

Digital Video Recorders

User Manual

V1.07

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About this Manual

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Disclaimer

Due to such reasons as product version upgrade or regulatory requirement of relevant regions, this manual will be periodically updated.

This manual is only for informational purpose, and all statements, information, and recommendations in this manual are presented without warranty.

The illustrations in this manual are for reference only and may vary depending on the version or model. The screenshots in this manual may have been customized to meet specific requirements and user preferences. As a result, some of the examples and functions featured may differ from those displayed on your monitor.

Safety Symbols

The symbols in the following table may be found in this manual. Carefully follow the instructions indicated by the symbols to avoid hazardous situations and use the product properly.

Symbol	Description
 NOTE!	Indicates useful or supplemental information about the use of product.
 CAUTION!	Indicates a situation which, if not avoided, could result in damage, data loss or malfunction to product.
 WARNING!	Indicates a hazardous situation which, if not avoided, could result in bodily injury or death.

1 Local Operations

This chapter introduces operation methods and matters needing attention on the local interface.

You can refer to [Initial Configuration](#) and complete a quick configuration.

 **Note:** Unless otherwise specified, all operations described in this manual are performed with a mouse by the right hand.

Before You Begin

- Please be aware that functions may vary with DVR model.
- The figures in this manual are for illustration purpose only and may vary with DVR model.
- The parameters that are grayed out on the local interface cannot be edited. The parameters and values displayed may vary with DVR model and version.

2 Initial Configuration

This chapter describes the initial configuration of the DVR.

2.1 Preparation

- Make sure that at least one monitor is correctly connected to the VGA or HDMI interface on the rear panel of the DVR, otherwise, you cannot view the local interface.

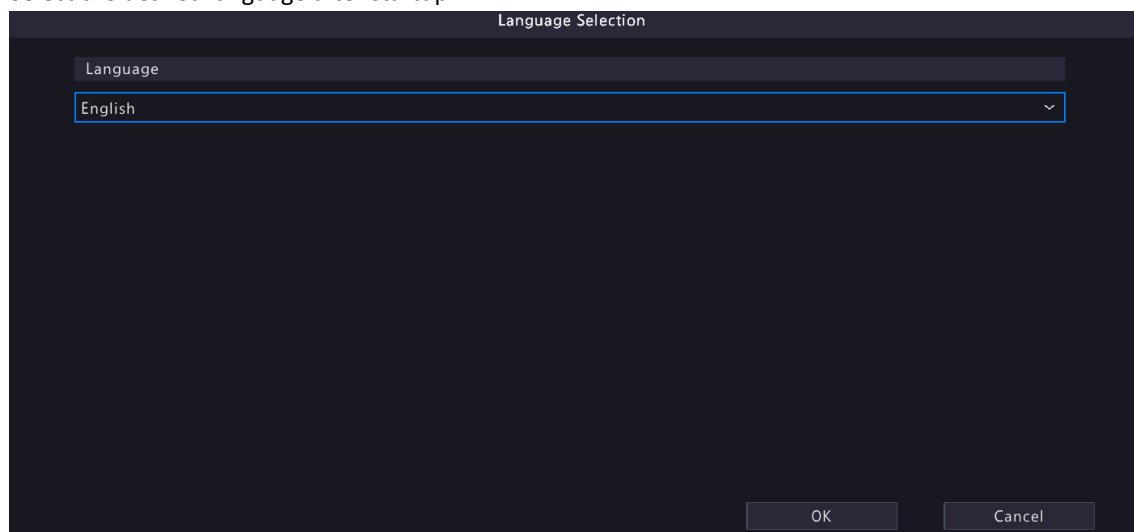
 **Note:** If no images are displayed after the DVR is powered on, it may be because the monitor does not support the current output resolution of the DVR. Please press and hold the scroll wheel of the mouse to restore to the lowest resolution.

- Make sure that the hard disk(s) are correctly installed. For detailed installation steps, please refer to the quick guide shipped with the DVR.

2.2 Login

Device Login

1. Select the desired language after startup.



2. Select the default username and enter the password (admin/123456), and then click **Login**.

Login

admin

☐ Remember Password

Login

Forgot Password?

Unlock Pattern

 **Note:** If you enable **Remember Password**, the username and password will be automatically filled in the next time.

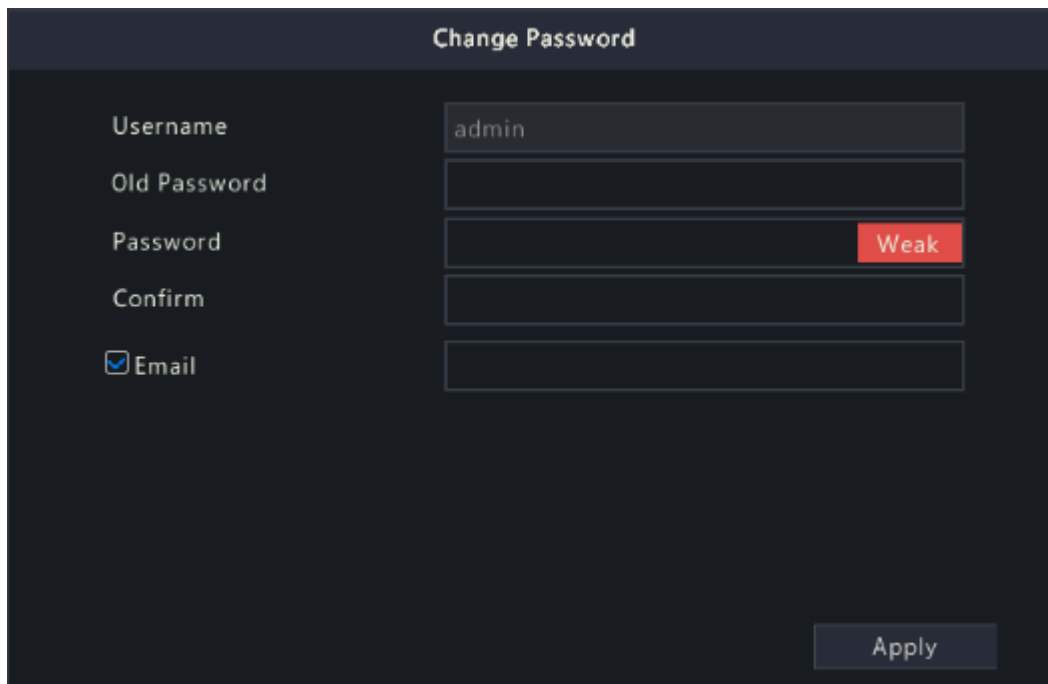
3. Click **Yes** in the pop-up window to change the password into a strong one.

Login

Please change the default password. Change now?

Yes No

4. In the **Change Password** page, enter the old password, new password, and confirm the new password. You may check **Email** to enter your email address, and then click **OK**.



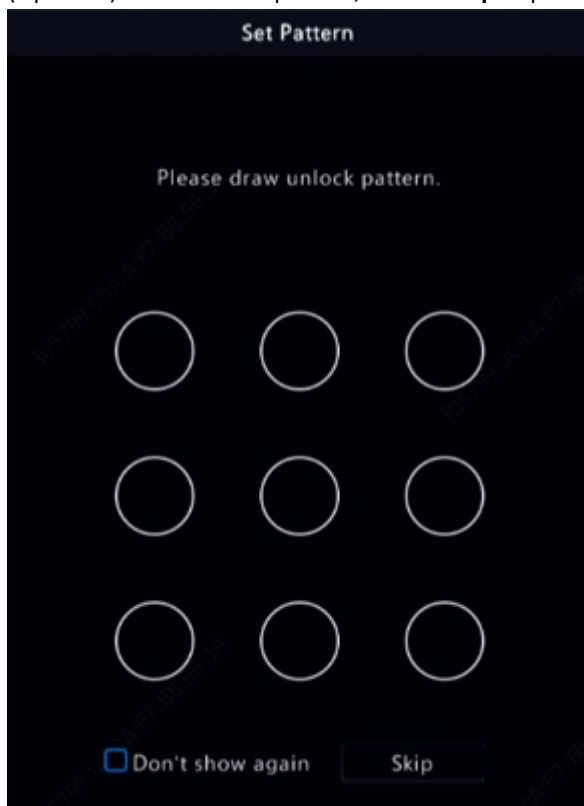
The 'Change Password' form is displayed on a dark background. It contains five input fields: 'Username' (pre-filled with 'admin'), 'Old Password', 'Password', 'Confirm', and 'Email' (preceded by a checked checkbox). A red 'Weak' label is positioned to the right of the 'Password' field. An 'Apply' button is located at the bottom right of the form.



Note:

- Use the default username and password (admin/123456) to log in for the first time. After login, you have to change the password, and use the new password to log in the next time.
- For security, you are strongly recommended to set a strong password with at least 9 characters including all three elements: letter, digit, and special character.
- It is recommended to enter your email address in case you need to reset the password. You may also enter it when you need to retrieve the password. See [Reset Password](#) for details.

5. (Optional) Set an unlock pattern, or click **Skip** to proceed.



The 'Set Pattern' screen features a 3x3 grid of circles for drawing an unlock pattern. The text 'Please draw unlock pattern.' is centered above the grid. At the bottom, there is a checkbox labeled 'Don't show again' and a 'Skip' button.

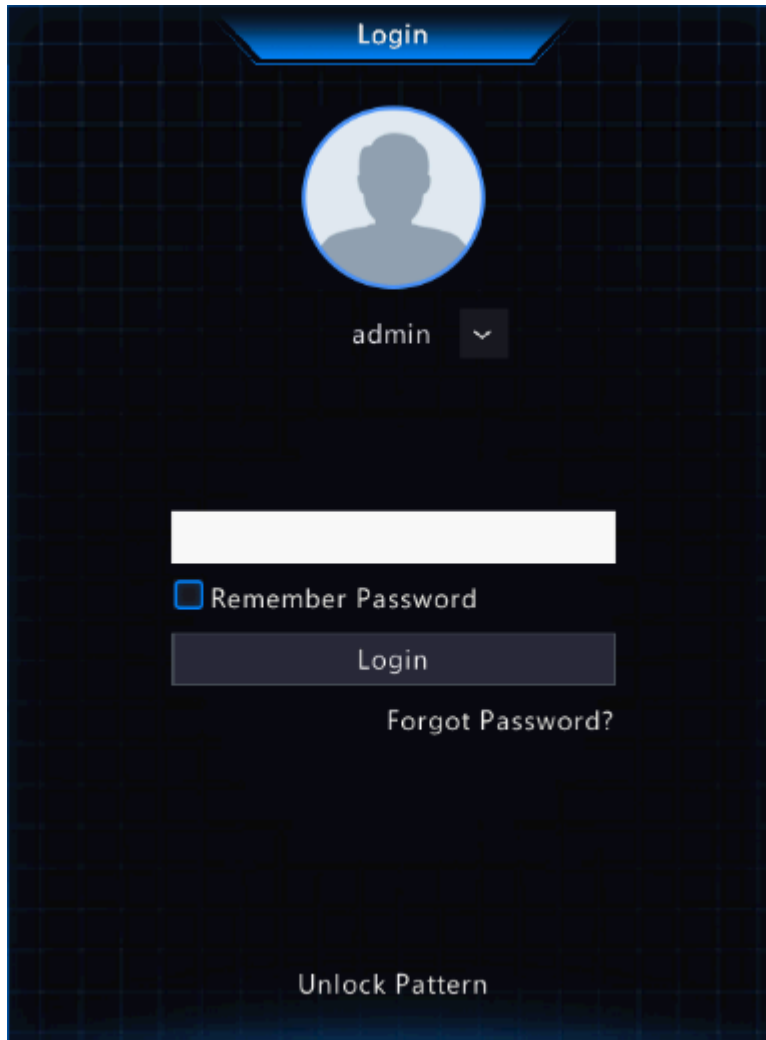


Note:

- You can set the unlock pattern later at anytime or disable it under **Menu > System > User**.
- If an unlock pattern is set, it will replace the password at login.

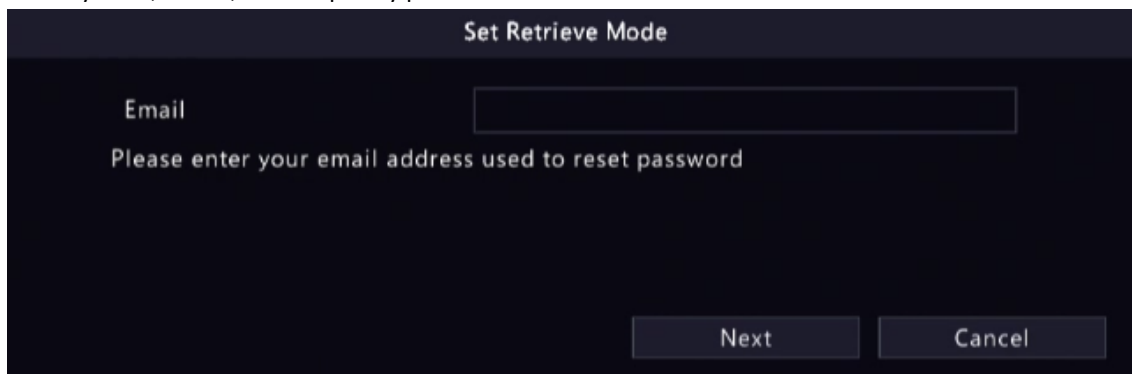
Reset Password

1. If you forgot the admin password or want to reset the password, click **Forgot Password** in the login page.



The image shows a login screen with a dark blue background and a grid pattern. At the top, there is a blue button labeled "Login". Below it is a circular profile picture placeholder. Under the profile picture, the text "admin" is displayed next to a dropdown arrow. Below this is a white password input field. Under the input field is a checkbox labeled "Remember Password". Below the checkbox is a dark blue button labeled "Login". Below the "Login" button is a link labeled "Forgot Password?". At the bottom of the screen is a link labeled "Unlock Pattern".

2. (Skip this step if you have already entered your email address) Enter your email address so as to receive the security code, that is, the temporary password.

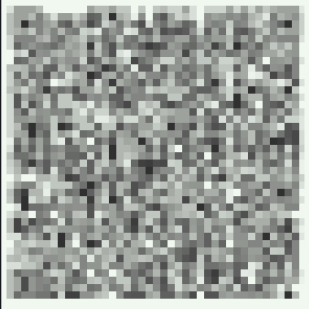


The image shows a screen titled "Set Retrieve Mode". It has a dark blue background. At the top, the title "Set Retrieve Mode" is displayed. Below the title is a label "Email" next to a white input field. Below the input field is the text "Please enter your email address used to reset password". At the bottom right of the screen are two buttons: "Next" and "Cancel".

3. Follow the instructions on the screen to obtain the security code.

Retrieve Password

Serial No.	219
Email	117
Security Code	



Please scan the QR code to obtain the security code:

Scan with your app

For admin only

 **Note:** The app may vary with DVR model.

4. Enter the security code received from the email address, and click **OK**.
5. Enter the password, and confirm the password, and then click **OK** to reset the password.

Change Password

Username	admin
Password	Weak
Confirm	

1-32 characters. A strong password is recommended: at least 9 characters including letters, digits and special characters

Note: If NVR is added to managing platform, you also need to edit the password on the platform.

6. Use the new password to log in again.

2.3 Wizard

The wizard page appears after you login. Follow the wizard to complete the most basic setup, or click **Exit** to skip this step.

 **Note:** You can also go to **Menu > System > Basic** to set the basic parameters.

1. Scan the QR code and follow the on-screen instructions to add the NVR to your app, and then click **Next** or click **2**. This page shows the network connection status.



- Network connected:



- Network unconnected:



- Set the time parameters, including time zone, date format, time format, and system time, and then click **Next**.



- Configure TCP/IP. Select the working mode and NIC. Check **Enable DHCP** to automatically obtain the IP address, subnet mask and IP default gateway. You can also enter the information manually.



4. Click **OK**.

3 Live View

This chapter introduces the live view page, including window toolbar, screen toolbar, shortcut menu, digital zoom, sequence operation, etc.

 **Note:** The operations may vary with DVR model.

3.1 Live View Status

The following icons are used to indicate alarms, recording status, and audio status in a live view window.

Table 3-1: Live View Window Icons

Icon	Description	Icon	Description
	Tampering alarm		Recording
	Motion detection alarm		Two-way audio

3.2 Window Toolbar

Click a window to display the window toolbar for quick configuration.

Table 3-2: Window Toolbar

Button	Name	Description
	PTZ Control	- Available for PTZ cameras only. Click to display the PTZ control window. - You can also configure PTZ under Menu > Camera > PTZ. See PTZ Configuration for details.
	Local Recording	Record live video in the window to the hard disk. Click  to stop recording.  Note: Similar to manual recording, local recording is a scheduled recording and has a priority over other video recording schedules. You can play the local recording in normal mode.
	Instant Playback	Click to play the video recorded during the past 5 minutes.

Button	Name	Description
	Digital Zoom	Zoom in on an area of interest in the window. See Digital zoom for details.
	Image Settings	- Click to set the image mode and parameters so as to get optimal images in the window. - You can also edit image settings under Menu > Camera > Image > Image Settings. See Image Settings for details.
	Take Snapshot	Click to take a snapshot. The window borders will flash white. You may view and back up snapshots under Menu > Backup > Image .
	OSD	- Click to set OSD. - You can also set OSD under Menu > Camera > OSD. See OSD Configuration for details.
	Two-way Audio	Start two-way audio with the camera. The sound volume is adjustable. Click  to stop.  Note: Correct audio input and output (AUDIO IN/OUT) connections between DVR and IPC are required.
	Turn Audio On	Click to turn on audio. The sound volume is adjustable. Click  to turn off audio.  Note: When you turn on audio in the current window, audio of the previous window is turned off.
	Camera Info	Hover over the button to view the bit rate of the current window; click the button to modify the camera information.

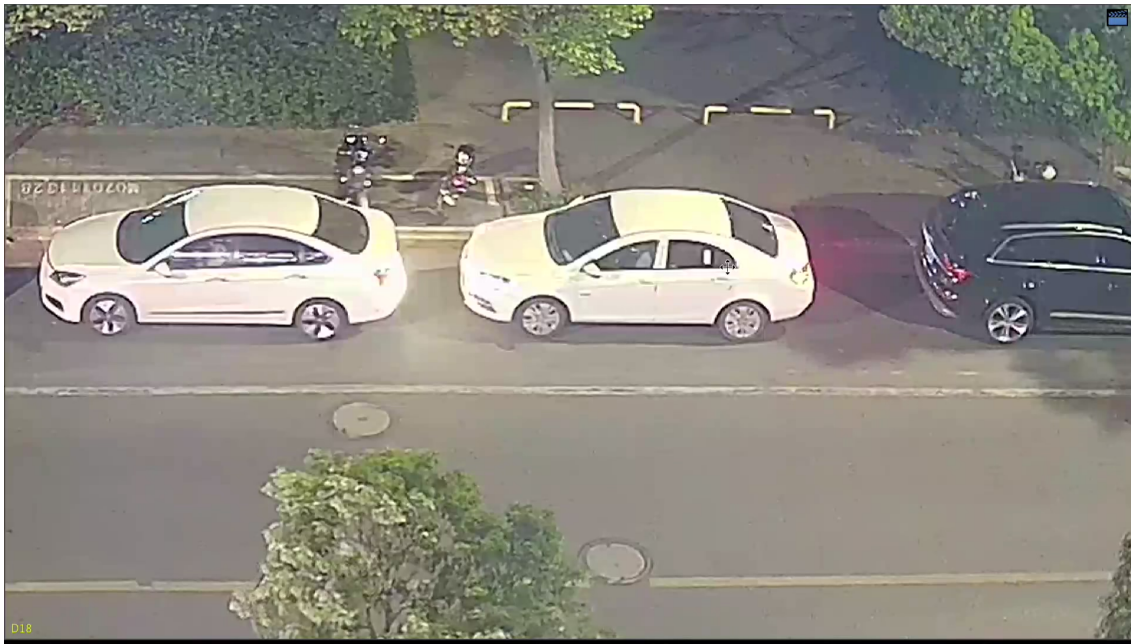
Digital zoom

Zoom in on an area of images in a window for details.

1. In the preview page, click the window, and then click  on the window toolbar.



2. Move your mouse to the area you want to zoom in on, then use your scroll wheel to zoom in. The enlarged image is as follows.



3. Right-click to exit zoom.

3.3 Screen Toolbar

Move your mouse to the bottom of the preview page to display the screen toolbar. Click  to lock the toolbar.

Table 3-3: Screen Toolbar

Button	Description
	Click to select menu, playback, logout, restart, shutdown.
	Select the screen layout, including single window and 4/6/8/9 windows.
	Previous or next screen.
	Start or stop sequence. See Sequence for details.
	Click to go to the Playback page.
	Switch to multi-sensor preview mode.  Note: This function is only available for dual-channel cameras.
	Click to view camera information, including camera status and alarm status.
	Click to view DVR alarm and camera alarm.
	Hover over the button to view the NIC information; Click to edit network settings.
	Show device time. Hover over the button to view the date; Click to edit time settings.
	Lock/hide the screen toolbar.

Sequence

Use sequence when you want to view live videos from different cameras at the same time and ensure the image clarity. The function requires you to configure the screen layout, windows, linked cameras, and the sequence interval.

The following example describes how to configure sequence for five cameras based on a 4-window screen layout.

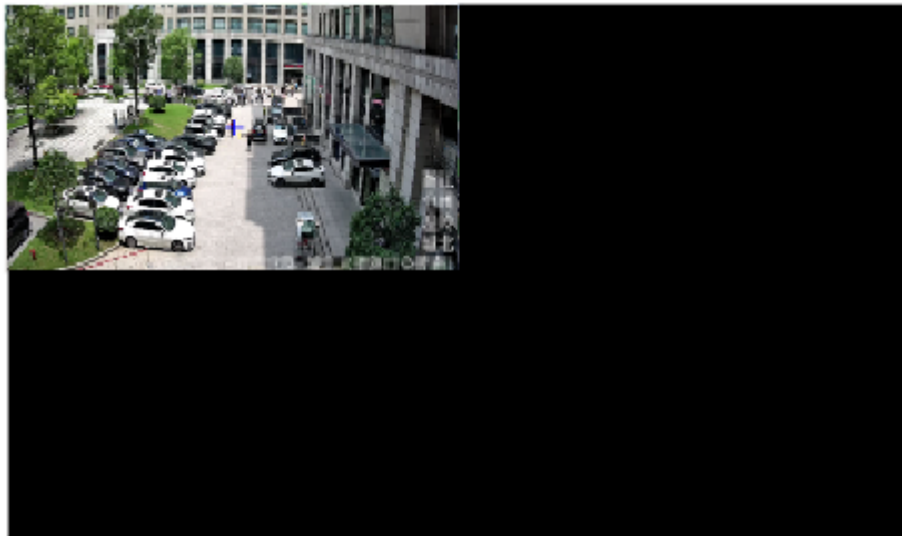
1. In the preview page, right-click and select **Multi-Window > 4 Windows**.



 **Note:** The number of windows that can be displayed may vary with DVR model.

2. Click  on the screen toolbar to start sequence.

The system starts to display images of four cameras in four windows on the first screen, and then display the fifth camera' image on the second screen after the set interval.

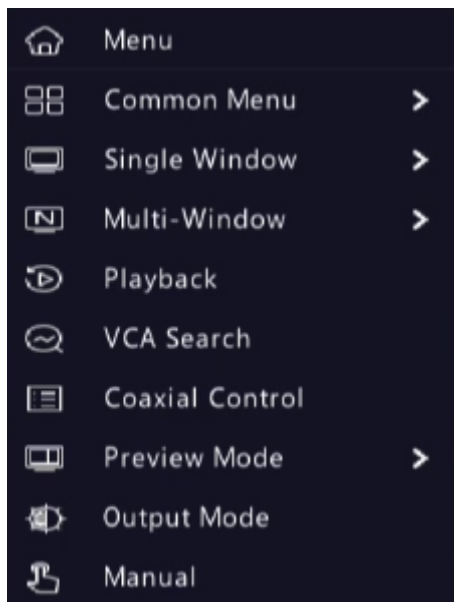


 **Note:** The default sequence interval is 8 seconds. You can set it under **Menu > System > Preview**. See [Preview Configuration](#) for details.

3. Click  to stop sequence.

3.4 Shortcut Menu

A shortcut menu as shown below appears when you right-click in a window.



Shortcut Menu

Table 3-4: Shortcut Menu

Item	Description
Menu	Display the main menu.
Common Menu	Go to the Camera , Network , and Recording page.
Single Window	Switch to single window.
Multi-Window	Select the screen layout, including 4/6/8/9 windows.
Playback	Play the video of the current day for the camera linked to the current window. You can also choose to play videos from other days as needed.
Preview Mode	Switch between Normal Mode and Smart . The default is Normal mode.
VCA Search	Search the VCA snapshots and recordings in the Behavior Search page. See Behavior Search for details.
Coaxial Control	Go to the OSD Menu Control Page.
Output Mode	Choose a video output mode, including standard, soft, bright, vivid, and custom. Brightness, saturation, and other parameters are also configurable.
Manual	Manual settings include manual recording, manual snapshot, and manual alarm, buzzer, let through manually. See Manual Operations for details.

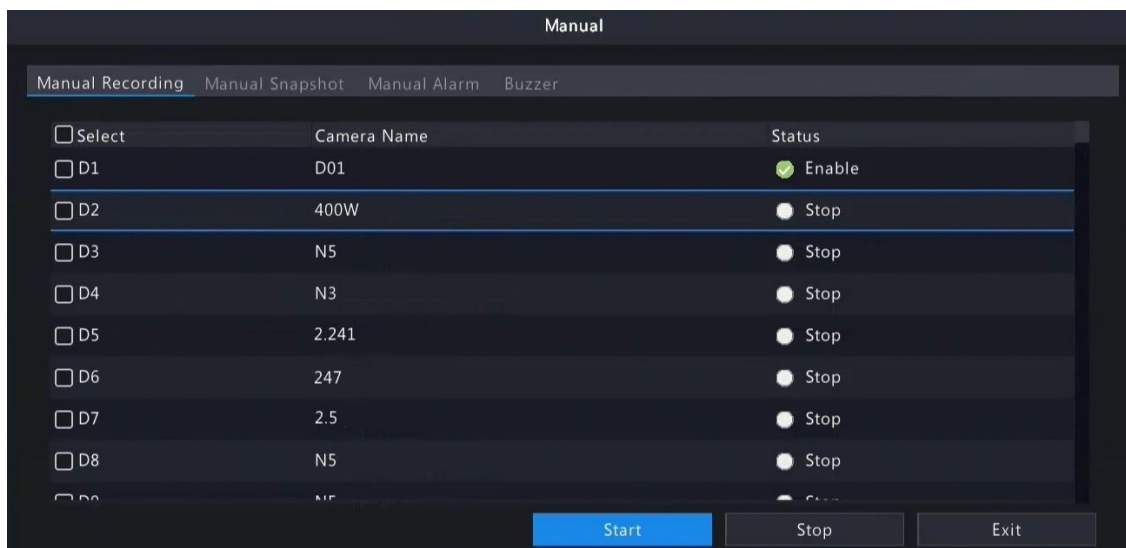
Manual Operations

Manual operations include manual recording, manual alarm and buzzer.

Manual Recording

 **Note:** Similar to local recording  on the screen toolbar, manual recording is a scheduled recording and has higher priority over other recording schedules. You can play manual recordings in normal mode.

1. Right-click and select **Manual** > **Manual Recording**.

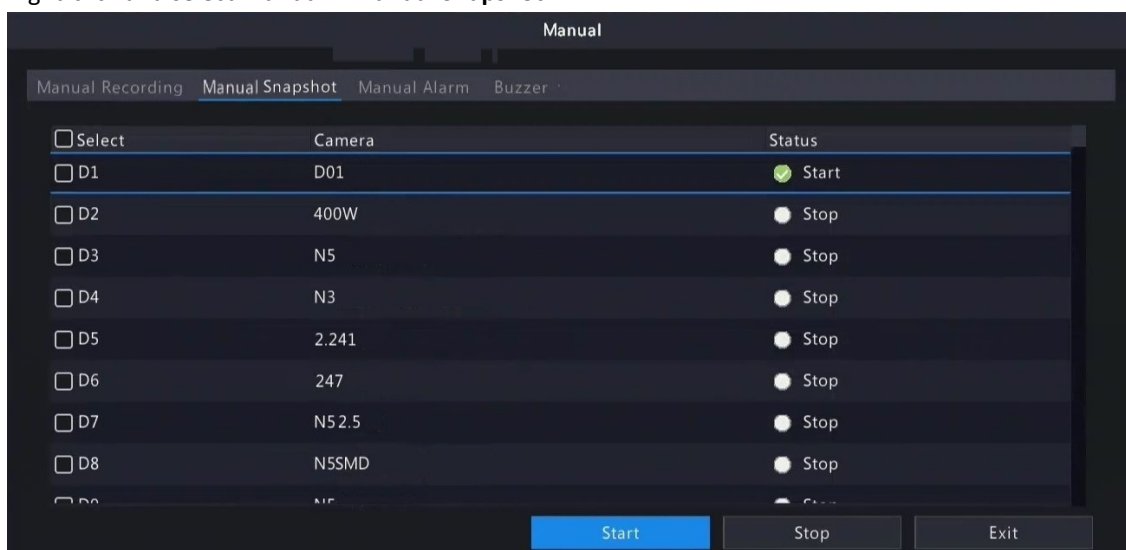


2. Start or stop manual recording.

- Start recording: Select the desired camera(s) and then click **Start**.
- Stop recording: Select the camera(s) being recorded and then click **Stop**.

Manual Snapshot

1. Right-click and select **Manual > Manual Snapshot**.



2. Start or stop manual snapshot.

- Start snapshot: Select the desired camera(s) and then click **Start**.
- Stop snapshot: Select the camera(s) that has enabled snapshot, and click **Stop**.

Manual Alarm

Right-click and select **Manual > Manual Alarm**. You can trigger or clear an alarm output manually. See [Manual Alarm](#) for details.

Buzzer

Right-click and select **Manual > Buzzer**. You can stop the buzzer manually. See [Buzzer](#) for details.

4 Channel Configuration

Configure IPC, encoding, audio, OSD, image and PTZ parameters.

 **Note:** The IP devices mentioned in this manual mainly refer to IP cameras (or network cameras).

4.1 Channel Management

Add and manage IP cameras.



Note:

- Before you start, make sure the IP cameras are connected to your DVR via network.
- An IP camera should be connected to one DVR only. An IP camera managed by multiple DVRs may cause unwanted issues.

4.1.1 Camera Type

You can change the channel type to analog or digital. This function is only available for DVRs.

Change Channel Type

1. Go to **Menu > Camera > Camera > Camera Type**.

Camera ID	☒ Coaxial Power	☒ Analog	☐ Digital
1	☒	☒	☐
2	☒	☒	☐
3	☒	☒	☐
4	☒	☒	☐

2. Select the channel you want to change and choose the desired type.

Coaxial Power and **Analog** are enabled by default. A PoC analog camera should be connected to the DVR for power supply without the need for a power adapter; A power adapter is required if the DVR is connected to a common analog camera or **Coaxial Power** is disabled; If you enable **Digital**, please connect a digital camera to the DVR.

3. Click **Apply**, then a message indicating device restart appears.

System Message

Changing the camera type will cause the device to restart. Continue?

Yes No

4. Click **Yes**. The channel type will be changed after the DVR restarts.

Add Analog Camera

Analog cameras can be added to DVRs only.

