Network Video Recorder (NVR)
User Manual

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About This Document：

- This document covers several NVR models. The appearance and function of your product may be different.
- Any loss caused by failure to follow the instructions in this document is the responsibility of the user.

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Network Security Advice

Required measures to ensure basic network security of equipment:

Modify the password regularly and set a strong password.

Devices that do not change the password regularly or use a weak password are the easiest to be hacked. Users are advised to modify the default password and use strong passwords whenever possible (minimum of 6 characters, including uppercase, lowercase, numbers and symbols).

Update firmware

According to the standard operating specifications of the technology industry, the firmware of NVR, DVR and IP cameras should be updated to the latest version to ensure the latest features and security of the device.

The following recommendations can enhance your device's network security:

1. Change your password regularly

Regularly modifying the login credentials ensures that authorized users can log in to the device.

2. Modify the default HTTP and data ports

Modify the device's default HTTP and data ports, which are used for remote communication and video browsing.

These two ports can be set to any number between 1025 and 65535. Changing the default port reduces the risk of the intruder guessing which port you are using.

3. Use HTTPS/SSL encryption

Set up an SSL certificate to enable HTTPS encrypted transmission. The information transmission between the front-end device and the recording device is fully encrypted.

4. Enable IP filtering

After IP filtering is enabled, only devices with the specified IP address can access the system.

5. Change the ONVIF password

For some old versions of the IP camera firmware, after the system's master password is changed, the ONVIF password will not be automatically changed. You must update the camera's firmware or manually update the ONIVF password.

6. Only forward the ports that must be used

Only forward the network ports that must be used. Avoid forwarding a long port area. Do not set the device's IP to DMZ.

If the camera is connected locally to the NVR, you do not need to forward the port for each camera. Only the ports of the NVR need to be forwarded.

7. Use a different username and password on the video surveillance system.

In the unlikely event that your social media account, bank, email, etc. account information is leaked, the person who obtained the account information will not be able to invade your video surveillance system.

8. Restrict the permissions of the ordinary account

If your system is serving multiple users, make sure that each user has permission to access only its permissions.

UPNP

When the UPnP protocol is enabled, the router will automatically map the intranet ports. Functionally, this is user-friendly, but it causes the system to automatically forward the data of the corresponding port, causing the data that should be restricted to be stolen by others.
If you have manually opened HTTP and TCP port mappings on your router, we strongly recommend that you turn this feature off. In actual usage scenarios, we strongly recommend that you do not turn this feature on.

SNMP

If you do not use the SNMP, we strongly recommend that you turn it off. The SNMP function is limited to temporary use for testing purposes.

Multicast

Multicast technology is suitable for the technical means of transmitting video data in multiple video storage devices. There have been no known vulnerabilities involving multicast technology so far, but if you are not using this feature, we recommend that you turn off multicast playback on your network.

12. Check logs

If you want to know if your device is secure, you can check the logs to find some unusual access operations. The device log will tell you which IP address you have tried to log in or what the user has done.

Physically protect your device

For the safety of your device, we strongly recommend that you physically protect your device from unauthorized boring operations. We recommend that you place the device in a locked room and place it in a locked cabinet with a locked box.

It is highly recommended that you use PoE to connect IP cameras to NVR.

IP cameras connected to the NVR using PoE will be isolated from other networks so that they cannot be accessed directly.

Network isolation between NVR and IP cameras

We recommend isolating your NVR and IP cameras from your computer network. This will protect unauthorized users on your computer network from having access to these devices.

About This Document

Purpose

This document describes in detail the installation, use, and interface operation of the NVR (Network Video Recorder) device.

Symbols Convention

The symbols may be found in this document, which are defined as follows:

Symbol	Description
DANGER	It's for warning when a hazard or a hazardous condition is likely to be life-threatening.
WARNING	Alerts you to a medium or low risk hazard that, if not avoided, could result in moderate or minor injury.
CAUTION	Alerts you to a potentially hazardous situation that, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.
TIP	Provides a tip that may help you solve a problem or save time.
NOTE	Provides additional information to emphasize or supplement important points in the main text.

Safety instructions

The following are the correct use of the product. In order to prevent danger and prevent property damage, please read this manual carefully before using the device and strictly comply that when using it. Please save the manual after reading.

Requirements

- The front-end devices of POE are required to be installed indoors.
- The NVR device does not support wall mounting.
- Do not place and install the device in direct sunlight or near heat-generating equipment.
- Do not install the device in a place subject to high humidity, dust or soot.
- Please keep the equipment installed horizontally or install the equipment in a stable place, taking care to prevent the product from falling.
- Do not drop or spill liquid into the device and ensure that no liquid-filled items are placed on the device to prevent liquid from flowing into the device.
- Install the device in a well-ventilated area, and do not block the ventilation openings of the device.
- Use the device only within the rated input and output range.
- Do not disassemble the device at will.
- Please transport, use and store the device within the permissible humidity and temperature range.

Power Requirements

- Be sure to use the specified manufacturer's model battery, otherwise there is a danger of explosion!
- Be sure to use the battery as required, otherwise there is a danger of the battery catching fire, exploding or burning!
- Only use the same model of battery when replacing the battery!
- Be sure to dispose of the used battery as the instruction of battery!
- Be sure to use the power adapter that meets standard with the device, otherwise the personal injury or equipment damage caused by the user will be borne by the user.
- Use a power supply that meets the SELV (Safety Extra Low Voltage) requirements and supply power according to the rated voltage of IEC60950-1 in accordance with the Limited Power Source. The specific power supply requirements are based on the equipment label.

- Connect the Class I product to the power outlet with a protective ground connection.
- The appliance is coupled to the port unit. Keep it at a proper angle for normal use.

Important Statement

Users are required to enable and maintain the lawful interception (LI) interfaces of video surveillance products in strict compliance with relevant laws and regulations. Installation of surveillance devices in an office area by an enterprise or individual to monitor employee behavior and working efficiency outside the permitted scope of the local law and use of video surveillance devices for eavesdropping of illegal purposes constitute behaviors of unlawful interception.

This manual is only for reference and does not ensure that the information is totally consistent with the actual products. For consistency, see the actual products.

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1 Preface

1.1 Product Description

This product is a high-performance NVR device. The product has local preview, video multi-screen split display, local real-time storage function of video files, add support for mouse shortcut operation, remote management and control.

This product supports three storage methods: central storage, front-end storage, and client storage. The front-end monitoring point can be located anywhere in the network without geographical restrictions. It is combined with other front-end devices such as network cameras, network construction of network video server, and professional video surveillance systems to form a powerful security monitoring network. In the networked deployment system of this product, the central point and the monitoring point need only one network cable to connect. There is no need to connect video and audio cables. The operation is simple, and the cost of wiring and maintenance cost is low.

This product is widely used in public security, transportation, electric power, education and other industries.

1.2 Product Features

1.2.1 Cloud Upgrade

For devices that have access to the public network, you can update the software of the devices online.

1.2.2 Real-time Monitoring

It has a VGA (Video Graphics Array) port and an HDMI (High Definition Media Interface) port. It can realize monitoring function through monitor and display, and support VGA and HDMI output at the same time.

1.2.3 Playback

Each channel has independent real-time recordings and multi functions, such as retrieval, playback, network monitoring, video query, and download. Please refer to chapter

Playback

Multiple playback modes: slow release, fast release, reverse playback, and frame-by-frame playback.

The exact time when the event occurred can be displayed during playback of the recording.

You can select any area of the screen for partial magnification.

1.2.4 User Management

Each user group has a rights management set, which can be selected autonomously. The total rights set is a subset, and the user rights in the group cannot exceed the rights management set of the user group.

1.2.5 Storage Funtion

According to the user's configuration and policies (alarm or time settings), the corresponding audio and video data transmitted by the remote device is stored in the NVR device. For details, please refer to chapter Storage Management.

Users can record by WEB mode as needed. The video files are stored on the computer where the client is located. Please refer to chapter Storage.

1.2.6 Alarm Function

Real-time response to external alarm input, correct processing according to the user's preset linkage settings and give corresponding prompts.

The setting options of the central alarm receiving server are provided, so that the alarm information can be actively and remotely notified, and the alarm input can come from various external devices connected.

The alarm information can be notified to the user by mail or APP push information.

1.2.7 Network Monitoring

Through the network, the audio and video data of the IP camera or NVS (Network Video Server) of the NVR device is transmitted to the network terminal for decompression and reproduction.

The device supports 8 simultaneous online users to perform streaming operations.
The audio and video data is transmitted using protocols such as HTTP (Hyper Text Transfer Protocol), TCP (Transmission Control Protocol), UDF (User Datagram Protocol), MULTICAST, RTP (Real-time Transport Protocol), and RTCP (Real Time Streaming Protocol).
Use SNMP (Simple Network Management Protocol) for some alarm data or information
Support WEB mode access system, applied to WAN, LAN environment.

1.2.8 Split Screen

Image compression and digitization are used to compress several images in the same scale and display them on the display of a monitor. 1/4/8/9/16/32 screen splitting is supported during preview; 1/4/9/16 screen splitting is supported during playback.

1.2.9 Recording Function

The device supports regular recording, motion detection recording, alarm recording, and intelligent recording. The recording file is placed on the hard disk device, USB (Universal Serial Bus) device, and client PC (personal computer). It can be connected to the WEB terminal, USB device, or local device. Query and play back the stored video files.

1.2.10 Backup Function

Support USB2.0 and eSATA video backup.

1.2.11 External Device Control

The peripheral control function is supported, and the control protocol and connection interface of each peripheral can be set as you need.
Support transparent data transmission of multiple interfaces, such as: RS232, RS485.

1.2.12 Accessibility

Supports video NTSL (Nation Television Standards Committee) system and PAL (Phase Alteration Line) system.

Supports system resource information and real-time display of running status.

Supports for logging recording.

Supports local GUI (Graphical User Interface) output and quick menu operation via mouse.

Supports playback of audio and video from remote IPC or NVS devices.

NOTE

For other functions, please see the following text.

2 Product Design

2.1.1 Front Panel

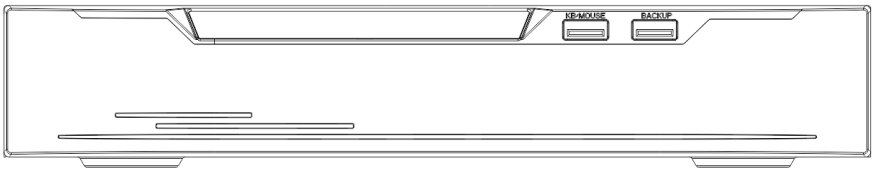


Table 2-1 Front panel function

Port	Description
PWR	When the NVR is operating, the PWR indicator is steady on. When the NVR is shut down, the PWR indicator is turned off.
HDD	Hard disk status indicator. This indicator flashes when data is transmitted.
POE	PoE network status indicator. This indicator flashes when data is transmitted.
KB/MOUSE	For USB mouse only.
BACKUP	For USB disk only.

2.1.2 Back Panel

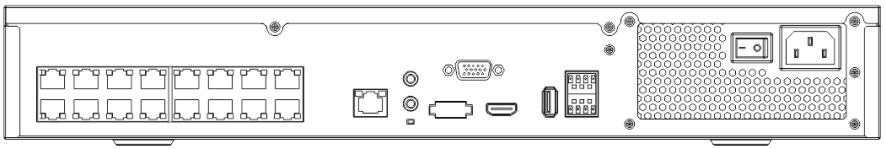
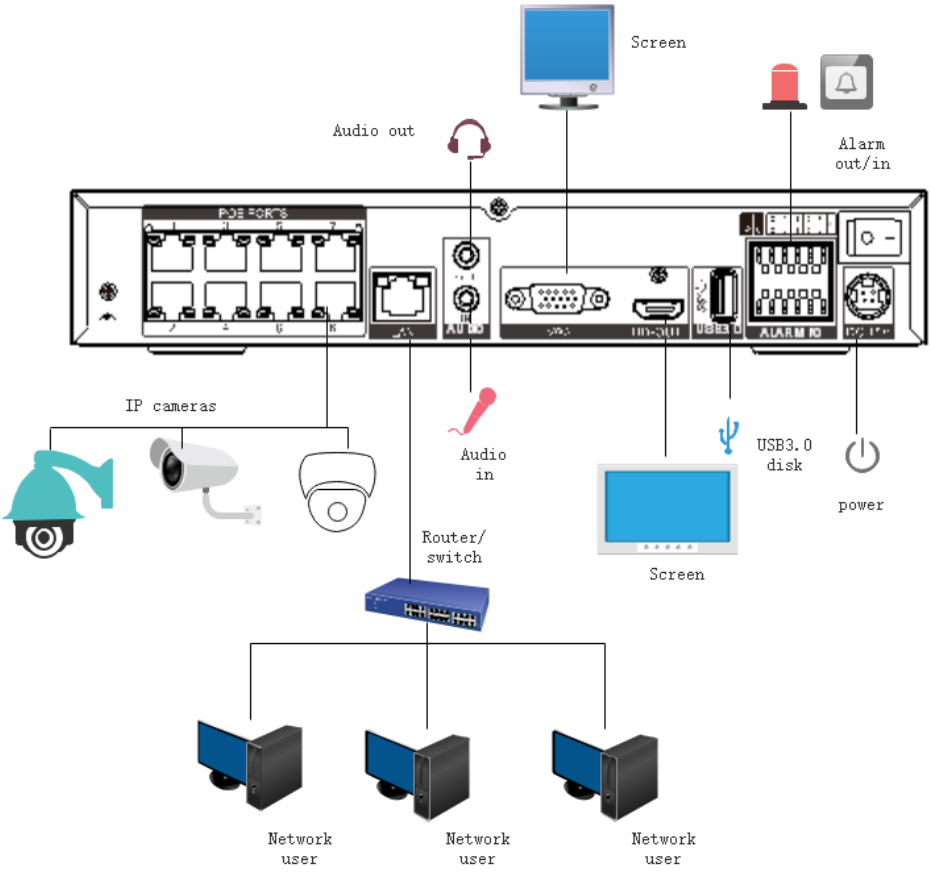


Table 2-2 Back panel function

Port	Description
POE	POE network interfaces
LAN	RJ 45 10/100/1000 Mbps Ethernet interface
LINE OUT / LINE IN	Audio output / Audio input
VGA	Video output interfaces
HDMI	
E SATA	External hard disk interface
USB 3.0	Can only be connected to 3.0 USB disk
	Alarm input and alarm output./RS485
	Power switch
	Safe ground screw of the device
	AC power input



2.1.3 Important Notes

Thank you for choosing the NVR. Please read the user manual carefully before using this product.

The NVR is a complex system-based device. To avoid malfunctions caused by environmental factors and human factors during installation, commission, and application, note the following points when installing and using this product:

Read the user manual carefully before installing and using this product.

- Use Monitoring dedicated hard disks as the storage devices of the NVR with high stability and competitive price/performance ratios (the quality of hard disks sold on markets varies greatly with different brands and models).
- Do not open the enclosure of this product unless performed by a professional person to avoid damage and electric shock.
- We are not liable for any video data loss caused by improper installation, configuration, operation, and hard disk errors.
- All images in the document are for reference only, please subject to the actual products.

2.1.4 About This User Manual

Please note the following points before using this user manual:

- This user manual is intended for persons who operate and use the NVR.
- The information in this user manual applies to the full series NVR, NVR as an example for description.
- Read this user manual carefully before using the NVR and follow the methods described in this manual when using the NVR.
- If you have any doubts when using the NVR, contact your product seller.
- As our products are subject to continuous improvement, we reserve the right to modify product manual, without notice and without incurring any obligation.

2.1.5 Installation Environment and Precautions

Installation environment

Table 2-10 defines the installation environment of the NVR.

Table 2-10 Installation environment

Item	Description
Electromagnetism	The NVR conforms to national standards of electromagnetic radiation and does not cause harm to the human body.
Temperature	–10ºC to +45ºC
Humidity	20% to 80%
Atmospheric pressure	86 Kpa to 106 Kpa
Power supply	DC 12V, DC 48V 2A(1 HDD) or AC110/ 220V 4A(2 HDDs or more)，please refer to actual products.
Power consumption	<15W (not including the hard disk)

Installation precautions

Note the following points when installing and operating the NVR:

- The power adapter of the NVR uses DC48V±20% input. Do not use the NVR when voltage is too high or too low.
- Install the NVR horizontally.
- Avoid direct sunlight on the NVR and keep away from any heat sources and hot environments.
- Connect the NVR to other devices correctly during installation.
- The NVR is not configured with any hard disk upon delivery. Install one or more hard disks when using the NVR for the first time.

The NVR identifies hard disk capacity automatically and supports mainstream hard disk models. You'd better use high-quality hard disk so that the NVR can work stably and reliably. Please refer to chapter 10 Disk Compatibility

Other precautions

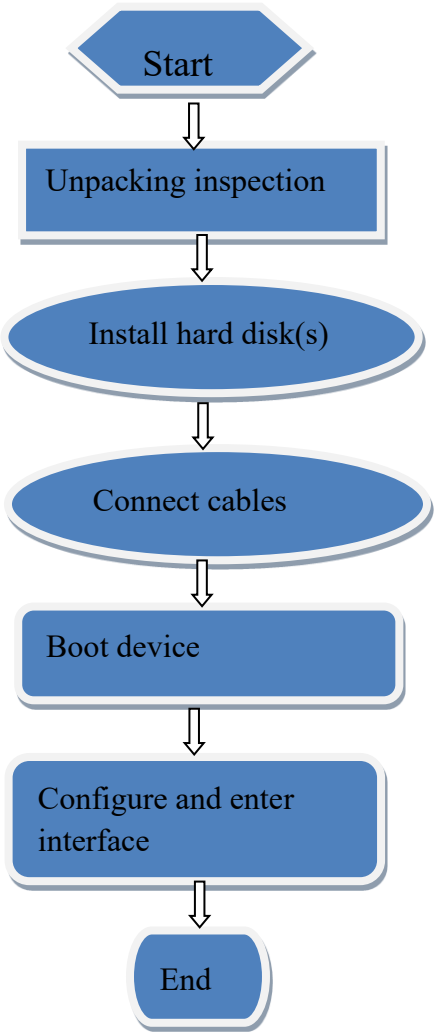
- Clean the NVR with a piece of soft and dry cloth. Do not use chemical solvents.
- Do not place objects on the NVR.

The NVR meets the national standards of electromagnetic radiation and does not cause electromagnetic radiation to the human body.

Series of NVR

3 Install device

3.1.1 Process



Step 1 Check the appearance, packaging, and label of the device to make sure there is no damage.

Step 2 Install the hard disk and fix it to the device bracket.

Step 3 Connect the device cable.

Step 4 Make sure the device is properly connected. Power up and turn on the device.

Step 5 Configure the initial parameters of the device. The boot wizard contains network configuration, add cameras, and manage disks. For details, please refer to the chapter of Wizard .

3.1.2 Unpacking Inspection

When you receive the video recorder, please check it against the following table.

Should you have any issues, please don't hesitate to contact our after-sales support.

Table 3-1 Unpacking inspection

No	Item		Check content
1	Overall packaging	Appearance	Is there any obvious damage
		Package	Is there accidental impact
		Accessories	Is it complete
2	Label	Label of device	Is the equipment model consistent with the order contract? Whether the label is torn **NOTE** Do not tear or discard, otherwise warranty service is not guaranteed. When you call the company for sales personnel calls, you need to provide the serial number of the product on the label.
3	Cabinet	Package	Is there any obvious damage
		Data cable, power cable, fan power supply, and motherboard	Is the connection loose? **NOTE** If it is loose, please contact the company's after-sales personnel.

3.1.3 Install Hard Disk

Check if the hard disk is installed during the first installation. Please use the recommended hard disk model. For more details, see *10 Disk Compatibility*.

It is not recommended to use a PC dedicated hard disk.

CAUTION

When replacing hard disks, please turn off the power before opening the device and disconnecting the hard disk.

Please use S.M.A.R.T. monitoring to check hard disk health.

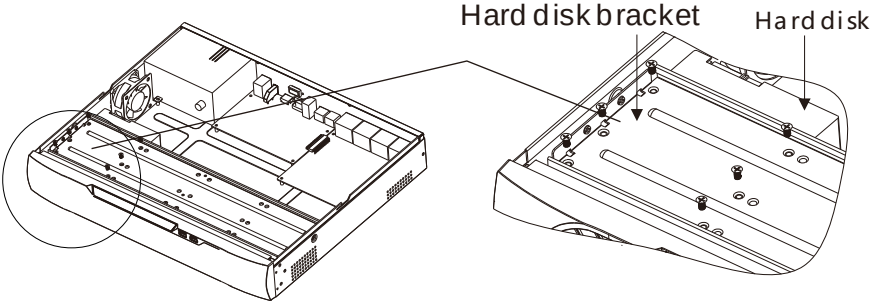
Choose hard disk capacity according to your recording requirements.

3.1.4 Install Up to Four Hard Disks

Step 1 Remove the top cover by loosening the screws..

Step 2 Put the hard disk under the hard disk bracket, hold the hard disk with one hand and aim the hard disk hole at the bracket hole, and then tighten the screws to fix (first install the hard disk near the fan), as shown in Figure 3-1.

Installing the hard disks



Step 3 Install other hard disks following step 2.

Step 4 Insert the hard disk data cable and power cable, and then put back the upper cover and tighten the fixing screws.

4 Basic Operations

4.1.1 Power on the Device

CAUTION

- Ensure that the NVR is correctly connected to a power supply, and a display is correctly connected to the high-definition multimedia interface (HDMI) or video graphics array (VGA) port of the NVR before power-on.
- In some environments, abnormal power supply may cause the failure of the NVR to work properly and even damage the NVR in severe cases. It is recommended to use a regulated power supply to power up the NVR in such environments.

After connecting the NVR to a power supply, the power indicator is always on. Start the NVR. The real-time video screen is displayed as shown in Figure 4-1.

Real-time video screen

NOTE

Users need to provide a hard disk for the NVR. The hard disk is strictly detected during device startup. If the detection result failed, the possible causes are as follows.

The hard disk is new and is not formatted. Login to the system and format the hard disk.

The hard disk is formatted, but the file system is inconsistent with the file system supported by the NVR. Format the hard disk.

The hard disk is damaged.

4.1.2 Activation

When logging into the device for the first time, or after a reset, you need to activate the device and set login and channel (i.e. camera) default password, as shown in Figure 4-2.

Activation

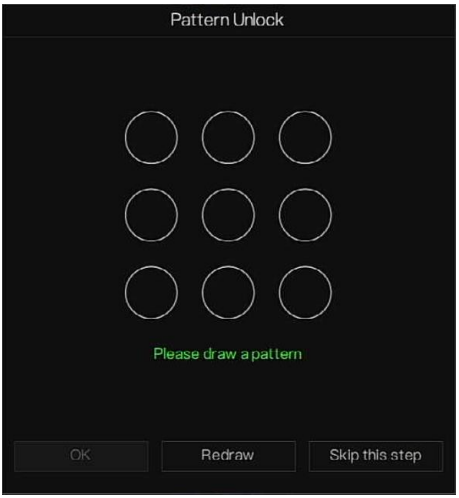
Table 4-2 Description of activation

Name	Description
Username	The default username is admin, and “admin” is super administrator.
Password	Valid password range 6-32 characters. At least 2 kinds of numbers, lower case, upper case or special characters contained. Only these special characters are supported ！@#&*+=-%&”`(),/’.:;< >?^|~[]{}.
Confirm password	

Channel password	The NVR channel connection password is the camera login password. Default camera (channel) password is “admin”.

Users can set the pattern unlock to login the device, as shown in Figure 4-3.

Set pattern unlock



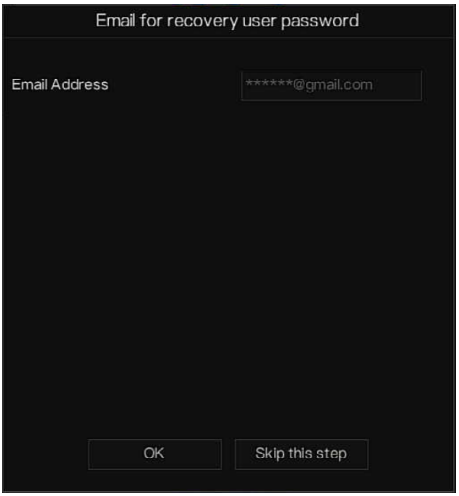
NOTE

After setting pattern unlock, the system default login will be pattern unlock login. If pattern unlock is not set, you need enter the password to log in.

If you don't need to set the pattern to unlock, click "Skip this step".

Allow the Mailbox to receive verification code. The password will be reset when you forget it, as shown in Figure 4-4.

Set Email



NOTE

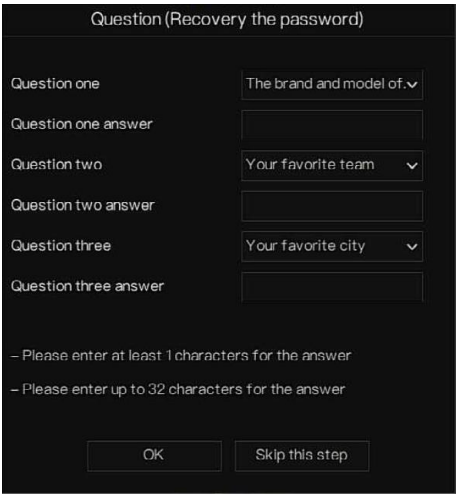
Set the email address, if you forget the password, you can though the email address to receive the verification, and reset the password.

If the email address is not set, you can reply to the secure question or send the QR code to the seller to get the temporary password to login to the device.

If you don't need to set the email, click "Skip this step".

Set the secure questions to create a new password in case the user forgets the password.

Set question



NOTE

The user can set three questions, and if they forget the password, they can answer the question and enter the reset password interface.

Questions one can be set: Your favorite animal

Company name of your first job

The name of the first boy/girl you like

The worst security question you have ever seen

The most funny worst design you have ever seen

Your favorite team

Your favorite city

The three question options cannot be set to the same issue.

The answer requires a minimum of four characters and a maximum of 32 characters.

If you do not want to set a password question, you can click Skip this step.

4.1.3 Power off the Device

Click the main menu and choose **System** > **Maintenance**, the maintenance setting page is displaying, click **Shutdown** to power off the NVR. If there is a power switch on the rear panel of the NVR, you can power off the power switch to disconnect the NVR from the power supply.

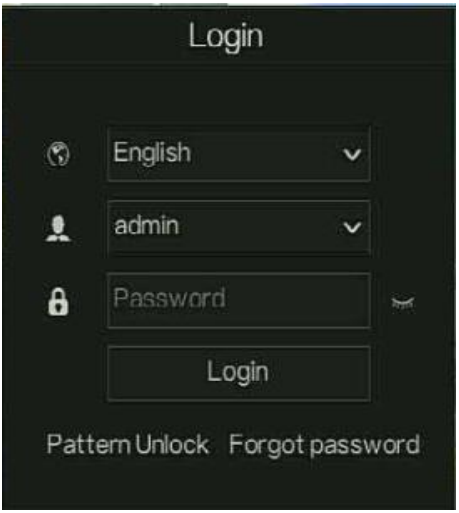
4.1.4 Login to the System

Step 1 Login to the device (two modes to login). The pattern unlock is as shown in Figure 4-6.

Pattern unlock login page

Step 2 On the NVR login page, click “Password” to enter pattern unlock interface. If users don’t set the pattern unlock it will show password to login interface directly, select the language, as shown in Figure 4-7.

Password login page



Step 3 Input the username and password.

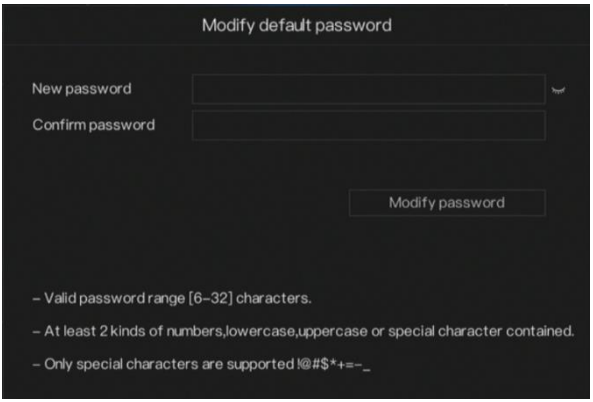
NOTE

The password incorrect more than 3 times, please login again after 5 minutes. You can also power off, and power on to start on the device, input the correct password to avoid waiting five minutes. If user forget password, click Forgot password. User can choose a way to create new password:

1. Scan the QR code and send the QR code to your seller, se the seller will send you the verification code to create a new password.
2. Answer the secure question to create new password.

Step 4 Click Login to access the main User Interface (UI).Modify the default password, as shown in Figure 4-8

Modify default password

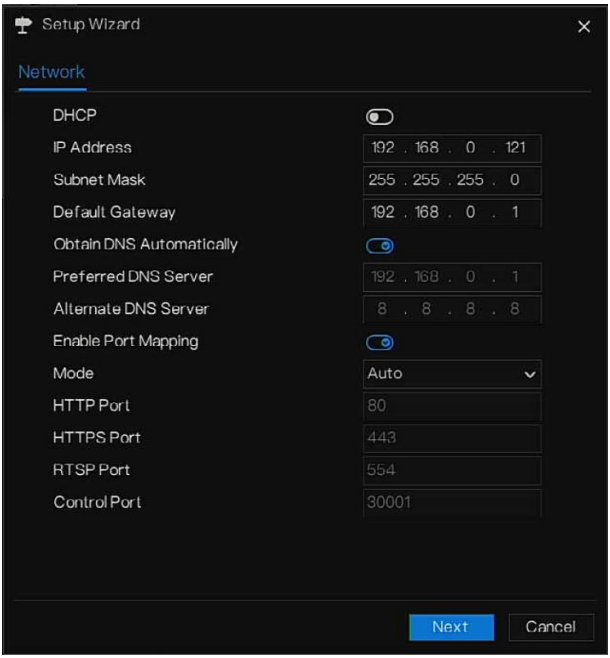


5.1.1 Wizard

Login the NVR, the wizard is showing on live video, click **Start Wizard,** the pop-up window will show as Figure 5-1.

Wizard

Wizard of network



Step 1 Contains he parameter, the details please refer to Table 5-1.

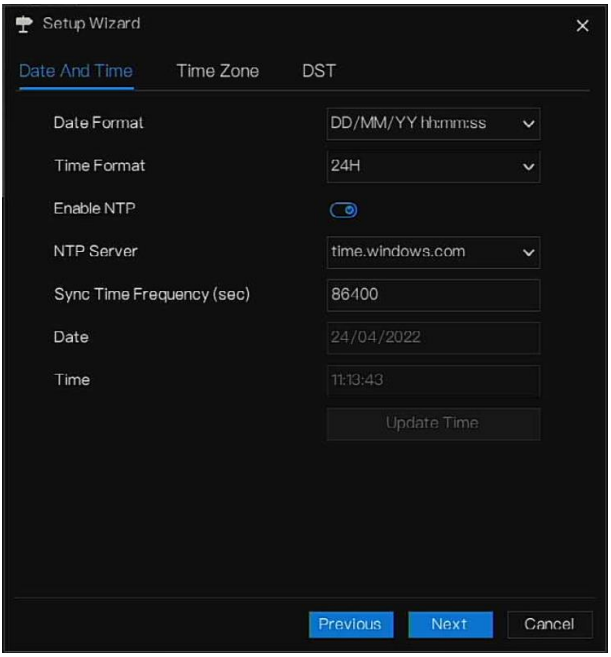
Table 5-1 Network parameter

Parameter	Description	Configuration
DHCP	Enable DHCP, the device will obtain the IP address from the DHCP server.	[Setting method] Enable
IP Address	Set the IP of device when DHCP is disable	[Setting method] Manual
Subnet mask	Set the subnet mask of device	[Setting method] Manual [Default value] 255.255.255.0
Gateway	If the user wants to access device, he must set that	[Setting method] Manual [Default value] 192.168.0.1
Obtain DNS	N/A	[Setting method]

Parameter	Description	Configuration
automatically		Enable
Preferred DNS Server	N/A	[Setting method] Manual [Default value] 192.168.0.1
Alternate DNS Server	N/A	[Setting method] Manual [Default value] 8.8.8.8
Enable Port Mapping	Enable to set the ports of HTTP, HTTPS, RSTP, Control. Auto: device to obtain Web port, data port and client port. Manual: user set the port manually.	[Setting method] Choose type from drop-down list [Default value] Auto
HTTP Port	N/A	[Setting method] When Port Mapping is manual, you need to set these.
HTTPS Port	N/A	
RTSP Port	N/A	
Control Port	N/A	

Step 2 Click Next to view the basic information about device, as shown in Figure 5-3.

Wizard of date and time



Choose date format and time format from drop-down list.

Click to synchrony time from network.

Disable the NTP-Sync, set time manually.

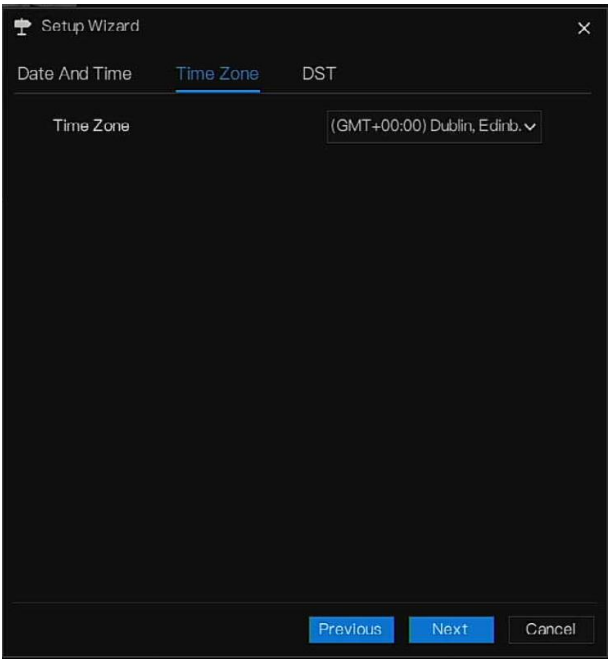
Roll the mouse to choose year, month and day when clicking the date.

Roll the mouse to choose hour, minute and second when clicking the date.

Click **Modify Time** to save the time.

Step 3 Click **Time Zone,** choose the current time zone from drop-down list, as shown in Figure 5-4.

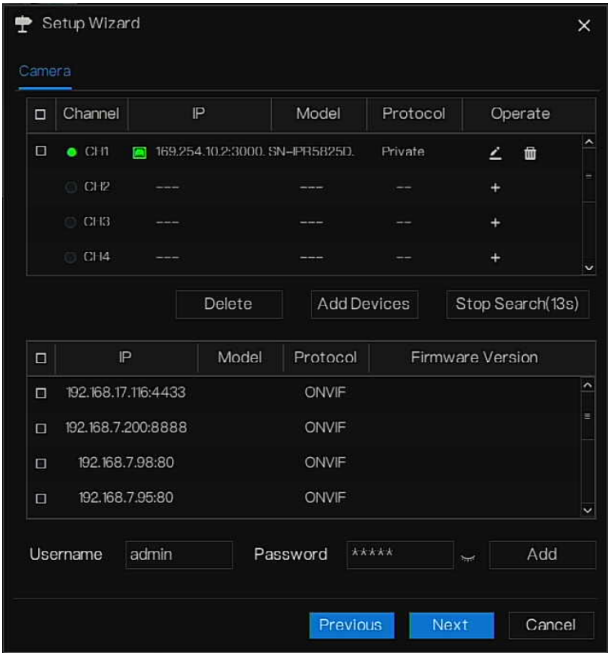
Wizard of time zone



Step 4 Click **DST,** enable the DST, set start and end time. Select offset time from drop-down list.

Step 5 Click Next to enter the adding camera wizard, as shown in Figure 5-5.

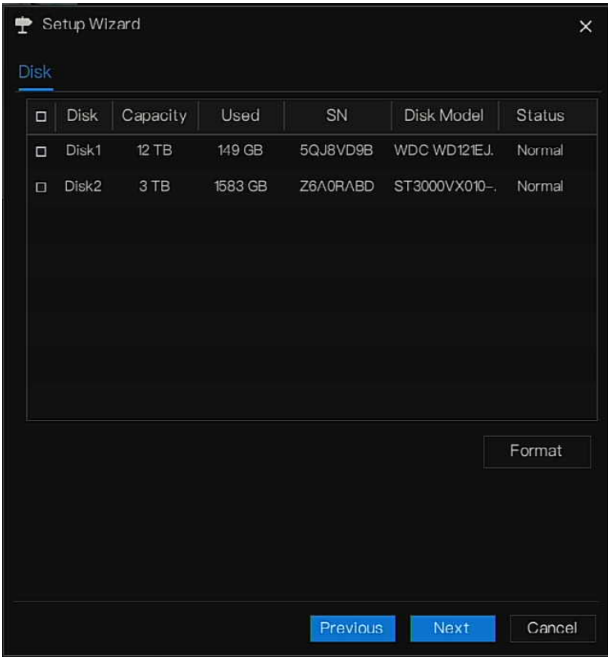
Wizard of adding camera



The details of adding camera please refer to *chapter 7.1*.

Step 6 Click Next to enter wizard of disk, as shown in Figure 5-6.

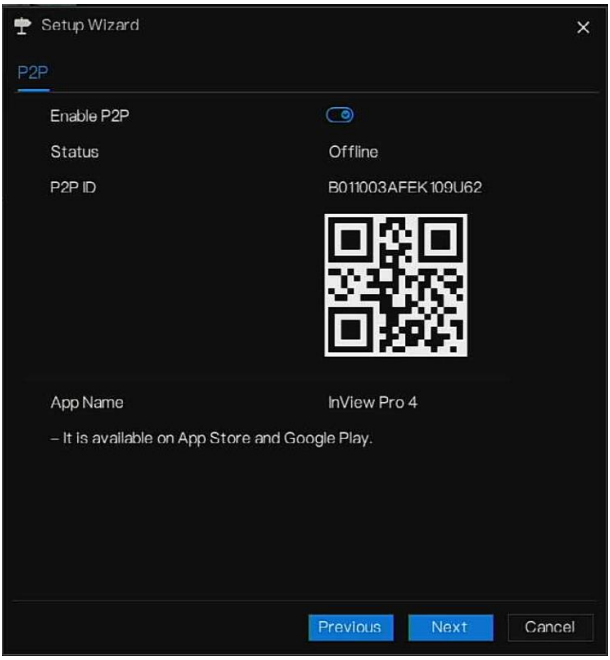
Wizard of disk



You can view the general information of disk. You can also format the disk.

Step 7 Click Next to enter wizard of P2P, as shown in Figure 5-7

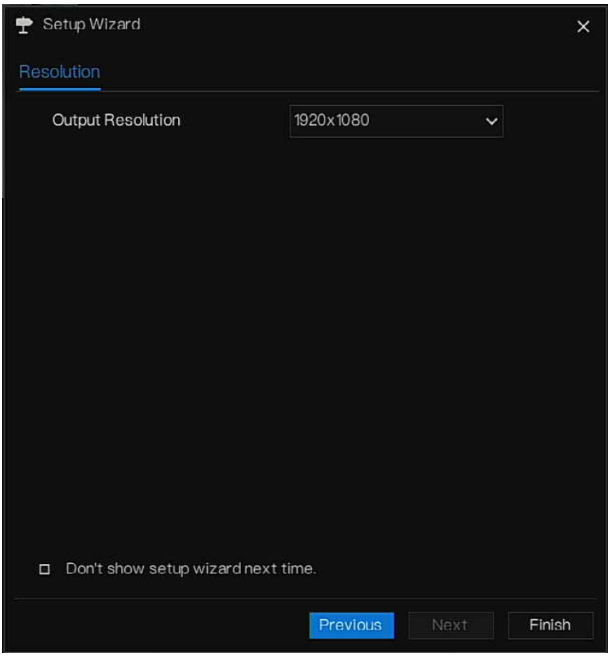
P2P



Step 8 Enable the P2P, user can use mobile devices to manage the NVR by scanning the P2P ID, if the mobile phone has loaded the InView Pro 4(search the APP at App Store or Google Play).

Step 9 Click Next to enter the wizard of resolution, as shown in Figure 5-8. Choose resolution from drop-down list. (the highest resolution is 3840*2160)

Wizard of resolution



Step 10 Click Finish to end the wizard, tick the **Don't show setup wizard next time,** it would not show at next time. Reopen wizard at **system > User > Advance setting**.

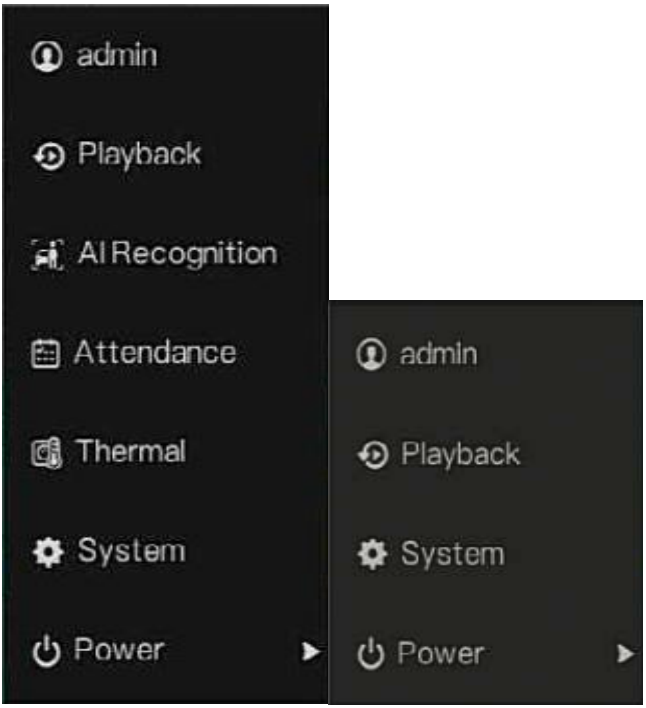
6 Quick Navigation

6.1 Quick Bar

After the NVR operation screen is displaying, move the cursor to the far bottom of the NVR screen. The NVR floating menu bar is displaying.

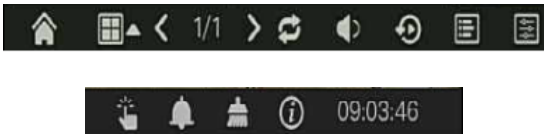
Click in the left of NVR floating menu bar. The quick home menu is showing. The quick home menu contains **Playback**, **System and Power (Shutdown, Reboot and Logout)** as shown in Figure 6-1.

Quick home menu



In the middle of NVR floating menu bar, the video tool bar provides **video window switching**, **auto SEQ, volume, playback,** and **channel information,** as shown in Figure 6-2.

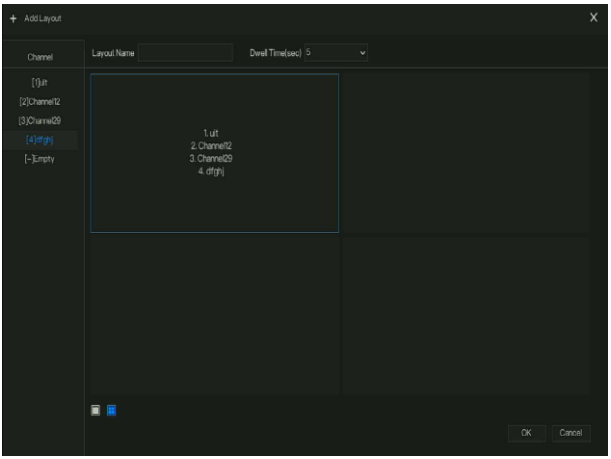
Real-time video toolbar



The real-time video toolbar is as follows:

: Layout. Users can choose layout and add new layout strategies as shown in Figure 6-3. Click on the right of screen splitting format and choose the channels to view the video. Click + to add a new layout.

Add layout



Input the layout name, choose the dwell time, choose the splitting format. Choose one channel or several channels to add on screen.

: Auto SEQ. click icon, the layout dwell on screen is enabled, for how to set the dwell on, please see *chapter 7.5.5.*

: Audio. Click on the icon, the audio setting screen is displaying, where you can choose the channel and adjust the volume.

: Channel information, tick the channel or encode, the live video will show the channel information.

: Preview strategy, users can switch the real-time preview mode according to the network.

There are three modes: fluency, balanced and real-time.

A main menu quick toolbar is on the right of NVR floating menu bar. The main menu quick toolbar provides **Manual alarm, Alarm information, Clean alarm, Information** and **time**, as shown in Figure 6-4.

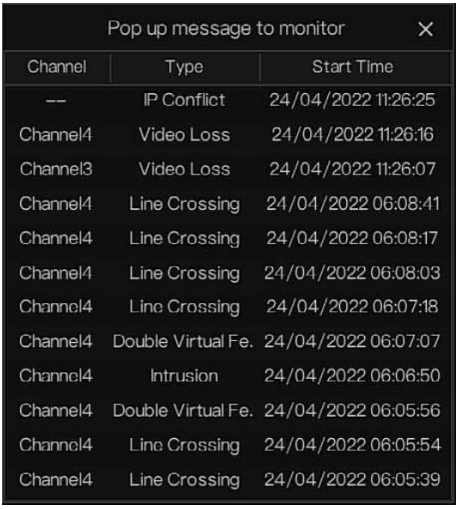
Main menu quick toolbar

: Manual alarm, click the icon, users can set different channels, choose alarm out, the window shows in Figure 6-5.

Manual alarm

: Alarm message, click on the icon for more details as shown in Figure 6-6.

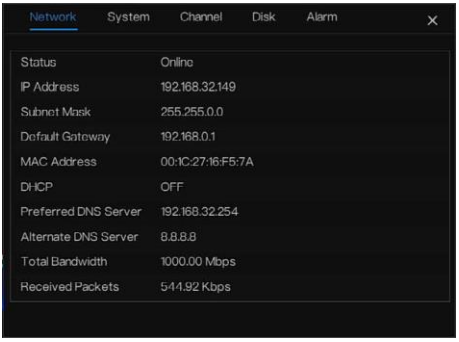
Alarm message



: Clean alarm, click icon and clean the current alarm actions like voice and external alarm out.

: Information, click icon and the general information would show, like network, system, channel, disk and alarm, as shown in Figure 6-7.

Information



6.2 Real Time Video Bar

Right click at realtime image, the quick setting will show as figure.

Record: click the icon and start to record video. Click again to end record.

Instant playback: click the icon, the window will be recording video five minutes ago.

is the time bar of playback.

Audio: open or close the audio.

PTZ: This function is only applied for speed dome cameras. The monitored camera can focus, zoom or iris at this pop-up window. You can adjust every parameter as shown in Figure 6-8.

PTZ adjust screen

: adjust direction of camera.

: At this part, perform **Advanced, Scan** and **Tour** settings.

: 3D, this function can only be used for high speed dome camera. Click the icon to enter the camera live video screen, use the mouse to move the camera or zoom in or out the lens. Click the point to zoom in. Drag and draw the area, zoom in the drawing area, Reverse drag to zoom out.

: Zoom in, click zoom in, roll the mouse wheel to zoom in and zoom out. Right-click to exit the zooming.

: Image, click the icon,as shown in Figure 6-9. Select scene, and drag cursor to adjust value of brightness, sharpness, contrast and saturation.

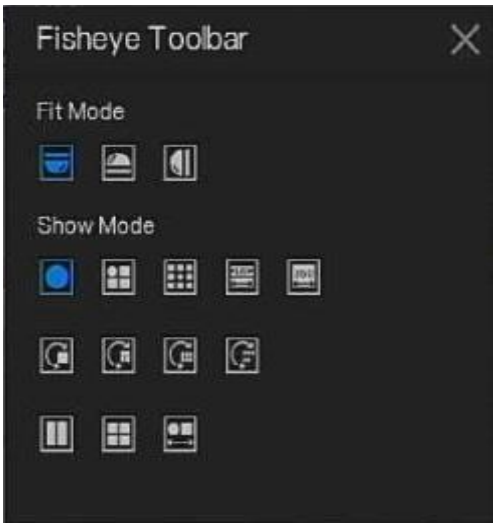
Camera picture parameter

: Two way audio. The NVR and camera can talk to each other.

: Snapshot panorama. If an USB storage device is connected to the NVR device, click to save the panorama snapshot directly.

: fisheye (only used for fisheye cameras), click to switch the fisheye modes, as shown in Figure 6-10.

Fisheye



Playback

Playback refers to playing back a video, fixed-point playback, playback the search type.

Click in the quick navigation bar to access the playback screen, as shown in Figure 6-11.

Playback screen

Choose the channels from the channels list, click one day to play (the date has blue line, it means there is recording video at this day, it doesn't mean for all channels has video.)

It maybe has three colour bars on the time bar, the blue one is schedule record, the yellow one is manual record, and the red one is alarm record.

The toolbar at the bottom of the playback screen is described as follows:

: Layout.

: Reversed, pause/play, stop.

:30s backward, 30s forward.

: Triple speed, it supports up to 32 times to playback. Click the Number to switch the speed.

: Zoom. Roll the roller of mouse to zoom in or out.

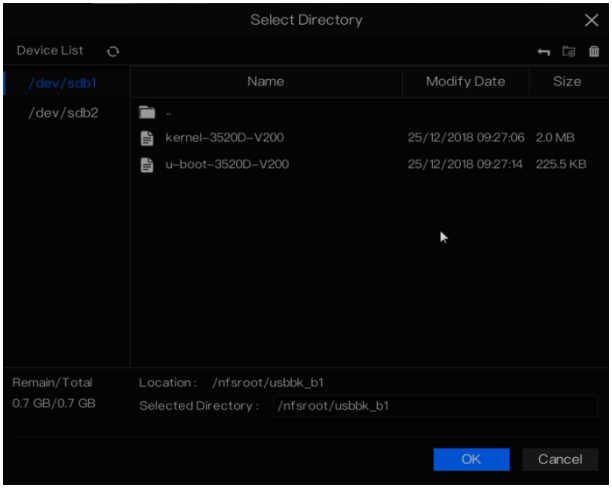
: Audio.

: Start and end backup. Click the icon, the video backup starts, select the video and click the icon again.

The backup type appears. Click **save**. And **saving the file** pop ups as Figure 6-12. Click **OK** to save.

This function is available after an USB disk is plugging in the device.

Select directory

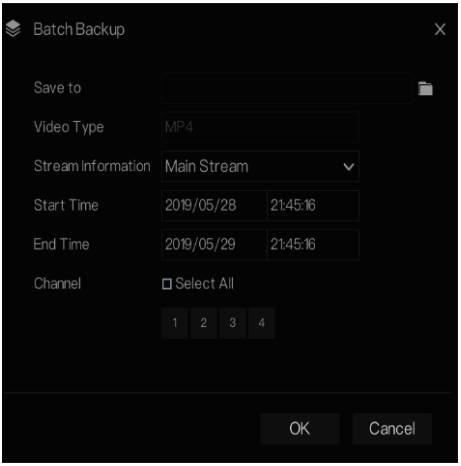


: Batch backup, click the icon to backup multi-channels, as shown in Figure 6-13.

Choose the folder to save, select the stream information from drop-down list, set the start time and end time, select the channels, Click **OK** to backup. The backup videos are marked by watermark, you can view it by our player.

: Snapshot panorama. Click to save it to USB storage device on NVR.

Batch backup



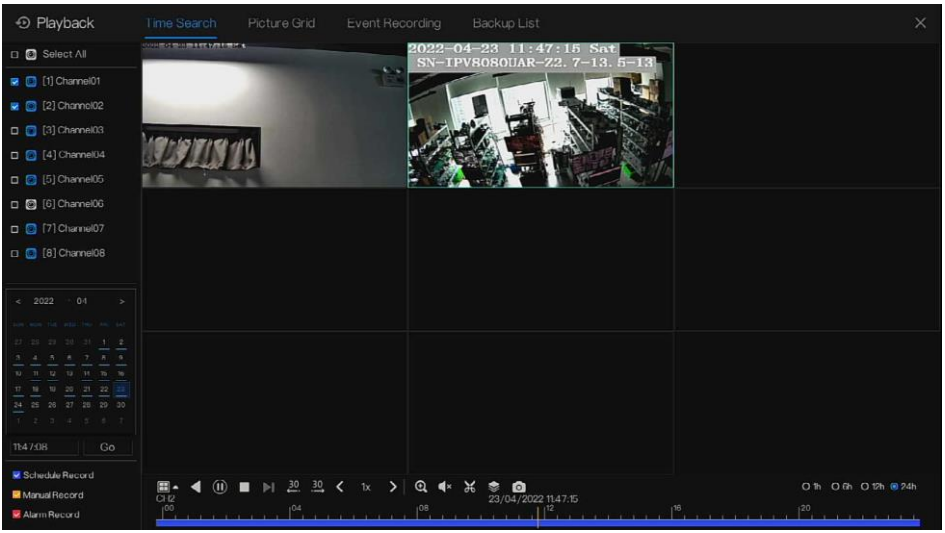
6.2.1 Time Search

Search refers to searching for a video by date and time.

Operation Description

Click in the quick navigation bar to access the search screen, as shown in Figure 6-14.

Time Search screen



Operation Steps

Step 1 Select a camera or cameras in the camera list on the left side of the search screen. The video view of the selected camera is displaying in the play window.

Step 2 Select a date in the calendar on the light-down side of the search screen.

Step 3 Choose record type, and search the video quickly.

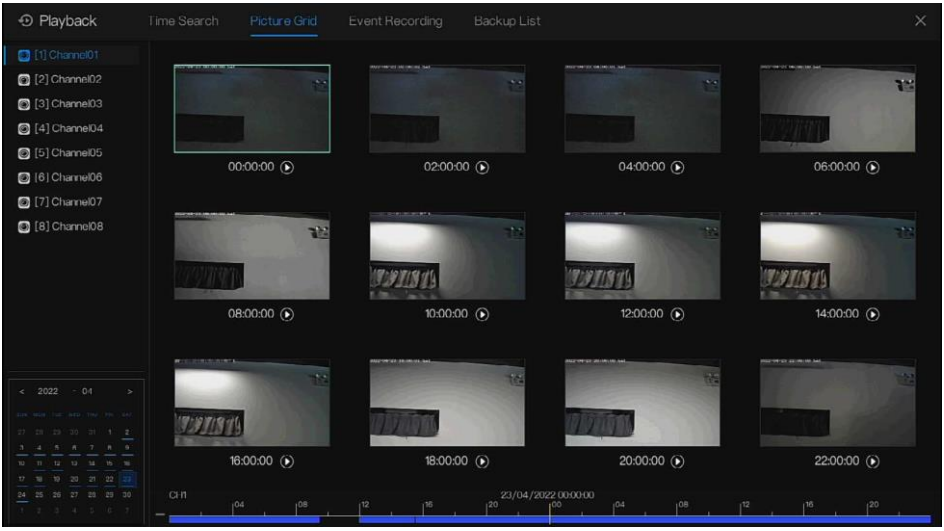
Step 4 Choose proper button to adjust video.

6.2.2 Picture Grid

Picture grid refers to evenly dividing the video of a channel by time range and searching for a video based on thumbnails divided by time range.

Click Picture Grid on the quick navigation bar to access the picture grid screen, as shown in Figure 6-15.

Picture grid screen



Operation Steps

Step 1 Select a camera in the camera list on the left side of the picture grid screen. Videos shot by the camera in the earliest time range on the current day are displayed as thumbnails in the window on the right side.

Step 2 Select a date from calendar.

Step 3 A day are dividend to 12 grids, every two hours is a grid. Click the image to change the interval.

Step 4 Select a required thumbnail, double-click it or right-click it and choose Play from the shortcut menu to play the video.

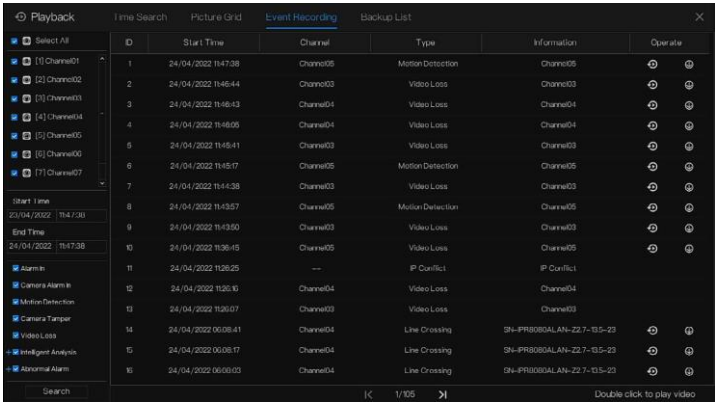
Step 5 Click to replay the gird individually.

Replay

6.2.3 Event Recording

Click on the quick navigation bar; choose **Event** at title to access the alarm event screen, as shown in Figure 6-17

Event screen



Operation Steps

Step 1 Select cameras in the camera list on the left.

Step 2 Set start and end time.

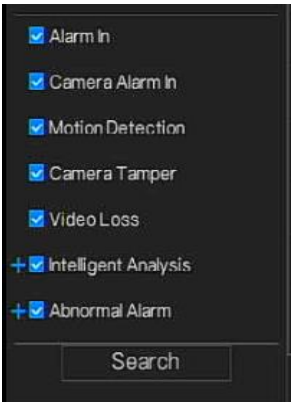
Step 3 Tick the alarm type, such as alarm in, camera alarm in, motion alarm, video loss, intelligent analysis and abnormal alarm

Step 4 Click Search to query the event, the result would show at window.

Step 5 Double click to play video about event. It will play recording video.

: play the recording video.

: backup the recording video.



The type of intelligent analysis and abnormal alarm are subdivided, users can tick **Detail Alarm** to show.

Intelligent analysis includes perimeter, single virtual fence, double virtual fences, loiter, multi loiter, object left, object removed, abnormal speed, converse, illegal parking, signal bad, register, stranger, registered license plate, over temperature, low temperature, abnormal temperature, threshold warning, threshold alarm, temperature difference warning, temperature difference alarm, temperature section alarm, face temperature, wear mask, no mask, personnel count threshold alarm, personnel count threshold alarm(IPC) .

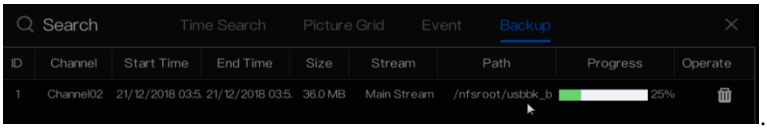
Abnormal alarm includes disk error, IP conflict, network disconnected.

User can choose the accurate alarm events to search.

6.2.4 Backup List

Click on the quick navigation bar, choose at title to access the backup screen, as shown in Figure 6-18.

Backup screen



View detailed information of backup. Click on **Delete** to quit the download.

6.3 AI Recognition

NOTE AI Recognition functions are only available in some Camera and NVR Models. Your solution may have different set of functions.

At AI recognition interface, we can set the **Real time Comparison, Smart search, Archives library, Comparison configuration**.

The all snapshots is able to be added to the libraries according the real needs

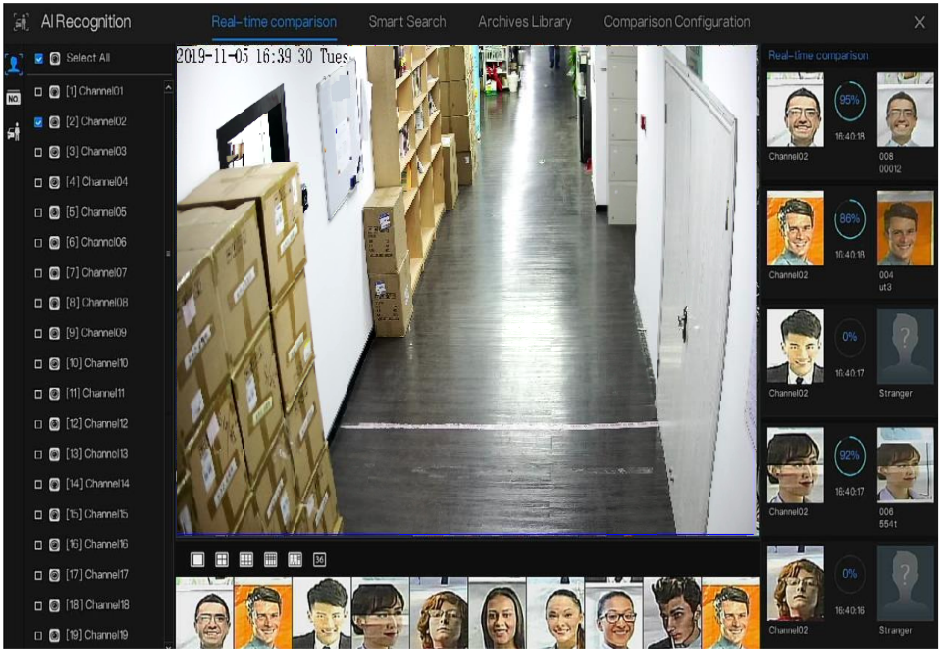
6.3.1 Real Time Comparison

Real time comparison can compare human faces, vehicle license plate, and AI(include riding, vehicle, full body)

Human Face

At real time comparison interface, click the to enter the human face comparison interface, choose the cameras with face recognition function to play live video, the snapshots of camera will be compared with the templates which have been registered in libraries, the result shows as in Figure 6-19.

Human face comparison



Click the "+" to add the snapshot to face library immediately.

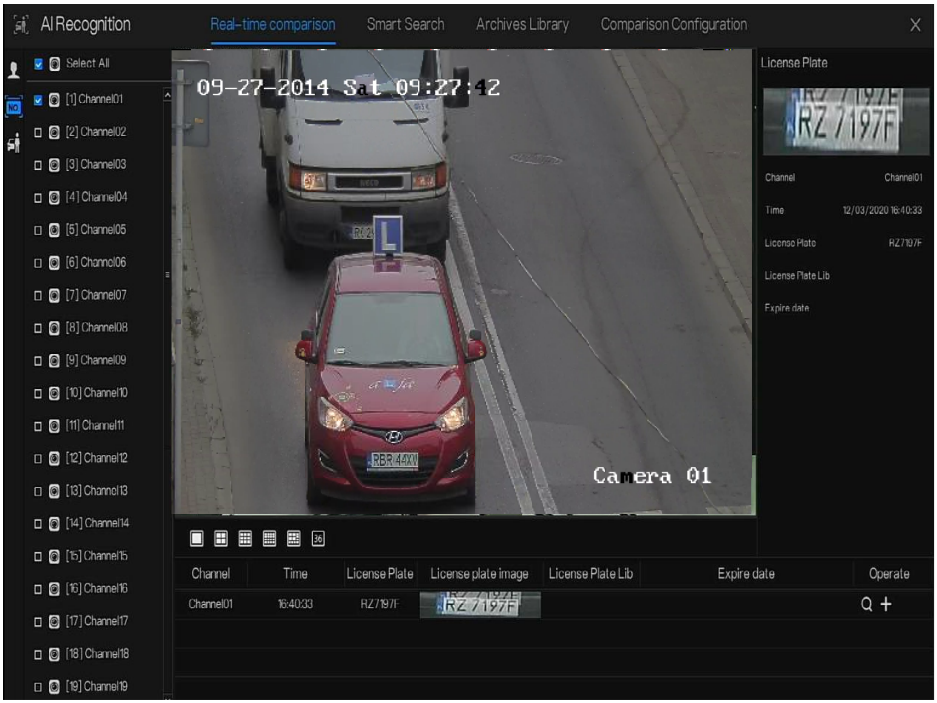
Snapshot in real time video, put the cursor on picture such as , you can add it to face library, or face search. The cursor on area and the pictures are not update, move the mouse so that the pictures can be shown in time.

Vehicle License Plate

At real time comparison interface, click the

to enter the vehicle license plate comparison interface, choose the cameras with license plate recognition function to play live video, the snapshot of camera will be compared with libraries, the result shows as in Figure 6-20.

