Devices in the device list can be added to group list.

Figure 4-25 Signal group

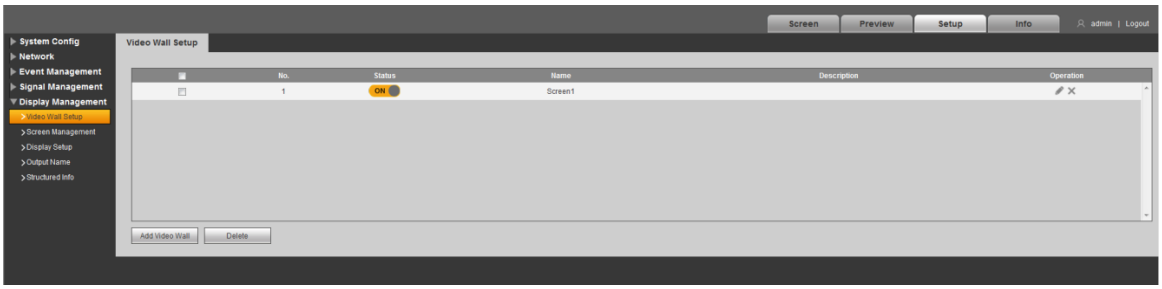


4.3.1.3 Adding Video Wall

Step 1 Select **Setup > Display Management > Video Wall Setup**.

The **Video Wall Setup** interface is displayed. See Figure 4-26.

Figure 4-26 Video wall setup



Step 2 Click Add Video Wall to add.

4.3.2 Adding TV Wall through Decoder Web Interface

This part takes decoder web interface as an example.

- This part is operated on the decoder web interface.
- For more specific configurations, refer to decoder user's manual.

Step 1 Enter IP address of decoder at address bar of the browser, and press Enter to enter decoder login interface. See Figure 4-27.

Figure 4-27 Login interface of decoder

Step 2 Enter username and password.

Step 3 Click **Login** to enter web interface.

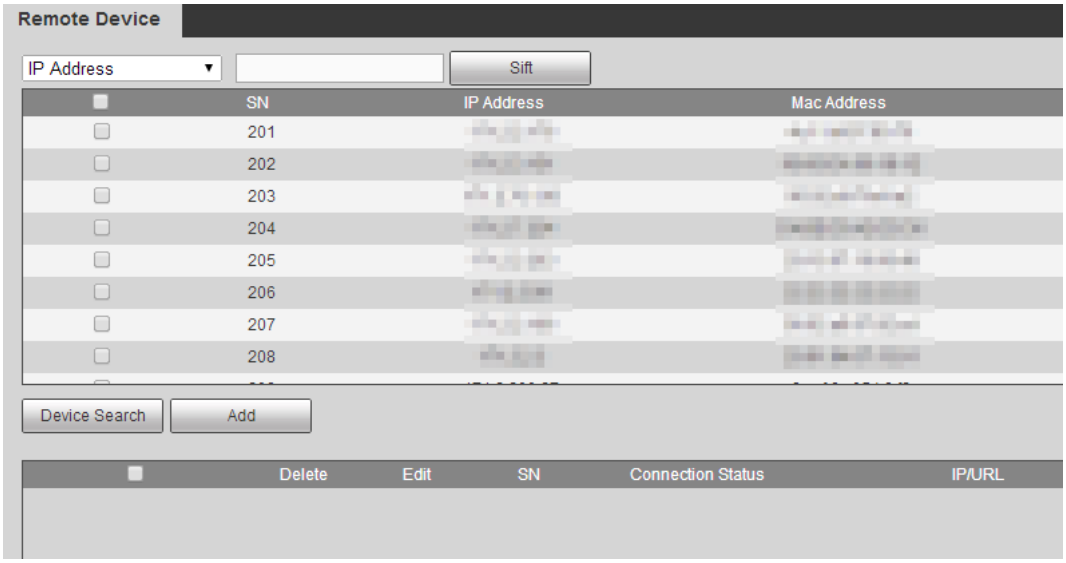
4.3.2.1 Adding Remote Device

Search or add network signals manually.

Step 1 Select Settings > Remote Device.

The **Remote Device** interface is displayed. See Figure 4-28.

Figure 4-28 Remote device



Step 2 Add a remote device.

- Click **Device Search** to show search results, select the needed device and click **Add**.
- Click **Add** to set parameters in the pop-up dialog box.

4.3.2.2 Editing Decoder TV Wall

Click the merged screen to edit TV wall.

4.3.3 Adding Device

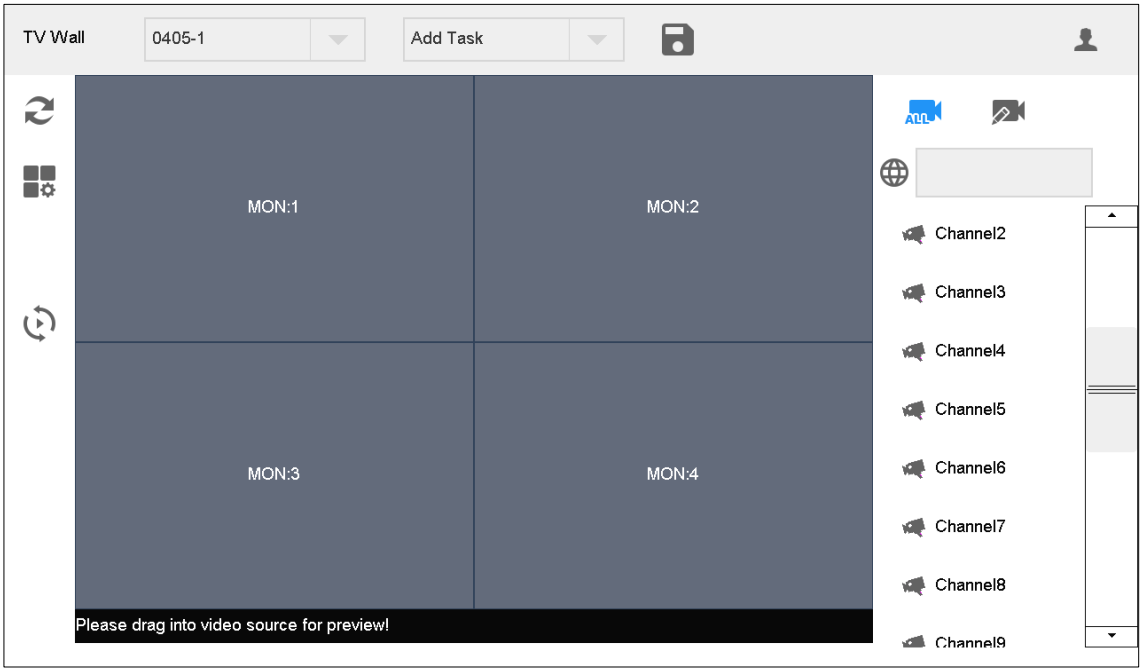
Add TV wall, matrix and decoder device at the network keyboard. Refer to "3.6 Adding Device" for details.

4.3.4 Video on Wall

Step 1 On the main interface, click **TV Wall.**
The **TV Wall** interface is displayed.

Step 2 In the pull-down list, select TV wall. See Figure 4-29.

Figure 4-29 TV wall (screen)



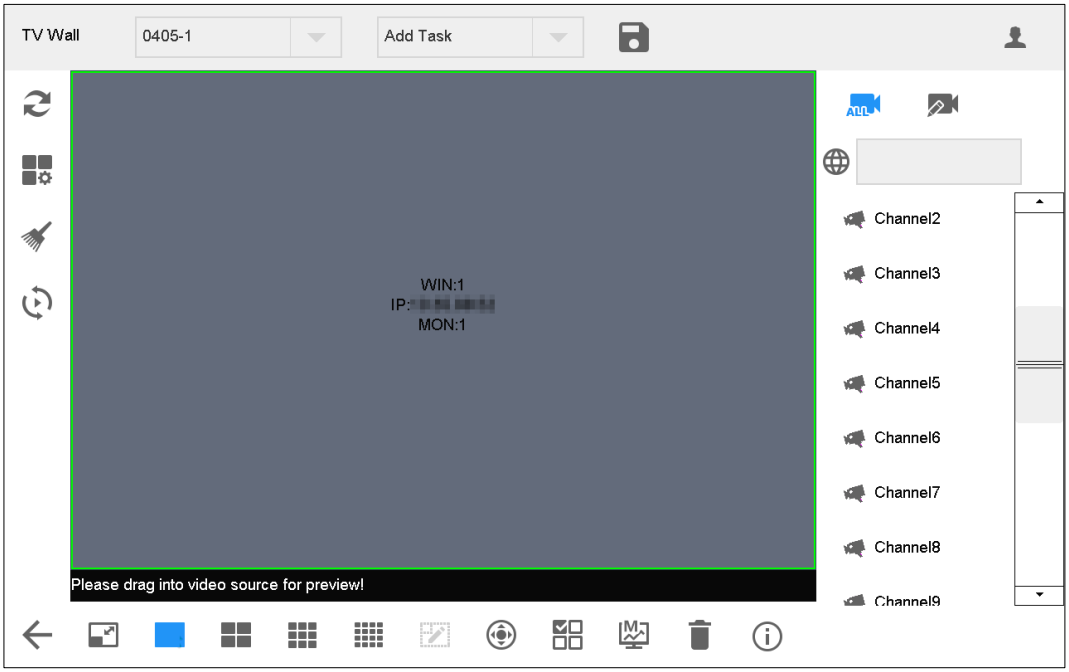
Step 3 Click one screen in Figure 4-29, such as MON:1.

Step 4 Split the screen.

Click , enter the line and column numbers, and customize the splicing. Maximum splicing is 20×20.

Step 5 Drag video source on the right onto TV wall.
The system displays relevant information. See Figure 4-30.

Figure 4-30 TV wall (screen information)



Switching Main and Sub-stream

Click  to switch main and sub-stream. M represents main stream, while S represents sub-stream.

Please switch the stream, and then drag the video onto the TV wall.

Clearing Screen

Click  to clear screen.

4.3.5 TV Wall Icon Description

Refer to Table 4-5 for icon description.

Table 4-5 Icons of TV wall interface

Icon	Description	Icon	Description
	Refresh		Configure TV wall
	Clear screen		Return
	Maximize and restore the window		Single split
	4-split		9-split

Icon	Description	Icon	Description
	16-split		Custom split
	PTZ		Select one window or all windows on the screen. This button is used with deletion button.
	Switch main and sub-stream. M represents main stream, while S represents sub-stream.		Delete
	Detailed information about channel.		Display the video on the wall quickly. Refer to "4.1.3 Video on Wall" for details.
	Display all input channels.		Display signal group. Refer to "4.3.1.2 Signal Group" for new signal group.
	Start or stop the scheme patrol. Please configure patrol task on the decoder. This is just a switch.	–	–

4.3.6 PTZ Control

Please refer to "4.5 PTZ Control."

4.3.7 Adding Tasks

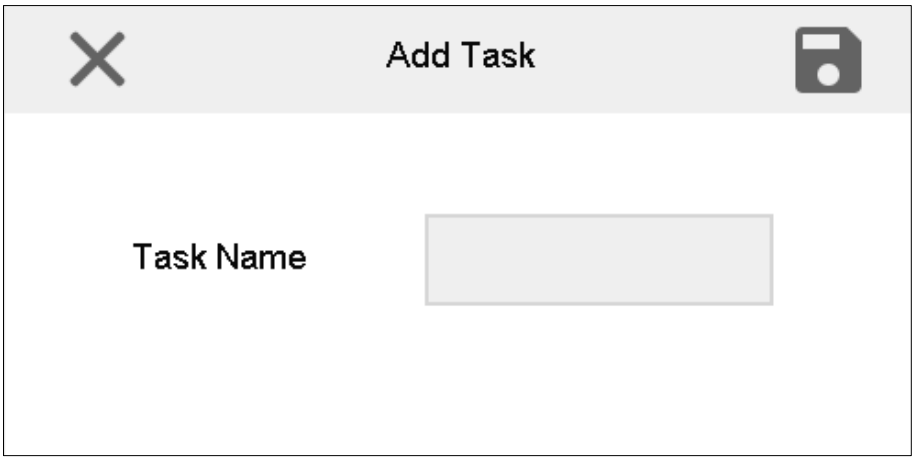
Frequently-used operations can be saved as tasks, in order to call them quickly. Maximum 16 tasks can be created.

Step 1 On the **TV Wall** interface, carry out a series of operations according to actual needs. For example, split the screen into 16 parts.

Step 2 Click .

The **Add Task** dialog box will pop out. See Figure 4-31.

Figure 4-31 Add task



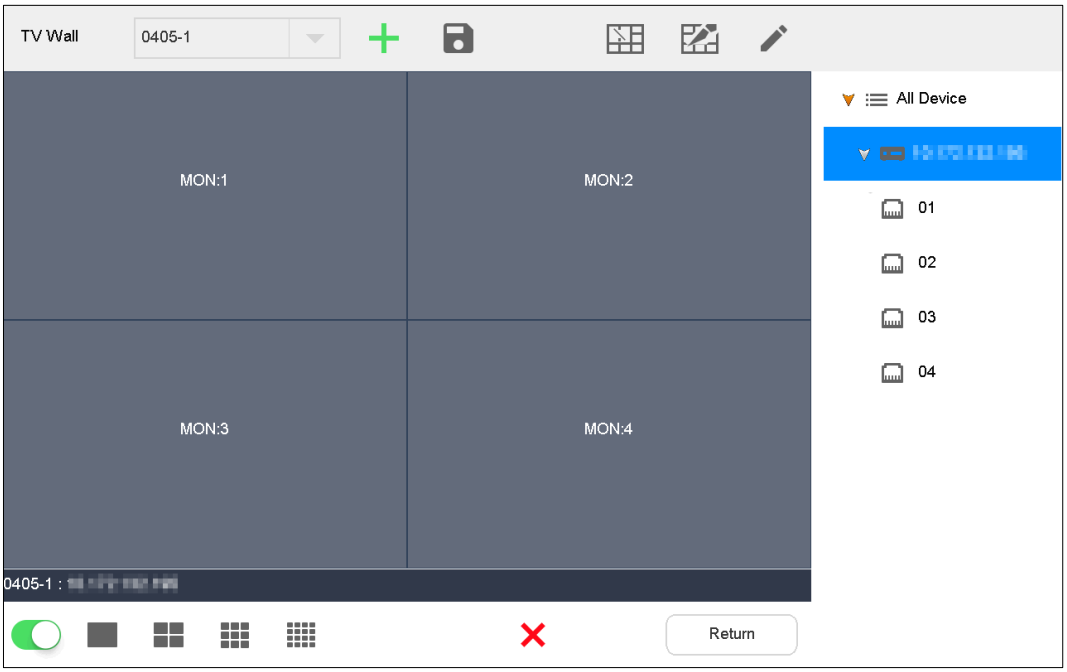
Step 3 Enter task name.

Step 4 Click .

4.3.8 Configuring TV Wall

On the **TV Wall** interface, click to enter **TV Wall** interface. See Figure 4-32.

Figure 4-32 Configure TV wall



Enable TV Wall

Click to enable TV Wall. Then, **TV Wall** pull-down list in Figure 4-29 will display this TV wall.