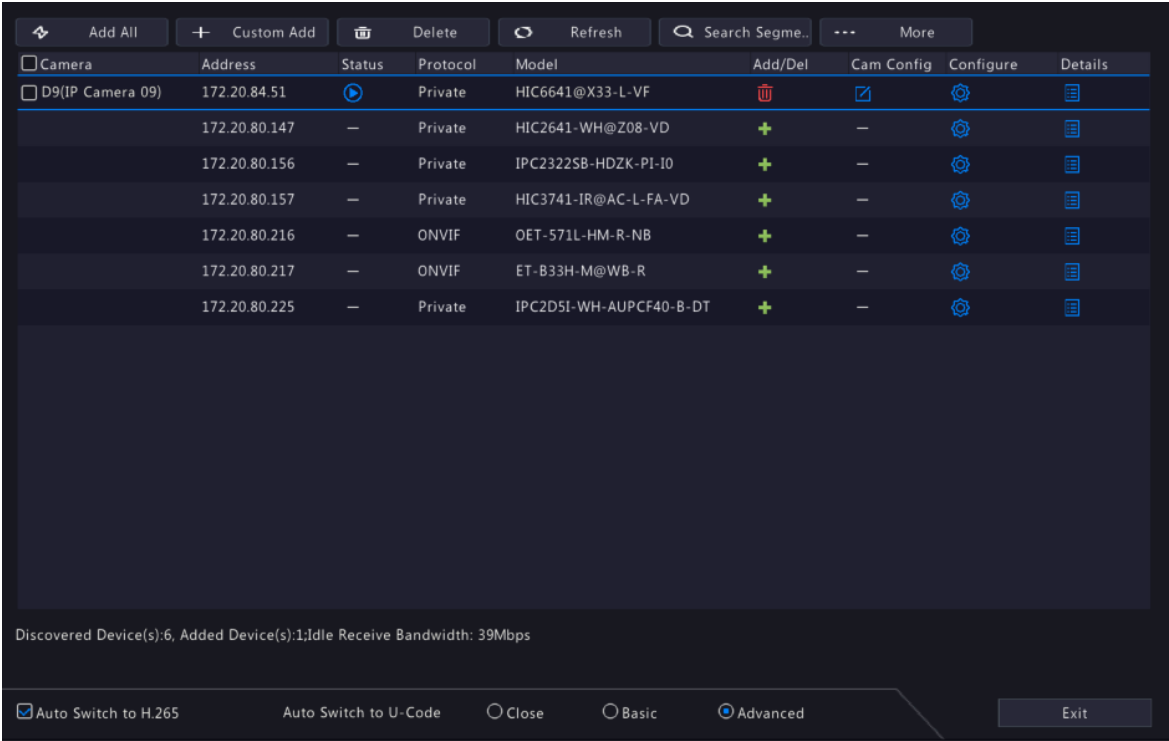
1. Connect the camera to the video output interface of the DVR via a coaxial cable, and connect the camera to power. The camera will be added to the DVR.
2. Check the camera status in the preview page.

4.1.2 IPC Configuration

Add and manage IP cameras.

Go to **Menu > Camera > Camera > Camera**.

 **Note:** The third-party cameras cannot be added to the DVR via the private protocol.



The screenshot displays the 'IPC Configuration' window. At the top, there are buttons for 'Add All', 'Custom Add', 'Delete', 'Refresh', 'Search Segme..', and 'More'. Below these is a table with columns: Camera, Address, Status, Protocol, Model, Add/Del, Cam Config, Configure, and Details. The table lists several IP cameras, including 'D9(IP Camera 09)' and others with addresses like 172.20.84.51, 172.20.80.147, etc. Below the table, it shows 'Discovered Device(s):6, Added Device(s):1, Idle Receive Bandwidth: 39Mbps'. At the bottom, there are radio buttons for 'Auto Switch to H.265', 'Auto Switch to U-Code', 'Close', 'Basic', and 'Advanced', along with an 'Exit' button.

Camera	Address	Status	Protocol	Model	Add/Del	Cam Config	Configure	Details
D9(IP Camera 09)	172.20.84.51	▶	Private	HIC6641@X33-L-VF	🗑️	🔧	⚙️	📄
	172.20.80.147	—	Private	HIC2641-WH@Z08-VD	+	—	🔧	📄
	172.20.80.156	—	Private	IPC2322SB-HDZK-PI-I0	+	—	🔧	📄
	172.20.80.157	—	Private	HIC3741-IR@AC-L-FA-VD	+	—	🔧	📄
	172.20.80.216	—	ONVIF	OET-571L-HM-R-NB	+	—	🔧	📄
	172.20.80.217	—	ONVIF	ET-B33H-M@WB-R	+	—	🔧	📄
	172.20.80.225	—	Private	IPC2D5I-WH-AUPCF40-B-DT	+	—	🔧	📄

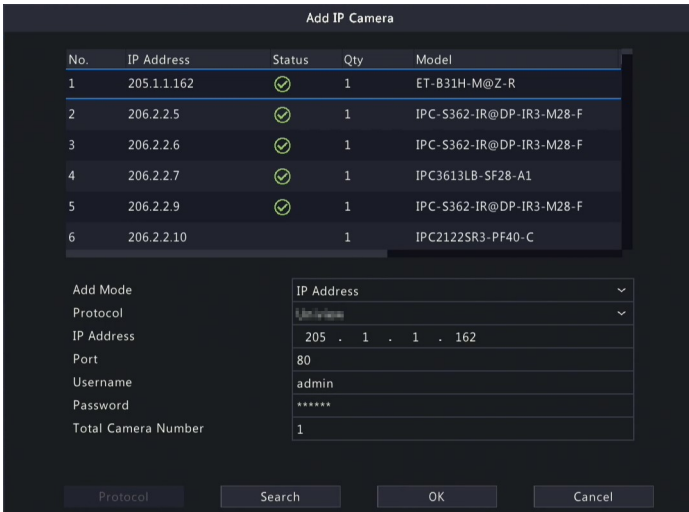
Discovered Device(s):6, Added Device(s):1, Idle Receive Bandwidth: 39Mbps

☒ Auto Switch to H.265 ☐ Auto Switch to U-Code ☐ Close ☐ Basic ☒ Advanced

Add IPC

The system automatically searches for IP cameras and lists the discovered. Click **Refresh**, the system refreshes the list and IPC status. Choose a way to add IPCs.

- Option 1: Custom Add
 1. Click **Custom Add**.



The 'Add IP Camera' dialog box shows a table of discovered cameras and a form for adding a new one. The table has columns: No., IP Address, Status, Qty, and Model. The form includes fields for Add Mode, Protocol, IP Address, Port, Username, Password, and Total Camera Number, along with buttons for Protocol, Search, OK, and Cancel.

No.	IP Address	Status	Qty	Model
1	205.1.1.162	✓	1	ET-B31H-M@Z-R
2	206.2.2.5	✓	1	IPC-S362-IR@DP-IR3-M28-F
3	206.2.2.6	✓	1	IPC-S362-IR@DP-IR3-M28-F
4	206.2.2.7	✓	1	IPC3613LB-SF28-A1
5	206.2.2.9	✓	1	IPC-S362-IR@DP-IR3-M28-F
6	206.2.2.10	✓	1	IPC2122SR3-PF40-C

Add Mode:
Protocol:
IP Address: 205 . 1 . 1 . 162
Port: 80
Username: admin
Password: *****
Total Camera Number: 1

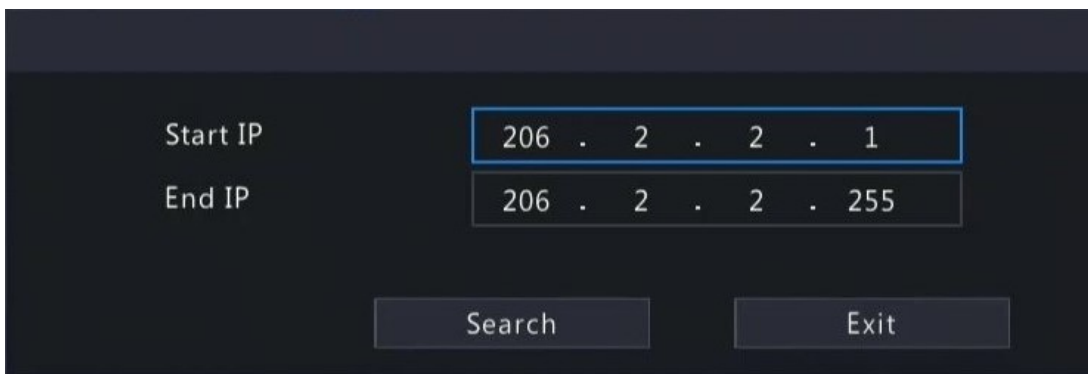
2. In the window displayed, enter the IPC's IP address and complete other settings, then click **OK**. You may check the camera's status.

- : Camera online.
- : Camera offline. Point to the icon to view the failure information.
- : The camera is added to another DVR.

3. Repeat the above steps to add other IPCs.

- Option 2: Search Segment

1. Click **Search Segment**. Enter the start and end IP addresses, click **Search**. The discovered IP devices are listed.



2. Select the desired camera, click  to add it to the DVR.

- Option 3: Add All

Click **Add All** to add all the discovered IPCs (if not exceeding the upper limit).

- Option 4: Click

Click  to add the camera directly.

- Option 5: Add from the Preview Window

 **Note:** This option is not applicable to DVRs with PoE ports. Some DVRs have PoE ports and non-PoE ports, and some have PoE ports only. All these DVRs do not support this option.

1. In the preview page, click  in a window to go to the **Add IP Camera** page.

2. Select the desired IP camera and then click **OK**.

- Option 6: Connect via Cable

1. Connect an IP camera to a PoE port or a switching port of the DVR with a network cable. The connected camera will be added to the DVR automatically.

2. Check the camera status under **Menu > Camera > Camera > Camera**.

 Note:

- This option is only applicable to DVRs with PoE ports, and the added camera cannot be deleted.
- If you want to add an IPC that is not connected to the DVR's with a network cable, click , change **Plug-and-Play** to **Manual**, and complete other parameters.
- For DVR with PoE ports only,  appears under **Status** if the power output from a PoE port is below or above the rated power of the connected camera.

- Option 7: Add From Another Network

Use this option when the DVR and the IP camera are connected to different router. Make sure the DVR can access the camera via the camera's public IP address and mapped port number.

 **Note:** First you need to enable port mapping under **Setup > Port > Port Mapping** on the IP camera's Web interface.

- Option 8: Use Custom Protocol



Note:

- Use this option when the IP camera supports the standard RTSP.
- Only live and recorded video streams are available from the camera added in this way. Configuration operations are not supported.

1. Go to **Menu > Camera > Camera > Camera**.
2. Click **Custom Add**. Select **Custom** from the **Protocol** drop-down list.

Add IP Camera

No.	IP Address	Status	Qty	Model
1	205.1.1.162	✓	1	ET-B31H-M@Z-R
2	206.2.2.5	✓	1	IPC-S362-IR@DP-IR3-M28-F
3	206.2.2.6	✓	1	IPC-S362-IR@DP-IR3-M28-F
4	206.2.2.7	✓	1	IPC3613LB-SF28-A1
5	206.2.2.9	✓	1	IPC-S362-IR@DP-IR3-M28-F
6	206.2.2.10		1	IPC2122SR3-PF40-C

Add Mode

Protocol

IP Address

Port

Username

Password

Total Camera Number

IP Address

Custom

205 . 1 . 1 . 162

0

admin

1

Protocol

Search

OK

Cancel

3. Click **Protocol**.

Protocol

Custom	Custom1
Protocol Name	Custom1
Port	7891
Transfer Protocol	UDP
Enable Main Stream	☒
Resource Path	rtsp://<ip>:<port>/hjt
Enable Sub Stream	☐
Resource Path	rtsp://<ip>:<port>/

Example : rtsp://<IP address>:<Port number>/<Resource path>;

One channel:
rtsp://192.168.0.1:554/unicast/c1/s0/live

Multi-channel:
rtsp://192.168.0.1:554/unicast/c[%C]/s0/live Add selected camera ID
rtsp://192.168.0.1:554/unicast/c[%C+1]/s0/live Add selected camera ID+1
rtsp://192.168.0.1:554/unicast/c[%C+1]/s0/live Add selected camera ID-1
[%C±N] : %C means the remote camera ID selected, N means offset

Apply
OK
Cancel

4. Set the protocol name, enter the RTSP port number, transmission protocol, resource paths, etc., and then click **OK**.



Note: Contact the camera manufacturer for resource paths of main stream and sub stream.

5. Enter the IP address, username, and password, and then click **OK**. Check status in the camera list.

Edit IP Camera

Select the target camera and click . Edit the settings as needed, and then click **OK**.

Modify IP Camera

No.	IP Address	Status	Qty	Model
1	206.3.0.9	✓	1	IPC244S-IR5-PF36-DT
2	206.3.0.22	✓	1	IPC242S-IR3-HUPF40-C-DT
3	206.3.0.24	i	1	IPC244S-IR9-PF36-DT
4	206.3.0.27	i	1	IPC242S-IR3-HUPF40-C-DT
5	206.3.0.28	✓	1	HIC6221EX20-5CIR-U
6	206.3.0.30	i	1	IPC814SR-DVSPF16

Add Mode

Protocol

IP Address

Port

Username

Password

Total Camera Number

IP Address v

Private v

206 . 2 . 22 . 207

80

admin

1

Protocol
Search
OK
Cancel



Note:

- To change the IP camera connected to the channel, you can edit the IP channel related parameters (except IP address), or directly click another camera in the list above.
- The configuration items may vary with IPC model.

Delete IP Camera

You can delete IP camera(s) one by one or in batches.



Note: Channels corresponding to PoE ports or switching ports cannot be deleted.

- Select a camera to be deleted, click , and click **OK** in the pop-up window.
- Select cameras to be deleted, click **Delete**, and click **OK** in the pop-up window.

Change Window Position

Use this function to change window position of channels in the preview page, without changing the channel ID, IP address, and display order in the channel list. Choose a way to change window position.

- In the multi-window preview page, drag a window to another window to swap their positions.
- In the **Preview Configuration** page under **Menu > System > Preview**, change window positions in the preview page. See [Screen Configuration](#) for details.

Batch Change Password

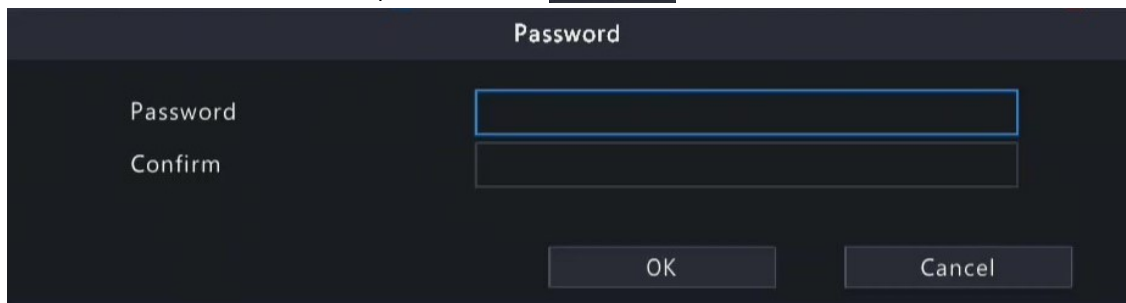
When multiple IPCs are not added successfully due to incorrect password, and if the login passwords of these cameras are the same, use this function to change the passwords in batches.



Note:

- This function only changes the password used to add cameras. It does not change the cameras' login password.
- This function is only applicable for IPCs with the same login password. If one of the cameras still fails to be added after you change the password, it means the camera's login password is different, and you need to change the password separately.

1. Select the cameras with the same password. Click  More, and select **Batch Edit Password**.

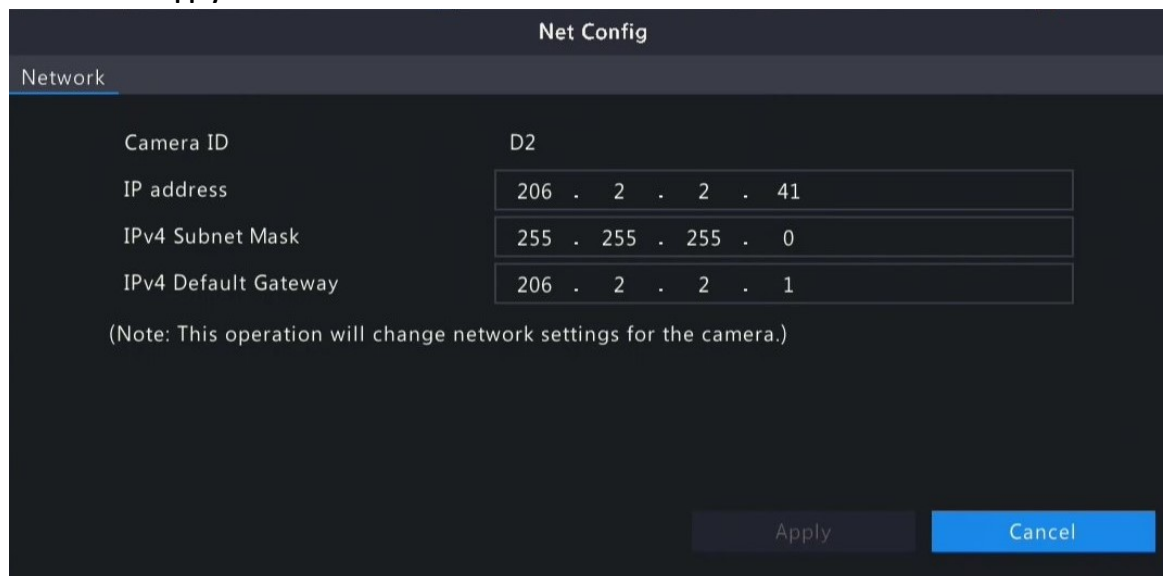


A dialog box titled "Password" with a dark background. It contains two input fields: "Password" and "Confirm". Below the input fields are two buttons: "OK" and "Cancel".

2. Enter the new password and confirm the password.
3. Click **OK**.

Network Configuration

Select the camera, click  under **Configure**. Edit the IP address, IPv4 subnet mask, IPv4 default gateway for the camera. Click **Apply**.



A dialog box titled "Net Config" with a dark background. It has a "Network" tab selected. Below the tab, there is a table with the following data:

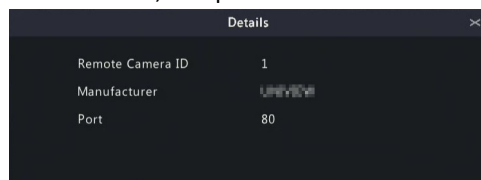
Camera ID	D2
IP address	206 . 2 . 2 . 41
IPv4 Subnet Mask	255 . 255 . 255 . 0
IPv4 Default Gateway	206 . 2 . 2 . 1

Below the table, there is a note: "(Note: This operation will change network settings for the camera.)". At the bottom right, there are two buttons: "Apply" and "Cancel".

 **Note:**  indicates the camera does not support changing network settings.

More Info

Select the channel, click  under **Details** to view the detailed information, including remote camera ID, manufacturer, and port number.



A dialog box titled "Details" with a dark background. It contains a table with the following data:

Remote Camera ID	1
Manufacturer	UNIVIEW
Port	80

Other Operations

Item	Description
Auto Switch to H.265	When enabled, the DVR automatically chooses H.265 for a newly added camera.

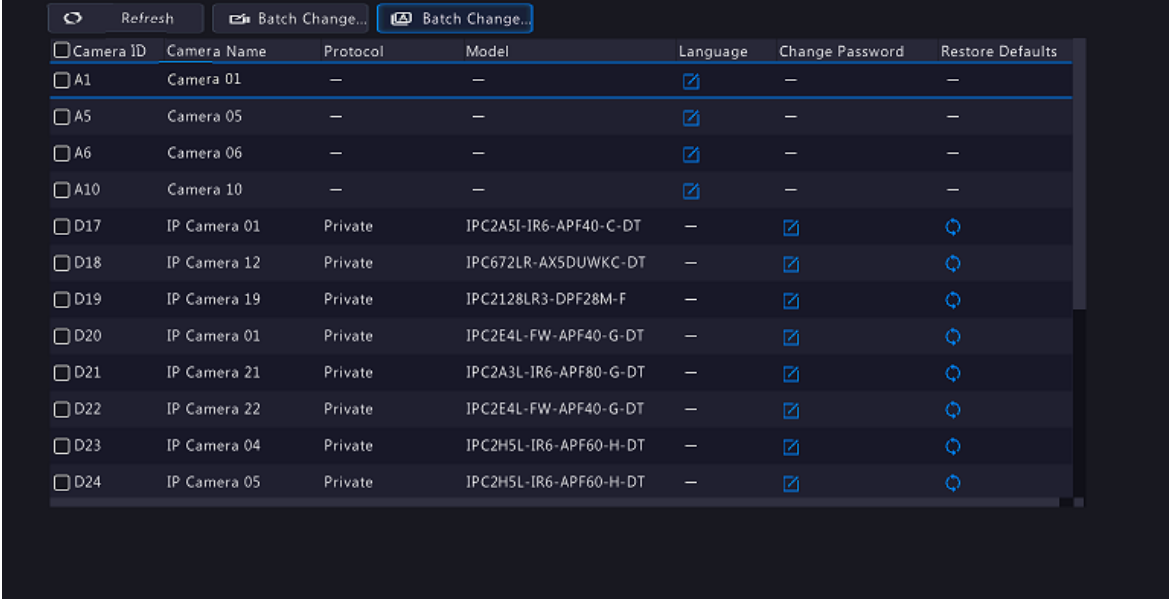
Item	Description
	 Note: - Every time a camera is added to the DVR, it is considered a newly added camera. This function is not effective to cameras that are already added or added cameras that go back online after being offline. - This function is enabled by default on some DVR models.
Auto Switch to U-Code	Select Basic or Advanced , then the DVR automatically chooses basic U-code mode or advanced U-code mode for a newly added camera.  Note: - Every time a camera is added to the DVR, it is considered a newly added camera. This function is not effective to cameras that are already added or added cameras that go back online after being offline. - This function is enabled by default on some DVR models.
Refresh	Click Refresh to check the camera status.
Live View	Click  to play live video of the camera.

4.1.3 Advanced Functions

Change the password of online IP cameras or restore factory default settings for cameras.

 **Note:** Changing camera password is available for cameras connected via the private protocol.

Go to **Menu > Camera > Camera > Advanced**.



☐ Camera ID	Camera Name	Protocol	Model	Language	Change Password	Restore Defaults
☐ A1	Camera 01	—	—	☒	—	—
☐ A5	Camera 05	—	—	☒	—	—
☐ A6	Camera 06	—	—	☒	—	—
☐ A10	Camera 10	—	—	☒	—	—
☐ D17	IP Camera 01	Private	IPC2A5I-IR6-APF40-C-DT	—	☒	
☐ D18	IP Camera 12	Private	IPC672LR-AX5DUWKC-DT	—	☒	
☐ D19	IP Camera 19	Private	IPC2128LR3-DPF28M-F	—	☒	
☐ D20	IP Camera 01	Private	IPC2E4L-FW-APF40-G-DT	—	☒	
☐ D21	IP Camera 21	Private	IPC2A3L-IR6-APF80-G-DT	—	☒	
☐ D22	IP Camera 22	Private	IPC2E4L-FW-APF40-G-DT	—	☒	
☐ D23	IP Camera 04	Private	IPC2H5L-IR6-APF60-H-DT	—	☒	
☐ D24	IP Camera 05	Private	IPC2H5L-IR6-APF60-H-DT	—	☒	

Change Camera Password

You can change password of camera(s) one by one or in batches.

- Select a camera and click , or select the target cameras and click **Batch Change Password**.

2. Enter the new password and confirm the password.

 **Note:** Select **Use Admin Password**, the camera's password is changed to the admin password of the DVR, and cannot be edited.

3. Click **OK**. Check if the password is successfully changed.

Change Language

Change the device language one by one or in batches.

1. Choose a channel, and click  under **Language**; or click **Batch Change Language**.

2. On the **Language** page, select the desired language.
3. Click **OK**.

Restore Default Settings

Select the camera, click . A message indicating camera restart appears, click **OK** and then the camera's default settings will be restored.

4.2 Encoding Settings

Configure stream type, resolution, etc.

 **Note:**

- The configuration items may vary with IPC models or versions.
- Some functions may be unavailable if the IPC version is too low. In this case, you need to upgrade the IPC first.

1. Go to **Menu > Camera > Encoding**.

Select Camera	A1(Camera 01)		
Storage Mode	Main and Sub Stream		
Capture Mode	2592*1944@12_PAL		
	Main Stream	Sub Stream	Third Stream
Stream Type	Normal	Network Transmission	Network Transmission
Video Compression	H265	H265	H265
Resolution	1920*1080(1080P)	720*576(D1)	352*288(CIF)
Bitrate Type	CBR	CBR	CBR
Bit Rate(Kbps)	1536	1536	16
fps	6	6	6
I Frame Interval	16	16	16
U-Code	Off	Off	Off

Copy
Apply
Exit

2. Select the camera from the drop-down list.
3. Choose a storage mode. It may affect the clarity of the recording (HD or SD). Set the storage mode based on the disk capacity and actual requirements.

Storage Mode	HD Streaming	SD Streaming
Main stream	Main stream	No video or image
Sub stream	Sub stream	No video or image
Main + sub stream	Main stream	Sub stream
Main + third stream	Main stream	Third stream
Sub + third stream	Sub stream	Third stream

4. Set the capture mode, that is, combinations of resolution and frame rate.

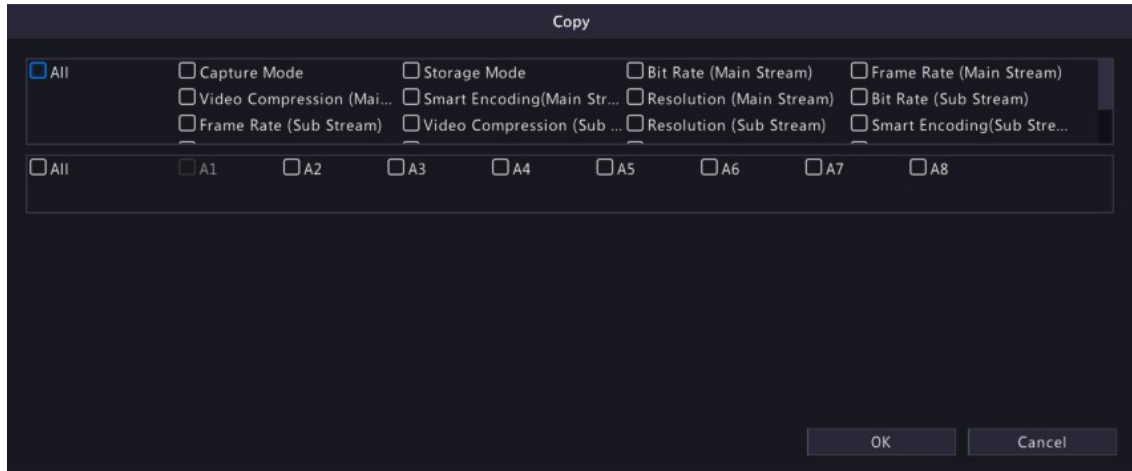
 **Note:** When the analog camera supports PAL/NTSC format, the capture mode is displayed as **resolution@fps_PAL** or **resolution@fps_NTSC**. Please choose a mode based on the actual situation.

5. Set the encoding parameters for different streams.

Item	Description
Stream Type	- Main stream: Set encoding parameters for normal recordings. - Sub stream: Set encoding parameters for low resolution video intended for network transmission.
Video Compression	Choose H264 or H265. The supported video compression may vary with IPC models.
Resolution	The number of pixels in a frame.
Bitrate Type	- VBR: Variable Bit Rate (VBR) is used to keep the quality of video streams as constant as possible by varying the bit rate. - CBR: Constant Bit Rate (CBR) is used to keep a specific bit rate by varying the quality of video streams.
Bit Rate(Kbps)	The number of bits transferred per second. Select a value from the drop-down list, or select Custom to set a value as needed.
fps	The number of frames per second.

Item	Description
I Frame Interval	The number of frames between two adjacent I frames.
U-Code	Select the U-Code mode, including basic mode and advanced mode. The advanced mode achieves higher compression ratios. You can also turn off the U-Code.

6. (Optional) To apply the settings to other camera(s), click **Copy** and select the desired parameter(s) and camera(s), and then click **OK**.



Note:

- When you copy **Capture Mode** to other camera(s), if the target camera does not support the capture mode, the operation will fail.
- When you copy **Capture Mode** to other camera(s), if the current camera and target camera support the capture mode with the same resolution and frame rate (regardless of whether it is PAL/NTSC format or not), the operation will succeed.
- When you copy **Storage Mode** to other camera(s), if the target camera does not support the storage mode, the operation will fail.
- When you copy **Video Compression** to other camera(s), **Bit Rate** will be selected automatically because video compression adjusts bit rate automatically.

7. Click **Apply**.

4.3 Audio Configuration

4.3.1 Audio

Configure the camera's audio input and audio output parameters.

Analog Camera

1. Go to **Menu > Camera > Audio**.

Select Camera: A1(Camera 01) ▼

Audio Input

Coaxial Audio: ☒

Access Mode: Coaxial ▼

Input Volume: [Slider]

Audio Output

Audio Output: SPEAKER ▼

Output Volume: [Slider]

Alarm Volume: [Slider]

2. Select the camera to configure from the drop-down list.
3. Configure the audio input parameters.

Item	Description
Coaxial Audio	Select ☒ to enable coaxial audio. Note: It is only available to our TVI analog cameras.
Access Mode	Select the audio access mode as Coaxial or RCA. - Coaxial: Make sure Coaxial Audio is enabled, otherwise the audio will not be received. - RCA: The audio input device, such as a microphone, must be connected to the analog camera.
Input Volume	Drag the slider to adjust the input volume.

4. Configure audio output parameters.

Item	Description
Audio Output	Click the drop-down list to choose the audio output mode. - Speaker: Default mode, i.e., speaker mode. - Line: Requires an external speaker or headphone.
Output Volume	Drag the slider to adjust the output volume.
Alarm Volume	Drag the slider to adjust the alarm volume.

5. (Optional) To apply the audio settings to other camera(s), click **Copy**, select the desired parameter(s) and camera(s), and then click **OK**.
6. Click **Apply**.

Digital Camera

Select Camera: D9(01)

Audio Input

☐ Audio Input

Access Mode: Line/Mic

Input Volume: [Slider]

Audio Compression: G.711U

Sampling Rate(KHz): 8KHz

☒ Noise Suppression

☒ Audio Channel 1: MIC

Audio Output

Audio Output: SPEAKER

Output Volume: [Slider]

Alarm Volume: [Slider]

1. Go to **Menu > Camera > Audio**.
2. Select the desired camera from the drop-down list.
3. Configure audio input parameters.

Item	Description
Audio Input	Check ☒ to enable audio input.
Access Mode	Select the access mode according to the IPC's audio interface, including Line, Mic, and RS485. - Line-in: The IPC is connected to a sound pickup by a 3.5mm audio cable. - Mic-in: The IPC is connected to a microphone. - RS485: The IPC is connected to a sound pickup by a RS485 cable. You need to set the port mode to sound pickup on the IPC's web interface. See Network Camera User Manual for details. Note: Only certain brands of sound pickups are supported by IPCs. Contact technical support for details.
Input Volume	Drag the slider to adjust the audio input volume.
Audio Compression	Select the audio compression, including G.711A, G.711U, AAC-LC. The supported audio compression may vary with IPC model.
Sampling Rate(KHz)	Select the sampling rate based on the audio compression. - For AAC-LC, select 8 KHz, 16 KHz, or 48KHz. - For G.711A or G.711U, select 8KHz or 16KHz.
Noise Suppression	Select ☒ to enable noise suppression.
Audio Channel 1/Audio Channel 2	Select ☒ to enable audio channel 1 or audio channel 2, and then select the access mode from the drop-down list. Note: Only certain dual-channel IPCs support two audio channels, but the two audio channels cannot be enabled at the same time.

4. Configure the audio output parameters.

Item	Description
Audio Output	Click the drop-down list to choose the audio output mode. • Speaker: Default mode, i.e., speaker mode. • Line: Requires an external speaker or headphone.  Note: Analog cameras only support Speaker.
Output Volume	Drag the slider to adjust the output volume.
Alarm Volume	Drag the slider to adjust the alarm volume.

5. (Optional) To apply the audio settings to other camera(s), click **Copy**, and select the desired parameter(s) and camera(s), and then click **OK**.
6. Click **Apply**.