Vehicle license plate

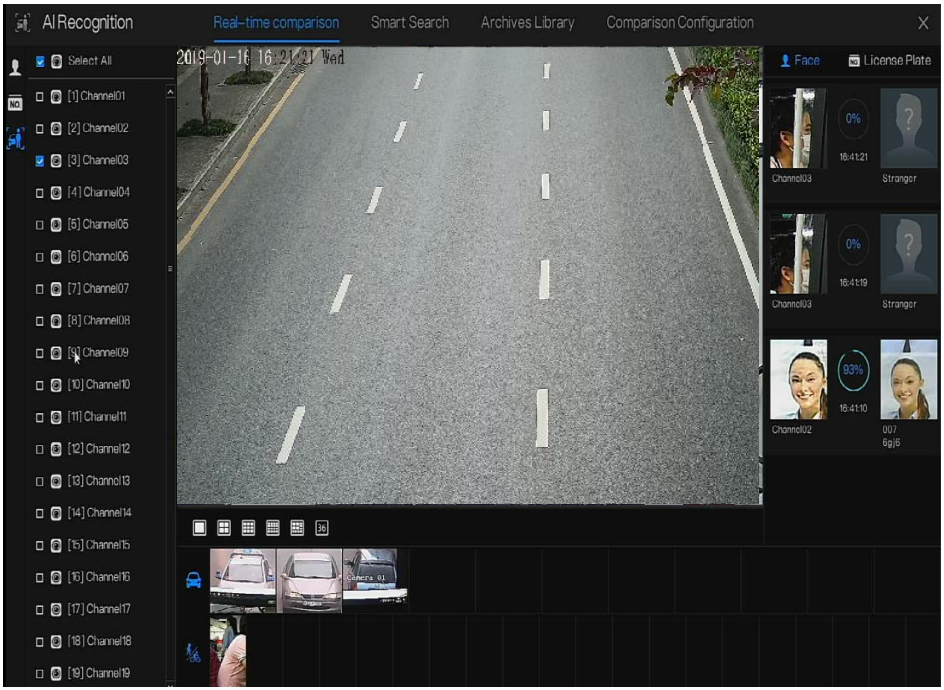


Click the “+” to add the snapshot to license plate library immediately.

Vehicle and Full Body

At real time comparison interface, click the NO. to enter the vehicle license plate comparison interface, choose the AI recognition cameras to play live video, the snapshot of camera will be compared in libraries, the snapshot to vehicle and full body will show at the bottom of page, the result shows as in Figure 6-21.

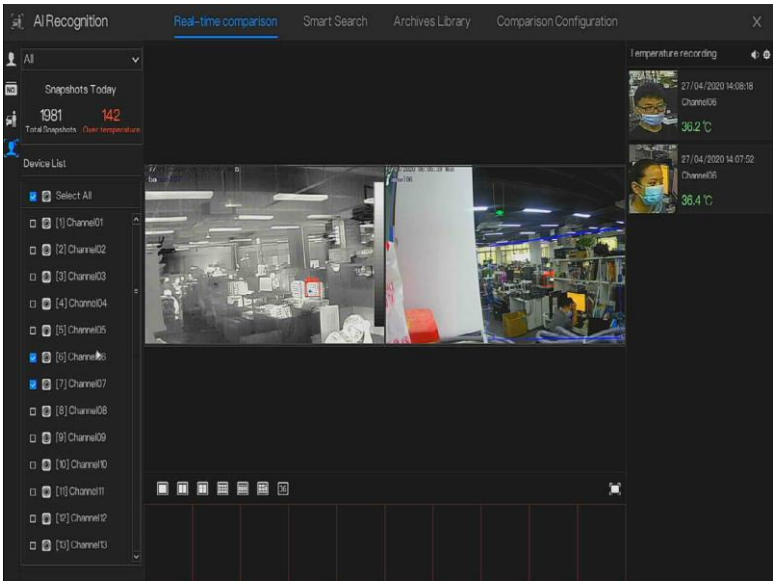
Full body



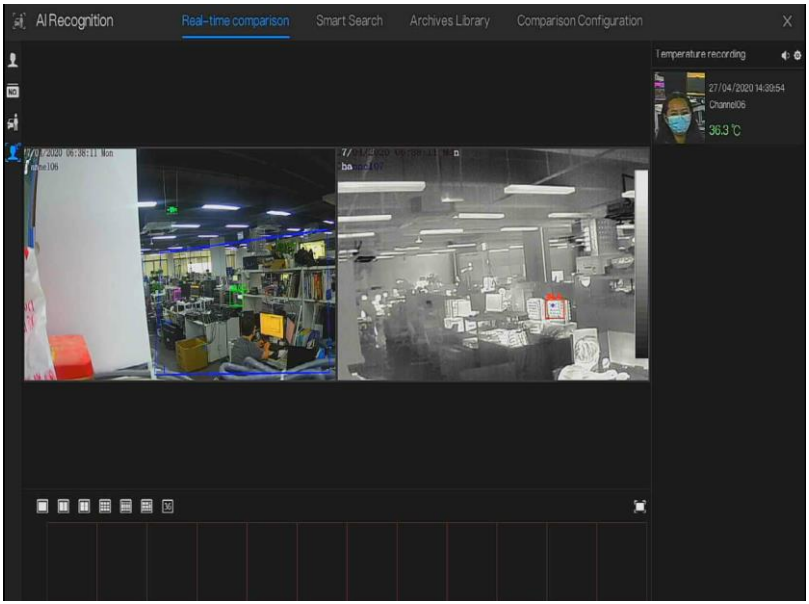
Real-time Body Temperature Filter

At AI recognition, click to enter the real-time body temperature filter, Users can select the body temperature camera, which will display temperature recordings and over-temperature snapshots. Click full-screen, the channel list and snapshots statistics will be hidden.

Real-time body temperature filter



Full screen



If users enable the mask detection, the snapshot results will reminder wear mask or no mask.

6.3.2 Smart Search

At smart search interface, user can search the human face, vehicle license plate, full body, car, body temperature.

Up to 1000 pictures can be displayed. Click to see more details and export search result.

Human Face Search

Human face search

Step 1 Choose human face search at smart search interface.

Step 2 Tick the face recognition camera channels, set the start and end time.

Step 3 Choose the condition (by picture or by feature), the picture can be selected from the file folder.

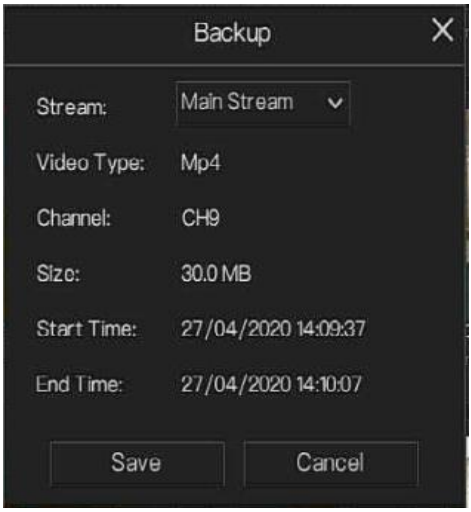
Step 4 Click “Search” to search the snapshot of human face.

Step 5 The result will show at the middle of page, click the picture and the detail information show at the top right of page.

Step 6 The pictures can be added to library or used to search.

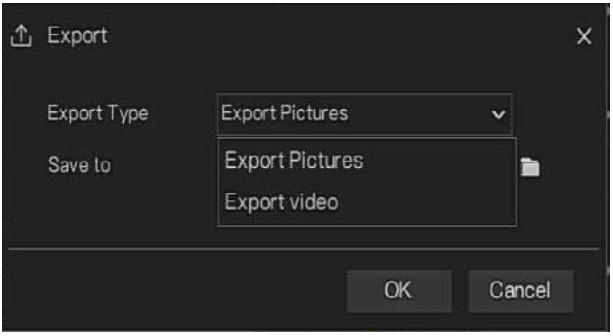
Step 7 Click play button of video to play the recording of snapshot, click “Backup” to back up the recording videos.

Back up



Step 8 Click “Export” to export the result, choose export type pictures or videos.

Export

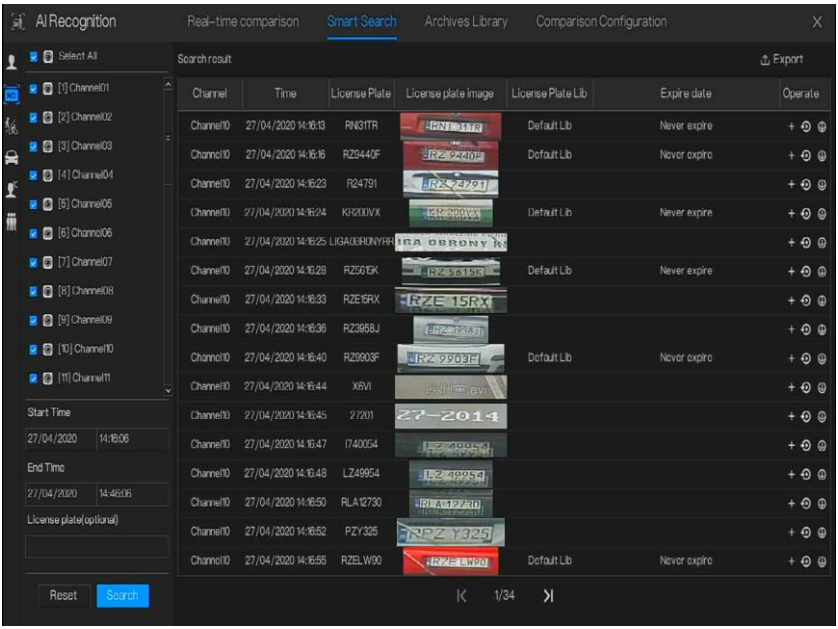


Play video of snapshot, it will play a 30-seconds video before and after the snapshot.

Snapshot in real time video, put the cursor on picture such as , you can add it to face library, or face search. The cursor on area 6 and the pictures is not update, move the mouse so that the pictures can be shown in time.

Vehicle License Plate Search

Vehicle License Plate search



Step 1 Choose vehicle License Plate at smart search interface.

Step 2 Tick the vehicle license plate recognition camera channels, set the start time and end time.

Step 3 Input the license plate optionally.

Step 4 Click “Search” to search the snapshot of license plate.

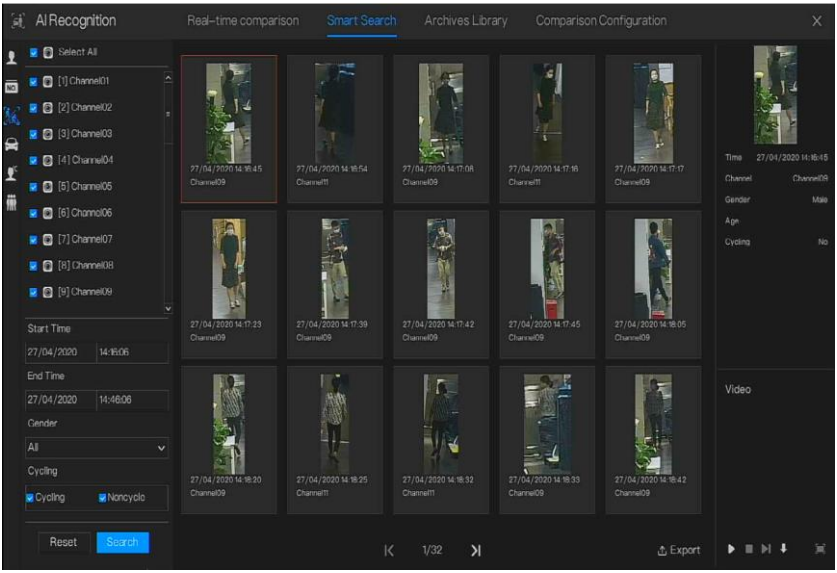
Step 5 The result will show at the page, click “+” add to library.

Step 6 Click “Playback” to view the recording video, click “Backup” to back up the video.

Step 7 Click “Export” to export the result.

Full Body Search

Full body search



Step 1 Choose full body search at smart search interface.

Step 2 Tick the AI recognition camera channels, set the start time and end time.

Step 3 Set the gender, click cycling or no cycling .

Step 4 Click “Search” to search the snapshot of human face.

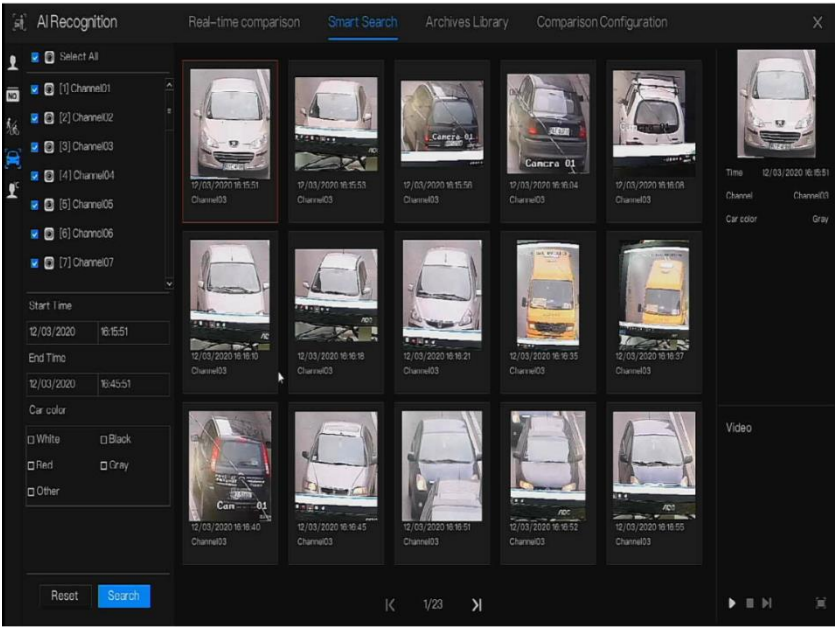
Step 5 The result will show at the middle of page, click the picture and the detail information show at the top right of page.

Step 6 Click play button of video to play the recording of snapshot, click “backup” to back up the video.

Step 7 Click “Export” to export the result.

Vehicle Search

Vehicle search



Step 1 Choose vehicle search at smart search interface.

Step 2 Tick the AI recognition camera channels, set the start time and end time.

Step 3 Tick the colour.

Step 4 Click “Search” to search the snapshot of human face.

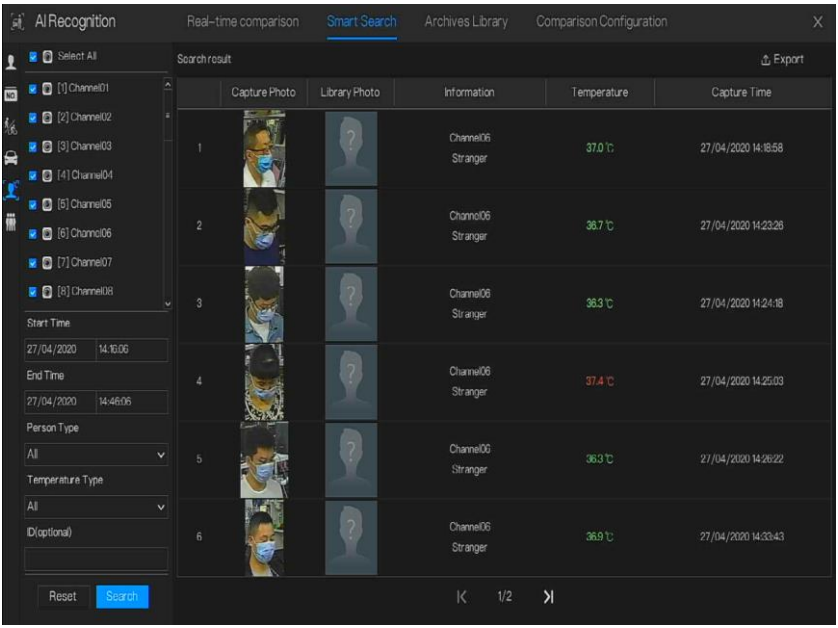
Step 5 The result will be showed at the middle of page, click the picture and the detail information show at the top right of page.

Step 6 Click play button of video to play the recording of snapshot, click “backup” to back up the video

Step 7 Click “Export” to export the result.

Body Temperature Search

Body temperature search



Step 1 Choose body temperature search at smart search interface.

Step 2 Tick the AI recognition camera channels, set the start time and end time.

Step 3 Choose the person type, temperature type, input ID optionally.

Step 4 Click “Search” to search the temperature.

Step 5 Click “Export” to export the result

Personnel Count

Personnel count

Step 1 Choose personnel count at smart search interface.

Step 2 Tick the AI recognition camera channels, set statistical type and date.

Step 3 Click “Search” to search the snapshot of human face.

Step 4 Click to view the data in different data tables.

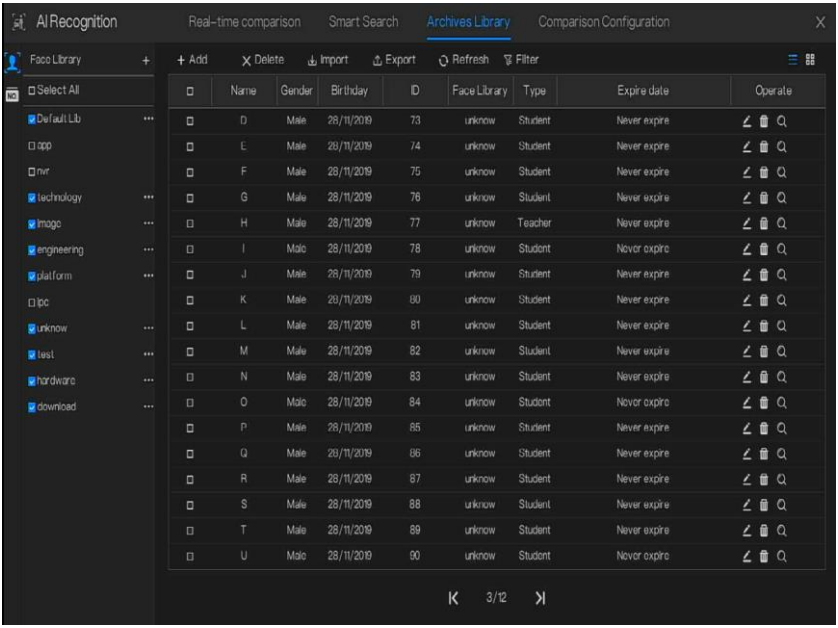
6.3.3 Archives Library

At archives library, users can add or edit the face library , license plate library.

The license plate libraries can be imported to and exported from IP cameras.

Face Library

Face library



Click “+” to add a new face library.

Click “Add” to add person face.

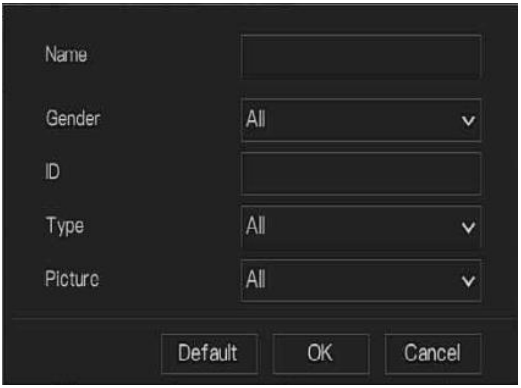
Tick the person, click “Delete” to delete the person.

Click “Import” to add the person batch.

Click “Export” to export the all person in library.

Click “Filter” to filter the all persons in library, as shown in Figure 6-33.

Filter

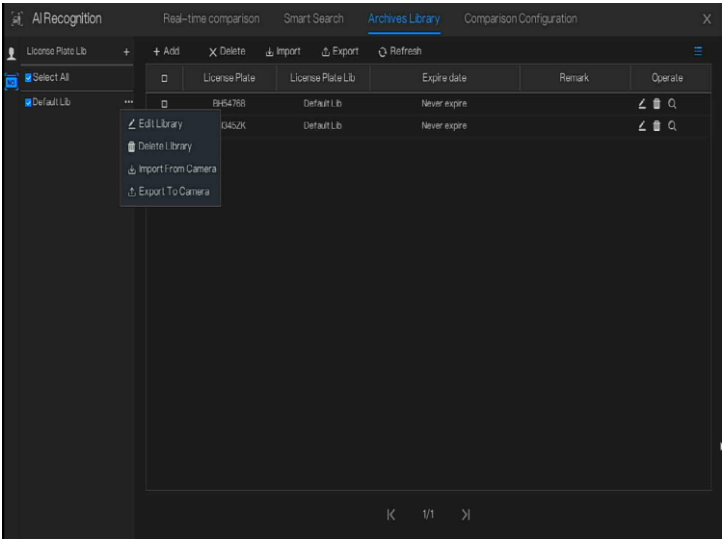


Click operate icon to edit or delete the chosen person.

License Plate Library

At license plate library interface, users can add/delete/operate the library. It supports the white-list and black-list according the libraries to export and import the library to IP cameras.

License plate library



Click “+” to add a new license plate library.

Click “Add” to add a plate to library.

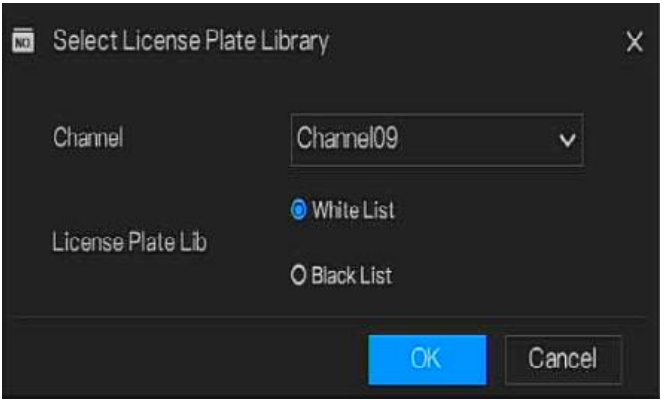
Tick the plate, click “Delete” to delete the license plate.

Click “Import” to add the license plate batch.

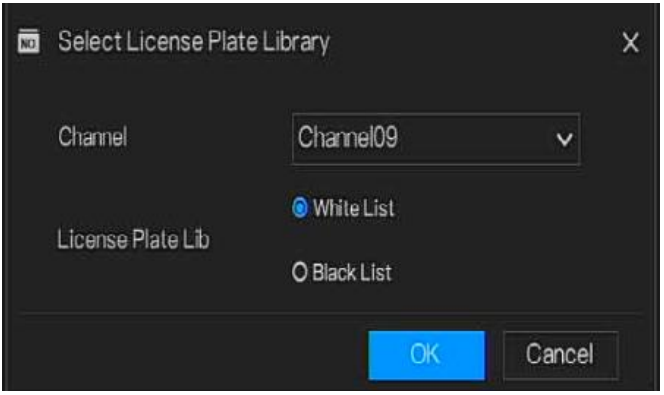
Click “Export” to export the all-license plate library.

Click operate icon to edit or delete the chosen license plate.

Click “Import from Camera” to select license plate library to channel.



Click “Export to Camera” to add license plate number to camera.



6.3.4 Comparison Configuration

NOTE

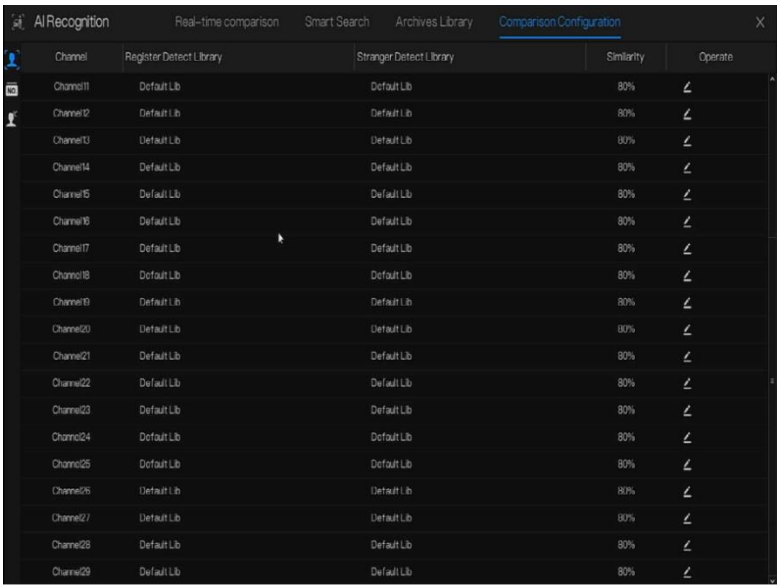
The comparison function is only for AI cameras, please refer to actual cameras.

At comparison configuration interface, user can set the comparison of human face/ license plate/temperature/ mask detection configuration/ personnel count configuration.

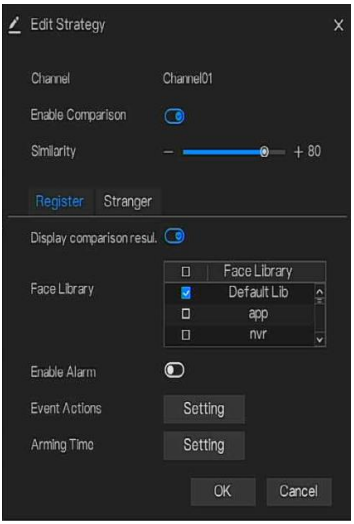
Face Comparison

At face comparison interface, users can set different channels' strategy, such as similarity, display comparison result, face library, enable alarming, event action, arming time, as shown in Figure 6-35 .

Face comparison



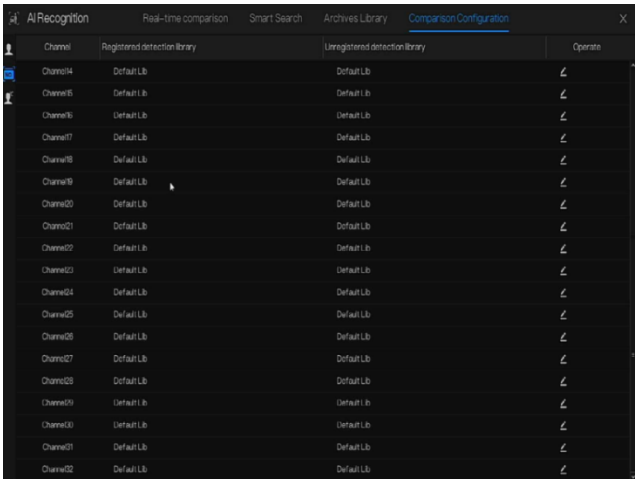
Strategy



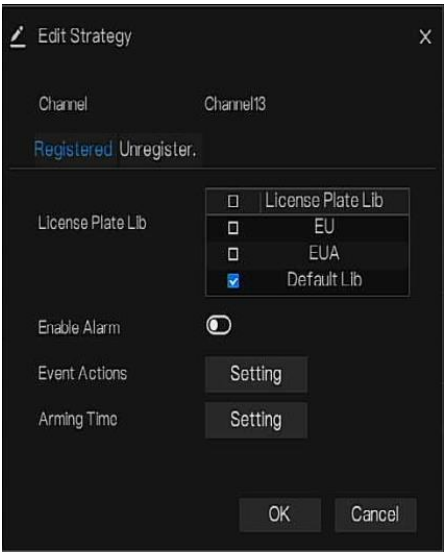
License Comparison

At license plate interface, users can set strategies of different channels of license plate recognition cameras, such as register and unregister, enable alarming, event action, arming time, as shown in Figure 6-37.

License comparison



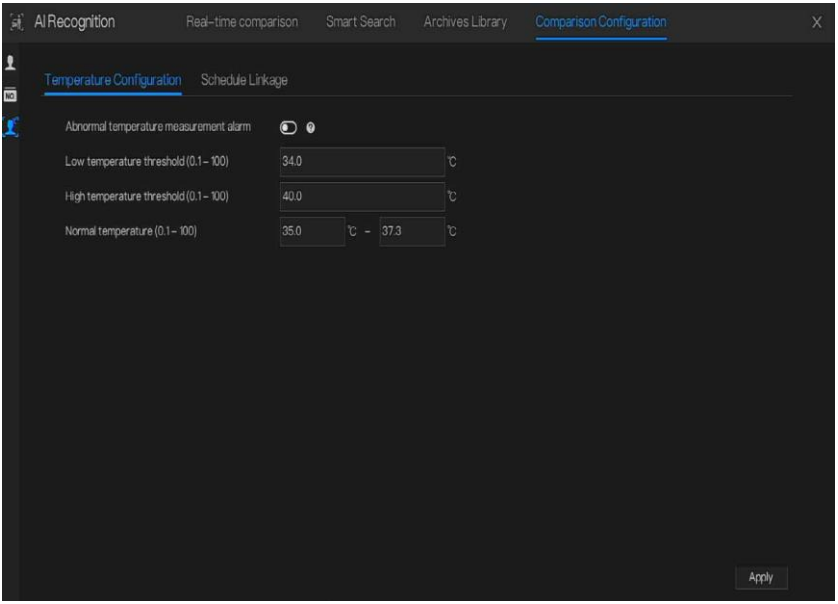
Strategy


Edit Strategy
Channel
Channel13
Registered
Unregister.
License Plate Lib
License Plate Lib
EU
EUA
Default Lib
Enable Alarm
Event Actions
Setting
Arming Time
Setting
OK
Cancel

Temperature Comparison

At comparison configuration interface, click to enter the temperature configuration, as shown in Figure 6-39.

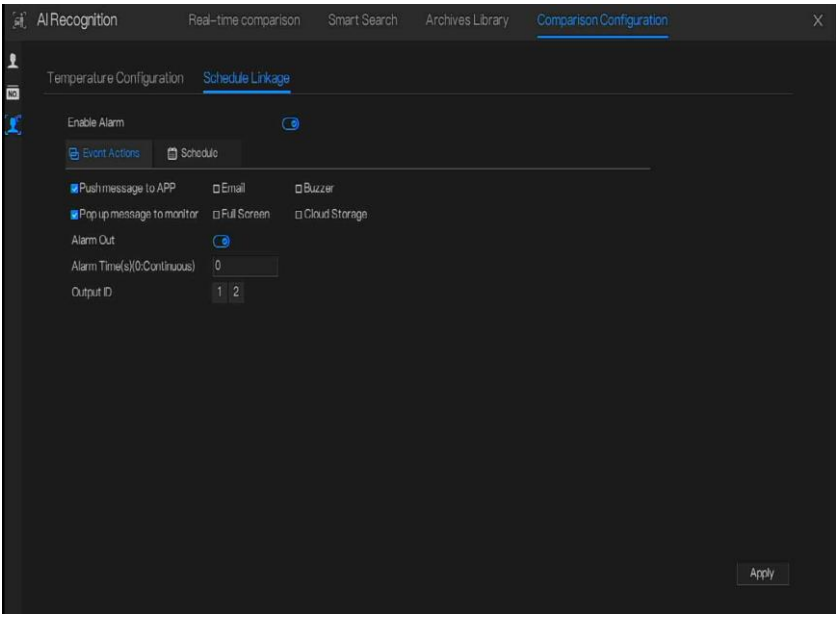
Temperature comparison



At temperature comparison interface, users can set low temperature threshold, high temperature threshold, and normal temperature.

Abnormal temperature measurement alarm, when it is turned on, the temperature below the low threshold and above the high temperature threshold will generate abnormal temperature alarm. When it is turned off, body temperatures below the low threshold and above the high threshold are discarded.

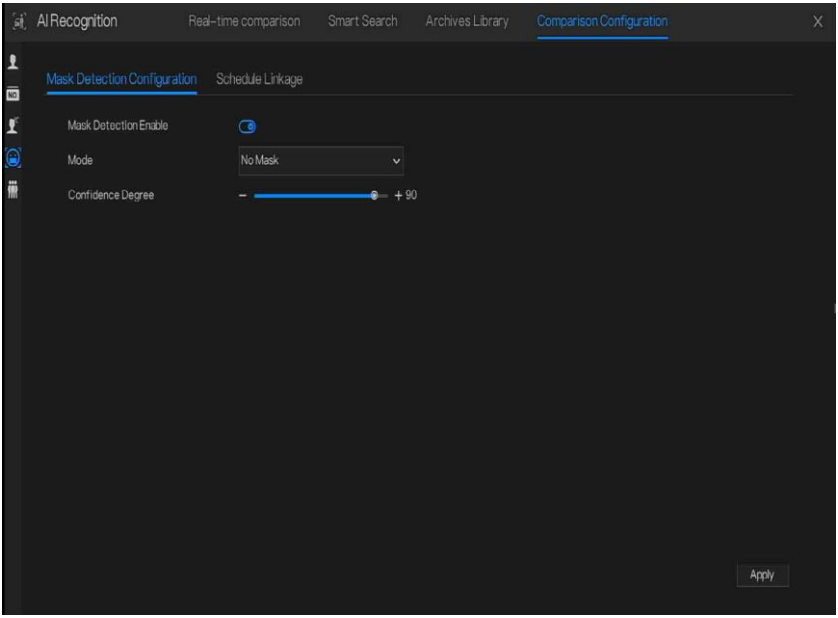
Schedule linkage



Enable alarm, set the schedule linkage, it will send alarm information if the temperature is higher than low threshold and lower the normal temperature, or higher than normal temperature and lower than high threshold.

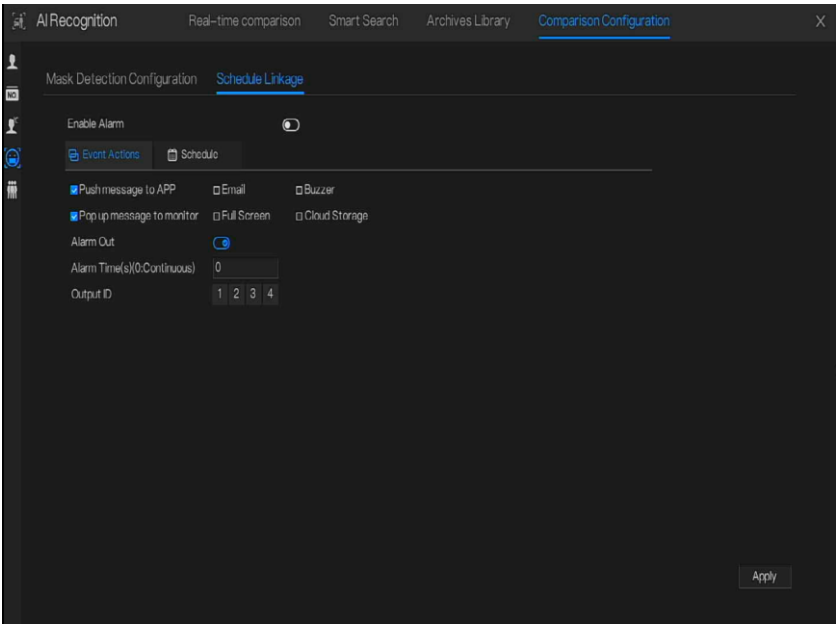
Mask Detection Configuration

Mask detection configuration



Enable mask detection, choose the mode (with or without a mask). Set the confidence degree, the default value is 90.

Schedule linkage



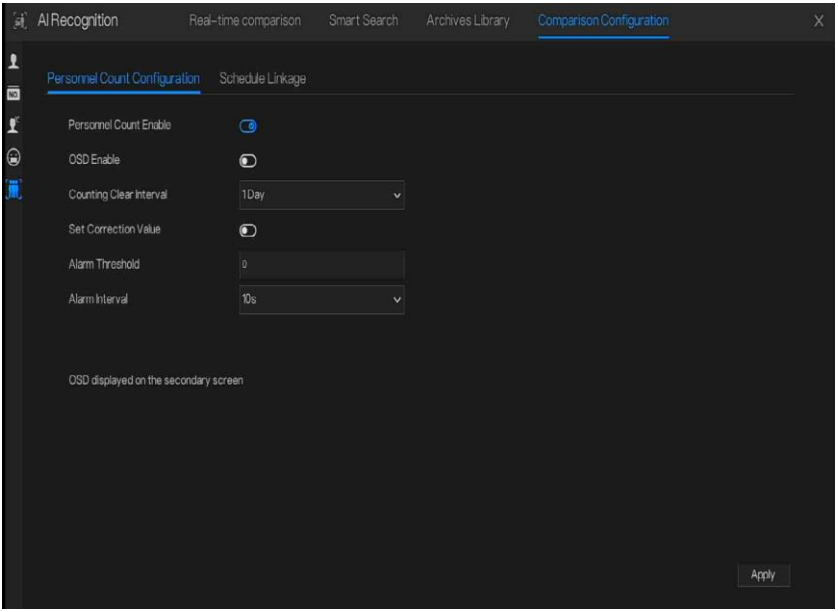
Enable the alarm, the real-time comparison can show if someone wears a mask or not.

Choose event actions, and set the schedule.

Click “Apply” to save the settings.

Personnel Count Configuration

Personnel count configuration



Enable personnel count to start the people counting.

Enable OSD to show OSD (OSD is displayed on the auxiliary screen, you need to start the auxiliary screen in "System> Auxiliary Screen" before displaying).

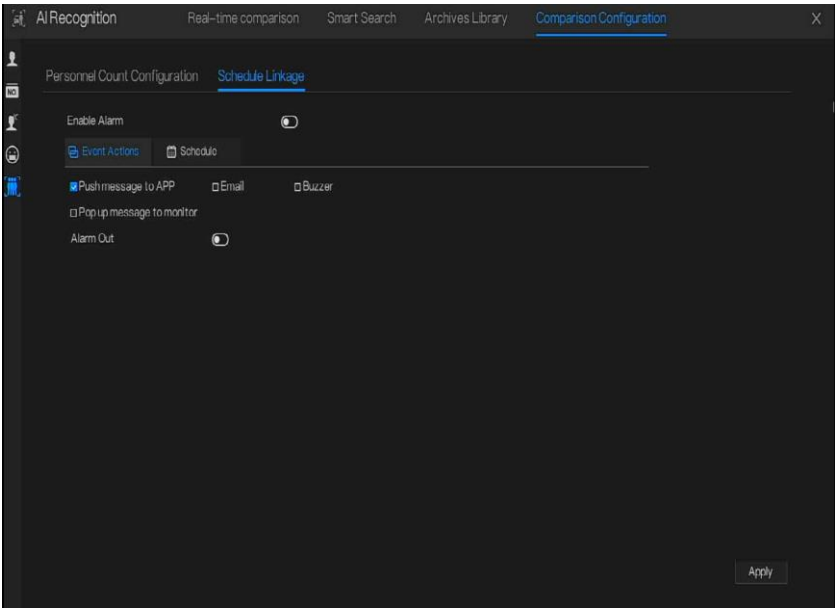
Select the counting clear interval (never, 10 minutes, half an hour, 1 hour, 12 hours, 1 day).

Set correction value, Configure the calibration value to start the manual calibration of the personnel count value.

Alarm threshold: when the people count reaches the threshold, an alarm is activated. Alarm interval: 10s, 20s, 30s, 40s, 50s, 60s.

Click "Apply" to save the settings.

Schedule linkage



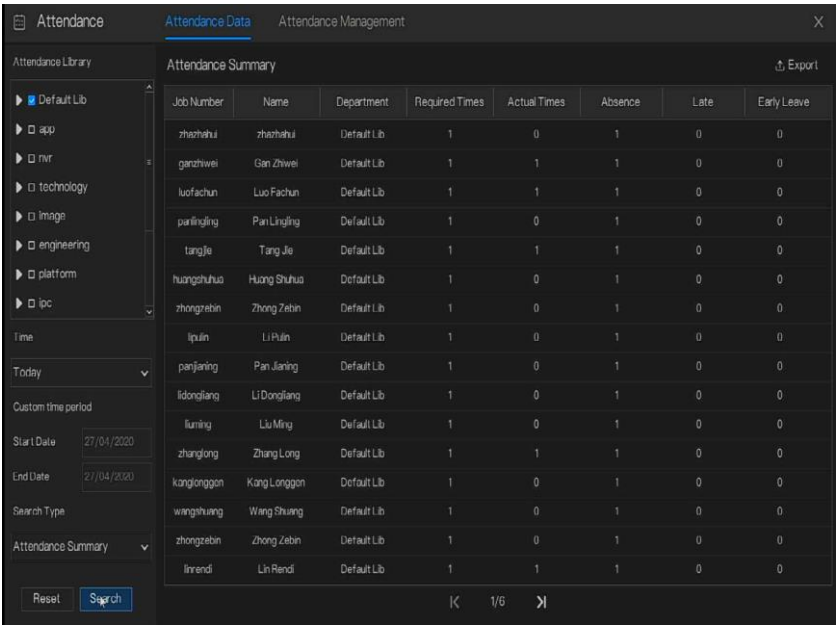
Set schedule linkage action to alarm.

6.4 Attendance (Only for Some Models)

6.4.1 Attendance Data

Click to enter attendance data interface, as shown in Figure 6-45.

Attendance data



Operation Steps

Step 1 Tick the attendance library.

Step 2 Choose time mode, such as today, this week, this month and custom time.

Step 3 Choose search type, such as attendance summary and attendance details.

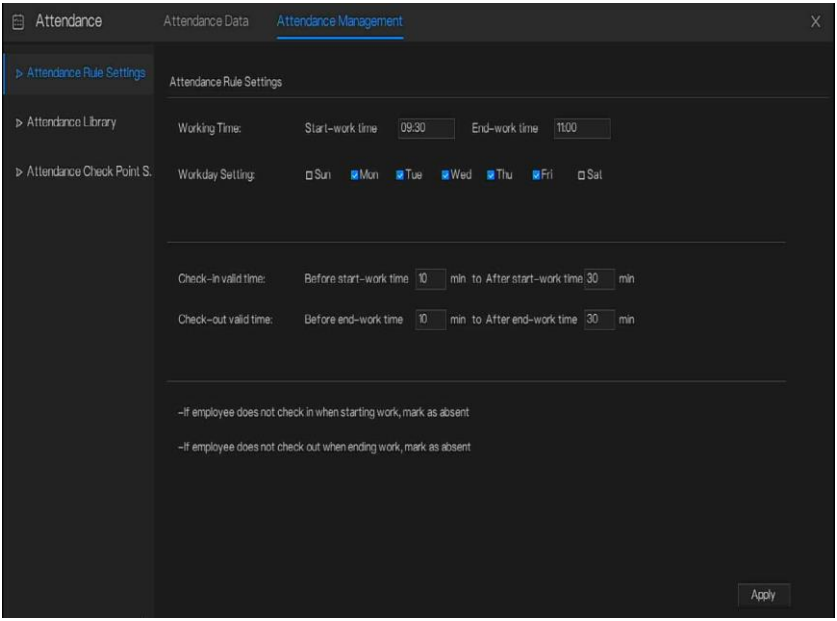
Step 4 Click search, the result will show in interface.

Step 5 Click Export to export the query result.

6.4.2 Attendance Management

In attendance management, users can set attendance rule, library and check point, as shown in Figure 6-46.

Attendance rule settings



Operation Steps

Step 1 Set start work time and end work time.

Step 2 Tick the workday

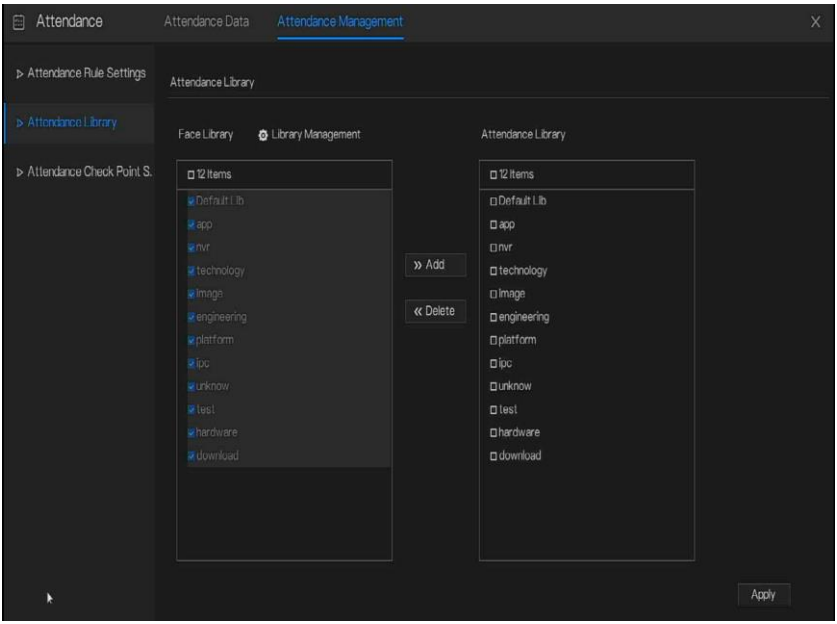
Step 3 Set valid time of check in and check out.

Step 4 Click Save to save the setting.

Attendance library

Step 1 Click **Attendance Library** to add library, the attendance library can call the face database directly.

Attendance library



Step 2 Tick the library and click Add to add to attendance library. If you want to modify the library.

Step 3 click

to enter the face database management to modify parameter.

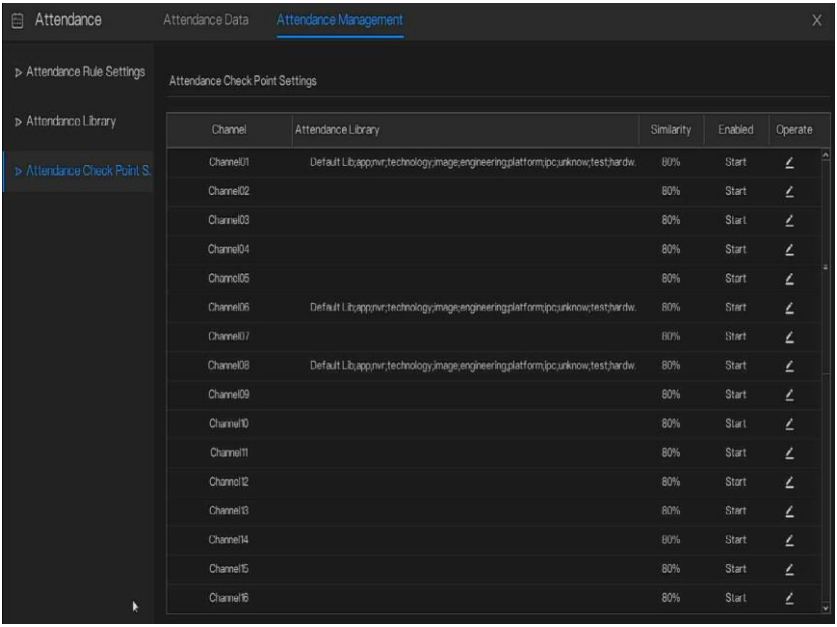
Step 4 Click Save to save the setting.

Step 5 Click to edit check point setting, as shown in Figure 6-48

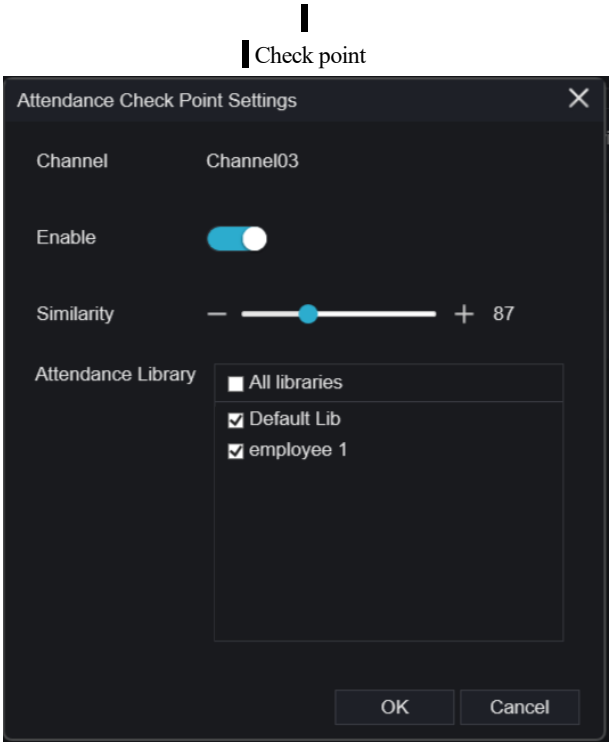
Attendance check point settings:

Step 1 Click **Attendance check point** settings to set point, as shown in Step 1.

Attendance check point settings



Step 2 Click to edit check point setting, as shown in Figure 6-48



Step 3 Enable the function, set similarity and tick the library, all face detection cameras can be set the check points

Step 4 Click **OK** to save the setting.

6.5 Temperature Measurment (Only for Some Models)

NOTE

The thermal temperature function is only available for some devices. If the current device does not have the function, please ignore it.

6.5.1 Temperature Parameters

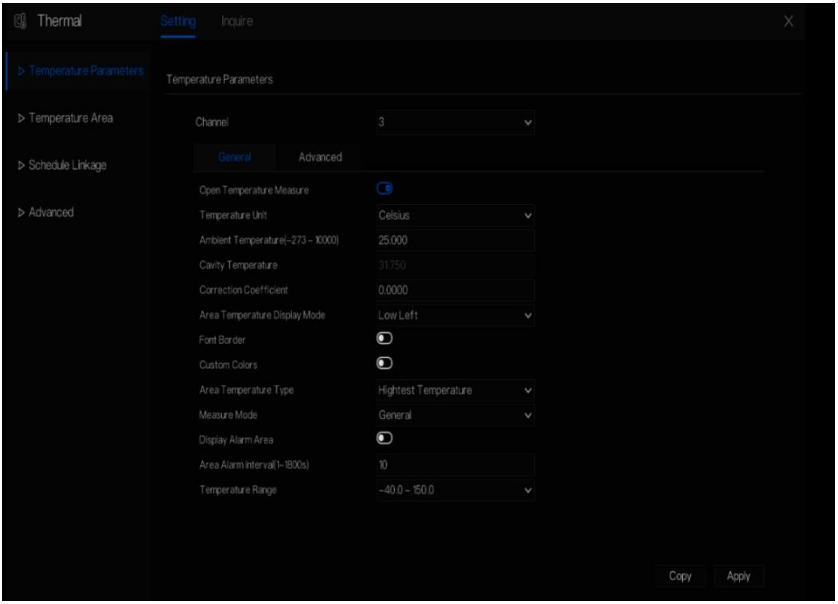
Temperature parameters include: temperature unit, ambient type, ambient temperature, cavity temperature, correctional coefficient and area temperature display mode.

Operation Procedure

Step 1 Choose Thermal >Temperature Parameters.

The **Temperature Parameters** page is displayed, as shown in Figure 6-50.

Temperature Parameters interface



Step 2 Set the parameters according to Table 6-1.

Table 6-1 Temperature parameters

Parameter	Description	Setting
Open Temperature Measure	Enable temperature measure.	
Temperature Unit	Celsius and Fahrenheit temperature units are available.	[Setting method] Select a value from the drop-down list box. [Default value] Celsius
Ambient Temperature	The ambient temperature of camera. It is set when ambient is outside.	[Setting method] Enter a value manually.
Cavity Temperature	The cavity temperature of camera.	N/A
Correction Coefficient	Correction coefficient is refer to the deviation of measured object temperature and actual temperature. For example: 1. The measured object temperature is 30, and actual temperature is 37, so the correction coefficient should be **7.** 2. The measured object temperature is 37, and actual temperature is 30, so the correction coefficient should be **-7.**	[Setting method] Enter a value manually. [Default value] 0.00
Area Temperature Display Mode	The display position of temperature information on the live-video image.	[Setting method] Select a value from the drop-down list box. [Default value] Low left
Font Border	The font will be bolded.	[Setting method] Enable or disable [Default value] disable

Parameter	Description	Setting
Custom Colours	Enable to custom the colour, there are nine colours chosen.	[Setting method] Enable or disable [Default value] disable
Area Temperature Type	There are three types of area temperature.	[Setting method] Select a value from the drop-down list box. [Default value] Highest Temperature
Measure Mode	There are two types measure modes.	[Setting method] Select a value from the drop-down list box. [Default value] General
Display Alarm Area	N/A	[Setting method] Enable or disable [Default value] disable
Area Alarm Interval	N/A	[Setting method] Enter a value manually ranges from 1 to 1800. [Default value] 10

Advanced parameters

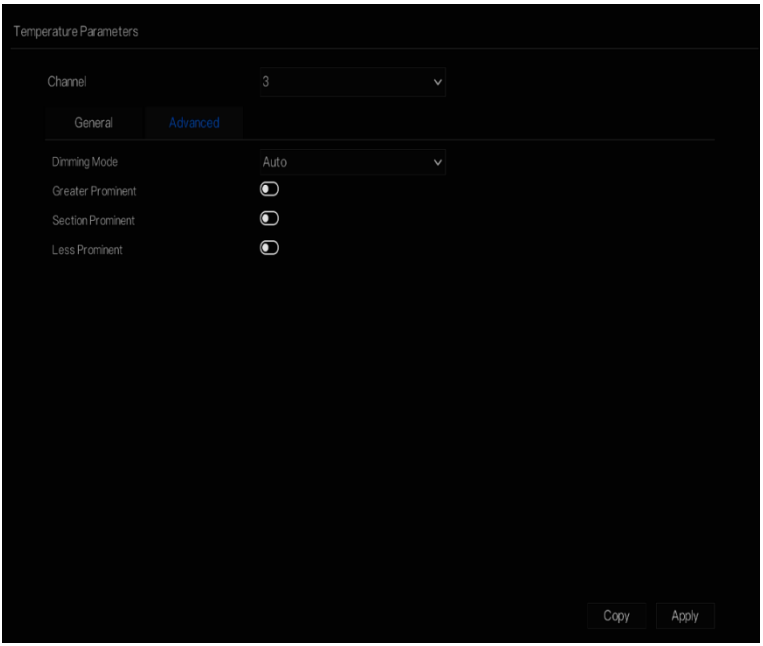


Table 6-2 Advanced parameters

Parameter	Description	Setting
Dimming Mode	There are auto and manual modes. It will show on temperature item.	[Setting method] Select a value from the drop-down list box. [Default value] Auto
Greater Prominent	Enable that, the image will show the setting colour if the temperature is higher than set value.	[Setting method] Enter a value manually. Choose one colour to show.
Section Prominent	Enable that, the image will show the setting colour if the temperature is between minimum and maximum temperature.	[Setting method] Enter a value manually. Choose one colour to show.

Parameter	Description	Setting
Less Prominent	Enable that, the image will show the setting colour if the temperature is lower than set value.	[Setting method] Enter a value manually. Choose one colour to show.

Step 3 Click **Copy** to copy the same settings to others thermal cameras.

Step 4 Click **Apply**.

Step 5 The message "Apply success" is displayed, the system saves the settings.

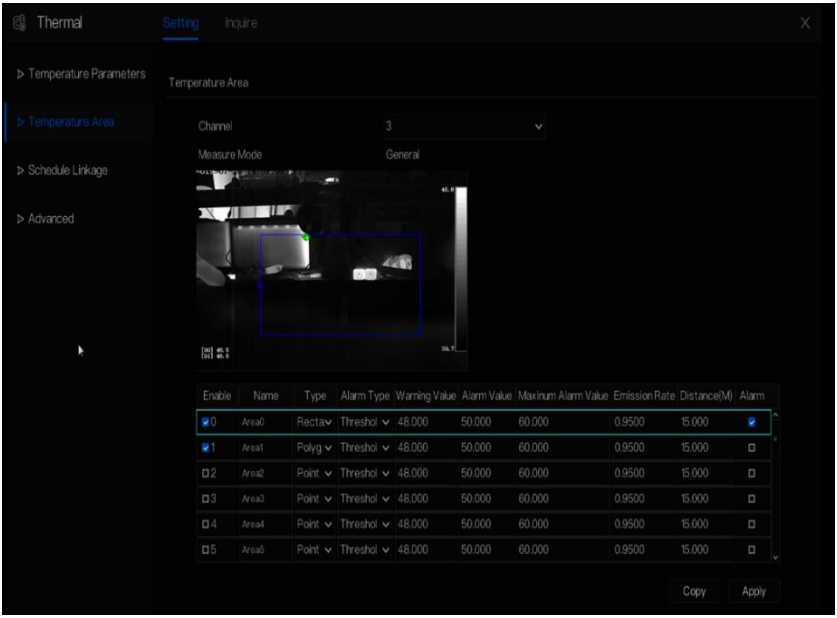
6.5.2 Temperature Area

Operation Procedure

Step 1 Choose Thermal >Temperature Area.

The **Temperature Area** page is displayed, as shown in Figure 6-52

Temperature area and alarm configuration



Step 2 Set the parameters according to Table 6-3

Table 6-3 Temperature area and alarm configuration

Parameter	Description	Setting
Channel	N/A	[Setting method] Select a value from the drop-down list box. [Default value] 1
Measure Mode	Set at temperature parameter interface.	N/A
PTZ Area(only use for PTZ cameras)	Choose or set the preset, adjust the camera with PTZ keyboard. The all presets can set 20 areas to alarm	Set the preset manually, or select an existing preset in the drop-down list.
Enable	Tick to enable alarm areas.	N/A
ID	It ranges from 0 to 19.	N/A
Name	Area name of temperature area.	[Setting method] Enter a value manually.
Type	Type of temperature area. ID 0 is default rectangle area, which is full screen. There are 20 areas can be set, these are from 0 to 19 area.	[Setting method] Select a value from the drop-down list box. [Default value] Rectangle/Point
Alarm Type	Threshold alarm and Temperature difference alarm are available for alarm type.	[Setting method] Select a value from the drop-down list box. [Default value] Threshold alarm
Warning Value	Camera will warn when the surveillance object temperature reaches the warning value.	[Setting method] Enter a value manually. [Default value] 48.00
Alarm Value	Camera will alarm when the surveillance object temperature reaches the alarm value.	[Setting method] Enter a value manually. [Default value] 50.00

Parameter	Description	Setting
Maximum Alarm Value	The maximum value of the alarm range, if the alarm value is exceeded, no alarm will be generated.	[Setting method] Enter a value manually. [Default value] 60.00
Emission Rate	The emission rate is the capability of an object to emit or absorb energy. The emission rate should be set only when the target is special material.	[Setting method] Enter a value manually. [Default value] 0.95
Distance(M)	The distance between camera and target.	[Setting method] Enter a value manually. [Default value] 15 NOTE Enter actual distance when the distance between camera and target is less than 15 m. Enter 15 when the distance between camera and target is great than or equal to 15 m.
Alarm	Open or close the alarm output and linkage of area.	[Setting method] Tick the alarm areas

Step 3 Set temperature area.

1. Tick an area ID.
2. Select type from drop-list.
3. Press and hold the left mouse button, and drag in the video area to draw a temperature area. Right-click to finish the area selection.
4. Click **Apply**, the message “Apply success” is displayed, the temperature area is set successfully.

Delete a temperature area:

1. Select an area ID.
2. Click the temperature area and right-click.
3. Unselected the area ID.
4. Click **Apply**, the message “Apply success” is displayed, the temperature area is deleted successfully.

Step 4 Click **Apply**.

Step 5 The message "Apply success" is displayed, the system saves the settings.

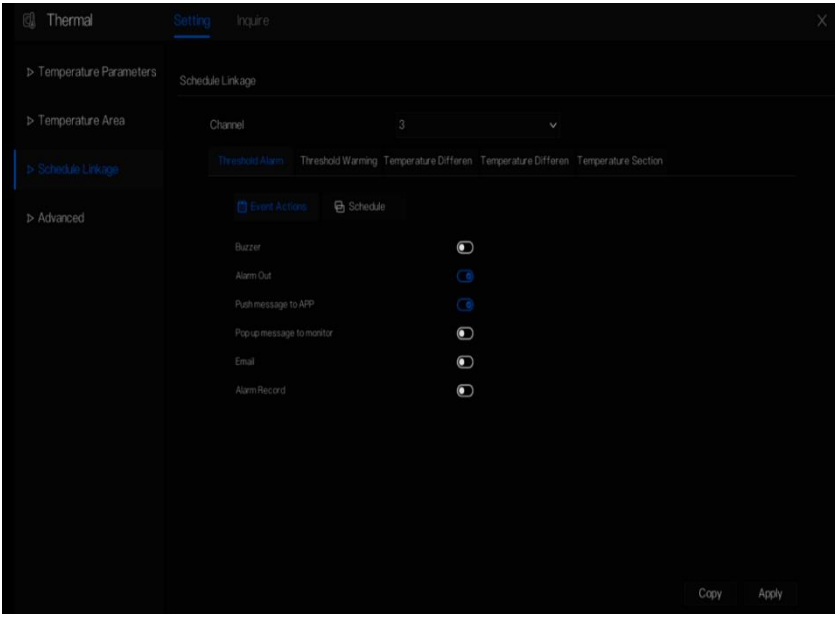
6.5.3 Schedule Linkage

Operation Procedure

Step 1 Choose Thermal > Schedule Linkage

The **Schedule Linkage** page is displayed, as shown in Figure 6-53.

Schedule Linkage

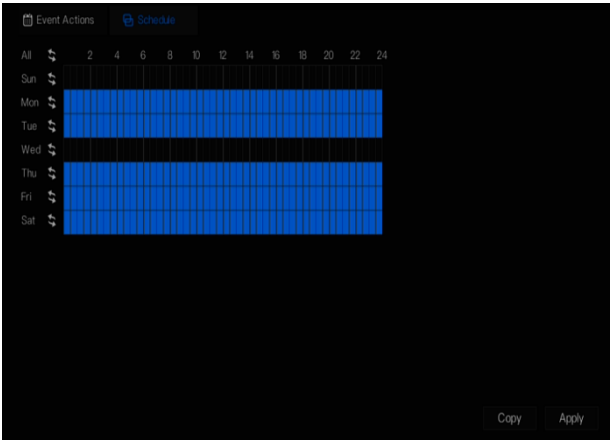


Step 2 Tick the output channel.

Step 3 Enable “Alarm Record”, “E-mail” button.

Step 4 Set schedule linkage.

Schedule



Method 1: Click left mouse button to select any time point within 0:00-24:00 from Monday to Sunday as shown in Figure 6-53.

Method 2: Hold down the left mouse button, drag and release mouse to select the alarm time within 0:00-24:00 from Sunday to Saturday.

NOTE

When you select time by dragging the cursor, the cursor cannot be moved out of the time area. Otherwise, no time can be selected.

Method 3: Click in the alarm time page to select the whole day or whole week.

Deleting alarm time: Click again or inverse selection to delete the selected alarm time.

Step 5 Click **Apply**.

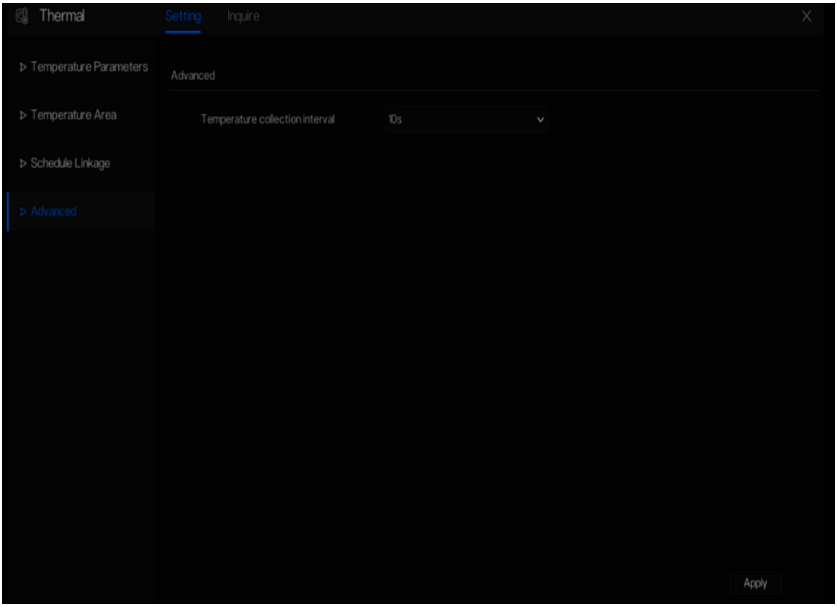
Step 6 The message "Apply success" is displayed, the system saves the settings.