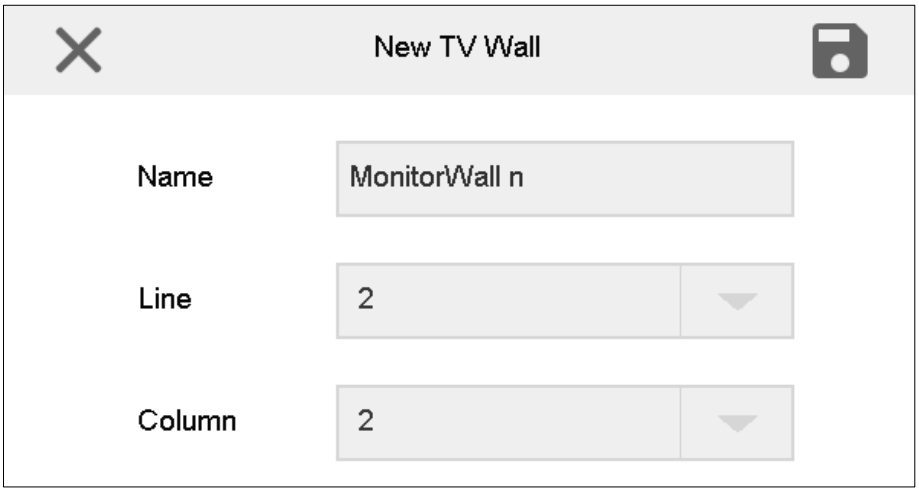
If decoding channel of this TV wall is bound to other TV walls, other TV walls will be disabled.

New TV Wall

Step 1 Click  .

The **New TV Wall** dialog box pops up. See Figure 4-33.

Figure 4-33 New TV wall



Step 2 Enter the name, select line and column, and then click  .

Step 3 Drag decoding channels on the right into the screen to bind them.

Step 4 (Optional) Select two or more screens, and then click  to merge them into one screen.

Step 5 Click  .

Delete TV Wall

Click  to delete TV wall.

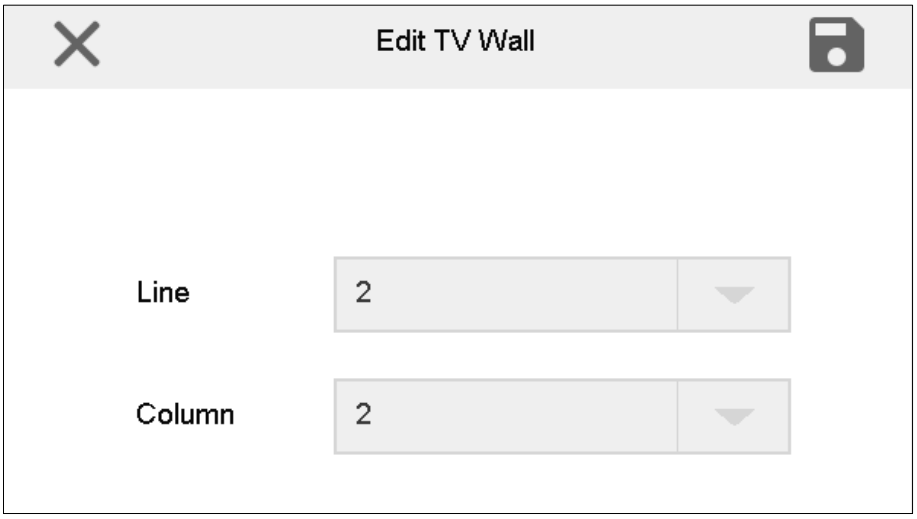
Cancel Merged Screen

Select a merged screen and then click  .

Edit TV Wall

Click  and the **Edit TV Wall** dialog box is displayed. See Figure 4-34.

Figure 4-34 Edit TV wall



Return to TV Wall Interface

Click **Return** to return to TV wall interface.

Exit TV Wall Interface

Click  to exit TV wall interface.

4.4 Platform

The network keyboard can connect to a platform, and thus control the devices that are added to the platform. At present, the supported platforms include DSS, DSS-PRO, DSS-C9100 and DSS-Express.

- DSS platform does not support platform channel preview at present.
- Key module is not supported in platform preview mode.

4.4.1 Adding Devices and Video Wall

4.4.1.1 Adding Devices to Platform

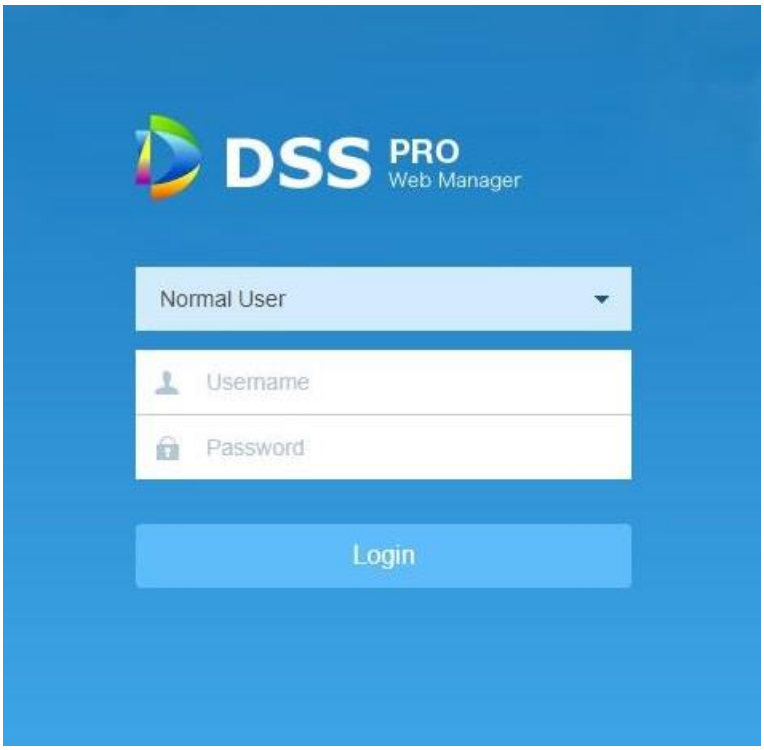
You can add an encoder, decoder, TV wall and matrix device. Take adding a decoder for example.

This part is about operations on the DSS-PRO platform.

Step 1 Enter IP address of platform server at address bar of the browser, and then press Enter.

The platform server login interface is displayed. See Figure 4-35.

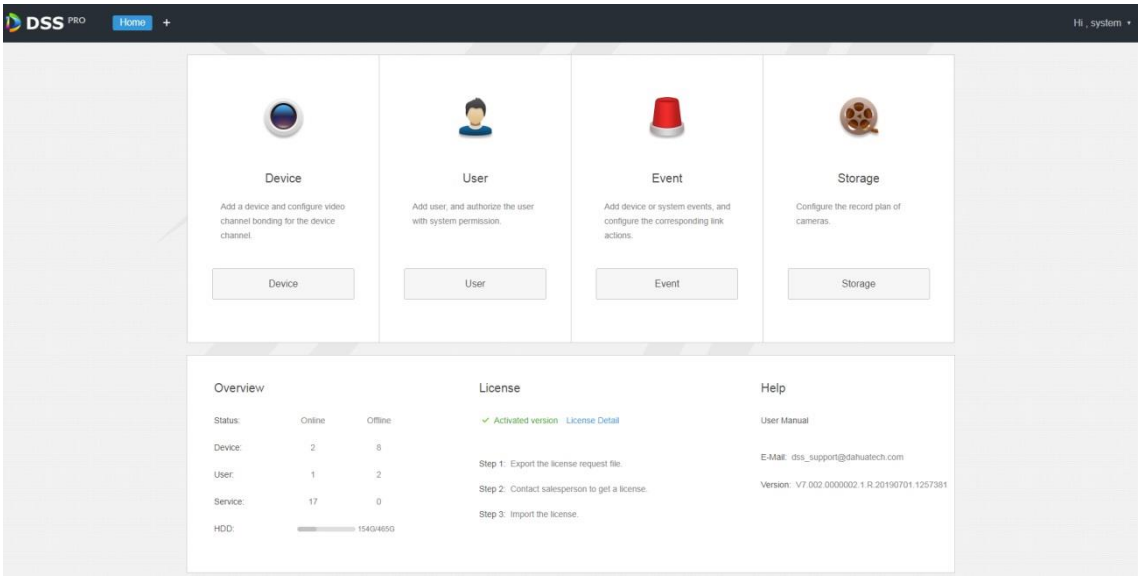
Figure 4-35 Platform server login interface (DSS-PRO)



Step 2 Enter username and password. The default username is system and default password is admin123. Click **Login**.

Main interface of platform server is displayed. See Figure 4-36.

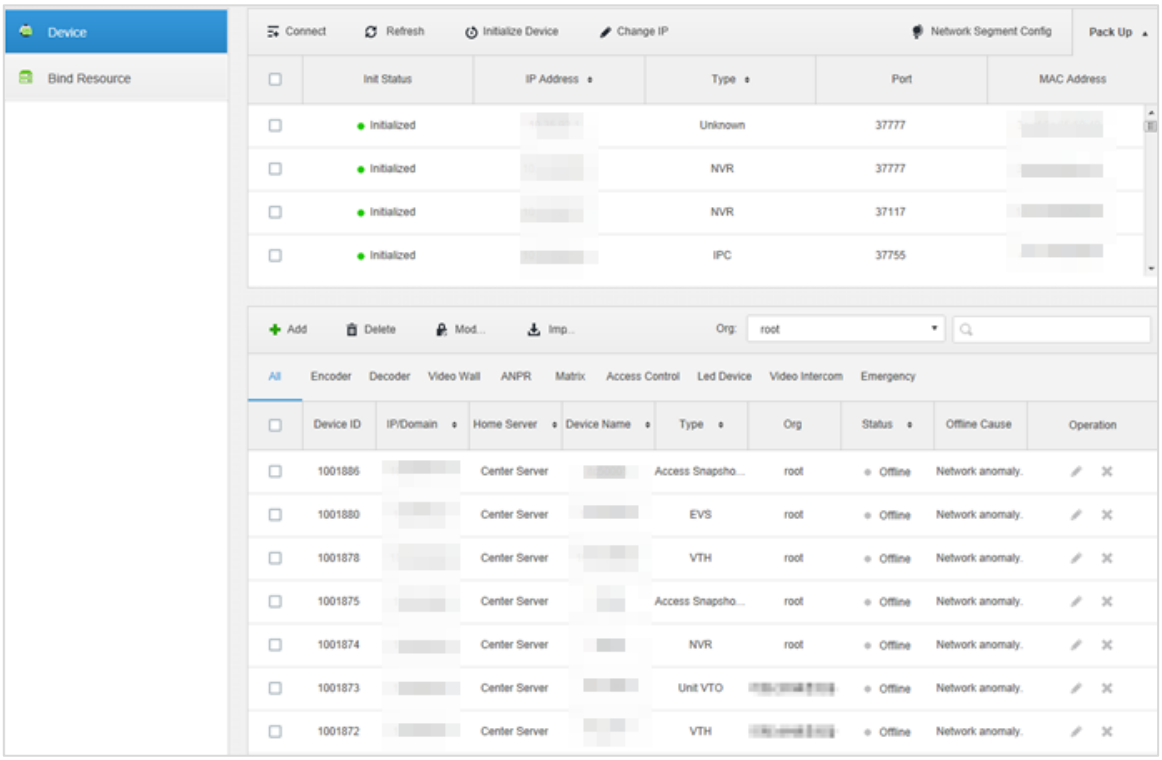
Figure 4-36 Main interface of platform



Step 3 Click + and select **Device** on the **New Tab** interface.

The system will display the **Device** interface. See Figure 4-37.

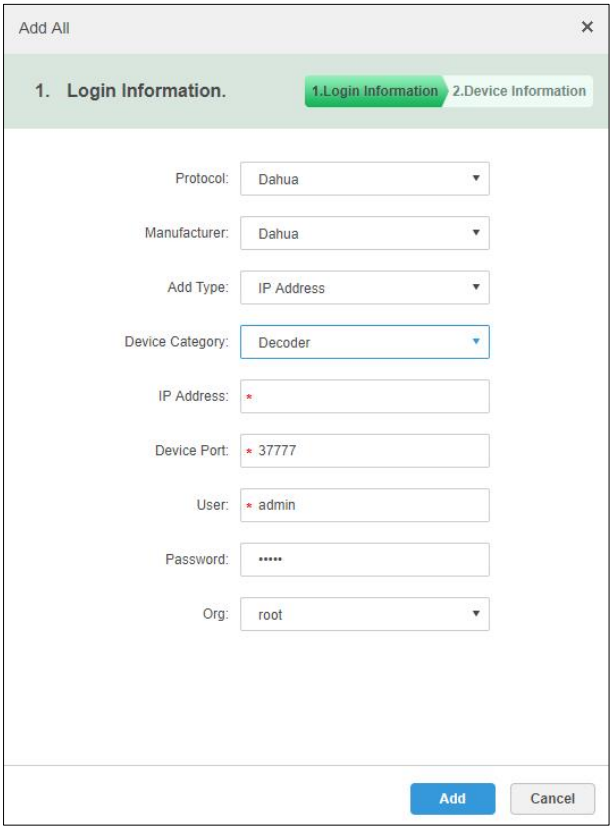
Figure 4-37 Device



Step 4 Click **Add**.

The interface is shown in Figure 4-38.

Figure 4-38 Add a device (1)



Step 5 Select **Protocol**, **Manufacturer**, **Add Type**, **Device Category**, **Organization**, **Video Server**, input **IP Address**, **Device Port** and **Username/Password**.

The parameters vary with the selected protocols. The actual interface shall prevail.

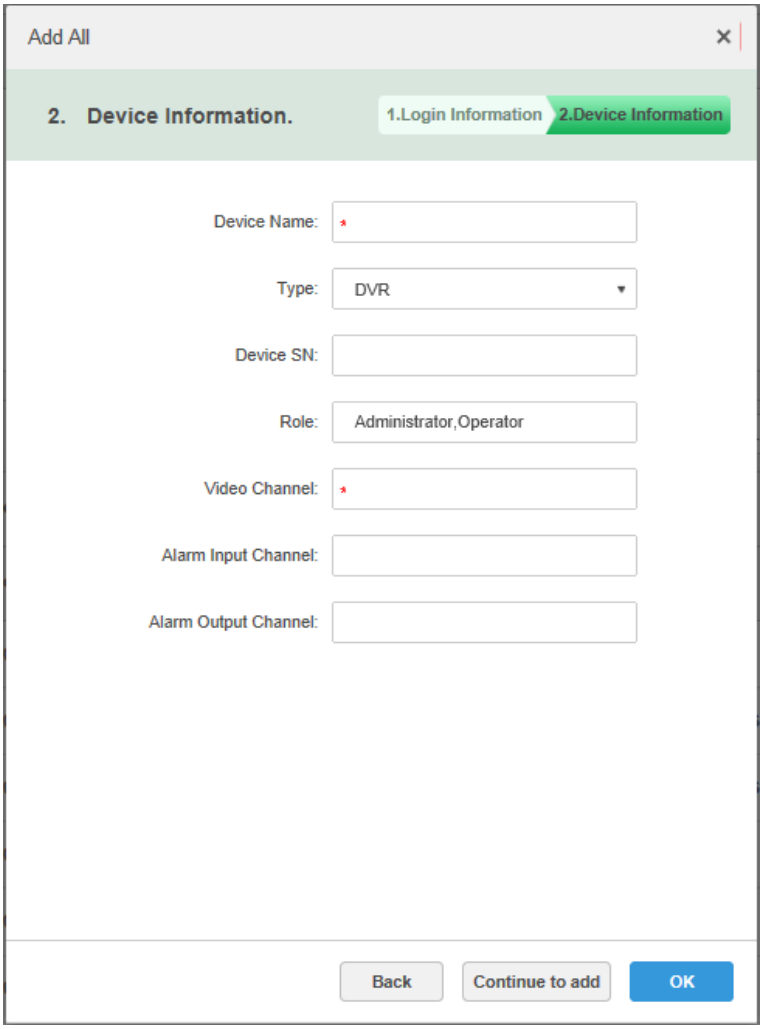
In the **Add Type** dropdown list,

- When **IP Address** is selected, enter device IP address.
- When **Auto Register** is selected, enter device registration ID. Add encoders through auto register; the ID of auto register has to be in accordance with the registered ID configured at encoder.
- When **Domain Name i**s selected, the options are from the configured domain during deployment.

Step 6 Click **Add**.