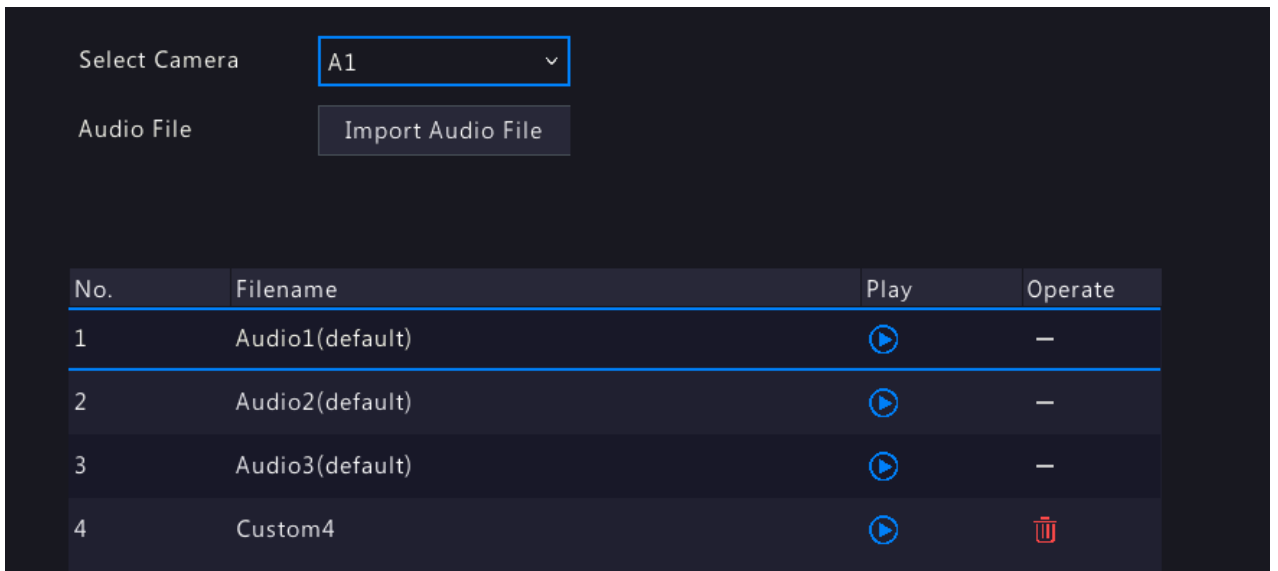
4.3.2 Audio File

Audio files can be used for alarm linkage. When an alarm event (such as area intrusion) is detected, it triggers the front-end camera to play the alarm sound and flash the lights.

Note:

- If multiple alarms are triggered at the same time, only the first alarm will take effect, and subsequent alarms will not be announced.
- If two-way audio is in progress when a sound and light alarm is triggered, the alarm audio will be paused, prioritizing two-way audio transmission.
- Two-way audio can only be used with one camera at a time. If noise occurs during two-way audio, try lowering the volume.

1. Go to **Menu > Camera > Audio > Audio File**.



No.	Filename	Play	Operate
1	Audio1(default)		—
2	Audio2(default)		—
3	Audio3(default)		—
4	Custom4		

2. Select the camera to configure from the drop-down list.
3. Click the **Import Audio File** drop-down list. The **Import** page appears.
4. Select the PCM audio file to import, and then click **Import**.

**Note:**

- Audio file size limit: 5KB ~ maximum supported value. Please refer to the on-screen prompts for the specific limit.
- All two-way audio channels must be closed during the import process, or the operation will fail.
- The default audio files are audio1, audio2, and audio3, and the custom audio is custom4. Only one custom audio file is supported. When re-importing, please delete the previous custom audio before importing the new one.

5. Click **Save**.

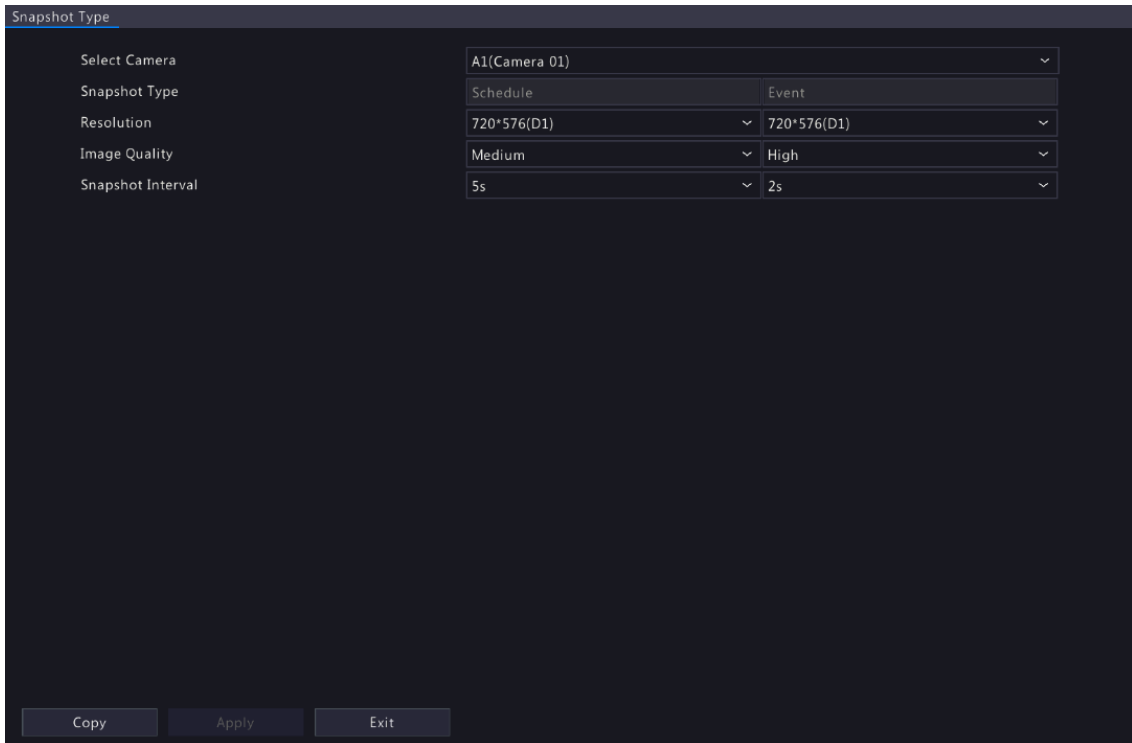
Other Operations

Item	Description
	You can try the audio file. Click the play button, and the audio will play in real time on the front-end camera.  Note: When trying the audio file, ensure the camera is online and no other audio transmission tasks are ongoing.
	Click to delete an audio file.

4.4 Snapshot

Configure snapshot parameters.

1. Go to **Menu > Camera > Snapshot > Snapshot Type**.



2. Select the camera and set the parameters as needed.

Item	Description
Snapshot Type	Supports scheduled snapshot and event-triggered snapshot. You need set image quality and snapshot interval for them respectively. • Schedule: A snapshot is taken according to the set schedule. • Event: A snapshot is triggered by an event such as alarm input and motion detection alarm. Manual snapshots are event-triggered snapshots.

Item	Description
Resolution	The number of pixels stored in a frame. Only certain DVRs support setting resolution.
Image Quality	Set the snapshot quality. High, medium or low are available.
Snapshot Interval	Select the time interval between two snapshots from the drop-down list.

3. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired camera(s).
4. Click **Apply**.

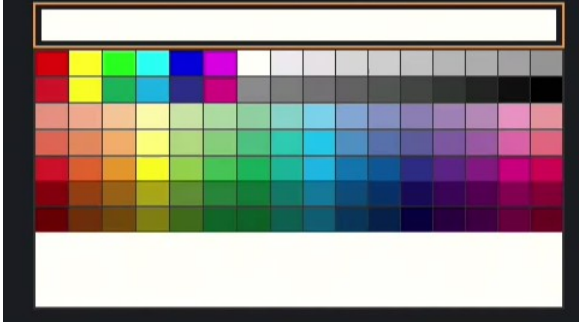
4.5 OSD Configuration

Configure the characters overlaid on the preview (live view) window. On Screen Display (OSD) are characters displayed with video images, for example, channel/camera name, date and time, and people counting statistics.

1. Go to **Menu > Camera > OSD**.

2. Select the desired camera from the drop-down list.
3. Set the OSD parameters.

Item	Description
Camera Name	The name of the selected camera. You may customize the camera name as needed.
Sync OSD Camera Name	Sync OSD Camera Name is enabled by default, thus the OSD camera name is synchronized with the camera name automatically.  Note: - Up to 20 characters can be synced to OSD camera name. If camera name exceeds 20 characters, only the first 20 characters will be displayed. - If Sync OSD Camera Name is disabled, after the camera name is changed, the new name will not be synced to OSD camera name.
OSD Camera Name	The camera name displayed on the video image. OSD camera name is same as the camera name by default. You can customize the OSD camera name after disabling Sync OSD Camera Name . Up to 20 characters are allowed.

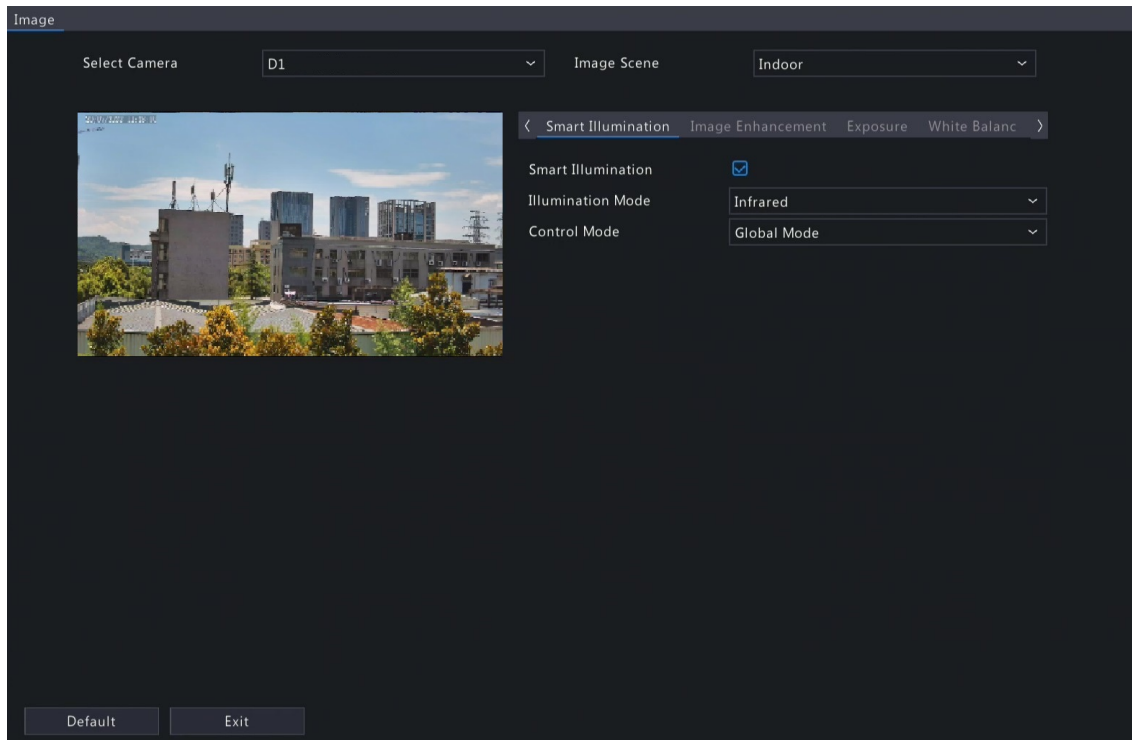
Item	Description
Date Format	Select the date format from the drop-down list.
Time Format	Select the time format from the drop-down list.
Show Time	When enabled, the camera time is displayed on the left side of video image.
Show Name	When enabled, the OSD camera name is displayed on the video image.
Font Color	Select the front color from the drop-down list. 

- (Optional) To apply the same OSD settings to other cameras, click **Copy** and select the desired camera(s).
- Click **Apply**.

4.6 Image Settings

Adjust image settings to get optimal images.

- Go to **Menu > Camera > Image > Image**.



- Select the desired channel.
- Select the image scene you want to use.

The IP camera provides several predefined scene modes for different application scenarios. When you select a scene, the parameters will be automatically set, you can also adjust the parameters as needed.

- Indoor: Recommended for indoor scenes.
- Common: Recommended for outdoor scenes.
- Starlight: Recommended for low light conditions.

- Test: Recommended for test scenes.
- Road Highlight Compensation/Park Highlight Compensation: Recommended for capturing vehicle license plates on roads or in parks.
- WDR: Recommended for scenes with high-contrast lighting, such as window, corridor, front door or other scenes that are bright outside but dim inside.
- Custom: Set a scene as needed.

4. Configure the parameters under the tabs in this page.



Note:

- Only certain IPCs support scene selection, and the image parameters may vary with IPC model.
- The default settings are scene-adaptive. Use default settings unless modification is necessary. To restore default settings under all the tabs, click **Default** in the lower left corner. This function is available only when the camera is connected to the NVR via the private protocol.
- Image settings apply to both live and recorded videos.

Image Enhancement

Click the **Image Enhancement** tab, and set the parameters.

Analog Camera

Time Period

☒

No.

Period 1

Valid Time

00 00 24 00

Color Mode

Standard Custom

Brightness

Saturation

Contrast

Sharpness

Noise Reduction

Offset

Digital Camera

Brightness

Saturation

Contrast

Sharpness

Noise Reduction

Image Rotation

Normal

Item	Description
Time Period	Enable Time Period and configure parameters for different time periods respectively.

Item	Description
No.	Select Period 1 or Period 2 .
Valid Time	Set the valid time for the two time periods, and the image enhancement parameters will be effective during the corresponding period. After period 1 is set, the period 2 will be generated automatically. For example, if the period 1 is 8:00 to 20:00, the period is 20:00 to 8:00.
Color Mode	9 options: 4 default modes (Standard, Bright, Soft, Vivid), 4 custom modes (Custom 1, Custom 2, Custom 3, Custom 4), and Camera Custom. To set the custom mode, select a custom mode from the drop-down list, click the Custom button, then a dialog box appears, and you can adjust the desired parameters. The noise reduction and image rotation can be set separately, which will not affect the nine color modes.  Note: • If you adjust the parameters of default mode and custom modes, the color mode will automatically switch to the camera custom mode. • The default modes and custom modes are applicable to all channels of the DVR; while the camera custom mode is only applicable to the current channel. • If you have configured camera custom mode and then switch to other modes (such as Custom 1), the configured camera custom settings will be lost, and you need to configure again.
Brightness	The overall brightness or darkness of the image.
Saturation	The intensity or vividness of colors in the image.
Contrast	The difference between the lightest and darkest tones in the image.
Sharpness	The contrast between the edges of an object in the image.
Noise Reduction	Reduce noises in images, while it may cause image blur or smearing.
Offset	Adjust the image to the left or right.
Image Rotation	The rotation of the image. • Normal: Displays images without rotation. • Flip Horizontal: Displays images flipped horizontally. • Flip Vertical: Displays images flipped vertically. • 180°: Displays images flipped vertically and horizontally. • 90° CW: Displays images in corridor format. The camera must be installed correctly (rotated 90° clockwise). • 90° CCW: Displays images in corridor format. The camera must be installed correctly (rotated 90° counterclockwise).

Exposure

Click the **Exposure** tab, and set the parameters.



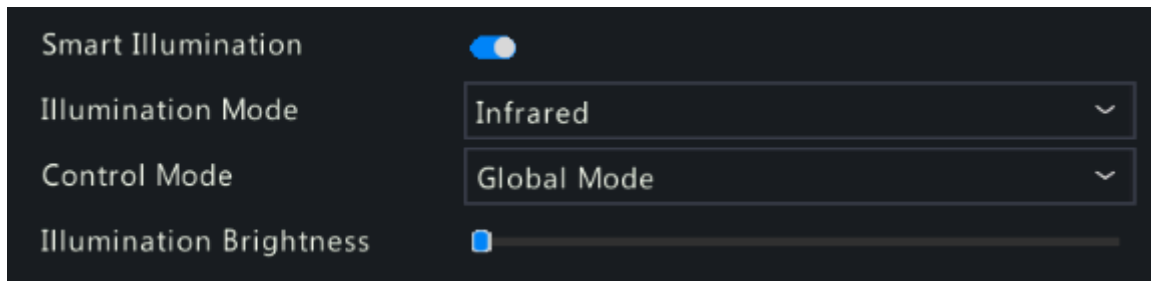
Item	Description
Exposure Mode	Select the correct exposure mode to achieve the desired exposure effect. - Automatic: The camera automatically sets the exposure parameters according to the scene. - Custom: User can set exposure parameters as needed. - Shutter Priority: The camera adjusts shutter as priority to adjust the image quality. - Indoor 50Hz: Reduce stripes by adjusting the exposure time. Note: - Stripe effect: The high-contrast condition in an image caused by uneven light energy received by the sensor. - Using this mode in brighter environments aids in adjusting the stripe effect in the image with linear stripe suppression. - Indoor 60Hz: Reduce stripes by adjusting the exposure time. Note: Using this mode in brighter environments aids in adjusting the stripe effect in the image with linear stripe suppression. - Manual: Fine-tune image quality by setting shutter, gain, and iris manually. - Low Motion Blur: Control the minimum shutter to reduce motion blur.
Shutter(s)	Shutter is used to control the amount of light that comes into the lens. A fast shutter speed is ideal for scenes in quick motion. A slow shutter speed is ideal for scenes that change slowly. This parameter is configurable when Exposure Mode is set to Manual, Shutter Priority, or Custom. Note: If Slow Shutter is disabled, the reciprocal of the shutter speed must be greater than the frame rate.
Gain(dB)	Control image signals so that the camera can output standard video signals in different light conditions. This parameter is configurable when Exposure Mode is set to Manual or Custom.

Item	Description
Slow Shutter	Select  to enable slow shutter. When enabled, the camera improves image brightness in low light conditions.
Slowest Shutter	When enabled, you can set the slowest shutter speed for the camera during exposure.
Compensation	Adjust the compensation value as required to achieve the desired image effect.
Day/Night Mode	- Automatic: The camera automatically switches between night mode and day mode according to the ambient lighting condition to output optimum images. - Day: The camera outputs high-quality images in daylight conditions. - Night: The camera outputs high-quality images in low light conditions.
Day/Night Sensitivity	Light threshold for switching between day mode and night mode. Ultra-low, low, medium, and high are available. A higher sensitivity level means that the camera is more sensitive to the change of light and is therefore more easily to switch between day mode and night mode. This parameter is configurable when Day/Night Mode is set to Automatic.
Day/Night Switching(s)	Set the length of time before the camera switches between day mode and night mode after the switching conditions are met. This parameter is configurable when Day/Night Mode is set to Automatic.
WDR	Suitable for high-contrast scenes. WDR can balance the brightness in the bright area and dark area, and provide clear image with more details. - On/Off: User needs to identify WDR scenes, and manually enable or disable WDR as needed. - Smart (Automatic): The device can automatically identify typical WDR scenes, and then enable or disable WDR.  Note: When WDR is enabled, some other functions may not be supported. Refer to the actual interface for details.
WDR Level	Adjust the WDR level to improve image quality when WDR is enabled.  Note: In the case of low contrast, it is recommended to disable WDR or use level 1 to 6. Level 7 or higher is recommended if there is a high contrast between the bright and dark areas in the scene.
WDR On/Off Sensitivity	When WDR is set to Automatic , adjust the parameter to change the WDR switching sensitivity.
Metering Control	Perform luminance statistics on the images captured by the device, automatically adjust the exposure value, and output properly exposed images with optimal brightness. The default is the Center-Weighted Average Metering, you may configure this according to the actual scene. - Center-Weighted Average Metering: Measure light mainly in the central part of the image. - Evaluative Metering: Measure light in the specified area of the image, - Face Metering: Adjust image quality in poor lighting or back lighting conditions by controlling the brightness of captured faces in face scenes. - Spot Metering: Similar to the evaluative metering. However, it cannot increase the brightness of the image.  Note: This parameter is configurable when Exposure Mode is not set to Manual.

Item	Description
Linear Stripe Suppression	Adjust the linear stripes in the image. Range: 1 to 9, the default is 5. The greater the value, the more obvious the linear stripe suppression effect is, but it may cause overexposure in the image. Please configure this according to the actual scene.  Note: This parameter is configurable when Exposure Mode is set to Indoor 50Hz or Indoor 60Hz.

Smart Illumination

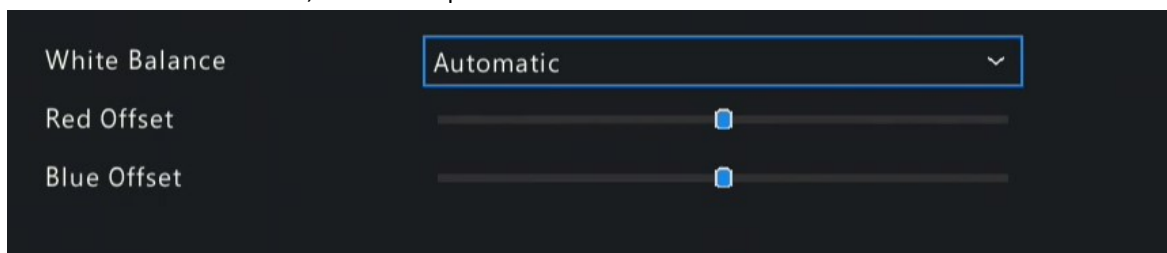
Click the **Smart Illumination** tab, and set the parameters.



Item	Description
Smart Illumination	Enable Smart Illumination .
Illumination Mode	Select the illumination mode from the drop-down list. • Infrared: The camera uses infrared light illumination. • White Light: The camera uses white light illumination. • Dual Light: The camera adjusts the white light or infrared automatically according to the current lighting condition.
Control Mode	Select the control mode from the drop-down list. • Global Mode: The camera automatically adjusts illumination brightness and exposure to achieve the balanced image effect. • Overexposure Restrain: The camera automatically adjusts illumination brightness and exposure to avoid regional overexposure. • Manual: Control the brightness of illumination manually.
Illumination Level	Drag the slider to adjust the illumination level. This parameter is configurable when Control Mode is set to Manual. The greater the value, the higher the intensity (0 is off).

White Balance

Click the **White Balance** tab, and set the parameters.

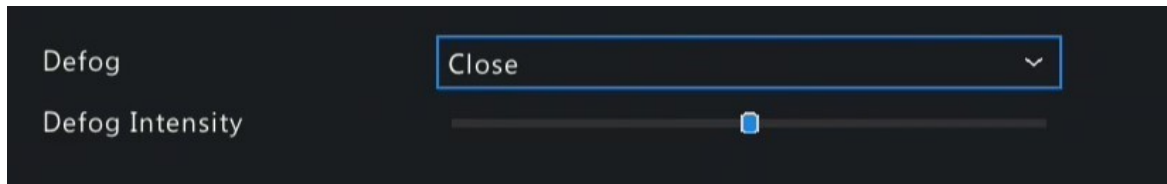


Item	Description
White Balance	Adjust the red and blue gains of the image to remove unrealistic color casts. • Auto: The camera automatically adjusts the red and blue gains according to the lighting condition (the color tends to be blue).

Item	Description
	- Fine Tune: Adjust the red or blue offsets manually. - Outdoor: Suitable for outdoor scenes where the color temperature varies widely. - Sodium Lamp: The camera automatically adjusts red and blue gains according to the lighting condition (the color tends to be red). - Locked: Lock the current color temperature to avoid change.
Red Offset	Adjust the red offset manually.
Blue Offset	Adjust the blue offset manually.

Advanced Settings

Click the **Advanced** tab, and set the parameters.



Item	Description
Defog	Enable/disable defog from the drop-down list. Defog is used to improve image visibility in foggy, hazy and other low-visibility scenes.
Defog Intensity	When defog is enabled, you can adjust the defog intensity. In a heavy-fog environment, the higher the defog level, the clearer the image. In a fog-free or light-fog environment, there is not much difference between levels 1 to 9.  Note: Optical defog is available only for certain IPC models. When the defog intensity is set to 6 or higher, optical defog automatically turns on in thick fog, and images change to black and white.

Image Enhancement

Click the **Image Enhancement** tab, and set the parameters.



Item	Description
Brightness	The overall lightness or darkness of the image.
Saturation	The intensity or vividness of colors in the image.
Contrast	The difference between the lightest and darkest tones in the image.

Item	Description
Sharpness	The contrast between the edges of an object in the image.
Noise Reduction	Reduce noises in images, while it may cause image blur or smearing.
Image Rotation	The rotation of the image. • Normal: Displays images without rotation. • Flip Horizontal: Displays images flipped horizontally. • Flip Vertical: Displays images flipped vertically. • 180°: Displays images flipped vertically and horizontally. • 90° CW: Displays images in corridor format. The camera must be installed correctly (rotated 90° clockwise). • 90° CCW: Displays images in corridor format. The camera must be installed correctly (rotated 90° counterclockwise).
Splice Distance	Adjust splice distance to display splicing image for the dual-lens camera with single channel. The larger the distance, the more natural the splicing effect, thus avoiding video stuttering or image ghosting. The NVR can obtain the current splice distance automatically. Drag the slider to set it as needed.  Note: • This item appears only for dual-lens cameras that support this function. • Configure the splice distance for the dual-lens camera according to the installation scene so as to achieve the best splicing effect.

Exposure

Click the **Exposure** tab, and set the parameters.



Exposure Mode	Indoor 60Hz
Shutter(s)	1/50
Gain(dB)	0
Slow Shutter	☒
Slowest Shutter	1/12
Compensation	[Slider]
Linear Stripe Suppression	[Slider]
Day/Night Mode	Automatic
Day/Night Sensitivity	Ultra-low
Day/Night Switching(s)	3
WDR	Automatic
WDR Level	[Slider]
WDR On Sensitivity	[Slider]
WDR Off Sensitivity	[Slider]

Item	Description
Exposure Mode	Select the correct exposure mode to achieve the desired exposure effect. • Automatic: The camera automatically sets the exposure parameters according to the scene.

Item	Description
	- Custom: User can set exposure parameters as needed. - Shutter Priority: The camera adjusts shutter as priority to adjust the image quality. - Indoor 50Hz: Reduce stripes by adjusting the exposure time.  Note: - Stripe effect: The high-contrast condition in an image caused by uneven light energy received by the sensor. - Using this mode in brighter environments aids in adjusting the stripe effect in the image with linear stripe suppression. - Indoor 60Hz: Reduce stripes by adjusting the exposure time.  Note: Using this mode in brighter environments aids in adjusting the stripe effect in the image with linear stripe suppression. - Manual: Fine-tune image quality by setting shutter, gain, and iris manually. - Low Motion Blur: Control the minimum shutter to reduce motion blur.
Shutter(s)	Shutter is used to control the amount of light that comes into the lens. A fast shutter speed is ideal for scenes in quick motion. A slow shutter speed is ideal for scenes that change slowly. This parameter is configurable when Exposure Mode is set to Manual, Shutter Priority, or Custom.  Note: If Slow Shutter is disabled, the reciprocal of the shutter speed must be greater than the frame rate.
Gain(dB)	Control image signals so that the camera can output standard video signals in different light conditions. This parameter is configurable when Exposure Mode is set to Manual or Custom.
Slow Shutter	Select  to enable slow shutter. When enabled, the camera improves image brightness in low light conditions.
Slowest Shutter	When enabled, you can set the slowest shutter speed for the camera during exposure.
Compensation	Adjust the compensation value as required to achieve the desired image effect.
Day/Night Mode	- Automatic: The camera automatically switches between night mode and day mode according to the ambient lighting condition to output optimum images. - Day: The camera outputs high-quality images in daylight conditions. - Night: The camera outputs high-quality images in low light conditions.
Day/Night Sensitivity	Light threshold for switching between day mode and night mode. Ultra-low, low, medium, and high are available. A higher sensitivity level means that the camera is more sensitive to the change of light and is therefore more easily to switch between day mode and night mode. This parameter is configurable when Day/Night Mode is set to Automatic.
Day/Night Switching(s)	Set the length of time before the camera switches between day mode and night mode after the switching conditions are met. This parameter is configurable when Day/Night Mode is set to Automatic.
WDR	Suitable for high-contrast scenes. WDR can balance the brightness in the bright area and dark area, and provide clear image with more details.

Item	Description
	- On/Off: User needs to identify WDR scenes, and manually enable or disable WDR as needed. - Smart (Automatic): The device can automatically identify typical WDR scenes, and then enable or disable WDR.  Note: When WDR is enabled, some other functions may not be supported. Refer to the actual interface for details.
WDR Level	Adjust the WDR level to improve image quality when WDR is enabled.  Note: In the case of low contrast, it is recommended to disable WDR or use level 1 to 6. Level 7 or higher is recommended if there is a high contrast between the bright and dark areas in the scene.
WDR On/Off Sensitivity	When WDR is set to Automatic, adjust the parameter to change the WDR switching sensitivity.
Metering Control	Perform luminance statistics on the images captured by the device, automatically adjust the exposure value, and output properly exposed images with optimal brightness. The default is the Center-Weighted Average Metering, you may configure this according to the actual scene. - Center-Weighted Average Metering: Measure light mainly in the central part of the image. - Evaluative Metering: Measure light in the specified area of the image, - Face Metering: Adjust image quality in poor lighting or back lighting conditions by controlling the brightness of captured faces in face scenes. - Spot Metering: Similar to the evaluative metering. However, it cannot increase the brightness of the image.  Note: This parameter is configurable when Exposure Mode is not set to Manual.
Linear Stripe Suppression	Adjust the linear stripes in the image. Range: 1 to 9, the default is 5. The greater the value, the more obvious the linear stripe suppression effect is, but it may cause overexposure in the image. Please configure this according to the actual scene.  Note: This parameter is configurable when Exposure Mode is set to Indoor 50Hz or Indoor 60Hz.

4.7 PTZ Configuration

Configure and control PTZ cameras.



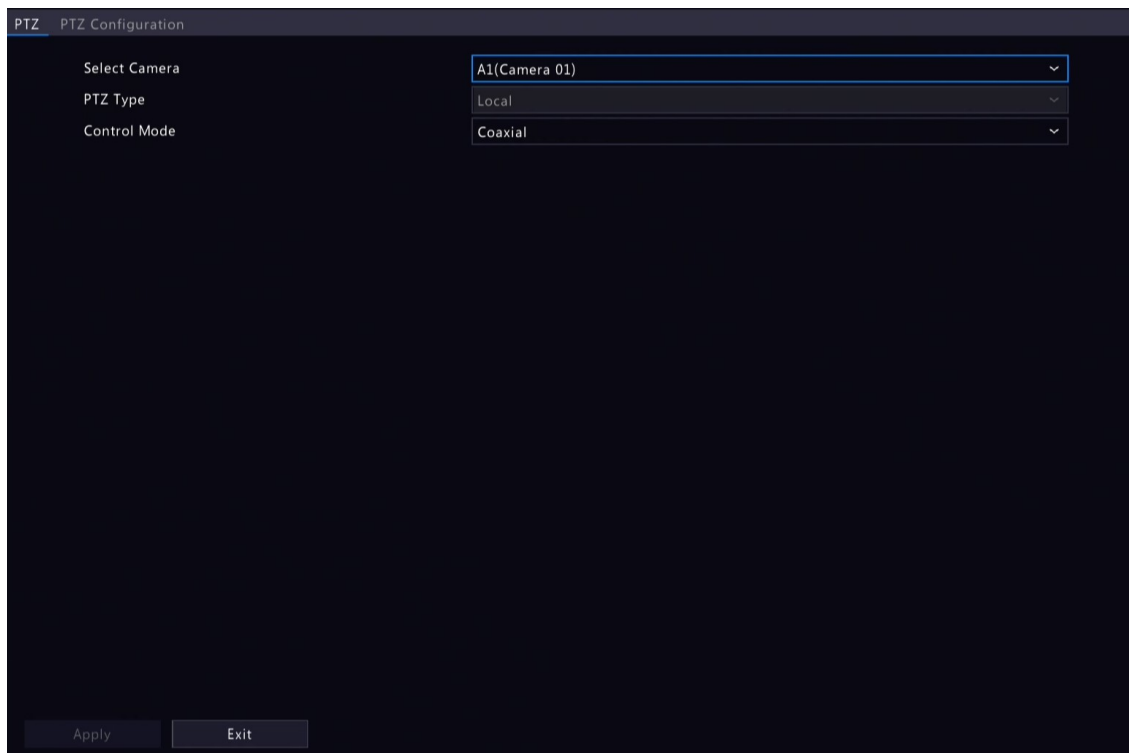
Note:

- This function is only available for PTZ cameras or cameras installed on PT mounts.
- The PTZ parameters may vary with camera model.
- PTZ (pan, tilt and zoom) control is applicable to PTZ cameras only and may vary depending on the functions and protocols supported by the PTZ cameras. Refer to PTZ camera specifications for details.

PTZ Control Mode

DVRs support two control modes, including **Coaxial** or **Serial Port**. Choose the control mode before using PTZ function.

- Go to **Menu > Camera > PTZ > PTZ**.



2. Choose a control mode according to camera connection method, and complete other settings.



Note: RS485 supports the analog PTZ camera control, and the control mode should set to **Serial Port**. The current DVR has only one RS485 interface. If there are multiple analog PTZ cameras, connect the devices as follows::

- Connect all analog PTZ cameras in series via their RS485 A interfaces, and then connect the RS485 A interface of the camera to that of the DVR.
- Connect all analog PTZ cameras in series via their RS485 B interfaces, and then connect the RS485 B interface of the camera to that of the DVR.
- Connect all analog PTZ cameras to the corresponding channels of the DVR with the coaxial cables.