6.5.4 Advanced

Operation Procedure

Step 1 Choose **Thermal** > **Advanced** to enter the advance interface, as shown in Figure 6-55**.**

Advanced



Step 2 Select the temperature collection interval from the drop-list.

Step 3 Click **Apply**.

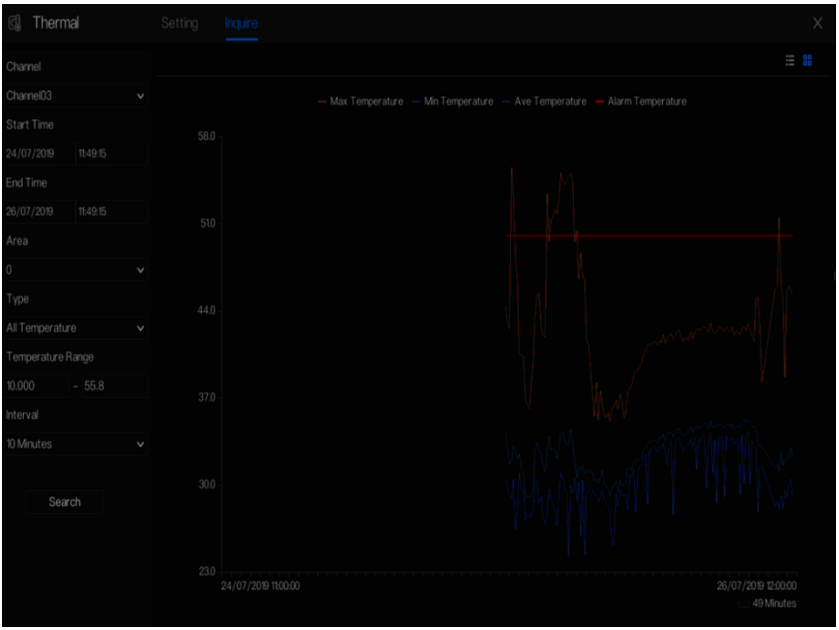
Step 4 The message "Apply success" is displayed, the system saves the settings.

6.5.5 Inquire

Operation Procedure

Step 1 Choose **Thermal** > **Inquire** to enter the inquire interface, as shown in Figure 6-56.

Inquire



Step 2 Choose a channel is thermal camera.

Step 3 Set the start and end time.

Step 4 Choose the area, which is set at the temperature area interface. The default area is 0(full screen).

Step 5 Choose the type of temperature, set the temperature range.

Step 6 Choose the interval of showing, click **Search** to show the result, there are two modes to show result, list or picture.

6.5.6 Channel Information

Click the will show as Figure 6-57, tick the Channel or Encode, the information will show in live video screen.

Channel information

6.5.7 Main Menu

Right-click on the UI screen, the main menu as shown in Figure 6-58. The main menu includes **Channel**, **Record, Network, Alarm** and **System**.

NVR main menu

7 UI System Setting

NOTE

Different devices may have different functions, please refer to actual products.

7.1 Channel Management

IP cameras can directly be connected to input channels of the NVR by plugging in POE port. When IP cameras are insufficient, the NVR can automatically search for and add IP cameras or manually add cameras in the same Local Area Network (LAN).

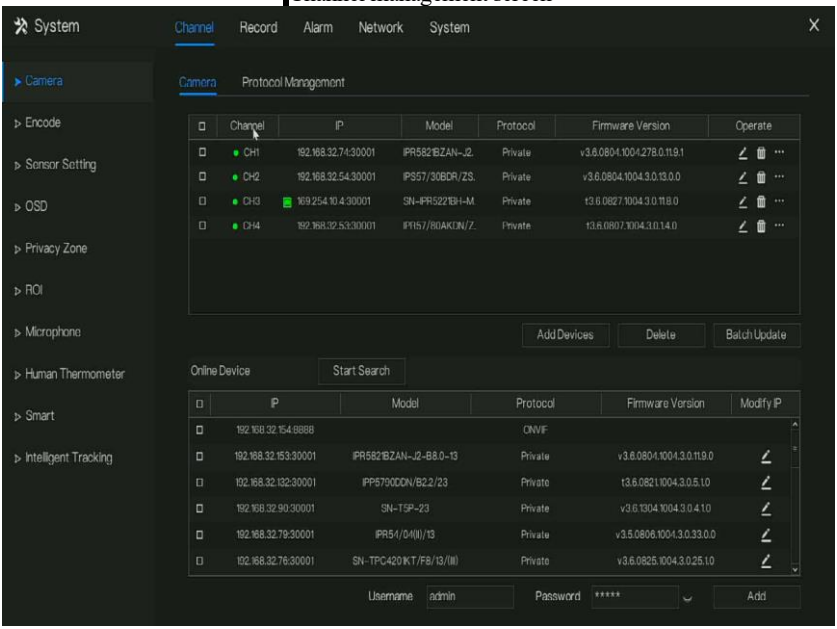
Channel management includes **Add** or **Delete Camera, Encode, Sensor Setting, OSD, Privacy Zone, ROI, Microphone, Human Thermometer, Smart,** and **Intelligent Tracking.**

7.1.1 Camera

Operation Description

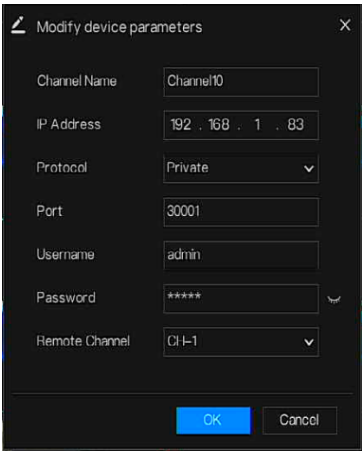
Click **Channel** in the main menu to access the camera management screen, as shown in Figure 7-1 There are four modes for adding cameras, manually add, batch add, search to add, POE add, and automatic add.

Channel management screen



: Modify device parameters, remote channel is based on cameras (human body temperature has two remote channels, fisheye cameras have four remote channels) as shown in Figure 7-2.

Modify device parameter



Add Camera Automatically

The NVR can add automatically cameras to the camera list.

Operation Methods

Method 1: Click Start Search button**,** the cameras in the same network as your recorder will show in list, the search will be lasting for 20 seconds. Input username and password (the default value both are admin) click Add Devices, the cameras in the list would be added to channels directly.

Method 2: Select the cameras you want to add, and click Add, the selected cameras would be added to the camera list.

Tick the online non-onvif channels at list and click Batch Update to access the directory of software; it would to update the channels at once.

NOTE

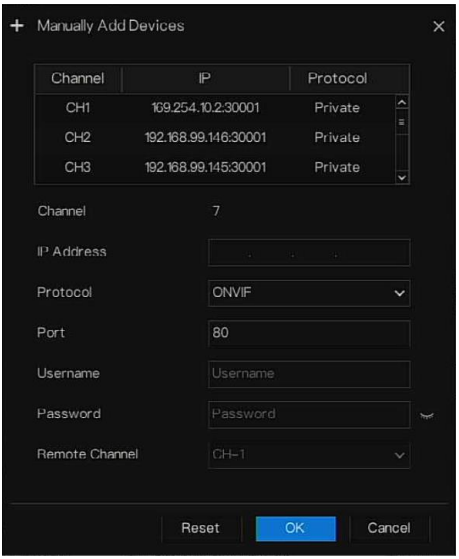
- On the camera management screen, check the status of channels in the camera list. If the status of a channel is , this camera is online. If the status of a channel is , this camera is offline.
- The added cameras should be the same network as NVR.

Add Camera Manually

Operation Steps

Step 1 Click to add devices as shown in Figure 7-3.

Add camera screen



Step 2 Input IP address, port, user name and password of this camera. Double click the online camera IP to copy its configuration. Quick change of other channel's parameters can be done.

Step 3 Select a protocol from the drop-down list(ONVIF, Private, custom protocols). Remote channel is only used for multi channels cameras, such as human temperature cameras, fisheye cameras, and so on.

Step 4 Click , the camera is added successfully.

NOTE

If all channels of the NVR are connected by cameras, please delete the cameras that you don't need , so that you can add more cameras.

If an IP camera is added manually, input the correct username and password of the camera below the online device list. The camera will be added successfully. If not the camera would be shown on list at offline.

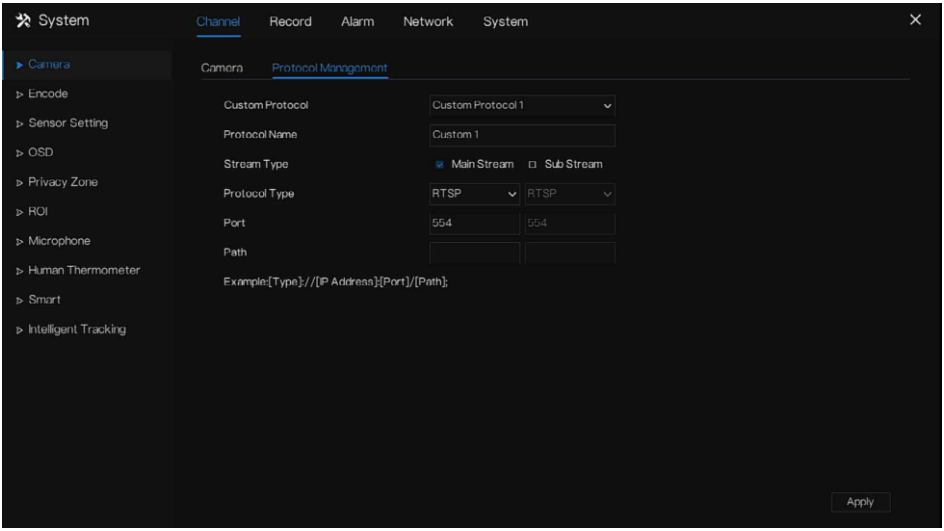
The protocol can be chosen the custom protocols these are set at protocol interface.

The user can click the added channel to copy the information to save the time, you can just need to modify difference information, such as the remote channel.

Add Camera by RSTP

If the user wants to add the different protocol cameras to NVR, you can set the protocol management, and add cameras one by one, as shown in Figure 7-4.

Protocol management



Step 1 Click **Channel > Camera > Protocol Management.**

Step 2 Choose the custom protocol from the drop-down list, there are 16 kinds of protocols can be set.

Step 3 Input the protocol name.

Step 4 Tick main stream and sub stream. The main stream shows image on full screen live video. The sub stream shows image on split screen. If you just tick main stream and the channel will not show image on split screen.

Step 5 Choose the type of protocol, the default value is RTSP.

Step 6 Input the port of the IP camera.

Step 7 Input the path (it may vary with different camera models).

Step 8 Click Apply to save the settings.

NOTE

Choose the protocol from the drop-down list, the protocol is set at protocol management interface.

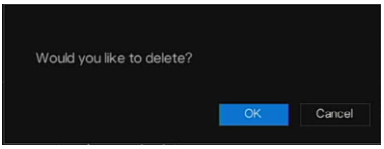
The cameras should be confirmed to the protocols.

Delete Camera

Operation Steps

Step 1 Select a camera to delete in the camera list and click , the delete confirmation message screen is displaying, as shown in Figure 7-5.

Delete confirmation message

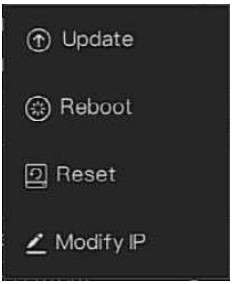


Step 2 Click OK, the camera will be deleted successfully.

Operate Camera

At camera list, click to operate camera as shown in Figure 7-6, users can update, reboot and reset the camera immediately.

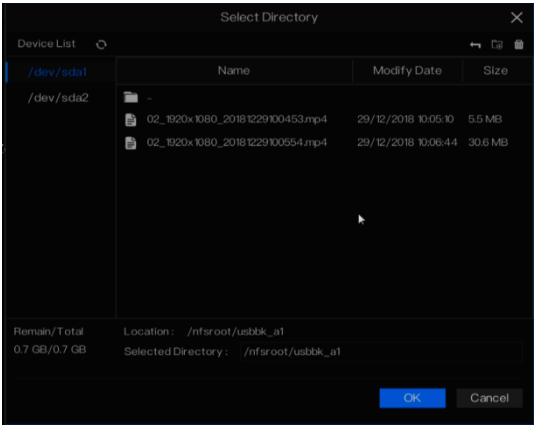
More operation



Step 1 Click **Update,** pop-up window to select software, as shown in Figure 7-7.

Step 2 Set the directory click OK to update camera.

Select directory of software



Step 3 Click **Reboot,** message "**Are you sure to reboot?** " would show, click OK to reboot the camera.

Step 4 Click **Reset,** message "**Are you sure to reset?** " would show, users can enable the retain IP address function. Click OK to reboot the camera.

Step 5 Tick the cameras with non-onvif protocol and cameras are online, click **Update** to update all cameras at once.

Step 6 IP address of the online camera can be modified, click **Modify IP** to modify as shown in following figure, input the new IP address and subnet mask.

NOTE

Update need upload the firmware by flash driver.

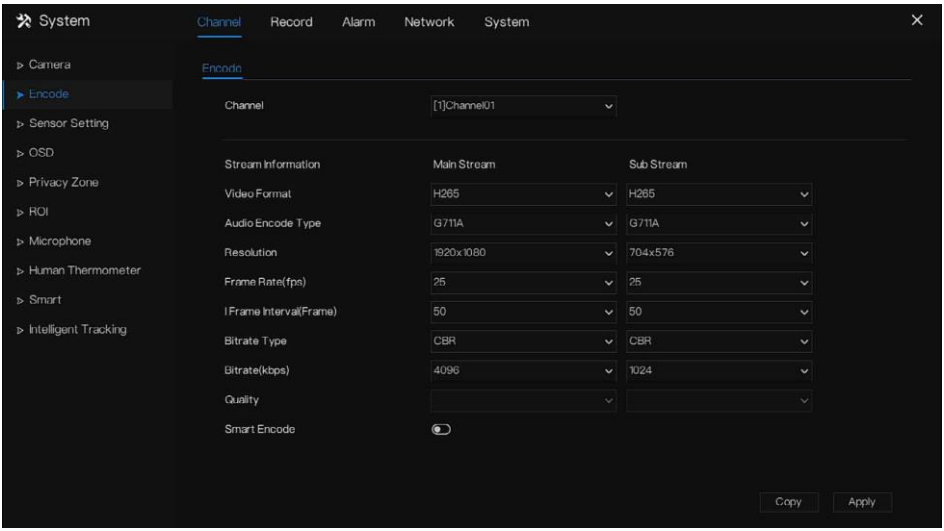
7.1.2 Encoding Parameters

The system allows setting the stream information, encoding type, resolution, frame rate, bitrate control, bitrate and quality for cameras in a channel in **Encoding Parameters** screen.

Operation Description

Click **Encode** in the main menu or **Menu** of the channel management screen and choose **Encode** to access the **Encode** screen, as shown in Figure 7-8.

Encode screen



Operation Steps

Step 1 Select a channel from the drop-down list of channel.

Step 2 Set video format, audio encode type, resolution, frame rate, bitrate type, bitrate size and quality from the drop-down lists.

Step 3 Click Copy and select channels or tick **all**, then click OK to apply the parameter settings to cameras in selected channels , click Apply to save encode parameter settings.

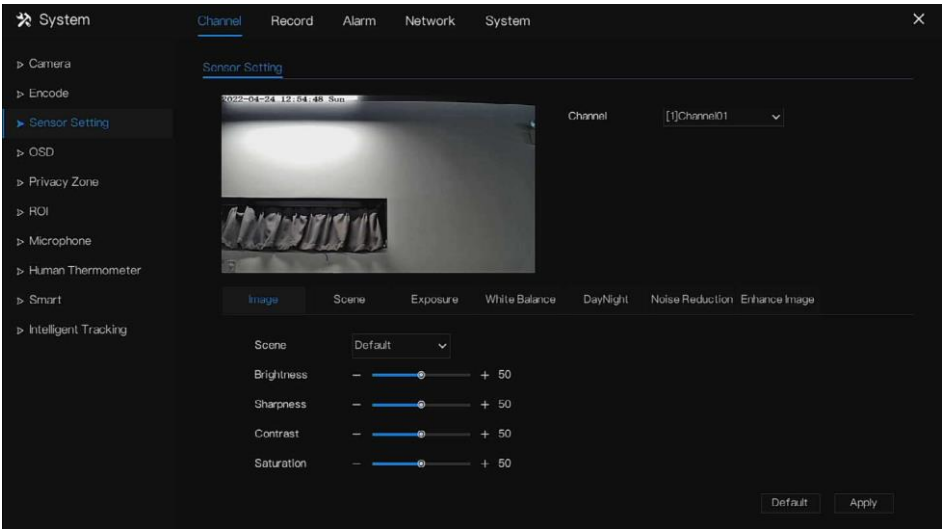
7.1.3 Sensor Setting

Sensor setting refers to basic attributes of pictures, it includes the brightness, sharpness, contrast and saturation. You can set picture parameters for each channel based on scene.

Operation Description

Click **Sensor Setting** in the main menu or click menu of the channel management screen and choose **Sensor Setting** to access the Sensor Setting screen, as shown in Figure 7-9.

Sensor setting screen



The Sensor Setting are as follows:

- Brightness: it indicates brightness or darkness of an image.
- Sharpness: it indicates picture's clarity.
- Contrast: it refers to the brightest white and darkest black in an image.
- Saturation: it indicates brilliance of the picture colour.

Other parameters are sensor settings of IP cameras, like scene, exposure, white balance, day-night, noise reduction, enhance image, zoom focus, etc.

- Scene: it includes indoor, outdoor, default. Mirror includes normal, horizontal, vertical, horizontal + vertical.
- Exposure: it includes mode, max shutter, meter area and max gain.
- White balance: it includes tungsten, fluorescent, daylight, shadow, manual, etc.
- Day-night: users can transit day to night, or switch mode.

- Noise reduction: it includes 2D NR and 3D NR.
- Enhance image: it includes WDR, HLC, BLC, defog and anti-shake.
- Zoom focus: users can zoom and focus.

Operation Steps

Step 1 Select a channel from the drop-down list of channel.

Step 2 Select scene from the drop-down list. The default values of picture parameters vary with scenarios.

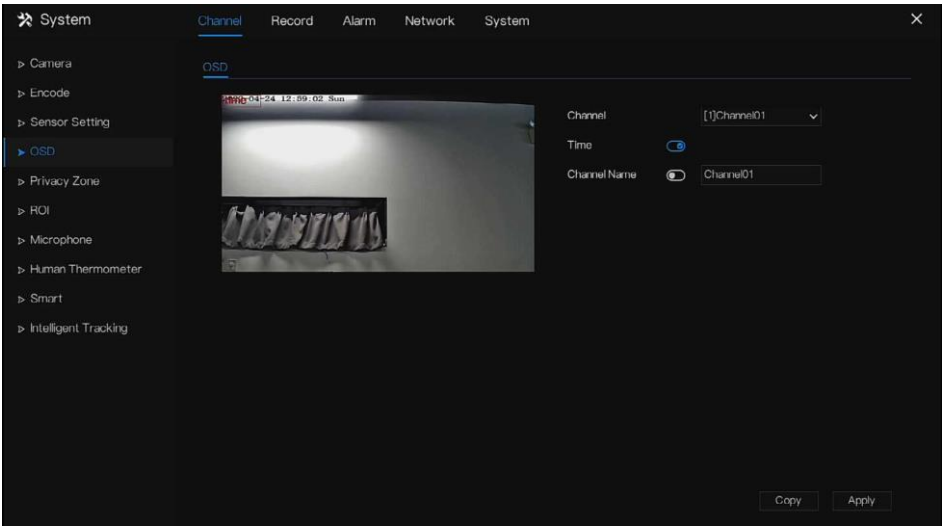
Step 3 Set parameters.

Step 4 Click Default to reset to factory settings, click Apply to save image settings.

7.1.4 OSD Settings

Click **OSD** in the main menu or menu of the channel management screen and choose **OSD** to access the OSD screen, as shown in Figure 7-10.

OSD setting screen



Operation Steps

Step 1 Select a channel from the drop-down list of channel.

Step 2 Click next to Time to enable or disable OSD time setting.

Step 3 Click next to Name to enable or disable OSD channel setting.

Step 4 Set the channel name.

Step 5 In the video window, click and drag time or channel to move to a location.

Step 6 Click Copy and select channels, then click OK to apply the OSD settings to cameras in selected channels , click Apply to save OSD settings.

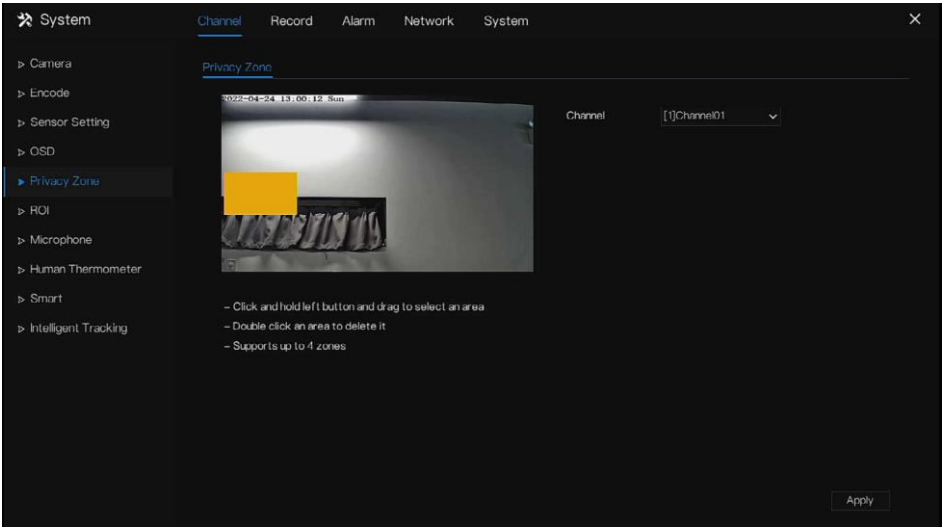
7.1.5 Privacy Zone

The system allows you to mask images in a specified zone and which is called privacy zone.

Operation Description

Click **Privacy Zone** in the main menu or menu of the channel management screen and choose privacy zone to access the **Privacy Zone** screen, as shown in Figure 7-11.

Privacy zone screen



Operation Steps

Step 1 Select a channel from the drop-down list of channel.

Step 2 In the video window, hold down and drag the left mouse button to draw a privacy area.

Step 3 Click Copy and select channels or tick **all**, then click OK to apply the privacy settings to cameras in selected channels , click Apply to save privacy settings.

Step 4 Double click privacy area to delete setting.

7.1.6 ROI

Click **ROI** in the main menu or menu of the channel management screen and choose **ROI** to access the ROI screen, as shown in Figure 7-12.

ROI

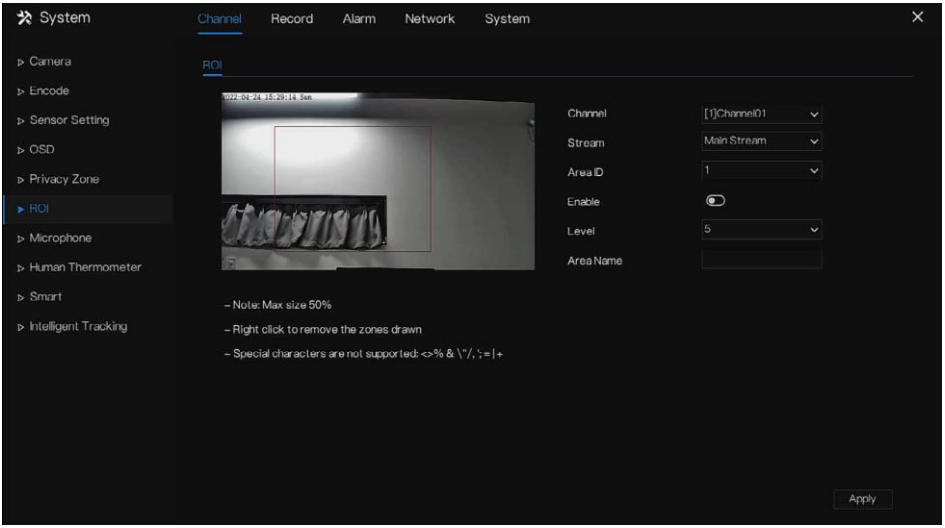


Table 7-1 RIO parameter

Parameter	Description	Setting
Stream	Stream ID.	[Setting method] Select a value from the drop-down list box. [Default value] Stream 1
Enable	Enable the ROI	[Setting method] Click the button. [Default value] OFF
Area ID	ROI area ID, there are 8 area	[Setting method] Select a value from the drop-down list box. [Default value] 1

Parameter	Description	Setting
Level	The measure result of ROI. The higher the grade, the clearer the area inside and the more vaguer the area outside. There are five levels.	[Setting method] Select a value from the drop-down list box. [Default value] 5
Area Name	The marked name used for areas.	[Setting method] Enter a value manually. The value cannot exceed 32 bytes.

7.1.7 Microphone (Only for Some Models)

Click **Microphone** in the main menu or menu of the channel management screen and choose **Microphone** to access the Microphone screen, as shown in 0.Microphone

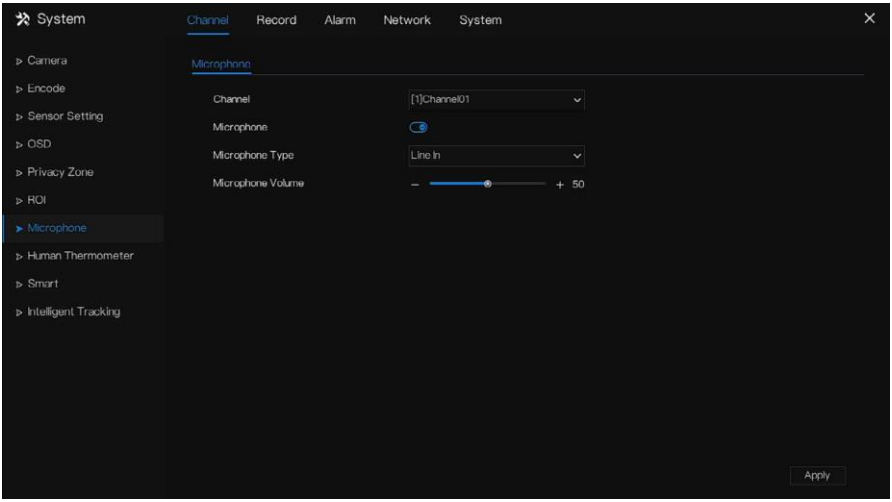


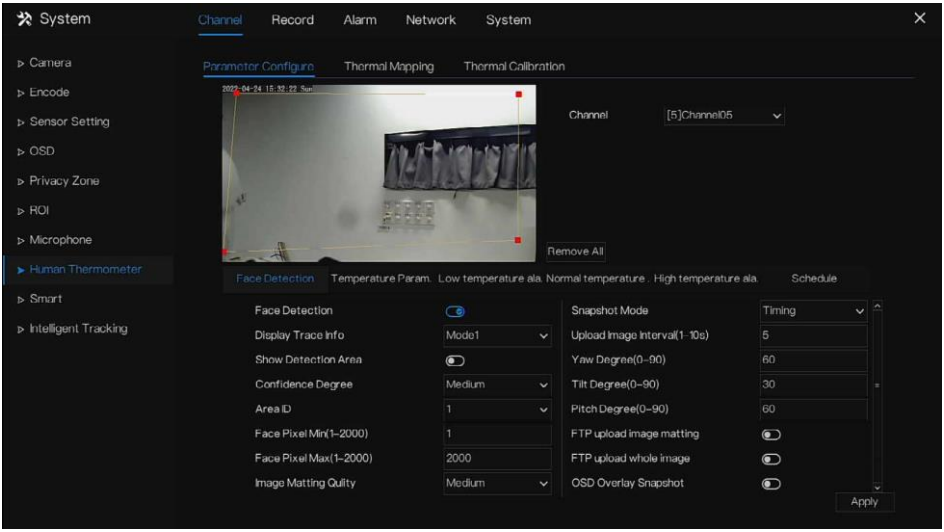
Table 7-2 Microphone

Parameter	Description	Setting
Enable Microphone	Indicates whether to enable the microphone function.	[Setting method] Click the button on to enable microphone.
Microphone Type	Microphone types include: • Line In An active audio input is required.	[Setting method] Select a value from the drop-down list box.
Microphone Volume	Allows you to adjust the microphone volume.	[Setting method] Slide the slider left or right. [Default value] 50 NOTE The value ranges from 0 to 100.

7.1.8 Human Thermometer (Only for Some Models)

Click **Human thermometer** in the main menu or menu of the channel management screen and choose **Human thermometer** to access the **Human thermometer** screen, as shown in Figure 7-13.

Human thermometer



Parameter Configuration

Table 7-3 Human thermometer

Parameter	Description	Setting
Face detection	Detect face of human	[Setting method] Enable [Default value] On
Display trace	Display the information of tracing. OFF, mode 1 and mode 2	[Setting method] Enable the button [Default value] Mode 1
Show detection area	Enable, the live video will show area of detection.	[Setting method] Enable

Confidence coefficient	Face detection sensitivity, the value range is high, medium, low, the larger the value is, the higher the sensitivity. The higher the sensitivity value is, the higher the detection rate will be, but the more false detection may occur, such as the false detection of the patterns on pedestrian clothes to adult faces.	[Setting method] Choose from drop -list [Default value] Medium
Area ID	There are 8 areas can be set to detect temperature. Choose from the drop-list, left-click to draw the area, right-click to finish the set.	[Setting method] Choose from drop -list [Default value] 1
Face pixel min （1-2000）	When the pixel of the face in the image is less than the set value (the minimum pixel for face recognition), it is not captured.	[Setting method] Input a number from 1 to 2000 [Default value] 30
Face pixel max （1-2000）	When the pixel of the face in the image is more than the set value (the maximum pixel for face recognition), it is not captured.	[Setting method] Input a number from 1 to 2000 [Default value] 70
Image matting quality	The quality of snap image, There are three mode can be chosen, such as low, mid and high.	[Setting method] Choose from drop list. [Default value] Medium
Snapshot mode	There are two types, timing and optimal.	[Setting method] Choose from drop -list [Default value] Timing
Upload image interval	The snapshot mode is optimal, set the interval.	[Setting method] Input a number from 1 to 10 [Default value] 5
Snapshot count	At optimal mode, set the number of snapshot image	[Setting method] Input 1
Yaw degree(0-90)	Both eyes appear on the screen, offset in the left and right	[Setting method]

	direction	Input a number from 0 to 90 [Default value] 30
Tilt degree(0-90)	The face is deflected, and both eyes cannot appear in the picture.	[Setting method] Input a number from 0 to 90 [Default value] 30
Pitch degree(0-90)	Face is moving up and down	[Setting method] Input a number from 0 to 90 [Default value] 30
FTP upload image matting	**Configuration > Network Service > FTP**, set FTP related parameters, the captured picture will be sent to the set FTP location	[Default value] Disable
FTP upload whole image	Capture a picture and send a whole image.	[Default value] Disable
OSD over snapshot	Enable, the snapshots will record the temperature, as shown in figure. 	[Default value] Disable

Temperature parameters

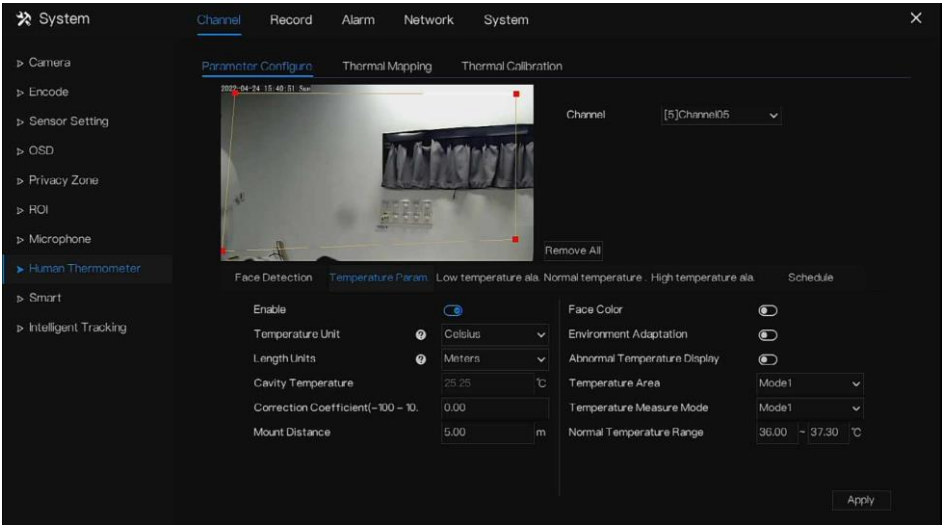


Table 7-4 Temperature parameters

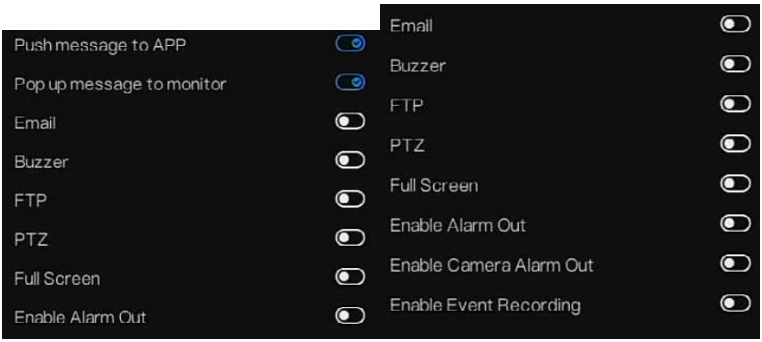
Parameter	Description	Setting
Temperature Unit	Celsius and Fahrenheit temperature units are available. The unit is link to all temperature parameter, please modify the linkage value.	[Setting method] Select a value from the drop-down list box. [Default value] Celsius
Ambient Temperature	The ambient temperature of camera.	[Setting method] Enter a value manually.
Cavity Temperature	The cavity temperature of camera.	N/A

Parameter	Description	Setting
Correction Coefficient	Correction coefficient refers to the deviation of measured object temperature and actual temperature. For example: 1. The measured object temperature is 30, and actual temperature is 37, so the correction coefficient is **7.** 2. The measured object temperature is 37, and actual temperature is 30, so the correction coefficient is **-7.**	[Setting method] Enter a value manually. [Default value] 0.00
Mount distance	The actual distance between the detection person and the device, it is set to facilitate the temperature measurement accuracy.	[Setting method] Select a value from the drop-down list box. [Default value] General
Face colour	Enable, if the camera detect the face and the face will be covered colour, normal is yellow, and high temperature is red, as shown in figure. 	[Default value] Disable
Environment adaptation	Enable, the device will restart the temperature if the ambient temperature of camera varies greatly. It is recommended not to open.	[Default value] Disable
Abnormal temperature display	Enable, the measure temperature is lower than 34 ℃ will show on OSD. Disable, the measure temperature is lower than 34 ℃ will not show on OSD.	[Default value] Disable
Temperature area	Two modes, shows at themal channel. Mode 1 is full face area, mode 2 is forehead area.	[Setting method] Select a value from the drop-down list box. [Default value] Mode 1

Parameter	Description	Setting
Temperature measure mode	Two modes, mode 1 is suitable for high air temperature, if the forehead temperature is less than 31 ℃, not to show as body temperature. Mode 2 is suitable for low air temperature, if the forehead temperature is at 30-31 ℃, so it will show as body temperature too.	[Setting method] Select a value from the drop-down list box. [Default value] Mode 1
Normal temperature range	Set the temperature range, when the detection is out of range, it will be alarming.	[Setting method] Enter a value manually. [Default value] 36 ~37.3

Low temperature alarm linkage / Normal temperature linkage / High temperature linkage: when the detection temperature is meet the setting, you can set the linkage action to alarm, as shown in Figure 7-15.

Linkage action



Set the alarm linkage schedule.

Click **Apply** to save the settings.

Thermal Mapping

Thermal mapping

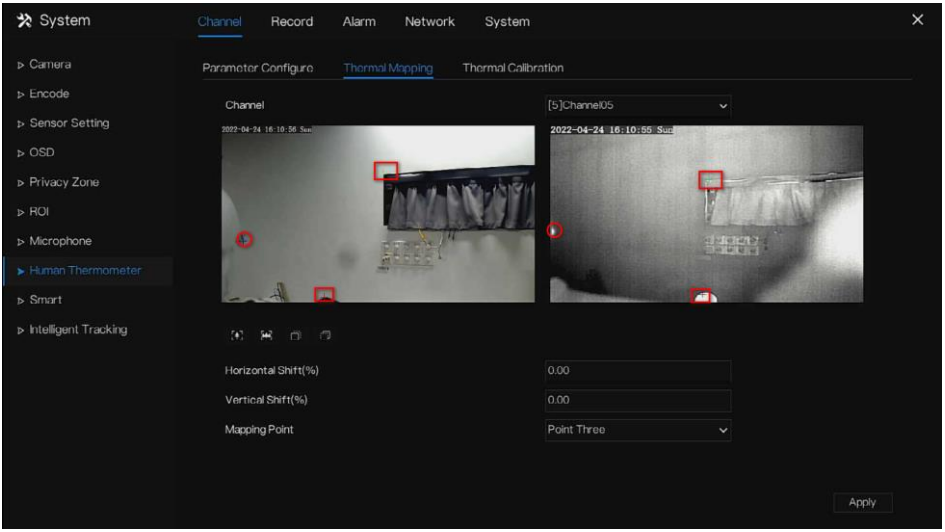


Table 7-5 Parameter of thermal mapping

Parameter	Description	Setting
	Zoom in /zoom out.	[Setting method] Click the button
	Near focus / far focus.	[Setting method] Click the button
Horizontal shift (%)	The points move small at horizontal direction.	[Setting method] Enter a value manually. [Default value] 0.00
Vertical shift (%)	The points move small at vertical direction.	[Setting method] Enter a value manually. [Default value] 0.00

Parameter	Description	Setting
Mapping point	You need map three points at two channels. Points are correspond of each. The three points should cover most areas, and two points are located in the diagonal display of the picture. Point one is green cross. Point two is red cross. Point three is blue cross.	[Setting method] Select from drop list .

Thermal Calibration

Thermal calibration

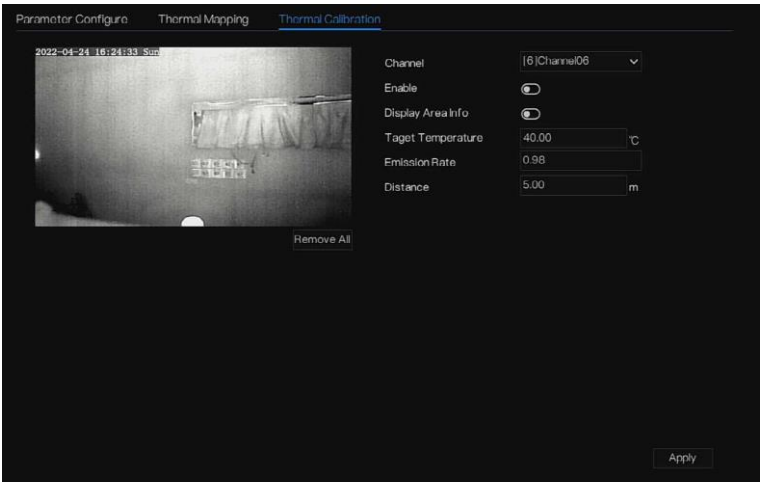


Table 7-6 Thermal calibration

Parameter	Description	Setting
Display area information	Enable to show the information of displaying area.	[Setting method] enable
Target temperature	The special calibration tool's temperature, it is general black body's target temperature.	[Setting method] Input value

Parameter	Description	Setting
Emission rate	Emission rate is the thermal calibration device's base parameter, the general blackbody's is 0.98.	[Setting method] Input value
Distance	Distance is the actual horizontal distance between measuring object and the camera	[Setting method] Input value

7.1.9 Smart (Only for Some Models)

NOTE

It is only available for cameras with AI function.

The comparison function is only for AI multiobject cameras, please refer to actual cameras.

AI Multiobject

AI Multiobject

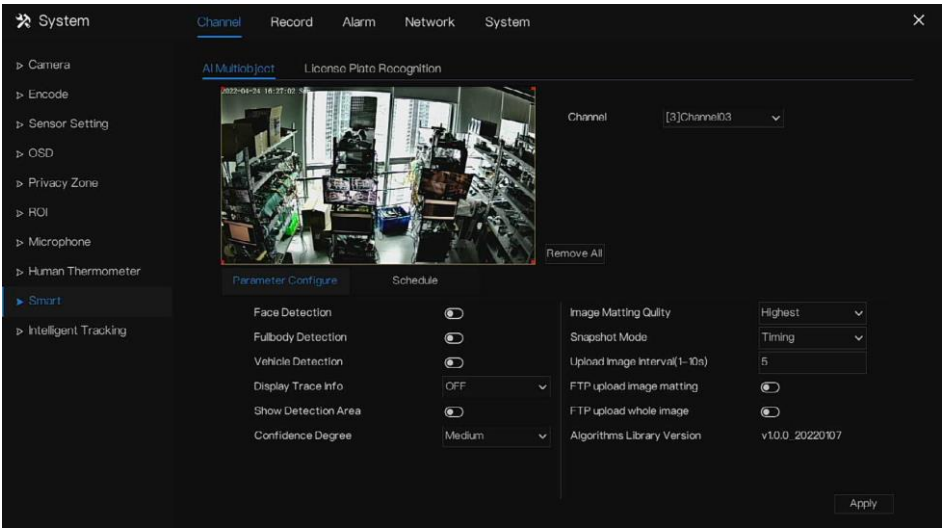
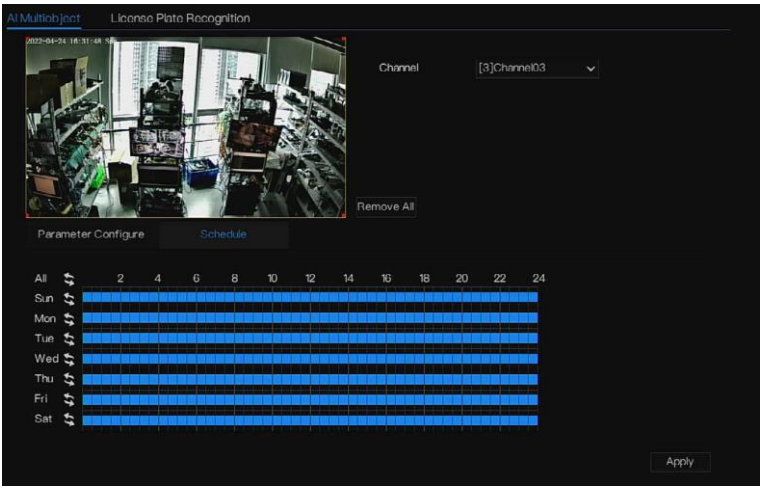


Table 7-7 AI Multiobject

Parameter	Description	How to set
Face detection	The camera will snap the face when someone appears in live video.	Enable
Full body detection	The camera will snap the whole body when someone appears in live video.	Enable
Licence plate detection	The camera will snap the licence when the vehicle's licence appears in live video.	Enable
Vehicle detection	The camera will snap the licence when the vehicle appears in live video.	Enable
Display trace info	Enable the function and a trace frame will show at live video.	Choose from drop list.

Parameter	Description	How to set
	Mode 1: Mode 2:	
Show detection area	Enable to set a detection area, and the frame will show at live video	Enable
Confidence coefficient	The range of snap image, there are three type, such as high, mid and low. The higher the confidence, the better the snap quality and the fewer snapshots.	Choose from drop-down list.
Face pixel min(30-300)	30-300 pixels, the smaller the pixel be set, the more face will be captured, but it may be mistaken.	Input a value ranges 30 to 300
Body pixel min(30-300)	30-300 pixels, the smaller the pixel be set, the more body will be captured, but it may be mistaken.	Input a value range 30 to 300
Vehicle pixel min(30-800)	30-300 pixels, the smaller the pixel be set, the more face will be captured, but it may be mistaken.	Input a value range 30 to 800
Image matting quality	The quality of snap images, There are three modes can be chosen, such as low, mid and high.	Choose from drop list.
Snapshot mode	There are three modes can be chosen, such as timing, and optimal.	Choose from drop list.
Upload image interval(1-10 s)	At timing mode, set the interval of upload image.	Input a value ranges 1 to 10
FTP upload image matting	**Configuration > Network Service > FTP**, set FTP related parameters, the captured picture will be sent to the set FTP location	Enable
FTP upload whole image	Capture a picture and send a whole image.	Enable

Schedule



License Plate Recognition

License plate recognition

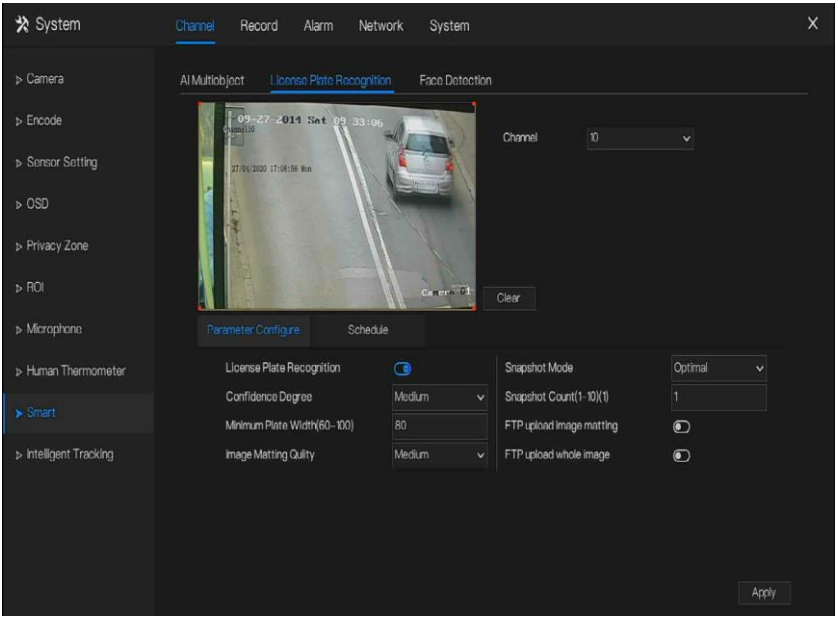


Table 7-8 License plate recognition

Function	Procedure	Description
Licence plate recognition	The camera will snap the face when someone appears in live video.	Enable
Confidence coefficient	The range of snap image, there are three type, such as high, mid and low. The higher the confidence, the better the snap quality and the fewer snapshots.	Choose from drop-down list.
Minimum plate width (60-100 Pixel)	60-100 pixels, the smaller the pixel, the more plates will be captured, but it may be wrong.	Input a value ranges 60 to 100
Image matting quality	The quality of snap image, There are three modes can be chosen, such as low, mid and high.	Choose from drop-down list.
Snapshot mode	There are three modes can be chosen, such as timing, and optimal.	Choose from drop-down list.
Upload image interval(1-10 s)	At timing mode, set the interval of upload image.	Input a value ranges 1 to 10
Snapshot count (1)	At optimal mode, set the number of snapshot image	Input 1
FTP upload image matting	**Configuration > Network Service > FTP**, set FTP related parameters, the captured picture will be sent to the set FTP location	Enable
FTP upload whole image	Capture a picture and send a whole image.	Enable

7.1.10 Intelligent Tracking (Only for Some Models)

NOTE

This function is available for high speed camera.

The automatic target tracking function is that the dome camera can continuously track the moving target of the pre-made scene, and automatically adjusts the camera zoom focus according to the moving target distance, and the dome automatically returns to the preset scene when the moving target disappears.

Intelligent tracking

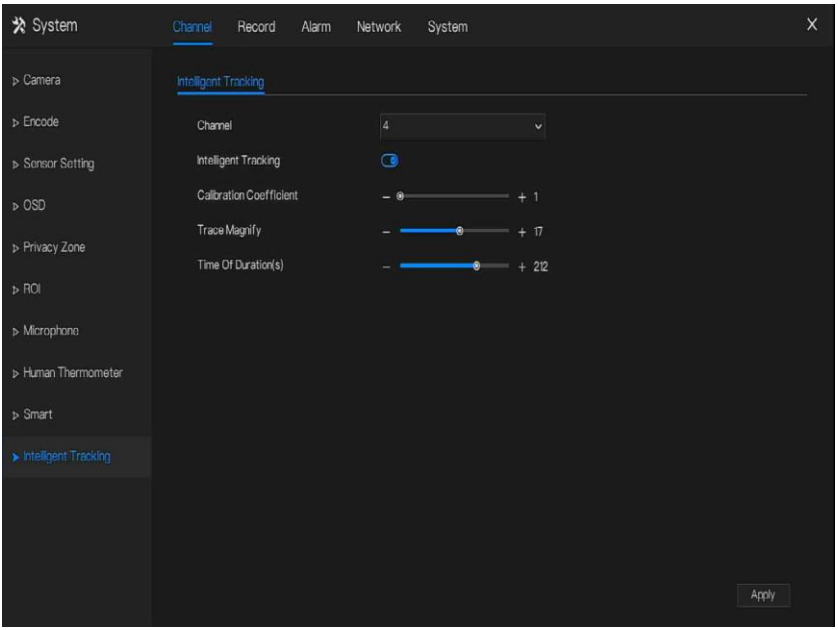


Table 7-9 Intelligent tracking parameters

Parameter	Description	Setting
Enable	Enable the button to enable the intelligent tracking	[How to set] Click Enable to enable. [Default value] OFF
Calibration Coefficient	It is equivalent to a control coefficient, and real-time tracking doubling rate nonlinear positive correlation, usually the higher the installation height, the greater the calibration coefficient value; it ranges from 1 to 30	[Setting method] Drag the slider. [Default value] **1**
Trace Magnify	It is the value of lens zoom, it has a large influence on the real-time tracking magnification,	[Setting method] Drag the slider. [Default value] **7**
Time of Duration	The maximum time of a tracking period, it ranges from 0 to 300 s.	[Setting method] Drag the slider. [Default value] **120**

7.2 Record Setting

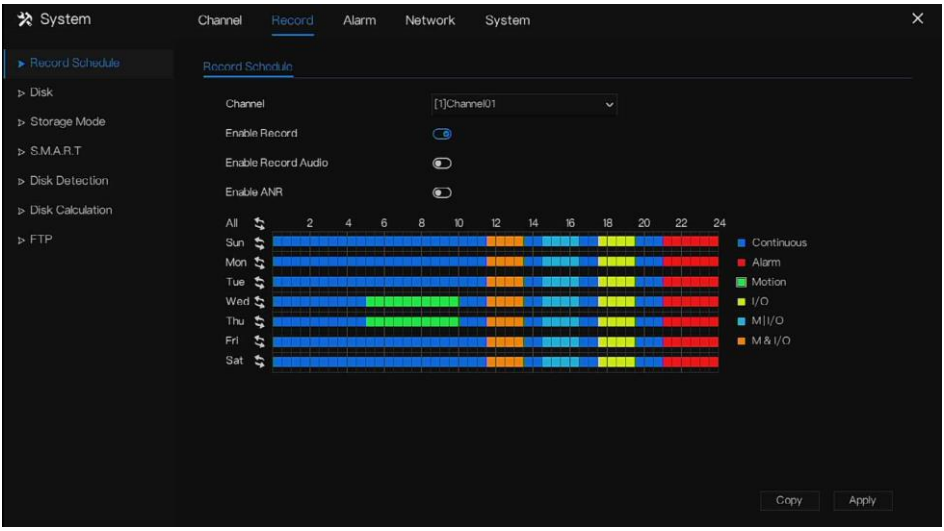
Set the **Record Schedule**, **Disk, Storage Mode, S.M.A.R.T, Disk Detection, Disk Calculation, FTP** and so on.

7.2.1 Record Schedule

Operation Description

Click **Record** in the main menu or click the record page of any function screen in the main menu to access the record schedule screen, as shown in Figure 7-22.

Record management screen



Operation Steps

Step 1 Select a channel from the drop-down list of channel option.

Step 2 Enable the record.

Step 3 Enable the record audio.

Step 4 Enable ANR, the camera is installed with SD card, if the camera is disconnected from the network, when the network is recovered, the NVR can read the recording of camera and copy the loss video form the SD card.

Step 5 Set the record schedule.

Method 1: Hold down the left mouse button, drag and release mouse to select the arming time within 00:00-24:00 from Monday to Sunday.

NOTE

- When you select time by dragging the cursor, the cursor cannot move out of the time area. Otherwise, no time would be selected.
- The selected area is blue. The default is all week.
- Users can choose alarm type to record, if the chosen alarm is happening at the setting time, it will record. So that it will using the disk effectively to avoid repeating useless recording.
- The ANR function can be used only for the cameras with supplementary recording function.
- Users can set different alarms to record.

Method 2: Click in the record schedule page to select the whole day or whole week.

Step 6 Deleting record schedule: Click again or inverse selection to delete the selected record schedule.

Step 7 Click Copy and select channels or tick **all**, then click OK to apply the record management settings to selected channels , click Apply to save settings.

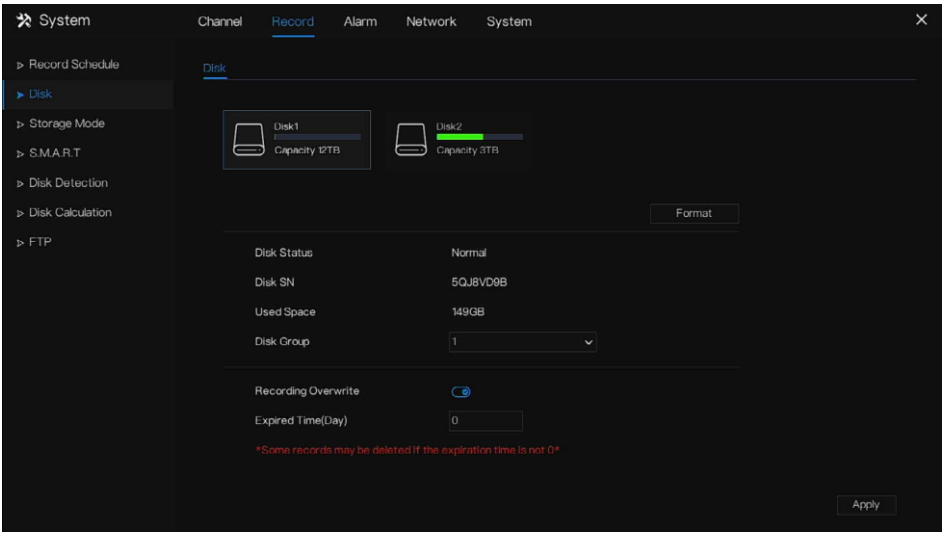
7.2.2 Disk

View the total capacity of disk, disk status, disk SN code and storage space of disk. You can format the disk and set record expiration time.

Operation Description

Step 1 Click **Record** in the main menu or menu of the record screen and choose **Disk** to access the disk screen, as shown in Figure 7-23.

Disk screen



Step 2 Click **Format**. The message "Are you sure to format disk? Your data will be lost" is displaying.

Step 3 Choose the disk group, there are four groups.

Step 4 Click OK, and the disk would be formatted.

Step 5 Enable recording overwrite, the disk will be overwrote automatically.

Step 6 Record expiration setting. Select record expiration days from the drop-down list of record expiration. The expired time is not 0, the records will be deleted when the time is over the setting value.

Step 7 Click Apply to save the settings.

NOTE

The disk groups can keep the recording of channels at different disks, it will improve the storage efficiency.

The expired time is 0, it means the disk will be rewrite only when the disk is full .

7.2.3 RAID (Only for Some Models)

The NVR support to build/ edit/ delete the RAID. Users can choose the type of RAID according to the importance of recording.

NOTE

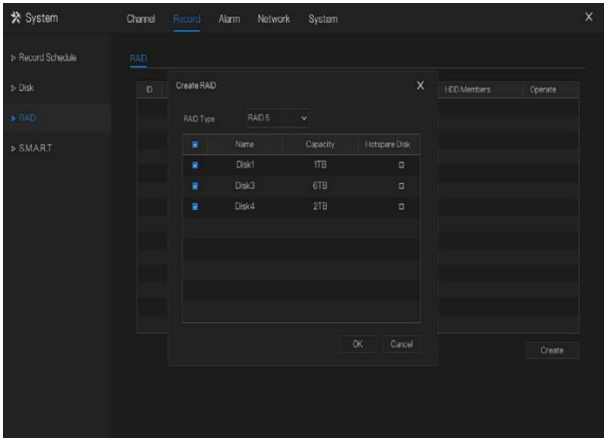
RAID is only used for the device with 4 disks or more. And the disks must be enterprise level disks. The capacity of disks is the same for efficient using.

The maximum capacity of RAID cannot exceed 100T.

RAID5 at least 3 disks can be created. RAID6 at least 4 disks can be created. RAID10 at least 4 disks can be created. Create hot spare disk need more one disk or double basic disks.

The capacity of disks is the same for efficient using

RAID



Operation Steps

Step 1 Click **RAID** to create the RAID.

Step 2 Click **Create** to choose a disk to create a new RAID.

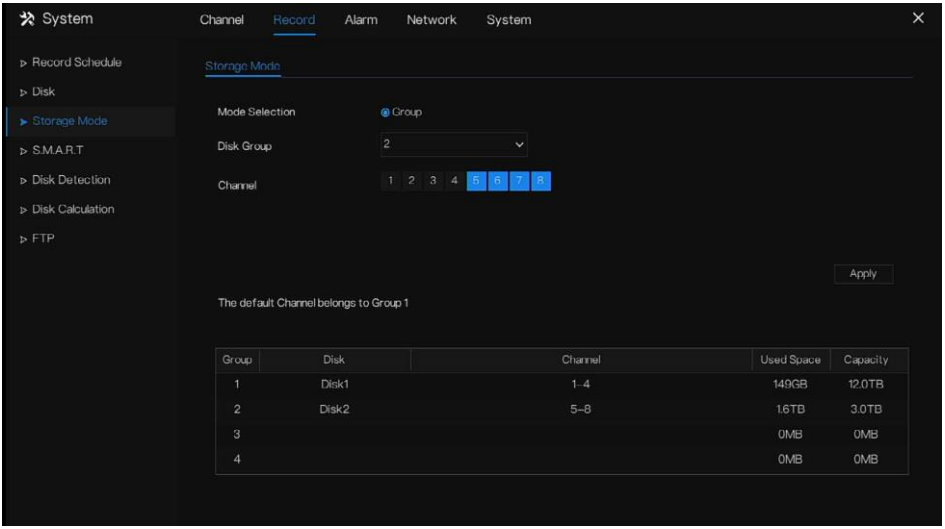
Step 3 Tick **Hot-spare Disk** to back up in case the disk is broken. The number of disk must be more than one.

Step 4 Click OK to save the creation, format the new RAID.

7.2.4 Storage Mode

Users need to distribute the channels to different disk groups, and use disk capacity reasonably, as shown in Figure 7-25

Storage mode



Operation Steps

Step 1 Choose the disk group.

Step 2 Select the channel to record to disk group.

Step 3 Click Apply to save the settings.

Step 4 The group list will show the detail information.

NOTE

If the channels are not in list, it means NVR will not record these channels, please make sure that all channels are in list.

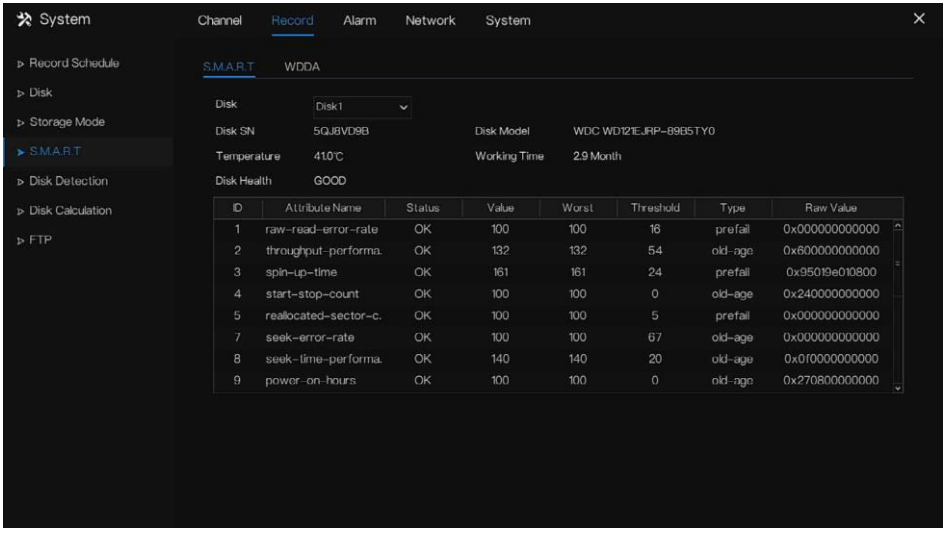
Choose number of channel number you should consider the capacity of disk group.

7.2.5 S.M.A.R.T

S.M.A.R.T

S.M.A.R.T is Self-Monitoring Analysis and Reporting Technology, u which is able to check the disk as shown in Figure 7-26.

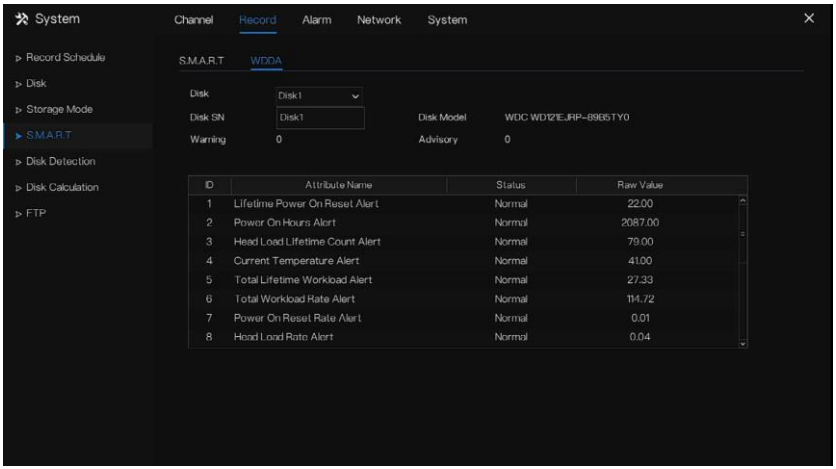
S.M.A.R.T



WDDA

The western digital disk has the WDDA function, the NVR can read the information of disk, so that users can view the status of disk, as shown in Figure 7-27.

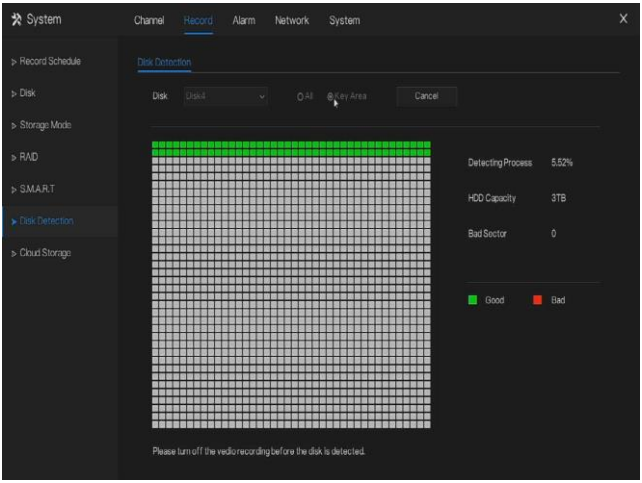
WDDA



7.2.6 Disk Detection

Detect the disk before recording videos so that the data are secure as shown in 0.

Disk Detection



Operation Steps

Step 1 Choose the disk from the drop-down list.

Step 2 Tick **All** or **key Area** to detect the disk. It will take some several minutes.

Step 3 Click Scan to scan the disk.