The interface is shown in Figure 4-39.

Figure 4-39 Add a device (2)



Step 7 Select Device Type and enter Device Name, Alarm input/output channel, and so on.

Step 8 Click **OK**.

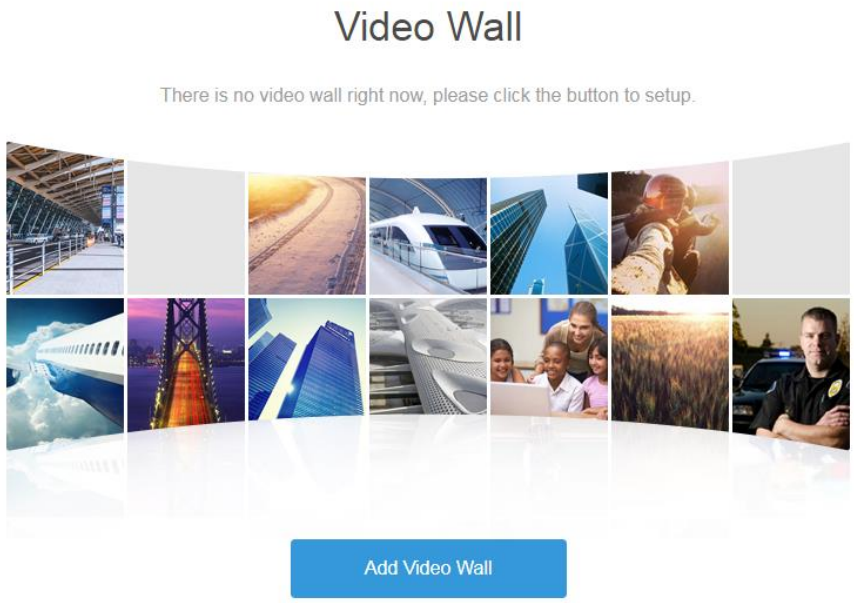
Please click **Continue to add** if it continues to add device.

4.4.1.2 Adding Video Wall

Add a video wall layout on the platform.

Step 1 Click + and select **Video Wall** on the **New Tab** interface. See Figure 4-40.

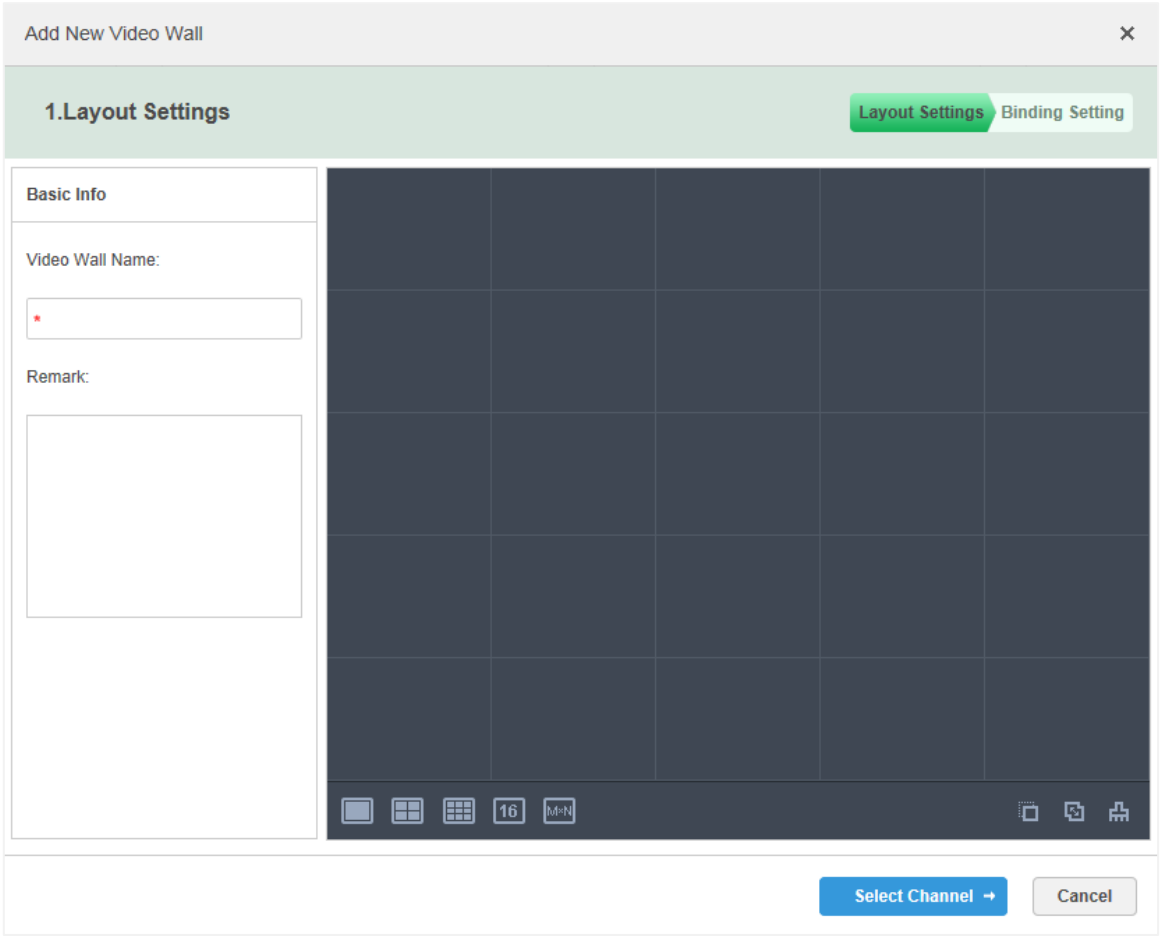
Figure 4-40 Video wall configuration interface



Step 2 Click Add Video Wall.

The **Add New Video Wall** interface is displayed. See Figure 4-41.

Figure 4-41 Add a video wall

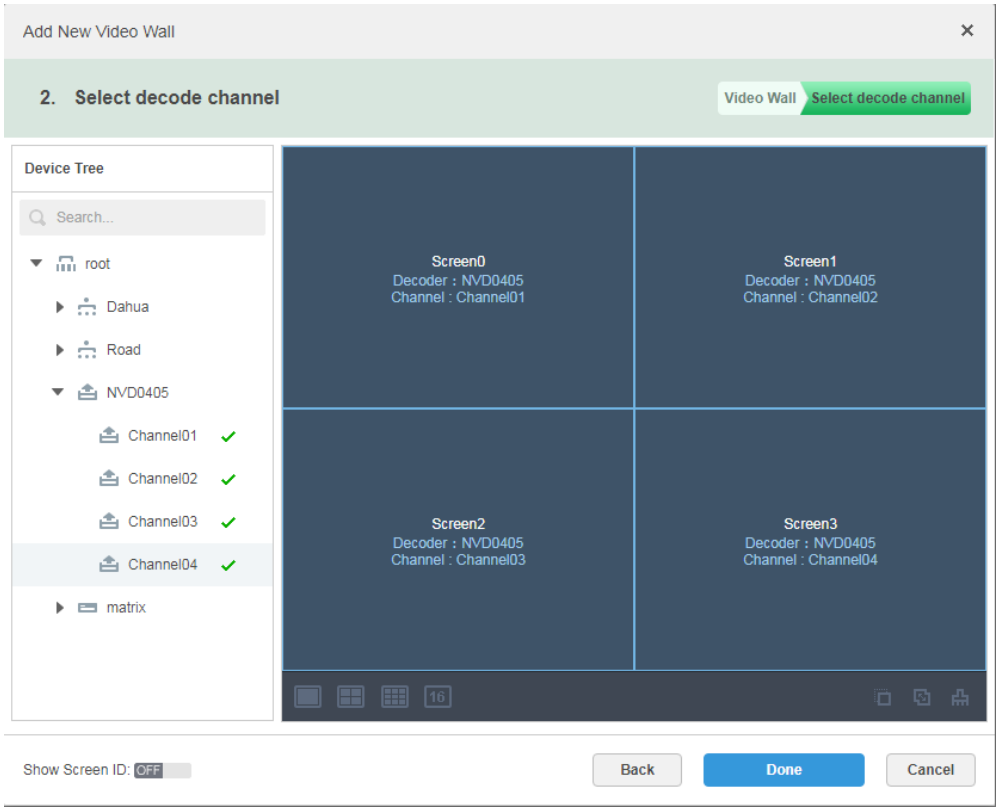


Step 3 Enter **Video Wall Name**, select window distribution.

Step 4 Click Select Channel.

The **Select decode channel** interface is displayed. See Figure 4-42.

Figure 4-42 Select a decoding channel



It can set if it displays ID in the screen, Show Screen ID: OFF means that the screen ID has been disabled; click the icon and it becomes Show Screen ID: ON, and then it means that screen ID has been enabled.

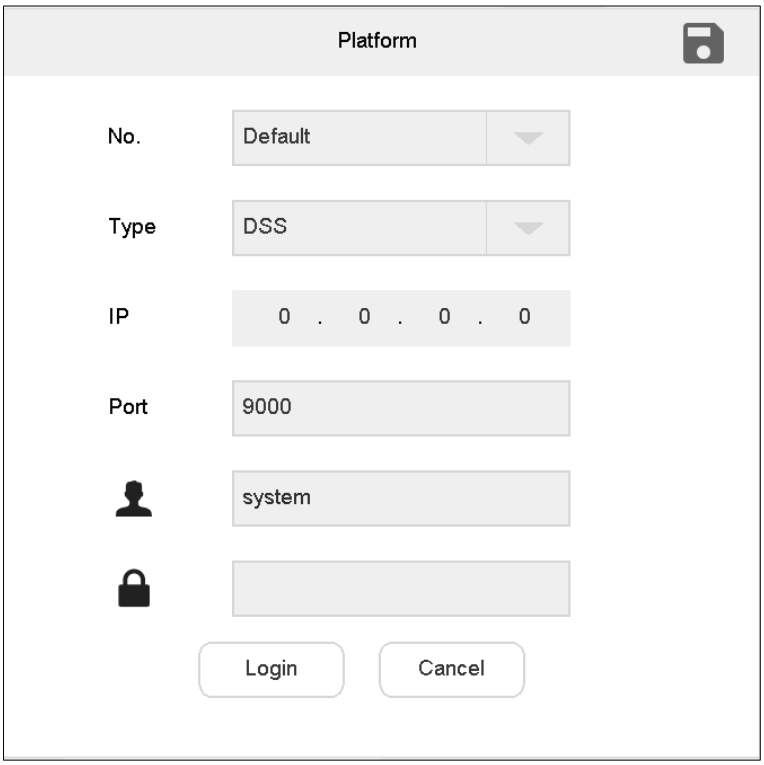
Step 5 Click **Done**.

4.4.2 Video on Wall

Step 1 On the main interface, click **Platform**.

The connection interface of keyboard operation platform is displayed. See Figure 4-43.

Figure 4-43 Connect keyboard operation platform



Step 2 Set parameters. Refer to Table 4-6.

Table 4-6 Platform parameter description

Parameter	Description
No.	Customize platform number.
Type	● Select platform type, including DSS (the old version before DSS-PRO), DSS-PRO, DSS-C9100 and DSS- Express.
IP	Enter IP address of platform.
Port	Set port number. ● Regarding DSS platform, default port number is 9000. ● Regarding DSS-PRO and DSS-Express platform, default port number is 80. ● Regarding DSS-C9100 platform, default port number is 8314.
Username	Enter username to log in to the platform.
Password	Enter password to log in to the platform.

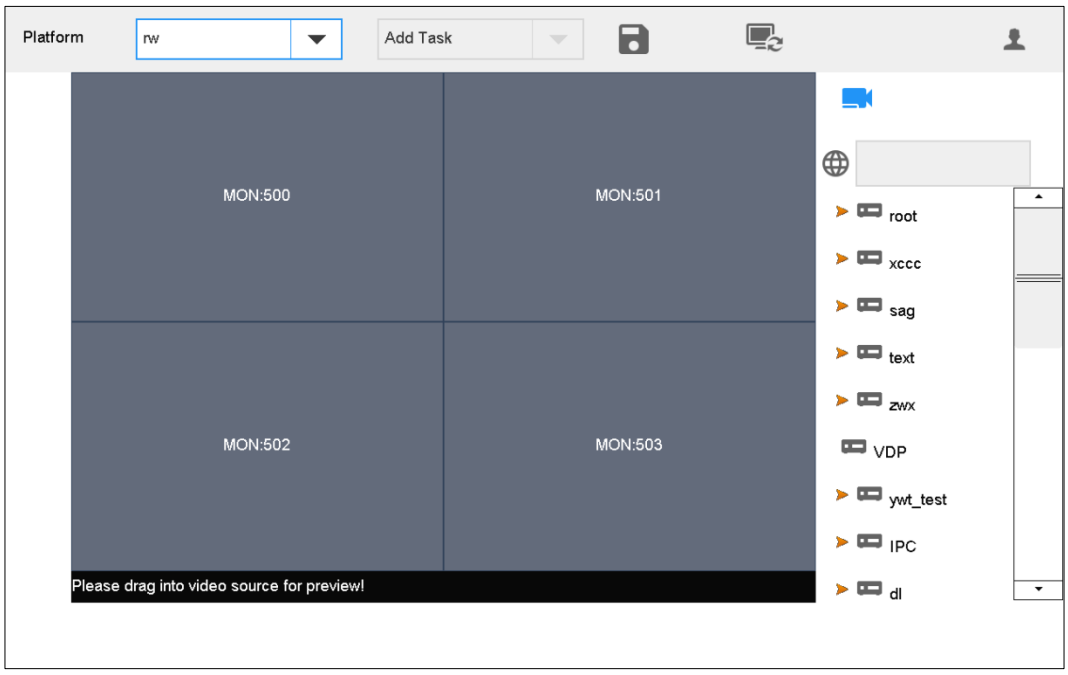
Step 3 Click **Login**.

The **Login** interface is displayed.

Click to save the present information.

Step 4 Select platform. See Figure 4-44.

Figure 4-44 Platform (1)



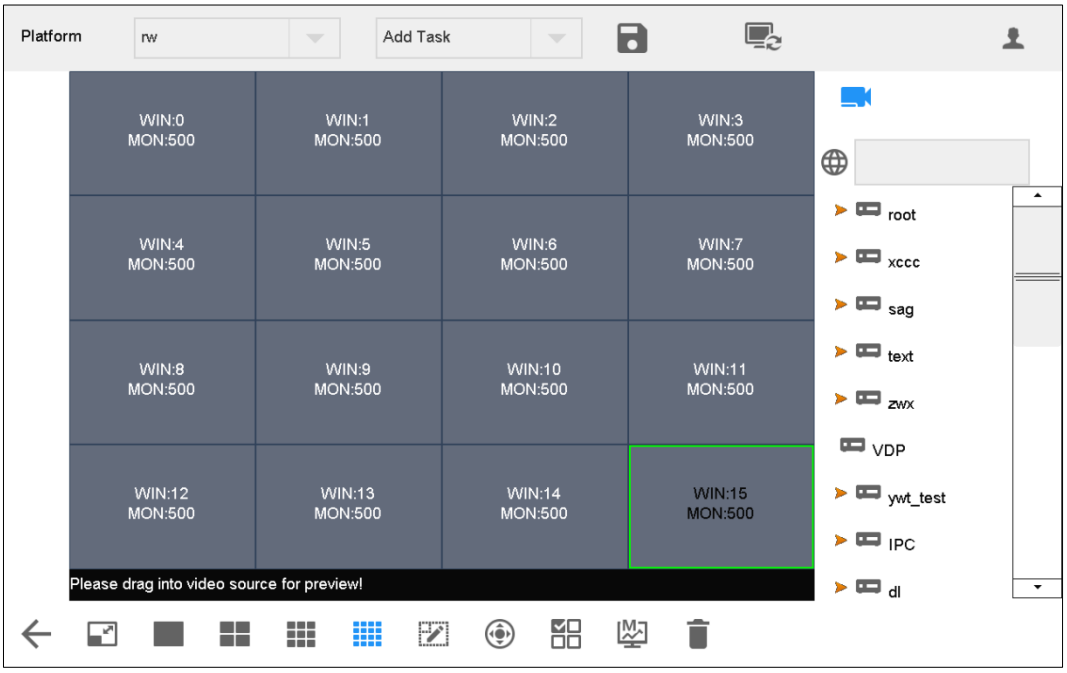
Step 5 Click one screen in Figure 4-44, such as MON:500. Enter display screen information interface.