As the DVR cannot distinguish the channels connected to the RS485 interface, the DVR will issue PZT configuration commands to all analog PTZ cameras. Please pay attention to the following matters:



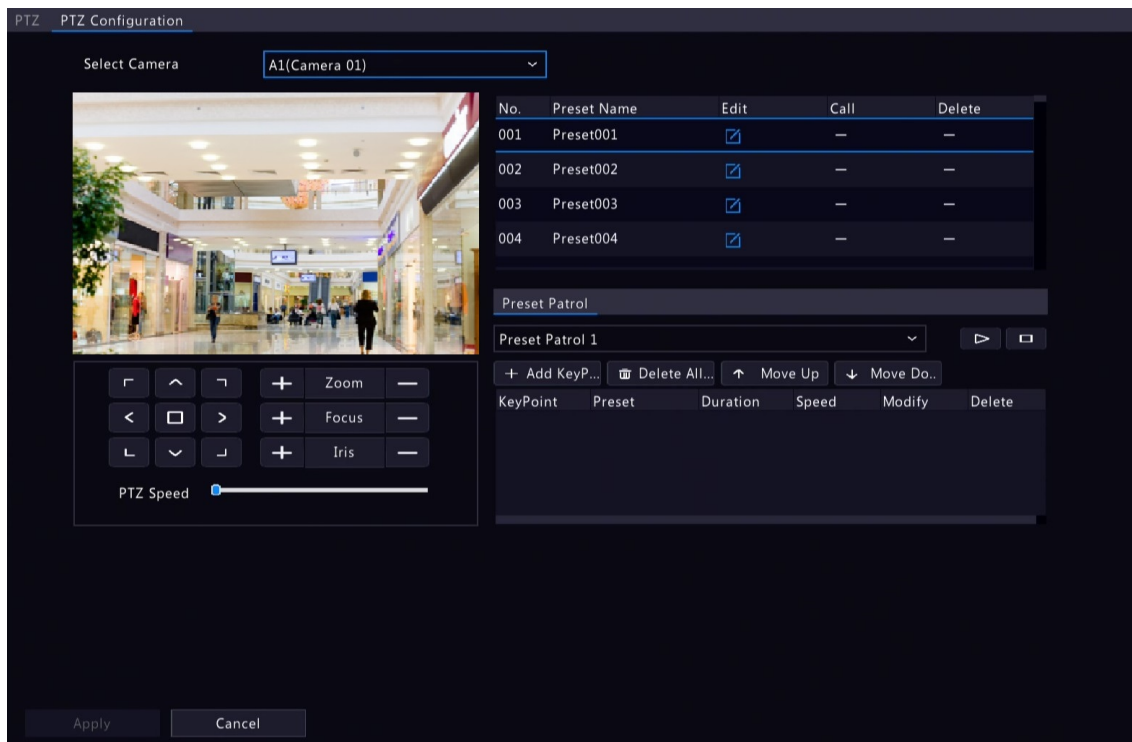
Note:

- If you want to configure multiple PTZ cameras in batches, make sure the protocols of all PTZ cameras are consistent. Configure the PTZ parameters for one analog camera, and then all analog cameras will receive the commands and perform the same operations.
- If you want to configure an analog PTZ camera individually, change the camera protocol to ensure that it is inconsistent with other PTZ camera protocols. Configure the PTZ parameters for the camera, and other analog PTZ cameras will not perform the same operations.

Configure PTZ

Option 1: Enter Menu

1. Go to **Menu > Camera > PTZ > PTZ Configuration**.
2. Select the target PTZ camera.



3. Set the parameters. See below for details.

Option 2: Use PTZ Toolbar

1. In the preview page, select the target window, click  on the window toolbar.



2. The PTZ control window appears. You can control the PTZ camera as needed.
3. Click **PTZ Configuration**, and set the parameters.

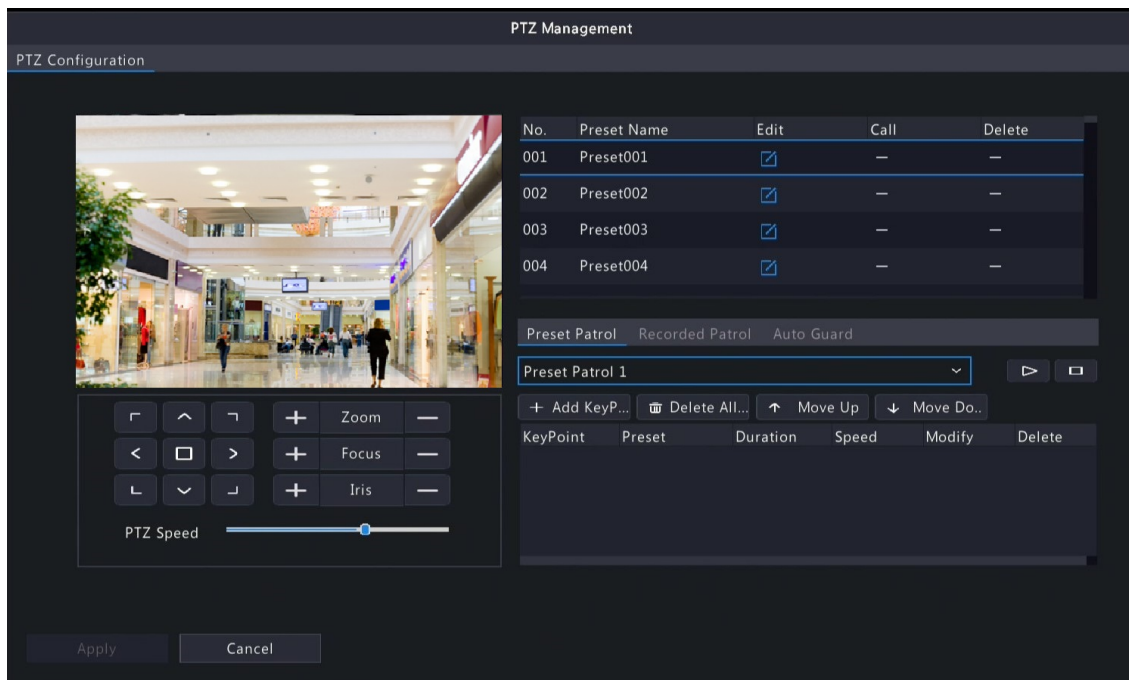
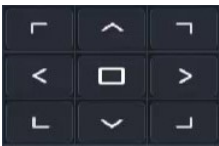
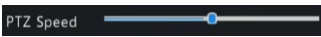


Table 4-1: PTZ Control Window Buttons

Button	Description
	Control the rotation direction of the PTZ camera; release PTZ control.
	- Zoom in or out on images.  Note: You can also zoom in or out using the scroll wheel on your mouse. - Focus far or near for clear images. - Increase or reduce the amount of light that enters the lens of the camera.
	Control the rotation speed of the camera. 1-9 are available. 1 means the slowest, and 9 means the fastest.
	Click to display the PTZ Configuration page.
	- Turn on/off the light. - Turn on/off the wiper. - Turn on 3D positioning. - Turn on/off the heater. - Turn on/off the snow removal. - Turn on/off PTZ shortcut operations.  Note: - Make sure that the 3D positioning, heater and snow removal functions are supported by the camera before using. - Use 3D positioning to zoom in or out. Dragging from top down zooms in. Dragging the other way zooms out.
Preset/ Preset Patrol/Recorded Patrol/ Auto Guard	For detailed information, see Preset, Preset Patrol, Recorded Patrol and Auto Guard respectively.

Button	Description
 	- Call a preset: Click , the PTZ camera goes to the preset position. - Delete a preset: Click  to delete the preset.  Note:  and  are displayed for saved presets only.
	Start or stop preset patrol.

OSD Menu

Configure analog cameras on DVRs. This function is only available for DVRs.

1. In the preview window of an analog camera, click  on the window toolbar.
2. Click **OSD Menu Control**.
3. Click  or  to open camera settings window, and set the parameters.
4. Click  to save the settings, and then choose **Exit** button to close the window.

Preset

A preset position (preset for short) is a saved view used to quickly steer the PTZ camera to a specific position.

- Add a Preset
 1. Use the PTZ direction buttons to steer the PTZ camera to the desired position.
 2. Select a preset number not in use, and click  to edit the preset name.

Edit Preset Name

Preset Name

Note: Editing a preset name will save the current position as the preset

OK Cancel

3. Click **OK** to save. Repeat the above steps to add all the presets.

No.	Preset Name	Edit	Call	Delete
001	Preset001			
002	Preset002		—	—
003	Preset003		—	—
004	Preset004		—	—

- Call a Preset

In the preset list, select the preset to call and click . Then the camera rotates to the preset position.
- Delete a Preset

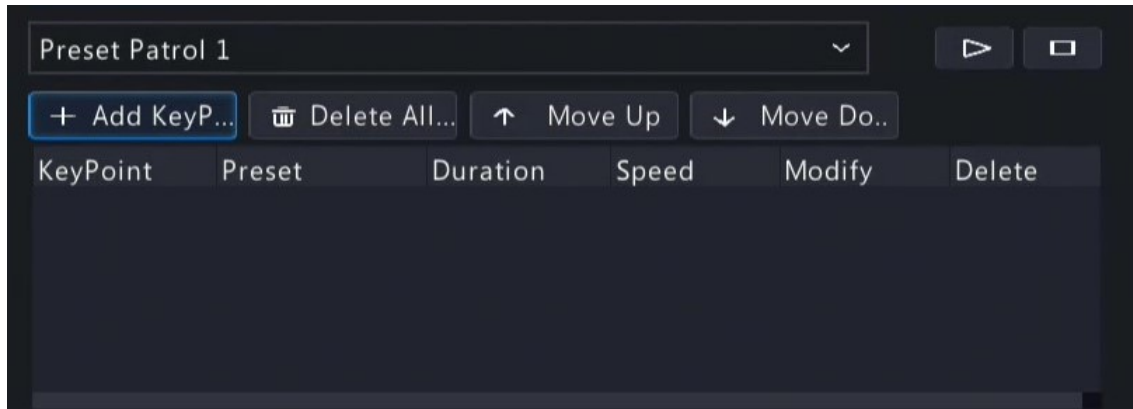
In the preset list, select the preset to delete, and then click .

Preset Patrol

Set a preset patrol route so the PTZ camera can patrol by presets (go from one preset to the next in specified order).

- Add Preset Route

1. Click **Preset Patrol**, and select a patrol route.



2. Click **+ Add KeyP...**. The figure as shown below appears.



3. Complete the parameters, and click **OK**.

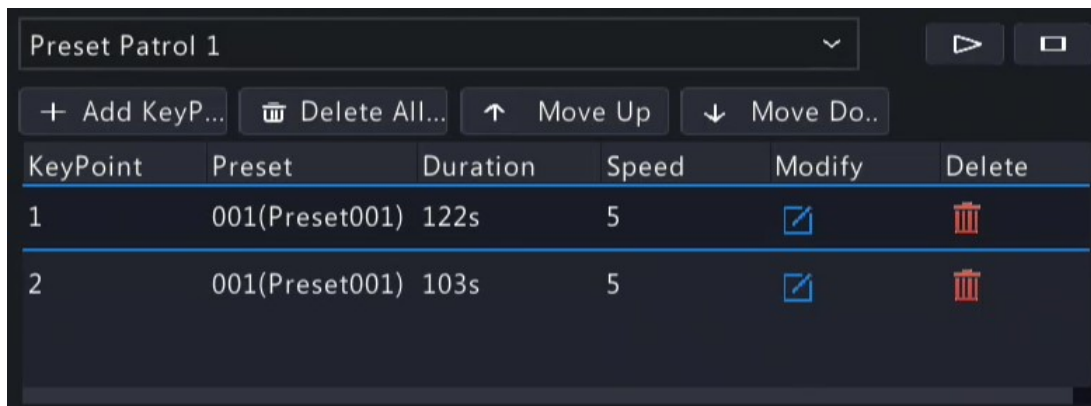
Item	Description
Preset	Set the length of time the camera stays at the preset after performing the patrol. See Preset for setting preset.
Duration(s)	Set the time the camera stays at the preset after the patrol is performed. The valid range is from 0 to 1800 seconds. The default is 10s.
Speed	Set the rotation speed. 1 means the slowest, 9 means the fastest. The default is 5.

4. Repeat the above steps to add more routes.

 **Note:** Up to 4 patrol routes are allowed for each PTZ camera. Up to 8 presets (keypoints) are allowed for each patrol route.

- Call a Preset

Select a preset patrol in the list, click  to start the preset patrol. To stop, click .

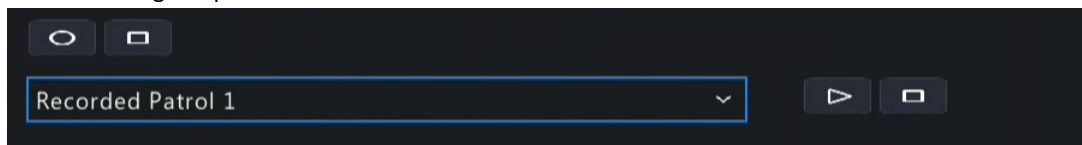


- Other Operations
 - Edit: Click to edit the preset patrol parameters.
 - Delete: Click to delete a keypoint; Click Delete All... to delete all keypoints.
 - Move Up/Move Down: Click Move Up / Move Do.. to adjust the sequence of these presets.

Recorded Patrol

Record a patrol route so the PTZ camera can patrol according to the recorded patrol.

- Add a Recorded Patrol
 1. In the **Recorded Patrol** tab, select a patrol route.
 2. Click to start recording. Steer the camera to the desired directions, adjust the zoom, focus, iris as needed during the process.



3. Click to stop recording.
 4. Click **Apply**.
- Call a Recorded Patrol

Click to start the recorded patrol. Click to stop the recorded patrol.

Auto Guard

Configure auto guard so the PTZ camera automatically performs the specified action (e.g., going to a preset or starting a patrol) after being idle (no user operation) for a certain length of time.

Note: Before use, you need to add a preset or a patrol route.

1. In the **Auto Guard** tab, select the **Enable** check box to enable auto guard.
2. Set the parameters.

Item	Description
Idle State(s)	Set the idle duration for the camera to start auto guard. 1 to 3600 seconds are available. The default is 60s.
Mode	Select preset or patrol route.
Preset/Patrol	Select a preset number or patrol route number.

3. Click **Apply**.

5 VCA

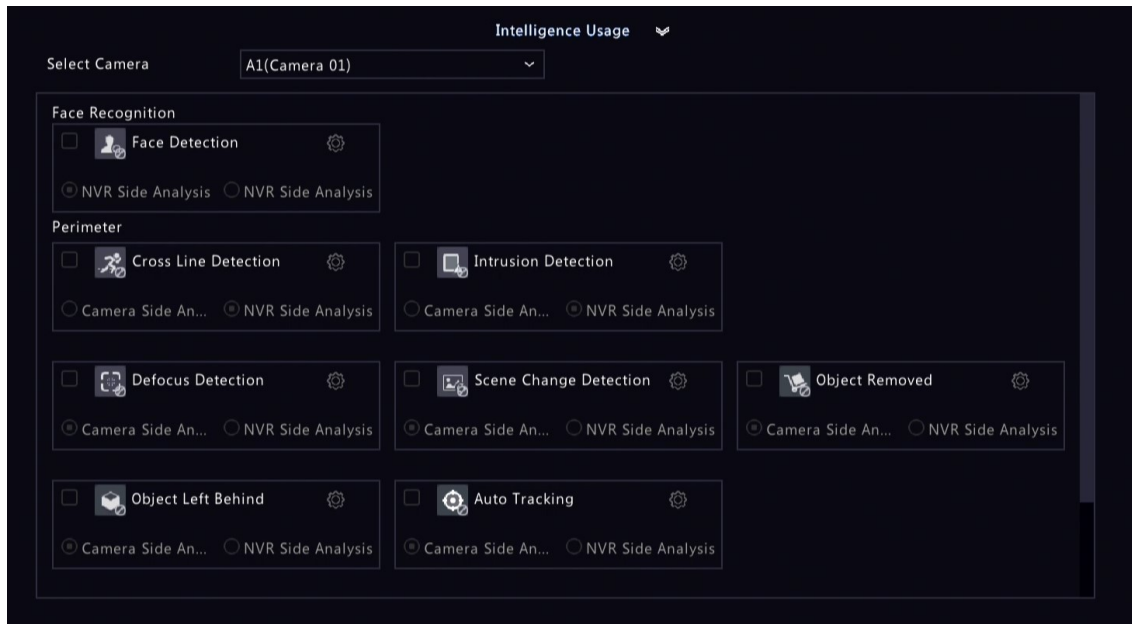
Configure VCA (Video Content Analysis), and VCA search.

5.1 VCA Configuration

VCA includes face recognition, perimeter protection, and people counting. You can monitor people flow, roads and moving objects by configuring VCA. The VCA functions and parameters may vary with DVR model.

 **Note:** VCA functions are not available if there is no disk in slot 1.

1. Go to **Menu > VCA > VCA Config.**



2. Select a camera.
3. Select the check box of the VCA function to be enabled, and choose whether to implement this function on the camera side or the NVR side.
 - Camera Side Analysis: The VCA function is implemented by the camera.
 - NVR Side Analysis: The VCA function is implemented by the NVR.

 **Note:**

- The parameters of some VCA functions supported on the camera side are more than that supported on the NVR side.
- Before you enable camera side analysis, make sure the camera is connected via private protocol.
- VCA functions that are not supported by the camera or NVR are grayed out.

4. Click  to configure the function.

5.1.1 Alarm-triggered Actions

Configure actions to be triggered when an alarm occurs to alert you to deal with it in time.

Click  right to **Trigger Actions**, set the actions, and then click **OK**.

 **Note:** The actions supported may vary with DVR model and VCA function.

Some actions are detailed below.

Buzzer

The DVR makes a buzzing sound when an alarm occurs.

Send Email

The DVR sends an email with alarm information to the specified email address(es) when an alarm occurs.

Http

This action is available to the motion detection, UMD, video loss, and alarm input. The DVR sends the alarm information to the third-party platform via http protocol when an alarm occurs.

URL format: Http://IP address of the platform that receives alarms/alarm channel number/alarm type.

Pop-up Window

An alarm message pops up when an alarm occurs.

Push Alarm

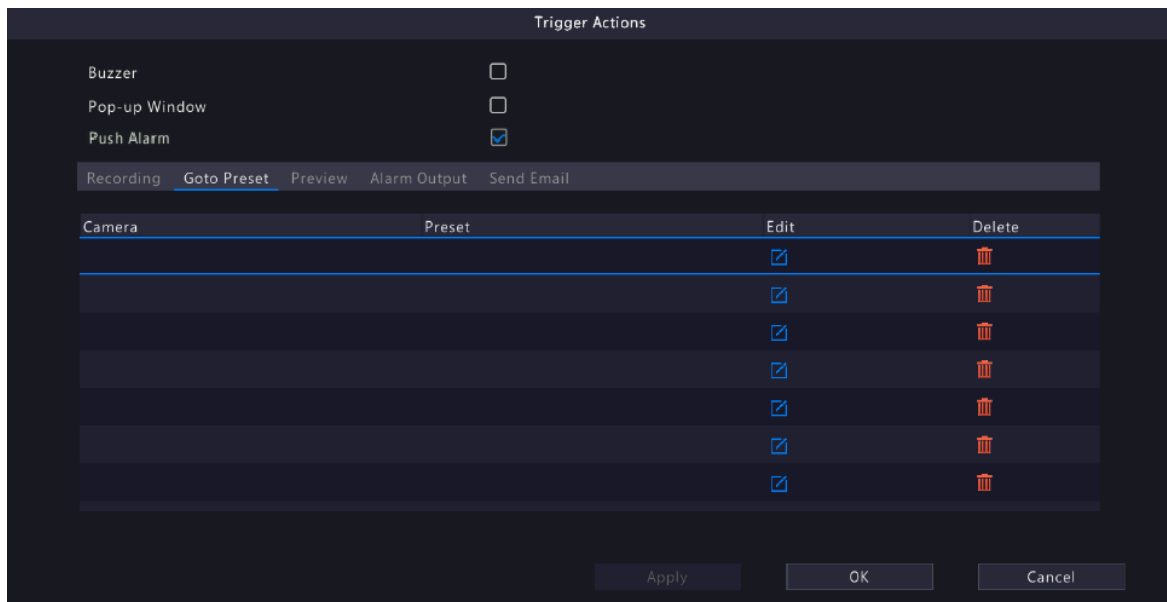
An alarm information will be pushed to the upper platform when an alarm occurs.

Recording

The DVR records video from the selected camera when an alarm occurs.

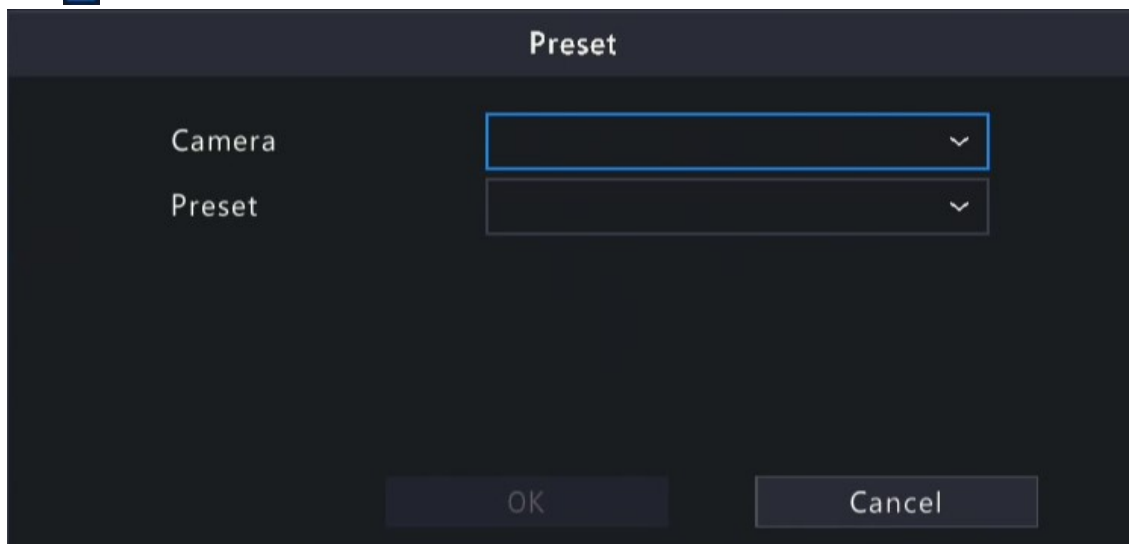
Goto Preset

A PTZ camera moves to a preset position when an alarm occurs.



Configure this action as follows:

1. Click .



2. Select the camera to perform this action and select the preset you want the camera to go to when an alarm occurs.

 **Note:** Before use, you need to configure presets on the PTZ camera. See *Network Camera User Manual* for details.

3. Click **OK**.

 **Note:** To delete or unlink a preset, click .

Preview

The DVR plays the live video of the specified camera(s) when an alarm occurs. To perform this action, you need to configure **Max. Alarm-Triggered Live View Windows** (1/4/9 available) under **Menu > System > Preview**.

Trigger Actions

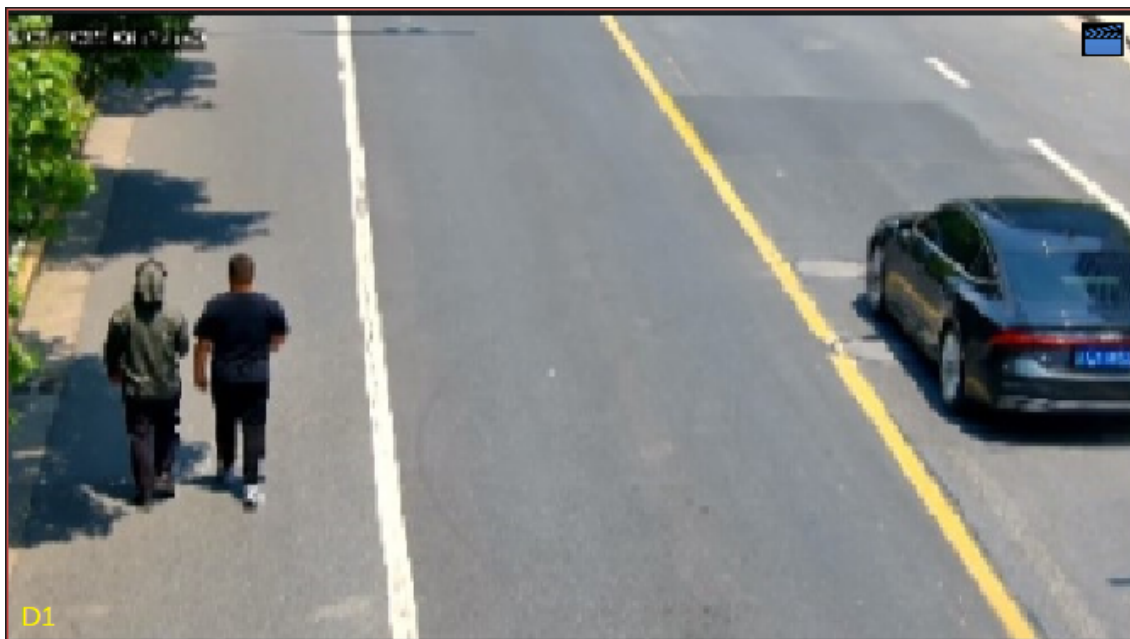
Buzzer	☐
Pop-up Window	☐
Push Alarm	☒

Recording Goto Preset Preview Alarm Output Send Email

☒ All	☐ D1	☐ D2	☐ D3	☐ D4	☐ D5	☐ D6	☐ D7	☐ D8
	☐ D9							

The live view page displayed in the event of alarms varies depending on the number of linked cameras and the number of alarm-triggered live view windows. When an alarm occurs, the live view page shows the live video from the linked camera(s) with a red frame; when the alarm ends, the live view page returns to the original state.

- When **Max. Alarm-Triggered Live View Windows** is set to **1 Window**, the live view page plays live video in one window. If more than one camera is linked, the live video switches at 5s.

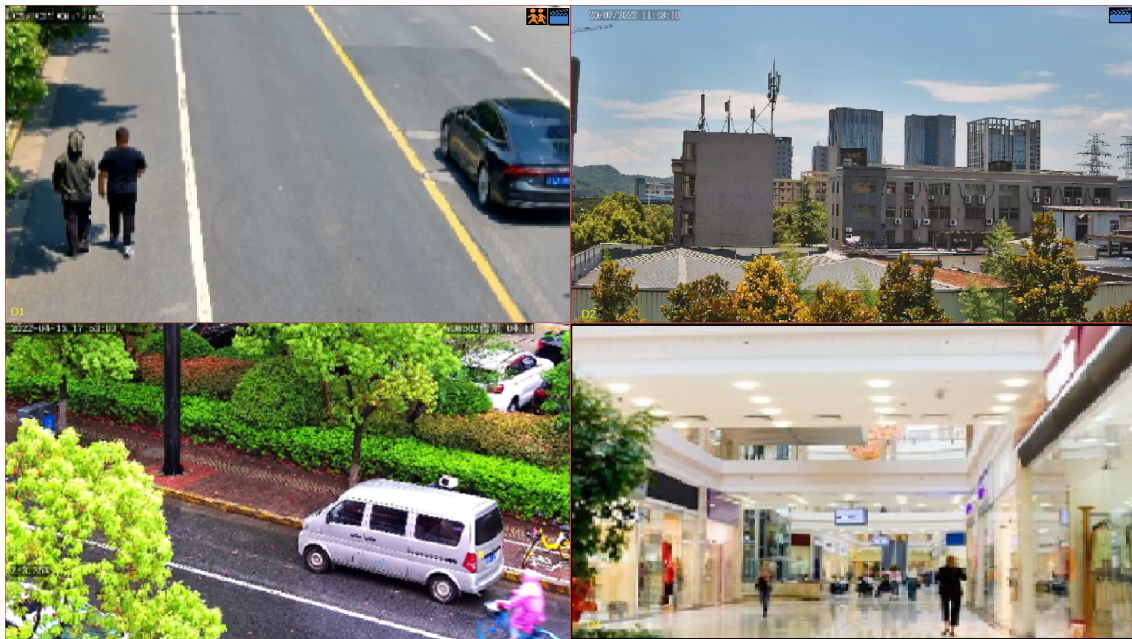


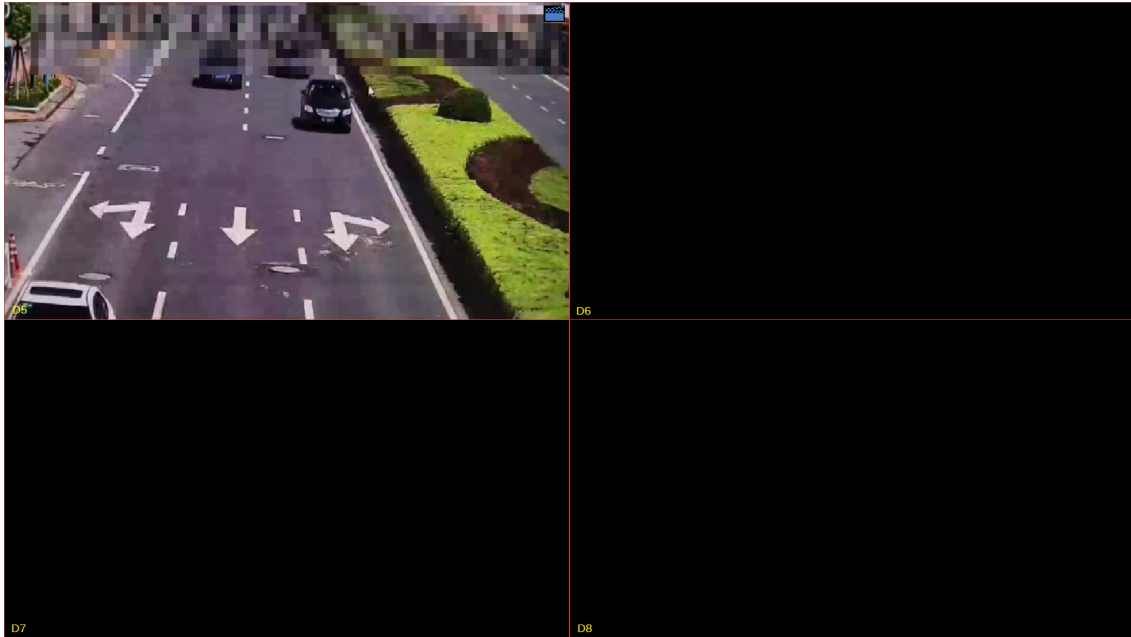
- When **Max. Alarm-Triggered Live View Windows** is set to **4 Windows**, the live view page plays the live video of each camera in 4-split mode. If more than 4 cameras are linked, the live video switches at 5s.

Live view page with 3 cameras linked:



Live view page with 5 cameras linked:





- When **Max. Alarm-Triggered Live View Windows** is set to **9 Windows**, the live view page plays the live video of each camera in 9-split mode. If more than 9 cameras are linked, the live video switches at 5s.

Alarm Output

A third-party device is triggered to raise an alarm when it receives an alarm output by the DVR.

Trigger Actions

Buzzer
☐

Pop-up Window
☐

Push Alarm
☒

Recording
Goto Preset
Preview
Alarm Output
Send Email

☒ All
☐ A->1
☐ A->2
☐ A->3
☐ A->4
☐ D4->1

Apply
OK
Cancel

Alarm Sound

The selected camera plays an audio alarm when an alarm occurs. This action is only available to cameras that support alarm sound.