Step 4 The result of disk will show in interface

NOTE

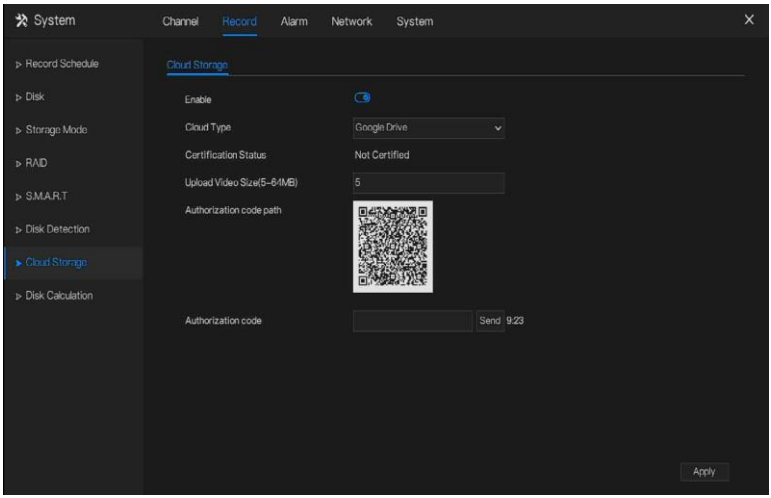
The green block means good, the red block means bad, if the red blocks are too much or at key section, please change the disk immediately.

Please turn off the video recording before the disk is detected, otherwise the recording of video maybe lost.

7.2.7 Cloud Storage (Only for Some Models)

The cloud storage can save the motion detection and intelligent analysis alarm Support Google Drive.

Cloud Storage



Operation Steps

Step 1 Enable the cloud storage, and the UUID of code path will show.

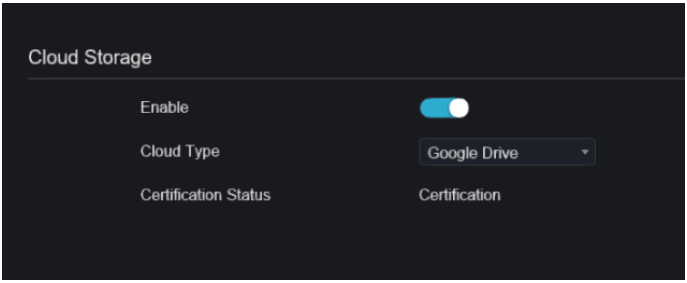
Step 2 Choose the cloud type, the default is Google cloud.

Step 3 Set upload video size, the video is saving in sub stream(the video size is less).

Step 4 Use browser to scan the UUID to jump to Google drive certification, input the account and password to certificate the NVR.

Step 5 Input the code , click Send to fish certificate, as shown in Figure 7-28.

Certification



Step 6 Click Apply to save the settings

NOTE

Google Cloud only needs to be authenticated once, without multiple authentications. After the authentication is completed, the cloud storage function can be turned on or off as required.

This function needs to be re-certified after the device is restored to factory settings.

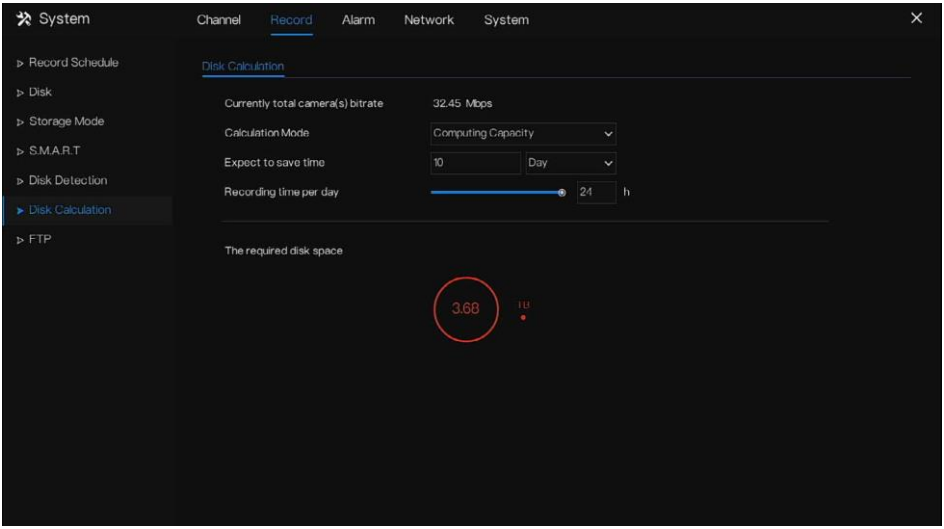
The UUID is the path of Google drive.

7.2.8 Disk Calculation

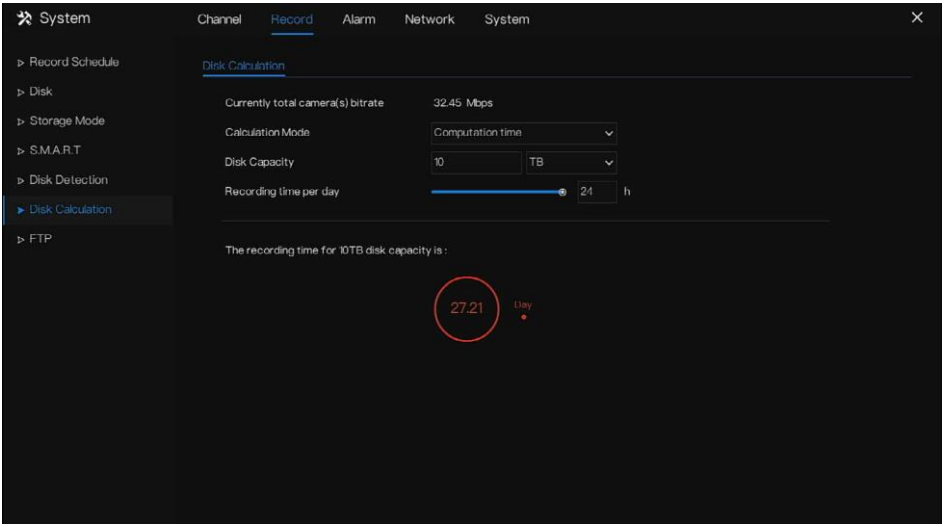
Users can calculate the usage of disk, so that he can set the storage strategy reasonably, as shown in Figure 7-29.

There are two modes can be set, computing capacity and computing time

Disk calculation of capacity



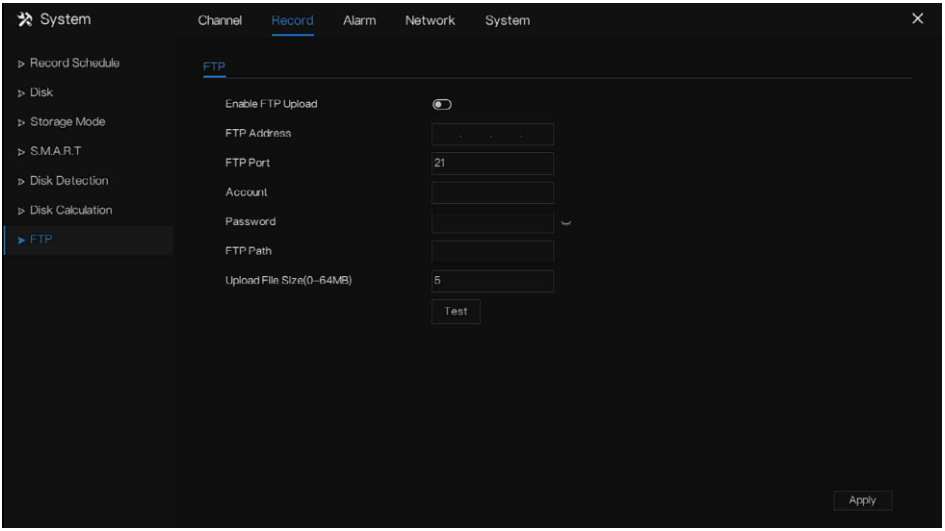
Disk calculation of time



7.2.9 FTP

Enable FTP upload, when the alarm happens, users can linkage the FTP upload to save the alarm recordings.

FTP



Step 1 Enable the FTP upload.

Step 2 Input the FTP address and port.

Step 3 Input the account, password and FTP path.

Step 4 Set the upload file size, it ranges from 0 to 64 MB.

Step 5 Click “Test” to test the parameters. After the test is successful, click "Apply" to save the settings

7.3 Alarm Management

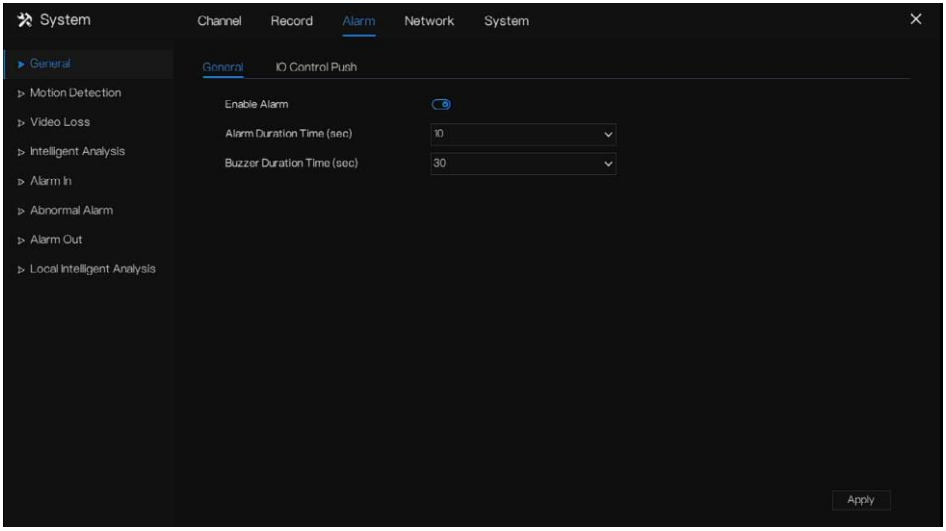
Set the **General alarm information, Motion Detection, Video Loss, Intelligent Analysis, Alarm In, Abnormal Alarm, Alarm out** and **Local intelligent analysis** in alarm management screen.

7.3.1 General

General

Step 1 Click **Alarm** in the main menu (or click the alarm page of any function screen in the main menu) to access the alarm management screen, as shown in Figure 7-32.

Alarm management screen



Step 2 Click to enable the alarm function.

Step 3 Select a value from the drop-down list of duration time.

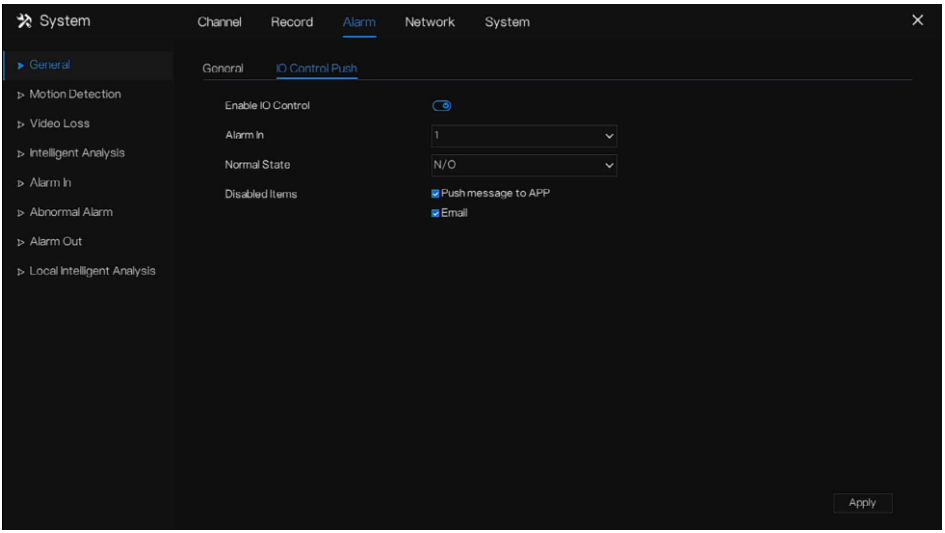
Step 4 Click Apply to save alarm settings.

IO control push

If you select normally open and tick the disabled items, the alarm input 1 will not push message. Only when the alarm in 1 is in the normally closed, it can push alarm message.

Step 1 Enable the IO control push.

IO control push



Step 2 Choose one alarm in and mode(N/C, N/O).

Step 3 Tick the disable items, click “Apply” to save settings.

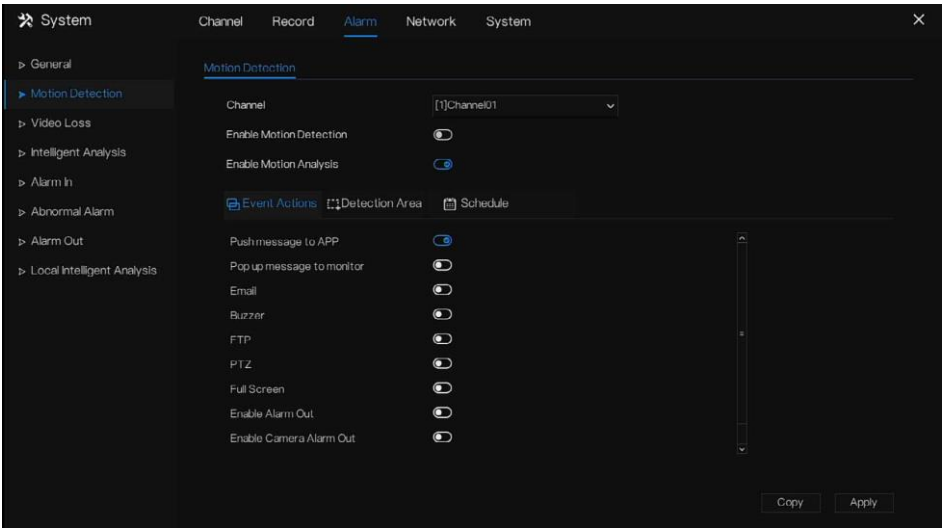
7.3.2 Motion Detection

The NVR will send motion detection alarm while something moving in the specific view of camera.

Operation Description

Step 1 Click **Motion Detection** in the main menu or menu of the alarm management screen and choose **Motion Detection** to access the Motion Detection screen, as shown in Figure 7-34.

Motion detection screen



Operation Steps

Step 1 Select a channel from the drop-down list of channel.

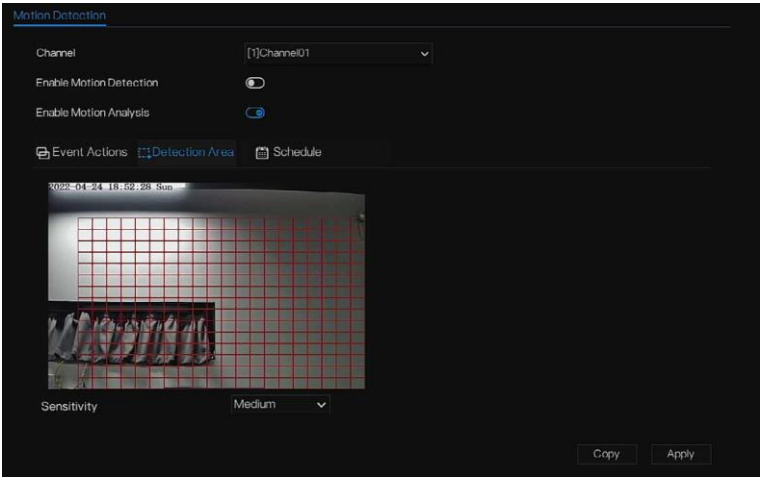
Step 2 Click to enable motion detection.

Step 3 Enable motion analysis if the camera detects the motion action, the area will be block as shown in Figure 7-35.

Step 4 Enable the Event actions include: push messages to App, pop up messages to monitor, send Email, buzzer, FTP, PTZ, full screen, alarm out, camera alarm out, event recordings and so on.

Step 5 Click Area page to access the motion detection area setting, as shown in Figure 7-35.

Motion detection area setting screen



Area :

1. Hold down and drag the left mouse button to draw a motion detection area.
2. Select a value from the drop-down list next to **Sensitivity**.

Step 6 Click **Schedule** page to access the schedule screen. For details, please see 7.2.1 Record Schedule Figure 7-22Step 5 Set the record schedule.

Step 7 Click Copy and select channels or tick **all**, then click OK to apply the motion detection settings to cameras in selected channels, click Apply to save motion detection alarm settings.

NOTE

Double click to delete the selected area.

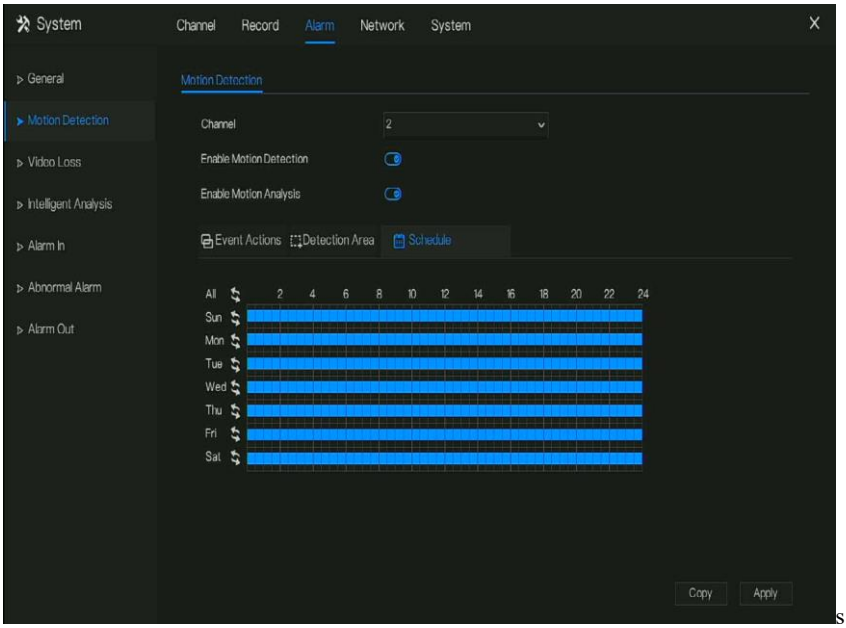
The default area is whole area.

If you leave the page without applying, the tip “Do you want to save?” would show. Click save to save the settings. Click cancel to quit the settings.

Enable the alarm out, users need to set alarm time and output ID, four ID are corresponding to back panel’s alarm out, 1 A and 1 B, 2 A and 2 B, 3 A and 3 B, 4 A and 4 B.

Channel alarm out is corresponding to alarm port of camera.

Alarm schedule



S

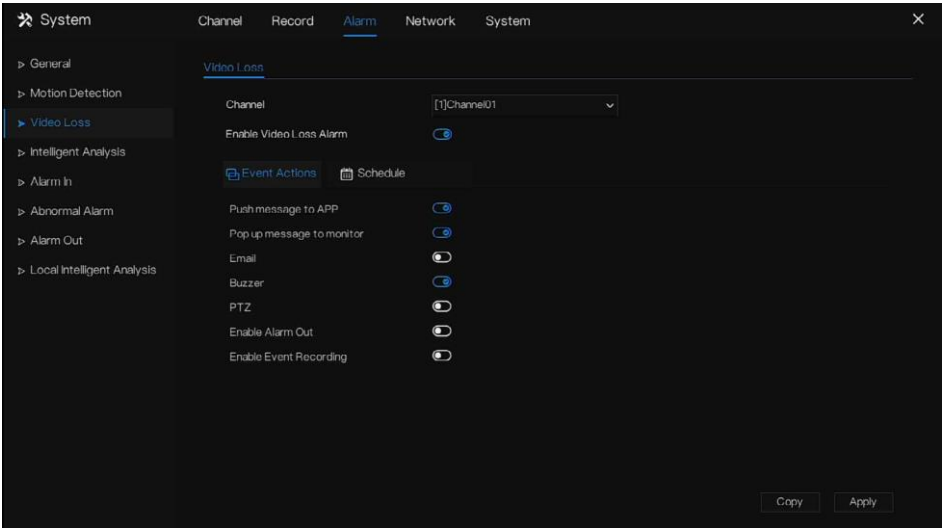
7.3.3 Video Loss

If a camera is disconnected to NVR, it will trigger video loss alarm.

Operation Description

Click **Video Loss** in the main menu or menu of the alarm management screen and choose **video Loss** to access the video loss screen, as shown in Figure 7-37.

Video loss screen



Operation Steps

Step 1 Select a channel from the drop-down list of channel.

Step 2 Click to enable video loss alarm.

Step 3 Enable the Event actions include: push message to App, pop up message to monitor, send Email, buzzer, FTP, PTZ, alarm out, event recording and so on.

Step 4 Click Schedule page to access the schedule screen.

Step 5 For details, please see 7.2.1 Record Schedule *Figure 7-22Step 5* Set the record schedule.

Step 6 Click Copy and select a channel, then click OK to apply the parameter settings to cameras in selected channels, click Apply to save video loss settings.

7.3.4 Intelligent Analysis (Only for Some Models)

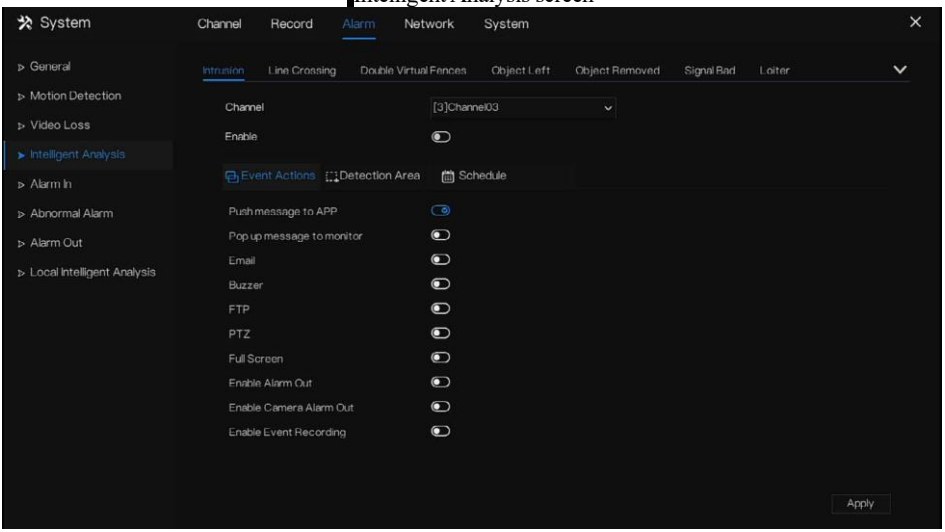
NOTE

The channel camera can set the intelligent analysis which are depended on the performance of cameras.

Operation Description

Step 1 Click **Intelligent Analysis** in the main menu or menu of the alarm management screen and choose **Intelligent Analysis** to access intelligent analysis screen, as shown in Figure 7-38.

Intelligent Analysis screen



Step 2 Select one action to set the alarm.(Intrusion, Line crossing, Single virtual fence, Double virtual fences, Object left, Object removed, Signal bad, Loiter, Multi loiter, Abnormal speed, Converse, Illegal parking, Personnel count, Fence, Enter area, Leave area, Advanced).

Step 3 Select a channel from the drop-down list of channel.

Step 4 Click to enable intelligent analysis alarm.

Step 5 Enable the event actions include: push message to App, pop up message to monitor, send Email, buzzer, FTP, PTZ, full screen, alarm out, camera alarm out, event recording and so on.

Step 6 Click Schedule page to access the schedule screen.

Step 7 For details, please see *Figure 7-22Step 5* Set the record schedule.

Step 8 Click Copy and select a channel, then click OK to apply the parameter settings to cameras in selected channels, click Apply to save video loss settings.

Personnel count

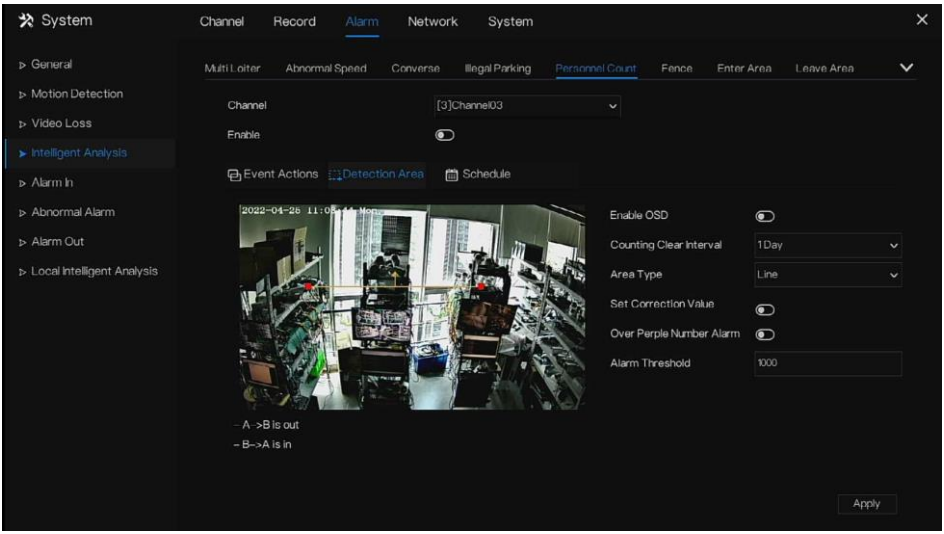


Table 7-10 Personnel count parameters

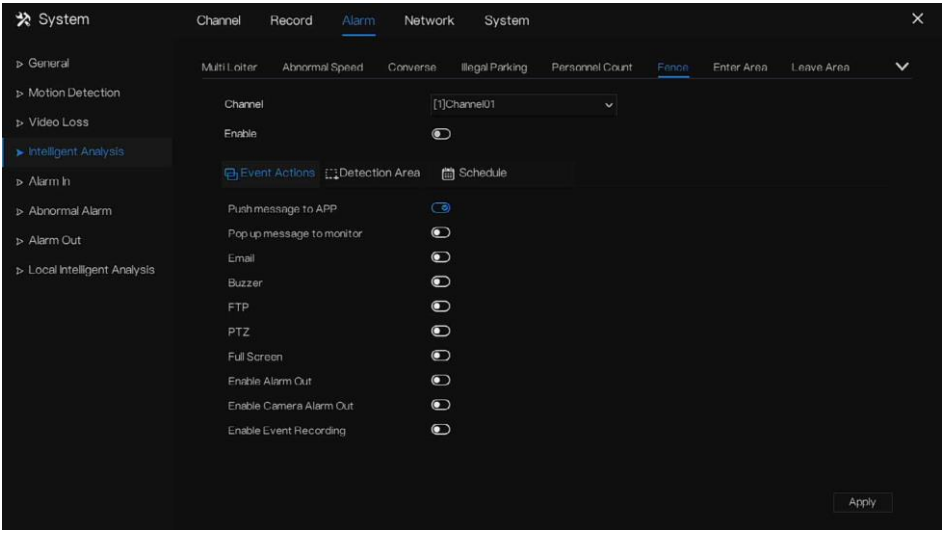
Parameter	Description	Setting
Enable	Click the button to enable personnel count.	[How to set] Click Enable to enable. [Default value] **OFF**
OSD enable	Enable, the statistical data of personnel count will show on OSD	[How to set] Click Enable to enable. [Default value] **OFF**
Counting clear interval	There are five modes can be chosen, such as 10 min, half-hour, 1 hour, 12-hour, 1 day.	[Setting method] Choose from drop-down list [Default value] **7**
Area type	The area to distinguish entry and exit.	[Default value] **Line**

Fence:

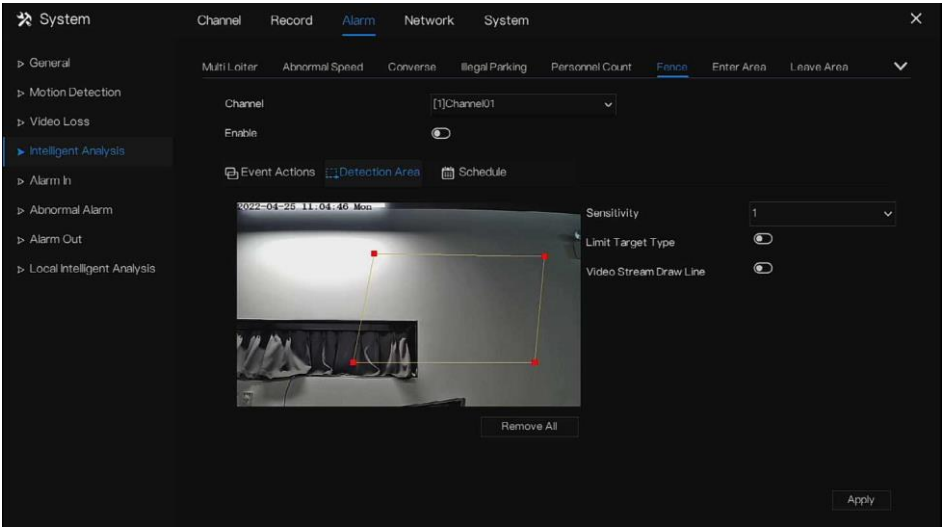
It is only available for fence AI multi-object cameras. When a person or car is found in detection area, it will alarm.

Users can choose several event actions to alarm.

Fence



Fence detection area



Enable limit target type, choose the type(person or car, person, car).

Enable video stream draw line, when detects the car or person, it will show the blue frame to mark the target.

Use the mouse to draw the detection area, users can draw serval areas depending on the real condition.

7.3.5 Alarm In

NOTE

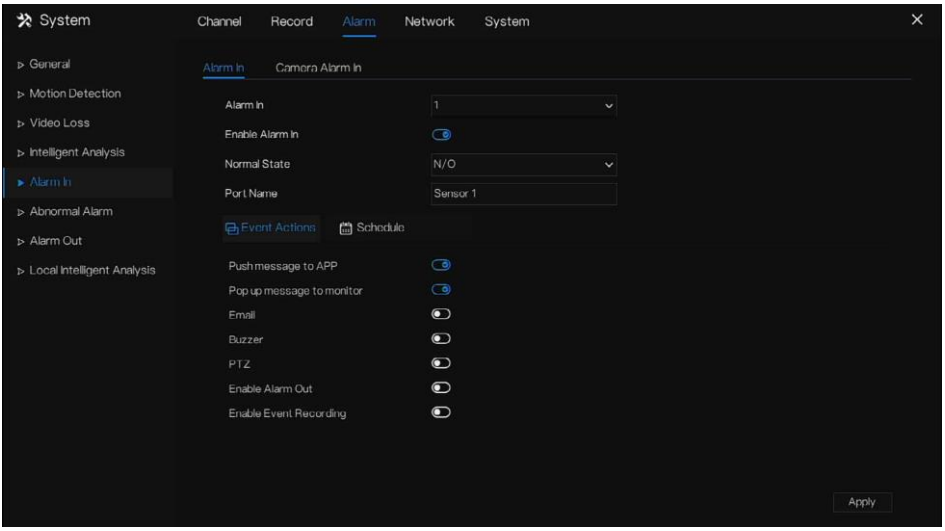
This function requires access to a camera that supports external alarm in.

There are two types alarm in, one is the NVR's alarm in, another is the camera channel's alarm in.

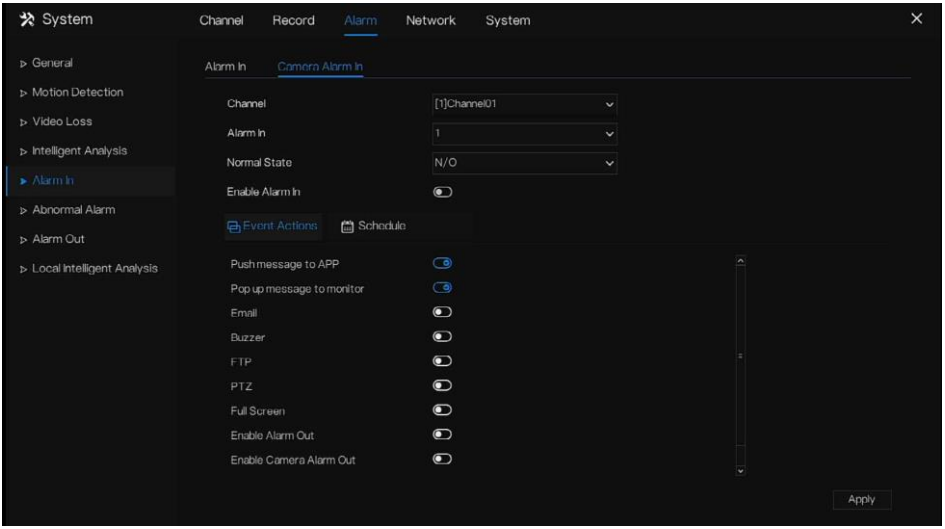
Operation Description

Click **Alarm in** in the main menu or menu of the alarm management screen and choose **Alarm in** to access the alarm in screen, as shown in Figure 7-42.

Alarm in screen



Camera alarm in



Operation Steps

Step 1 Select a channel in **alarm in**.

Step 2 Click to enable or disable the functions.

Step 3 Select **Alarm type** from the drop-down list.

NOTE

NC: Normal close the alarm

NO: Normal open the alarm

Step 4 Set **name**.

Step 5 Enable the event actions include: push message to App, pop up message to monitor, send Email, buzzer, FTP, PTZ, full screen, alarm out, camera alarm out, event recording and so on.

Step 6 Click **Schedule** page to access the schedule screen. For details, please see 7.2.1 Record Schedule Figure 7-22Step 5 Set the record schedule.

Step 7 Click Apply to save settings of **Alarm in**.

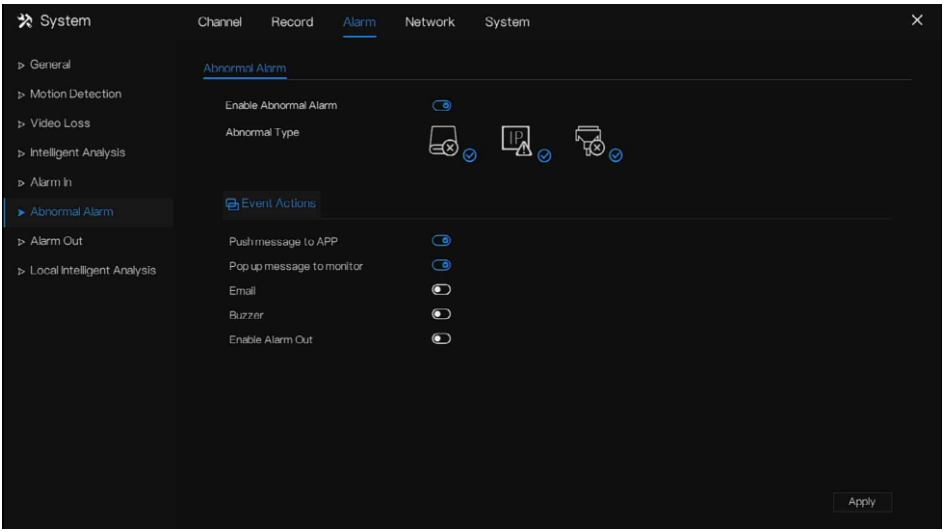
7.3.6 Abnormal Alarm

Abnormal alarm includes disk alarm, IP conflict and network disconnected.

Operation Description

Step 1 Click **Abnormal Alarm** in the main menu or menu of the alarm management screen and choose **Abnormal Alarm** to access the abnormal alarm screen, as shown in Figure 7-44.

Abnormal alarm screen



Step 2 Tick the abnormal actions.

Step 3 Enable the event actions include: push message to App, pop up message to monitor, send Email, buzzer, alarm out and so on.

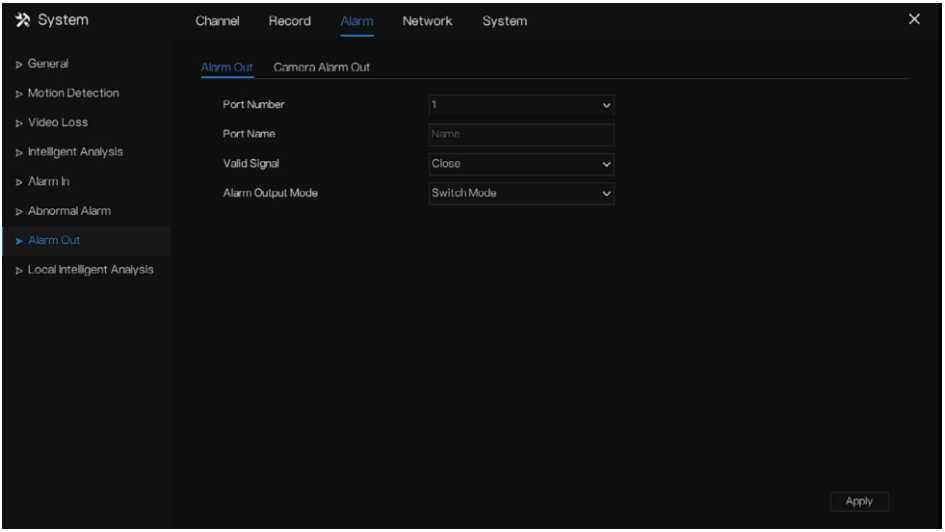
Step 4 Click Apply to save abnormal alarm settings.

7.3.7 Alarm Out

Alarm Out

Choose one output ID as the output interface.

Alarm out



Camera Alarm out

NOTE

This function requires access to a camera that connected to an external alarm out device.

Camera alarm out

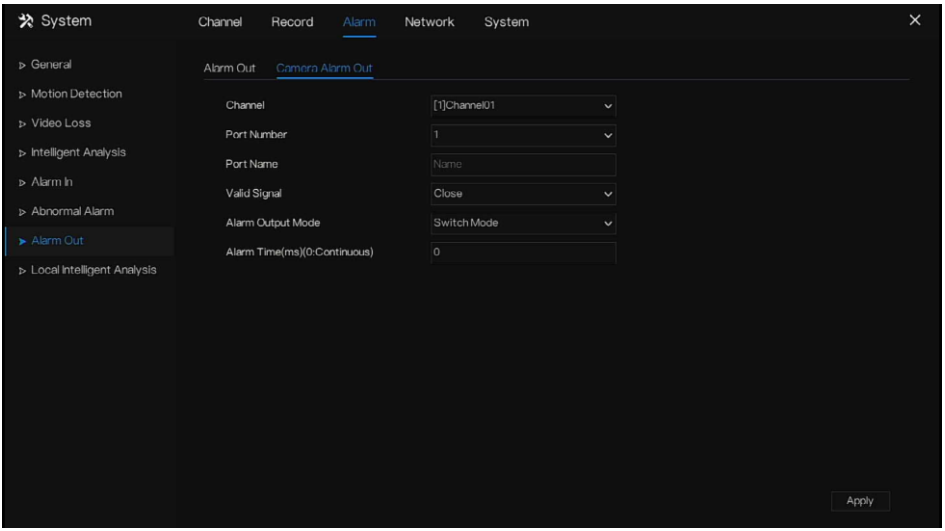


Table 7-11 Camera alarm out

Parameter	Description	Setting
Alarm Output	ID of the alarm output channel. NOTE The number of alarm output channels depends on the device model.	[Setting method] Select a value from the drop-down list box. [Default value] 1
Name	Alarm output channel name.	[Value range] 0 to 32 bytes
Valid Signal	The options are as follows: • **Close**: An alarm is generated when an external alarm signal is received. • **Open**: An alarm is generated when no external alarm signal is received.	[Setting method] Select a value from the drop-down list box. [Default value] Close

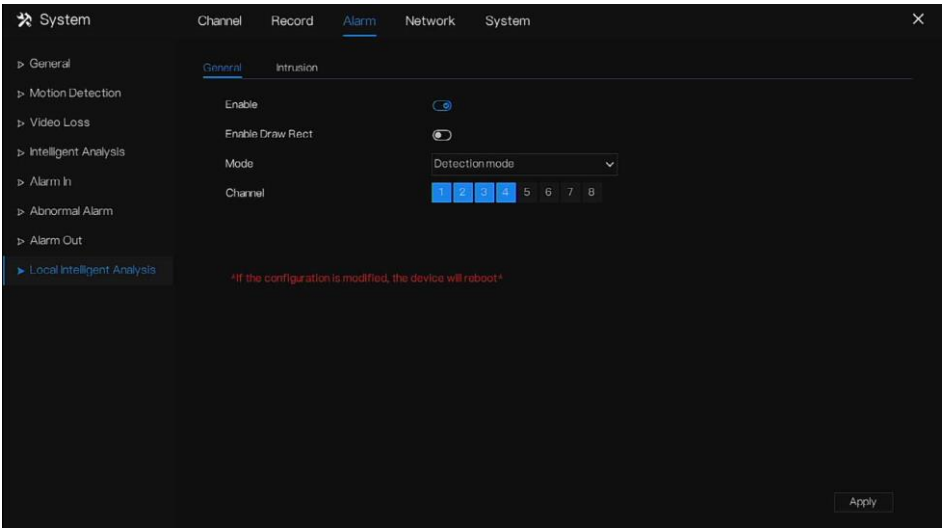
Parameter	Description	Setting
Alarm Output Mode	When the device receives I/O alarm signals, it will send the alarm information to an external alarm device in the mode specified by this parameter. The options include the switch mode and pulse mode. NOTE ● If the switch mode is used, the alarm frequency of the device must be the same as that of the external alarm device. ● If the pulse mode is used, the alarm frequency of the external alarm device can be configured.	[Setting method] Select a value from the drop-down list box. [Default value] Switch Mode
Alarm Time(ms) (0: Continuous)	Alarm output duration. The value **0** indicates that the alarm remains continuous valid.	[Setting method] Enter a value manually. [Default value] 0 [Value range] 0 to 86400 seconds
Manual Control	Control the alarm output.	N/A

7.3.8 Local Intelligent Analysis

General

At “Alarm > Local Intelligent Analysis > General” interface, enable the local intelligent analysis to set the local intrusion, as shown in Figure 7-47.

Local intelligent analysis – General



Enable the alarm function.

Enable Draw Rectangle, the detection rectangle will be showed on the live video of intrusion.

Choose the channels, up to 4 channels can be chosen.

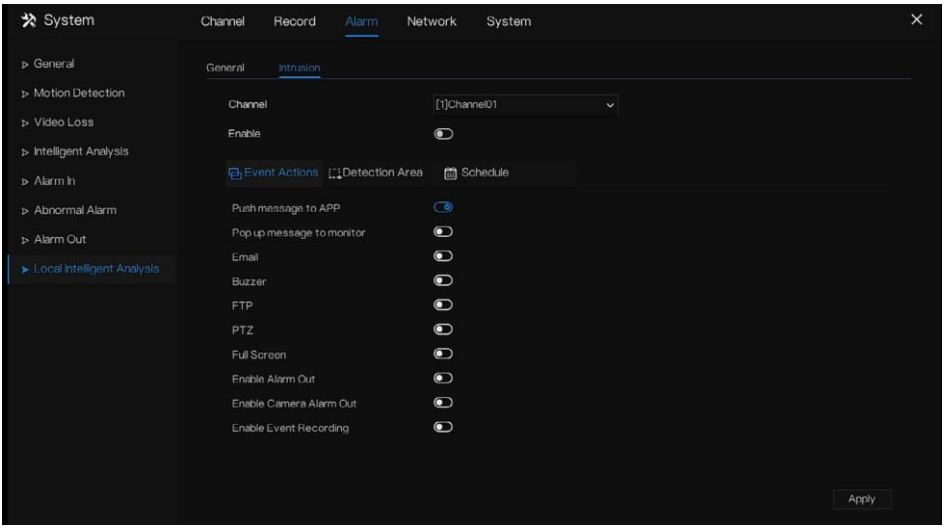
Enable or disable the intrusion, modify the channels, the device will be rebooted.

Intrusion

At “Alarm > Local Intelligent Analysis > Intrusion” interface to set the parameter of local intrusion.

The intrusion refers to that an alarm is generated when the targets of specified types (such as person, car, and both person and car) enter the detection area.

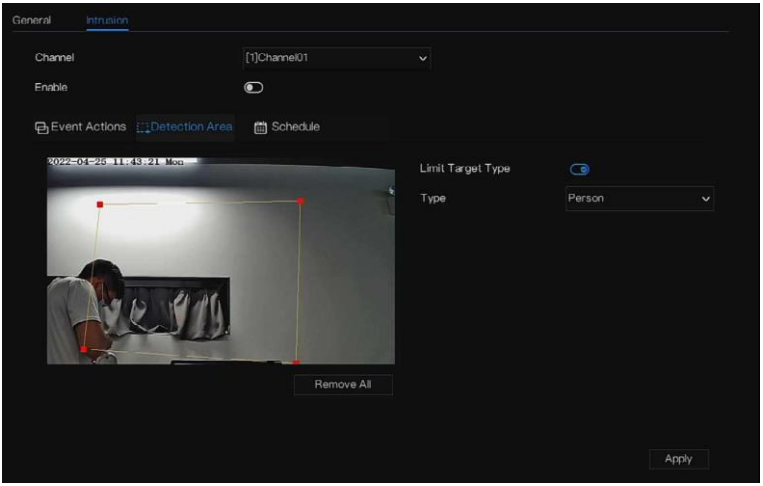
Intrusion



Event action：

Choose the channel to enable the intrusion, enable the event actions (such as push message to App, Pop up message to monitor, Email, Buzzer, FTP, PTZ, Full screen, Alarm out, Camera alarm out, Event recording, and so on). Click “Apply” to save the settings.

Detection area



Detection area:

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing.

NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 8 sides at most can be drawn.
- The quantity of detection areas is not limited yet and will be described in future when a limit is applied.

Choose Limit target from the drop-down list, person/ person or car / car.

Set schedule

Set schedule:

Method 1：Click left mouse button to select any time point within 0:00-24:00 from Monday to Sunday as shown in Figure 7-50.

Method 2：Hold down the left mouse button, drag and release mouse to select the schedule within 0:00a-24:00 from Monday to Sunday.

NOTE

When you select time by dragging the cursor, the cursor cannot be moved out of the time area. Otherwise, no time can be selected.

Method 3：Click in the schedule page to select the whole day or whole week.

Deleting schedule: Click again or inverse selection to delete the selected schedule.

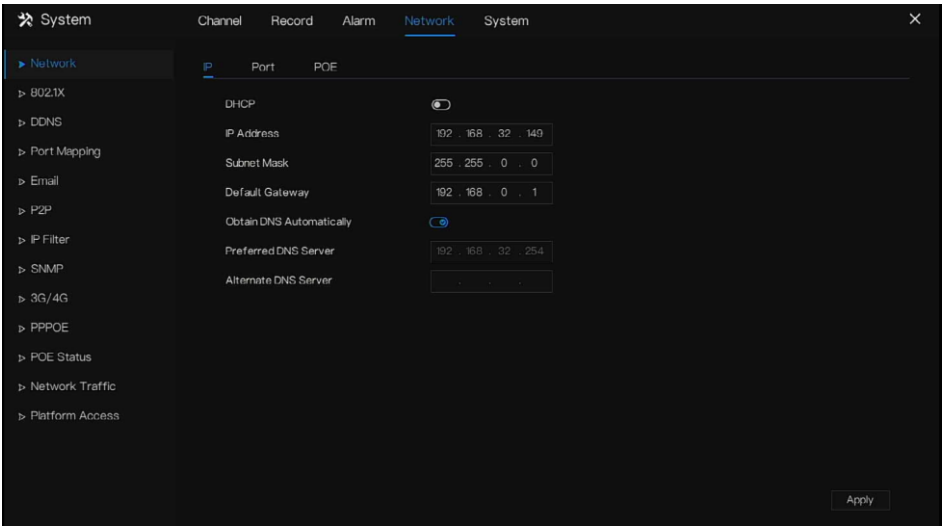
7.4 Network Management

Set the **Network Parameter, 802.1X, DDNS, E-mail, Port Mapping, P2P, IP Filter, SNMP 3G/4G** and **PPPOE, Network Traffic** in the network management screen.

Operation Description

Step 1 Click **Network** in the main menu (or click the network page of any function screen in the main menu) to access the network management screen, as shown in Figure 7-51.

Network management screen



7.4.1 Network

Set **DHCP a**nd **DNS** manually or automatically.

IP

Operation Steps

Step 1 Click next to **DHCP** to enable or disable the function of automatically getting an IP address. The function is disabled by default.

Step 2 If the function is disabled, click input boxes next to **IP**, **Subnet mask**, and **Gateway** to set the parameters as required.

Step 3 Click next to **Obtain DNS Automatically** to enable or disable the function of automatically getting a DNS address. The function is enabled by default.

Step 4 If the function is disabled, click input boxes next to **DNS 1(default 192.168.0.1)** and **DNS 2(default 8.8.8.8)**, delete original address, and enter a new address.

Step 5 Click

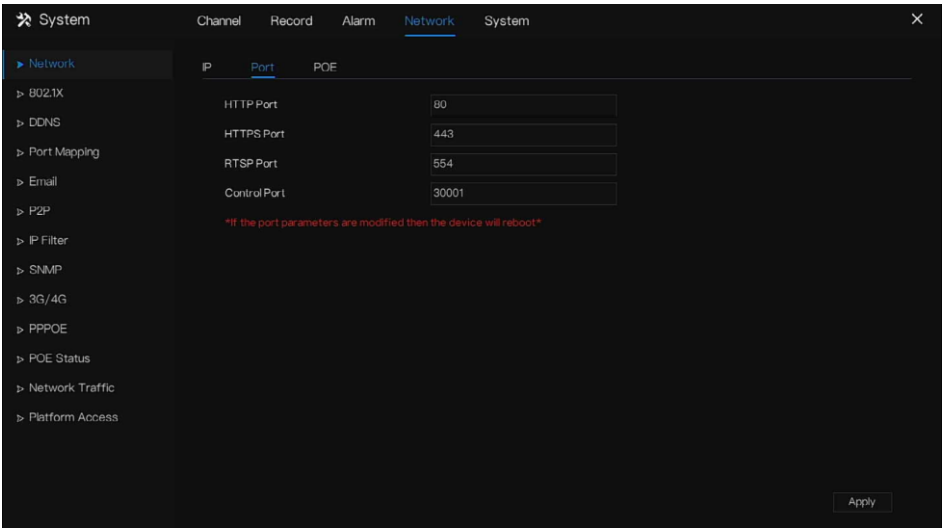
to save IP settings.

Port

Operation Steps

Step 1 Click **Port** page to access the port setting screen, as shown in Figure 7-52.

Port setting screen



Step 2 Set the HTTP port, HTTPS port, RTSP port and Control port.

Step 3 Click Apply to save port settings.

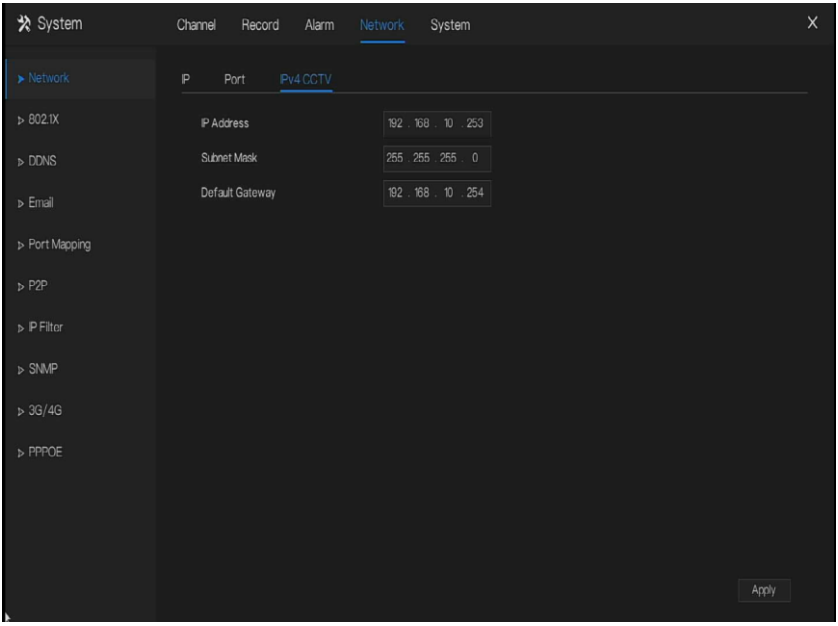
IPv4CCTV (Only for Some Models)

The no POE device has two LANs, LAN1 and LAN2.

Operation Steps

Step 1 Click **Ipv4 CCTV** page to access the LAN2 setting screen, as shown in Figure 7-53.

IPv4 CCTV



Step 2 Input the IP address, subnet mask, default gateway.

Step 3 Click Apply to save the settings.

NOTE

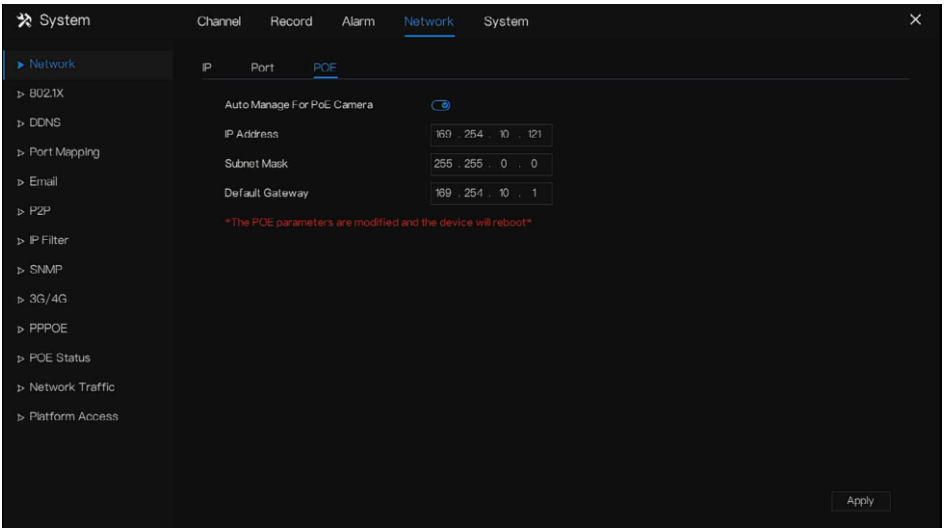
LAN1 and LAN2 can be connected to different network, so that NVR can add more cameras. LAN1 usually is connected to the external network, it is default gateway. LAN2 connect to internal network.

POE (Only for Some Models)

Operation Steps

Step 1 Click **POE** page to access the POE setting screen, as shown in Figure 7-54.

POE screen



Step 2 The NVR will deploy IP addresses to the cameras connected to POE immediately.

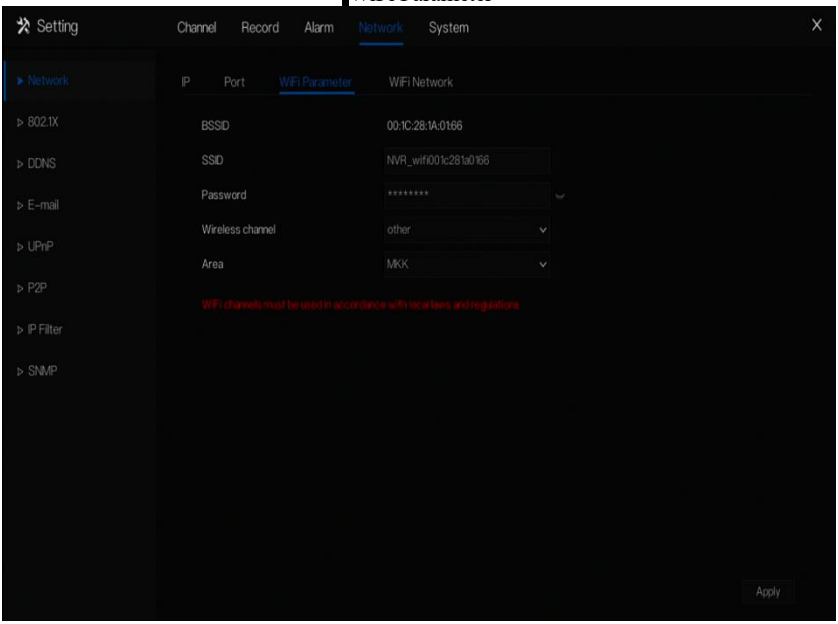
Step 3 Click Apply to set POE camera IP address successfully.

WiFi Parameter (Only for Some Models)

Operation Steps

Step 1 Click **WiFi Parameter** page to access the WiFi Parameter setting screen, as shown in Figure 7-54.

WiFi Parameter



Step 2 Set the parameters of WiFi。

Step 3 Click Apply to set POE camera IP address successfully.

NOTE

BSDID, default value of the device, cannot be changed.

SSID, the name can be changed to facilitate customer search.

WiFi channel; 1-13 channels, plus the other channel, can be changed according to network blocking conditions to avoid interference.

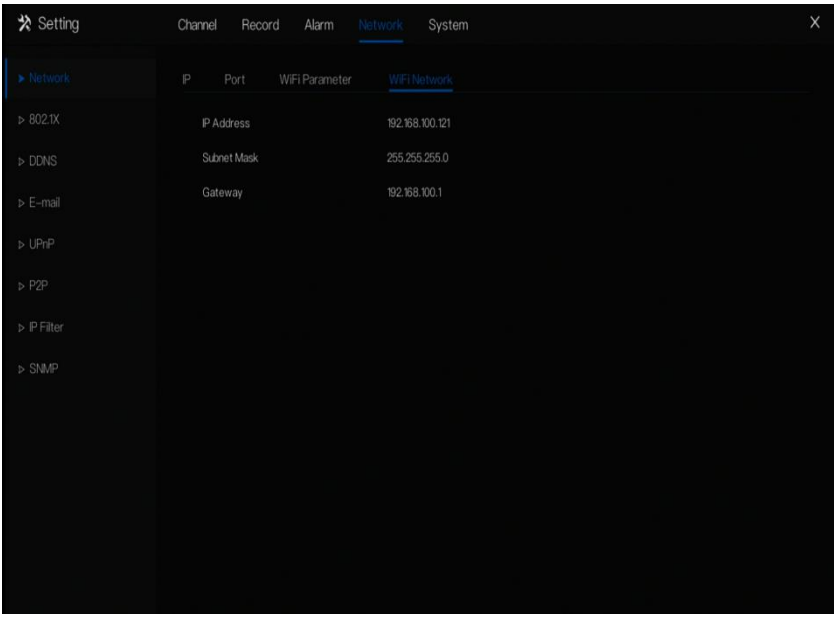
The area can be selected according to the country where it is located, MKK, ETSI1, ETSI2, FCC.

WiFi Network (Only for Some Models)

Operation Steps

Step 1 Click **WiFi Parameter** page to access the WiFi Parameter setting screen, as shown in Figure 7-54.

WiFi network

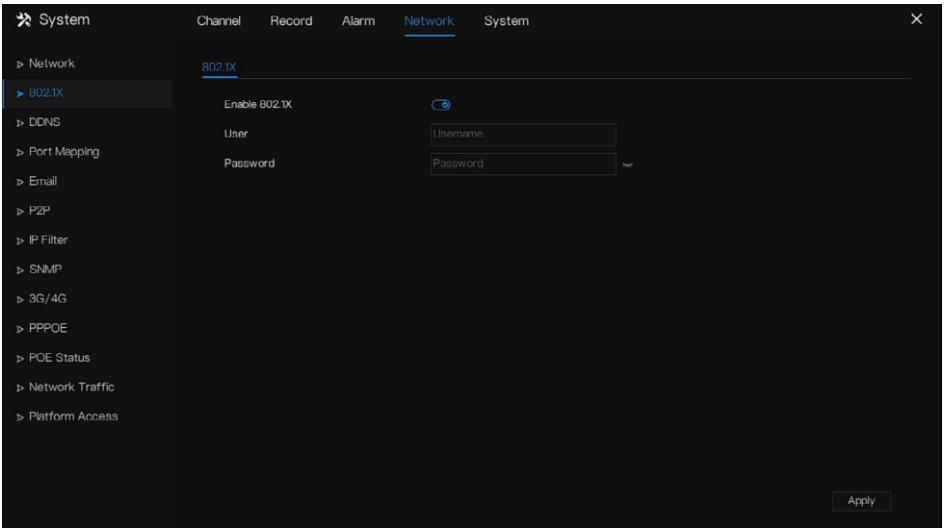


7.4.2 802.1X

Operation Steps

Step 1 Click next to **802.1X** to enable or disable the function .The default is disabled.

802.1 X



Step 2 Input the user and password of 802.1X, the account is created by user.

Step 3 Click to save the settings. The visitor to view the NVR need to input account to certify.

7.4.3 DDNS

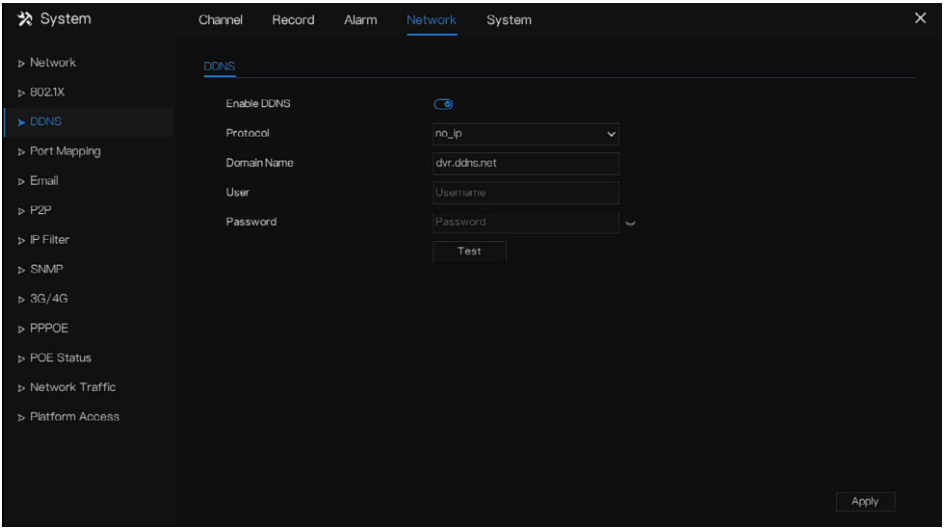
Please make sure connect the specified camera to the Internet, and obtain the user name and password for logging into the dynamic domain name system (DDNS) from the server.

Operation Steps

Step 1 Click **DDNS** in the main menu or menu of the network management screen and choose **DDNS** to access the DDNS screen.

Step 2 Click next to **Enable** to enable the DDNS function. It is disabled by default, as shown in Figure 7-58.

DDNS setting screen



Step 3 Select a required value from the protocol drop-down list.

Step 4 Set domain name, input user and password.

Step 5 Click Test to check the domain name.

Step 6 Click Apply to save DDNS network settings

NOTE

An external network can access the NVR via an address that is set in the DDNS settings.

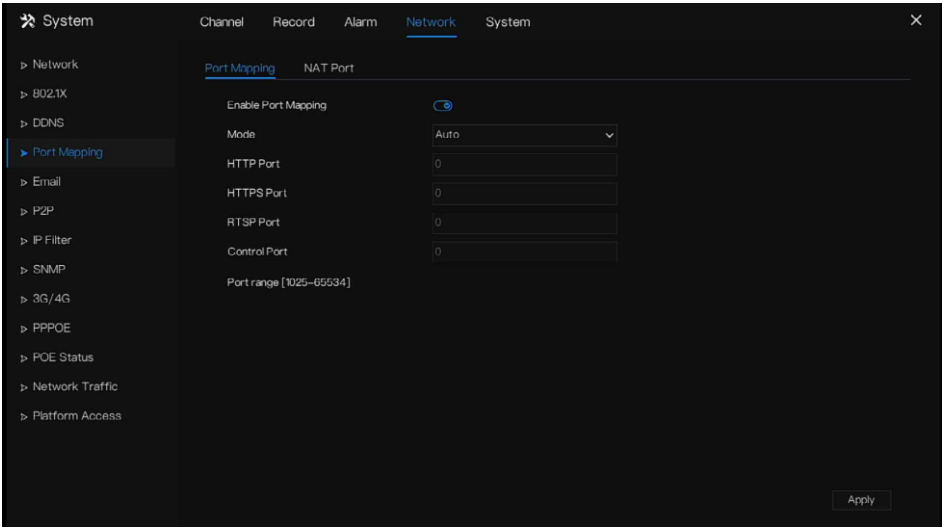
7.4.4 Port Mapping

Port Mapping

Operation Steps

Step 1 Click **Port Mapping** in the main menu or menu of the network management screen and choose **Port Mapping** to access the port mapping screen, as shown in Figure 7-59.