Step 6 Split the screen. For example, click  to get 16-split screen.

Click  , enter the line and column numbers, and customize the splicing. Maximum splicing is 20×20.

Step 7 Drag video source on the right onto large screen. See Figure 4-45.

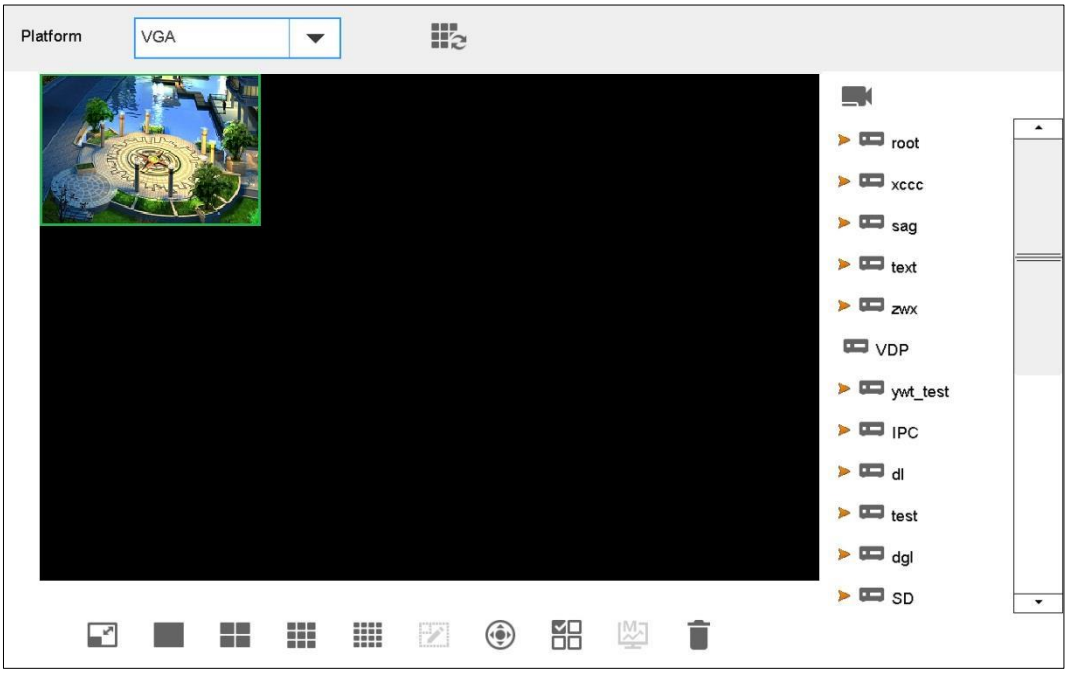
Figure 4-45 Platform (2)



Step 8 Click  .

Switch to live view interface. See Figure 4-46.

Figure 4-46 Live view



Switching Main Stream and Sub-stream

Click  to switch main and sub-stream. M represents main stream, while S represents sub-stream.

Please switch the stream, and then drag the video onto the TV wall.

Clearing Screen

Click  to clear screen.

For other operations of TV wall, please refer to "4.1.3 Video on Wall."

DSS-PRO, DSS-C9100 and DSS- Express platforms do not have this icon. The layout is cleared after each split.

4.4.3 Icons of Platform Interface

Refer to Table 4-7 for icon description.

Table 4-7 Icons of platform interface

Icon	Description	Icon	Description
	Refresh		Clear screen.

Icon	Description	Icon	Description
	Return		Maximize and restore the window.
	Single split		4-split
	9-split		16-split
	Custom split.		PTZ
	Select one window or all windows on the screen. This button is used with deletion button.		Switch main and sub-stream. M represents main stream, while S represents sub-stream.
	Delete		Detailed information about input channel.
	Switch to live view interface.		Switch to TV wall mode.

4.4.4 PTZ Control

Refer to "4.5 PTZ Control."

4.4.5 Adding Task

Refer to "4.3.7 Adding Task."

4.5 PTZ Control

The camera shall have PTZ function.

Click on the **Platform** interface, and then the PTZ control interface is displayed on the right. See Figure 4-47.

Figure 4-47 PTZ control

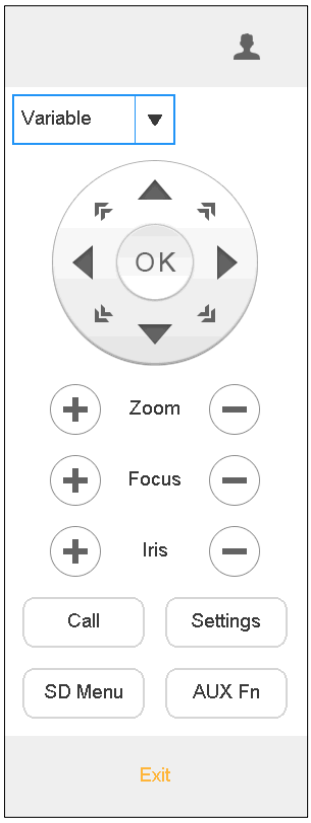


Table 4-8 PTZ control parameter description

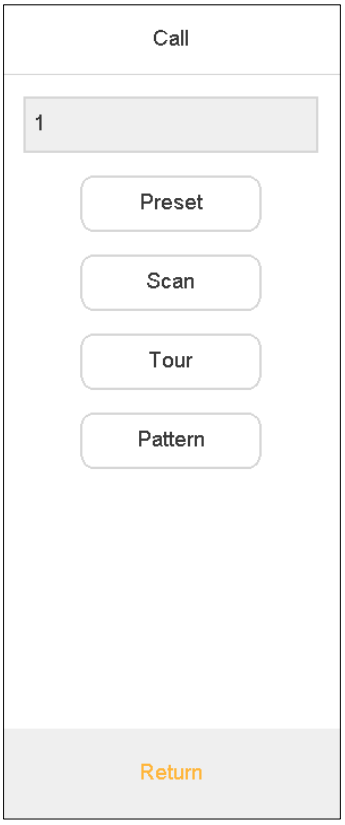
Parameter	Description
Step type	It consists of fixed step and variable step. ● By selecting **Fixed**, the step remains unchanged when PTZ turns; it is always the set step value. ● By selecting **Variable**, the step changes with the tilt of joystick. The larger tilt angle represents quicker turning speed.
8 direction keys	Control turning direction of SD lens.
Zoom	Set the zoom increase/decrease of PTZ lens.
Focus	Set the focus increase/decrease of PTZ lens.
Iris	Set the iris increase/decrease of PTZ lens.
Call	Call the preset point, scan, tour and pattern.
Settings	PTZ operation settings, including the preset point, scan, tour and pattern.
SD menu	Open and close SD menu.
AUX Fn	Lighting and wiper function.
Exit	Exit PTZ control.

Use the joystick to control 8 directions of PTZ.

4.5.1 Call

Click **Call**. The **Call** interface is displayed. See Figure 4-48.

Figure 4-48 Call



Enter a number in the input box, such as 1. Click **Preset** to call the preset point 1.

- It will be called successfully after you have set preset point.
- Call methods of scan, tour and pattern are the same as that of preset point. Refer to "4.5.2 Settings" for details.

4.5.2 Settings

4.5.2.1 Settings of Preset Point

Step 1 Turn the camera to required position with the joystick or direction button.

Step 2 Select **Preset**.

Step 3 Enter a preset point value in **Preset** input box, such as **1**.

Step 4 Click **Settings**. Preset point 1 is set successfully.

4.5.2.2 Settings of Tour

Step 1 Select **Tour**.

Step 2 Enter tour route value in **Tour No.** input box.

Step 3 Enter a preset point value in **Preset** input box, and then click **Add Preset** to add a preset point to the tour route.

- Multiple preset points can be added.

- Click **Del Preset** to delete the preset point from this tour route. Repeat the operation to delete multiple preset points from this tour route. Preset points cannot be deleted in some protocols.
- Click **Del Tour** to delete the present tour route.

4.5.2.3 Settings of Pattern

Step 1 Select **Pattern**.
Step 2 Enter pattern no. in **Pattern No.** input box.
Step 3 Click **Start Pattern** to carry out operations of zoom, focus, iris or direction.
Step 4 Click **Stop Pattern** to complete the settings of one pattern route.

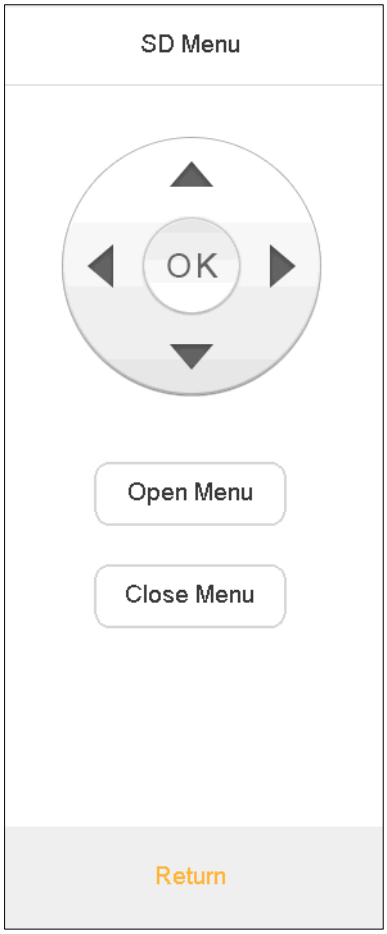
4.5.2.4 Settings of Scan

Step 1 Turn the camera to left margin with the joystick or direction button.
Step 2 Click **Set Left** to determine left margin position.
Step 3 Turn the camera to right margin with the joystick or direction button.
Step 4 Click **Set Right** to determine right margin position.

4.5.3 SD Menu

Click **SD Menu**. The **SD Menu** interface is displayed. See Figure 4-49.

Figure 4-49 SD menu



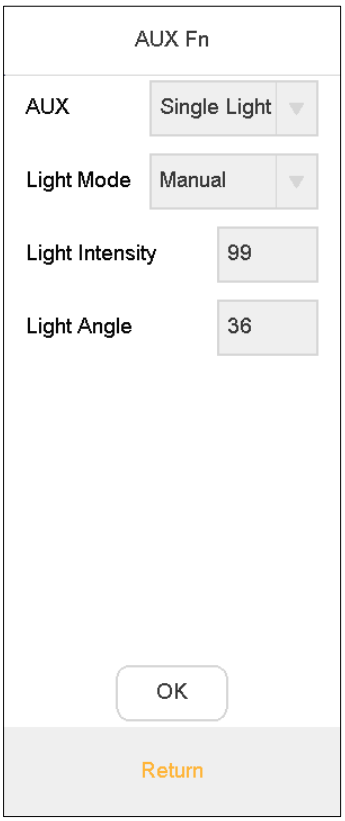
Refer to Table 4-9 for introductions to icons.

Table 4-9 SD menu parameter description

Parameter	Description
Direction key	Select PTZ menu options.
OK key	Confirm operations.
PTZ menu	• Click Open Menu to open PTZ menu on preview interface. Then, use direction key to select different functions to operate the PTZ. • Click Close Menu to close PTZ menu on preview interface.

4.5.4 Auxiliary Function

Figure 4-50 Auxiliary function



- Auxiliary function includes **Single Light**, **Multi-light** and **Wiper**.
- Light mode includes **Manual**, **SmartIR** and **Zoom Ratio First**.
- Light intensity: Light intensity can be set.
- Light angle: Light angle can be set.

4.6 Settings

It consists of four parts, namely, device, general, account and system.

4.6.1 Device Management

4.6.1.1 Adding Device

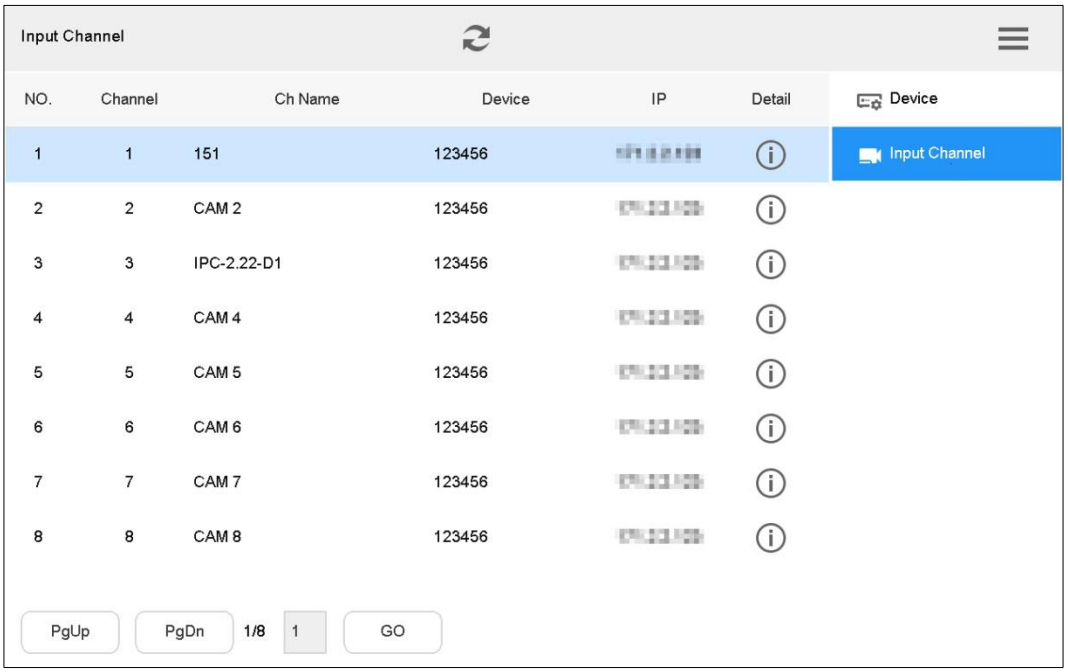
Refer to "3.6 Adding Device."

4.6.1.2 Input Channel

Display input number, channel, channel name, device, IP address and details. Meanwhile, modify input channel number.

On the **Settings** interface, click **Device**, and then click **Input Channel** tab. The **Input Channel** interface is displayed. See Figure 4-51.

Figure 4-51 Input channel



Modifying Input Channel Number

Click  to modify input channel number and name in the pop-up dialog box.

4.6.2 General Settings

4.6.2.1 Wired Network

Refer to "3.5.1 Wired Network" for details.

4.6.2.2 Wi-Fi

Refer to "3.5.2 Wi-Fi" for details.