Note:

- 在声音告警进行的过程中，若出现新的告警，则丢弃新的声音告警联动。
- 在声音告警进行的过程中打开语音对讲，则声音切换为对讲音频。
- 在语音对讲时，不会出现声音告警联动。

Trigger Actions

Buzzer ☒

Pop-up Window ☒

Push Alarm ☒

Recording Goto Preset Preview Alarm Output **Alarm Sound** Alarm Light Send Email

☐ Alarm Sound

Select day: Mon

Start Time	End Time	Audio	Repeat
00 : 00	23 : 59	1.You are in the .	3
00 : 00	00 : 00	1.You are in the .	3
00 : 00	00 : 00	1.You are in the .	3
00 : 00	00 : 00	1.You are in the .	3

Copy To: ☐ All ☐ Mon ☐ Tue ☐ Wed ☒ Thu ☐ Fri ☐ Sat ☐ Sun

Apply OK Cancel

Configure this action as follows:

1. Select the **Alarm Sound** check box, select the alarm mode, and configure other parameters as needed.

Mode	Description
Day/Night Mode	Select the day and time (day/night) in which alarm sound is enabled.  Note: The camera automatically switches to day or night mode according to the ambient brightness. See <i>Network Camera User Manual</i> for details.
Custom Mode	Select the day and time (start/end time) in which alarm sound is enabled.  Note: Up to 4 time periods are allowed per day, and the time periods cannot overlap.
Audio	Select the audio file to be played by the camera when an alarm occurs. By default, 13 audio files are available. You can configure the audio files on the camera's Web interface.  Note: The number of built-in audio files varies depending on the camera model, and up to 5 audio files are allowed on certain models.
Repeat	Set the number of times the audio file to be played when an alarm occurs. Range: 1 to 50.

2. (Optional) To apply the same settings to other days, select the desired day(s) after **Copy To**.
3. Click **OK**.

Alarm Light

The illuminator of the selected camera flashes for a certain period of time when an alarm occurs. This action is only available to cameras that support alarm light.

Trigger Actions

Buzzer ☒

Pop-up Window ☒

Push Alarm ☒

Recording Goto Preset Preview Alarm Output Alarm Sound **Alarm Light** Send Email

☐ Alarm Light

Blink Time(s) [5 ~ 60]

Select day

Start Time		End Time	
00	00	23	59
00	00	00	00
00	00	00	00
00	00	00	00

Copy To ☐ All ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fr ☐ Sat ☐ Sun

Apply OK Cancel

Configure this action as follows:

1. Select the **Alarm Light** check box, select the alarm mode, and configure other parameters as needed.

Mode	Description
Day/Night Mode	Select the day and time (day/night) in which alarm light is enabled.  Note: The camera automatically switches to day or night mode according to the ambient brightness. See <i>Network Camera User Manual</i> for details.
Custom Mode	Select the day and time (start/end time) in which alarm light is enabled.  Note: Up to 4 time periods are allowed per day, and the time periods cannot overlap.
Blink Time(s)	Set the duration that the illuminator flashes when an alarm occurs.

2. (Optional) To apply the same settings to other days, select the desired day(s) after **Copy To**.
3. Click **OK**.

Snapshot

The DVR takes a snapshot from a specified camera when an alarm occurs.

Trigger Actions

Buzzer ☐

Pop-up Window ☐

Push Alarm ☒

Recording Goto Preset Preview Alarm Output **Snapshot**

☐ All ☐ D1 ☐ D2 ☐ D3 ☒ D4 ☐ D5 ☐ D7 ☐ D9 ☐ D10

☐ D12

Apply OK Cancel

 **Note:** This action is only available to certain alarm functions such as motion detection and human body detection, and is not available to VCA functions.

Send Email

The NVR sends an email with alarm information to the specified email address(es) when an alarm occurs. Please set the recipient information in [Email](#). Up to 6 recipients are allowed.

Trigger Actions

Buzzer

Pop-up Window

Push Alarm

Recording

Goto Preset

Preview

Alarm Output

Send Email

	Recipient	Recipient Address
☐	Recipient1	wangtest@mmitest.com
☐	Recipient2	22@1.com
☐	Recipient3	3@3.com
☐	Recipient4	4@4.com
☐	Recipient5	5@5.com
☐	Recipient6	6@6.com

Apply

OK

Cancel

5.1.2 Arming Schedule

Configure an arming schedule to determine when the DVR receives alarms and performs predefined alarm-triggered actions.

Click  right to **Arming Schedule**, configure the schedule as needed, and then click **OK**.

Arming Schedule

Current Camera

D3

Select day

Mon

No.	Start Time	End Time
1	00 00	24 00
2	00 00	00 00
3	00 00	00 00
4	00 00	00 00

Copy To

☐ All

☐ Mon

☐ Tue

☐ Wed

☐ Thu

☐ Fri

☐ Sat

☐ Sun

☐ Holiday

Apply

OK

Cancel

On certain DVRs, the **Arming Schedule** page shows as follows:

Arming Schedule

Current Camera

Select day

No.

A<-3

Mon

Start Time				End Time			
00	⬆	00	⬆	24	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆

Copy To

☐ All
☐ Mon
☐ Tue
☐ Wed
☐ Thu
☐ Fri
☐ Sat
☐ Sun
☐ Holiday

Apply
OK
Cancel



Note:

- Up to 4 or 8 time periods are allowed per day, and the time periods cannot overlap.
- (Optional) To apply the same schedule to other days, select the desired day(s) after **Copy To**.
- The number of arming time periods available varies by function.
- If a SIP camera is connected to the DVR and configured with camera side analysis of **Intrusion Detection**, **Cross Line Detection**, **Enter Area**, or **Leave Area**, the arming schedule configured for these functions on the DVR will be synchronized to the camera.

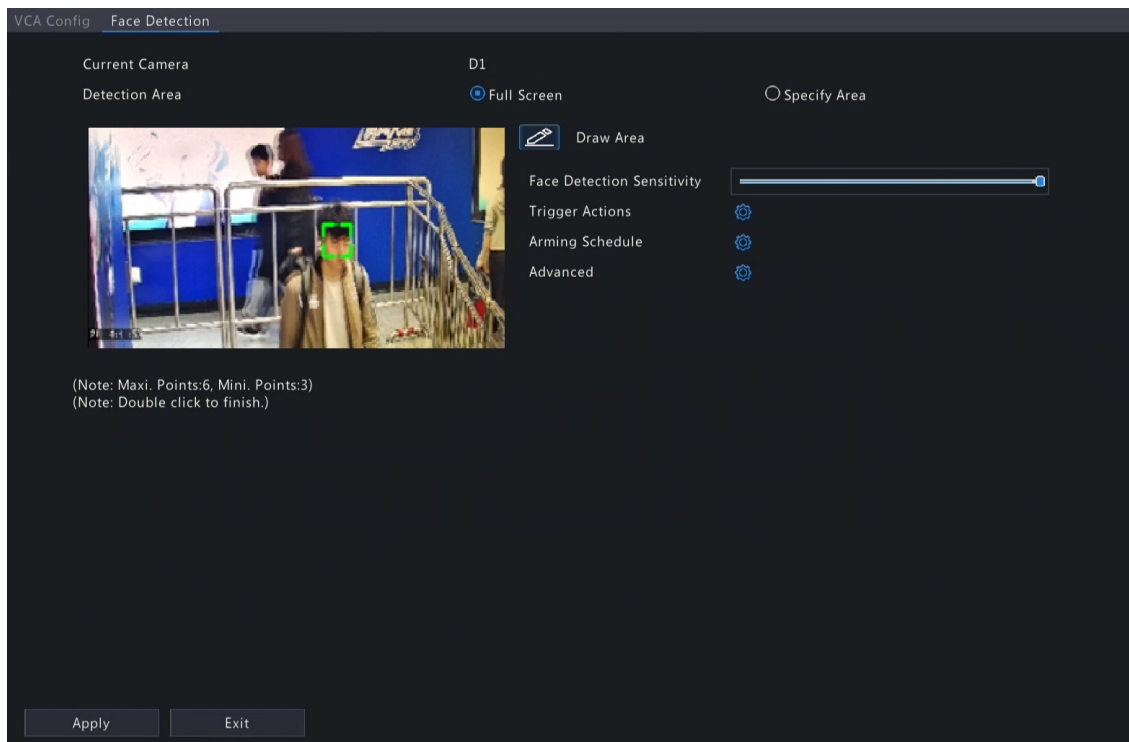
5.1.3 Face Detection

Face detection detects and captures faces in a specified detection area.



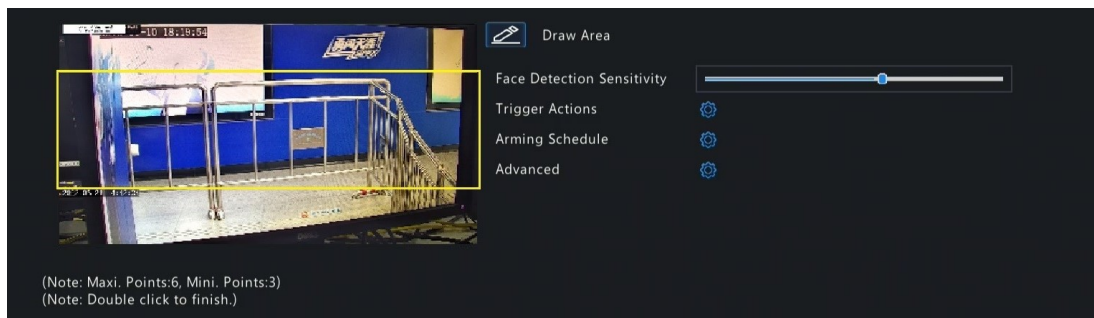
Note: The functions and parameters supported by camera side analysis and DVR side analysis are different.

1. Go to **Menu > VCA > VCA Config**.
2. Select a camera.
3. Select **Face Detection** and click to configure it.



4. Set the detection area. Only 1 detection area is allowed.

- Full Screen: Detects all faces in the live video.
- Specify Area: Detects faces in a specified area of the live video. Select **Specify Area** and click , then a detection box appears in the left preview window. You can adjust the position of the area or draw an area as needed.



- Adjust the position of the area. Point to a border of the area and drag it to the desired position.
 - Draw an area. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.
5. Set the face detection sensitivity by dragging the slider. The higher the sensitivity, the more likely a face will be detected. The lower the sensitivity, the less likely a side face or blurring face will be detected.
 6. Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
 7. Click  right to **Advanced**, configure the parameters as needed, and then click **OK**.

Advanced

Min. Pupillary Distance(px)	60
Number of Snapshots	5
Enable Face Selection	☒
Face Selection Mode	Effect Priority ▾
Number of Selected Photos	1

Note: Minimum pupillary distance range: 20px-150px

OK
Cancel

On certain DVRs, the **Advanced** page shows as follows:

Advanced

Min. Pupillary Distance(px)	60
Number of Snapshots	1

Note: Minimum pupillary distance range: 20px-150px

OK
Cancel

Parameter	Description
Min. Pupillary Distance(px)	The minimum distance (measured in pixels) between two pupils. Faces with pupillary distance smaller than the value will not be captured.  Note: The default value varies by image resolution, and the valid range varies by DVR model.
Number of Snapshots	The number of snapshots to be captured when the detection rule is triggered. Range: 1 to 30. Default: 5.
Enable Face Selection	Select whether to select face snapshots to report.
Face Selection Mode	- Effect Priority: Set the Number of Selected Photos, then the DVR selects the specified number of snapshots with the best quality from all the snapshots captured when a face is detected to report. - Speed Priority: Set the Number of Selected Photos and Selection Timeout, then the DVR selects the specified number of snapshots from the moment that a face is detected till Selection Timeout is up to report. Range: 1 to 1800. Face Selection Mode Speed Priority ▾ Number of Selected Photos 1 Selection Timeout(s) 30 - Periodic Selection: Set the Selection Timeout, for example, 600ms, then the DVR selects a face snapshot every 600ms to report. Face Selection Mode Periodic Selection ▾ Selection Timeout(100ms) 10

Parameter	Description
Number of Selected Photos	The number of face snapshots to be selected. Range: 1 to 3. This parameter is set to 1 by default and cannot be modified on certain models.
Max/Min Face Width(px)	The DVR only captures faces within Min. Face Width and Max Face Width . Range: 20 to 500.

- Click **Apply**.

5.1.4 Cross Line Detection

Cross line detection detects objects crossing a user-specified virtual line in a specified direction. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

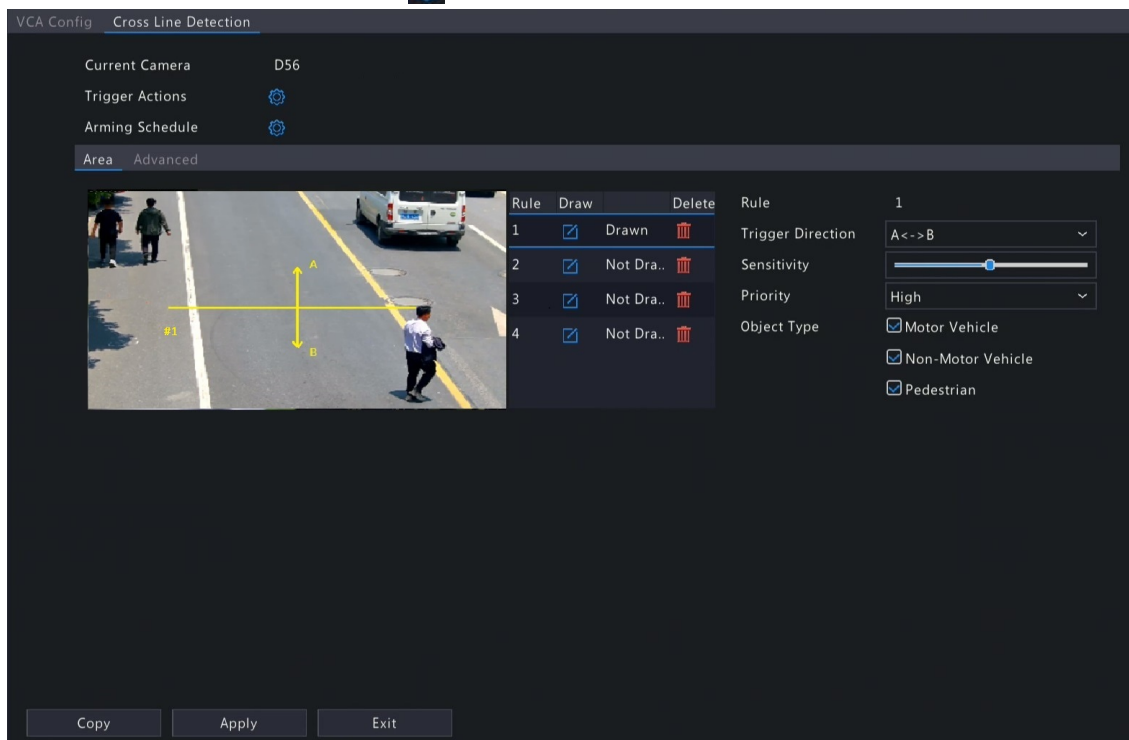


Note:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and DVR side analysis are different.
- To perform this function on the camera side, enable **Intelligent Mark** under **Menu > System > Basic**.
- To configure cross line detection, enable the **Smart Intrusion Prevention** mode in [Analyzer Configuration](#).

Configure Cross Line Detection

- Go to **Menu > VCA > VCA Config**.
- Select a camera.
- Select **Cross Line Detection** and click to configure it.

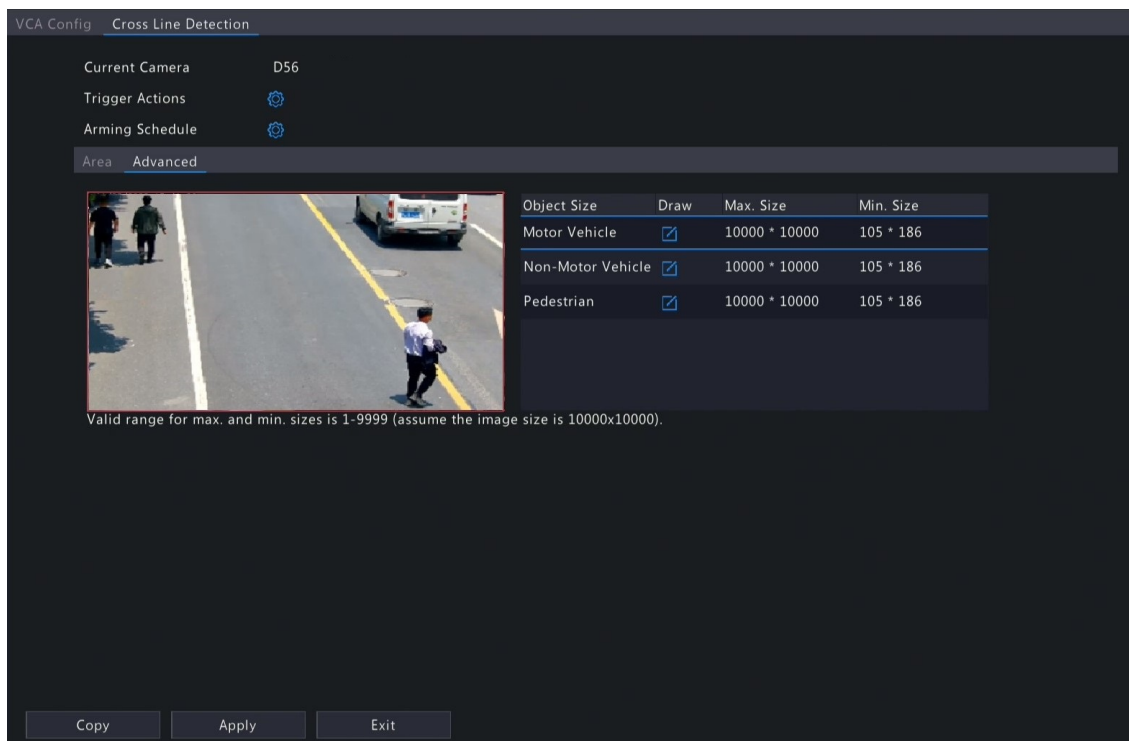


- Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Line	Select Rule 1, click , then click on the left image and drag to draw a detection line. The line defaults to A->B direction. You can modify it as needed.
Trigger Direction	Select the direction from which the object crosses the line to trigger an alarm. A->B: A cross line alarm occurs when an object crossing the line from A to B is detected.

Parameter	Description
	- B->A: A cross line alarm occurs when an object crossing the line from B to A is detected. - A<->B (default): A cross line alarm occurs when an object crossing the line from A to B or from B to A is detected.
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely cross line behaviors will be detected, but the false alarm rate will increase.
Priority	Select the priority of the detection rule, including High , Medium , and Low . The DVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the DVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle , Non-Motor Vehicle , and Pedestrian .

5. Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.



- (1) Select an object type and click ☒. A **Max. Size** box and a **Min. Size** box appear in the left preview window.
- (2) Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

Note:

- The **Max. Size** and **Min. Size** settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.

6. Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
7. (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.
8. Click **Apply**.

View Real-time Snapshots

1. Right-click on the live view page and select **Preview Mode > Smart**, then the real-time snapshots are shown on the right.
2. Click a snapshot to view detailed information. See [Perimeter](#) for details.

5.1.5 Intrusion Detection

Intrusion detection detects objects entering a user-specified area and staying for a preset time. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

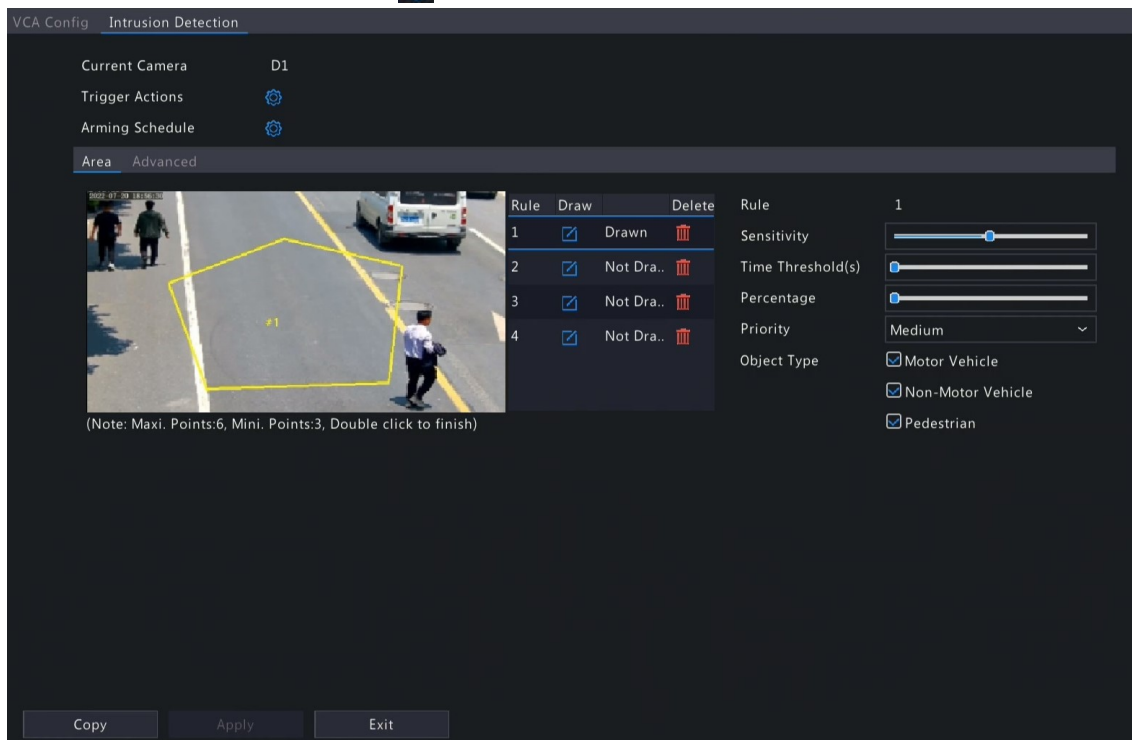


Note:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and DVR side analysis are different.
- To perform this function on the camera side, enable **Intelligent Mark** under **Menu > System > Basic**.
- To configure intrusion detection, enable the **Smart Intrusion Prevention** mode in [Analyzer Configuration](#).

Configure Intrusion Detection

1. Go to **Menu > VCA > VCA Config**.
2. Select a camera.
3. Select **Intrusion Detection** and click to configure it.

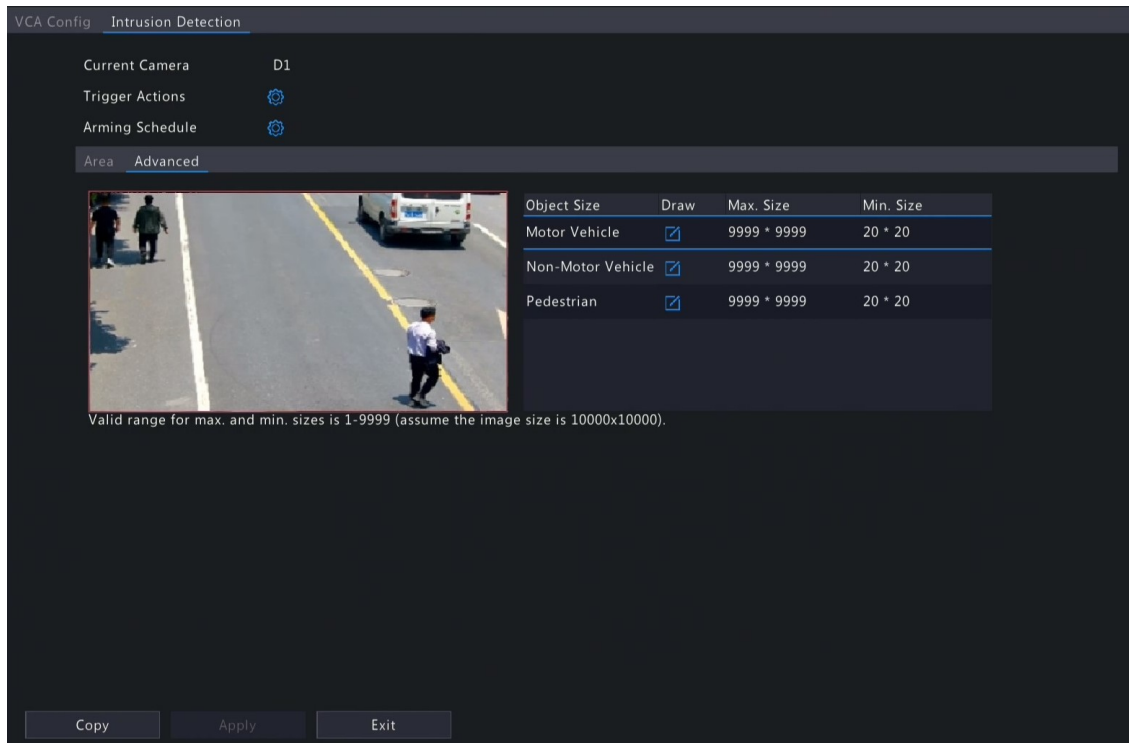


4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click , and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed. Note: For a rule in Drawn state, you can click to redraw a detection area. To delete a detection area, click .
Sensitivity	Set the sensitivity by dragging the slider.

Parameter	Description
	The higher the sensitivity, the more likely intrusion behaviors will be detected, but the false alarm rate will increase.
Time Threshold(s)	Set the time threshold by dragging the slider. If an object stays in the detection area for the set time, an intrusion alarm will be triggered.
Percentage	Set the percentage by dragging the slider. If the proportion of the object size to the detection area size reaches the set value, an intrusion alarm will be triggered.
Priority	Select the priority of the detection rule, including High , Medium , and Low . The DVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the DVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle , Non-Motor Vehicle , and Pedestrian .

5. Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.



- (1) Select an object type and click . A **Max. Size** box and a **Min. Size** box appear in the left preview window.
- (2) Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

 Note:

- The **Max. Size** and **Min. Size** settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.

6. Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
7. (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.

- Click **Apply**.

View Real-time Snapshots

- Right-click on the live view page and select **Preview Mode > Smart**, then the real-time snapshots are shown on the right.
- Click a snapshot to view detailed information. See [Perimeter](#) for details.

5.1.6 Enter Area Detection

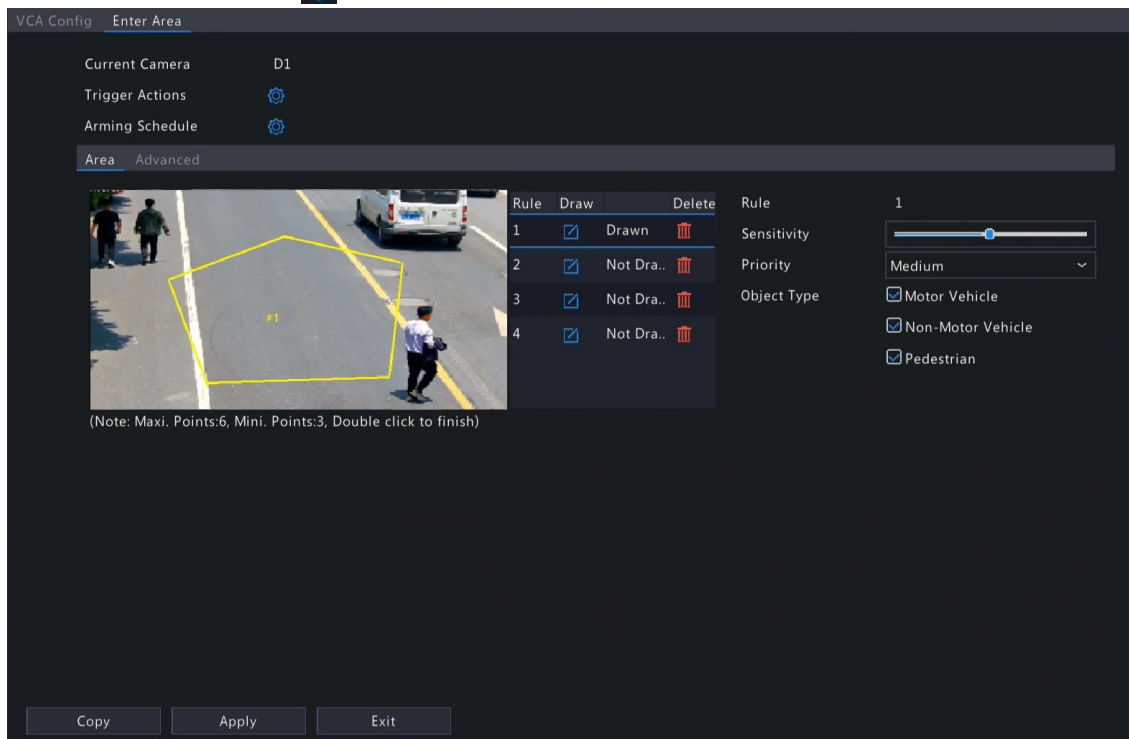
Enter area detection detects objects entering a user-specified area. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

Note:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and NVR side analysis are different.
- To perform this function on the camera side, enable **Intelligent Mark** under **Menu > System > Basic**.
- To configure enter area detection, enable the **Smart Intrusion Prevention** mode in [Analyzer Configuration](#).

Configure Enter Area Detection

- Go to **Menu > VCA > VCA Config**.
- Select a camera.
- Select **Enter Area** and click  to configure it.

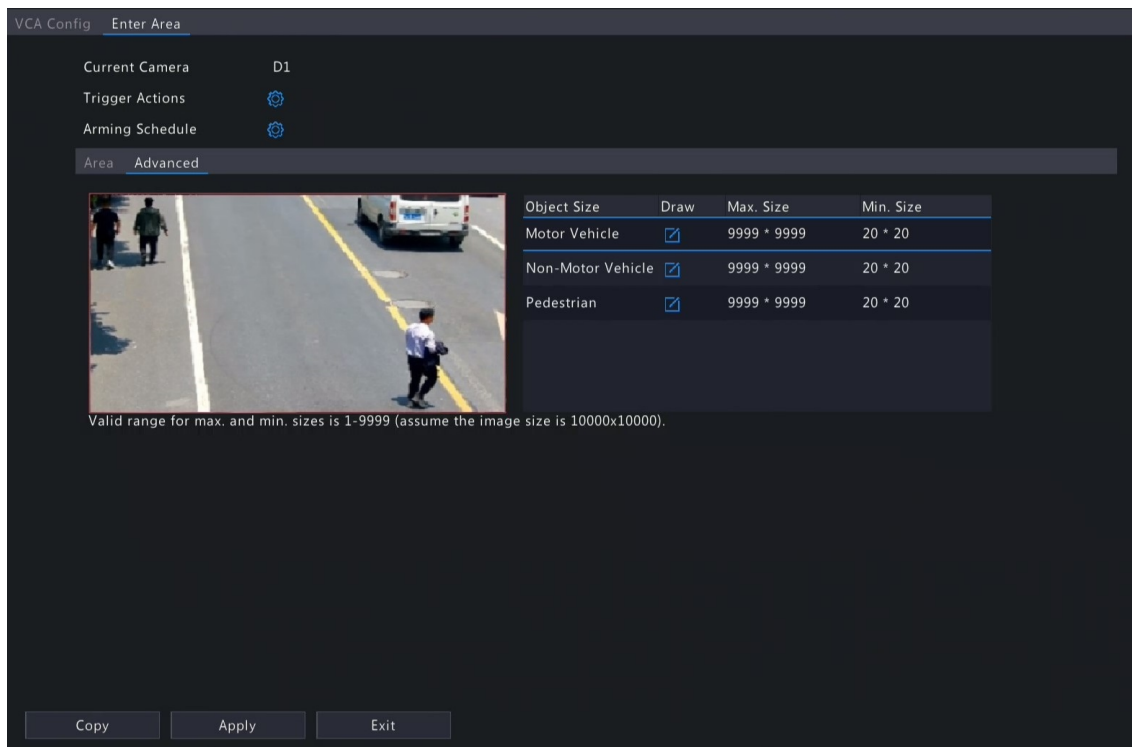


- Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click , and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.  Note: For a rule in Drawn state, you can click  to redraw a detection area. To delete a detection area, click .

Parameter	Description
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely entry behaviors will be detected, but the false alarm rate will increase.
Priority	Select the priority of the detection rule, including High , Medium , and Low . The DVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the DVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle , Non-Motor Vehicle , and Pedestrian .

- Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.



- Select an object type and click ☒. A **Max. Size** box and a **Min. Size** box appear in the left preview window.
- Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

Note:

- The **Max. Size** and **Min. Size** settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.

- Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
- (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.
- Click **Apply**.

View Real-time Snapshots

- Right-click on the live view page and select **Preview Mode > Smart**, then the real-time snapshots are shown on the right.
- Click a snapshot to view detailed information. See [Perimeter](#) for details.