Port mapping setting screen



Step 2 Select UPnP enable type.

Step 3 Manual UPnP: input http port, data port and client port manually.

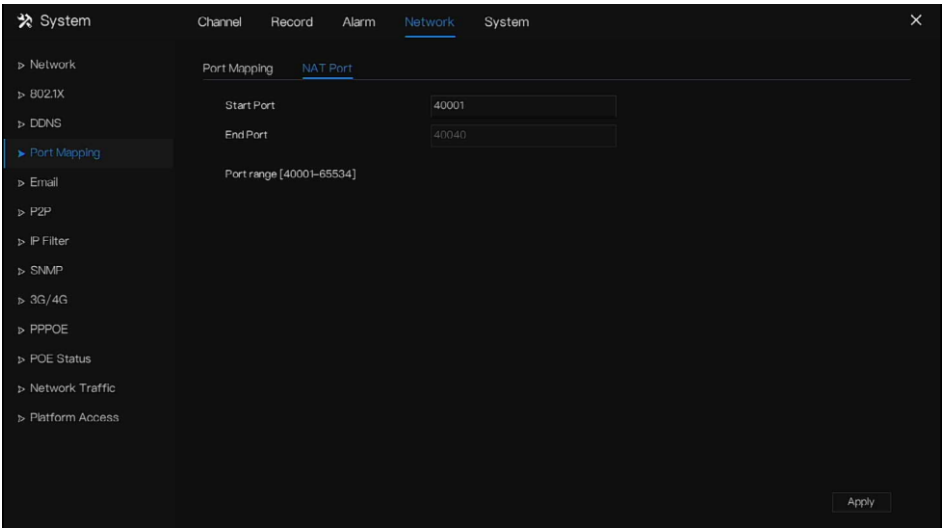
Step 4 Auto UPnP: device obtain the port automatically.

Step 5 Click Apply to save settings.

NAT Port

NAT Port (Network Address Translation). Access the NVR channels through the NAT port. Users can set the start port, and it will generate the end port automatically. We will view the NAT port when we access the channel through clicking icon at Web interface.

NAT port



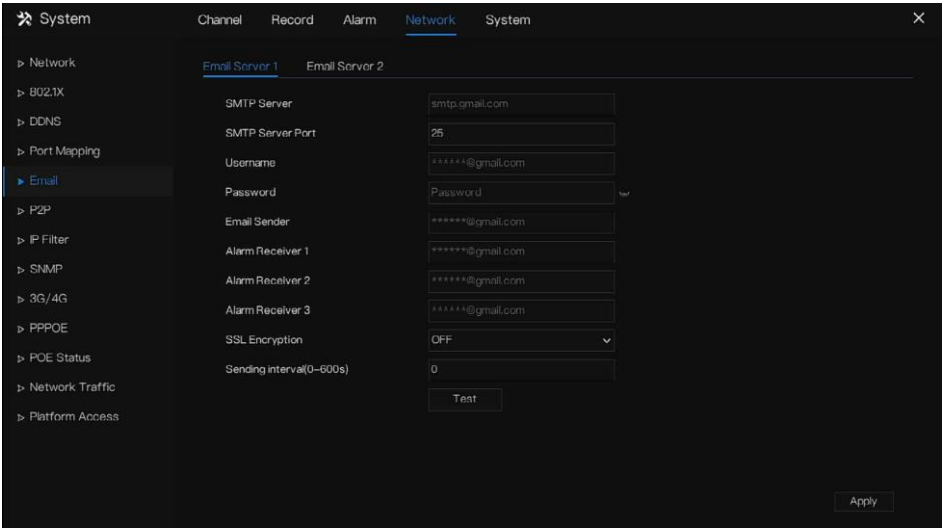
7.4.5 Email

If the simple mail transfer protocol (SMTP) function is enabled, the device automatically sends alarm information to specified email addresses when an alarm is generated. Two mailboxes can be set as receivers.

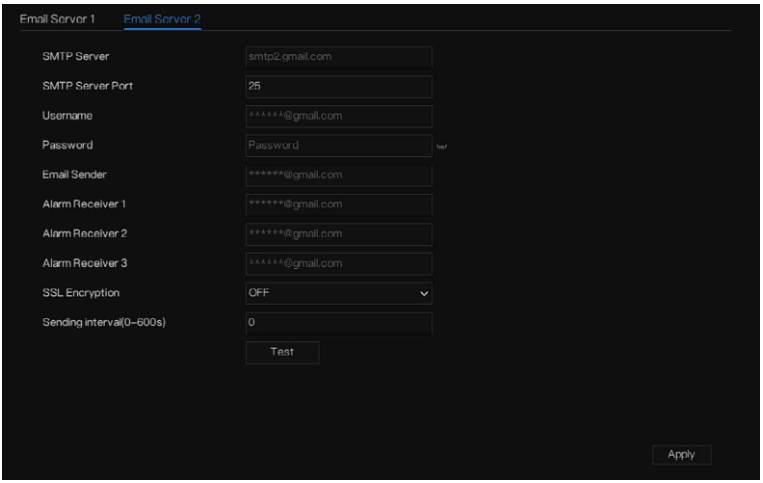
Operation Steps

Step 1 Click **E-mail** in the main menu or menu of the network management screen and choose **E-mail** to access the E-mail screen, as shown in Figure 7-61.

E-mail setting screen



E –mail server 2



Step 2 Set SMTP server address and SMTP server port manually.

Step 3 Input E-mail sender, user name and password manually.

Step 4 Set E-mail for receiving alarm. the message "**Mail has been sent, please check**" is displaying. Open the mail, if the verification code is received, that shows the E-mail is set successfully.

Step 5 Set E-mail for retrieve the password. the message "Mail has been sent, please check" is displaying. Open the mail, if the verification code is received, E-mail is set successfully.

Step 6 Set SSL encryption for encrypting mail or not, set sending interval.

Step 7 Click Apply to save settings.

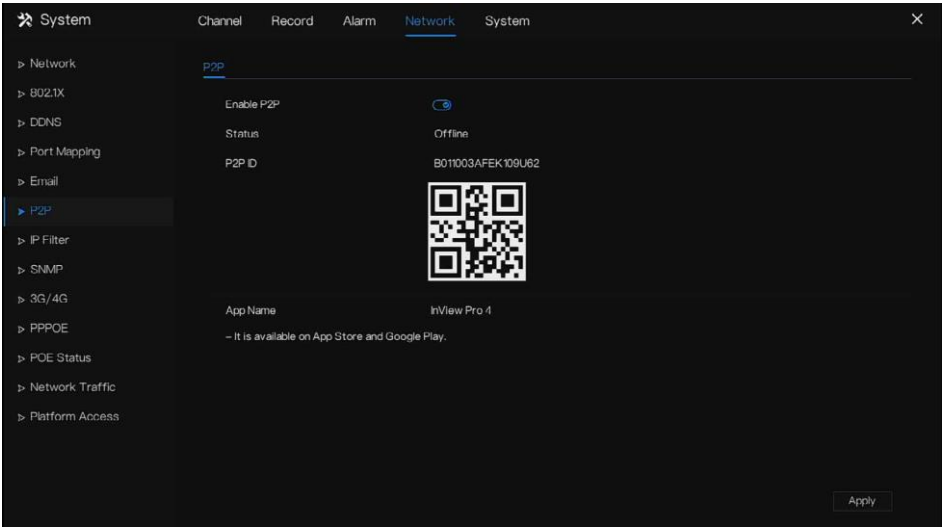
7.4.6 P2P

Show the UUID code and set the P2P status of the device.

Operation Steps

Step 1 Click **P2P** in the main menu or menu of the network management screen and choose **P2P** to access the P2P screen, as shown in Figure 7-63.

P2P screen



Step 2 Click to enable the P2P function.

Step 3 Click Apply to save P2P network settings or click **Cancel** to cancel settings.

Step 4 After the **Inview Pro4** is installed in mobile phone, run the APP and scan the QR to add and access the NVR when the device is online.

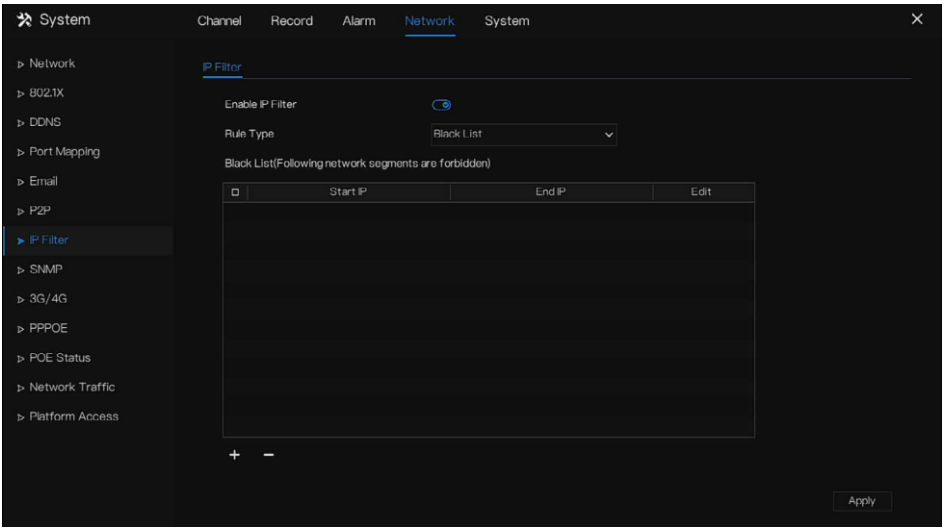
7.4.7 IP Filter

Set the IP address in specified network segment to allow or prohibit access.

Operation Steps

Step 1 Click **IP Filter** in the main menu or menu of the network management screen and choose **IP Filter** to access the IP filter screen, as shown in Figure 7-64.

IP Filter setting screen

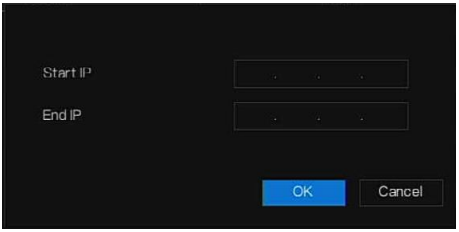


Step 2 Click next to **IP Filter** to enable the function of IP Filter.

Step 3 Select black list or white list drop-down list.

Step 4 Click to set black &white list IP segment screen is displaying, as show in Figure 7-65.

IP Address Segment screen



Step 5 Enter value manually for start IP address, end IP address.

Step 6 Click OK. The system saves the settings. The black and white lists IP segment listed in the black (white) list.

NOTE

Black list: A list of IP addresses in specified network segment that are regarded as unacceptable or untrustworthy and should be excluded or avoided.

White list: a list of addresses in specified network segment considered to be acceptable or trustworthy.

Select a name in the list and click **Delete** to delete the name from the list.

Select a name in the list and click **Edit** to edit the name in the list.

Only one rule type is available, and the last rule type set is efficient.

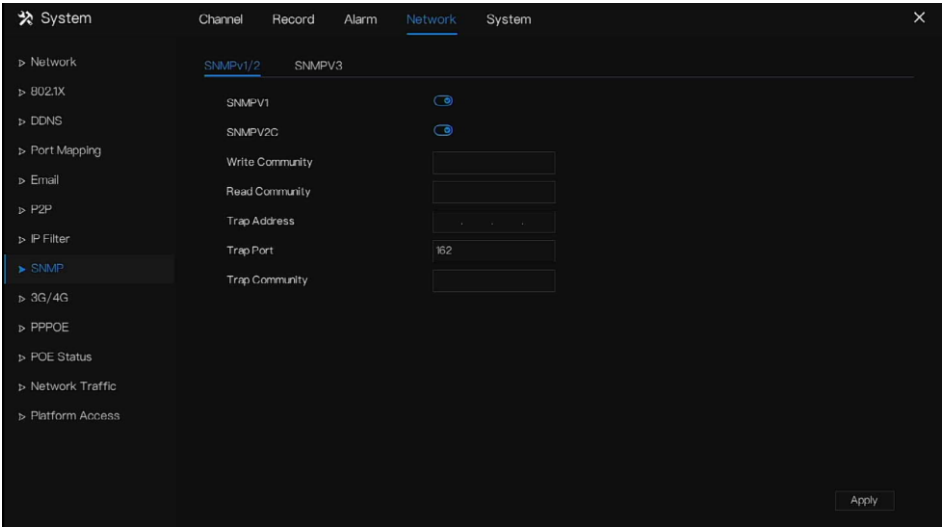
7.4.8 SNMP

There are three versions of simple network management protocols at interface.

Operation Steps

Step 1 Click **IP Filter** in the main menu or menu of the network management screen and choose **IP Filter** to access the IP filter screen, as shown in Figure 7-66.

SNMP settings screen



Step 2 Click next to **SNMPV 1** to enable the function . The interface is shown as Figure 7-67.

SNMPV 1/2 interface

Step 3 Input the parameters of protocol.

Step 4 Click Apply to save settings or click Cancel to cancel settings.

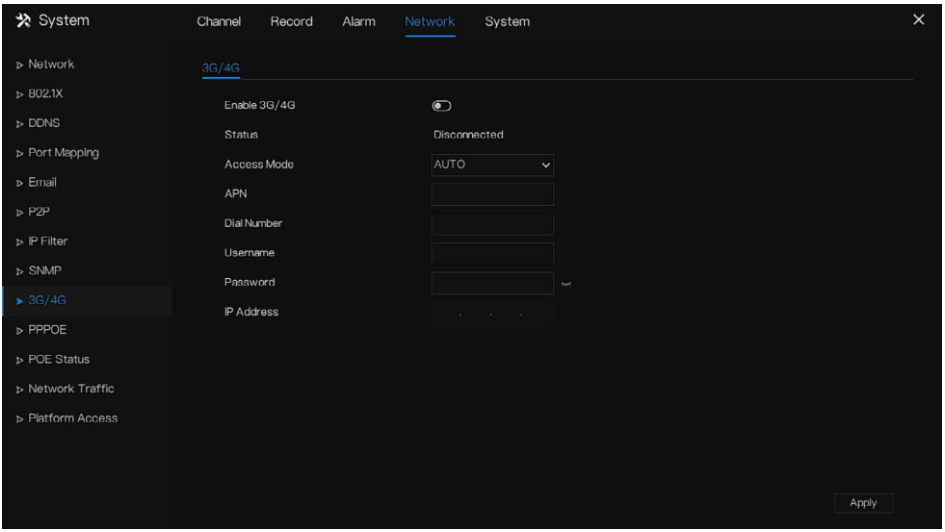
7.4.9 3G/4G

Users can connect NVR to the data network using a modem.

Operation Steps

Step 1 Plug the modem to NVR, and enable the 3G/4G function, as shown in Figure 7-68.

3G/4G setting screen



Step 2 If the connection is successful, set other parameters.

Step 3 Choose access mode, the default is AUTO. There are five modes can be chosen, such as AUTO, LTE, TD-SCDMA, WCDMA, GSM/GPRS.

Step 4 Input the APN, dial number, username, password, IP address. In Auto Mode, all these parameters can be obtained automatically.

Step 5 Click Apply to save settings.

NOTE

Modify the access mode of 3G/4G (AUTO, LTE, TD-SCDMA, WCDMA, GSM/GPRS). If you cannot dial within 5 minutes, re-plug the modem.

Users are familiar with the relevant network (different service provider parameters are different) and modem information before manually switching to other modes, the recommended mode is **Auto**.

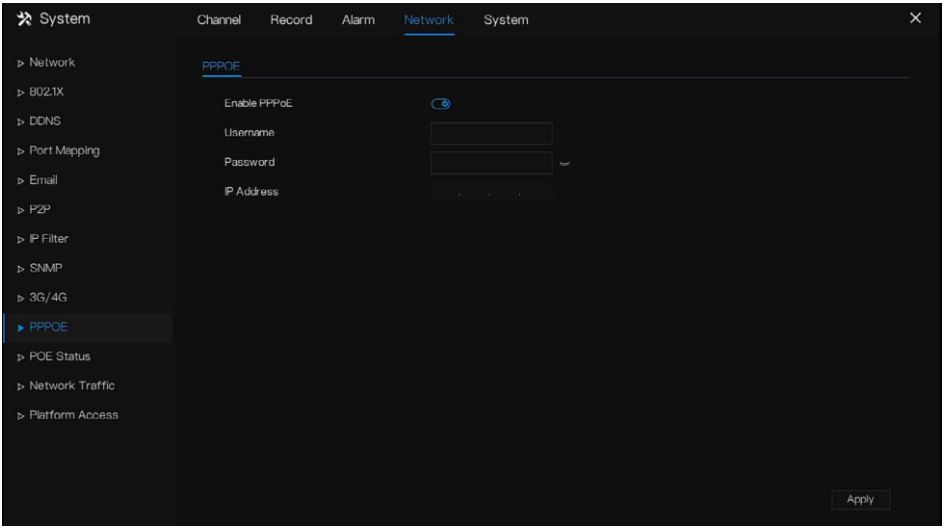
When using the 3G / 4G function, you need to manually close the PPPOE function. Only one function can be used at a time.

If the Internet access type is LTE (4G network), you do not need to dial the number, user name and password.

7.4.10 PPPOE

PPPOE point to point protocol Ethernet, user use the PPPOE to access network immediately, as shown in Figure 7-69.

PPPOE



Step 1 Enable the PPPOE function.

Step 2 Input the username, password (provided by network operator).

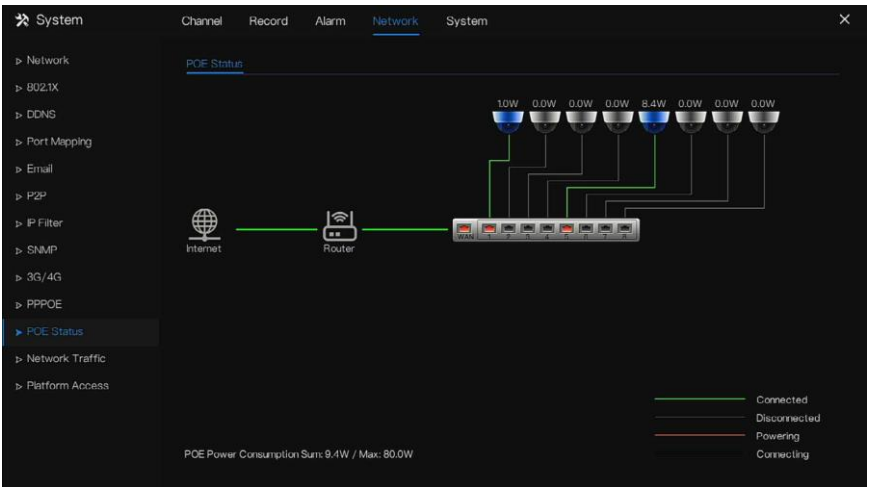
Step 3 Click Apply to save settings, and the IP is obtained automatically.

Step 4 Users input the IP to access NVR web immediately.

7.4.11 POE Status (Only for Some Models)

Users can view the status of POE intuitively, as shown in Figure 7-70.

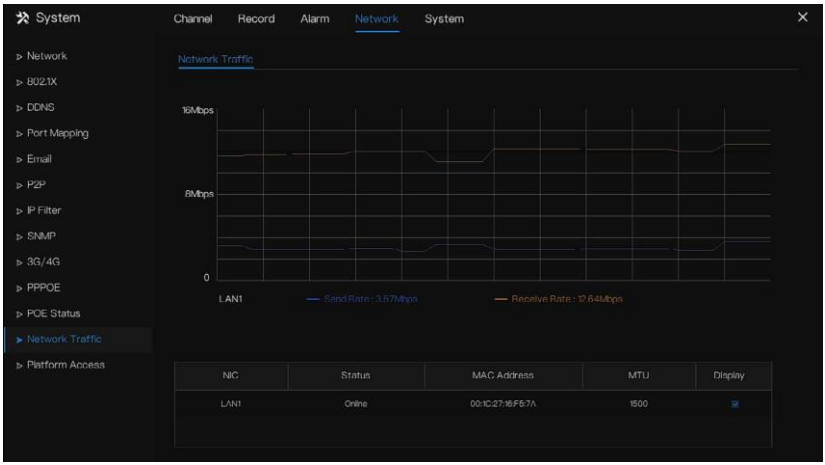
POE status



7.4.12 Network Traffic

Users can view the network traffic immediately, as shown in Figure 7-71

Network traffic



There are two rates, transmit rate and receive rate. The status of LAN(s) show on list.

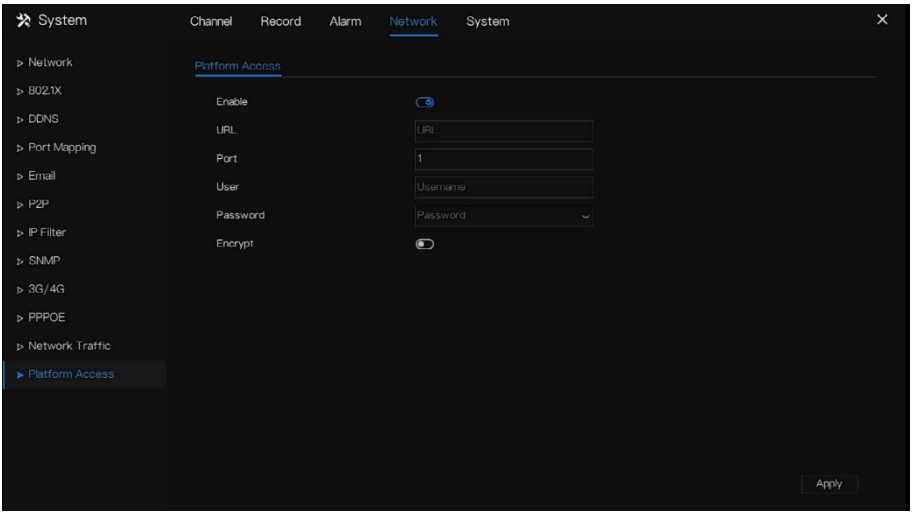
7.4.13 Platform Access

If the NVR and platform system are not at the same local network, ensure the NVR is connected to the same external server as the platform system. You should build a server for platform in advance, platform's remote IP/Port and NVR are mapping port to external network.

Step 1 Choose **Configuration > Network Service > Platform Access**.

The **Platform Access** page is displayed, as shown in Figure 7-72

Platform Access page



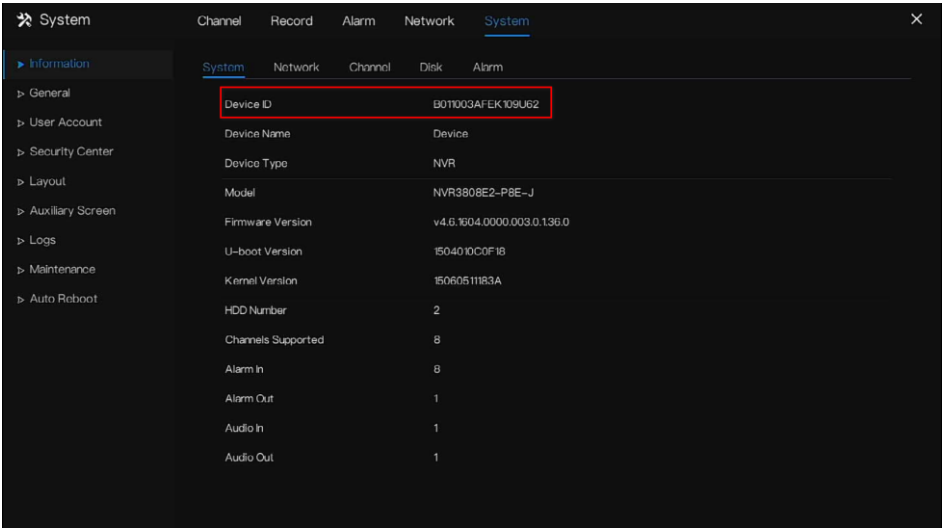
Step 2 Input the parameters. The URL and port are the platform server IP address and port

Step 3 The name and port are the platform's login name and password.

Step 4 Add the NVR to platform, you should input the following information.

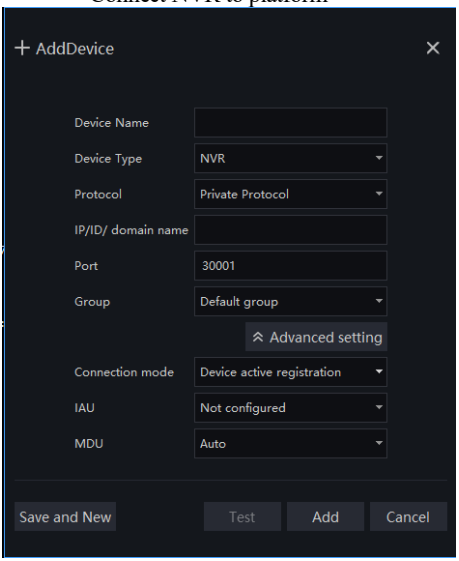
1: IP/ID/Domain name is Device ID of NVR.

IP/ID/Domain



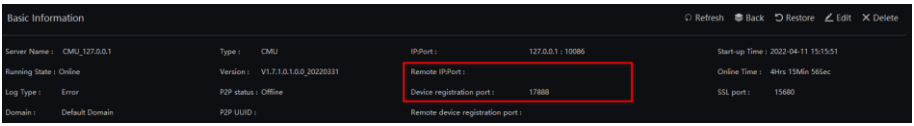
2: The connection mode should be chosen **Device active registration**.

Connect NVR to platform



3: the CMU, MDU and IAU servers of platform should be mapped to the ports to external network in advance.

URL address / port



Step 5 If you want to encrypt the access, you can enable the Encrypt.

Step 6 Click **Apply**.

The message "Apply success!" is displayed, and the system saves the settings.

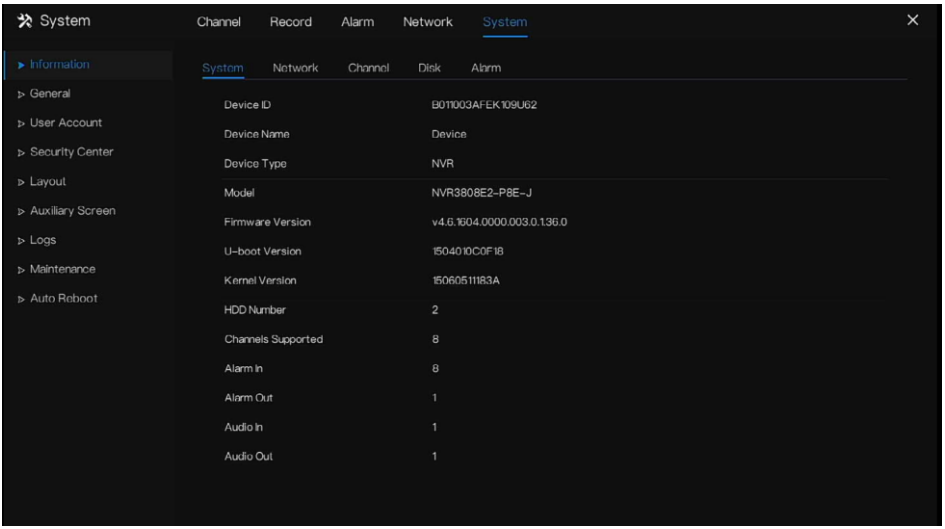
7.5 System Management

View the device **Information** and set **General** information, **User Account, Security Center, Layout, Logs, Maintenance** and **Auto Reboot** for the system setting.

Operation Description

Click **System** in the main menu (or click the system page of any function screen in the main menu) to access the system setting screen, as shown in Figure 7-75.

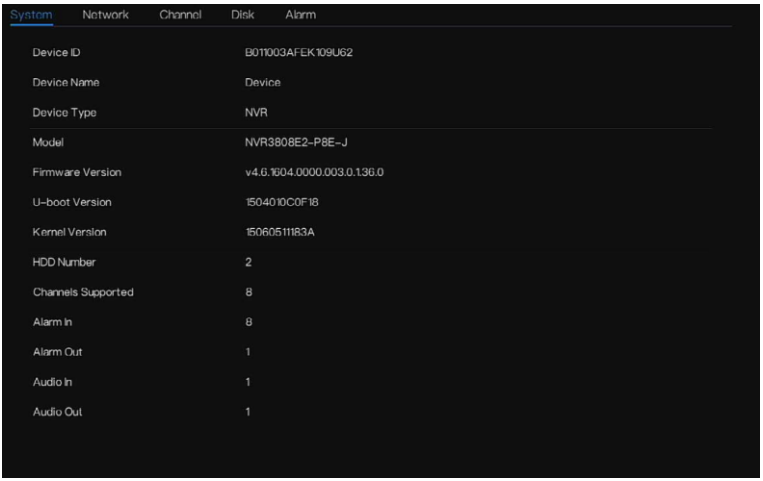
System setting screen



7.5.1 Information

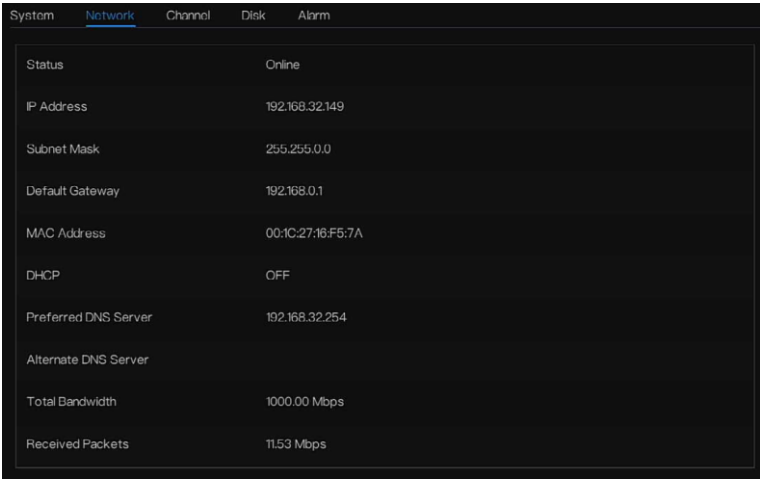
View the device ID, device name, device type, model, firmware version, kernel version, face detection version, HDD volume, channel support, alarm in, and alarm out, audio in, audio out in **information** screen, as shown in Figure 7-76 .

Information-system interface



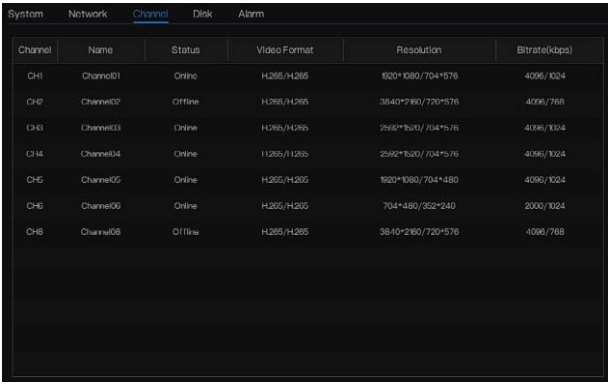
Network: status, IP address, subnet mask, default gateway, MAC address, DHCP, preferred DNS server, Alternate DNS server, total band width, received packets, and so on, as shown in Figure 7-77.

Information-network interface



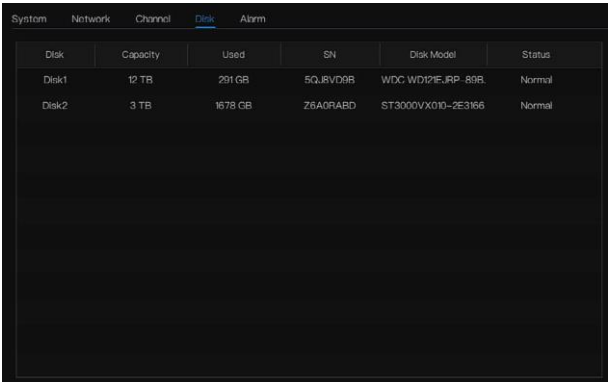
Channel: channel, name, status, video format, resolution, bitrate (kbps), and so on, as shown in Figure 7-78.

Information-channel interface



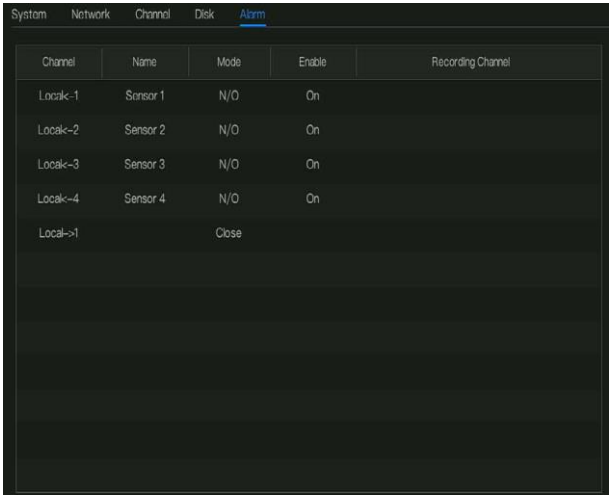
Disk: disk name, capacity, used, SN, disk model, status, and so on, as shown in Figure 7-79 .

Information-disk interface



Alarm: channel, name, mode, enable, recording channel, and so on, as shown in Figure 7-80.

Information-alarm interface



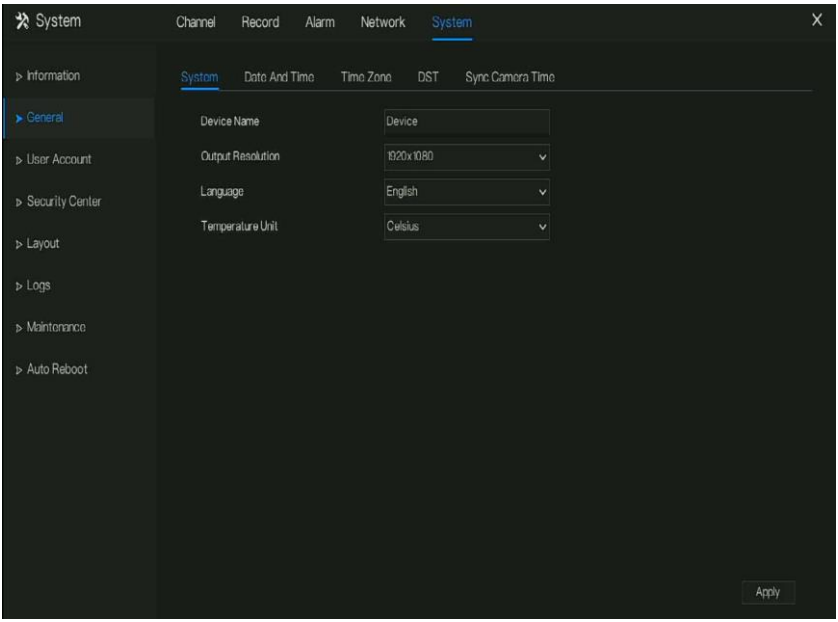
7.5.2 General

System

Operation Steps

Step 1 Click **General** in the main menu or menu of the system management screen and choose **General** to access the system screen, as shown in Figure 7-81.

system setting screen



Step 2 Enter the name of the selected device.

Step 3 Select a proper resolution from the output resolution drop-down list.

Step 4 Select a required language from the Language drop-down list.

Step 5 Set the temperature unit.

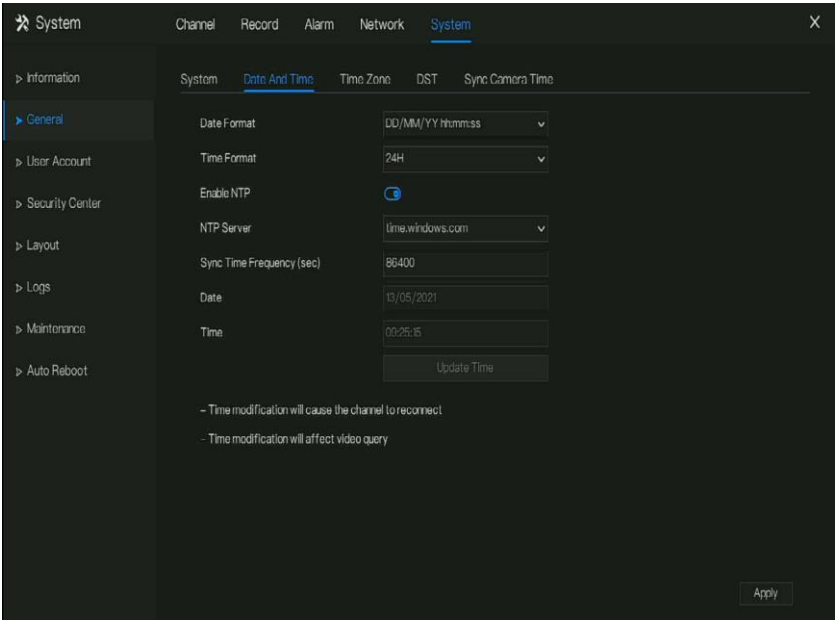
Step 6 Click Apply to save settings.

Date and Time

Operation Steps

Step 1 Click **Date and Time** page to access the date and time setting screen, as shown in Figure 7-82.

Date and Time setting screen



Step 2 Select required format from the Date Format and time format drop-down list.

Step 3 Click next to NTP Sync to disable time synchronization. Time synchronization is enabled by default. Time is synchronized with the NTP.

Step 4 After NTP Sync is disabled, you can manually set the system time:

Click **Date** and use the scroll wheel to select the year, month, and date.
Click **Time** and use the scroll wheel to select the hour, minute, and second.
Click **Modify Time** to save the time settings.

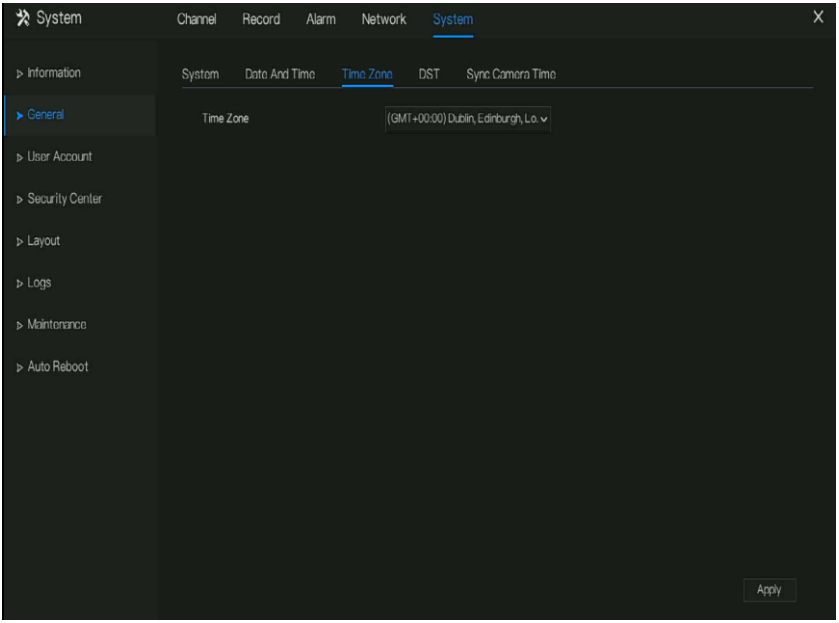
Step 5 Click Apply to save settings.

Time Zone

Operation Steps

Step 1 Click **Time zone** page to access the time zone setting screen, as shown in Figure 7-83.

Time zone setting screen



Step 2 Select a required time zone from the Time Zone drop-down list.

Step 3 Click Apply to save settings.

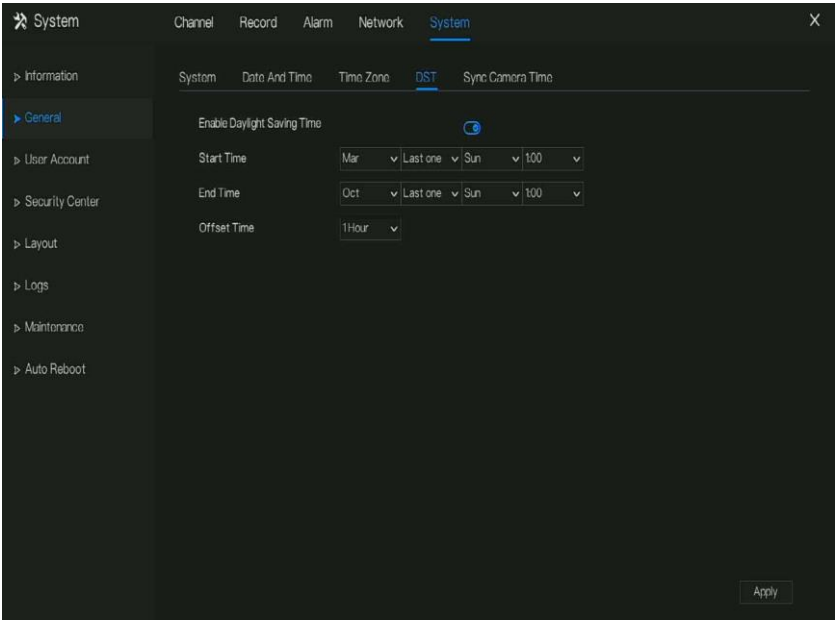
DST

When the DST start time arrives, the device time automatically goes forward one hour (offset time). When the DST end time arrives, the device time automatically goes backward one hour. The offset time can change if the local rule is different.

Operation Steps

Step 1 Click **DST** page to access the DST setting screen, as shown in Figure 7-84.

DST setting screen



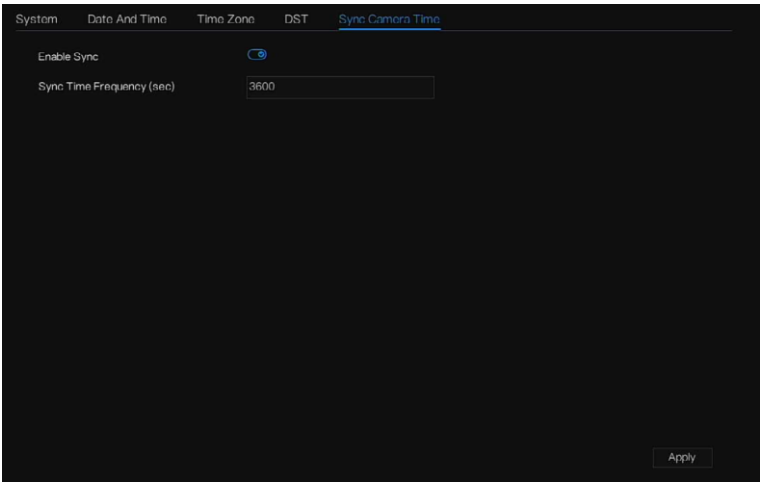
Step 2 Click next to **DST** to enable DST.

Step 3 Select start time, end time, offset time from the drop-down list respectively, that basis on the local rules.

Step 4 Click to save settings.

Sync Camera Time

Enable the sync camera time, the channels will show the sync time, and set the frequency of check



7.5.3 User Account

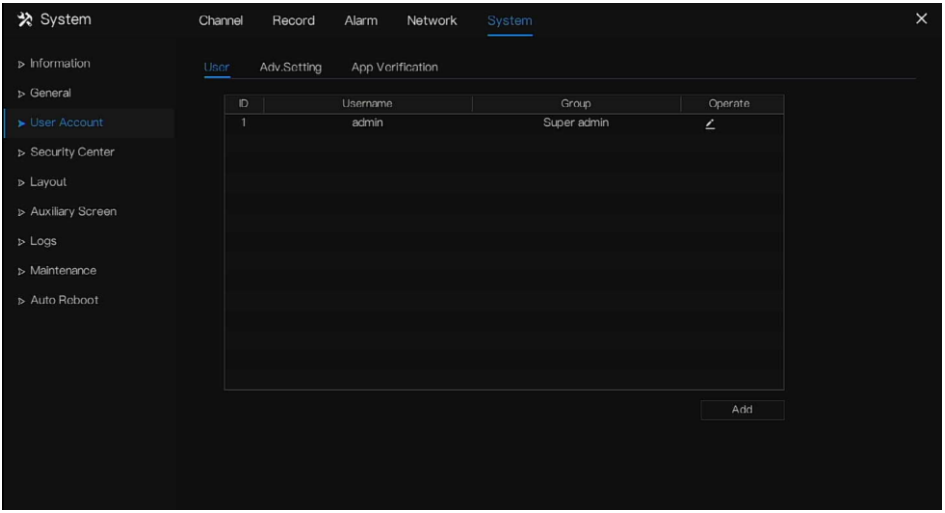
Add, modify, and delete a user and privilege in user screen, admin user can dispose privilege to different users.

User

Operation Steps

Step 1 Click **User** in the main menu or menu of the system management screen and choose **User** to access the user screen, as shown in Figure 7-85.

User management screen

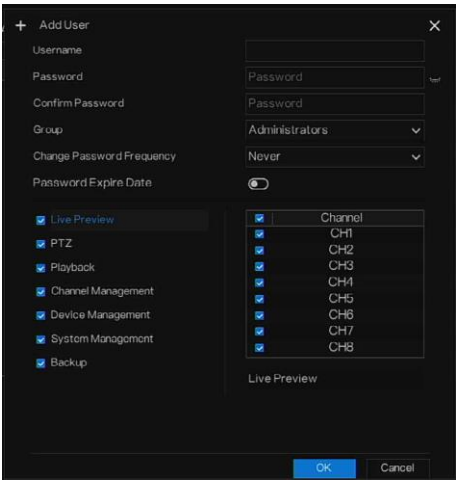


Step 2 Add or delete a user.

- Add a user

  Click **Add**, the **Add User** dialog box appears, as shown in Figure 7-86.

Add user screen



Input a username, password and confirm password, choose group and change password reminder, set the expire date.

NOTE

The password should include at least two types of letters, characters and numbers.

The password should be 6~32 characters long.

Step 3 Select a **Group** from the drop-down list box.

Step 4 Select a **Change password reminder** value from the drop-down list box.

Step 5 Enable the expire date to set the new user's authority time.

Step 6 Select the operation privileges and channels in the list of the add user screen.

Step 7 Click OK. The user is set successfully.

NOTE

The default user is **Administrator** and cannot be deleted or modified.

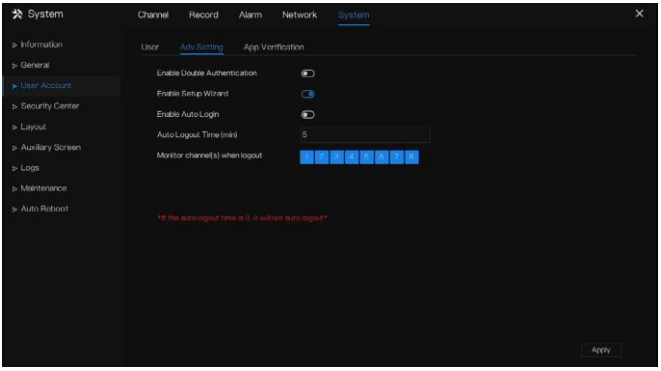
Select a user from user list and click to edit, or click to delete a user.

Advanced Setting

Operation Steps

Step 1 Click **User** in the main menu or menu of the system management screen and choose **Adv Setting** to access the user screen, as shown in Step 1.

Advance setting screen



Step 2 Enable or disable Double Authentication, Auto login, Setup Wizard. Set the logout time if the user disables the auto login.

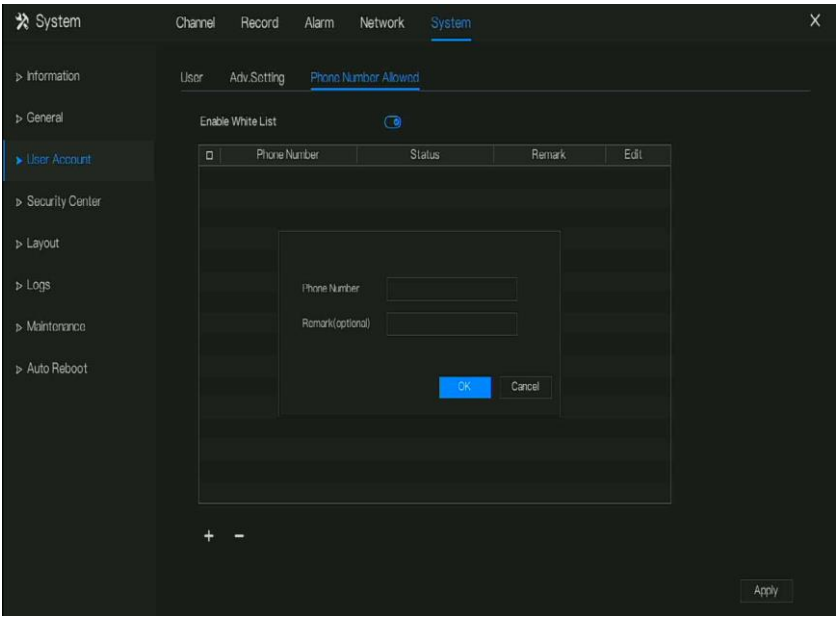
Step 3 Choose monitor channels when logout, the default is all channels.

Step 4 Click Apply to save settings.

App Verification

Add the digital number to whitelist, When log in to the mobile app to manage the NVR, enter a series of numbers in the whitelist for testing and verifying to ensure security.

App verification



Up to 20 groups of security codes can be added and notes can be modified for them.

Tick the numbers, click "-" to delete the numbers.

Click Apply to save the setting.

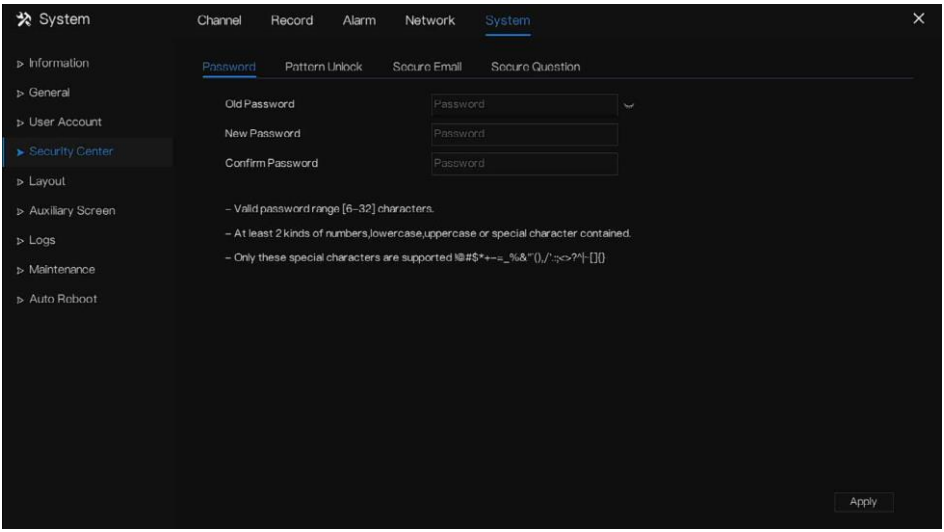
7.5.4 Security Center

Password

Operation Steps

Step 1 Click **Security Center** in the main menu or menu of the system management screen and choose **Password** to access the modify password screen, as shown in Figure 7-88.

Password modification screen



Step 2 Input the correct old password, new password, and confirm password.

NOTE

The password should include at least two kinds of letter, character and number.

The password should be 6~32 characters.

Only special characters (！ @#&*+=-%&"'`(),/'.:;< >?^|~[]{}) are supported,

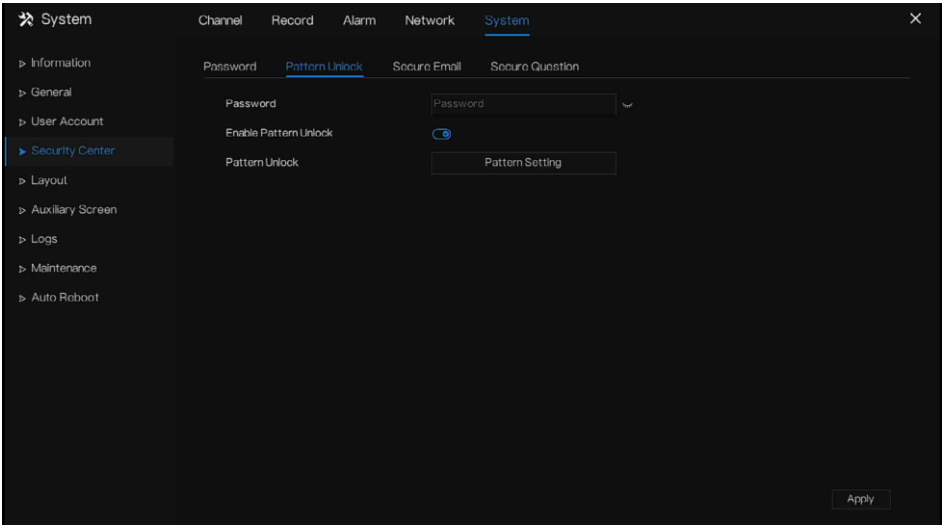
Step 3 Click Apply to save modified password settings.

Pattern Unlock

Operation Steps

Step 1 Click **Security Center** in the main menu or menu of the system management screen and choose **Pattern Unlock** to access the modify pattern unlock screen, as shown in Figure 7-89.

Pattern unlock screen



Step 2 Input the password, enable pattern unlock.

Step 3 Click **Setting Pattern** to set an new pattern unlock.

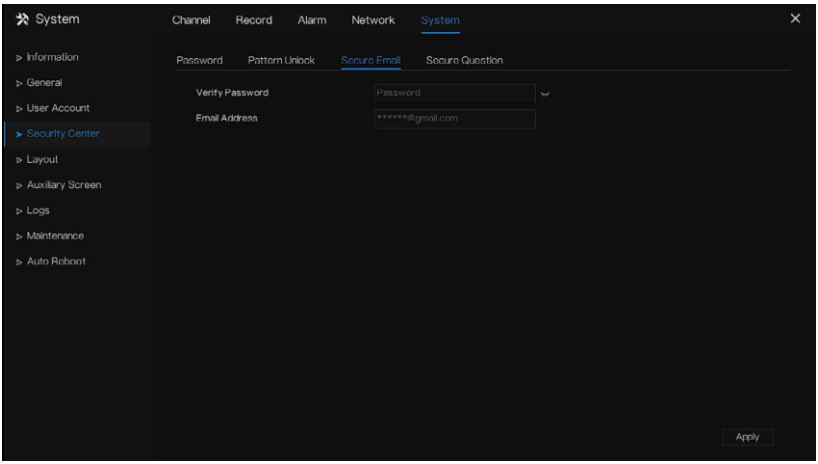
Step 4 Draw the pattern, then it will remind to draw the confirmation pattern again.

Step 5 Click OK to save the pattern unlock.

Secure Email

Set the email to receive the verification code to create new password, as shown in Figure 7-90.

Secure Email



Step 1 Input the password of NVR.

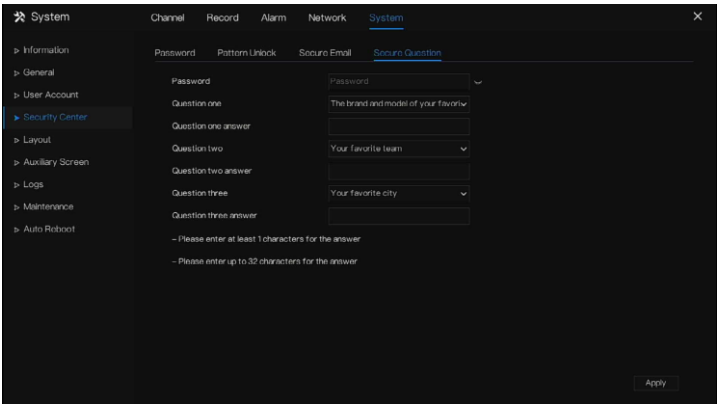
Step 2 Set the Email address to receive verification code.

Step 3 Click Apply to save setting.

Secure Question

Set the questions to create new password, as shown in Figure 7-90.

Secure question



Step 1 Input the password of NVR.

Step 2 Choose the question from drop-down list.

Step 3 Input the answer, click Apply to save setting.

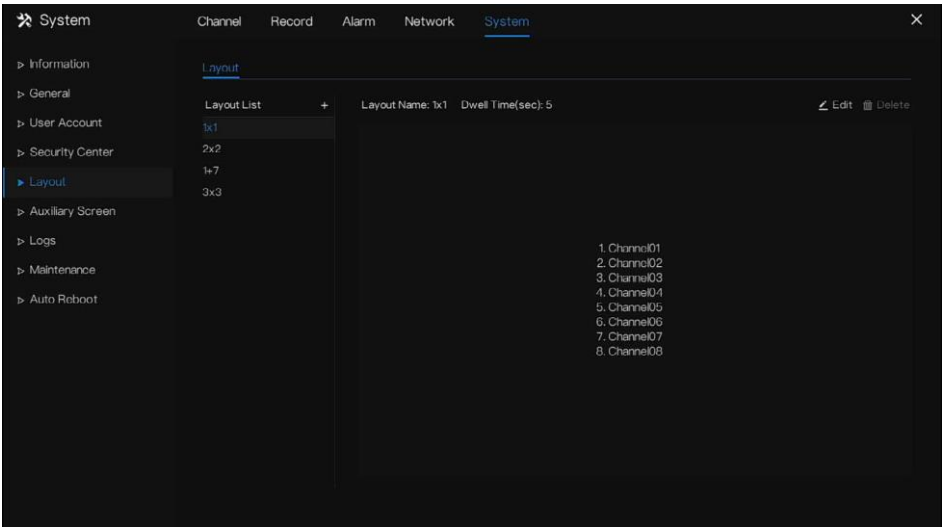
7.5.5 Layout

Set viewing video mode, dwell time in display screen. The layout is set as auto sequence multiple screen.

Operation Steps

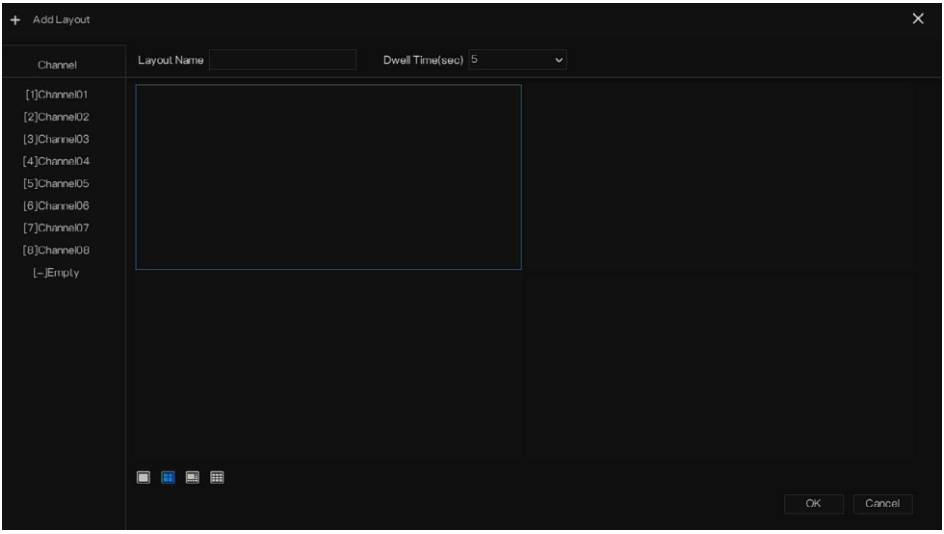
Step 1 Click **Layout** in the main menu or menu of the system management screen and choose **Layout** to access the display screen, as shown in Figure 7-91.

Auto Sequence screen



Step 2 Click “+” to add a new layout. The default layout is one splitting screen.

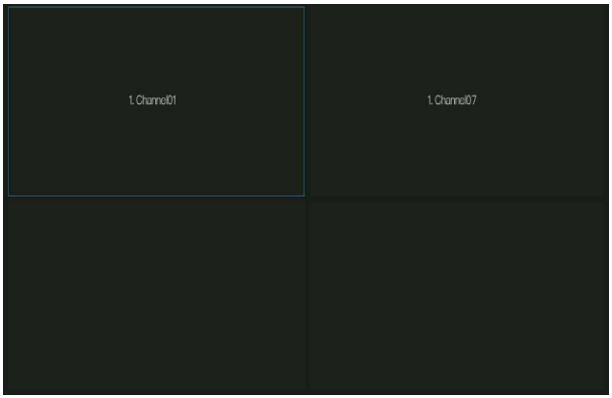
Add a new layout

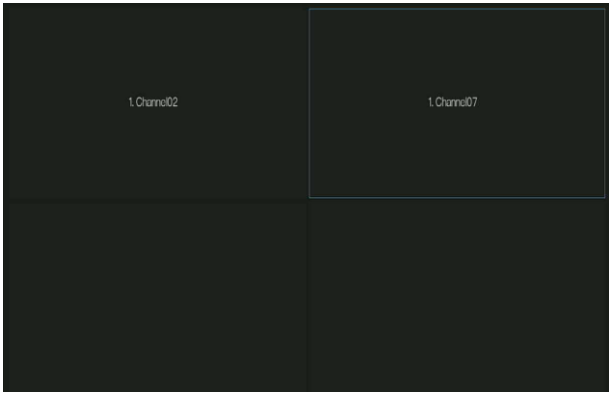


Step 3 Input the layout name, select dwell time from the **SEQ** Dwell time drop-down list(the display screen will loop play the real time video according to setting time).

Step 4 Select split screen mode at the bottom of the page. Set the channel display by dragging the channel to specific position, or select the position first, then click the channel. A split screen can play multiple channels. Auto sequence means it will play according to the setting. For example, the first split screen is set as two pages (channel 1 and 2), the second split screen is set as one page (channel 3). When auto sequence is enabled, channel 1 and channel 3 are displayed, then channel 2 and channel 3 are displayed.

Auto sequence





Step 5 Click Apply to save dwell settings.

NOTE

User can add up to 16 layouts.

7.5.6 Auxliary Screen (Only for Some Models)

NOTE

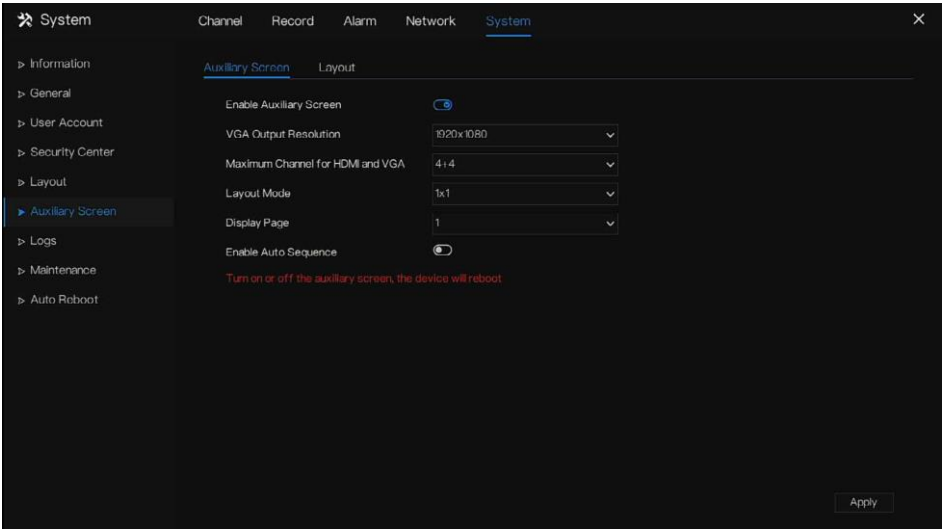
This function only can be used for the devices with 8 or more than channels. The main screen is connected by HDMI (HD-OUT 2), auxiliary screen is connected by VGA.