4.6.2.3 Bluetooth

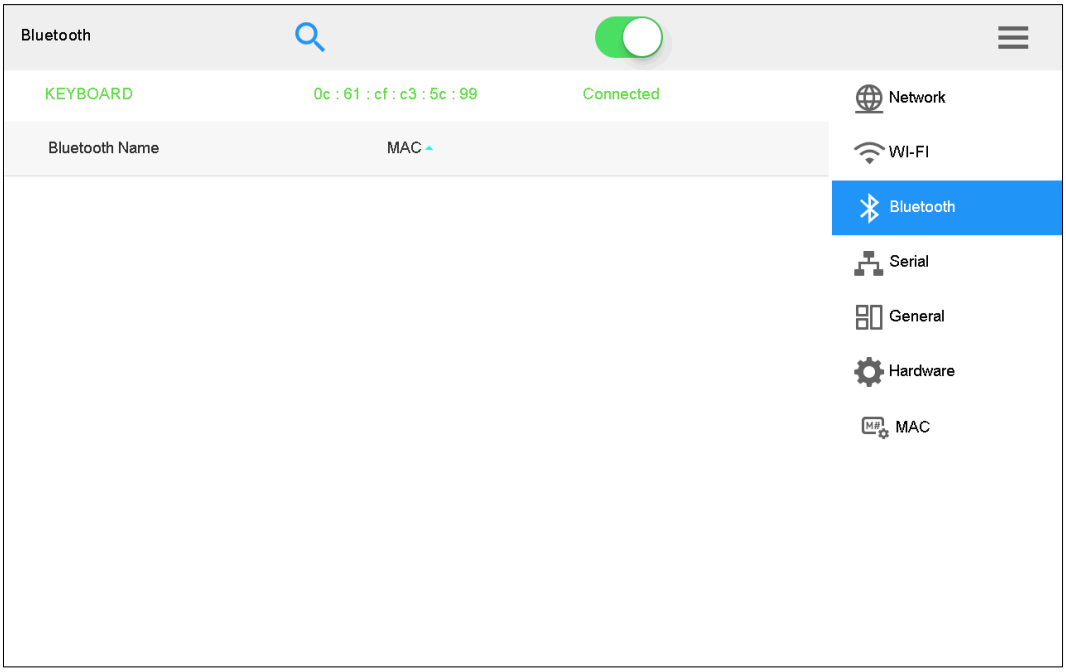
Step 1 On the **General** interface, click **Bluetooth** tab.
The **Bluetooth** interface is displayed.

Step 2 Click to enable Bluetooth.

Step 3 Click  to search nearby Bluetooth device.

Step 4 Double-click the searched device and the system will display **Connecting**.
After several seconds, the system will display **Connected**, so it is connected successfully. See Figure 4-52.

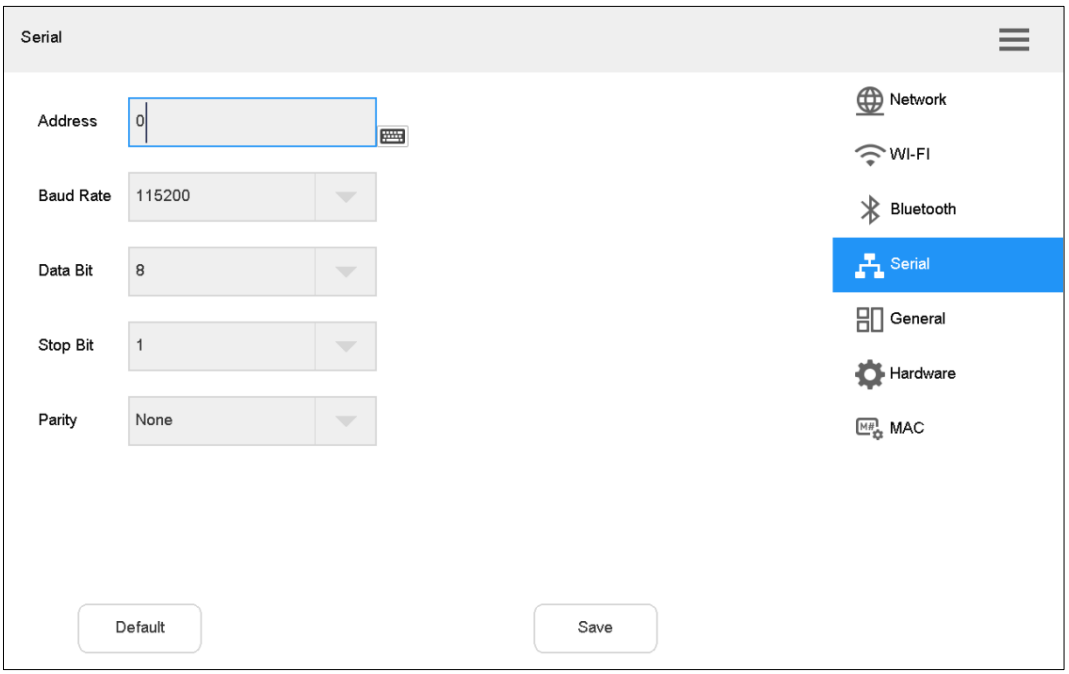
Figure 4-52 Bluetooth



4.6.2.4 Serial Port

Step 1 On the **General** interface, click **Serial** tab.
The **Serial** interface is displayed. See Figure 4-53.

Figure 4-53 Serial



Step 2 Set the parameters. Refer to Table 4-10.

Table 4-10 Serial port parameter description

Parameter	Description
Address	In case of serial port control, identify devices according to the address. Value ranges from 0 to 255.
Baud rate	Baud rate ranges from 1200 to 115200. There are 8 levels available.
Data bit	Select data bit, including 5, 6, 7 and 8.
Stop bit	Select stop bit, including 1 and 2.
Parity	Select parity, including none, odd, even, checkmark and null parity.

Step 3 Click **Save**.

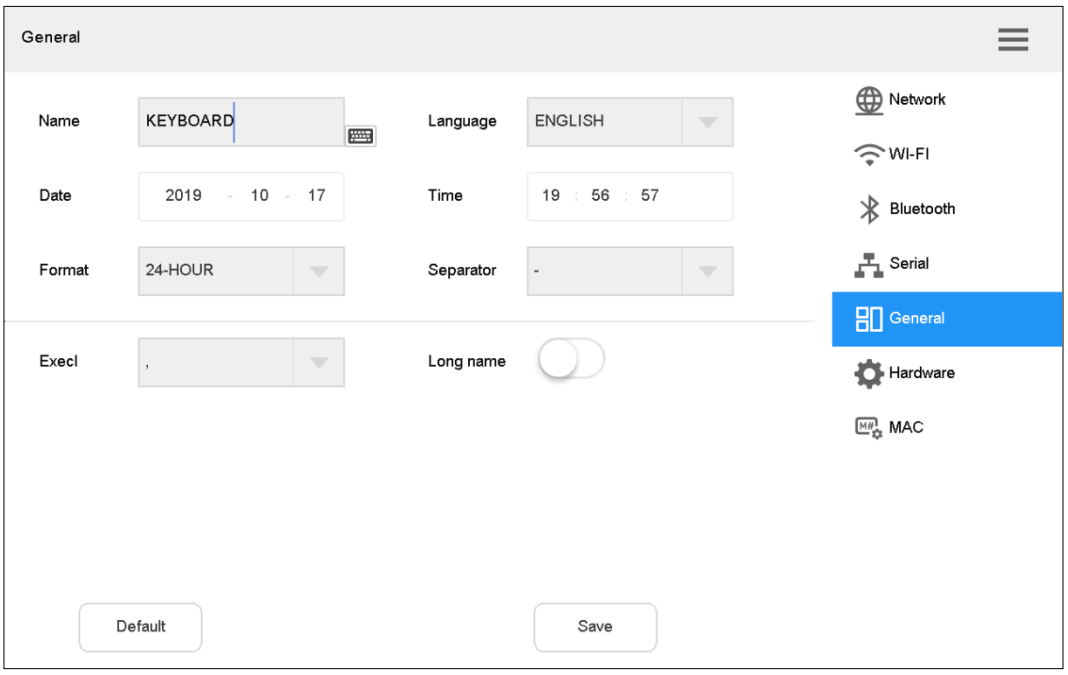
4.6.2.5 General

You can set name, date and time etc. of network keyboard.

Step 1 On the **Settings** interface, click **General** tab.

The **General** interface is displayed. See Figure 4-54.

Figure 4-54 General



Step 2 Set the parameters. Refer to Table 4-11.

Table 4-11 General parameter description

Parameter	Description
Name	Set network keyboard name.
Language	Select language.
Date	Set date.
Time	Set time.
Format	Set time format, including 24-hour and 12-hour.
Separator	Set date separator, including ".", "-" and "/". When it takes effect, system time is displayed as "2019.10.17", "2019-10-17" and "2019/10/17".
Excel	Excel config file import separator. It is comma by default. Italian config file shall use semicolon.
Long name	In the long name mode, channel name can contain 40 characters. This function is used if channel name is too long and cannot be displayed on previous interface completely.

Step 3 Click **Save**.

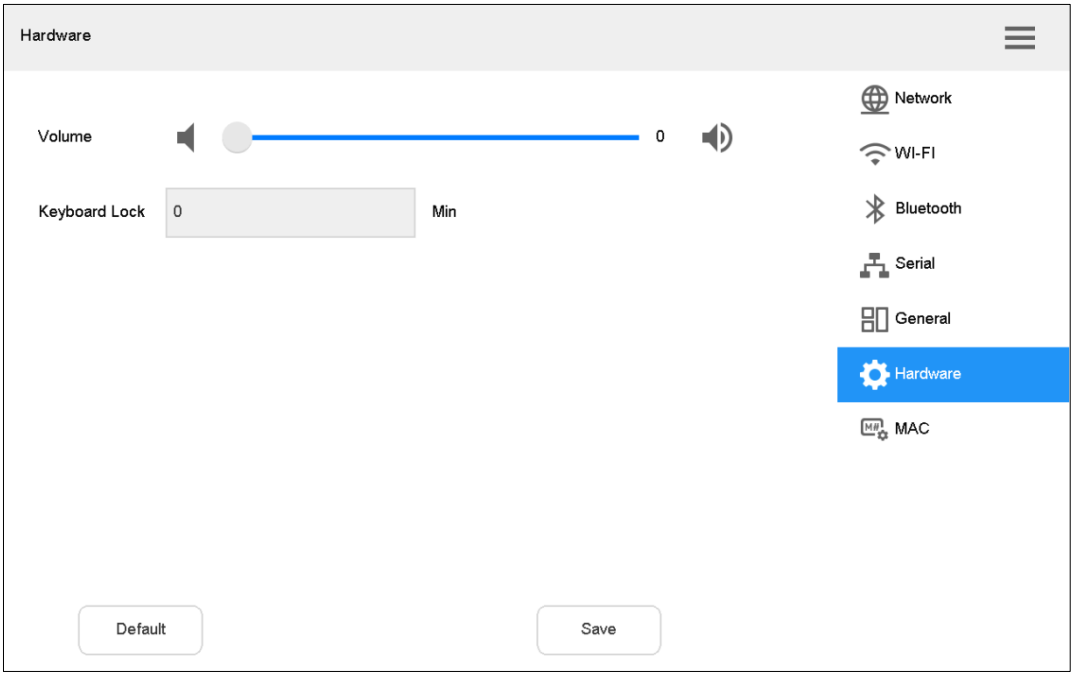
4.6.2.6 Hardware

You can adjust volume, and set the locking time of network keyboard.

Step 1 On the **Settings** interface, click **Hardware** tab.

The **Hardware** interface is displayed. See Figure 4-55.

Figure 4-55 Hardware



Step 2 Set the parameters. Refer to Table 4-12.

Table 4-12 Hardware parameter description

Parameter	Description
Volume	Adjust the volume. It is 0 by default.
Keyboard lock	After keyboard is locked, log in to the device again to enter it.

Step 3 Click **Save**.

4.6.2.7 MAC

Add MAC through key module, and then execute continuous action groups according to the adding sequence.

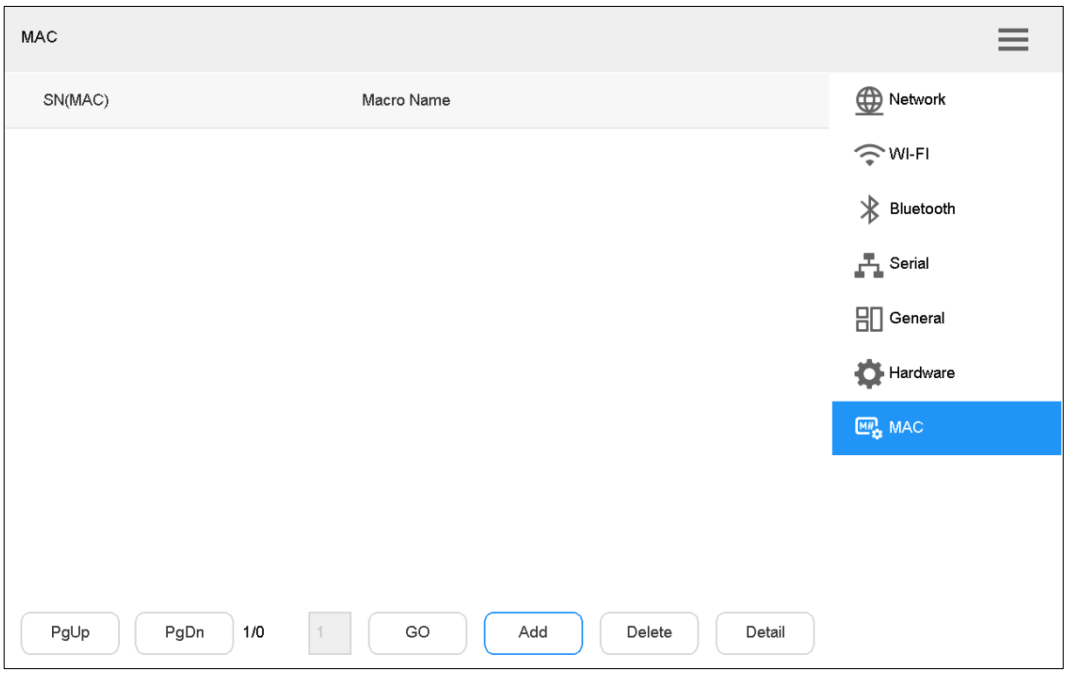
On the local preview interface or TV wall interface, press number key + F2 to call MAC.

Before use, please ensure that you have configured MAC with corresponding numbers.

Step 1 On the **Settings** interface, click **MAC** tab.

The **MAC** interface is displayed. See Figure 4-56.

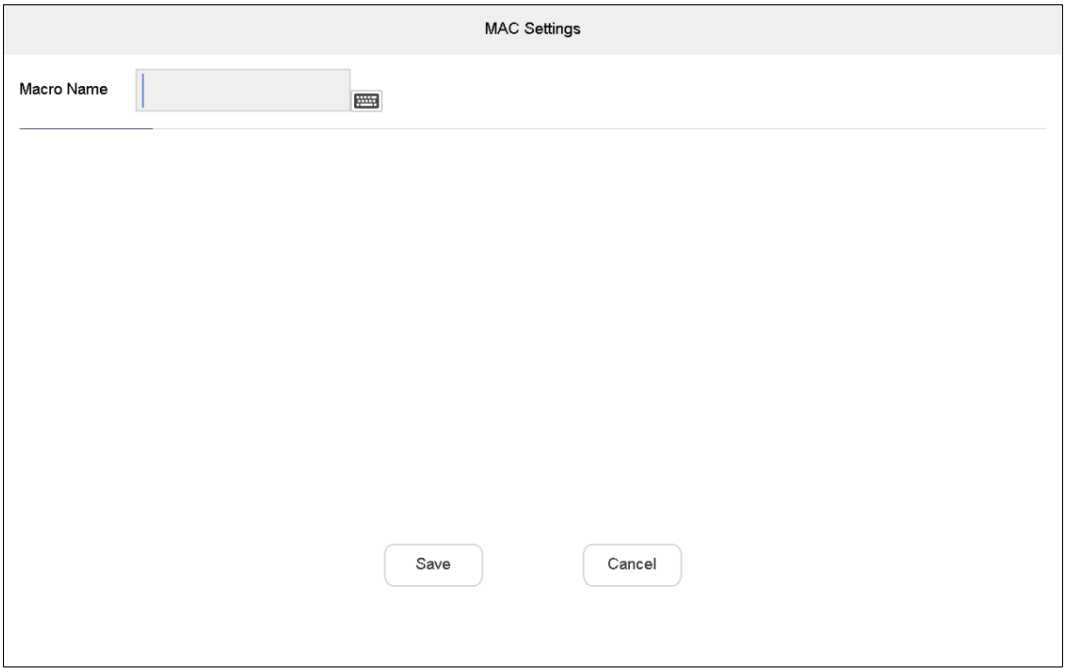
Figure 4-56 MAC



Step 2 Click **Add**.