5.1.7 Leave Area Detection

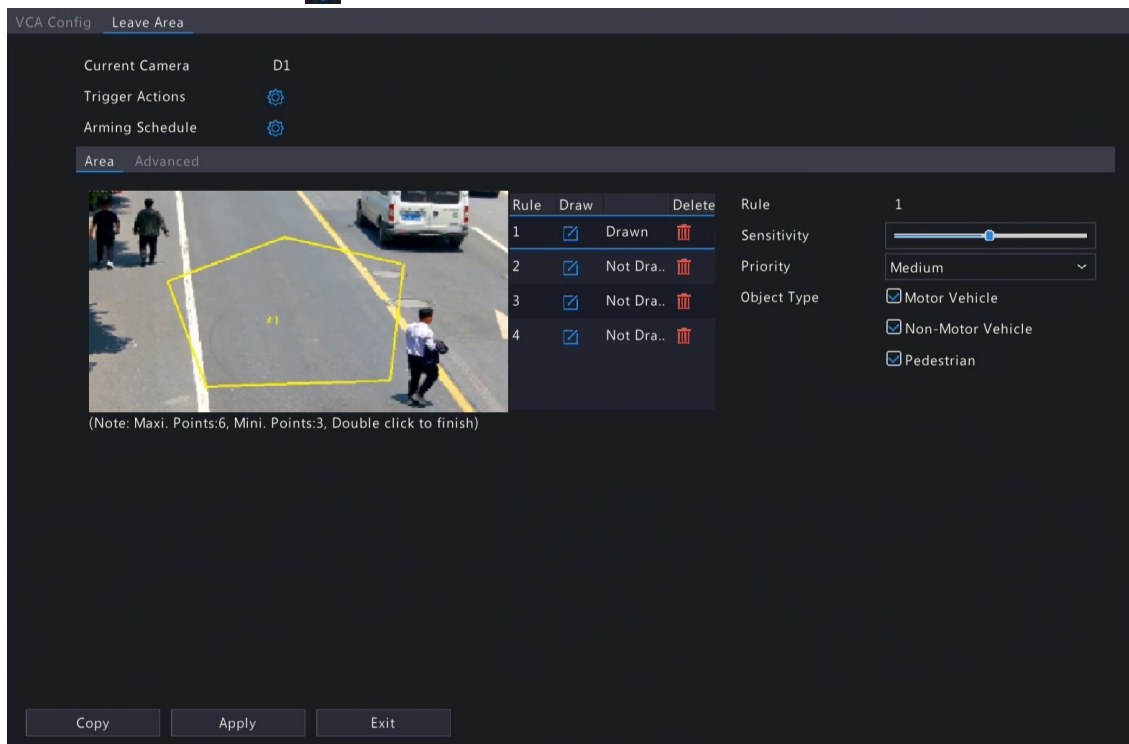
Leave area detection detects objects leaving a user-specified area. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

Note:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and NVR side analysis are different.
- To perform this function on the camera side, enable **Intelligent Mark** under **Menu > System > Basic**.
- To configure leave area detection, enable the **Smart Intrusion Prevention** mode in [Analyzer Configuration](#).

Configure Leave Area Detection

1. Go to **Menu > VCA > VCA Config**.
2. Select a camera.
3. Select **Leave Area** and click  to configure it.

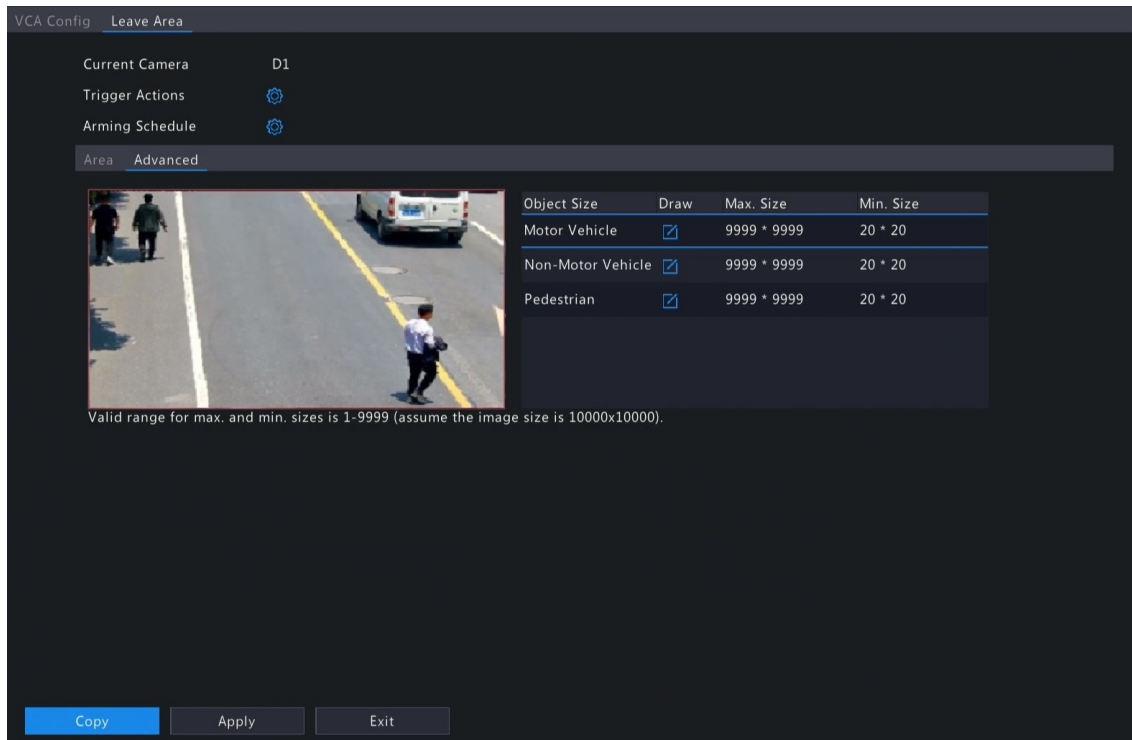


4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click , and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.  Note: For a rule in Drawn state, you can click  to redraw a detection area. To delete a detection area, click .
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely leaving behaviors will be detected, but the false alarm rate will increase.
Priority	Select the priority of the detection rule, including High, Medium, and Low.

Parameter	Description
	The DVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the DVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle , Non-Motor Vehicle , and Pedestrian .

- Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.



- Select an object type and click ☒. A **Max. Size** box and a **Min. Size** box appear in the left preview window.
- Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

Note:

- The **Max. Size** and **Min. Size** settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.

- Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
- (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.
- Click **Apply**.

View Real-time Snapshots

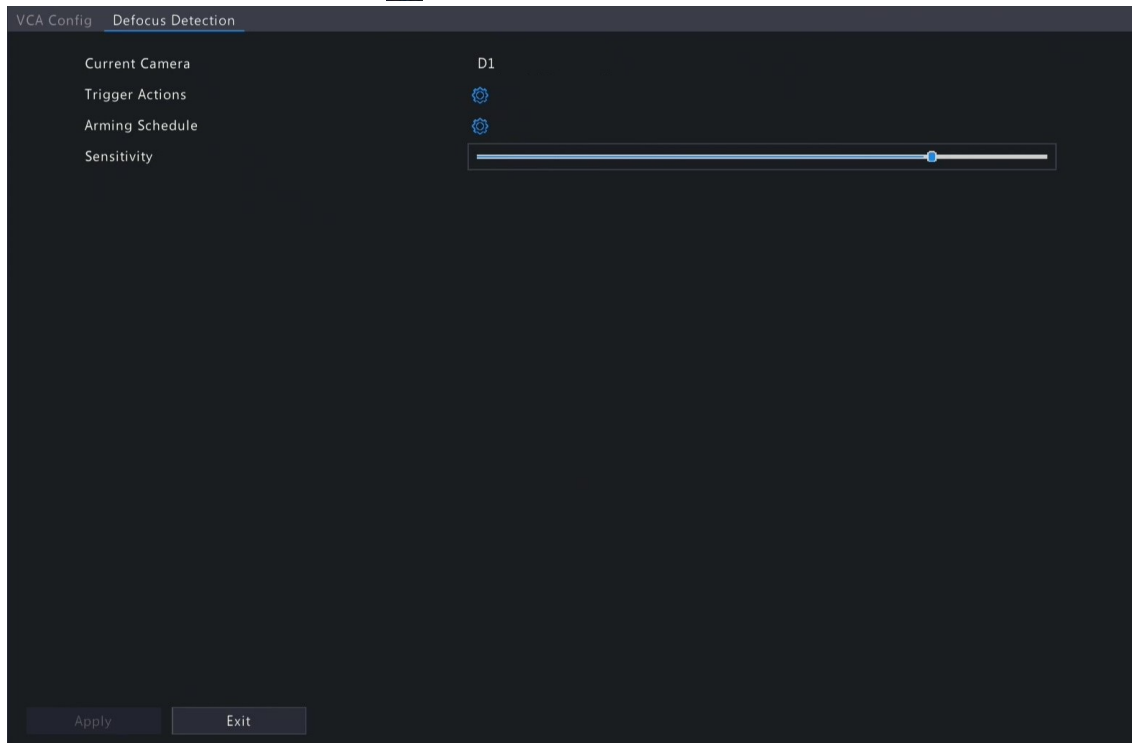
- Right-click on the live view page and select **Preview Mode > Smart**, then the real-time snapshots are shown on the right.
- Click a snapshot to view detailed information. See [Perimeter](#) for details.

5.1.8 Defocus Detection

Defocus detection detects lens defocus. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

- Go to **Menu > VCA > VCA Config**.

2. Select a camera.
3. Select **Defocus Detection** and click  to configure it.

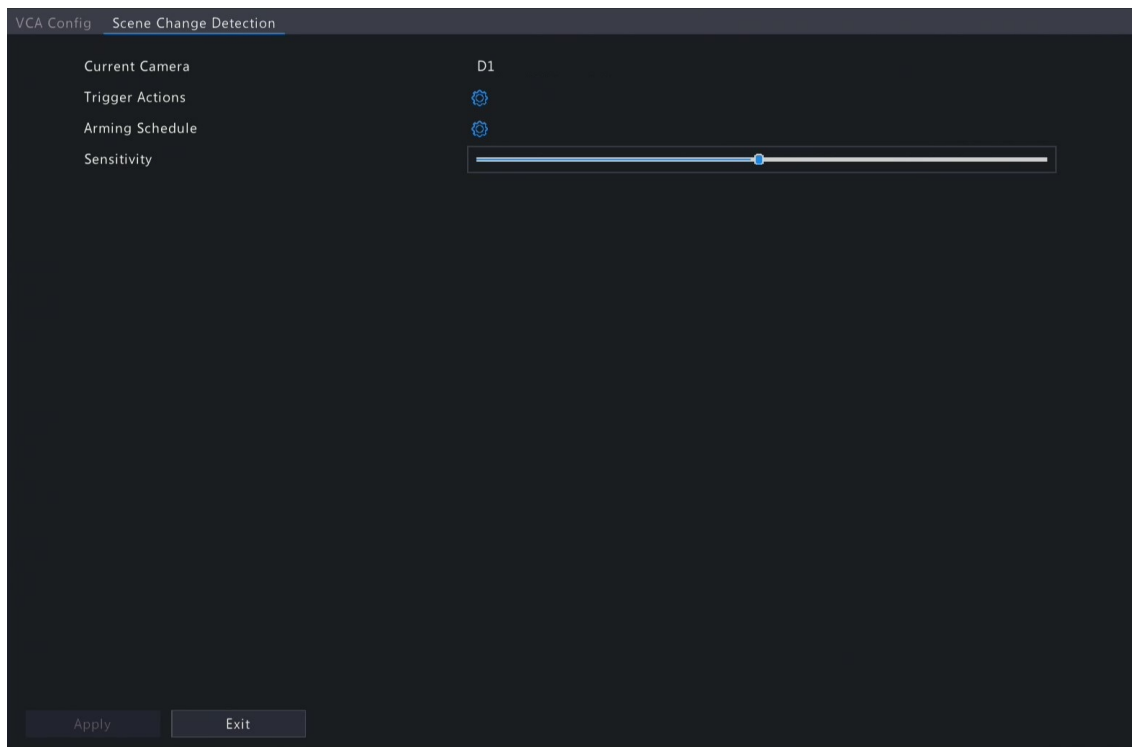


4. Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
5. Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely defocus will be detected, but the false alarm rate will increase.
6. Click **Apply**.

5.1.9 Scene Change Detection

Scene change detection detects the change of surveillance scene caused by external factors such as intentional camera movement. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

1. Go to **Menu > VCA > VCA Config**.
2. Select a camera.
3. Select **Scene Change Detection** and click  to configure it.

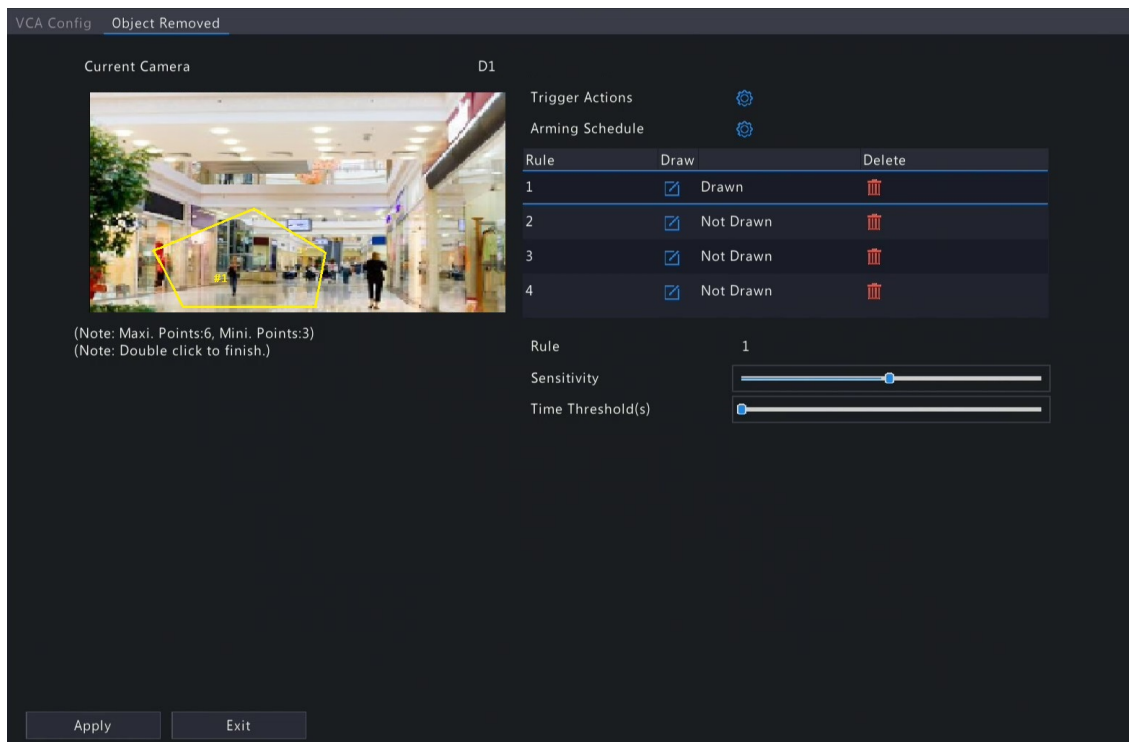


4. Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
5. Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely scene change behaviors will be detected, but the false alarm rate will increase.
6. Click **Apply**.

5.1.10 Object Removed Detection

Object removed detection detects objects removed from a user-specified area for a preset time. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

1. Go to **Menu > VCA > VCA Config**.
2. Select a camera.
3. Select **Object Removed** and click  to configure it.



- Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

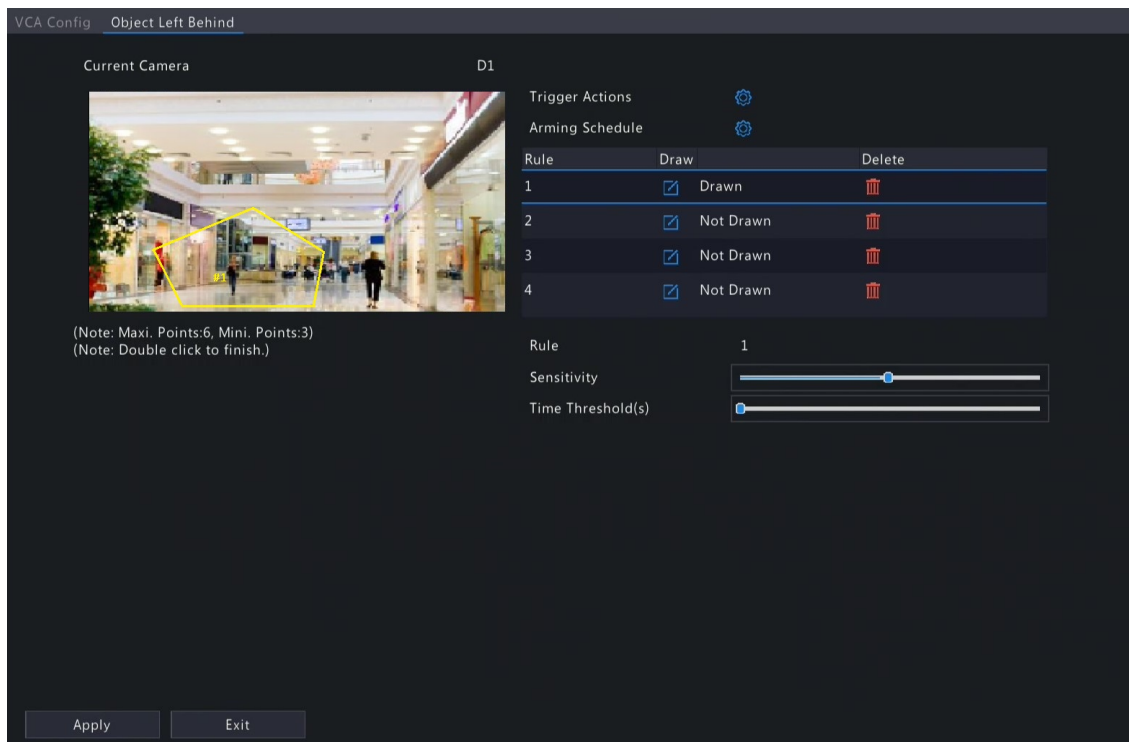
Parameter	Description
Detection Area	Select Rule 1, click , and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.  Note: For a rule in Drawn state, you can click  to redraw a detection area. To delete a detection area, click .
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely object removal behaviors will be detected, but the false alarm rate will increase.
Time Threshold(s)	Set the time threshold by dragging the slider. If an object is removed from the detection area for the set time, an alarm will be triggered.

- Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
- Click **Apply**.

5.1.11 Object Left Behind Detection

Object left behind detection detects objects left behind in a user-specified area for a preset time. The DVR takes snapshots and reports an alarm when the detection rule is triggered.

- Go to **Menu > VCA > VCA Config**.
- Select a camera.
- Select **Object Left Behind** and click  to configure it.



- Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

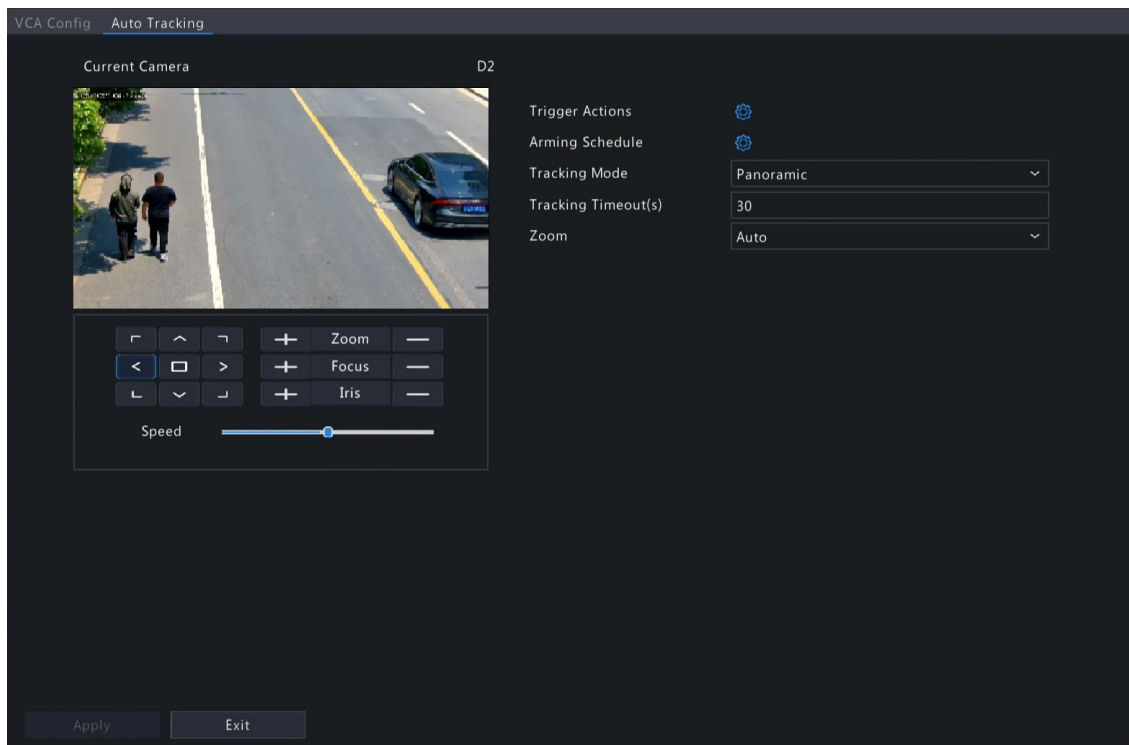
Parameter	Description
Detection Area	Select Rule 1, click , and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.  Note: For a rule in Drawn state, you can click  to redraw a detection area. To delete a detection area, click .
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely object left behind behaviors will be detected, but the false alarm rate will increase.
Time Threshold(s)	Set the time threshold by dragging the slider. If an object is left behind in the detection area for the set time, an alarm will be triggered.

- Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
- Click **Apply**.

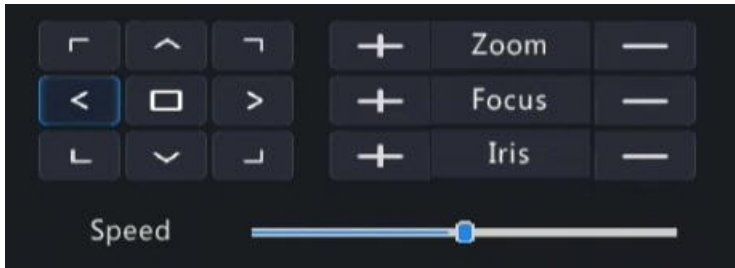
5.1.12 Auto Tracking

Auto tracking detects moving objects in the live video and tracks the first object detected.

- Go to **Menu > VCA > VCA Config**.
- Select a camera.
- Select **Auto Tracking** and click  to configure it.



- Set the tracking parameters.

Parameter	Description
Tracking Area	In the PTZ operation area, use the PTZ control buttons to adjust the tracking area, including shooting angle, zoom, focus, iris and rotation speed. 
Tracking Mode	Panoramic: Continuously tracks objects that appear in the tracking area until they disappear from the tracking area.
Tracking Timeout(s)	Set the maximum tracking time. The device stops tracking when the object disappears or the set time is up. Range: 1 to 300. Default: 30.
Zoom	Select the tracking zoom ratio: Auto or Current Zoom. The default is Auto. - Auto: Automatically adjusts the zoom ratio according to the tracking distance, focusing more on the object behavior. - Current Zoom: Keeps the zoom ratio when the object is tracked, focusing more on the whole monitoring scene.

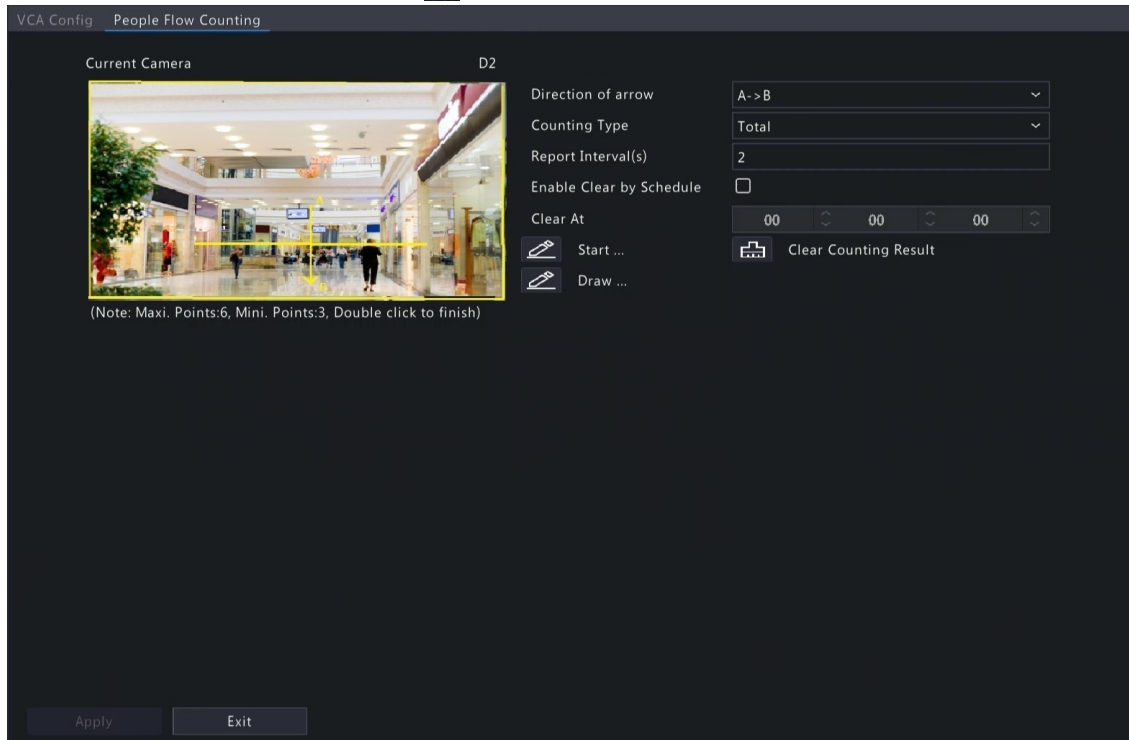
- Set the alarm-triggered actions and arming schedule. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
- Click **Apply**.

5.1.13 People Flow Counting

People flow counting counts people passing a specified tripwire in a user-defined area.

Configure People Flow Counting

1. Go to **Menu > VCA > VCA Config.**
2. Select a camera.
3. Select **People Flow Counting** and click  to configure it.



4. Set the people flow counting rule.

Parameter	Description
Draw Area	Click  and draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.
Draw Tripwire	Click  and draw a tripwire in the left preview window. Only 1 tripwire is allowed.
Direction of arrow	Set the entry direction. • A- >B: A to B is entry, B to A is exit. • B- >A: B to A is entry, A to B is exit.
Counting Type	Select the counting type: Total , People Entered , or People Exited . Total is the default counting type. • Total: Displays the number of people entering and leaving the detection area. • People Entered: Displays the number of people entering the detection area. An entry is counted as a person crosses the tripwire in the direction of the arrow and passes through the detection area. • People Exited: Displays the number of people leaving the detection area. An exit is counted as an object crosses the tripwire in the opposite direction of the arrow and passes through the detection area.

Parameter	Description
	 Note: - Before use, you need to enable people counting OSD under Menu > Camera > OSD. - People that loiter in the detection area, cross the tripwire only, or cross the detection area only are not counted.
Report Interval(s)	Set the time interval for reporting people flow statistics. Default: 60. Range: 1 to 60. The DVR reports people flow statistics to the uplink platform at set intervals. The uplink platform must subscribe to the function to receive the statistics.
Enable Clear by Schedule	Select the Enable Clear by Schedule check box and set the time to clear people counting statistics.
Clear At	The clearing time defaults to 00:00:00. You can modify it as needed. The DVR will clear people counting statistics on the OSD at the set time everyday. This operation does not affect statistics and data reporting.
Clear Counting Result	Click  to clear people counting statistics displayed on the live video immediately. This operation only affect the people counting OSD and does not affect statistics and data reporting.

- To be alerted when the number of people in the detection area exceeds a certain number, you can enable and configure **People Present Alarm** under **Menu > Alarm > People Present Alarm**. See [People Present Alarm](#) for details.
- Click **Apply**.

View Real-time Statistics

Right-click on the live view page and select **Preview Mode > Smart**, then the real-time people statistics are shown on the right. See [People Flow Counting](#) for details.

5.2 Analyzer Configuration

View the analyzer usage and change the analysis mode.

Analyzer is a smart chip used to process smart intrusion protection and ultra motion detection. The analyzer capacity may vary by DVR model, which requires you to allocate channels appropriately.

- Go to **Menu > VCA > Analyzer Config**.
- Select an analysis mode. **Ultra Motion Detection** is the default analysis mode.



Note:

Changing the analysis mode will disable the channel configuration in the original mode. Before you change the analysis mode, disable the functions in the current analysis mode for all channels. For example, if ultra motion detection is enabled for D1 and D2, you need to disable intrusion detection for D1 and D2 first before changing the analysis mode to smart intrusion prevention.

- View the analyzer's capacity usage. The analyzer's capacity is divided into the number of video stream analysis channels and the number of image stream analysis channels. Video stream analysis is NVR-side analysis, and image stream analysis is camera-side analysis.

5.3 VCA Search

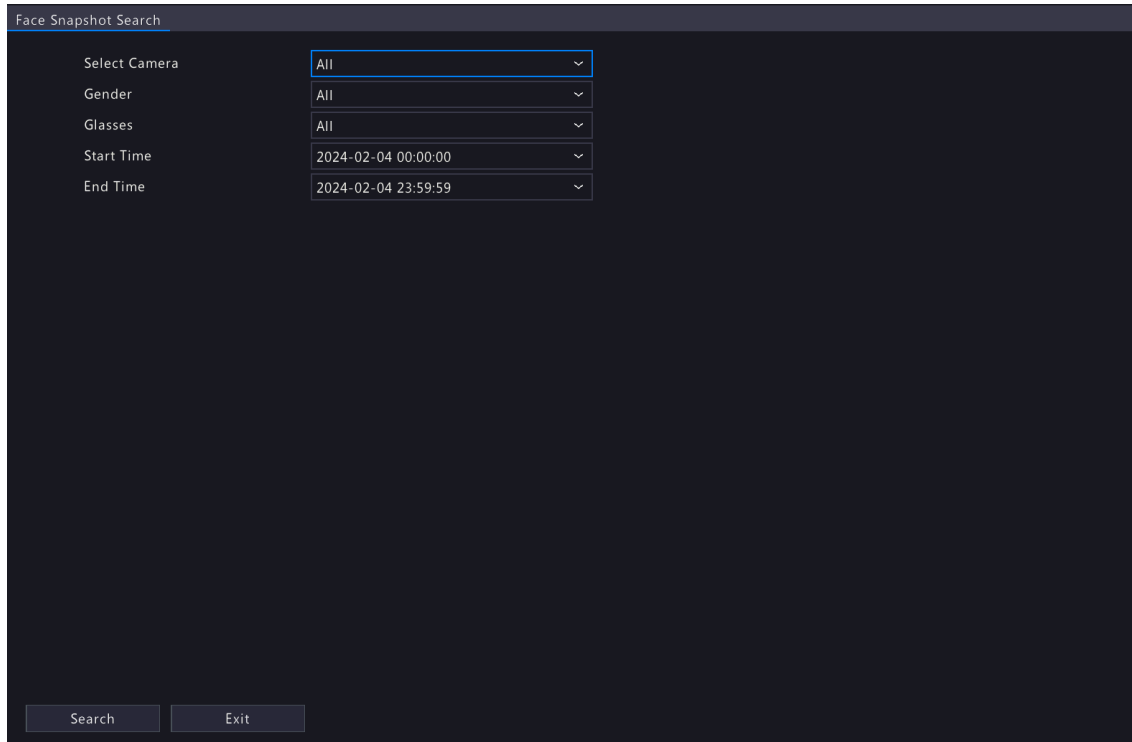
Search for face snapshots, VCA event snapshots and people counting statistics.

5.3.1 Face Snapshot Search

Search for face snapshots.