Operation Steps

Step 1 Click **Auxiliary Screen** in the main menu or menu of the system management screen.

Step 2 Enable the auxiliary screen, as shown in Figure 7-94

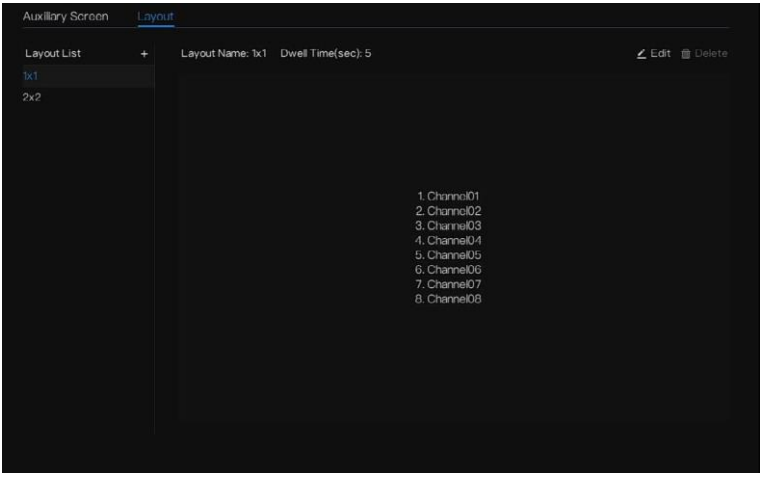
Auxiliary screen



Step 3 Set the Output Resolution, Decoding Ability(main + auxiliary), Layout Mode, Display Channel.

Step 4 Enable tour to set **Auto Sequence** of auxiliary screen as shown.

Auto sequence of auxiliary screen



Step 5 Click Apply to save settings.

NOTE

The auxiliary screen shows different channels with main screen, and the auto sequence show all channels.

The auxiliary screen will show the personnel counting information if it is enabling.

7.5.7 Logs

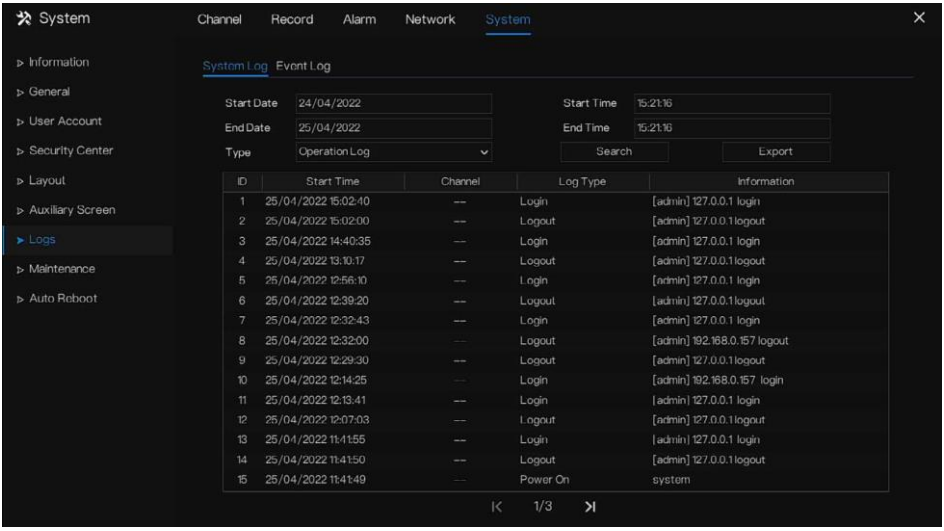
System Log

Search for logs information and export the information of logs.

Operation Steps

Step 1 Click **Logs** in the main menu or menu of the system management screen and choose **Logs** to access the log screen, as shown in Figure 7-96.

Log screen



Step 2 Set start date, end date, start time and end time of the logs on log screen.

Step 3 Select logs type from the drop-down list.

Step 4 Click Search to query logs.

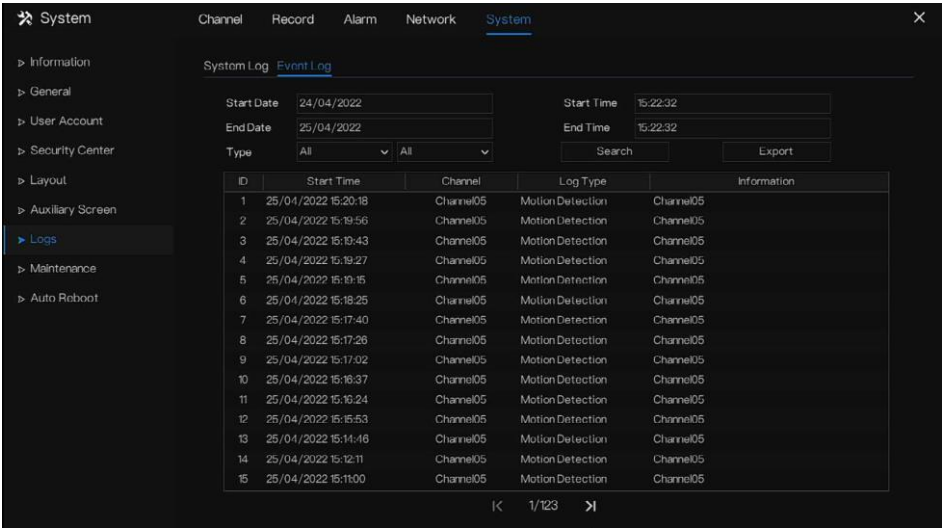
Step 5 Click Export to export logs to flash disk.

Step 6 the logs can be saved to flash disk and hard disk at the same time, the newest logs is saved to flash disk, and the old logs will be transferred to hard disk.

Event Log

Event logs are divided into more detailed types, which can be found quickly. Its operation is the same as the system log, please refer to chapter 7.5.7.1.

Event

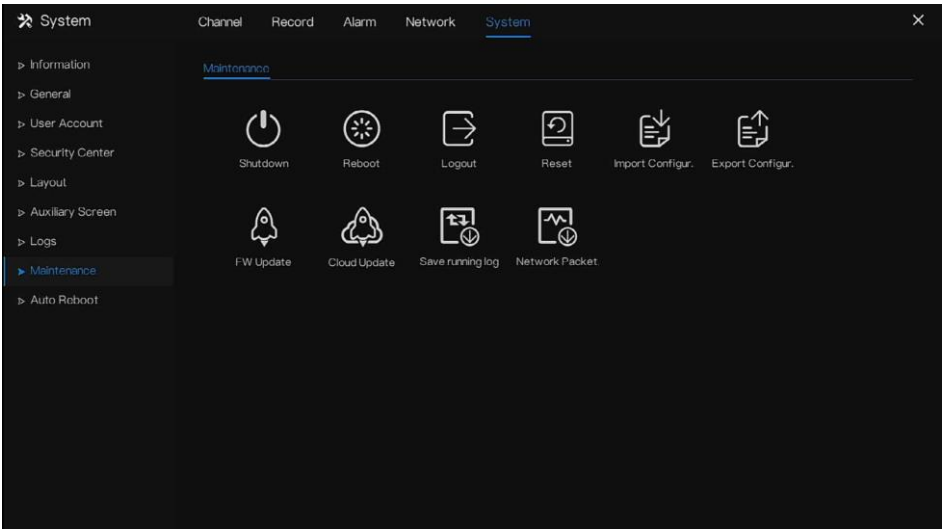

System
Channel
Record
Alarm
Network
System
Information
General
User Account
Security Center
Layout
Auxiliary Screen
Logs
Maintenance
Auto Reboot
System Log
Event Log
Start Date 24/04/2022
End Date 25/04/2022
Type All All
Start Time 15:22:32
End Time 15:22:32
Search
Export
ID Start Time Channel Log Type Information
1 25/04/2022 15:20:18 Channel05 Motion Detection Channel05
2 25/04/2022 15:19:56 Channel05 Motion Detection Channel05
3 25/04/2022 15:19:43 Channel05 Motion Detection Channel05
4 25/04/2022 15:19:27 Channel05 Motion Detection Channel05
5 25/04/2022 15:19:15 Channel05 Motion Detection Channel05
6 25/04/2022 15:18:25 Channel05 Motion Detection Channel05
7 25/04/2022 15:17:40 Channel05 Motion Detection Channel05
8 25/04/2022 15:17:26 Channel05 Motion Detection Channel05
9 25/04/2022 15:17:02 Channel05 Motion Detection Channel05
10 25/04/2022 15:16:37 Channel05 Motion Detection Channel05
11 25/04/2022 15:16:24 Channel05 Motion Detection Channel05
12 25/04/2022 15:15:53 Channel05 Motion Detection Channel05
13 25/04/2022 15:14:46 Channel05 Motion Detection Channel05
14 25/04/2022 15:12:11 Channel05 Motion Detection Channel05
15 25/04/2022 15:11:00 Channel05 Motion Detection Channel05
1/123

7.5.8 Maintenance

Operation Steps

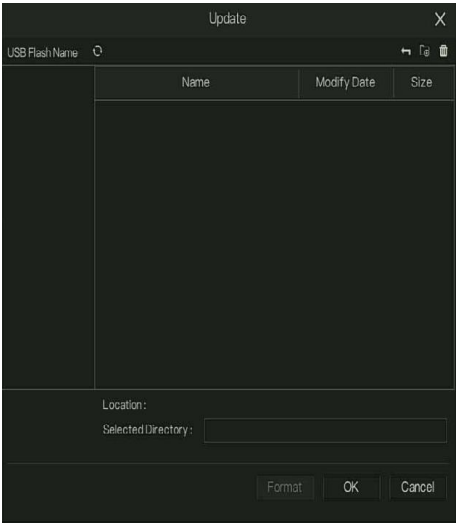
Step 1 Click **Maintenance** in the main menu or menu of the system management screen and choose **Maintenance** to access the maintenance screen, as shown in Figure 7-98.

Maintenance screen



Step 2 Click Shutdown, Reboot , Logout, Exit system, Reset or update to operate NVR if you need.

Firmware update



Step 3 Click import configuration or export configuration to view the message " A**re you sure to import the configuration?"** Make sure the flash driver is working.

Step 4 The tips will show on screen, click **ok** to ensure choice.

Step 5 Click **Import Config** to import the configuration to flash drive.

Step 6 Import the configuration, the device would restart immediately.

Step 7 Click **Export Config** to export the configuration from flash drive.

NOTE

When the NVR finishes updating, the device would restart.

Network packet capture: the NVR is plugged into the USB disk, click the network packet capture, and set the relevant parameters of the packet capture. The captured data can be downloaded and used for device problem analysis.

FW Update, firmware update; Plug in the U disk with the update software, choose the file to update.

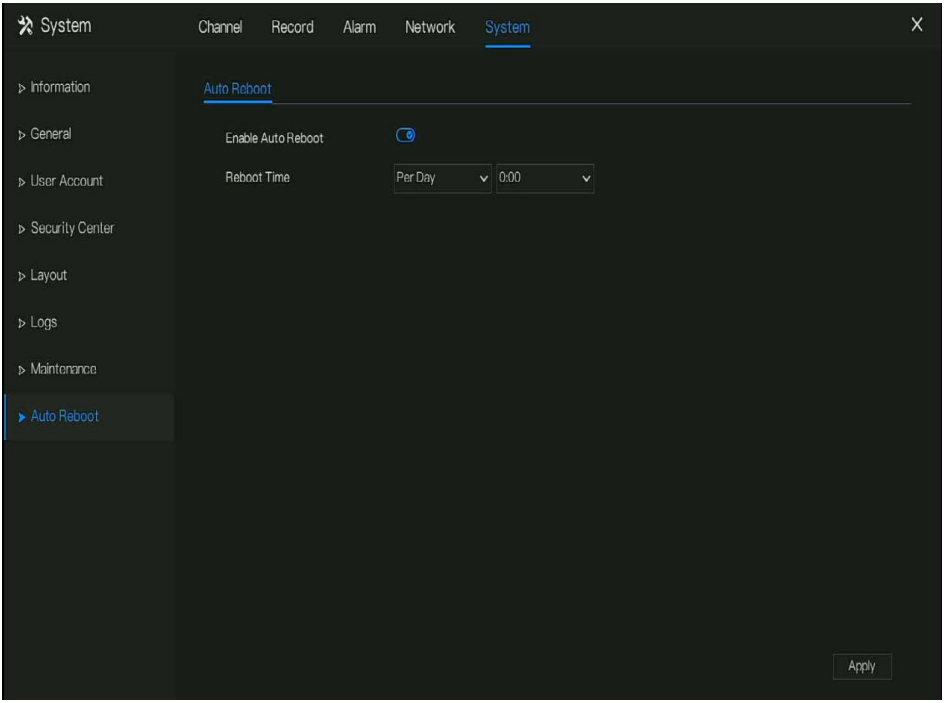
Save running log: In the U disk to save the running log.

7.5.9 Auto Reboot

Operation Steps

Step 1 Click **Auto reboot** in the main menu or menu of the system management screen and choose **Auto reboot** to access the maintenance screen, as shown in Figure 7-98.

Auto restart screen



Step 2 Enable the function, restart time is showing as figure

.

Step 3 Restart the NVR per day, week or month.

Step 4 Select the restart time from the drop-down list.

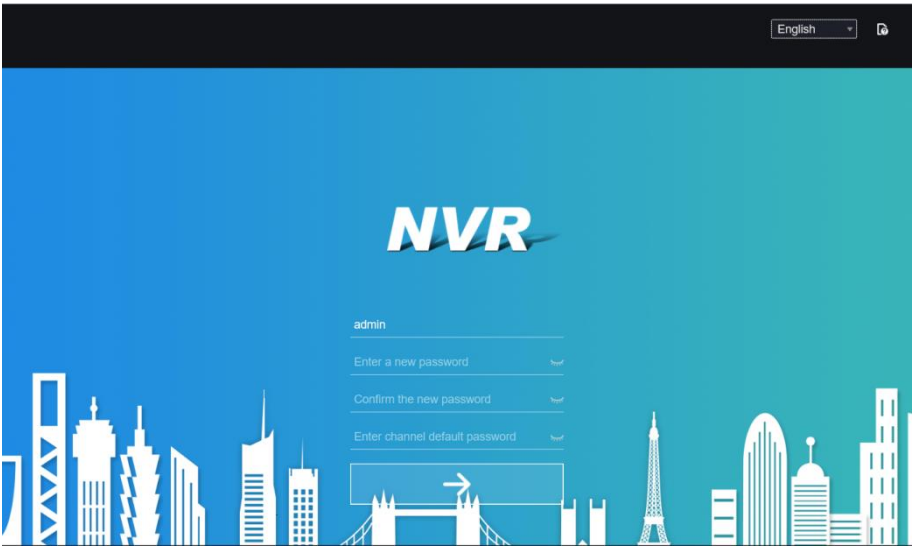
8 WEB Quick Start

The functions of Web are the same as those of UI system, all functions can be referred to chapter 7 UI system setting.

8.1.1 Activation

If you don’t set the password at UI interface, user need activate the device, as shown in

Activation

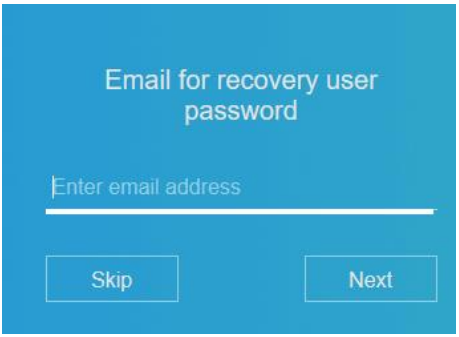


Step 1 Set the password, and confirm the password.

Step 2 Input the channel password.

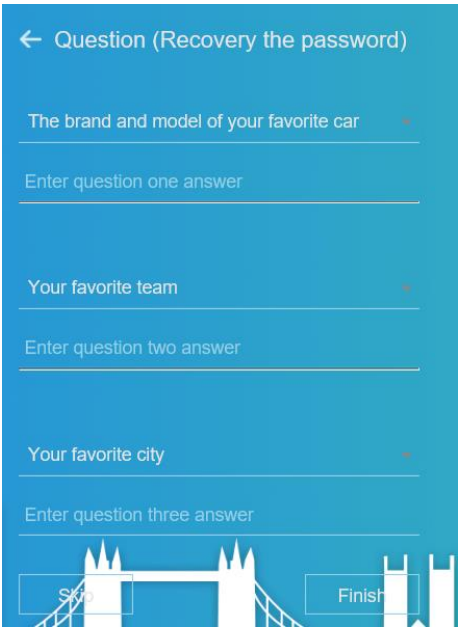
Step 3 Set the email to recovery the password.

Email



Step 4 Set the question to recovery the password.

Question



NOTE

If you don't set the email or question, you can skip the steps.

8.1.2 Login and Logout

CAUTION

You must use Firefox 53, Chrome 45 or Edge to access the Web interface. Otherwise, the interface functions cannot be used normally.

The win 7/ win 10 system supports Firefox/Chrome, but the XP system does not.

Brower supports 32 bits systems.

Descriptions of browser:

To access the client by using Chrome 42-44, you need to enable manually Npapi in the browser according to following steps:

- In the Chrome address bar, enter chrome://flag/#enable-npapi.
- Go to the experimental features' management page.
- Enable NAPAPI Mac, Windows.
- Click **Enable** (NPAPI plugin is enabled).
- Re-launch Chrome.

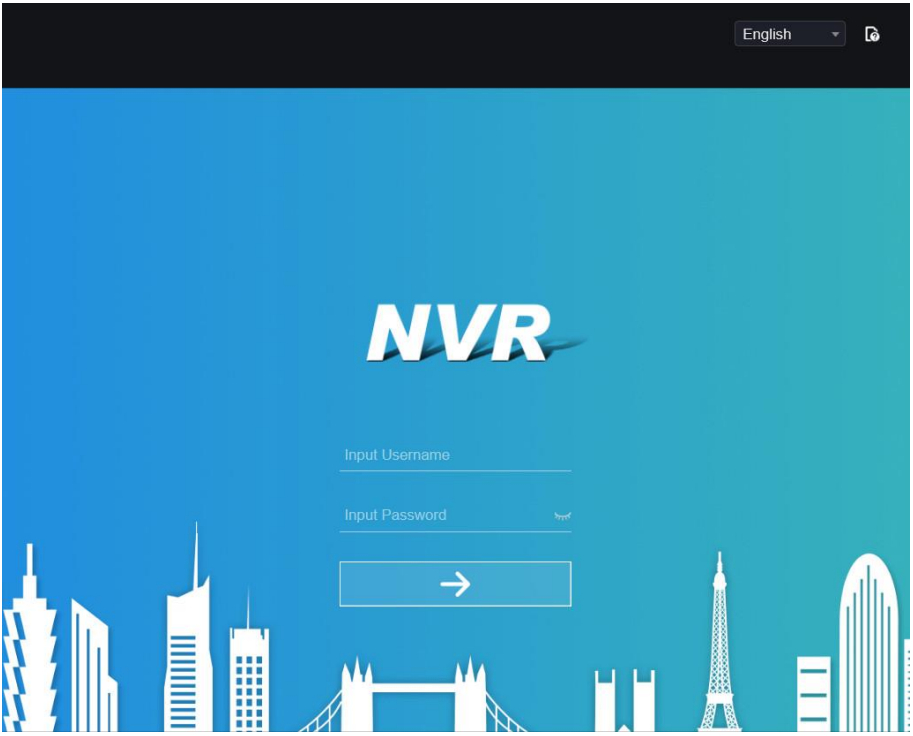
Here we take IE 10 as an example for videos viewing.

Login

Step 1 Open IE browser, enter the IP address of the NVR (default value: 192.168.0.121) in the address box, and press **Enter**.

The login page is displayed, as shown in Figure 8-4.

Login page interface



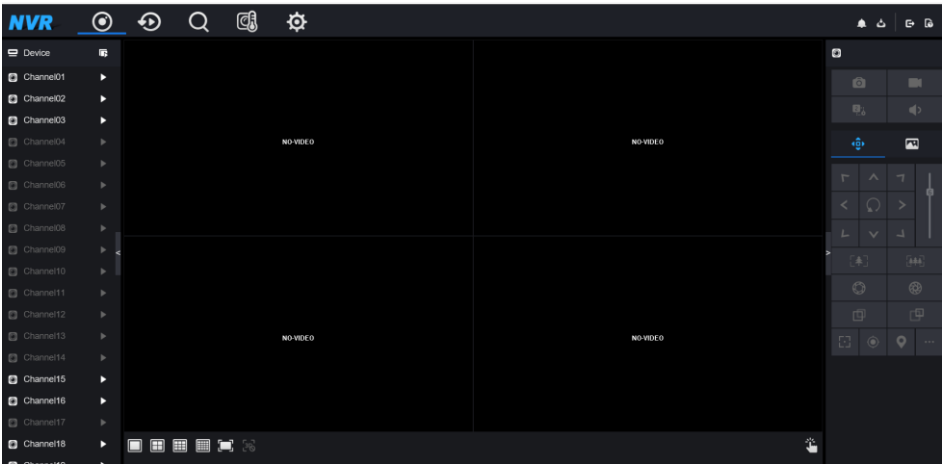
Step 2 Input the user name and password.

NOTE

The default user name and password both are admin. The password is incorrect more than 3 times, please log in again after 5 minutes.
User can change the system display language on the login page.
The modify password page pop-up window would show when login the NVR for the first time.

Step 3 Click **Login** to access the homepage, as shown in Figure 8-5.

Homepage interface 1



Homepage interface 2

Logout

To logout of the system, click in the upper right corner of the homepage. The pop-up message shows "**Would you like to exit?**" Click OK and the login page will display.

Homepage Layout

NVR allows you to use the Web interface in a PC for implementation of such functions as live video, playback, retrieval, setting, image parameters access, configuration, PTZ control and so on. Figure 6-8 shows the overall layout of the interface. For descriptions of the interface, please refer to Table 8-1.

Homepage layout

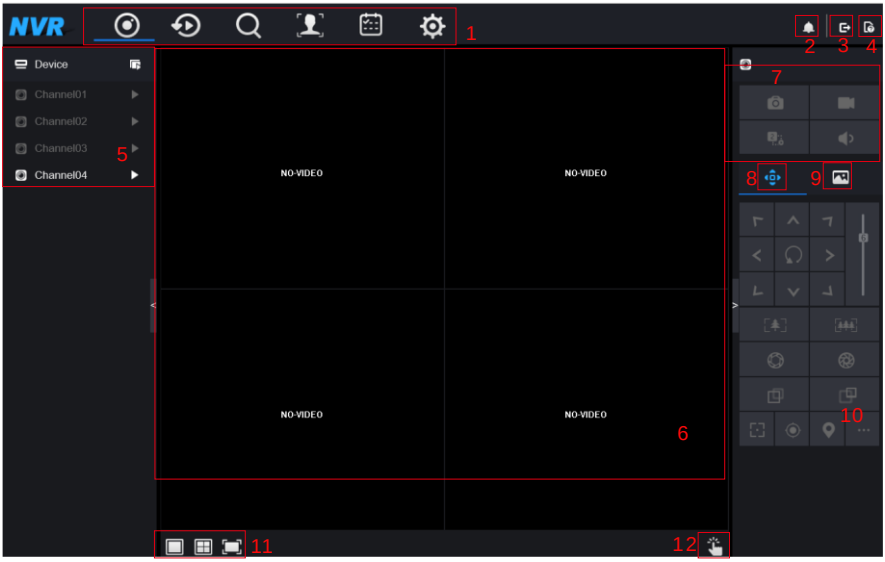


Table 8-1 Descriptions of homepage

No.	Function	Description
1	Function navigation bar	Main functions navigation bar of the device, it includes Live Video, Playback, Alarm Search, Face Recognition, Attendance and System Setting.
2	Alarm	Alarm notification. User can tick pop-up message to monitor, system alarm and channel alarm.
3	Logout button	User can click **Logout** to exit the current account and return to the login interface.
4	Help	Help for running environment, plug-in installation and activation.
5	Device's list	Display a list of the channels of the managed NVR and the channels managed by NVR.

6	Real-time video	Display the real-time videos of the channels managed by NVR.
7	Channel Operation	Include snapshot, record, stream switch and audio on/off.
8	PTZ control button	Click to show PTZ control buttons in zone 10, you can control the PTZ equipment in the current channels. That function only uses for IP dome camera.
9	Colour parameter button	Click to show colour parameter setting buttons in zone 9, you can set and adjust the colour parameters, for example, brightness, contrast, saturation, and sharpness. Click **More** to access image settings.
10	Operation zone	The operation zone of PTZ control and image parameter setting.
11	Layouts	Select the one-screen, four-screen, nine-screen or sixteen-screen to switch the layout.
12	Manual alarm	Trigger and close the external alarm device manually.

8.1.3 Browsing Videos

8.1.4 Browsing Real-Time Videos

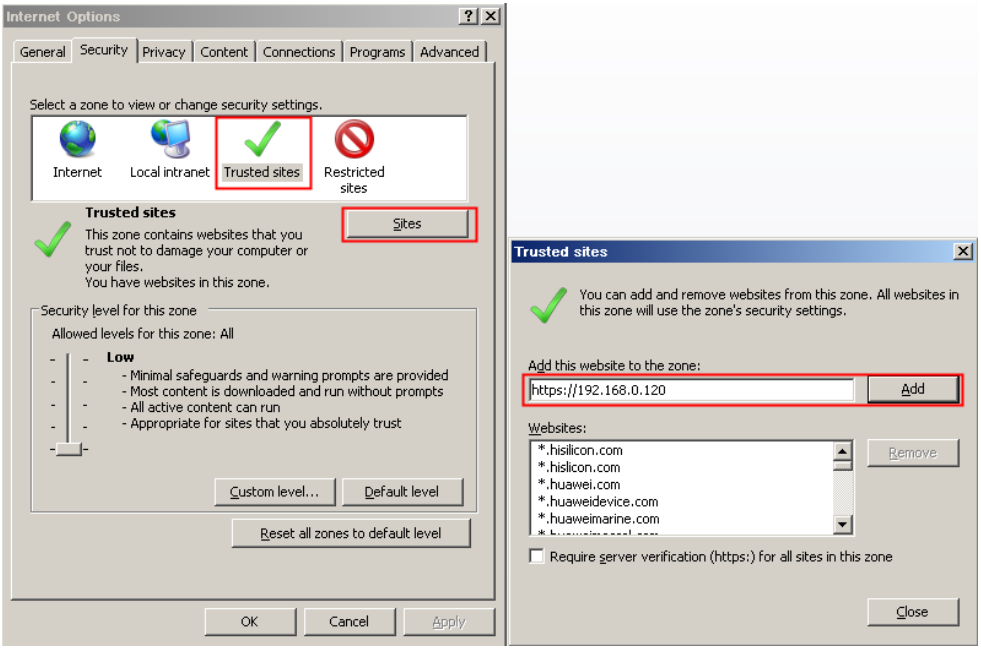
You can browse real-time videos in the web management system.

Preparation

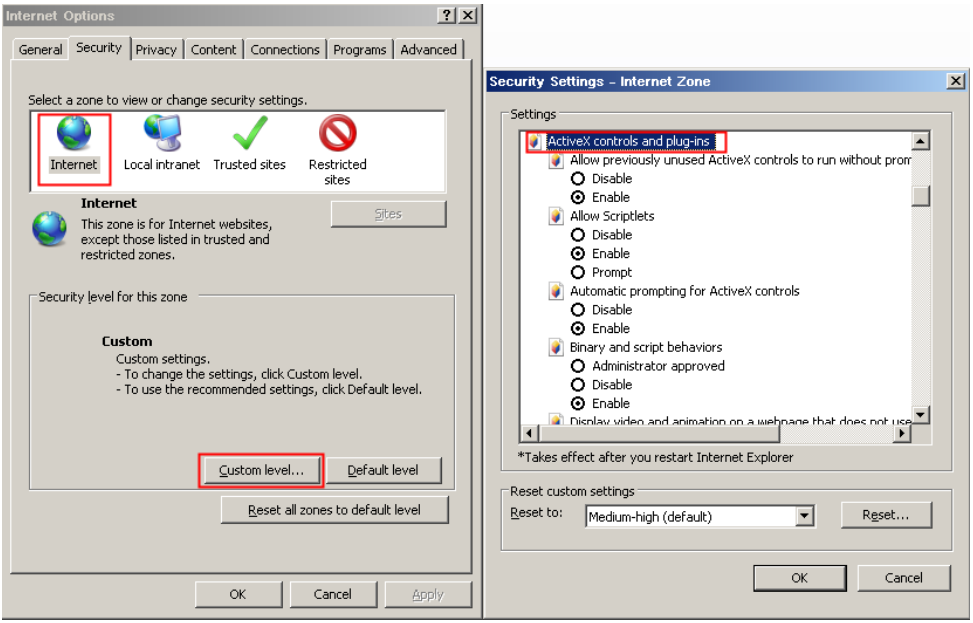
To ensure that real-time videos can be played properly, perform the following operations when you log in to the web management system for the first time:

Step 1 Open Internet Explorer. Choose **Tools > Internet Options > Security > Trusted sites > Sites**. In the displayed dialog box, click **Add**, as shown in Figure 8-8.

Adding a trusted site



Step 2 In Internet Explorer, choose **Tools > Internet Options > Security > Customer level**, and set Download unsigned ActiveX controls and Initialize and script ActiveX controls not marked as safe for scripting under ActiveX controls and plug-ins to Enable, as shown in Figure 8-9.



Download and install the player control as prompted. During installing, you need to close the browser.

NOTE

If the repair tips displayed when installing the control , close the browser and continue the installation, reopen the login page when the control is installed.

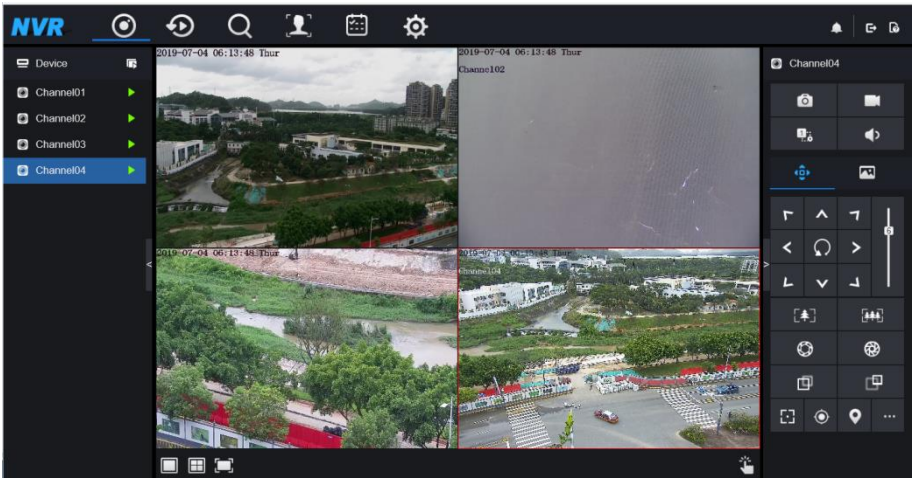
8.1.5

Live Video

Descriptions

After login the device, click online channel, you can view the real-time videos, as shown in Figure 8-10.

Real-time videos interface



8.1.6 Channel Operation

Descriptions

Channel operation includes snapshot, record, stream switch and audio on/off. Table 8-2 describes the operations.

Table 8-2 Descriptions of homepage

Buttons	Button description	How to operate
	Snapshot	Click button to take snapshots of the current image.
	Record	Click button to start recording and click button again to stop recording.
	Switch stream	Click button to switch stream 1 (main stream) and stream 2(sub stream).
	Enable/Disable video	Click button to enable the audio and click again to disenable the video.

8.1.7 PTZ Control and Setting

Descriptions

The PTZ control and setting function applies only to Network Dome or camera connected to an external PTZ.

PTZ Setting

If a Network Dome or a camera connected to PTZ had been added to the NVR channel, users can control the PTZ rotation to adjust their shooting angle when you are viewing the video. This allows you to perform Omni-directional video surveillance.

Click , the PTZ operation and setting interface is as shown in Figure 8-11. Table 8-3 describes the operations.

PTZ control interface

Table 8-3 Device parameters

Buttons	Button description	How to operate
	Direction key	Click button to control omni-directional movement of the PTZ.
	Speed slider	Drag the slider to adjust the value of PTZ rotation speed.
	Zoom in	Click buttons to adjust the focal length.
	Zoom out	
	Iris+	Click buttons to adjust the aperture.
	Iris-	
	Far focus	Click buttons to adjust the focal length.
	Near focus	
	Auto focus	Click button to focus automatically.
	Home preset	N/A
	Preset	The camera is set the tour, click the button and dome camera rotate as the setting.
	More	More settings, scan and tour

8.1.8

Sensor Setting

Descriptions

The sensor setting can adjust scene, brightness, sharpness, contrast and saturation, click to access image setting, as shown in Figure 8-12. Table 8-4 describes the operations.

Image parameter interface

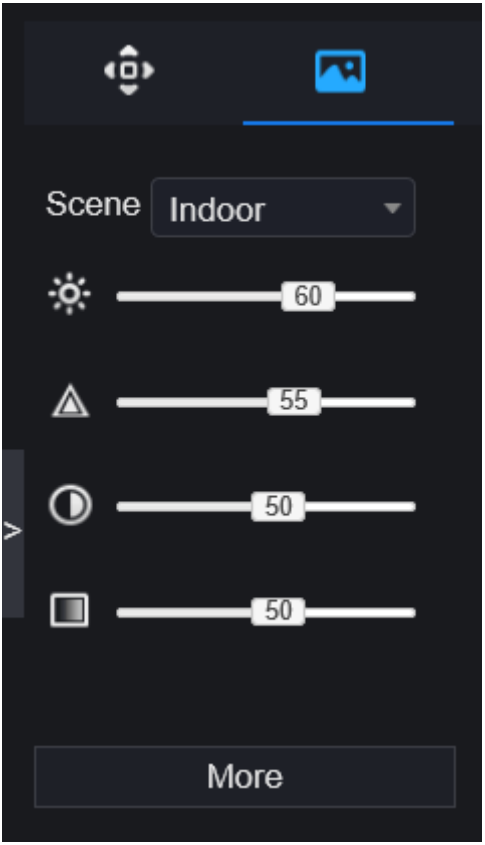
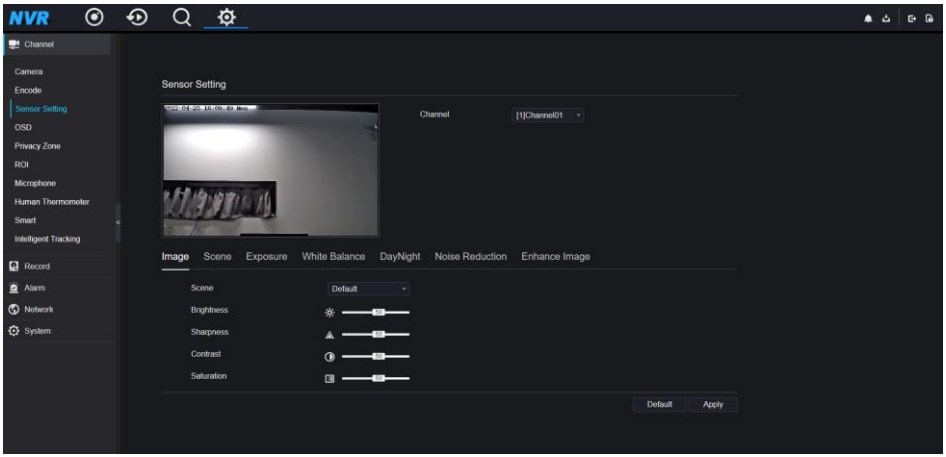


Table 8-4 Device parameters

Buttons	Button description	How to operate
	Brightness	Click button to adjust the image brightness.
	Sharpness	Click button to adjust the image definition.
	Contrast	Click button to adjust the transparency of the image.
	Saturation	Click button to adjust the chromatic purity of the image.

Click more will be access to system sensor setting. As shown in Figure 8-13, for more detail please refer to *chapter Figure 4-7*.

Sensor setting interface



8.1.9 Layout

Click at the bottom left conner of real-time videos interface, the buttons indicate 1 screen, 4 screens and 9 screens from left to right. The device with more POE ports can support 16 screens layout.

8. 2 Playback

8.2.1 Video Playback

Video playback refers to playing of videos stored in local hard disks.

Procedure

Step 1 Click in the function navigation bar, the video playback interface is displayed, as shown in Figure 8-14.

Video playback

Step 2 Select a channel. Click a device in the device list. A selected device is marked with .

The unselected device is marked with .

Step 3 Select a date from calendar at left bottom, the date will be coloured if it has record as shown in upper figure.

Step 4 Tick the type of record, such as schedule record, manual record and alarm record.

Step 5 Display videos.

After a device and date are selected, video information is displayed below the video pane. The time scale above the file axis shows the different time points of video recording. The time in blue in the middle is the time of the video playing.

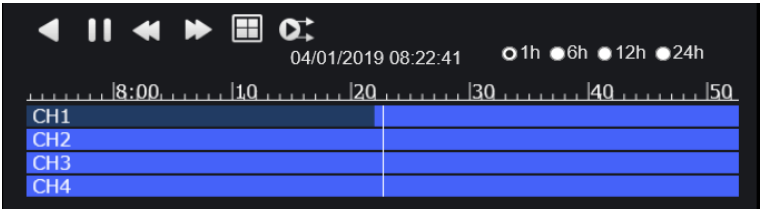
The file axis displays videos. The blue file axis indicates a video exits, grey file axis indicates no video exits.

You can drag the axis to play recording quickly.

Step 6 Play a video.

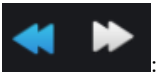
You can play a video after selecting a device and date. Figure 8-15 shows the control bar of video playback.

Control bar



: reversed.

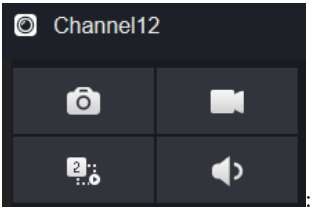
:play/pause.

 : triple speed.

: split screen. One or four screens.

: sync/async. You can set the different channels to play synchronously or asynchronous. Sync mode indicates the selected channels play video synchronously. Async mode indicates users play different time period record

: types of time bar.



: user can operate the record as same as live video.

8.3 Alarm Search

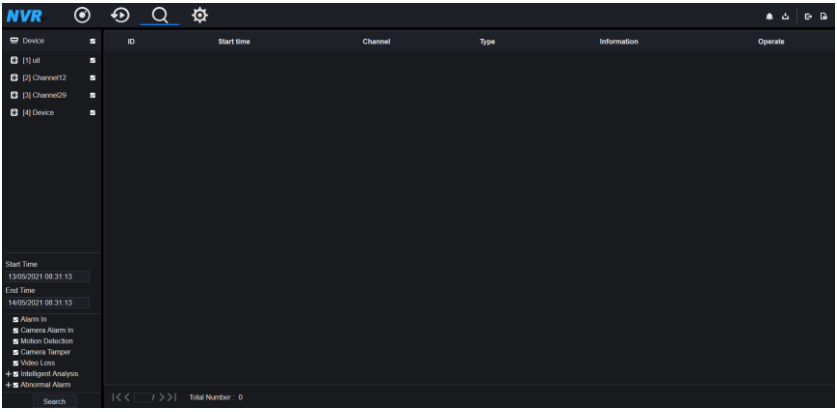
You can search for channel alarm and system alarm in the alarm search interface.

8.3.1 Channel Alarm

Procedure

Step 1 Click in the function navigation bar, the channel alarm interface is displayed, as shown in Figure 8-16.

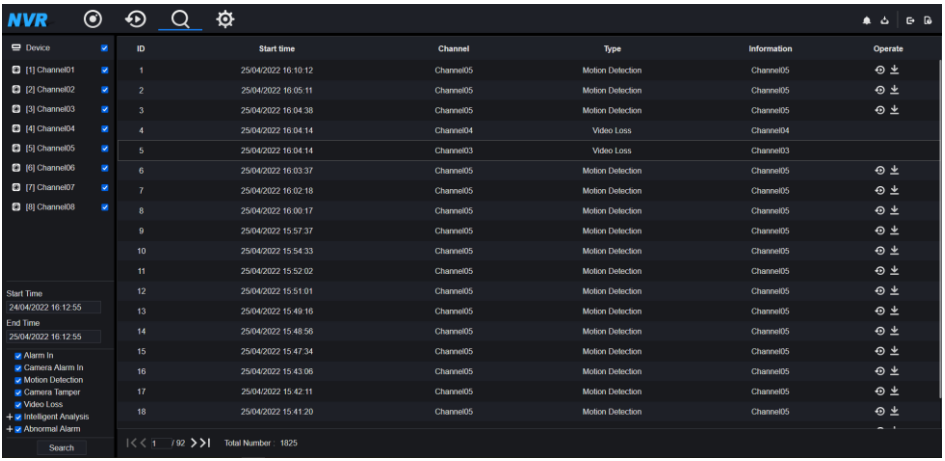
Channel alarm interface



Step 2 Choose the alarm type to search.

Step 3 Click **Search**, the result will be displayed as shown in Figure 8-17.

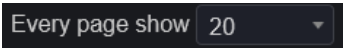
Channel alarm result



NOTE

Click

to select the page of alarm list.



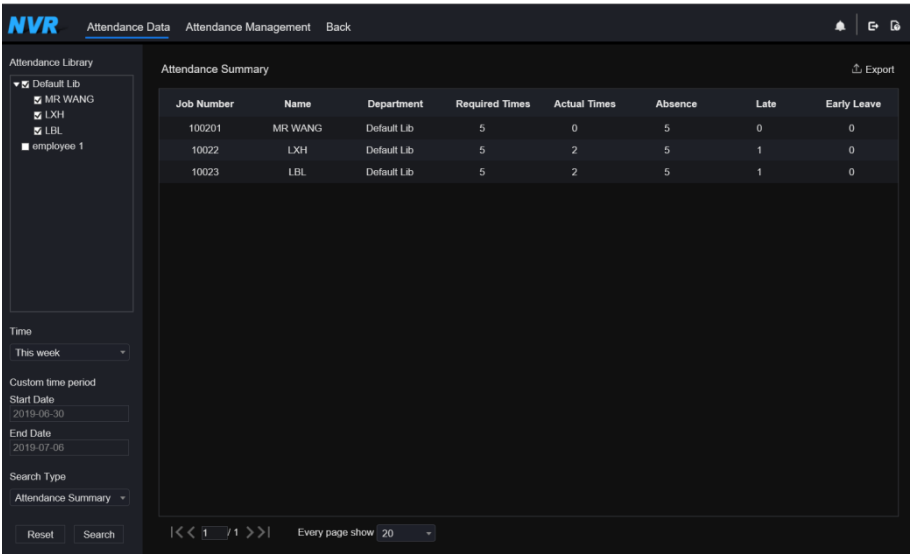
shows the rows shown in every page.

8.4 Attendance (Only for Some Models)

8.4.1 Attendance Data

Click to enter attendance data interface, as shown in Figure 8-18.

Attendance data



Operation Steps

Step 1 Tick the attendance library.

Step 2 Choose time mode, such as today, this week, this month and custom time.

Step 3 Choose search type, such as attendance summary and attendance details.

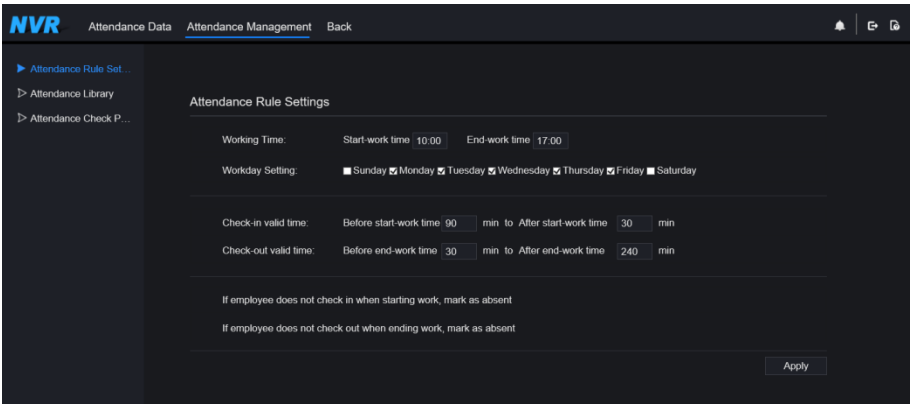
Step 4 Click search, the result will show in interface.

Step 5 Click Export to export the query result.

8.4.2 Attendance Management

In attendance management, user can set attendance rule, library and check point, as shown in Figure 8-19.

Attendance rule settings



Operation Steps

Step 1 Set start work time and end work time.

Step 2 Tick the workdays.

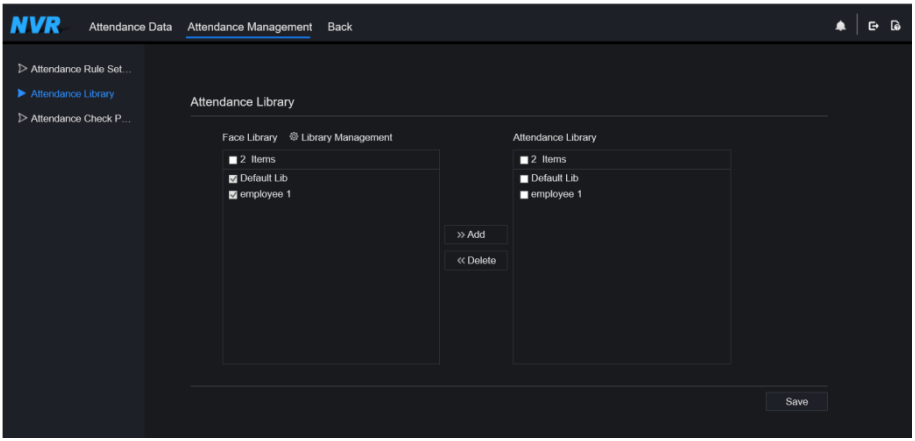
Step 3 Set valid time of check in and check out.

Step 4 Click Save to save the setting.

Attendance library

Step 1 Click **Attendance Library** to add library, the attendance library can call the face database directly.

Attendance library



Step 2 Tick the library and click **Add** to add to attendance library. If you want to modify the library, please enter to library interface to change parameters..

Step 3 click

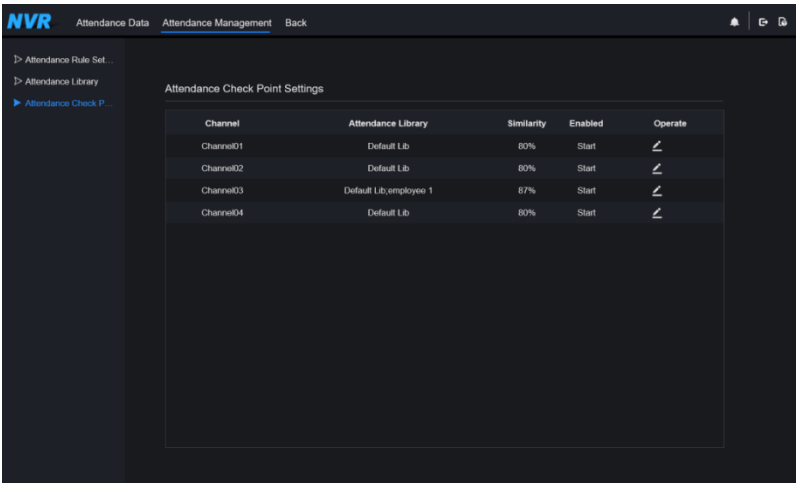
to enter the face database management to modify parameter.

Step 4 Click **Save** to save the setting.

Attendance check point settings:

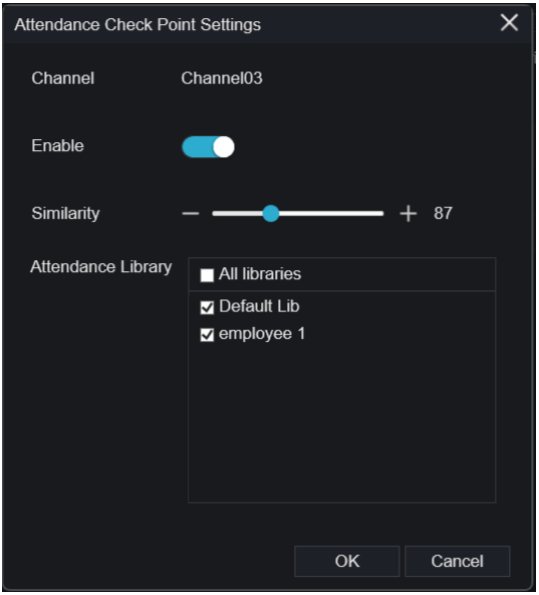
Step 1 Click Attendance check point settings to set point, as shown in Figure 8-21.

Attendance check point setting



Step 2 Click to edit check point setting, as shown in Figure 8-21Step 2

Check point



Step 3 Enable the function, set similarity and tick the library, all face detection cameras can be set the check points.

Step 4 Click OK to save the setting.

8.5 AI Recognition (Only for Some Models)

At AI recognition interface, we can set the **Real time Comparison, Smart search, Archives library, Comparison configuration**.

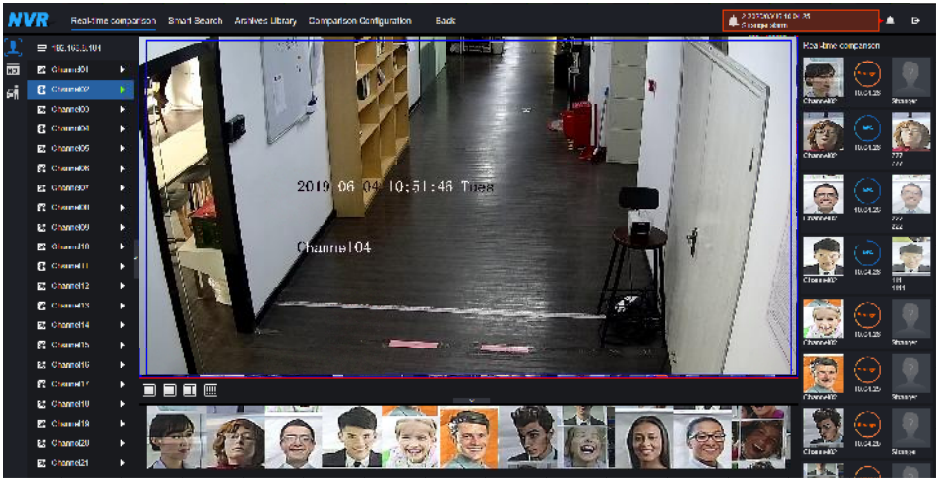
8.5.1 Real Time Comparison

Real time comparison can compare human face, vehicle license plate, and AI(include riding, vehicle, full body)

Human Face

At real time comparison interface, click the to enter the human face comparison interface, choose the cameras with face recognition function to play live video, the snapshot of camera will be compared with libraries, the result shows as in Figure 8-22.

Human face comparison

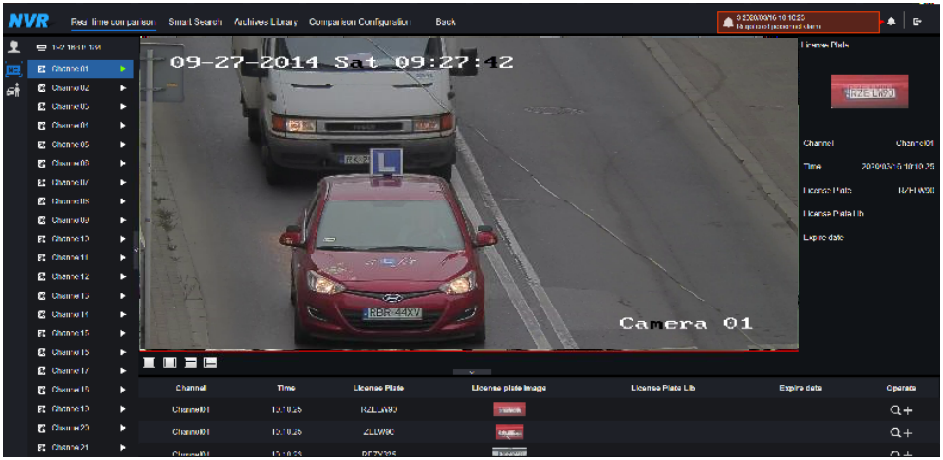


Click the “+” to add the snapshot to face library immediately.

Vehicle License Plate

At real time comparison interface, click the NO. to enter the vehicle license plate comparison interface, choose the cameras with license plate recognition function to play live video, the snapshot of camera will be compared with libraries, the result shows as in Figure 8-23.

Vehicle license plate



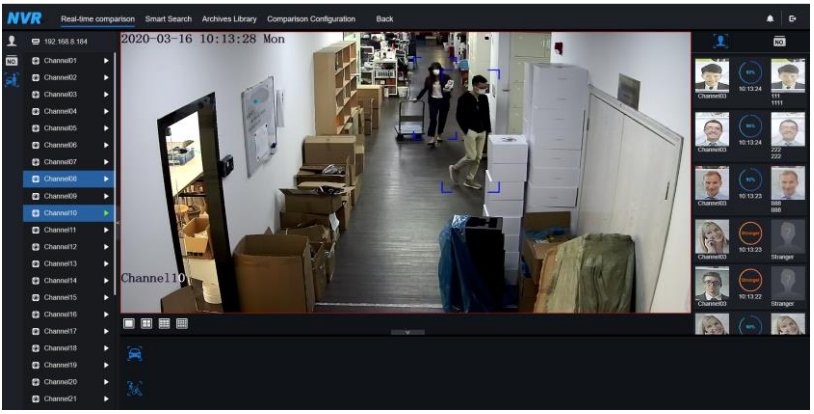
Click the "+" can add the snapshot to license plate library immediately.

To get snapshot in real time video, put the cursor on picture such as , you can add it to face library, or face search. The cursor on area 6 and the pictures are not update, move the mouse so that the pictures can be shown in time.

Vehicle and Full Body

At real time comparison interface, click the NO. to enter the vehicle license plate comparison interface, choose the AI recognition cameras to play live video, the snapshot of camera will compare with libraries, the snapshot to vehicle and full body will show at the bottom of page, the result shows as in Figure 8-24.

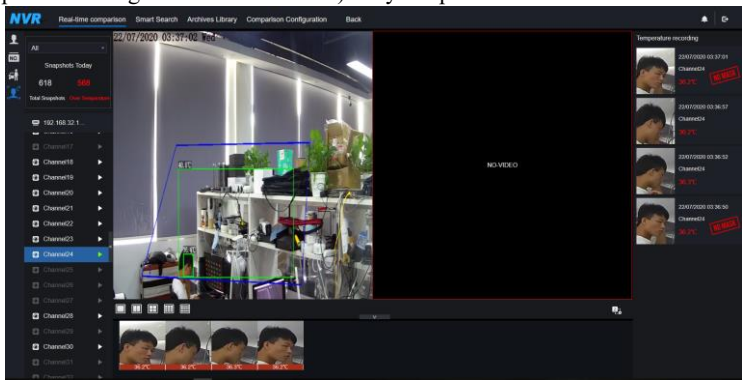
Full body



Real Time Body Temperature Filter

The real time body temperature will show the snapshot of device, it shows the over temperature and snapshot to human face.

Snapshot will show the characteristic such as no mask (the mask detection configuration can be set at comparison configuration interface)Body temperature

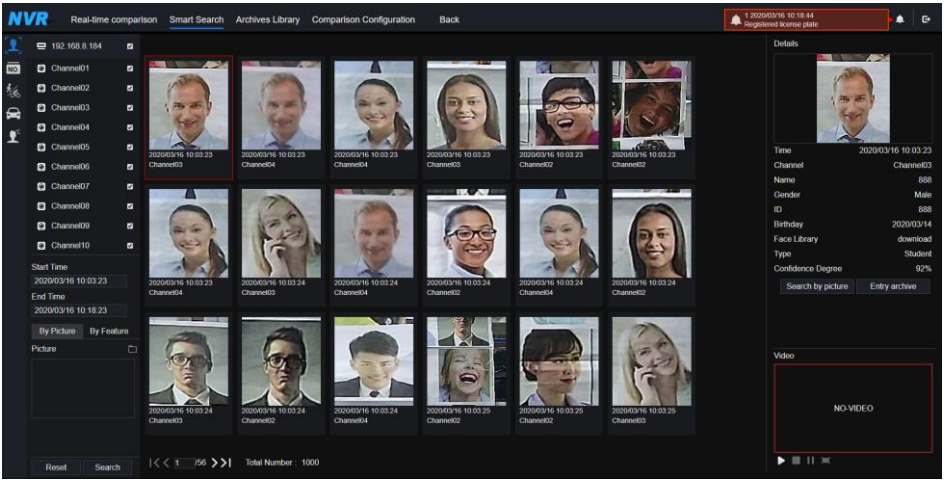


8.5.2 Smart Search

At smart search interface, users can search the human face, vehicle license plate, full body, car, body temperature.

Human Face Search

Human face search



Step 1 Choose human face search at smart search interface.

Step 2 Tick the face recognition camera channels, set the start time and end time.

Step 3 Choose the condition (by picture or by feature), the picture can be chosen from the file folder.

Step 4 Click “Search” to search the snapshot of human face.

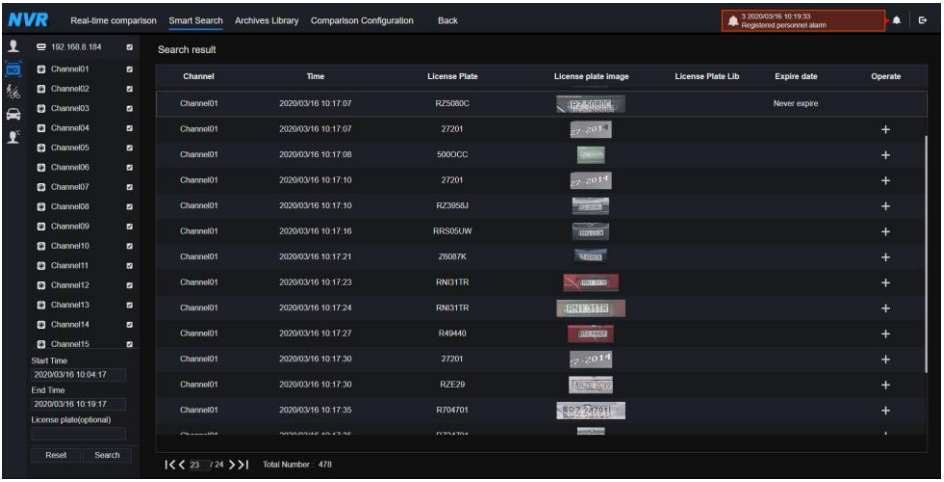
Step 5 The result will show at the middle of page, click the picture and detailed information at the top right of page.

Step 6 Detailed picture can be used to search or add to library.

Step 7 Click play button of video to play the recordings of snapshot.

Vehicle License Plate Search

Vehicle License Plate search



Step 1 Choose vehicle License Plate at smart search interface.

Step 2 Tick the vehicle license plate recognition camera channels, set the start time and end time.

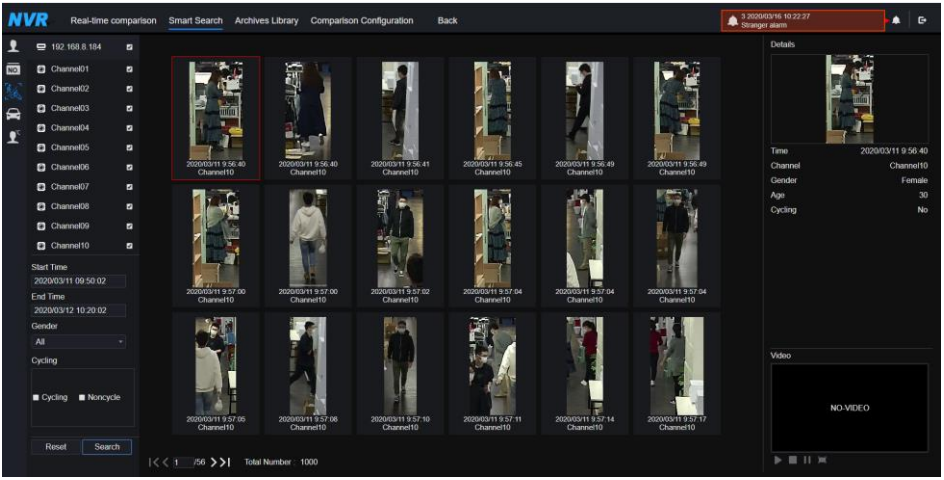
Step 3 Input the license plate optionally.

Step 4 Click “Search” to search the snapshot of license plate.

Step 5 The result will show at the page, click “+” add to library.

Full Body Search

Full body search



Step 1 Choose full body search at smart search interface.

Step 2 Tick the AI recognition camera channels, set the start time and end time.

Step 3 Set the gender, click cycling or no cycling .

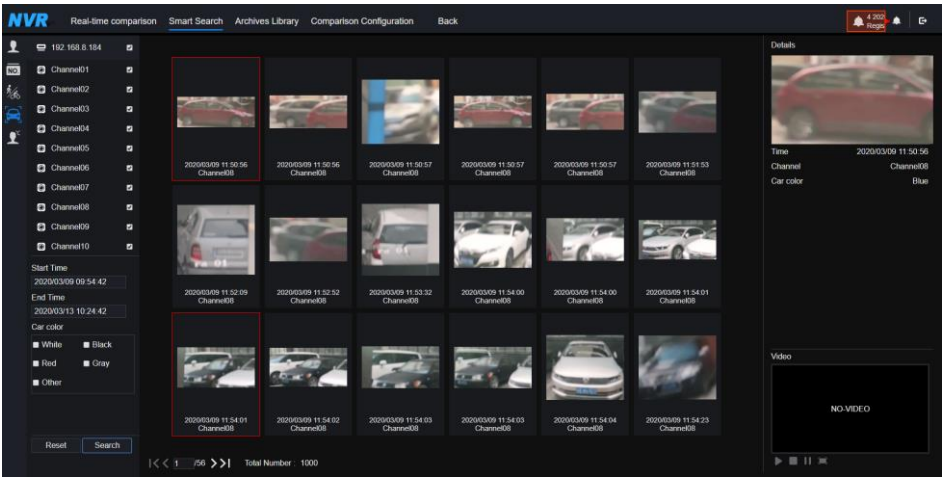
Step 4 Click “Search” to search the snapshot of human face.

Step 5 The result will show at the middle of page, click the picture and the detail information show at the top right of page.

Step 6 Click play button of video to play the recording of snapshot.

Vehicle Search

Vehicle search



Step 1 Choose vehicle search at smart search interface.

Step 2 Tick the AI recognition camera channels, set the start time and end time.

Step 3 Tick the colour.

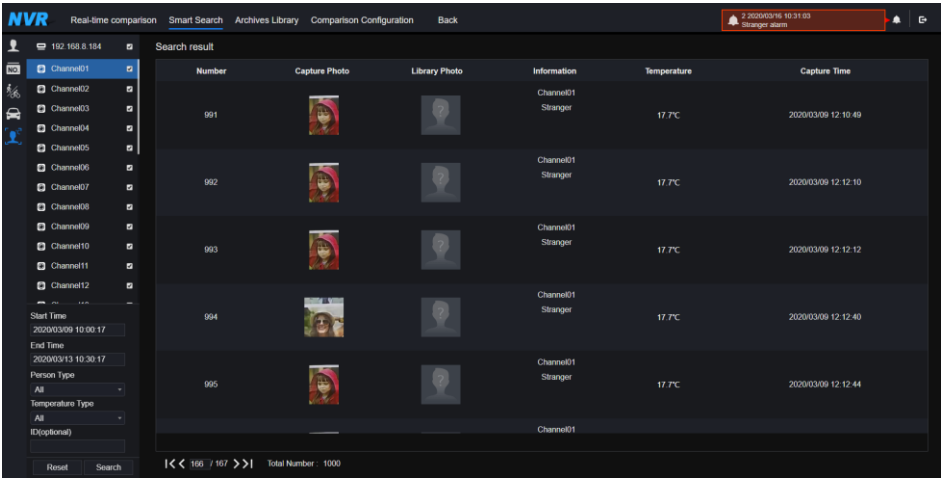
Step 4 Click “Search” to search the snapshot of human face.