The **MAC Settings** interface is displayed. See Figure 4-57.

Figure 4-57 MAC Settings (1)

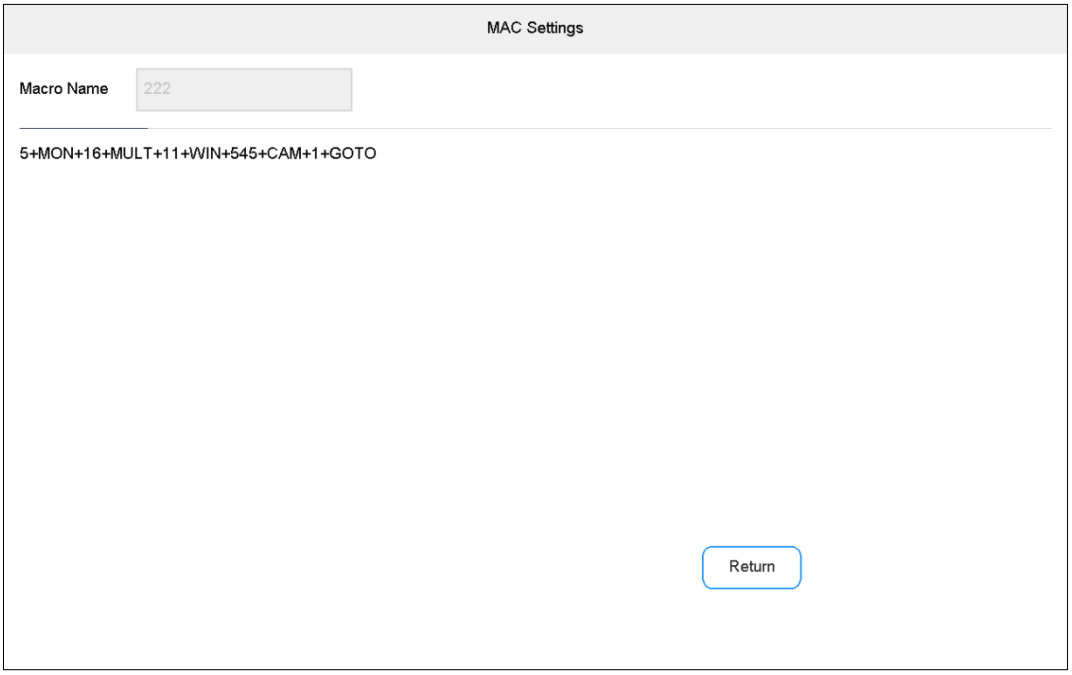


Step 3 Enter **Macro Name**, which can be free combination of no more than 15 letters and numbers.

Step 4 Create MAC with key module.

For example, on the key module, press [5+MON+4+MULT+1+WIN+123+CAM+1+GOTO]. The corresponding interface is displayed. See Figure 4-58. You can switch and call the presets.

Figure 4-58 MAC Settings (2)



Step 5 Click **Return**.

Relevant Operation

- Select a MAC, and then click **Delete** to delete the MAC.
- Select a MAC, and then click **Detail** to view detail.

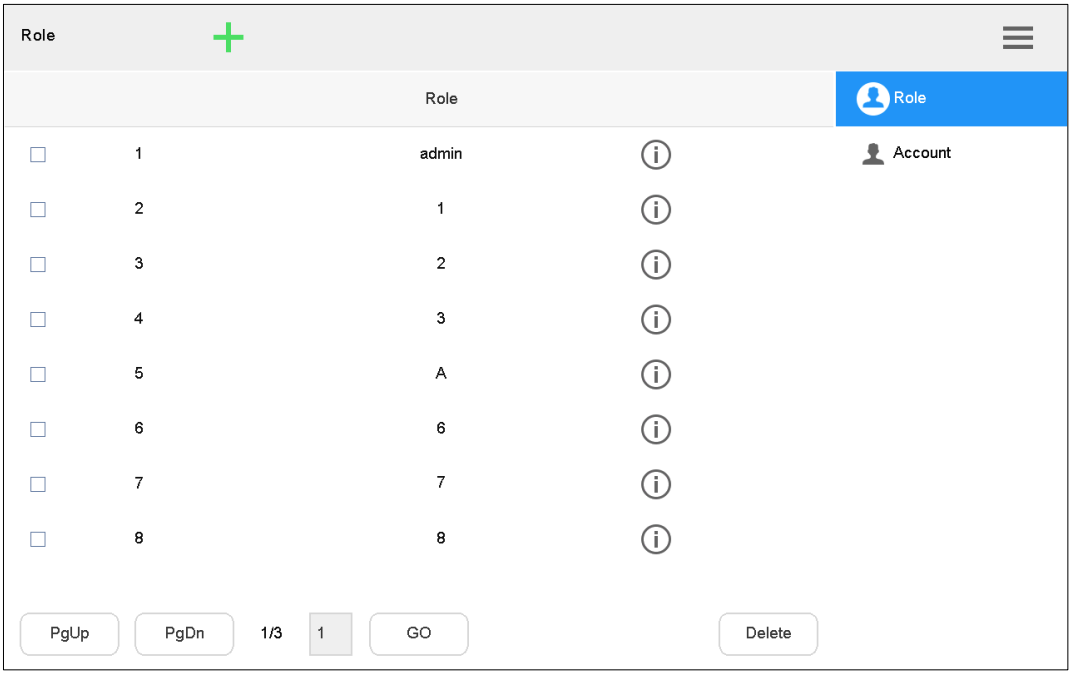
4.6.3 Account

4.6.3.1 Role

In the whole network, users might have different permissions to access network keyboard. You can classify users with the same permission into one role, and thus maintain and manage user information conveniently. Then, you can add, delete and modify role.

Select **Settings > Account > Role**. The **Role** interface is displayed. See Figure 4-59.

Figure 4-59 Role



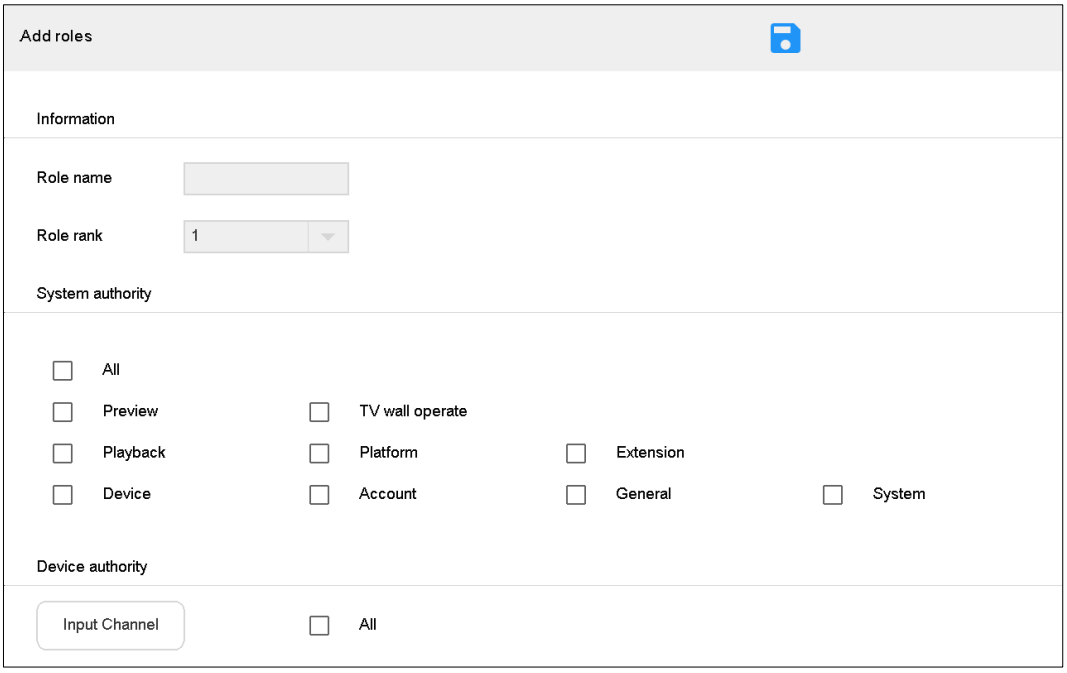
Adding Roles

Default admin of the system cannot be deleted. Admin has the highest authority by default.

Step 1 Click  .

The **Add roles** interface is displayed. See Figure 4-60.

Figure 4-60 Add roles



Step 2 Set Role name and Role rank.

There are 8 role ranks. The number 1 rank is the highest, only second to default admin. It drops from number 1 to number 8.

Step 3 In **System authority**, select role authority to operate the system.

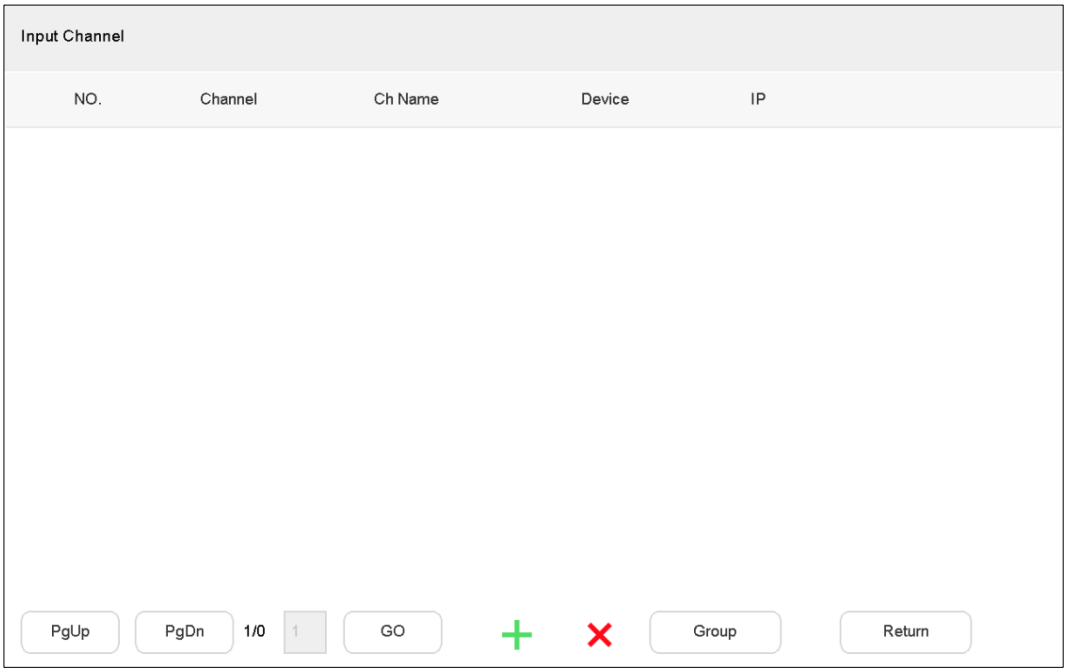
- Tick the check box to enable the authority.
- Tick **All** to select all authorities.

Step 4 Configure operation authority of device input channel.

1) Click **Input Channel**.

The **Input Channel** interface is displayed. See Figure 4-61.

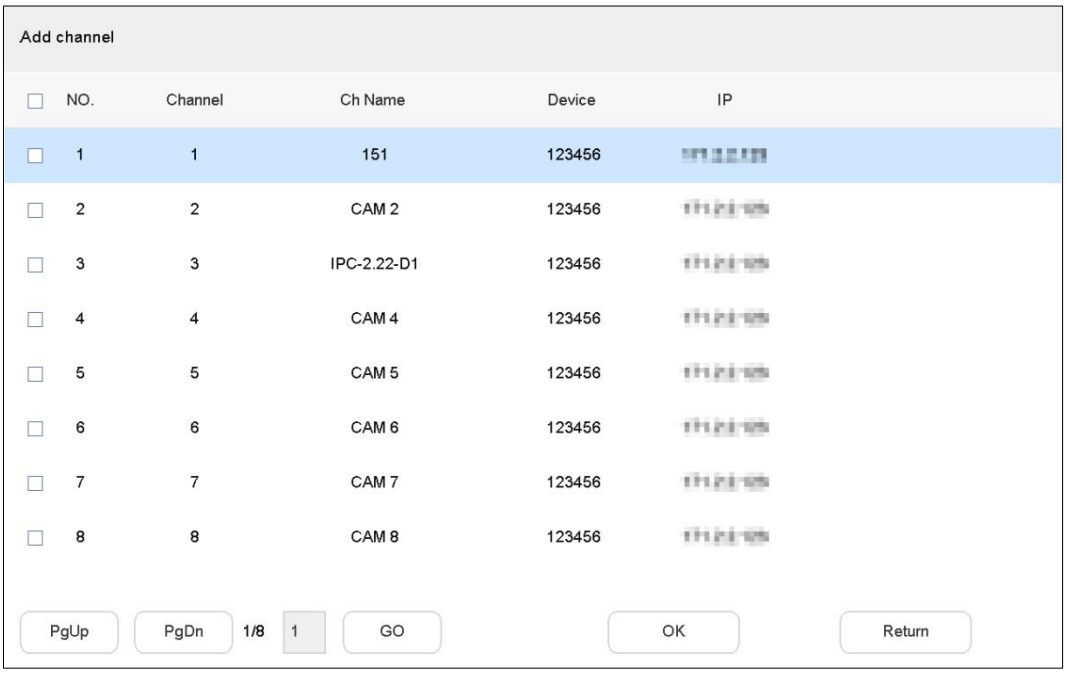
Figure 4-61 Input channel



2) Click  .

The **Add channel** interface is displayed. See Figure 4-62.

Figure 4-62 Add channel



3) Tick the check box of corresponding channel, and click **OK**.

Click **Group** to divide the input channels into groups.

Step 5 Click **Return** to return to **Add roles** interface.

Step 6 Click to save the settings.

Deleting Roles

Step 1 Tick the check box of corresponding role.

Step 2 Click **Delete**.

The **Message** dialog box pops up.

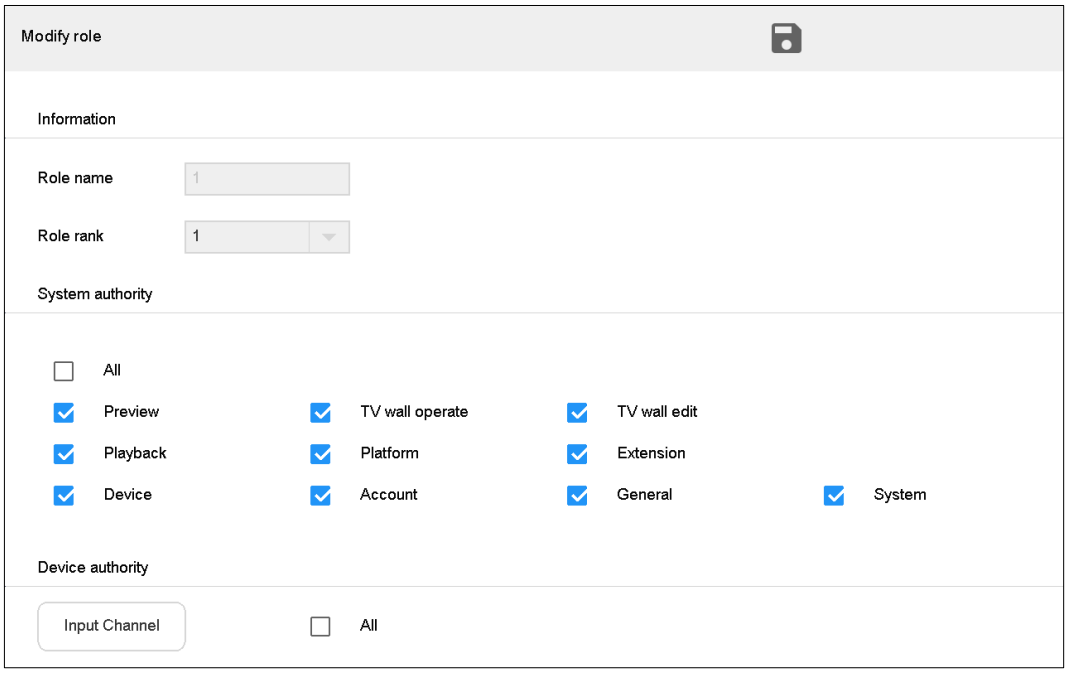
Step 3 Click **OK** to finish.