Search Face Snapshots

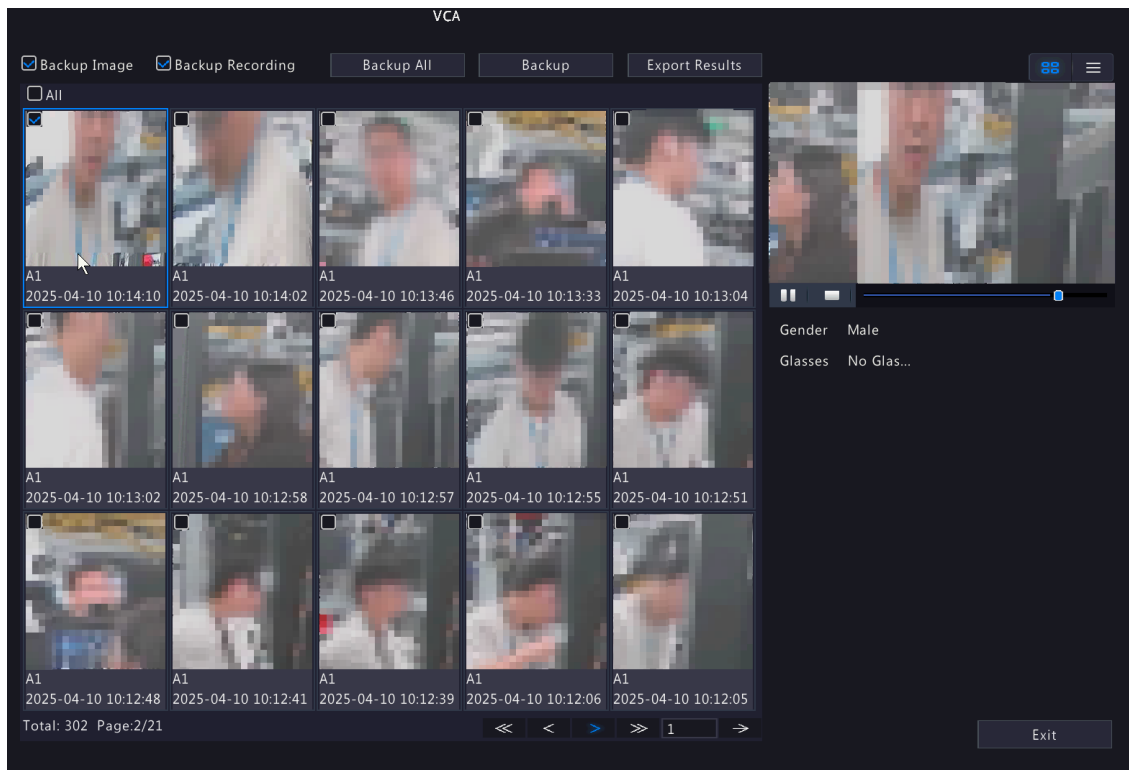
1. Go to **Menu > VCA > VCA Search > Face Snapshot Search**.



2. Set search conditions.

Parameter	Description
Select Camera	Select the camera(s) to search.
Gender	Select the gender: All , Male , or Female .
Glasses	Select the glasses status: All , No Glasses , or With Glasses .
Start/End Time	Specify the time period to search for face snapshots.  Note: A search range smaller than five months is recommended, because earlier snapshots and recordings may have been overwritten due to full storage.

3. Click **Search**. The search results are shown in tile mode by default. You may click  to switch to list mode.



Click any image to view the 20s video (10s before and 10s after the snapshot time) and detailed information about it even if the object lowers his/her head or turns his/her head away, or when the head is occluded.

Other Operations

Operation	Description
Backup/Backup All	1. Enable Backup Image or/and Backup Recording as needed. By default, they are both enabled. • Backup Image: Back up the selected image(s) to an external device. • Backup Recording: Back up the 10s video of the selected image(s) to an external device. 2. Select Backup or Backup All. • Backup: Back up specified search results. Select the search result(s) you want to back up and click Backup. • Backup All: Back up all search results. Click Backup All.
Export Results	1. Enable Backup Image or/and Backup Recording as needed, and click Export Results. 2. Select the export partition and click Export Results to export the search results to an external storage device.

5.3.2 Behavior Search

Search for images based on VCA behaviors including cross line detection, enter area detection, leave area detection, smart motion detection, etc. Behaviors supported for search may vary with DVR model.

1. Go to **Menu > VCA > VCA Search > Behavior Search**.

Behavior Search

Select Camera

All

Start Time

2022-08-11 00:00:00

End Time

2022-08-11 23:59:59

Event Type

All

Object Type

All

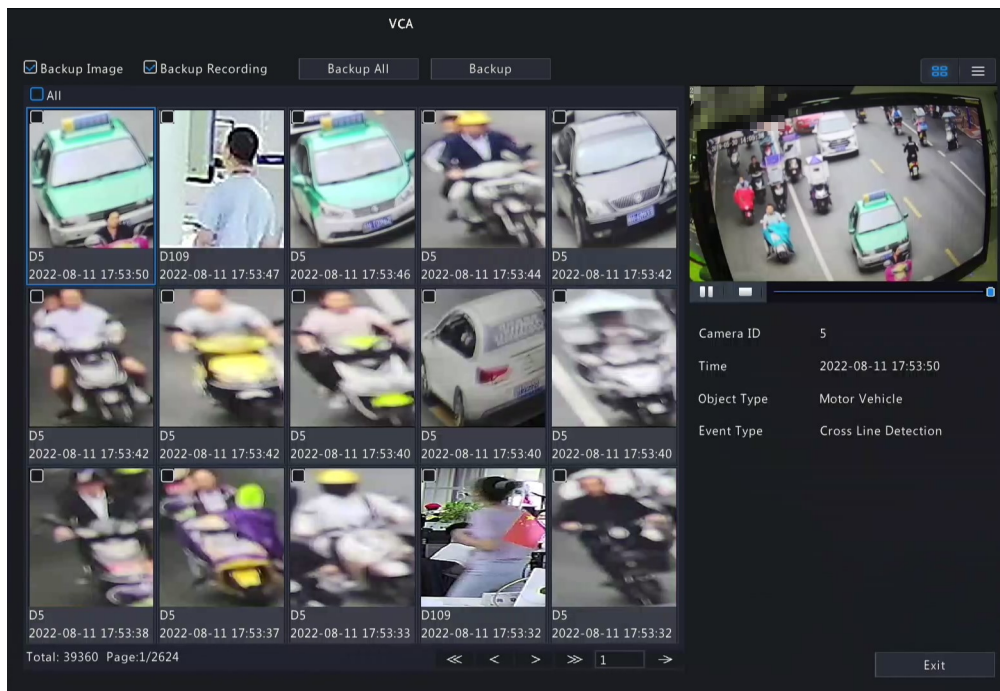
Search

Exit

- Set search conditions.

Parameter	Description
Select Camera	Select the camera(s) to search.
Start/End Time	Specify the time period to search.  Note: A search range smaller than five months is recommended, because earlier snapshots and recordings may have been overwritten due to full storage.
Event Type	Select the event type to search.
Object Type	Select the object type to search: All , Pedestrian , Non-Motor Vehicle , or Motor Vehicle .

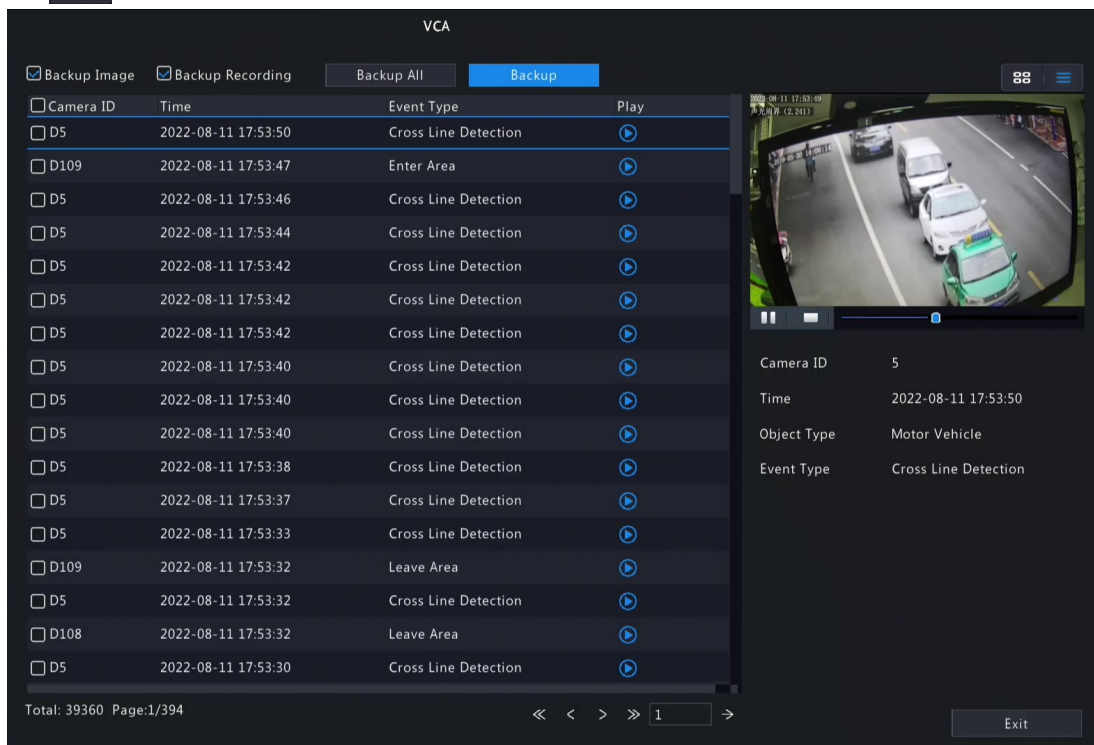
- Click **Search**. The search results are shown in tile mode by default. You may click  to switch to list mode.
 - Tile :



Note:

- By default, a 10s video (5s before and 5s after the first image) and the detailed information about the first image are displayed on the right.
- You can click any image to view the 10s video and detailed information about it.

List



Note:

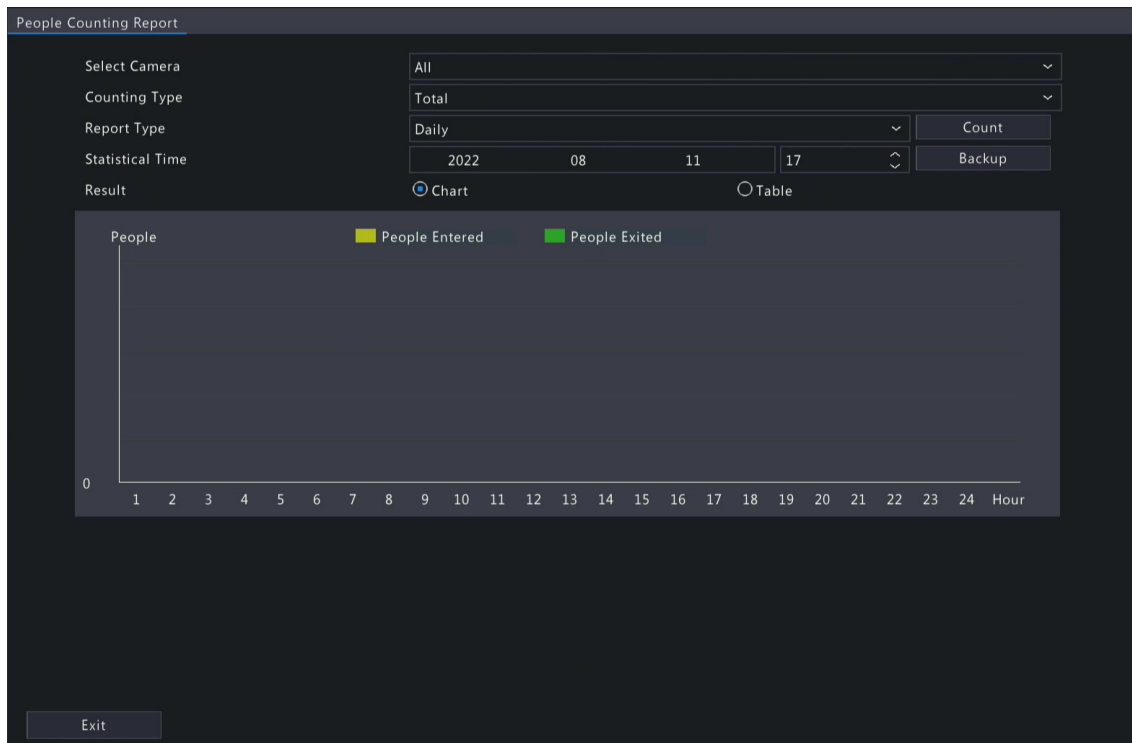
- By default, a 10s video (5s before and 5s after the first item) and the detailed information about the first item are displayed on the right.
- You can click any item and click  or  to view the 10s video and detailed information about it.

4. Back up search results. See [Back up search results](#) for details.

5.3.3 People Counting Report

Search for people counting data. You can view daily/weekly/monthly/yearly people counting reports-the number of people entering and/or leaving a certain area during a specified time period.

1. Go to **Menu > VCA > VCA Search > People Counting Report**.

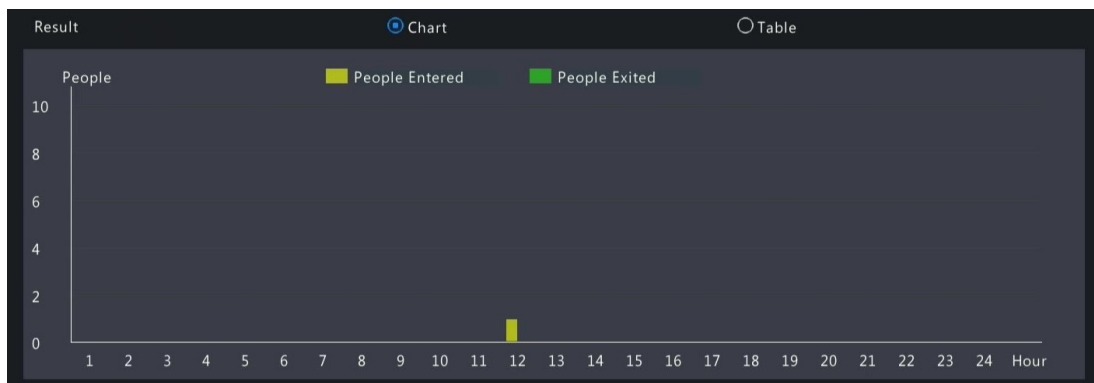


2. Set search conditions.

Parameter	Description
Select Camera	Select the camera(s) to search.
Counting Type	Select the counting type to search: Total , People Entered , or People Exited .
Report Type	Select the report type to view: Hourly , Daily , Weekly , Monthly , or Yearly .
Statistical Time	Select the time to count.

3. Select to create the report as a chart or a table.

- Chart



- Table

Result			
		Chart	Table
Camera ID	Statistical Time	People Entered	People Exited
D58	11:00-12:00	1	0

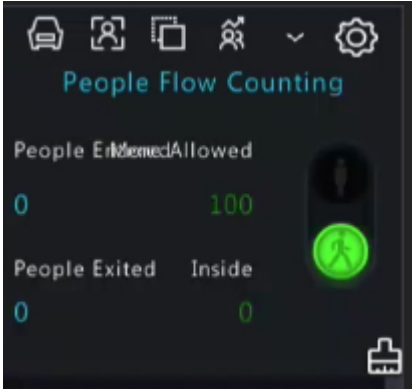
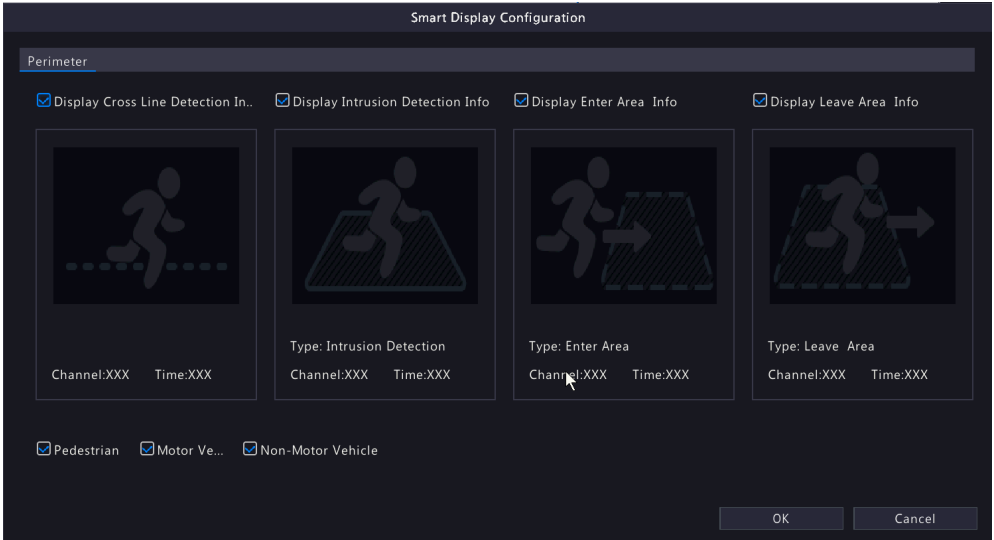
- Click **Backup** to export the report to an external storage device as a .CSV file. The content of the file exported from a report in chart or table format is the same.

5.4 Smart Preview

View real-time snapshots and statistics of four major categories of VCA functions on the live view page, including vehicle, face, perimeter and people counting.

Right-click on the live view page and select **Preview Mode > Smart**, then the real-time snapshots are displayed on the right.

Main Interface

Icon	Description
	Select the event type(s) for which you want to view real-time snapshots. 
	Set the display mode of snapshot information for vehicle recognition and perimeter protection. 
	Open the Behavior Search page.

Icon	Description
	Open the VCA Config page.
	Clear real-time snapshots displayed on the live view page. Search records and statistics are not affected.

Face

View face snapshots information.

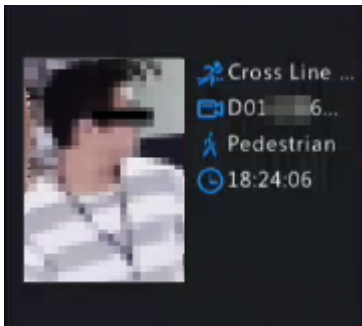
1. Select a face snapshot.
2. Click on the snapshot to view more details.

 **Note:** In the **View Details** dialog box, a 10s video (5s before and 5s after the snapshot) is automatically played on the left, and the snapshot and its detailed information are displayed on the right.

Perimeter

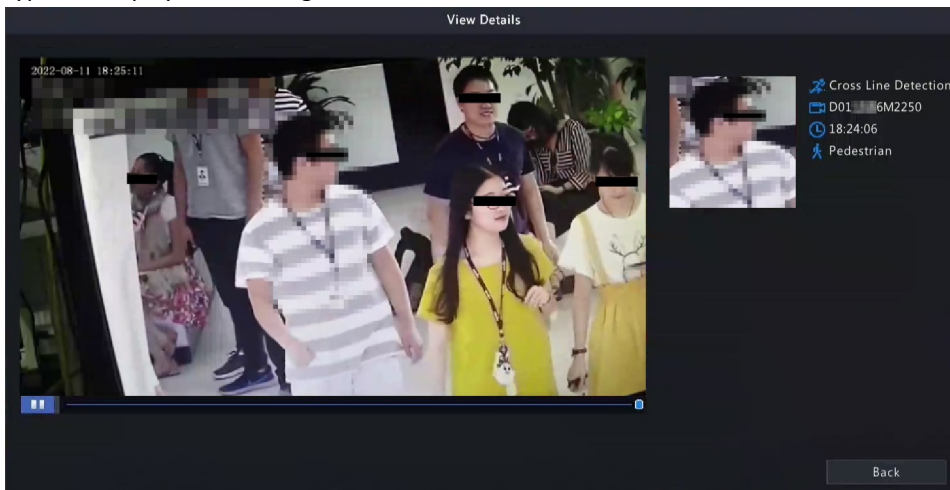
View real-time snapshots of perimeter protection functions including cross line detection, intrusion detection, enter area detection and leave area detection.

1. Select a snapshot.



2. Click on the snapshot to view more details.

In the **View Details** dialog box, a 10s video (5s before and 5s after the snapshot) is automatically played on the left, and the snapshot and its detailed information including event type, camera name, time, and object type are displayed on the right.



People Flow Counting

View real-time people flow statistics including the number of people entering/leaving/currently allowed/present.



- : The number of people present in the detection area does not exceed the set threshold.
 : The number of people present in the detection area exceeds the set threshold.
- : Clear the people counting statistics on the current page. This operation does not affect statistics and data reporting.

6 Network Configuration

Configure the network parameters of the DVR, such as IP address.

 **Note:** The default IP address of network interface 1 is 192.168.1.30, and that of network interface 2 is 192.168.2.30.

6.1 Basic Configuration

Configure the network, mobile app, DDNS, email, etc.

6.1.1 Network Configuration

Configure IP address and other network parameters of the DVR.

- Go to **Menu > Network > Basic > Network**.

Working Mode	Multi-address
Select NIC	NIC1
☐ Enable DHCP	
IPv4 Address	206 . 2 . 2 . 62
IPv4 Subnet Mask	255 . 255 . 255 . 0
IPv4 Default Gateway	206 . 2 . 2 . 1
IPv6 Mode	Router Advertisement
IPv6 Address	fe80::6ef1:7eff:fe85:6ef2
IPv6 Prefix Length	64
IPv6 Default Gateway	::
MAC Address	6c:f1:7e:85:6e:f2
MTU	1500
Preferred DNS Server	206 . 10 . 5 . 39
Alternate DNS Server	8 . 8 . 4 . 4
Default Route	NIC1

Apply Exit

- Choose a working mode. Only multi-NIC DVRs support these three working modes.

Working Mode	Description
Multi-address	Two NICs work independently. You need to configure the NICs separately.
Load Balance	Two NICs use the same IP address and work together to share the sending and receiving bandwidth.
Net Fault-tolerance	Two NICs use the same IP address, and if the primary NIC fails, the standby NIC takes over seamlessly to ensure uninterrupted network connection.

- Configure the network parameters according to the actual network environment.



Note:

- For a multi-NIC DVR, you can choose an NIC as the default route. When the DVR connects to an external network, data will be forwarded via the default route.
- For a DVR with PoE ports, you can configure an IPv4 address for the internal NIC.
- The MTU must be in the range of [576-1500]. To use IPv6, you must set MTU within [1280-1500], and make sure the IPv6 addresses of the DVR and PC are connected. To use functions such as live view, playback, make sure IPv4 addresses of the DVR and PC are also connected.

- Click **Apply**.

6.1.2 EZCloud

With EZCloud you can manage and operate the DVR remotely on a mobile phone.

Configure EZCloud

- Go to **Menu > Network > Basic > EZCloud**. EZCloud is enabled by default.

- Add the DVR to cloud. See [Add Device](#) below.
- (Optional) Select **Snapshot Upload**, and the DVR will upload images to cloud.
- Click **Apply**.
- Check the device status. If online, the current username will be displayed. If offline, the common cause will be displayed for your troubleshooting reference.



Note: You can also check the device status on the cloud website (en.ezcloud.uniview.com).

- (Optional) To delete the DVR from cloud, click **Delete**.

Add Device

Add the DVR to cloud using the app or cloud website.

Add NVR on app

1. Scan the QR code with your mobile phone to download the app; or search EZView or EZLive at app store. The following steps take EZView as an example.
2. Open the app, add the DVR with or without a cloud account.
 - Add with a cloud account:

Sign up for a cloud account, and then log in to add the DVR.

(1) Tap **Log In/Sign Up**, follow the on-screen instructions to sign up and log in.

(2) On the **Live View** page, tap  > , and choose a way to add the DVR.
 - Add without a cloud account:

Scan the QR code using the app to add the DVR without a cloud account.

(1) Tap **Try Now**. The **Live View** screen is displayed.

(2) Tap  >  > **Add Without Signup**, follow instructions to scan the QR code. You may also scan the QR code on the device body.

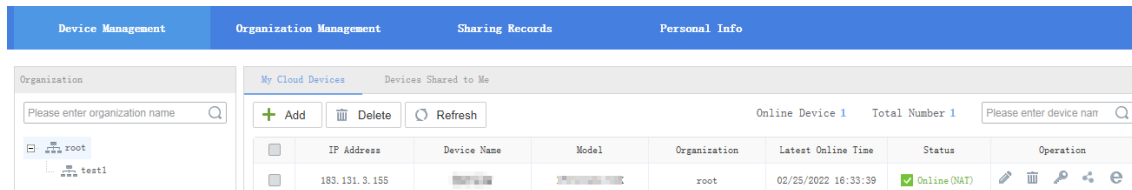
(3) The registered code is filled in automatically. The default username is "admin". Enter the device password, tap **Login**.

Note:

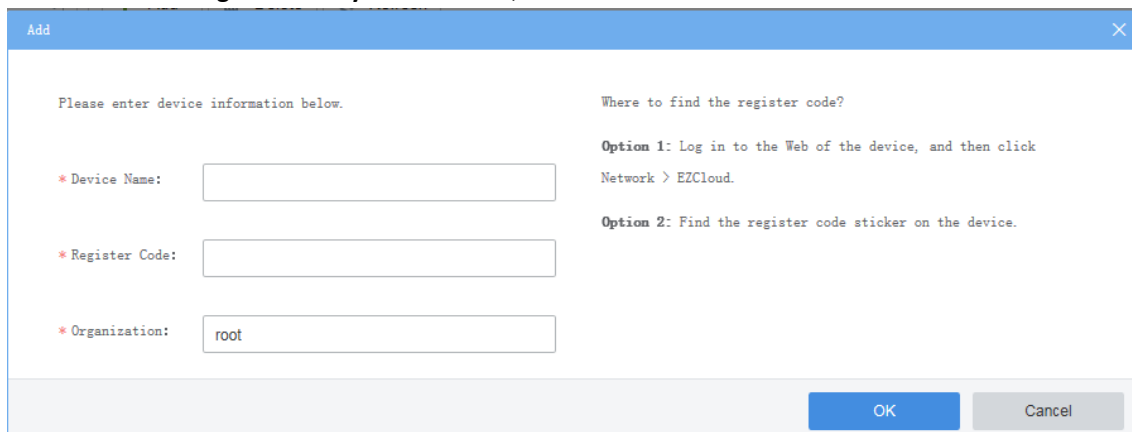
- To add the NVR without a cloud account, ensure that **EZCloud** and **Add Without Signup** are enabled on the NVR, and the NVR's admin password is a strong password.
- Certain functions will be unavailable on the app if the NVR is added without a cloud account. Signup for a cloud account is required to use full functions on the app.

Add DVR on the cloud website

1. Visit the EZCloud website address (en.ezcloud.uniview.com) using a Web browser.
2. Tap **Sign Up**, follow the on-screen instructions to sign up for a cloud account.
3. Log in to the account.



4. Go to **Device Management > My Cloud Device**, click **Add**.



Parameter	Description
Device Name	Set a device name that is easy to recognize.
Register Code	Enter the register code. You can find it on the EZCloud page.
Organization	Choose an organization for the DVR on the cloud.

Parameter	Description
	The default organization is root . You can add organizations at Organization Management > My Cloud Organization .

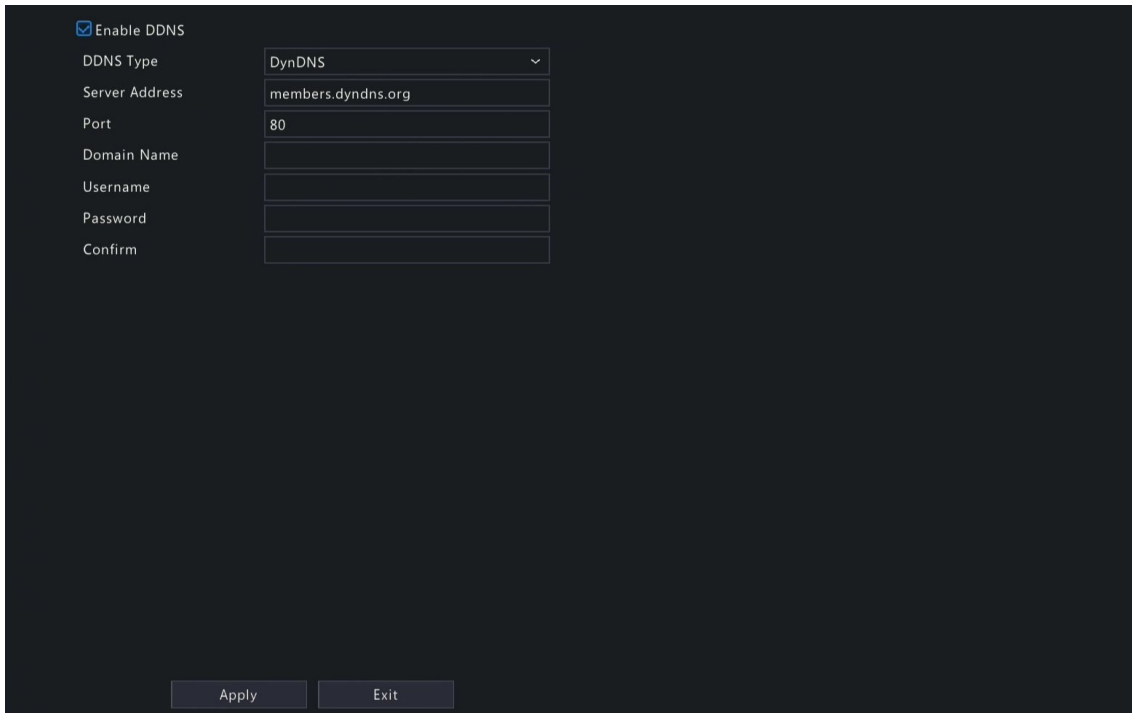
- Click **OK** to add the DVR to cloud.
- Click **Save**.

6.1.3 DDNS

Configure DDNS so you can access the DVR on the LAN from the Internet by visiting a fixed domain name instead of the changing IP addresses.

 **Note:** You can open the DVR's Web page by visiting **http://server address/DVR's domain name** using a Web browser.

- Go to **Menu > Network > Basic > DDNS**.



- Select **Enable DDNS**, choose a DDNS type, and configure the parameters.
 - DynDNS/No-IP: Third-party DDNS service provider. Enter the domain name and username/password that you acquired from your DDNS service provider.
 - Domain name: Domain name assigned by your DDNS service provider.
 - Username and password: The corresponding username/password for your DDNS account.
 - EZDDNS: DDNS service provided by Uniview. You can input a domain name, and then click **Test** to check its validity.
- Click **Apply**.

6.1.4 Email

Configure email so the DVR can send alarm information to specified users through email when an alarm occurs.

 **Note:** Select the **Send Email** checkbox on the **Trigger Actions** page before you start configuration.

- Go to **Menu > Network > Basic > Email**.

☒ Enable Server Authentication

Username: test@test.com

Password: *****

SMTP Server: 172.20.227.2

SMTP Port: 25

☐ Enable TLS/SSL (If TLS/SSL is enabled, use 25 first, and 587/465 as an alternative.)

Sender: test

Sender's Address: test@test.com

Select Recipient: Recipient 1

Recipient: test

Recipient Address: test@test.com

Arming Schedule: 

☒ Attach Image

Snapshot Interval: 5s

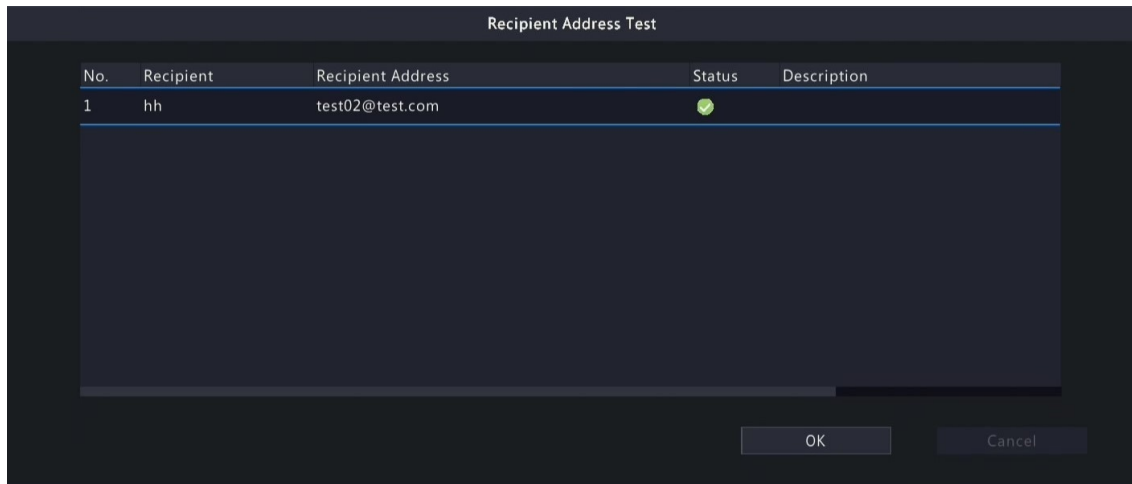
Test Apply Exit

2. Configure the parameters.

Parameter	Description
Enable Server Authentication	SMTP server authentication, when enabled, can enhance email security. This feature is disabled by default. To enable it, you need to enter the correct username and password.
Username/Password	Username and password of the SMTP server. Usually it is the username and password of the email box.
SMTP Server	SMTP server address.
SMTP Port	Default: 25. Range: [1-65535].
Enable TLS/SSL	When enabled, communication security will be improved by encrypting emails via TLS or SSL. This feature requires the SMTP server to support TLS/SSL.  Note: After TLS/SSL is enabled, if email sending via port 25 failed, try 587 or 465.
Sender	Sender's name.
Sender's Address	Sender's email address, which can be the same as the recipient's address.
Select Recipient	Choose a recipient from the list and then complete the recipient information. Up to 6 recipients are allowed.
Recipient	Recipient's name.
Recipient Address	Recipient's email address.
Arming Schedule	Click  to configure an arming schedule. See Arming Schedule .
Attach Image	When enabled, the NVR will send an email attached with snapshot(s) when an alarm occurs.