Step 5 The result will show at the middle of page, click the picture and detailed information at the top right of page.

Step 6 Click play button of video to play the recordings of snapshot.

Body Temperature Search

Body temperature search



Step 1 Choose body temperature search at smart search interface.

Step 2 Tick the AI recognition camera channels, set the start time and end time.

Step 3 Choose the person type, temperature type, input ID optionally.

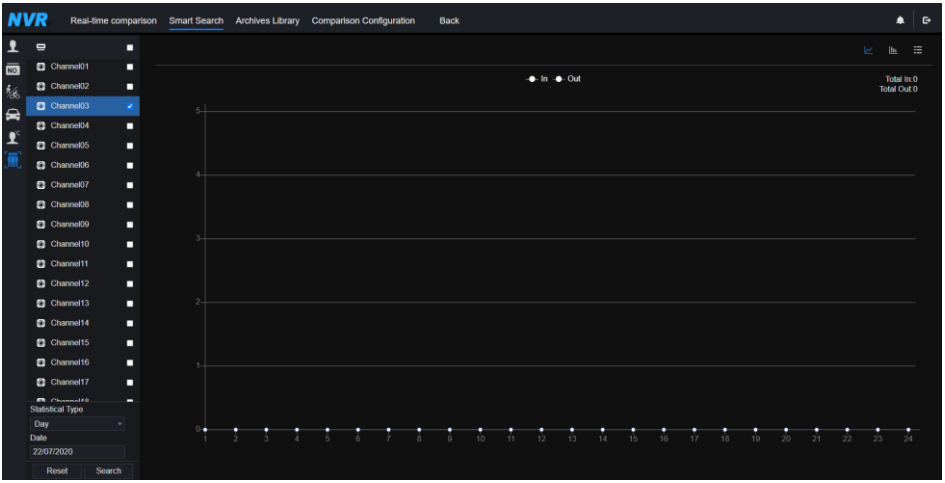
Step 4 Click “Search” to search the temperature.

Personnel Count

If the AI camera connect to NVR, the NVR can obtain the data of camera directly. Set the statistical type (day, month, year), choose the time to search.

The result can show as line graph, histogram, or list, as shown in Figure 8-30.

Personnel count

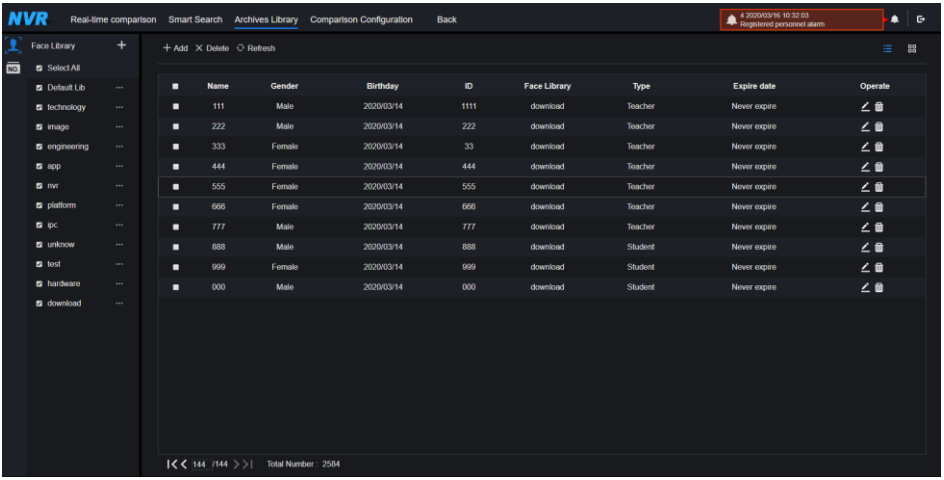


8.5.3 Archives Library

At archives library, users can add or edit the face library, license plate library.

Face Library

Face library



Click “+” to add face library.

Click “Add” to add person enroll.

Tick the person, click “Delete” to delete the person.

Click “Import” to add the person batch.

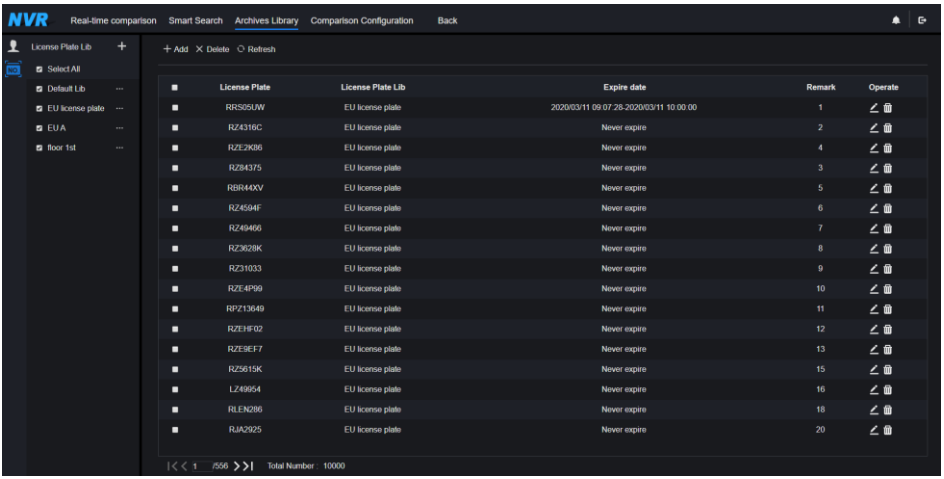
Click “Export” to export all people in library.

Click operate icon to edit or delete the chosen person.

To get snapshot in real time video, put the cursor on picture such as , you can add it to face library, or face search. The cursor on area 6 and the pictures are not update, move the mouse so that the pictures show in time.

License Plate Library

License plate library



Click “+” to add license plate library.

Click “Add” to add plate to library.

Tick the plate, click “Delete” to delete the license plate.

Click “Import” to add the license plate batch.

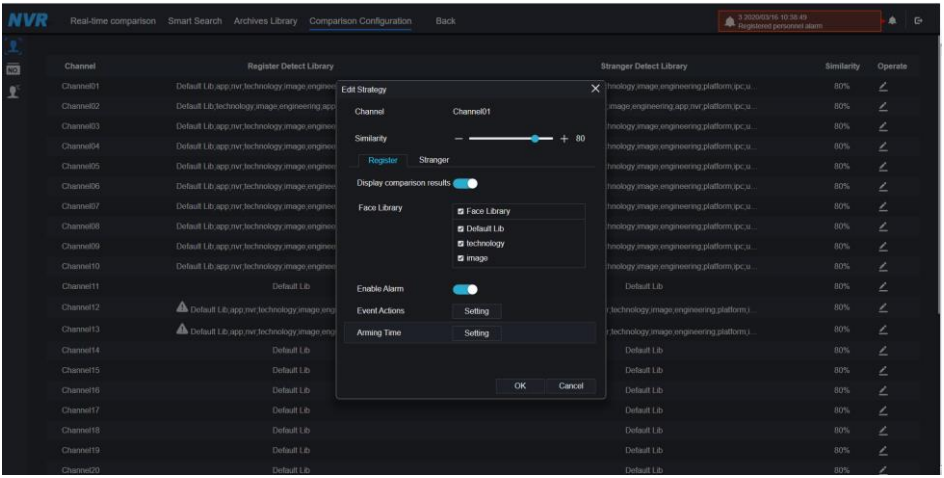
Click “Export” to export the all-license plate library.

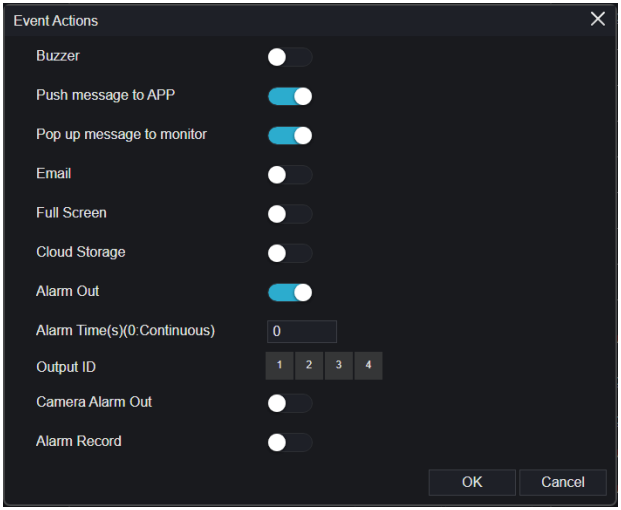
Click operate icon to edit or delete the chosen license plate.

8.5.4 Comparison Configuration

At comparison configuration interface, users can set the comparison of human face/ license plate/temperature.

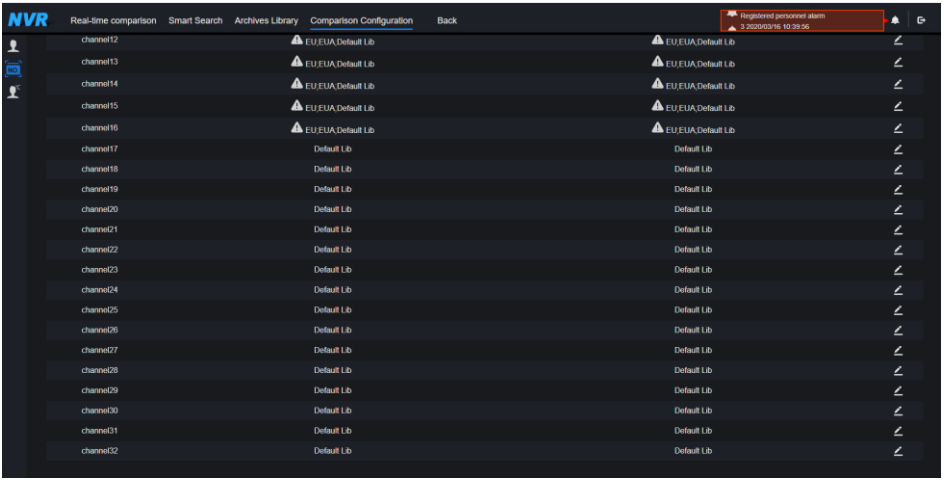
Face comparison





At face comparison interface, users can set different channels' strategy, such as similarity, display comparison result, face library, enable alarming, event action, schedule, as shown in Figure 6-35 .

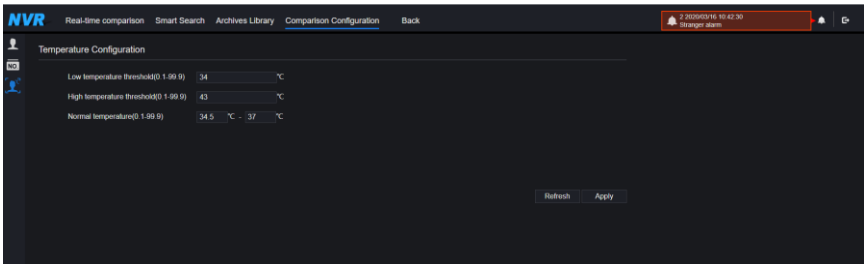
License comparison



At license plate interface, users can set strategies of different channels of license plate recognition cameras, such as register and unregister, enable alarming, event action, schedule, as shown in Figure 8-34.

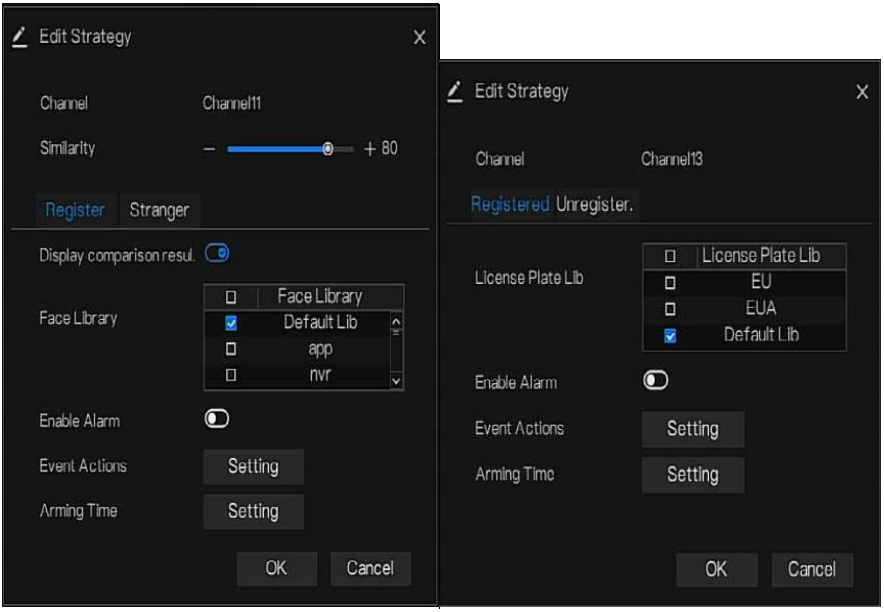
means the library is deleted.

Temperature comparison



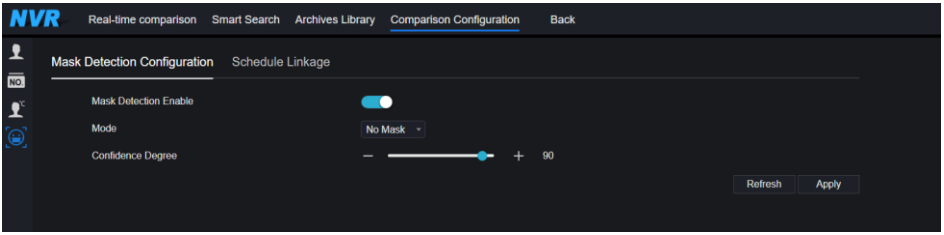
At temperature comparison interface, users can set low temperature threshold, high temperature threshold, normal temperature, as shown in Figure 8-35.

Strategy



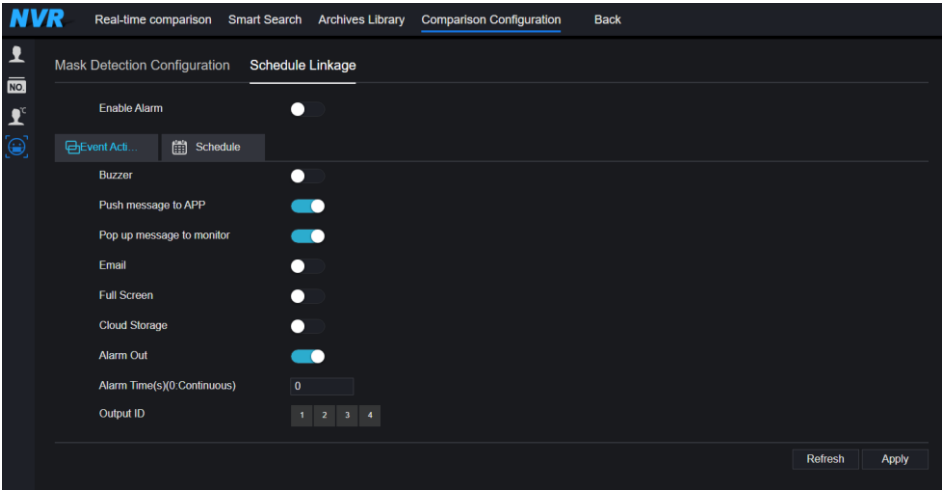
Mask detection configuration:able mask detection, set the mode (wear mask, no mask). Set confidence degree, the default value is 90. Click “apply” to save the settings.

Mask detection configuration



Enable mask alarm linkage, set the event action and schedule.

Schedule linkage



The alarm information is relevant to mask detection configuration.

9 System Setting

The system setting allows you to set system, channel, record, alarm, network and local setting.

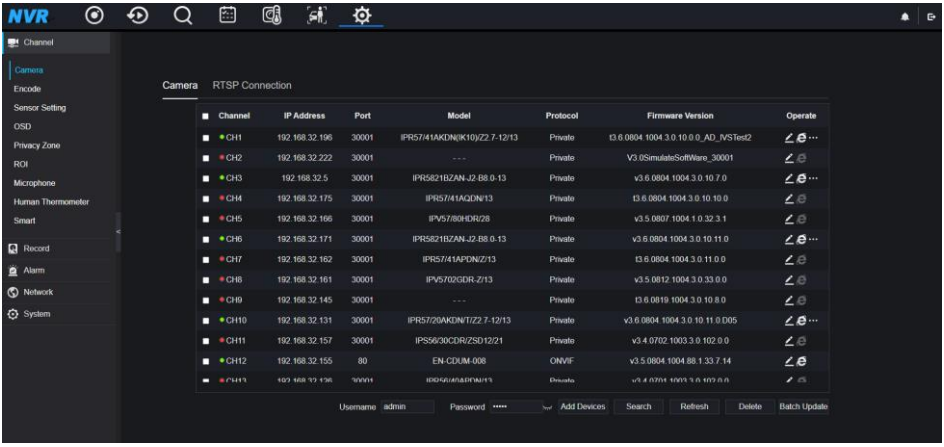
9.1 Channel

User can set parameter about camera, encode, sensor setting, OSD and privacy zone.

9.1.1 Camera

Step 0 On the **System Setting** screen, choose **Channel > Camera** to access the camera interface, as shown in Figure 9-1.

Camera interface

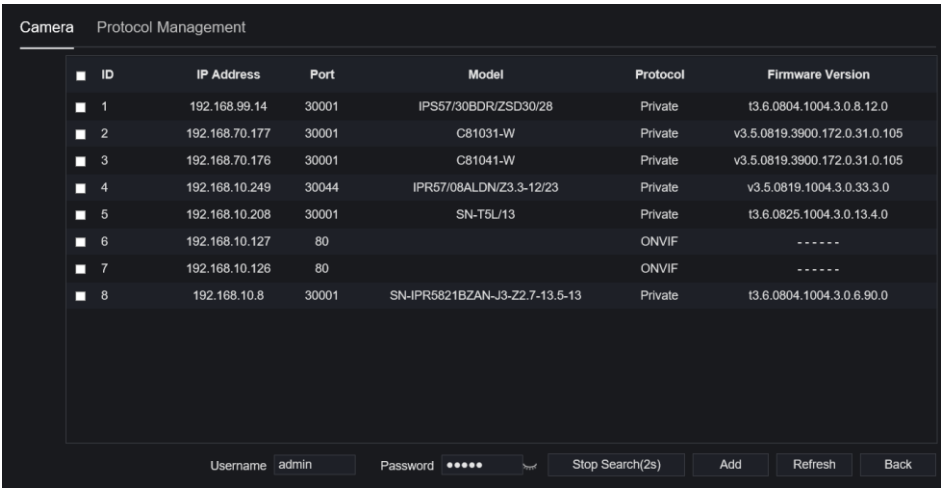


Step 1 Input username and password (the default username and password both are admin), and click Click To Add add cameras automatically.

Step 2 Click Search to search cameras at the same LAN as NVR, as shown in Figure 9-2.

Choose the cameras, input username and password, click **Add** to add new cameras.

Device search



Step 3 Click Back to back to camera interface.

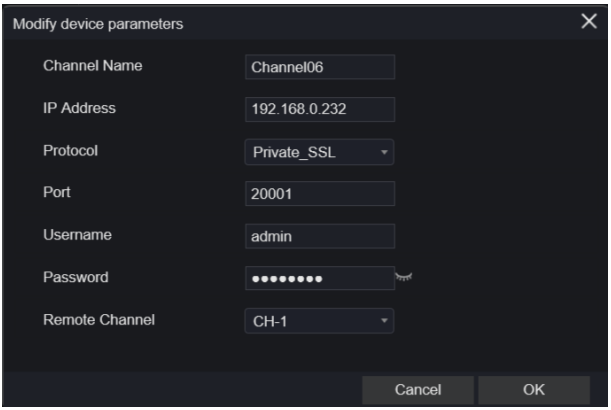
Step 4 Click Refresh to refresh cameras status.

Step 5 Choose the cameras and click Delete to delete.

Step 6 Click Batch Update to update all selected cameras at once, the pop-up window would show to select software.

Step 7 Click to modify the information of device parameters, as shown in Figure 9-3.

Modify device parameters

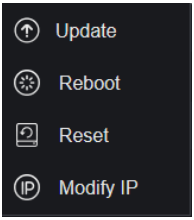


Step 8 Click to add camera manually, click the added channel to copy information to add, so that user just modify some information quickly, as shown in Figure 9-4.

Add camera manually

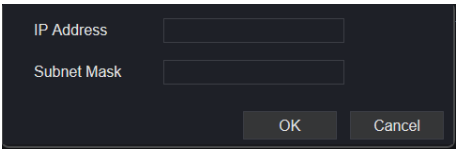
Step 9 Click to access web immediately.

Step 10 Click ••• to update, reboot or reset the selected camera, as



shows. The pop-up message “Are you sure to restart the device?” “Are you sure to reset? Reserve IP Address” would respectively show.

Modify IP



NOTE

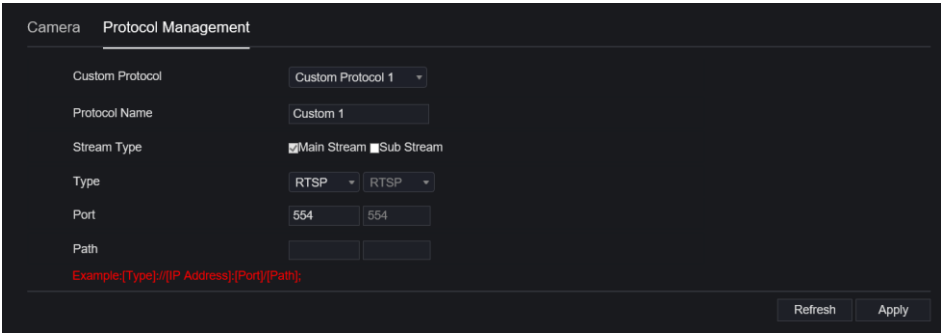
: it indicates the camera is online, users can view the live video immediately.

: it indicates the camera is offline, it maybe not connected to the network, or the password is incorrect. Access to the modify device parameters interface to change.

Protocol Management

Set the protocol management, users can add different protocol cameras to NVR

Protocol management



Step 1 Click **Channel > Camera > RTSP Connection.**

Step 2 Choose the custom protocol from the drop-down list, there are 16 kinds of protocols can be set.

Step 3 Input the protocol name.

Step 4 Tick main stream and sub stream. The main stream shows image on full screen live video. The sub stream shows image on split screen. If you just tick main stream and the channel will not show image on split screen.

Step 5 Choose the type of protocol, the default value is RTSP.

Step 6 Input the port of the IP camera.

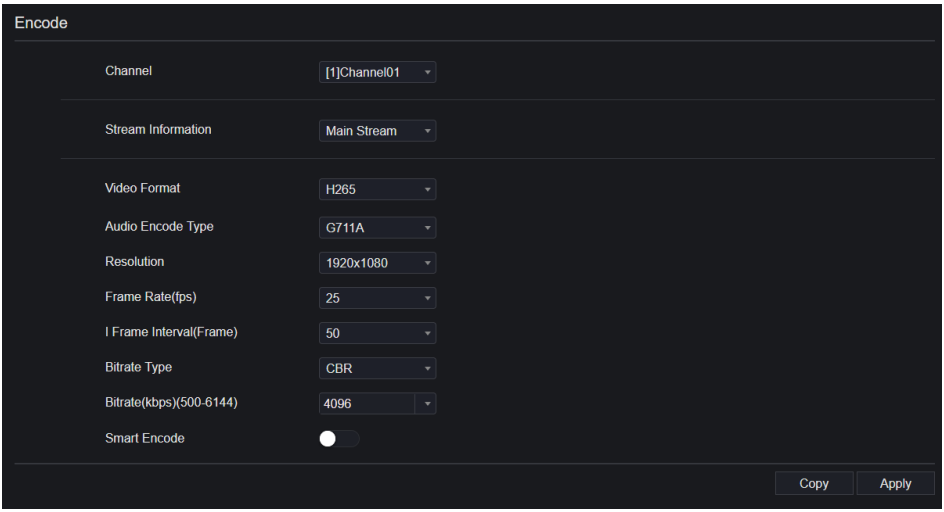
Step 7 Input the path, which decided by the manufacturer of cameras.

Step 8 Click Apply to save the settings.

9.1.2 Encode

Step 1 On the **System Setting** screen, choose **Channel > Encode** to access the encode interface, as shown in Figure 9-7.

Encode interface



Step 2 Select a channel from drop-down list.

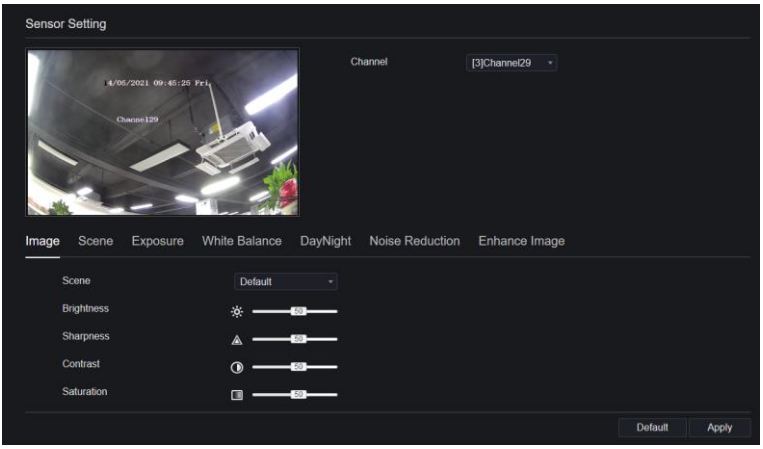
Step 3 Select stream information, encode type, resolution, frame rate, bitrate control and bitrate from drop-down list.

Step 4 Click Copy to choose other camera to copy settings. Click Apply to save the settings.

9.1.3 Sensor Setting

Step 1 On the **System Setting** screen, choose **Channel >Sensor Setting** to access the sensor setting interface, as shown in Figure 9-8.

Image interface



Step 2 Select a channel and scene from drop-down list.

Step 3 Set image parameters, like scene, brightness, sharpness, contrast and saturation.

Step 4 Other parameters are camera's senor setting, please refer IP cameras' settings.

Step 5 Click Copy to choose other cameras to copy settings. Click Apply to save the settings.

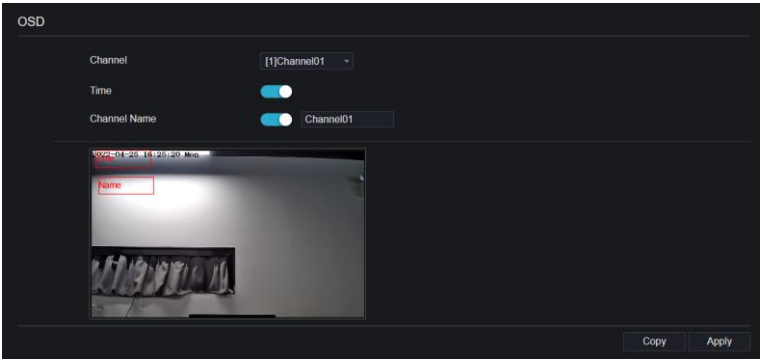
NOTE

Brightness: It indicates the total brightness of an image. As the value increases, the image becomes brighter.
Sharpness: It indicates the border sharpness of an image. As the value increases, the borders become clearer, and the number of noise points increases.
Saturation: It indicates the colour saturation of an image. As the value increases, the image becomes more colourful.
Contrast: It indicates the measurement of different brightness levels between the brightest white and darkest black in an image. The larger the difference range is, the greater the contrast is the smaller the difference range is, the smaller the contrast is.
Scene: it includes indoor, outdoor, default. Mirror includes normal, horizontal, vertical, horizontal + vertical.
Exposure: it includes mode, max shutter, meter area and max gain.
White balance: it includes tungsten, fluorescent, daylight, shadow, manual, etc.
Day-night: it transit day to night, or switch mode.
Noise reduction: it includes 2D NR and 3D NR.
Enhance image: it includes WDR, HLC, BLC, defog and anti-shake.
Zoom focus: zoom and focus.

9.1.4 OSD

Step 1 On the **System Setting** screen, choose **Channel >OSD** to access the OSD interface, as shown in Figure 5-4

OSD interface



Step 2 Select a channel and scene from drop down list.

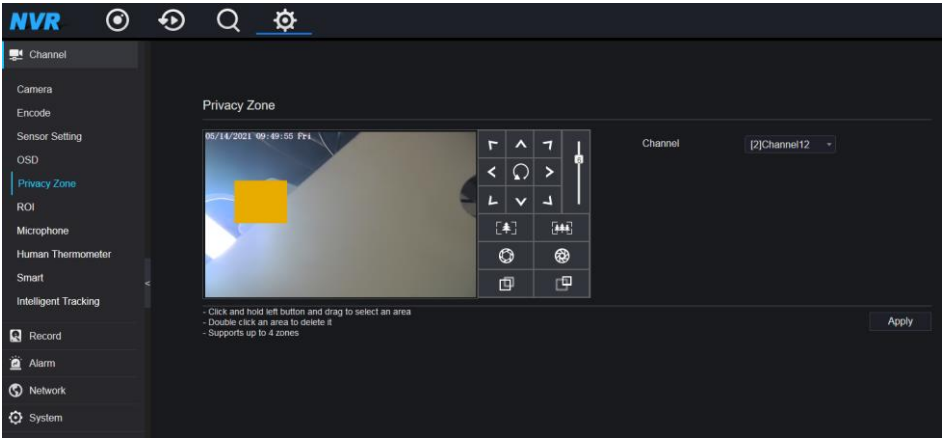
Step 3 Enable time and channel name. You can set channel name. Drag the icon of Channel Name or Date and Time to move, select the location.

Step 4 Click Copy to choose other cameras to copy settings. Click Apply to save the settings.

9.1.5 Privacy Zone

Step 1 On the **System Setting** screen, choose **Channel >Privacy Zone** to access the privacy zone interface, as shown in Figure 9-10.

Privacy interface



Step 2 Select a channel from drop-down list.

Step 3 Drag the mouse to select area to cover with rectangle frame. You can set less than four areas to be covered. Double click would delete the area.

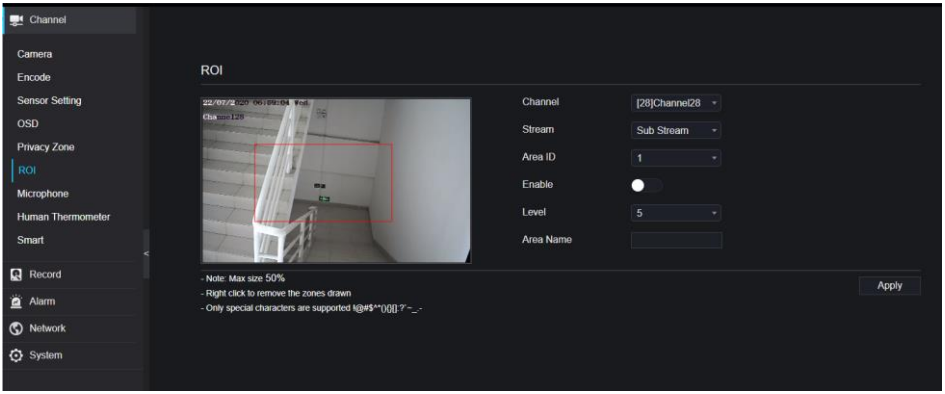
Step 4 PTZ can be used for adjusting the IP dome cameras.

Step 5 Click Copy to choose other cameras to copy settings. Click Apply to save the settings.

9.1.6 ROI

ROI(Region of interest), choose channel, stream, area ID and draw the area. Set the level, there are five levels can be chosen. Set area name, click “Apply” to save the settings.

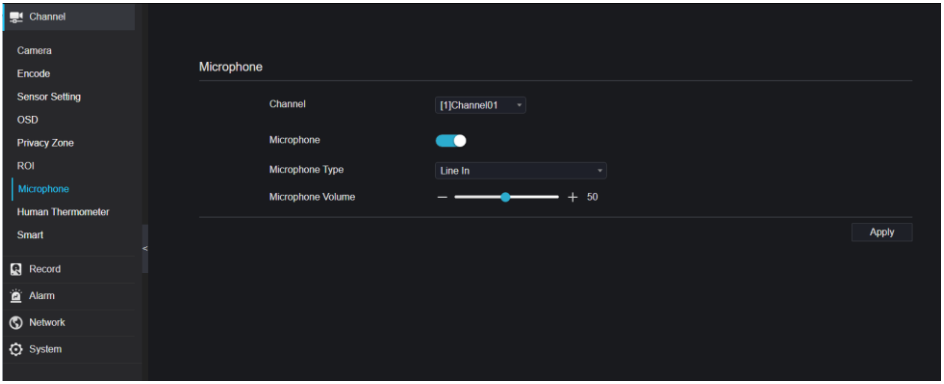
ROI



9.1.7 Microphone (Only for Some Models)

Users can set the microphone parameters of channel.

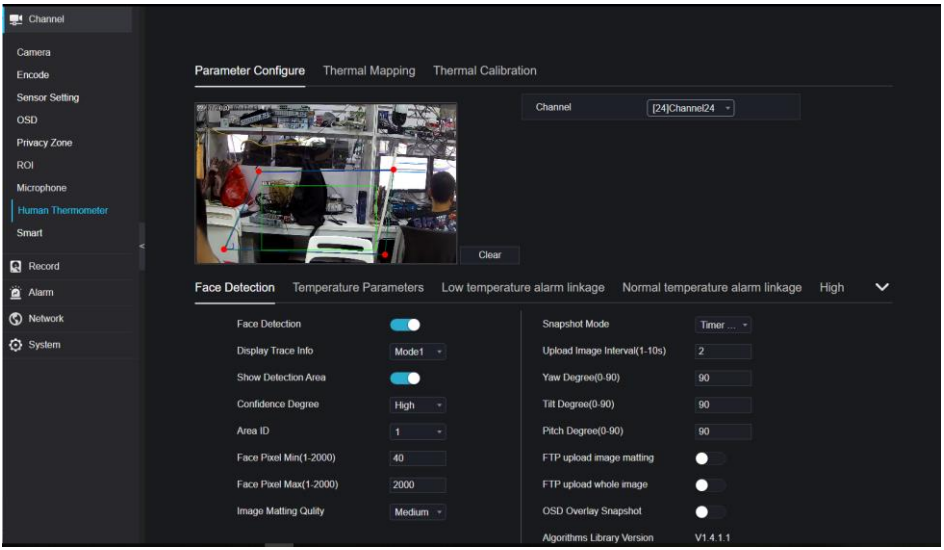
Microphone



9.1.8 Human Thermometer (Only for Some Models)

Users can set the parameters of human thermometer cameras, such as parameter configure, thermal mapping, thermal calibration, for more detail please refer to the UI settings.

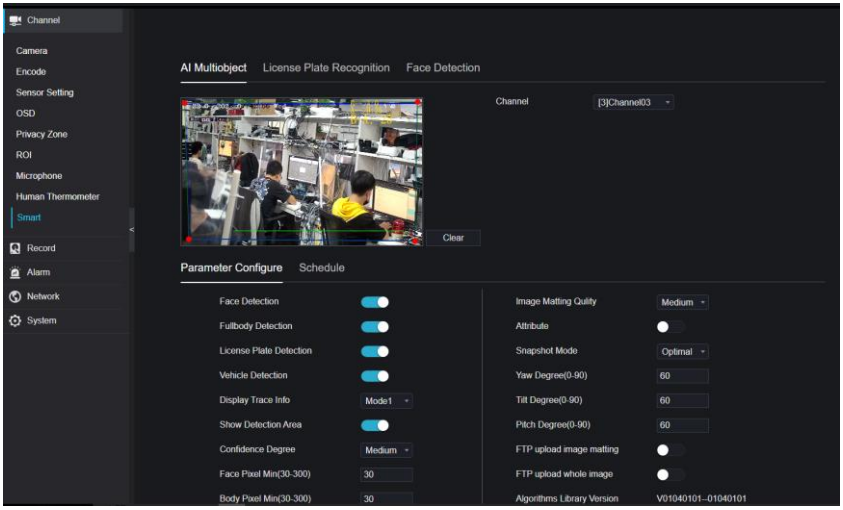
Human thermometer



9.1.9 Smart (Only for Some Models)

At smart interface, users can set AI multiobject, license plate recognition, face detection.

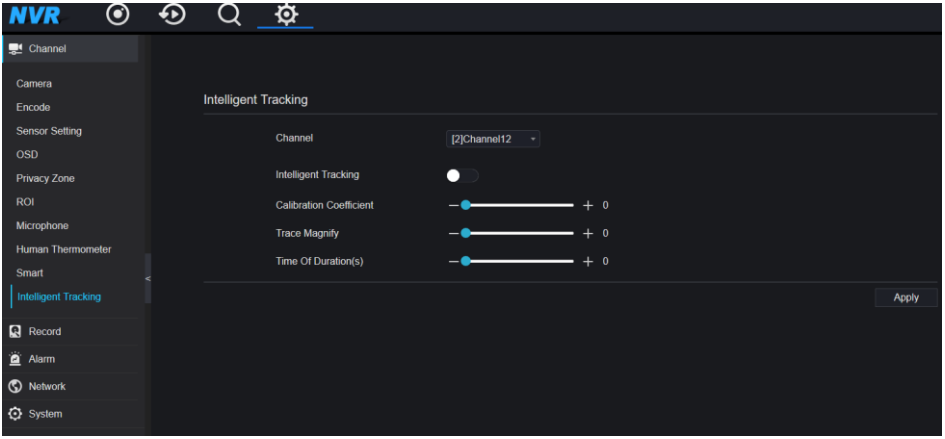
Smart interface



9.1.10 Intelligent Tracking (Only for Some Models)

This function can only be used for high speed dome camera. It works with PTZ function.

Intelligent tracking



The detailed information please refer to UI configuration setting.

9.2 Record

Users can set record policy in storage interface.

9.2.1 Record Schedule

Procedure

Step 1 On the **System Setting** screen, choose **Record** > **Record schedule** to access the record schedule interface, as shown in Figure 9-16.

Record schedule interface

Step 2 Select a channel.

Step 3 Enable the record, then enable record audio.

Step 4 Enable ANR, when the IP cameras support the ANR, if the cameras are disconnected to NVR, the NVR can copy the loss video recordings from SD card installed in cameras.

Step 5 Set the record schedule, you can drag the mouse to choose area, click to choose all day or all week, you can also click one by one to set the schedule. Or dray the mouse cursor to choose. Users can set the alarm recording to save the space of disk.

Step 6 Click

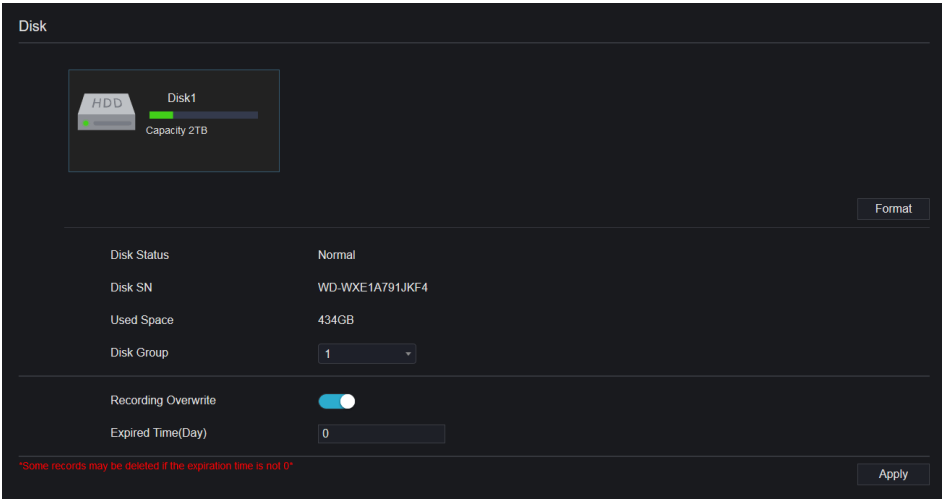
to return the previous settings.

Step 7 Click Copy to choose other cameras to copy settings. Click Apply to save the settings.

9.2.2 Disk

Step 1 On the **System Setting** screen, choose **Record >Disk** to access the disk interface, as shown in Figure 9-17.

Disk interface



Step 2 You can view the information like capacity, disk status, disk SN code and used space.

Step 3 Click Format to delete all data. Before deleting data users will view pop-up window "Are you sure to format disk? Your data will be lost". Click OK to delete, click Cancel to quit.

Step 4 Choose the disk group from drop-down list, there are four disk groups.

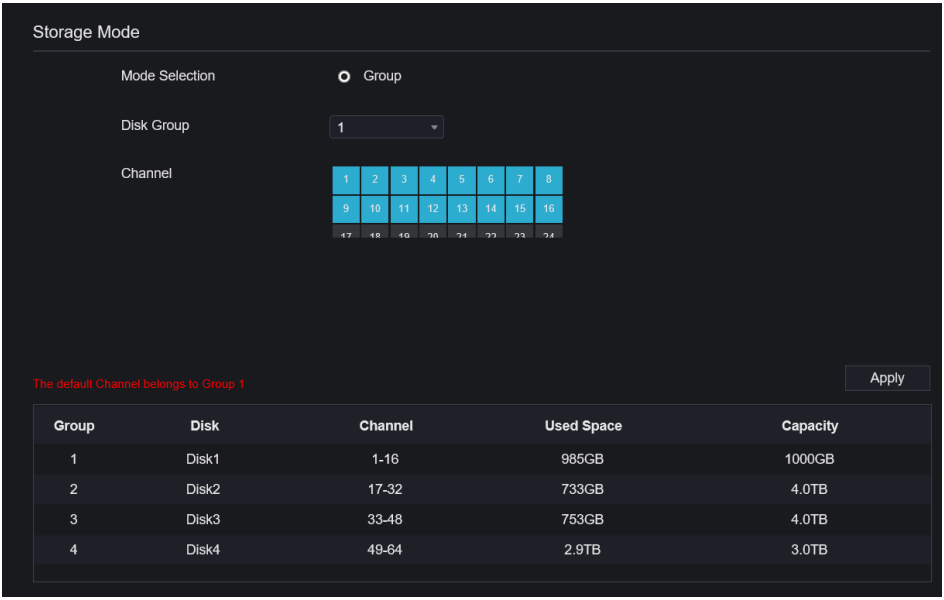
Step 5 Enable the recording overwrite, set the expired time. (If the expired time is 0, it means the disk is full, then the recording will be rewrite. It the expired time is 5 days, the recording video will be rewrite when it reaches the expiration date..)

Step 6 If the recording overwrite is disable, set the expired time, it is up to 90 days.

9.2.3 Storage Mode

Distribute channels to different disk groups as needed for efficient use of the disk capacity.

Storage Mode



Operation Steps

Step 1 Choose the disk group.

Step 2 Select the channel to record to disk group.

Step 3 Click Apply to save the settings.

Step 4 The group list will show the detail information.

9.2.4 RAID (Only for Some Models)

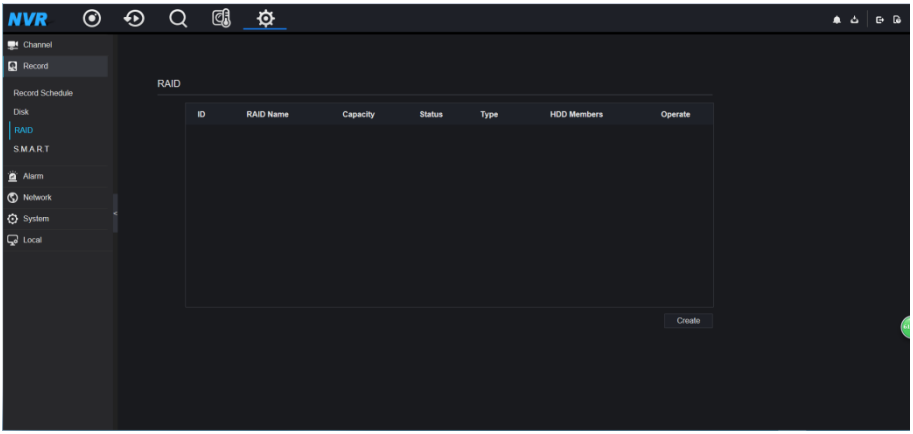
NOTE

RAID is only used for the device with 4 disks or more. And the disks must be enterprise level disks. It is recommended to choose the same capacity for efficient use.

For Raid5, at least 3 disks can be created. For RAID6, at least 4 disks can be created. For RAID10, at least 4 disks can be created. Creating a hot spare disk requires more disks.

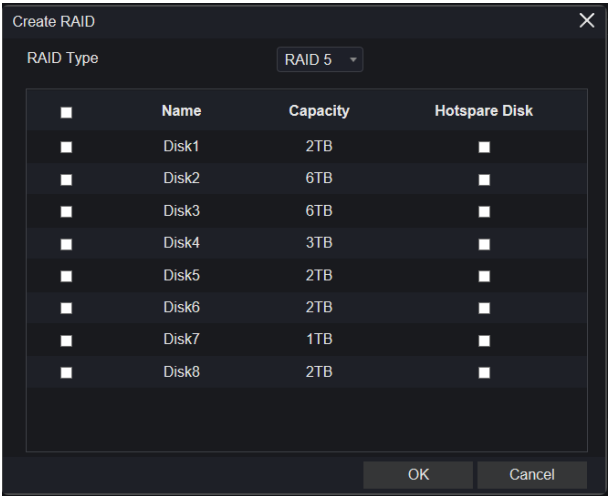
It is recommended to choose the same capacity for efficient use. The RAID with less than 100T capacity can be built.

RAID



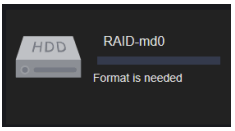
Operation Steps

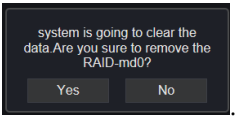
Step 1 Click **RAID** to create the RAID.



Step 2 Click **Create** to choose disk to create a new RAID.

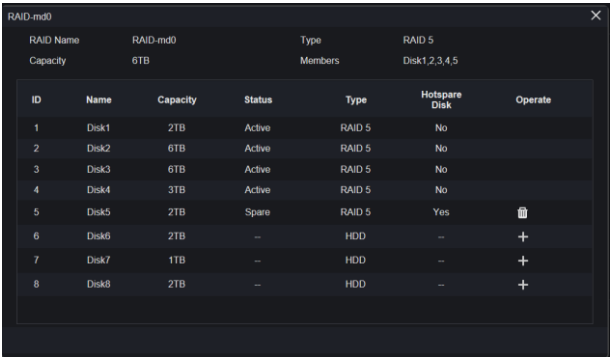
Step 3 Tick the **Hot-spare Disk** to back up the broken disk in case, the number of disk must be more than basic disks.

Step 4 Click OK to save the operation, format the new RAID 

Step 5 Click **format it will show** 

.

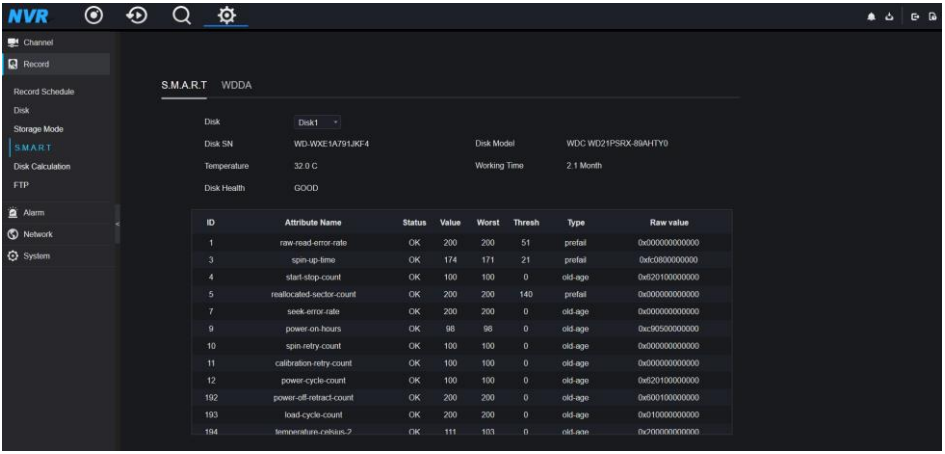
Modify the RAID



9.2.5 S.M.A.R.T

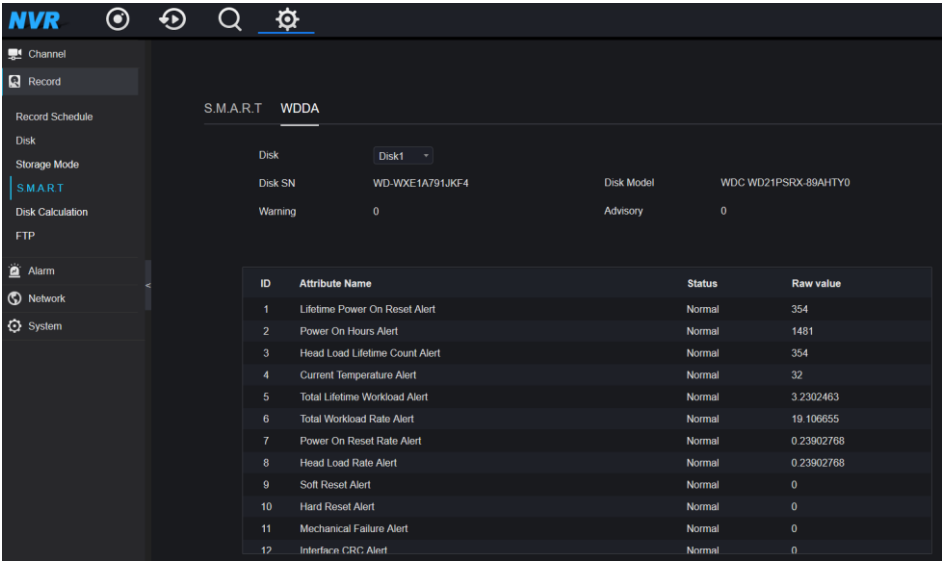
S.M.A.R.T is Self-Monitoring Analysis and Reporting Technology, users can view the health of disk, as shown in Figure 9-21.

S.M.A.R.T



The disk of Western Digital can be viewed by WDDA, as shown in Figure 9-22.

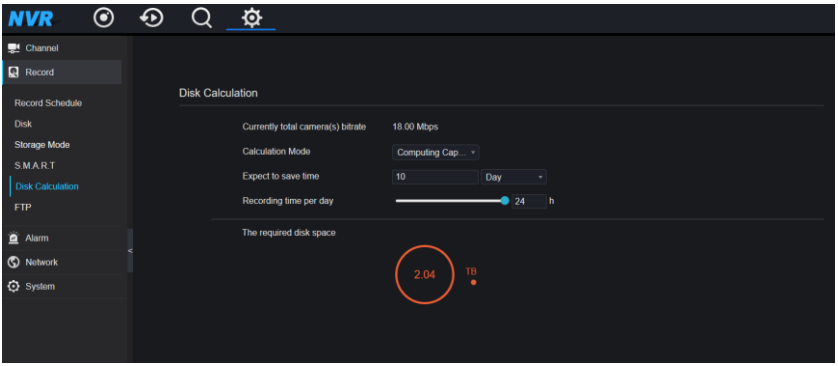
WDDA (Supplied for Some Model)

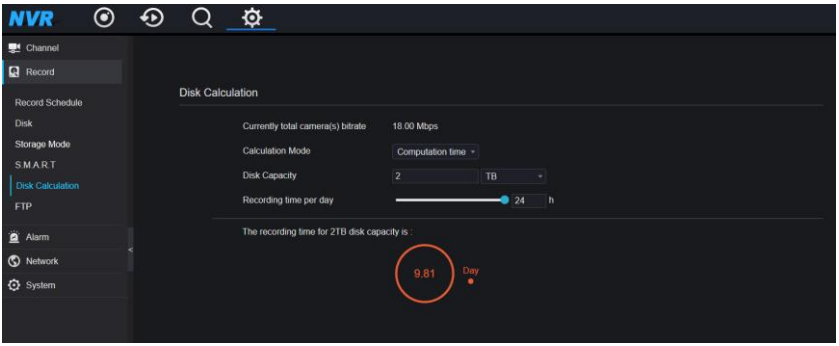


9.2.6 Disk Calculation

There are two modes to calculate the captivity of disk, as Computing Capacity Computation time shown in.

Disk calculation

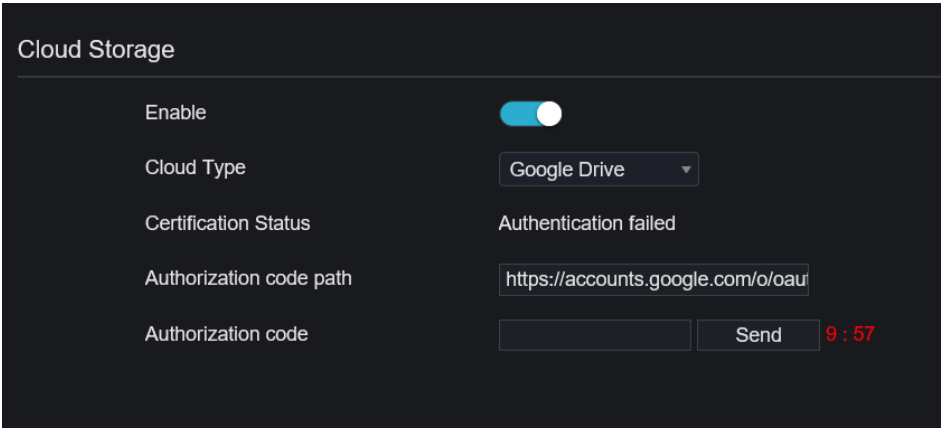




9.2.7 Cloud Storage (Only for Some Models)

User copy the authorization code path to browser to enter Google Drive interface. Google sends the code, and users input the code to authority NVR, so the device can set the alarm recording to Google drive.

Cloud Storage



NOTE

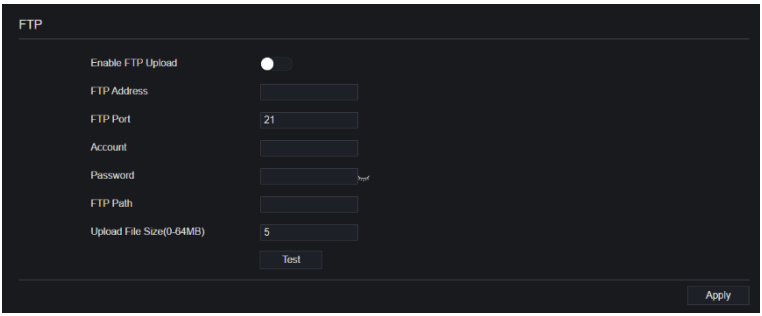
Enable the alarm of cloud storage at first so that the Google drive can receive the recoding.

Cloud storage can only be set at motion detection and intelligent analysis interface.

9.2.8 FTP

Set the FTP path to receive the alarm information, as shown in Figure 9-25. More detail information please refer to UI interface parameters.

FTP



9.3 Alarm

Users can set general, motion detection, video loss, intelligent analysis and alarm in on alarm interface.

9.3.1 General

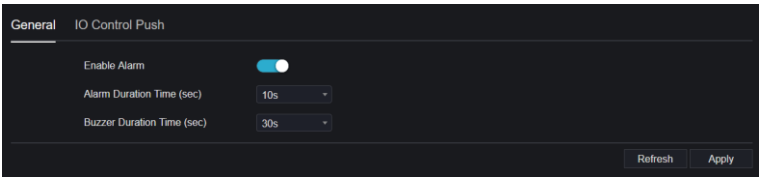
General

Procedure

Step 1 On the **System Setting** screen, choose **Alarm > General** to access the general interface.

Step 2 Enable alarm to set duration time and buzzer duration time, as shown in Figure 9-26.

General interface



Step 3 Click Apply to save settings. Click Refresh to return to the previous settings.

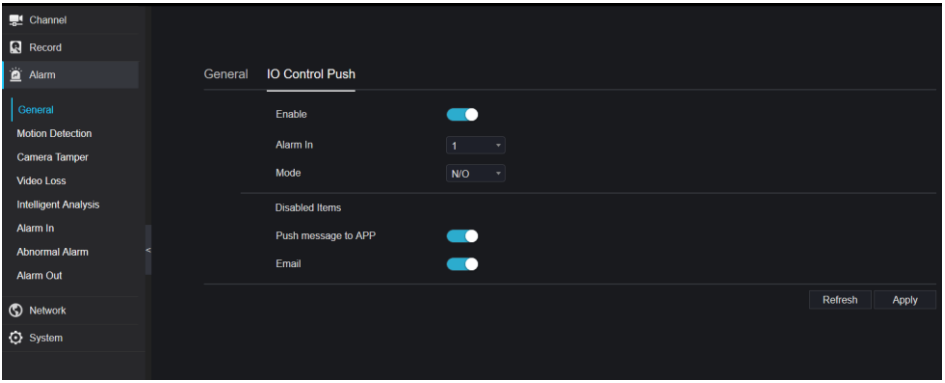
IO Control Push

Procedure

Step 1 On the **System Setting** screen, choose **Alarm > General** > **IO Control Push** to access the general interface.

Step 2 Enable the IO control push, as shown in Figure 9-27.

IO control push interface



Step 3 Choose one alarm in and mode (N/C, N/O).

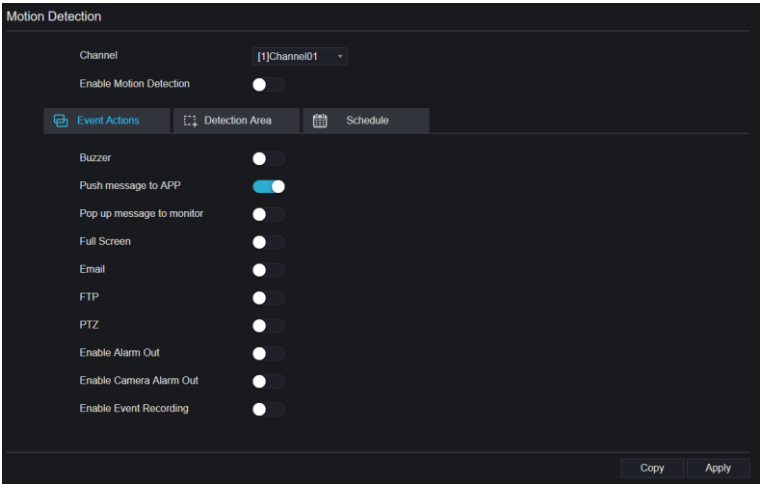
Step 4 Tick the disable items, click “Apply” to save settings.

9.3.2 Motion Detection

Procedure

Step 1 On the **System Setting** screen, choose **Alarm** > **Motion Detection** to access the motion detection interface, as shown in Figure 9-28.

Motion detection interface



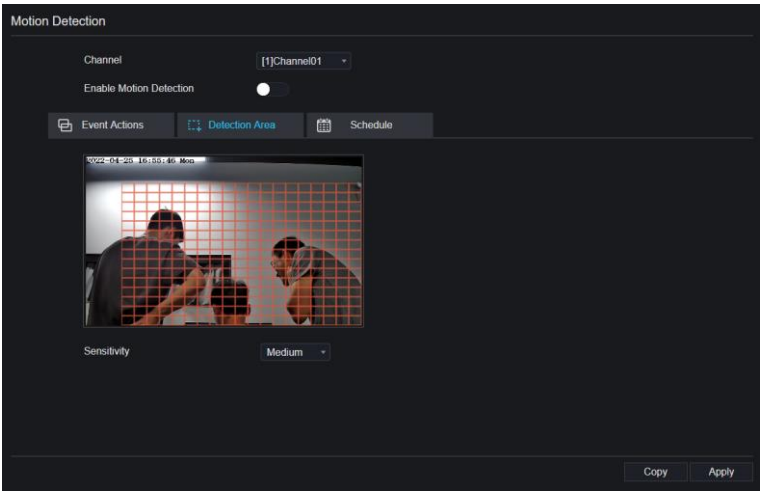
Step 2 Click channel drop-down list to choose channel.

Step 3 Enable motion detection alarm.

Step 4 Set **Event Activity**, includes buzzer, push message to APP, pop-up message to monitor, full screen, Email, cloud storage, alarm out (the back panel), channel alarm out (the port of cameras), and alarm record.

Step 5 Click **Area** to access the motion detection area setting, as shown in Figure 9-29.

Motion detection area interface



1. Hold down and drag the left mouse button to draw a motion detection area.
2. Select a value from the drop-down list next to **Sensitivity**.
3. Double -click the chosen area to delete.

Step 6 Click **Schedule** to access schedule settings, drag and release mouse to select the alarming time within 00:00-24:00 from Monday to Sunday. Click the chosen area can cancel. The settings of alarm schedule are same as disk schedule.

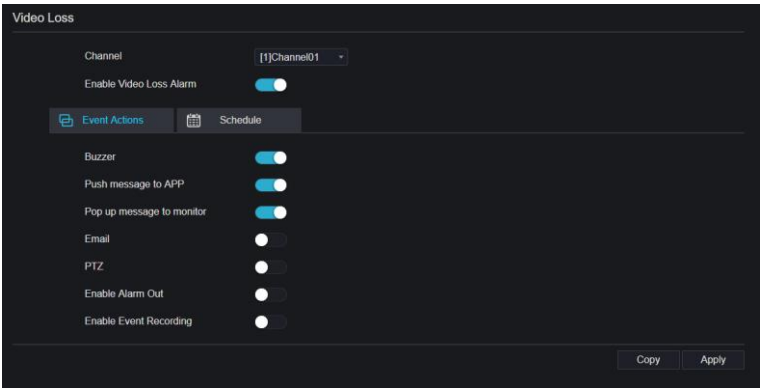
Step 7 Click Copy to choose other cameras to copy settings. Click Apply to save the settings.

9.3.3 Video Loss

Procedure

Step 1 On the **System Setting** screen, choose **Alarm > Video Loss** to access the video loss interface, as shown in Figure 9-30.

Video loss interface



Step 2 Click drop-down list to choose channel.

Step 3 Enable the video loss alarm.

Step 4 Set event activity and schedule please refer to *Figure 5-1 motion detection settings*.

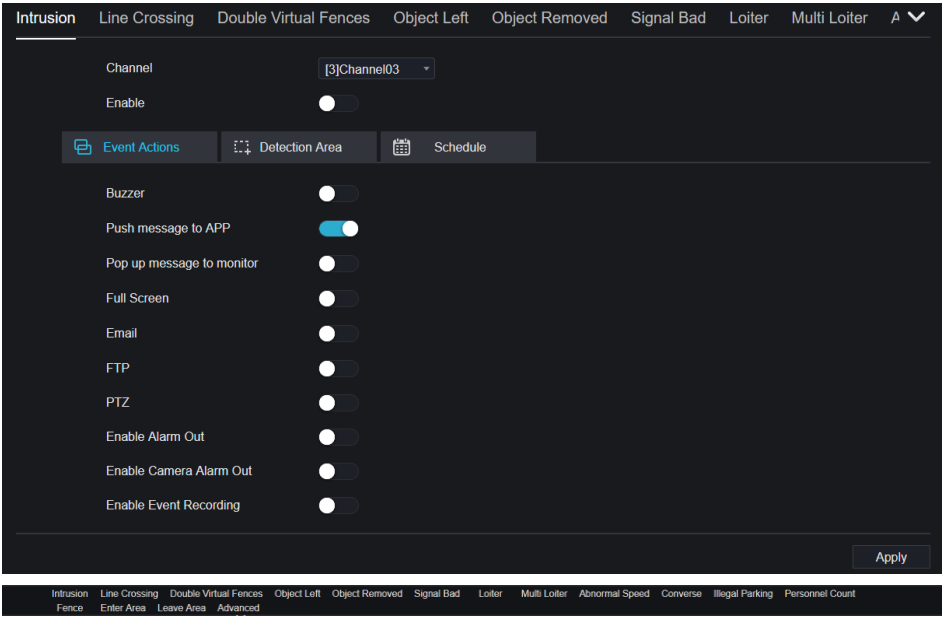
Step 5 Click Copy to choose other camera to copy settings. Click Apply to save the settings.