Modifying Role

Step 1 Click corresponding to the role.

The **Modify role** interface is displayed. See Figure 4-63.

Figure 4-63 Modify role



Step 2 Modify role information according to actual needs.

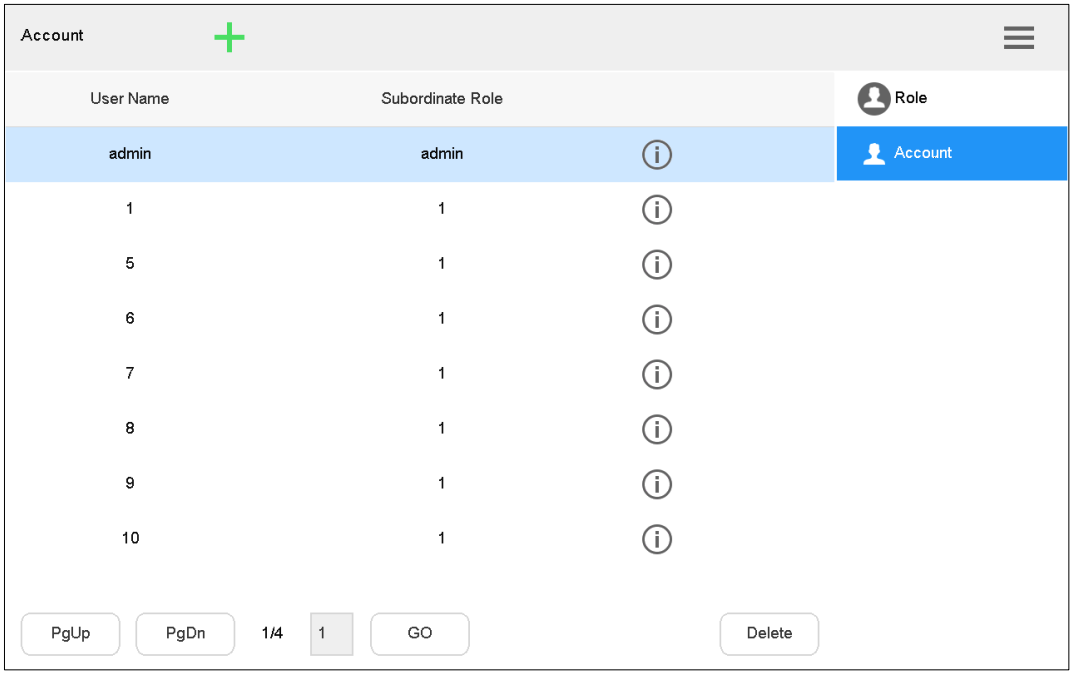
Step 3 Click to save the settings.

4.6.3.2 Account

You can view details about current user, add and delete user, and modify user password.

Select **Settings > Account > Account**. The **Account** interface is displayed. See Figure 4-64.

Figure 4-64 Account



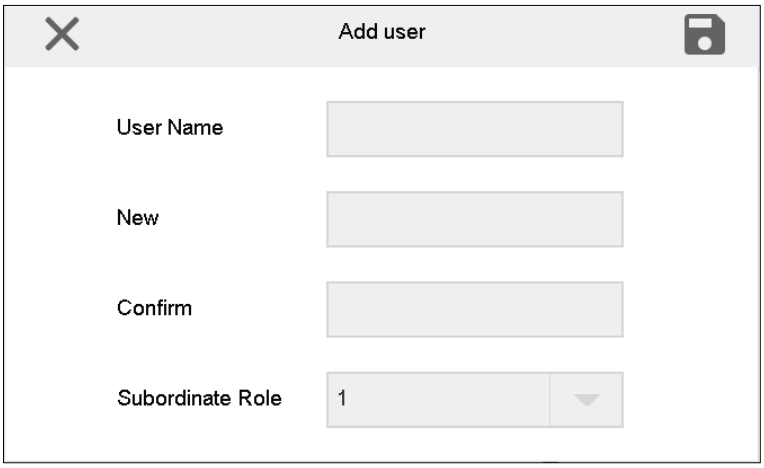
Adding User

Default admin of the system cannot be deleted. Admin has the highest authority by default. Create a role before adding account.

Step 1 Click .

The **Add user** interface is displayed. See Figure 4-65.

Figure 4-65 Add user



Step 2 Set User Name, enter New and Confirm, and select Subordinate Role.

New and **Confirm** shall be the same.

Step 3 Click to save the settings.

Deleting User

Step 1 Click the user that shall be deleted.

Step 2 Click **Delete**.

The **Message** dialog box pops up.

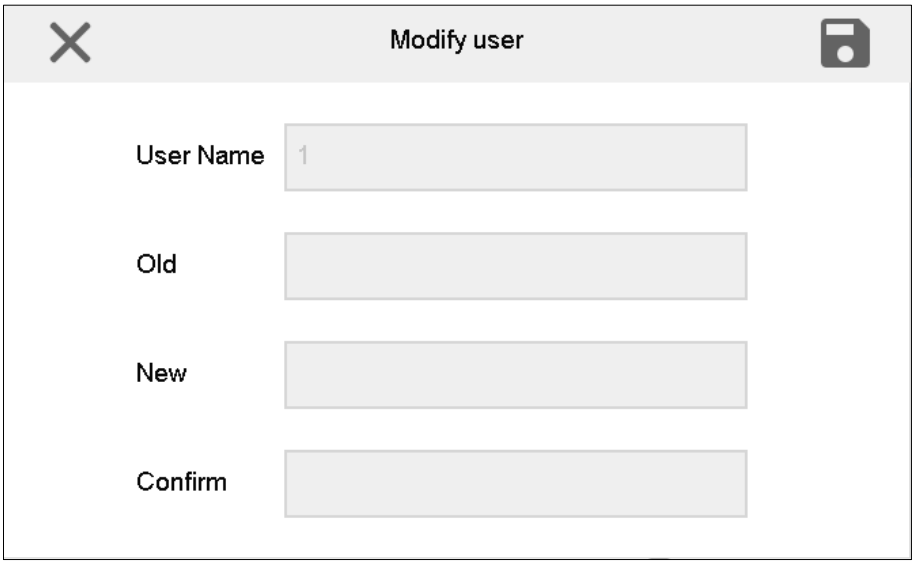
Step 3 Click **OK** to finish.

Modifying Password

Step 1 Click ⓘ corresponding to the user.

The **Modify user** interface is displayed. See Figure 4-66.

Figure 4-66 Modify user



Step 2 Enter old password, and set a new password.

Step 3 Click 💾 to save the settings.

4.6.4 System

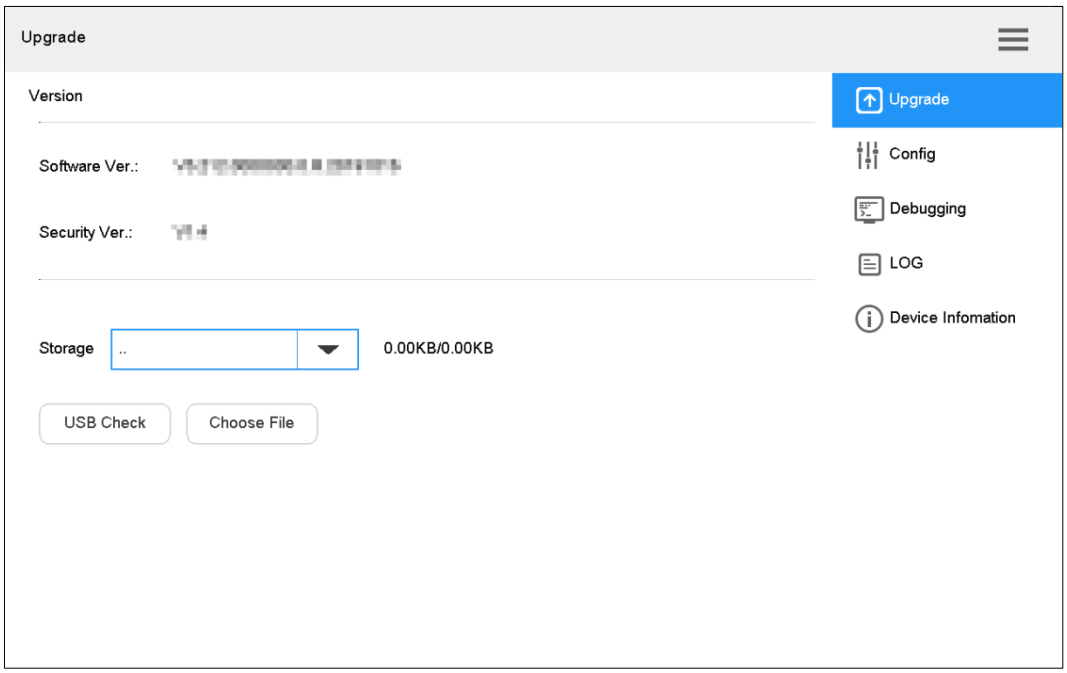
4.6.4.1 Version Upgrade

Upgrade the device with flash drive.

Step 1 On the **System** interface, click **Upgrade** tab.

The **Upgrade** interface is displayed. See Figure 4-67.

Figure 4-67 Upgrade



Step 2 Insert flash drive into the network keyboard, and click **USB Check**.

Step 3 Click **Choose File** to upgrade.

The keyboard will restart automatically after upgrade.

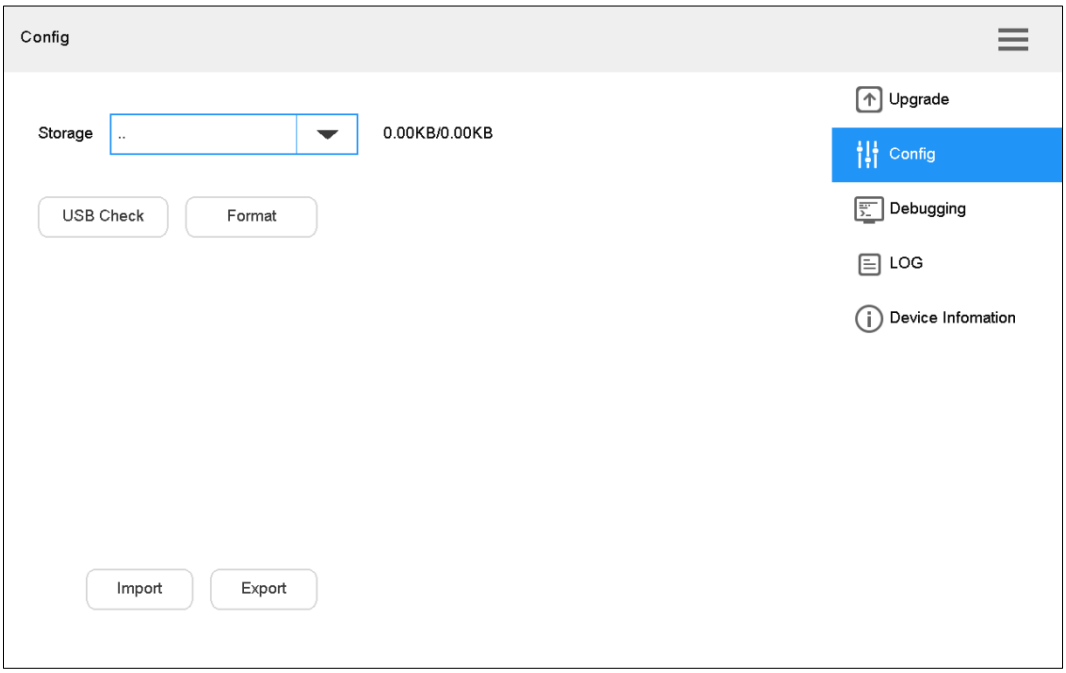
4.6.4.2 Configuration

You can import or export system configurations.

Step 1 On the **System** interface, click **Config** tab.

The **Config** interface is displayed. See Figure 4-68.

Figure 4-68 Config



Step 2 Insert flash drive into the network keyboard, and click **USB Check**. Detect all connected USB and capacity.

Step 3 Import or export configurations.

- Import: Import config information in flash drive into the network keyboard.
- Export: Export config information in the present keyboard to flash drive.

Click **Format** to format the storage device, and all its files will be cleared. Operate cautiously.

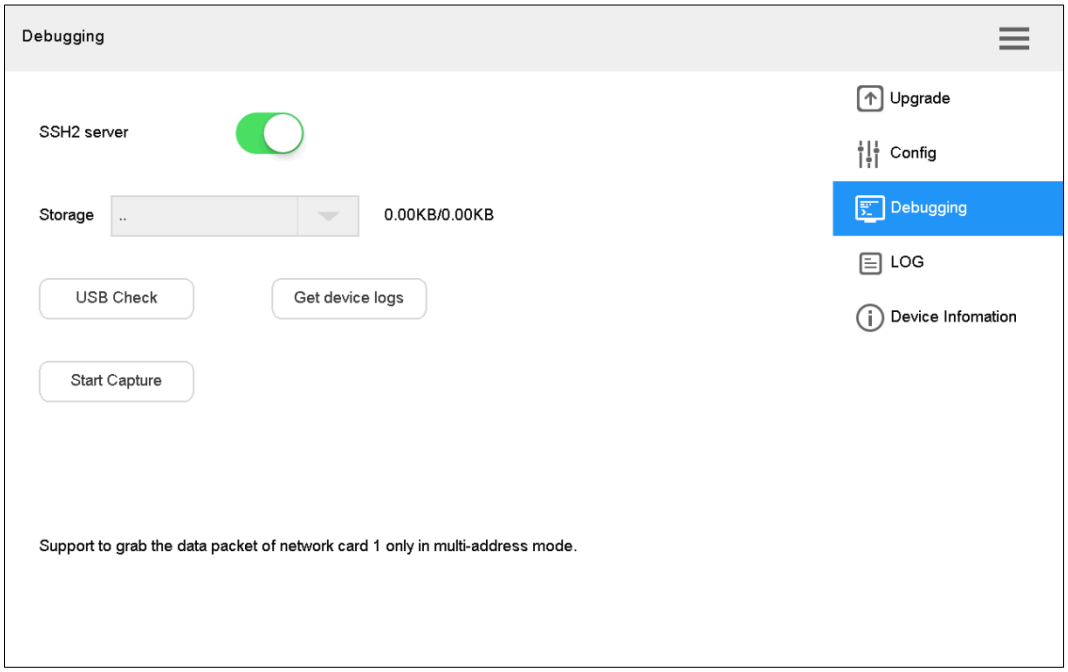
4.6.4.3 Debugging

In case of network error, you can capture the packet on this interface, download the file to flash drive, and then provide the file to technical support personnel to analyze network status.

Step 1 On the **System** interface, click **Debugging** tab.

The **Debugging** interface is displayed. See Figure 4-69.

Figure 4-69 Debugging



Step 2 Select **SSH2 server** to enable the **SSH2 server** function.

Step 3 Insert flash drive into the network keyboard, and click **USB Check**. Detect all connected USB and capacity.

Step 4 Click **Start Capture**.

Click **Stop Capture** after a while. The captured data packet will be stored in flash drive.

Step 5 Click **Get device logs**.

Get device logs and store them in USB flash drive.

In case of device error, insert the USB flash drive after the device is restarted or restored to normal. Then, click **Get device logs**, and then provide them to developers.

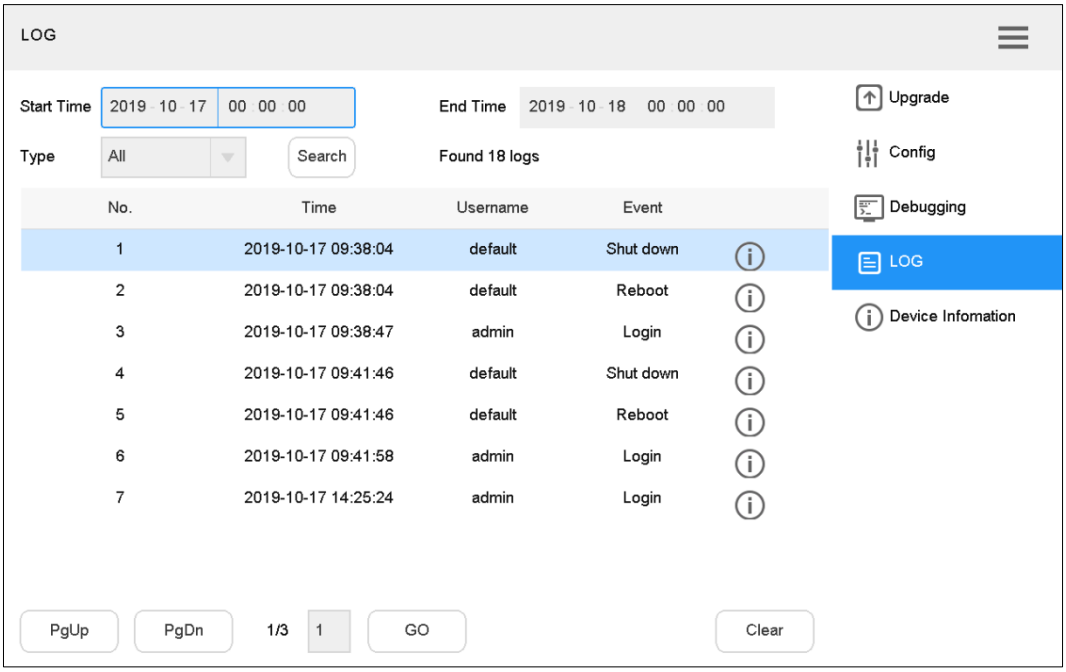
4.6.4.4 Log

You can view the device log information on the interface.

Step 1 On the **System** interface, click **LOG** tab.

The **LOG** interface is displayed. See Figure 4-70.

Figure 4-70 Log



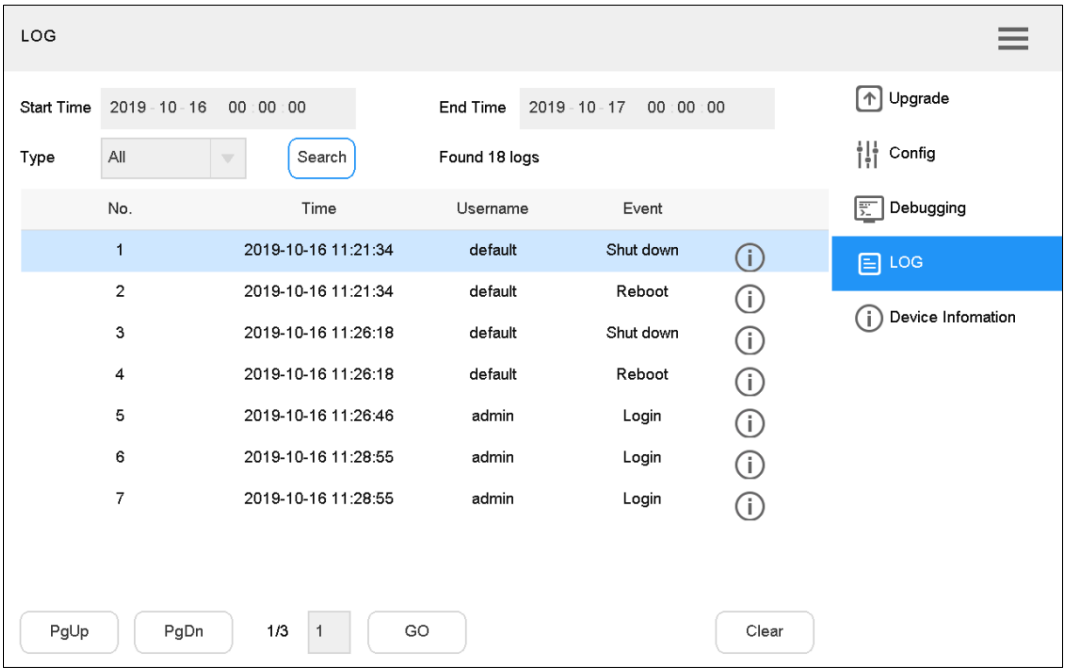
Step 2 Enter Start Time and End Time.

Step 3 Select **Type**.

Step 4 Click Search.

The found logs are displayed. See Figure 4-71.

Figure 4-71 Search log



Relevant Operation

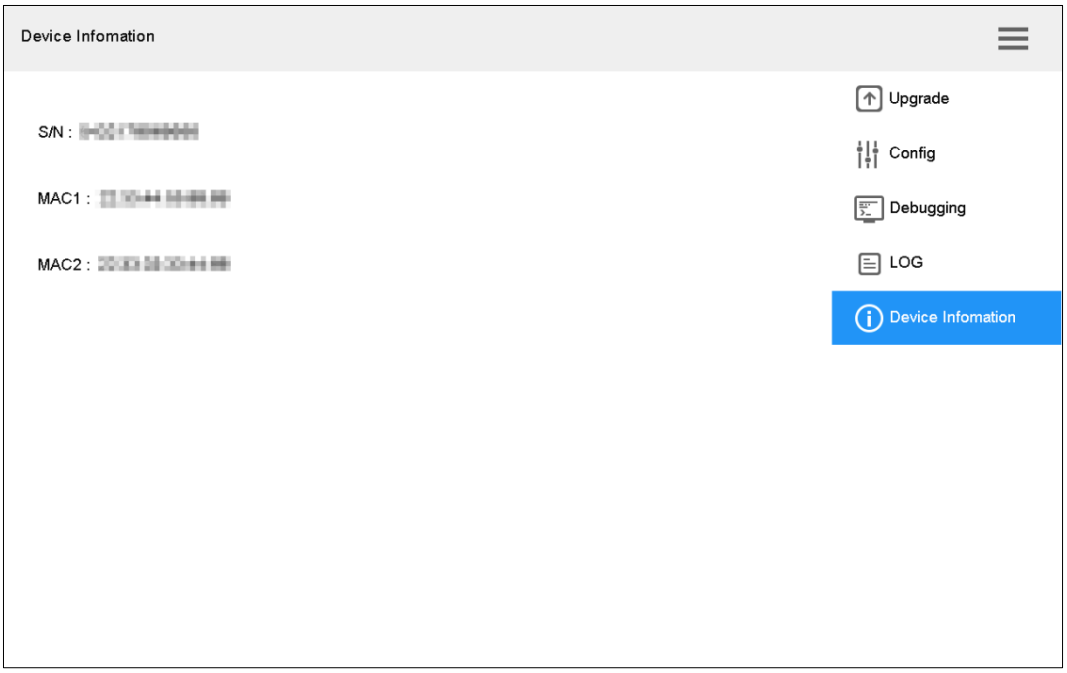
- Click ⓘ to view log details.
- Click **Clear** to clear all the logs. Be careful.

4.6.4.5 Device Information

You can view S/N and MAC address of the network keyboard.

On the **System** interface, click **Device Information** tab. The **Device Information** interface is displayed. See Figure 4-72.

Figure 4-72 Device information



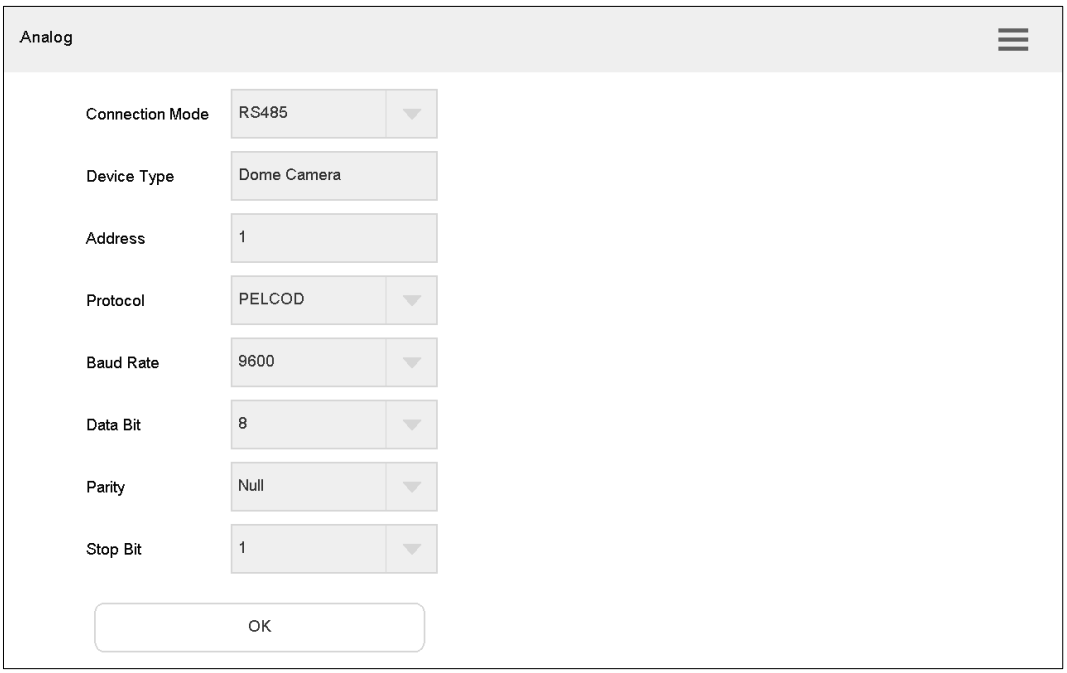
4.7 Extension

Control the devices with direct physical connection with network keyboard. At present, it only supports to control speed dome with RS–485 port.

Step 1 On the main interface, click **Extension**.

The **Analog** interface is displayed. See Figure 4-73.

Figure 4-73 Analog (1)



Step 2 Set the parameters. Refer to Table 4-13.

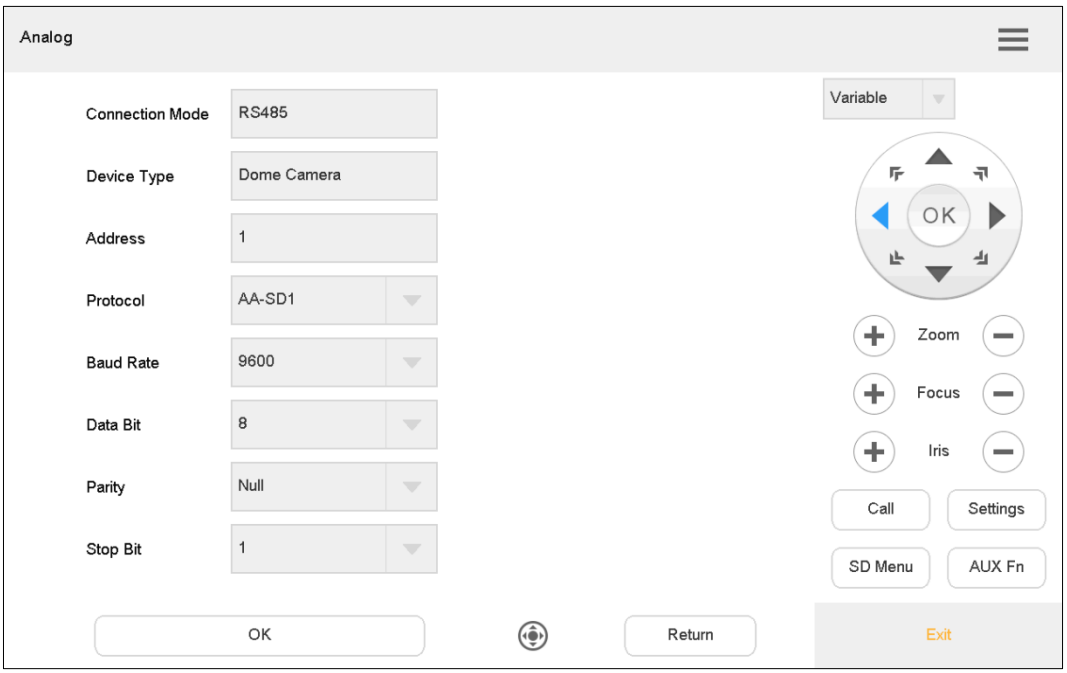
Table 4-13 Analog keyboard parameter description

Parameter	Description
Connection mode	Set the connection mode, which only supports RS–485 at present.
Device type	Enter device type.
Address	Enter device address.
Protocol	Select the protocol, including SD1, PELCOD and PELCOP. AA-SD1 is the same as SD1, AA-PELCOD is the same as PELCOD, and AA-PELCOP is the same as PELCOP. They are frequently-used protocols; with AA- prefix, they are ranked in the front of the list.
Baud rate	Select baud rate.
Data bit	It includes 5, 6, 7 and 8.
Parity	It includes null, odd and even parity.
Stop bit	It includes 1, 1.5 and 2.

Step 3 Click **OK**.

Open PTZ control interface to carry out PTZ control. See Figure 4-74.

Figure 4-74 Analog (2)



Appendix 1 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations on how to create a more secured security system.

Mandatory actions to be taken for basic equipment network security:

1. **Use Strong Passwords**

   Please refer to the following suggestions to set passwords:

   - The length should not be less than 8 characters;
   - Include at least two types of characters; character types include upper and lower case letters, numbers and symbols;
   - Do not contain the account name or the account name in reverse order;
   - Do not use continuous characters, such as 123, abc, etc.;
   - Do not use overlapped characters, such as 111, aaa, etc.;

2. **Update Firmware and Client Software in Time**

   - According to the standard procedure in Tech-industry, we recommend to keep your equipment (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the equipment is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
   - We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your equipment network security:

1. **Physical Protection**

   We suggest that you perform physical protection to equipment, especially storage devices. For example, place the equipment in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable equipment (such as USB flash disk, serial port), etc.

2. **Change Passwords Regularly**

   We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. **Set and Update Passwords Reset Information Timely**

   The equipment supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. **Enable Account Lock**

   The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. **Change Default HTTP and Other Service Ports**

   We suggest you to change default HTTP and other service ports into any set of numbers between 1024~65535, reducing the risk of outsiders being able to guess which ports you are using.

6. **Enable HTTPS**

   We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. **Enable Whitelist**

   We suggest you to enable whitelist function to prevent everyone, except those with specified IP addresses, from accessing the system. Therefore, please be sure to add your computer's IP address and the accompanying equipment's IP address to the whitelist.

8. **MAC Address Binding**

   We recommend you to bind the IP and MAC address of the gateway to the equipment, thus reducing the risk of ARP spoofing.

9. **Assign Accounts and Privileges Reasonably**

   According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

10. **Disable Unnecessary Services and Choose Secure Modes**

    If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

    If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

    - SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
    - SMTP: Choose TLS to access mailbox server.
    - FTP: Choose SFTP, and set up strong passwords.
    - AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.

11. **Audio and Video Encrypted Transmission**

    If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

    Reminder: encrypted transmission will cause some loss in transmission efficiency.

12. **Secure Auditing**

    - Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
    - Check equipment log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

13. **Network Log**

    Due to the limited storage capacity of the equipment, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

14. **Construct a Safe Network Environment**

    In order to better ensure the safety of equipment and reduce potential cyber risks, we recommend:

    - Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.

- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.