9.3.4 Intelligent Analysis (Only for Some Models)

Procedure

Please refer to chapter *0 video loss settings,* interface displayed as shown in Figure 9-31.

Intelligent analysis interface

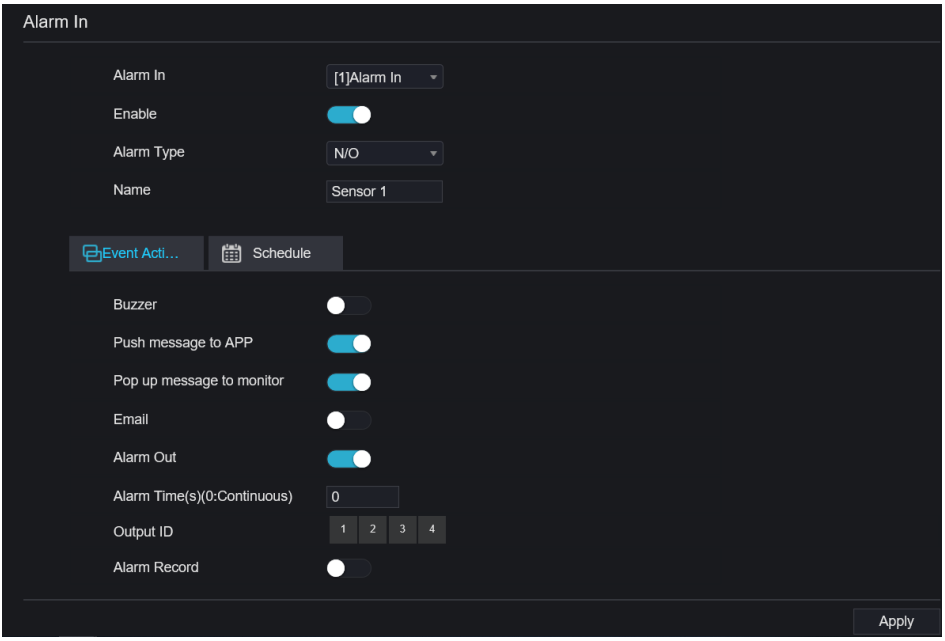


9.3.5 Alarm In

Procedure

Step 1 On the **System Setting** screen, choose **Alarm** > **Alarm In** to access the alarm in interface, as shown in Figure 9-32.

Alarm in interface



Step 2 Click drop-down list to choose alarm in.

Step 3 Enable the button, choose alarm type.

Step 4 Set name, default as Sensor 1.

Step 5 Set event activity and schedule please refer to *motion detection settings*.

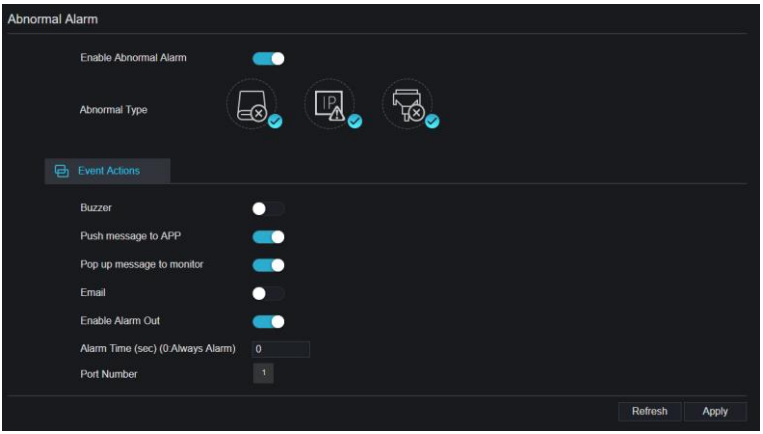
Step 6 Click Apply to save settings.

9.3.6 Abnormal Alarm

Procedure

Step 1 On the **System Setting** screen, choose **Alarm > Abnormal Alarm** to access the abnormal alarm interface, as shown in Figure 6-12.

Abnormal alarm interface



Step 2 Enable the button, tick alarm type.

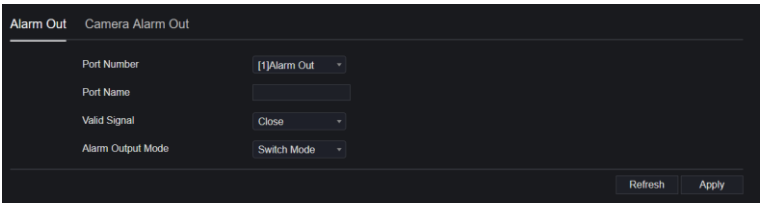
Step 3 Set event activity and schedule please refer to *motion detection settings*.

Step 4 Click Apply to save settings.

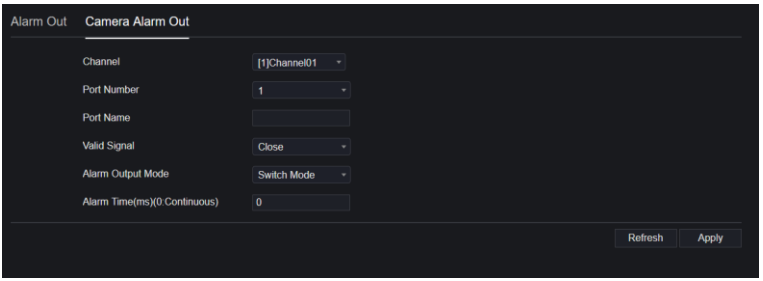
9.3.7 Alarm out

Set the alarm out, the camera alarm out.

Alarm out



Camera alarm out



9.4 Network

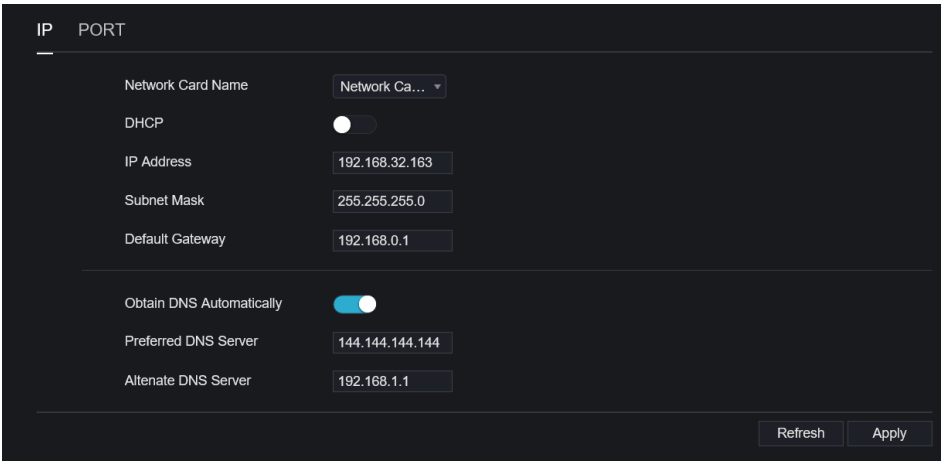
Users can set Network, DDNS, E-mail, UPnP, P2P, IP Filter, 802.1X, SNMP and Web Mode.

9.4.1 Network

Procedure

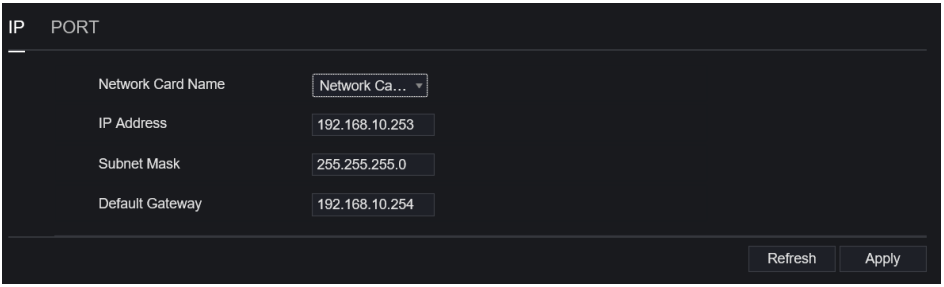
Step 1 On the **System Setting** screen, choose **Network > Network** to access the network interface, as shown in Figure 9-36.

Network interface



Step 2 Choose network card from the drop-down list. Network card I is LAN1, network card II is LAN2, as shown in Figure 9-37.

Network card II



Step 3 Click next to **IP** to enable or disable the function of automatically getting an IP address. The function is enabled by default.

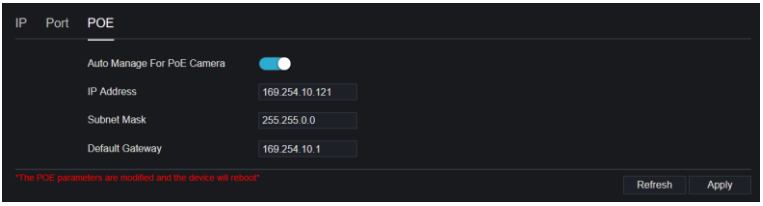
If the function is disabled, click input boxes next to **IP**, **Subnet mask**, and **Gateway** to set the parameters as required.

Step 4 Click next to **Obtain DNS Automatically** to enable or disable the function of automatically getting a DNS address. The function is enabled by default.

If the function is disabled, click input boxes next to **DNS1** and **DNS2**, delete original addresses, and enter new addresses.

Step 5 Set **PORT** and **POE** manually, input the information about these.

POE



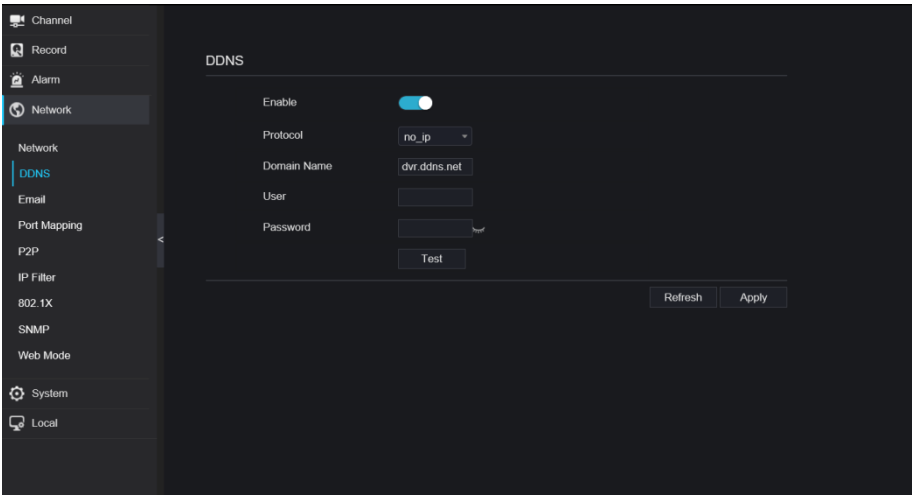
Step 6 Click Refresh to restore previous settings. Click Apply to save the settings.

9.4.2 DDNS

Procedure

Step 1 Click **DDNS** in the network interface, choose **Network > DDNS** to access the DDNS interface as shown in Figure 9-39.

DDNS interface



Step 2 Click the button to enable the DDNS function. It is disabled by default.

Step 3 Select a required value from the **protocol** drop-down list.

Step 4 Set domain name, user, and password.

Step 5 Click Refresh to restore previous settings. Click Apply to save the settings.

NOTE

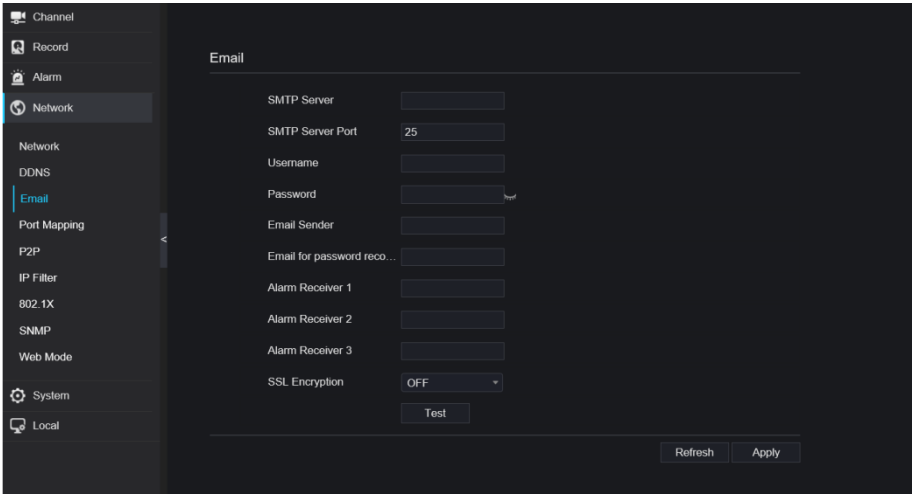
An external network can access an address specified in the DDNS settings to access the NVR.

9.4.3 Email

Procedure

Step 1 Click **Email** in the network interface, choose **Network > Email** to access the E-mail interface, as shown in Figure 9-40

Email interface



Step 2 Set SMTP server and SMTP server port manually.

Step 3 Set sender E-mail, user name and password manually.

Step 4 Set E-mail for receiving the alarm message.

Step 5 Set E-mail for retrieving the password.

Step 6 Click **SSL Encryption** drop-down list to enable safeguard of email.

Step 7 Click Refresh to restore previous settings. Click Apply to save the settings.

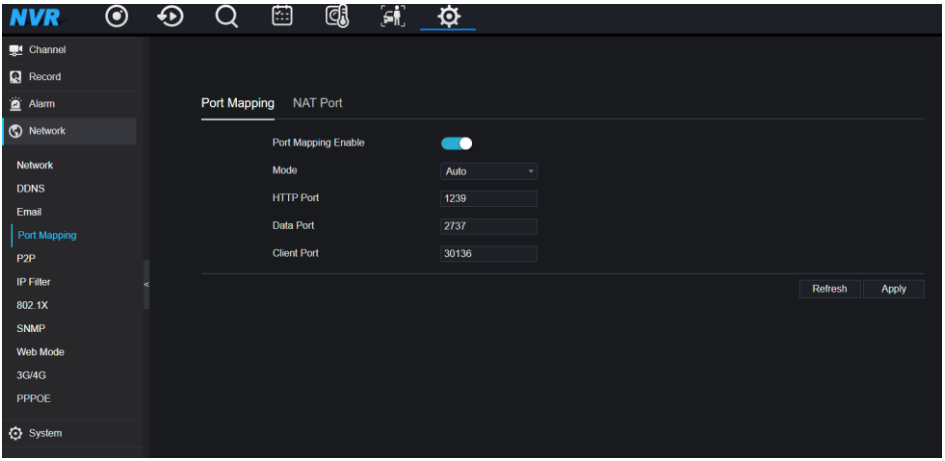
9.4.4 Port Mapping

Port Mapping

Procedure

Step 1 Click **Port Mapping** in the network interface, choose **Network > Port Mapping** to access the UPnP interface as shown in Figure 9-41.

Port Mapping interface



Step 2 Select manner from UPnP enable drop list. The default value is auto.

Step 3 After **UPnP** is manual, set the Web port, data port and client port manually.

Step 4 Click Refresh to restore previous settings. Click Apply to save the settings.

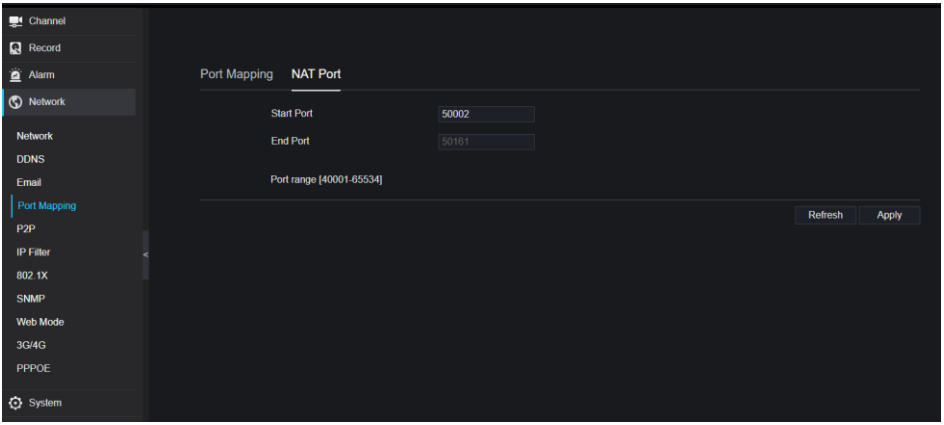
NOTE

Auto: System perform UPnP automatically.
Manual: The ports are distributed by the router. Input them according to the router.

NAT port

NAT (Network Address Translation), users can browse the web of camera by NAT port. There are five ports can be assigned to each camera. Input the start port, the system will compute the end port automatically.

NAT port

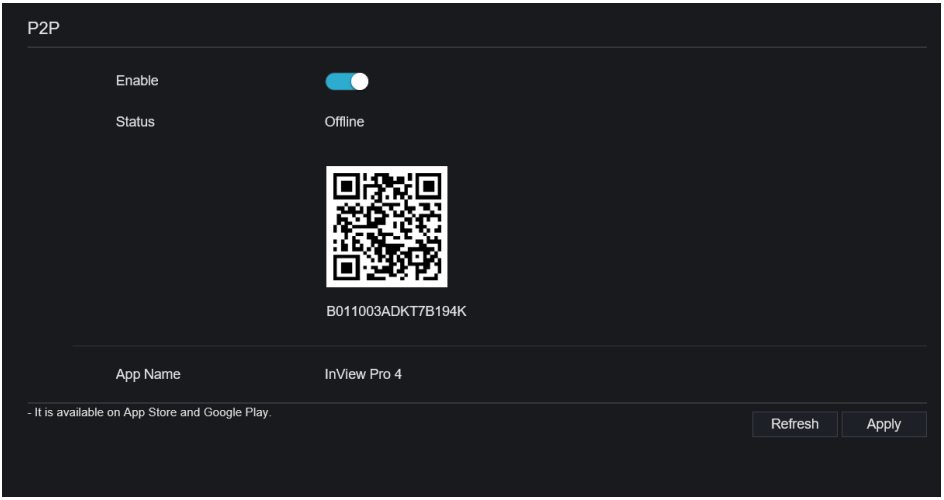


9.4.5 P2P

Procedure

Step 1 Click **P2P** in the network interface, choose **Network > P2P** to access the P2P interface, as shown in Figure 9-43.

P2P interface



Step 2 Click **Enable** to enable the P2P function.

Step 3 Click Refresh to restore previous settings. Click Apply to save the settings.

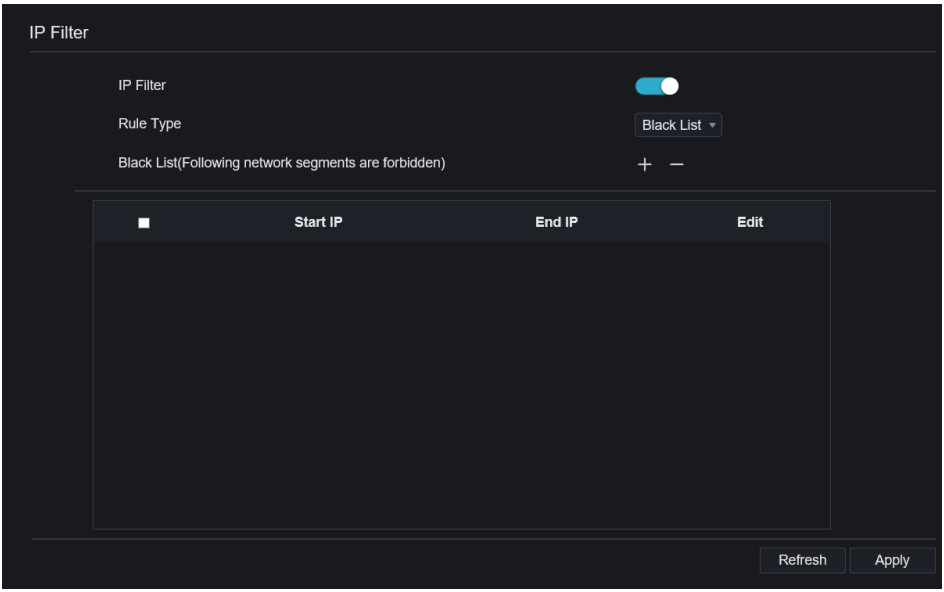
Step 4 After installing Inview Pro 4 in mobile phone, run the app and scan the UUID QR code to add it. And then access the NVR while the device is online.

9.4.6 IP Filter

Procedure

Step 1 Click **IP Filter** in the network interface, choose **Network > IP Filter** to access the IP filter interface, as shown in Figure 9-44.

IP filter interface



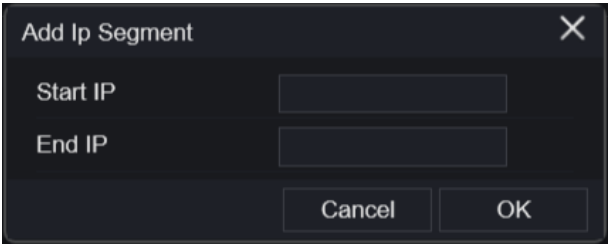
Step 2 Click **Enable** to enable the IP filter function.

Step 3 Click drop-down list of rule type to choose black list or white list.

Step 4 Click ,view the pop-up windows to set black list or white list, as shown in 7.5.5.

Click to delete the list.

Black or white list interface



Step 5 Set start IP and end IP.

Step 6 Click Cancel to deny settings, click OK to save the settings.

Step 7 Click Refresh to restore previous settings. Click Apply to save the settings.

NOTE

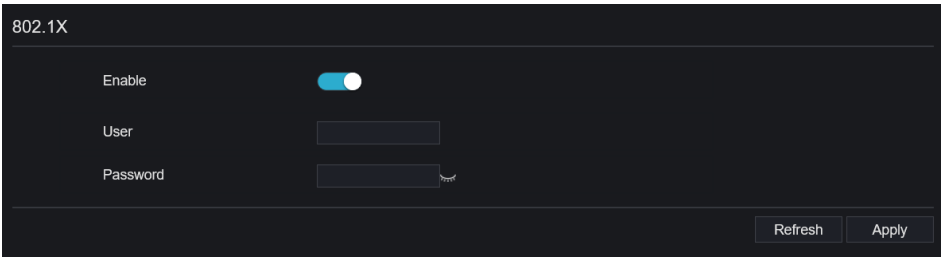
Black list: IP address in specified network segment to prohibit access.
White list: IP address in specified network segment to allow access.
Select a name in the list and click Delete to delete the name from the list.
Select a name in the list and click Edit to edit the name in the list.
Only one rule type is available, and the last rule type set is efficient.

9.4.7 802.1X

Procedure

Step 1 Click **802.1X** in the network interface, 802.1X interface is displayed, enable the button, as shown in Figure 9-46.

802.1X interface



Step 2 Input the user and password of 802.1X authentication.

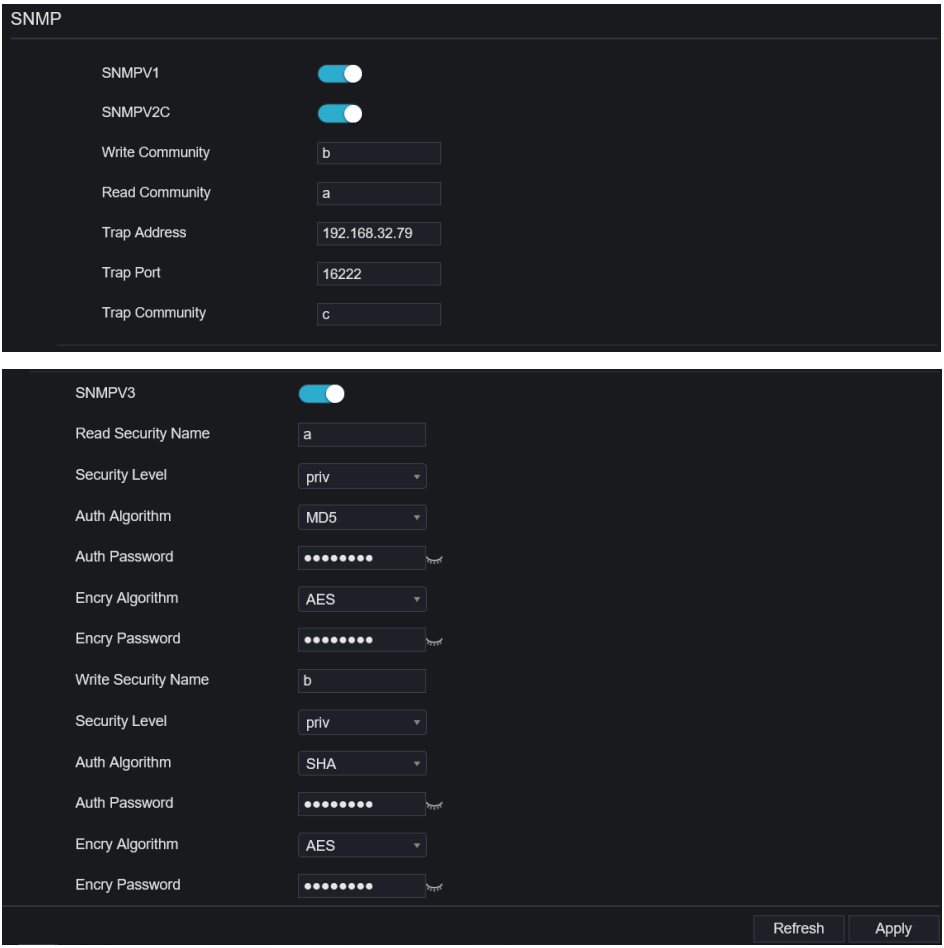
Step 3 Click Refresh to restore previous settings. Click Apply to save the settings.

9.4.8 SNMP

Procedure

Step 1 Click **SNMP** in the network interface, SNMP interface is displayed, enable the button next to SNMPV1, as shown in Figure 9-47.

SNMP interface



Step 2 Input the information of SNMP (simple network management protocol). there are three types of that function. Users can apply that if need.

Table 9-1 SNMP parameters

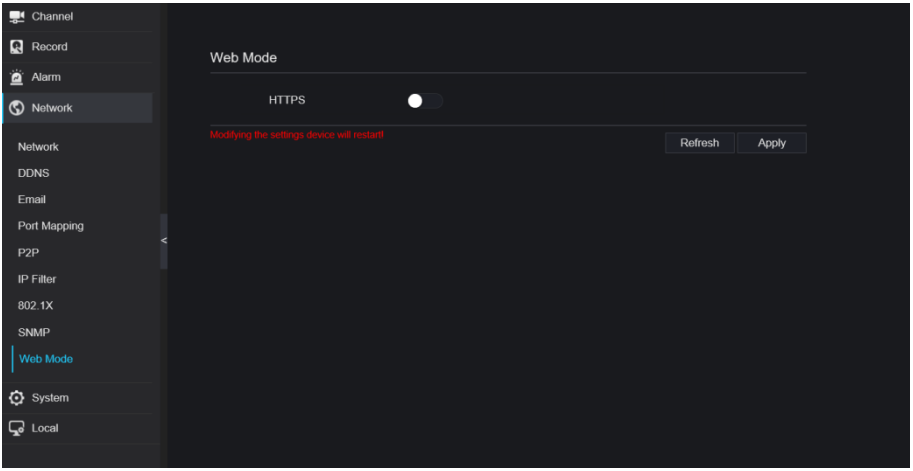
Parameter	Description	Setting
SMTP Server Address	IP address of the SMTP server.	[Setting method] Enter a value manually.
SMTP Server Port	Port number of the SMTP server.	[Setting method] Enter a value manually. [Default value] 25
User Name	User name of the mailbox for sending emails.	[Setting method] Enter a value manually.
Password	Password of the mailbox for sending emails.	[Setting method] Enter a value manually.
Sender E-mail Address	Mailbox for sending emails.	[Setting method] Enter a value manually.
Recipient_E-mail_Address1	(Mandatory) Email address of recipient 1.	[Setting method] Enter a value manually.
Recipient_E-mail_Address2	(Optional) Email address of recipient 2.	
Recipient_E-mail_Address3	(Optional) Email address of recipient 3.	
Recipient_E-mail_Address4	(Optional) Email address of recipient 4.	
Recipient_E-mail_Address5	(Optional) Email address of recipient 5.	
Attachment Image Quality	A higher-quality image means more storage space. Set this parameter based on the site requirement.	N/A
Transport Mode	Email encryption mode. Set this parameter based on the encryption modes supported by the SMTP server.	[Setting method] Select a value from the drop-down list box. [Default value] No Encrypted

Step 3 Click Refresh to restore previous settings. Click Apply to save the settings.

9.4.9 Web Mode

Step 1 Click **Web Mode** in the network interface, Web mode interface is displayed, as shown in Figure 5-1.

Web mode interface

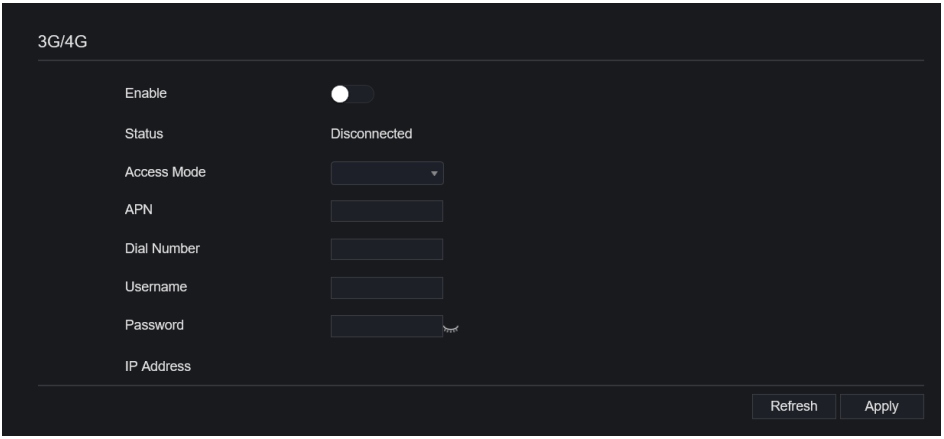


Step 2 Enable the https, the device will restart and start https secure.

Step 3 Click Refresh to restore previous settings. Click Apply to save the settings.

9.4.10 3G/4G

3G/4G



Step 1 The user plugs the modem to NVR.

Step 2 Enable the 3G/4G.

Step 3 When the status is connected, users can set the access mode, AUTO is recommended.

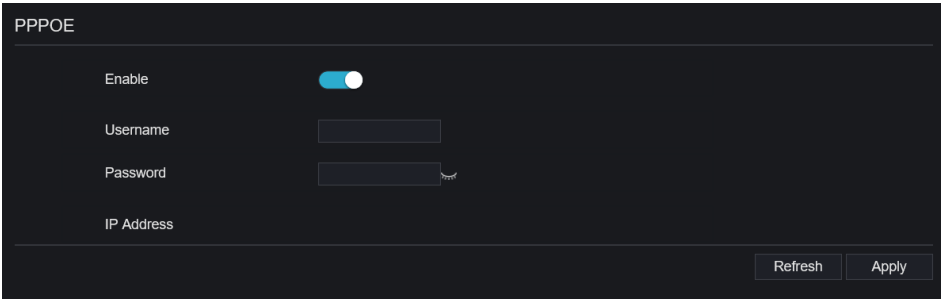
Step 4 If choose other access mode, users should input the parameter correctly.

Step 5 Click Refresh to restore previous settings. Click Apply to save the settings.

9.4.11 PPPOE

Users can use PPPOE function to manage the NVR conveniently.

PPPOE



Step 1 Enable the PPPOE.

Step 2 Input the username and password.

Step 3 The IP address is obtained automatically.

Step 4 Click Refresh to restore previous settings. Click Apply to save the settings.

Step 5 User use the IP address to access NVR immediately.

9.4.12 POE Status (Only for Some Models)

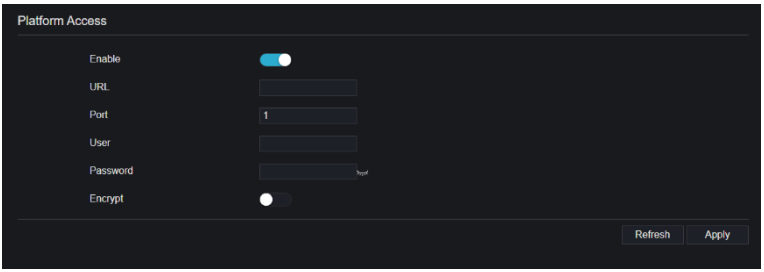
Users can view the POE status at this interface, as shown in Figure 9-51.

POE status

9.4.13 Platform Access

For more detail, please refer to UI interface parameter setting *7.4.13 Platform Access*.

Platform access



9.5 System

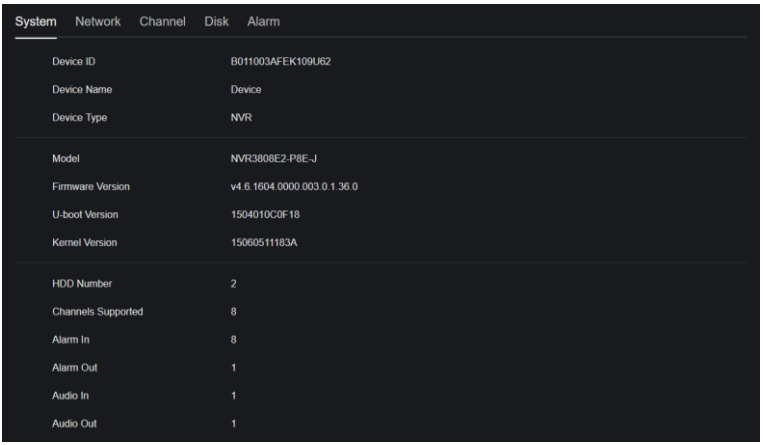
Users can set parameters about information, general, user, password, logs, maintenance and auto restart.

9.5.1 Device Information

Procedure

Step 1 Click on the navigation bar, the device information interface is displayed, as shown in Figure 9-53.

Device information interface

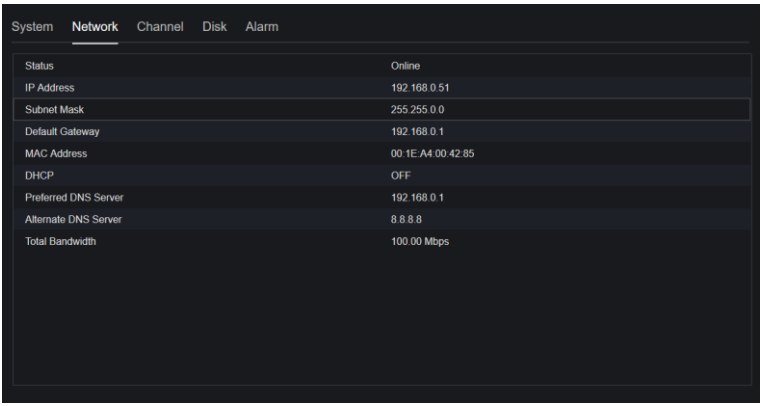


Step 2 Set the device name according to Table 9-2.

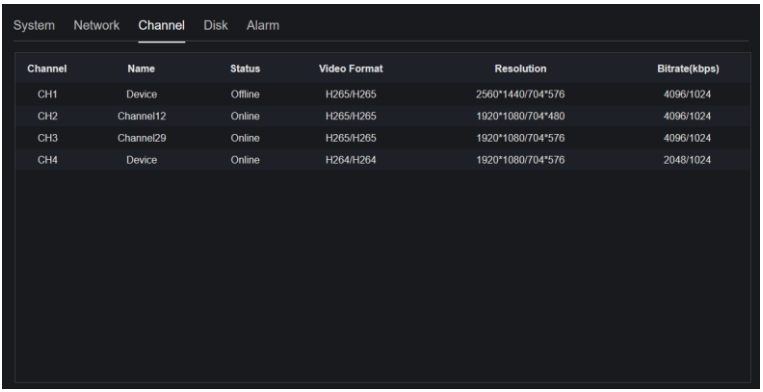
Table 9-2 Device parameters

Parameter	Description	Setting
Device ID	Unique device identifier used by the platform to distinguish the devices.	[Setting method] The parameter cannot be modified.
Device Name	Name of the device.	[Setting method] **System Setting > General** Modify the device name.
Device Type	N/A	[Setting method] These parameters cannot be modified.
Model		
Firmware version		
HDD volume		
Channel support		
Alarm in		
Alarm out		
Audio in		
Audio out		

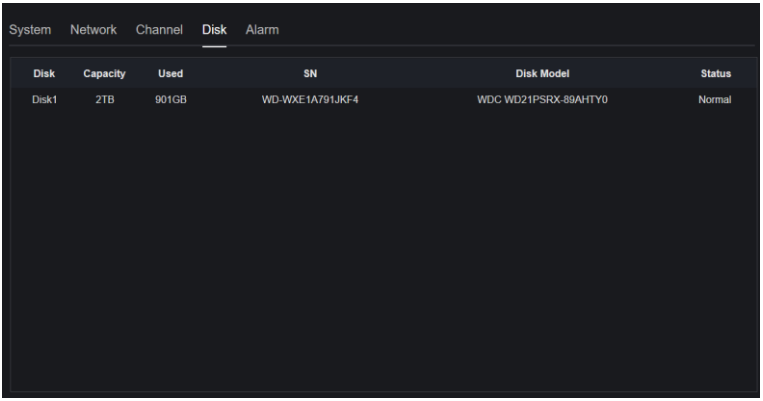
Network



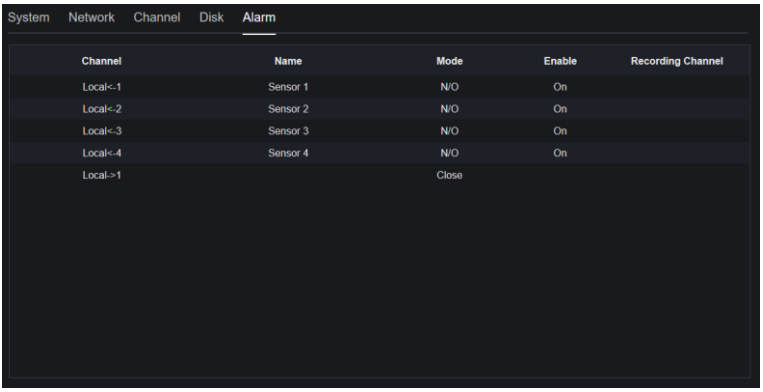
Channel



Disk


System
Network
Channel
Disk
Alarm
Disk
Capacity
Used
SN
Disk Model
Status
Disk1
2TB
901GB
WD-WXE1A791JKF4
WDC WD21PSRX-89AHTY0
Normal

Alarm


System
Network
Channel
Disk
Alarm
Channel
Name
Mode
Enable
Recording Channel
Local<-1
Sensor 1
N/O
On
Local<-2
Sensor 2
N/O
On
Local<-3
Sensor 3
N/O
On
Local<-4
Sensor 4
N/O
On
Local->1
Close

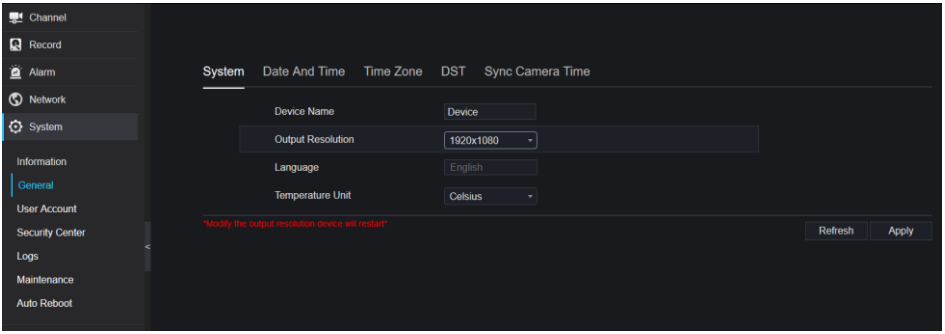
9.5.2 General

You can set system, date and time, time zone and DST general interface.

Procedure

Step 1 On the **System Setting** screen, choose **System >General** to access the general interface, as shown in Figure 9-58.

Basic setting interface



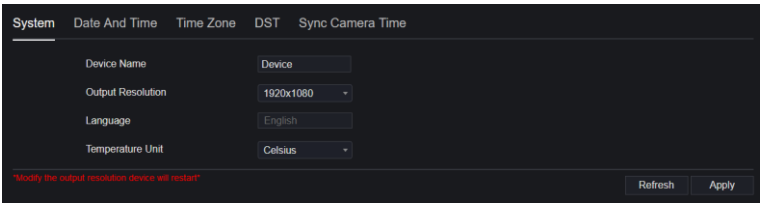
Step 2 Set system.

1. Input the device name.
2. Choose output resolution from drop list.
3. Click Apply to save the system setting.

Step 3 Set date and time.

1. Synchronize the time from the NTP server.
2. Click NTP Sync button to enable synchronize time. The default value is enabling.

System interface



3. Select NTP server, date format and time format from drop list.

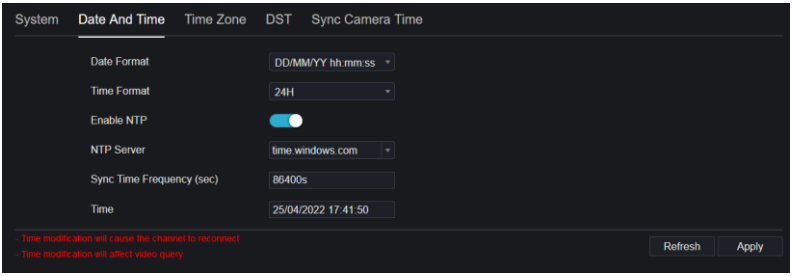
4. Click Apply to save date and time setting. The device time will synchronize with NTP server time.

5. Set the device time manually, as shown in Figure 9-60.

6. Click NTP Sync button to disable synchronize time.

7. Async date and time interface

Date and time



Step 4 Set the time zone.

1. Select date format and time format from the drop-down list.

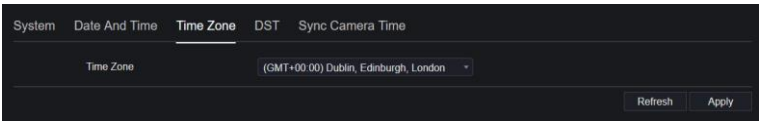
2. Click Apply to save the device time setting. Click Refresh to return to previous setting.

Step 5 Set time zone.

Click **Time Zone** to enter the time zone setting interface, as shown in Figure 9-61.

Time zone setting interface

Time zone



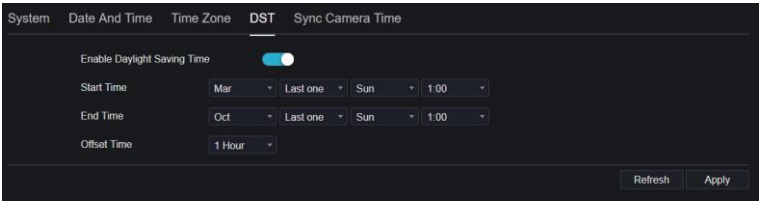
Select a time zone from the drop-down list.

Click Apply to save the time zone setting. Click Refresh to return to previous setting.

Step 6 Set DST.

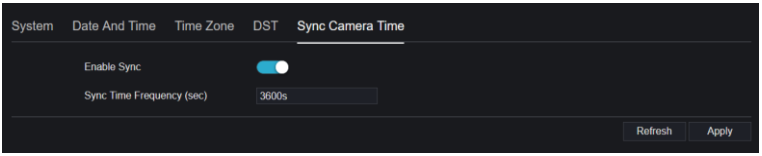
1. Click DST to enter the DST setting interface, click DST button to enable, as shown in Figure 9-62. The button is disabled by default.

DST setting interface



Select a start time from the drop-down list.
Select an end time from the drop-down list.
Select an offset time from the drop-down list.

Sync camera time



Enable sync camera time, the cameras of NVR management will be showing the same time.
Set the frequency of checks (minimum 10s).

Step 7 Click Apply to save the DST setting. Click Refresh to return to previous setting.

9.5.3 User Account

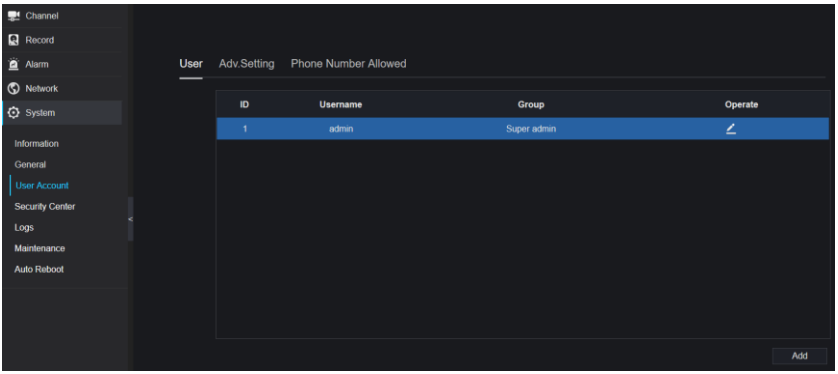
You can create new user accounts to manage the device.

Add User

Procedure

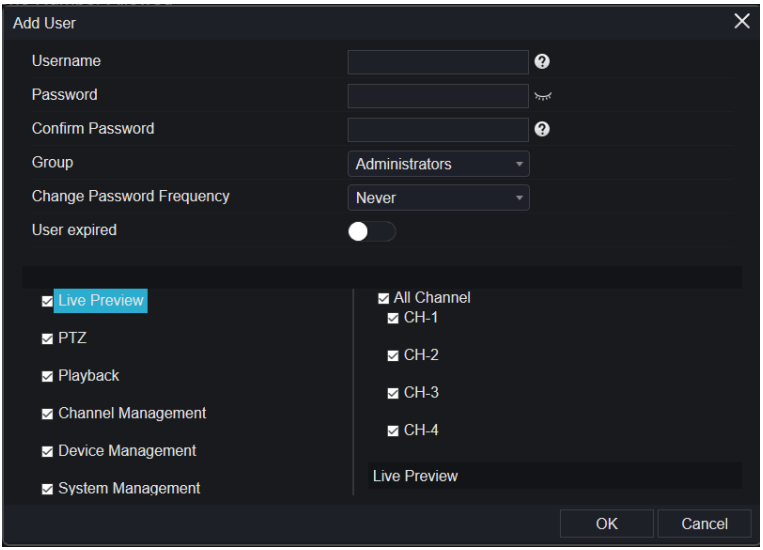
Step 1 On the **System Setting** screen, choose **System >User** to access the **User** interface, as shown in Figure 9-64.

User interface



Step 2 Click **Add** to add a new user, as shown in Figure 9-65.

Add user



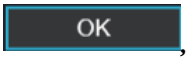
Step 3 Input username, password and confirm password.

Step 4 Select a group and change password reminder from drop-down list.

Step 5 Assign the privilege to the user.

Step 6 Enable the expire date to set the new user's authority time.

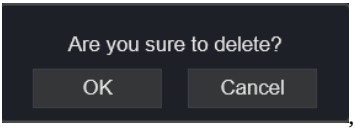
Step 7 Select channels to manage.

Step 8 Click 

, the message **"Add success"** is showed. If the password is not meet the rule, it would show

.

Step 9 Click to edit user's information.

Step 10 Click to delete the account, it would show 

, click

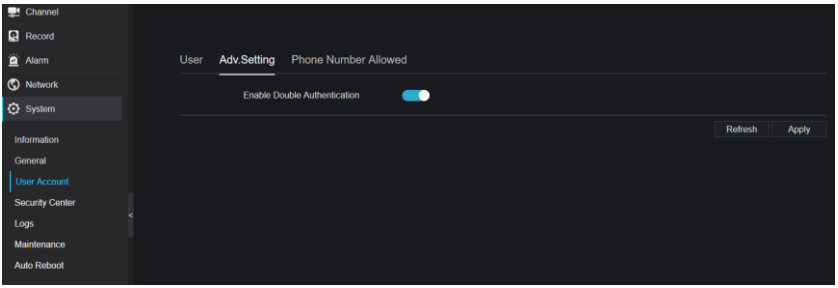
to delete.

Adv.Setting

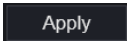
Procedure

Step 1 On the **System Setting** screen, choose **System > User** > **Adv. Setting** to access interface, as shown in Figure 9-66.

Adv. Setting interface



Step 2 Enable the **Password double authentication**. If the user want to playback video, he need input another username and password to authenticate.

Step 3 Click 

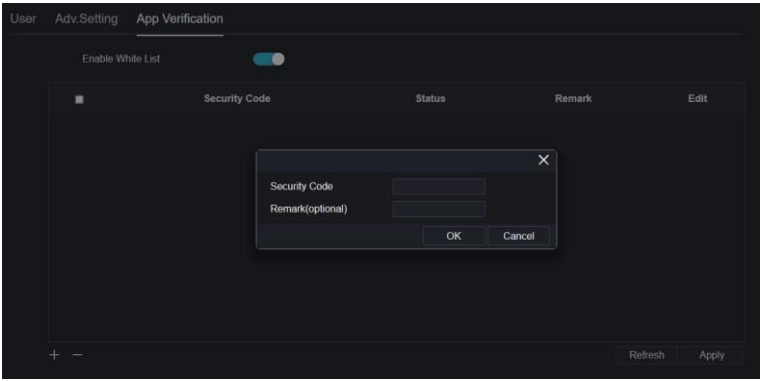
to save the device time setting. Click

to return to previous setting.

App Verification

Add the digital number to white list, when the user logins the cellphone App to manage the NVR, A series of numbers must be added in the whitelist for testing and verification to ensure the security.

App Verification



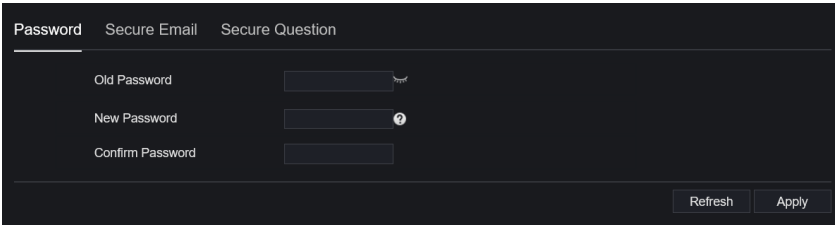
9.5.4 Security Center

Password

Procedure

Step 1 On the **System Setting** screen, choose **System >Security Center** to access password interface, as shown in Figure 9-68.

Password interface



Step 2 Input old password, new password and confirm password.

Step 3 Click Apply to save settings. Click Refresh to return to previous setting.

NOTE

Valid password range [6-32] characters.

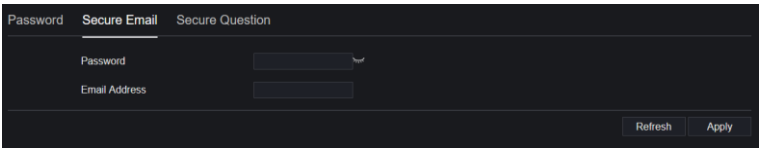
At least 2 kinds of numbers, lowercase, uppercase or special character contained.

Only special characters are support ！ @#&*+=-%&”`(),/’.:;< >?^|~[]{}.

Secure Email

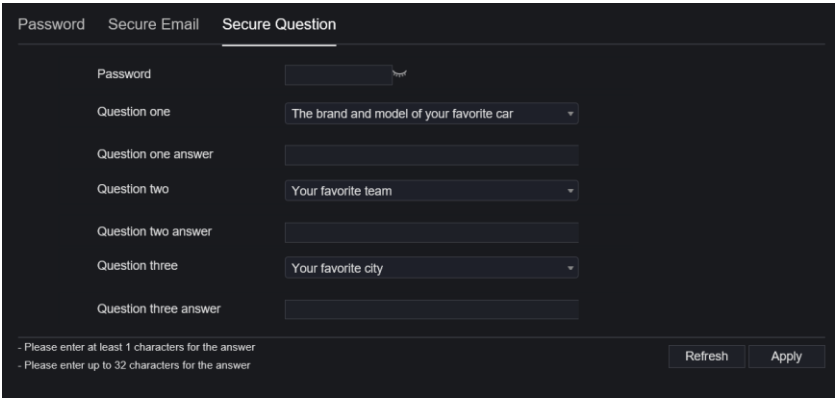
The secure email can receive the verification code of NVR, if user forgot the password accidentally.

Secure Email



Secure Question

If the user forgets the password and answers the security question correctly, the user can change the password to log in to the NVR..



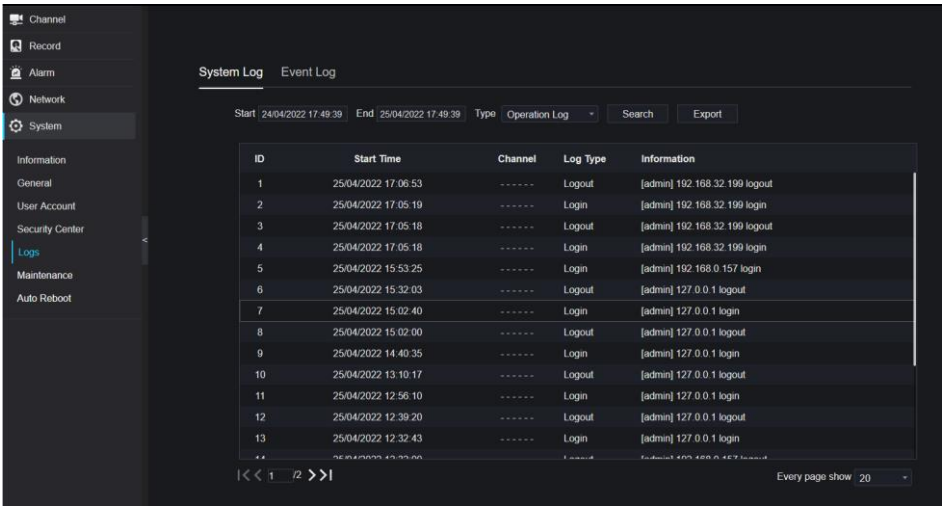
9.5.5 Logs

System Logs

Procedure

Step 1 On the **System Setting** screen, choose **System > Logs** to access logs interface, as shown in Figure 9-70.

System log interface



Step 2 Set start and end time from calendar.

Step 3 Select log type from drop-down list.

Step 4 Click **Search** to acquire log information.

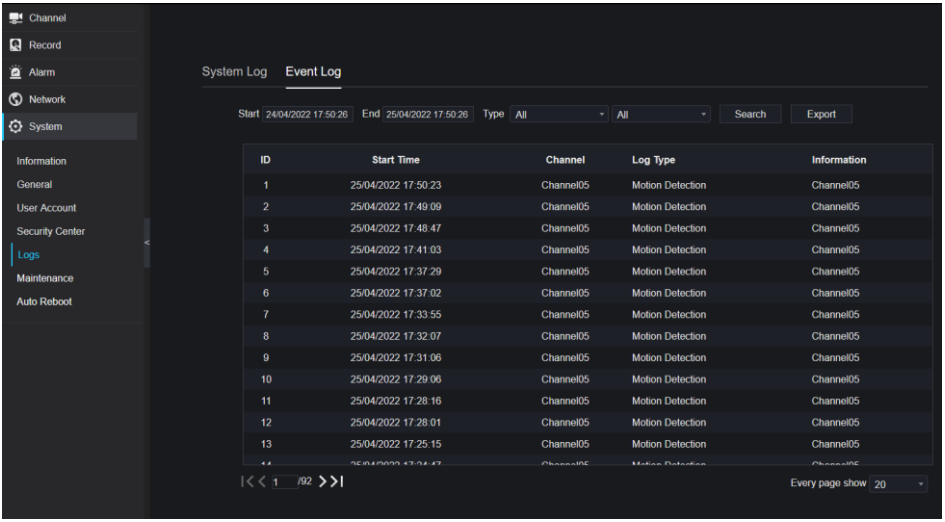
Step 5 Click **Export** to export the logs.

Event

Procedure

Step 1 On the **System Setting** screen, choose **System >Logs > Event** to access logs interface, as shown in Figure 9-71.

Event log interface



Step 2 Set start and end time from calendar.

Step 3 Select event type from drop-down list.

Step 4 Click **Search** to acquire log information.

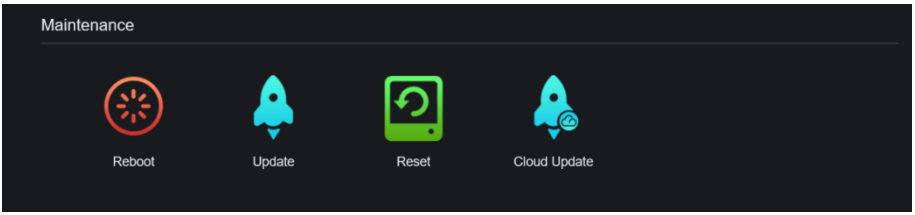
Step 5 Click **Export** to export the event logs.

9.5.6 Maintenance

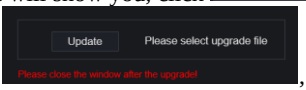
Procedure

Step 1 On the **System Setting** screen, choose **System >Maintenance** to access maintenance interface, as shown in Figure 9-72.

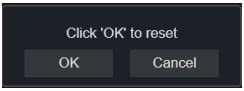
Maintenance interface



Step 2 Click **Reboot**, the pop-up message will show you, click OK to reboot.

Step 3 Click **Update,** the message shows 

, choose software from specific location to update.

Step 4 Click **Reset**, the pop-up message 

shows to you, click OK to reset.

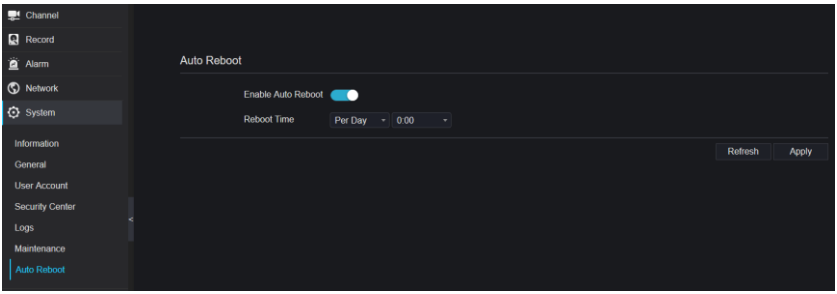
Step 5 If the device is online, and the cloud server has the software, click the **Cloud Update, it shows '**make sure to update**' ,** click **OK** to update.

9.5.7 Auto Reboot

Procedure

Step 1 On the **System Setting** screen, choose **System > Auto Reboot** to access auto restart enable the auto restart, the screen as shown in Figure 9-73.

Auto restart



Step 2 Select one type of restart time from drop-down list.

Step 3 Click Apply to save settings. Click Refresh to return to previous setting.

9.6 Local

Set the image download path for snapshot and the record download path for record files in the download configuration interface.

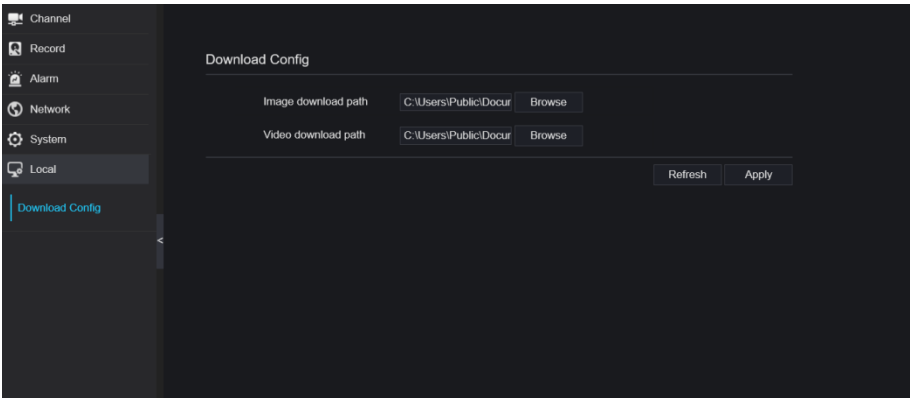
NOTE

This function may not work in some Web browsers.

Procedure

Step 1 Click **Local Download Config** in local interface, as shown in Figure 9-74.

Local interface



Step 2 Enter the image download path.

Step 3 Enter the record download path.

Step 4 Click Refresh to return the previous settings. Click Apply to save the settings.

10 Disk Compatibility

10.1.1 Disk Compatibility

The hard disks in the following list were tested and confirmed to be compatible. That does not mean that the NVR is limited to these specific models. Generally speaking, most SATA HDDs should work fine with the NVR. Please contact our Technical Support team for further details.

Table 10-1 Disk specifications

Disk Brand	Type	Capacity	Model	Parameters
WD (Western Digital)	Monitoring level	3T	WD30EJRX-89G3VY0	3000G/ 5400RPM/64MB/SATA
		1T	WD10EJRX-89N74Y0	1000G/5400RPM/64MB/SATA
		4T	WD40PURX-64GVNY0	4000G/5400RPM/64MB/SATA
		2T	WD20EURS-63S48Y0	
		3T	WD30EURS-63SPKY0	
		0.5T	WD5000AAKK-001CA0	
		1T	WD10EZEX-00BN5A0	1000G/7200RPM/64MB/SATA
		4T	WD40EJRX-89T1XY0	4000G/5400RPM/64MB/SATA
		3T	WD30PURX-64P6ZY0	3000G/5400RPM/64MB/SATA
		6T	WD60PURX-64WYOY1	6000G/5400RPM/64MB/SATA
		8T	WD82EJRX-89AD9Y0	
	Desktop	12T	WD121EJRX-89S5UY0	7200RPM/256MB/SATA
Seagate	Monitoring level	2T	ST2000VX000	2000G/5900RPM/64MB/SATA
		2T	ST2000VX008	2000G/5900RPM/64MB/SATA
		4T	ST4000VX000	4000G/5900RPM/ 64MB/SATA
		3T	ST3000VX000	3000G/5900RPM/64MB/SATA
		4T	ST3000VX010	
		1T	ST31000528AS	
		6T	ST6000VX0001	

		3T	ST3000VX010	3000G/5900RPM/64MB/SATA
		8T	ST8000VX0002	
	Enterprise level	6T	ST6000VN0011	6000G/7200RPM/128MB/SATA
Toshiba	Monitoring level	1T	DT01ABA100V	1000G/5400 RPM /32MB/SATA
WD (Western Digital)	Monitoring level	4T/6T/2T/1T	WD41PSRX	4000G/5400RPM/64MB/SATA
		2T	WD20EJRX-89AKWYO	2000G/5400RPM/64MB/SATA
		10T		
		6T	WD62EJRX-89B2VY0	
		10T	WD102EJRX-89YN0Y0	
		18T	WD180EJRX-89AFLY0	
		8T	WD84EJRX-89B2TY0	

Video recording size per channel per hour =bitrate (kbps)*3600/1200/8 (M)

Recording duration =Total hard disk capacity (M) / Video recording size per channel per hour / number channels (H)