Parameter	Description
	 Note: This feature is only available to certain devices.
Snapshot Interval	Options are 2s (default), 3s, 4s, and 5s.

- Click **Test**. The system will check the recipient address by sending it a test email.  in the **Status** column means the test succeeded and the email address is valid.



- Click **Apply**.

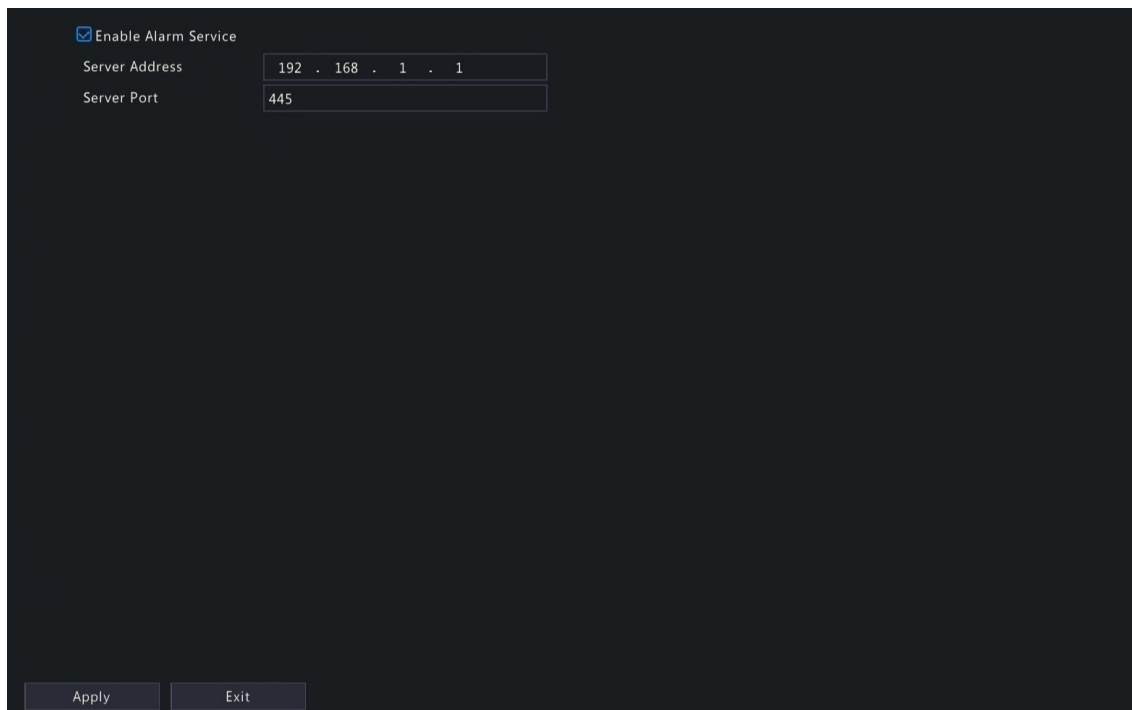
6.2 Platform Configuration

Configure an upper platform for the DVR.

6.2.1 Alarm Service

Configure an upper server to receive alarms and images from the DVR.

- Go to **Menu > Network > Platform > Alarm Service**.



- Select **Enable Alarm Service**.
- Configure the parameters.

Parameter	Description
Server Address	Upper server's IP address.
Server Port	Upper server's port number.

 **Note:** This configuration only enables the sending of alarm-related packets to the alarm host. The specific alarm methods on the alarm host need to be configured separately.

- Click **Apply**.

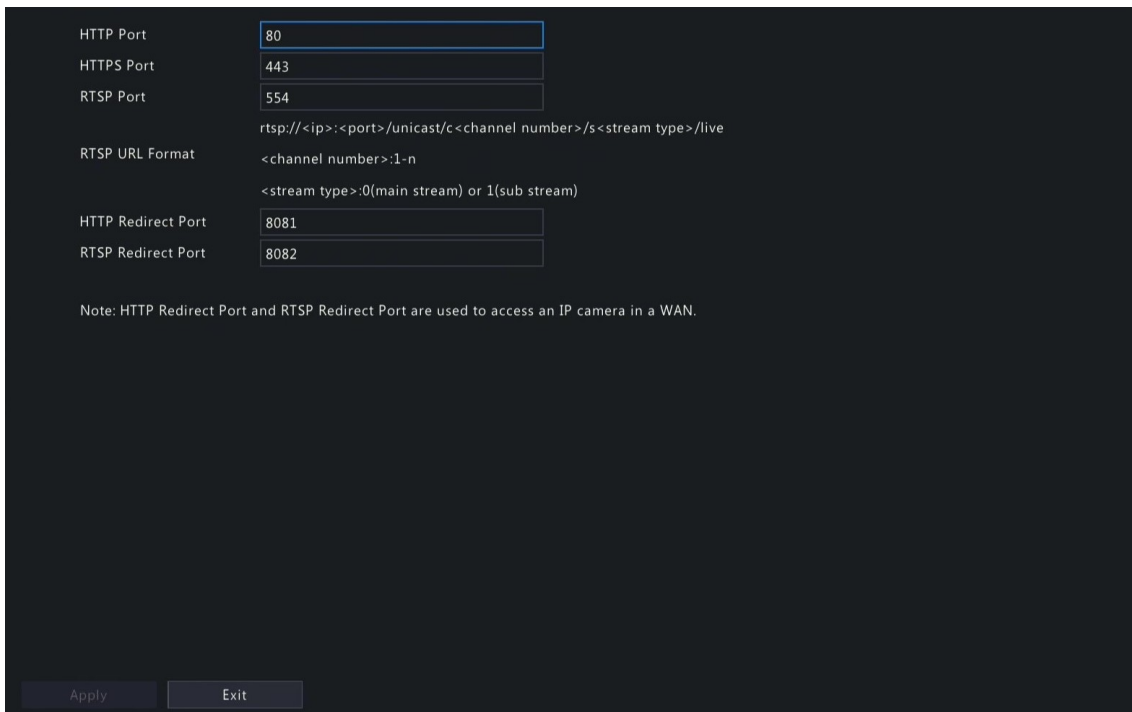
6.3 Advanced Configuration

Configure ports, port mapping, and multicast.

6.3.1 Port

Configure HTTP, HTTPS, RTSP, HTTP redirect port, and RTSP redirect port.

- Go to **Menu > Network > Advanced > Port**.



HTTP Port: 80

HTTPS Port: 443

RTSP Port: 554

RTSP URL Format: rtsp://<ip>:<port>/unicast/c<channel number>/s<stream type>/live
<channel number>: 1-n
<stream type>: 0(main stream) or 1(sub stream)

HTTP Redirect Port: 8081

RTSP Redirect Port: 8082

Note: HTTP Redirect Port and RTSP Redirect Port are used to access an IP camera in a WAN.

Apply Exit

- Configure the ports.

 **Note:**

- The port range is 1-65535, among which, ports 21, 23, 2000, 3702 and 60000 are reserved for other purposes. Duplicate ports are not allowed.
- The upper platform can access the live video of a camera using the displayed RTSP URL.

- Click **Apply**.

6.3.2 Port Mapping

Configure port mapping so client computers can access the DVR on the LAN across the Internet.

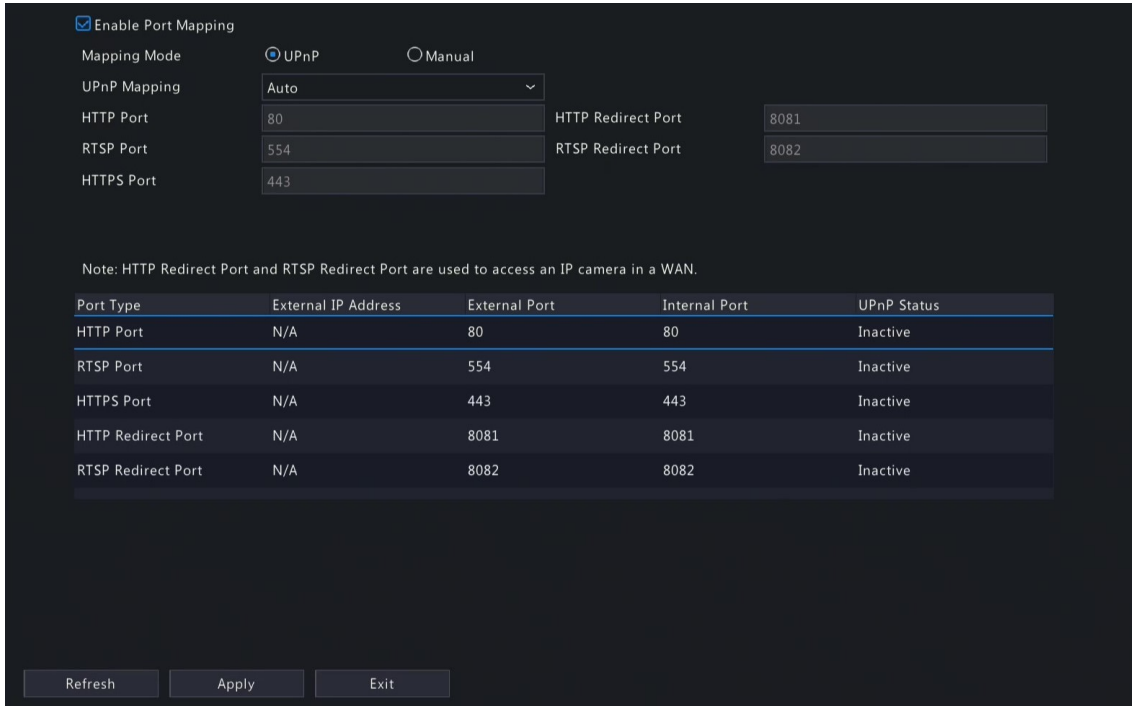
- Go to **Menu > Network > Advanced > Port Mapping**.
- Port mapping is enabled by default. You can choose a mapping mode, UPnP or manual port mapping.

UPnP

UPnP is short for Universal Plug and Play. UPnP-enabled network address translation (NAT) can perform automatic port mapping to enable client computers to access the DVR on the LAN from the Internet.

 **Note:** This function requires router support. You need to enable UPnP on the router before starting configuration on the DVR.

1. Choose the **UPnP** mapping mode.



☒ Enable Port Mapping

Mapping Mode: ☒ UPnP ☐ Manual

UPnP Mapping: Auto

HTTP Port: 80 HTTP Redirect Port: 8081

RTSP Port: 554 RTSP Redirect Port: 8082

HTTPS Port: 443

Note: HTTP Redirect Port and RTSP Redirect Port are used to access an IP camera in a WAN.

Port Type	External IP Address	External Port	Internal Port	UPnP Status
HTTP Port	N/A	80	80	Inactive
RTSP Port	N/A	554	554	Inactive
HTTPS Port	N/A	443	443	Inactive
HTTP Redirect Port	N/A	8081	8081	Inactive
RTSP Redirect Port	N/A	8082	8082	Inactive

Refresh Apply Exit

2. Choose a mode from the **UPnP Mapping** list:

- Auto: The DVR automatically assigns external port numbers, which are usually the same as the internal port numbers.
- Specify ports: User specifies ports within the range of [1-65535].

 **Note:**

- Auto is recommended. Port conflict may occur when external ports are specified manually.
- For a multi-NIC DVR, port mapping shall be performed on the NIC that is configured as the default route.

3. Click **Refresh**, and check whether **Active** is displayed in the **UPnP Status** column.
4. Click **Apply**.

Manual

If the router does not support UPnP, you have to configure internal and external ports manually.

 **Note:**

- Make sure the ports configured on the DVR are consistent with that configured on the router.
- For some routers, the DVR's external and internal ports must be the same, and they also must be the same as the ports on the router.

1. Choose the **Manual** mapping mode.

☒ Enable Port Mapping

Mapping Mode: ☐ UPnP ☒ Manual

HTTP Port	80	HTTP Redirect Port	8081
RTSP Port	554	RTSP Redirect Port	8082
HTTPS Port	443		

Note: HTTP Redirect Port and RTSP Redirect Port are used to access an IP camera in a WAN.

Refresh Apply Exit

- Set the external ports manually.
- Click **Apply**.



Note:

After port mapping is configured, you can open the Web interface using the following address: *Router's WAN IP:external HTTP port*. For example, the router's external IP address is 10.2.2.10, and the external HTTP port is 82, then enter `http://10.2.2.10:82` in the Web browser's address bar.

6.3.3 Multicast

When the number of users accessing the Web client has reached the upper limit and live video is unavailable, you can use multicast to solve this issue.

- Go to **Menu > Network > Advanced > Multicast**.

☐ Enable Multicast

Multicast IP:

Port:

Apply Exit

- Select **Enable Multicast**, enter the multicast IP address and port number.
- Click **Apply**.

- Log in to the Web interface, go to **Setup > Client**, set **Live View Protocol** to **Multicast**. Now live view is available through multicast.

Default Live Stream	Sub Stream	▼
Display Ratio	Full	▼
Video Mode	Fluency Priority	▼
Video File Size	1 GB	▼
Save File To	C:\Users\jps\OneDrive\Work\Plug	Browse Open Fold...
Live View Protocol	TCP Multicast	
Intelligent Mark	☐ On ☒ Off	

Note: Local recordings, snapshots, and downloaded recordings are saved in the Record, Snap, Download folders.

**Note:**

- IP multicast addresses are class-D addresses. 224.0.1.0 - 238.255.255.255 can be used on the Internet.
- In the range of 224.0.0.0 - 239.255.255.255, some are reserved for special uses, for example, 224.0.0.0 - 244.0.0.255 can only be used on the LAN, where packets with these addresses will not be forwarded by a router; 224.0.0.1 is used by all the hosts on the subnet; 224.0.0.2 is used by all the routers on the subnet; 224.0.0.5 is used by OSPF routers; 224.0.0.13 is used by PIMv2 routers; and 239.0.0.0 - 239.255.255.255 are private addresses (e.g., 192.168.x.x).

6.3.4 FTP

Configure FTP so the DVR can upload images to the FTP server.

**Note:**

- This feature is only available to certain DVRs.
- To use this feature, you need to deploy an FTP server first.
- After the FTP server is enabled and connected, the DVR can automatically upload images to the FTP server.

- Go to **Menu > Network > Advanced > FTP**.

2. Select **Enable FTP**.
3. Configure server parameters. Click **Test** to test the connection between the DVR and the FTP server.

Parameter	Description
IP Address	FTP server address.
Port	The default is 21. You can set a different port as needed.
Anonymous	When enabled, the DVR will connect to the FTP server as anonymous user without username/password required.
Username	Username used to access the FTP server.
Password	Password used to access the FTP server.
Remote Directory	Input the remote directory in the correct format (abc/efg/xyz), and the system will create folders level by level accordingly under the root directory, and then create different folders based on IP, time, and channel.  Note: - For example, if the remote directory is abc, then the created folder is FTP > abc > 206.2.5.8 > 2022-10-08 > D5. If the remote directory is abc/efg/xyz, then the created folder is FTP > abc efg > xyz > 206.2.5.8 > 2022-10-08 > D5. - If the remote directory is empty, the system will create folders under the root directory based on IP, time, and channel, for example, FTP > 206.2.5.8 > 2022-10-08 > D5.
Upload Interval(s)	The DVR uploads images captured within the set periods to the FTP server at the set interval. The default is 30s. You can alter the setting as needed.
Range(s)	Show the range of image upload interval: [5-600]s

4. Set an upload schedule.
 - (1) Choose a camera from the list.
 - (2) Click  behind **Upload Schedule**, configure time periods during which the camera will upload images of the desired type(s). Click **OK**.

Note:

- Two image upload periods are allowed each day, and the periods must not overlap.
- To apply the schedule to other days, select **All** or days and then click **OK**.

5. (Optional) To apply the current upload schedule to other cameras, click behind **Copy**, select cameras, and then click **OK**.

6. Click **Apply**.

7 System Configuration

This chapter describes how to configure the system parameters.

7.1 Basic Configuration

Configure the basic information of the system.

1. Go to **Menu > System > Basic Setup**.

Device Name:

Device ID:

Device Language:

Auto Logout(min):

Instant Playback(min):

Mouse Pointer Speed:

☒ Enable Password Protection

☐ Enable Startup Wizard

☐ Intelligent Mark

Wizard

2. Configure the basic parameters.

Parameter	Description
Device Name	The default name is the DVR model. You can change it as needed.
Device ID	Used to distinguish devices if you have more than one device. You can change it as needed.
Device Language	Choose the system language. The system will restart after you change the system language. Note: Not all devices can switch the language.
Auto Logout(min)	If you are not on the live view page and don't perform any operation, you will log out automatically when the set time is over, and the live view page will be displayed. Default: 5 minutes. You can change it as needed.
Instant Playback (min)	Set the instant playback time. Default: 5 minutes.
Mouse Pointer Speed	Drag the slider to adjust the speed (left to right: slow to fast).
Enable Password Protection	When the auto logout time is over, the user needs to enter the login password in order to access the main menu. This feature is enabled by default. Note: Only admin can change the setting.
Enable Startup Wizard	Startup wizard appears when the DVR starts up for the first time. If the checkbox is selected, the startup wizard appears every time the device starts up. You may click Wizard to set wizard on the Menu page.
Intelligent Mark	When enabled, smart detection rules will be displayed on the live video, or smart detection objects will be marked, and the corresponding smart data will be displayed. Smart rules are yellow detection boxes or detection lines. Detection boxes have two colors with different meaning as described below: - Green: Data have changed but didn't trigger the rules. - Red: Data in the area have triggered the rules configured for the VCA alarm and a VCA alarm has occurred. Note: Some smart functions do not support this feature.

3. Click **Apply**.

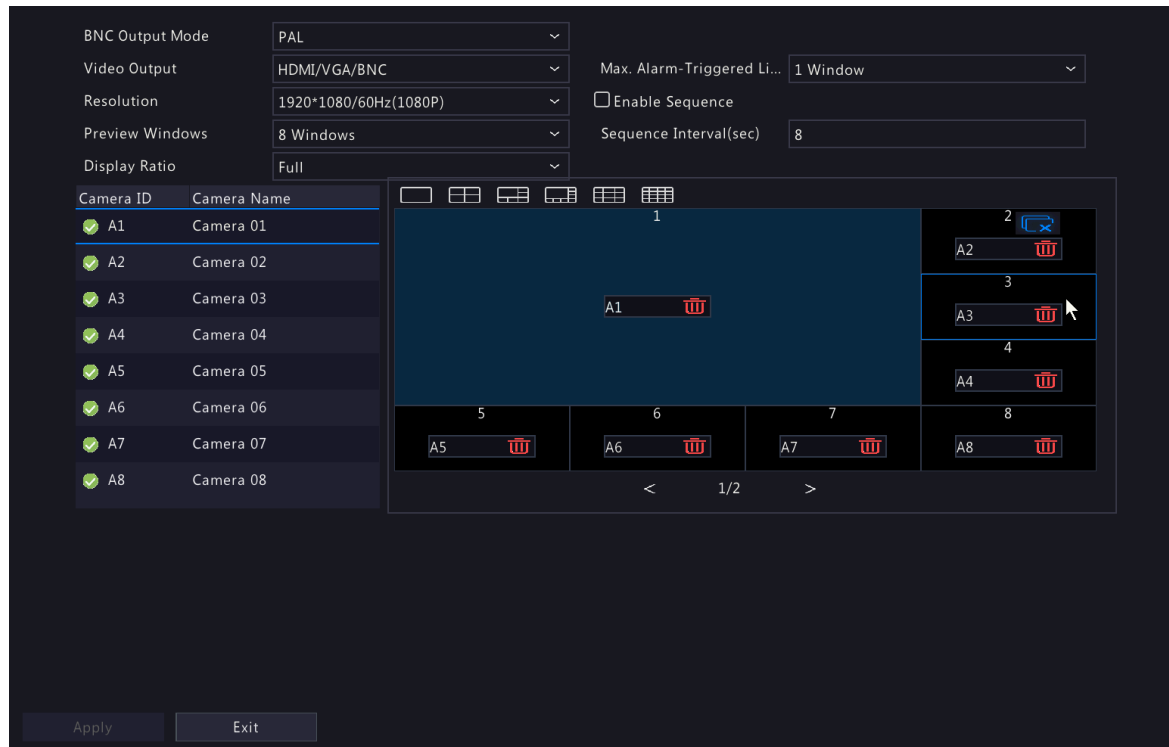
7.2 Preview Configuration

Configure the screen display and preferred stream type for preview.

7.2.1 Preview Configuration

Configure the basic preview parameters and display mode.

Go to **Menu > System > Preview**.



Basic Preview Configuration

Parameter	Description
Video Output	Outputs the system display to an external display device. Choose an output port.  Note: The DVR provides three output ports (VGA, HDMI1/HDMI2, BNC) and can output the system display to three displays simultaneously for independent operations. The actual port types available may vary with device.
Resolution	The resolution includes the display format and refresh rate. The display format refers to the number of pixels that can be displayed on the screen, for example, 1920x1080, 1280x720, 1280x1024, etc. More pixels displayed means higher image quality. The refresh rate can be 60Hz, 50Hz, 25Hz, etc. Choose an option that best fits your needs.
Preview Windows	Displays images in the desired window layout. Choose an option from the list, or click an icon to choose the layout. 
Max. Alarm-Triggered Live View Windows	Three options: 1/4/9 windows. See Preview for more information.
Enable Sequence	Select the Enable Sequence checkbox. See Sequence for more information.
Sequence Interval(sec)	Set the sequence interval time. Default: 8 seconds.
Display Ratio	- Full: Displays images according to the window size . - Original: Displays images with original size.

Screen Configuration

By default, camera IDs correspond to live view windows: D1 to window 1, D2 to window 2, and so on. You can change the correspondence relationship as follows. The example below shows how to switch D1 and D2.

 **Note:** You may also drag an image on the live view page to swap windows, and then view the changed window-channel binding relationship on this page. But this method requires the Configure permission, and it cannot switch windows that are not on the same screen.

1. Click window 1 on the right side. Window 1 is selected.

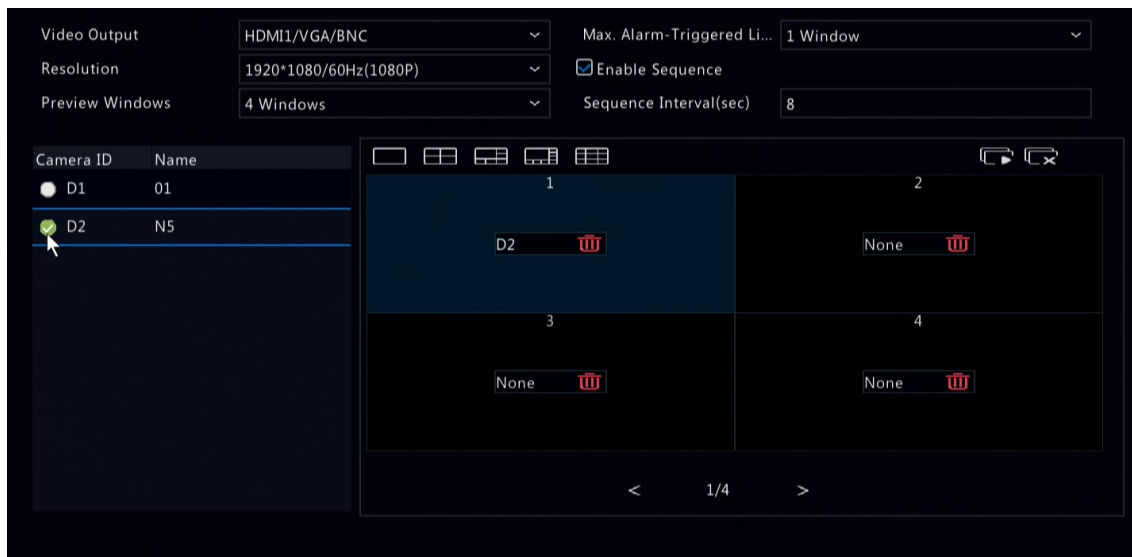


2. Click D2 on the left-side channel list. Now window 1 shows D2, and window 2 shows None.



 **Note:** On the left-side channel list,  is empty for D1, which means the channel is not bound to any window.

3. Click window 2 on the right side. Window 2 is selected.



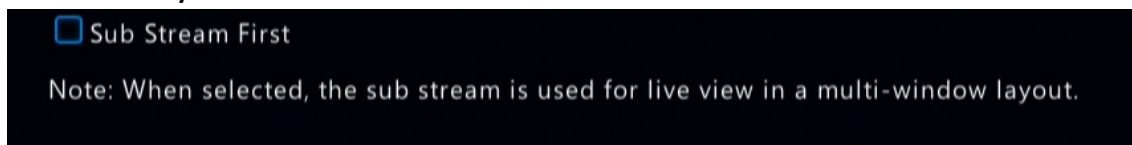
- Click D1 on the left-side channel list. Now window 2 shows D1, which means D1 and D2 have switched windows with each other.



- Click **Apply**.

7.2.2 Advanced Configuration

- Go to **Menu > System > Preview > Advanced**.



- Select **Sub Stream First**.
- Click **Apply**.

7.3 Time Configuration

Configure the time display mode, time synchronization mode, and holidays.

7.3.1 Time Configuration

Configure the time format and update method.

Configure Time Format

- Go to **Menu > System > Time > Time**.

Time Zone	(UTC+08:00) Beijing, Hong Kong, Urumqi ▾
Date Format	YYYY-MM-DD ▾
Time Format	24-hour ▾
System Time	2022-10-10 18:13:13 ▾
☐ Auto Update	
NTP Server Address	
NTP Port	123
Update Interval	10m ▾

2. Choose the time zone, date, and time format.
3. Set the system time.

Enable Auto Update

When enabled, the system syncs time with the NTP server.

1. Select **Auto Update**.
2. Enter the NTP server address and port number.
3. Choose an update interval.

7.3.2 DST

Configure DST.

1. Go to **Menu > System > Time > DST**.

☒ DST	
Start Time	Mar ▾ 2nd ▾ Sun ▾ 2 ▾
End Time	Nov ▾ 1st ▾ Sun ▾ 2 ▾
DST Bias	60 mins ▾

2. Select DST.
3. Configure the parameters.
4. Click **Apply**.

7.3.3 Camera Time Synchronization

When **Sync Camera Time** is enabled, the DVR syncs time to the connected cameras regularly.

This feature is enabled by default.

Note:

- Time sync occurs when a camera goes online for the first time.
- If **Sync Camera Time** is enabled, time sync occurs every 30 minutes.

1. Go to **Menu > System > Time > Time Sync**.

☒ Sync Camera Time

2. Enable/disable this feature as needed.
3. Click **Apply**.

7.3.4 Holiday Configuration

Configure special time periods as holidays for use in recording schedules.

1. Go to **Menu > System > Time > Holiday**.

The screenshot shows a table with columns: No., Status, Holiday Name, Start Time, End Time, Repeat, Configure, and Delete. The table is currently empty. Below the table is an 'Add' button. At the bottom of the interface are three buttons: 'Enable', 'Disable', and 'Exit'.

2. Click **Add** in the lower-right corner.

The screenshot shows the 'Holiday' configuration dialog box. It contains the following fields and options:

- Holiday Name: A text input field.
- Status: ☒ Enable, ☐ Disable
- Repeat: ☒ No, ☐ Yes
- Mode: ☒ By Day, ☐ By Week
- Start Time: A date and time picker showing 2022, 08, 06.
- End Time: A date and time picker showing 2022, 08, 06.

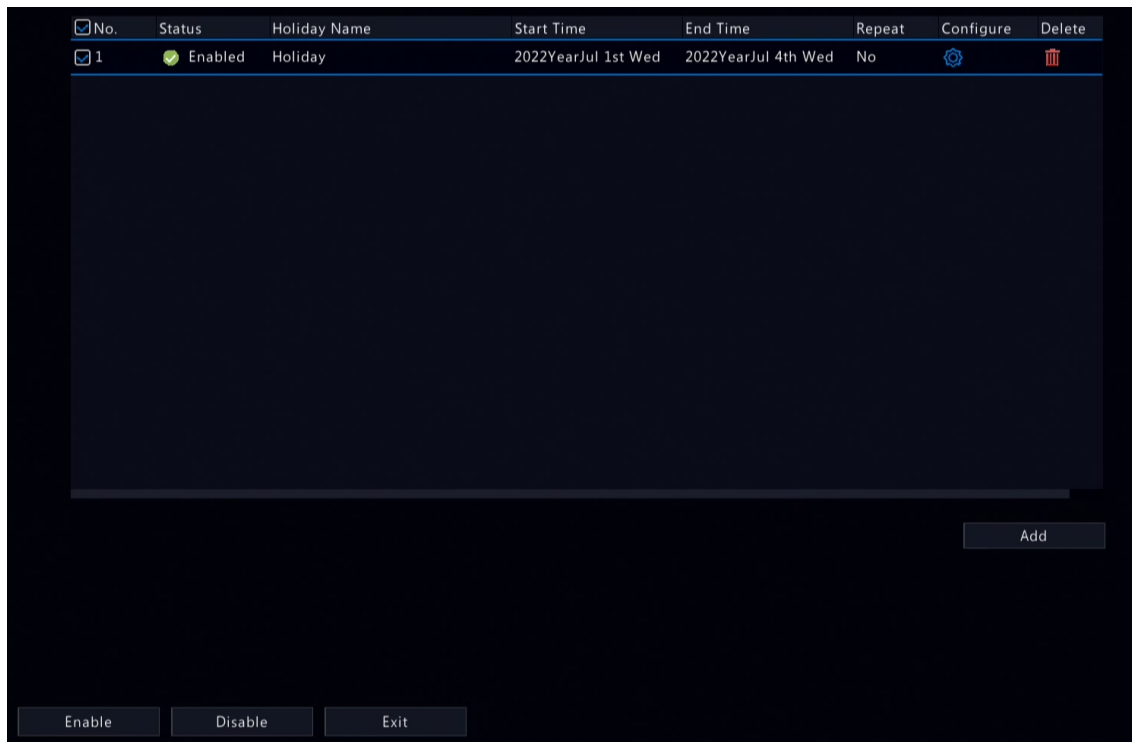
At the bottom of the dialog are three buttons: 'Apply', 'OK', and 'Cancel'.

3. Configure the parameters.

Parameter	Description
Holiday Name	Set a meaningful and easy-to-remember holiday name.
Status	The new holiday is enabled by default. If you want to disable it, select Disable .

Parameter	Description
Repeat	- No: The holiday is effective once only in the specified year. Specify a year for the holiday. - Yes: The holiday is effective every year.
Mode	- By Day: Set the holiday in the specified format: year/month/day. - By Week: Set the holiday in the specified format: year/month/week/day of the week.
Start Time/End Time	Set according to the specified format.

- Click **Apply**.
- Click **OK**.



- Click  to edit the current holiday.
- Click  to delete a holiday. Deleting a holiday will not delete the relevant recordings.
- Click **Disable** to disable the holiday.

7.4 Serial Port Configuration

Configure serial port parameters to connect a keyboard. The serial port settings configured on the DVR must match the serial port settings on the keyboard.

- Go to **Menu > System > Serial**.

Model 1:

Serial No.	1
Type	RS485
Baud Rate	9600
Data Bit	8
Stop Bit	1
Check Bit	None
Port Usage	Keyboard

Model 2:

No.	3
Serial Type	RS232
Baud Rate	9600
Data Bit	8
Stop Bit	1
Check Bit	None
Port Usage	Control PTZ

2. Configure the parameters.

Parameter	Description
No.	- Model 1: Choose the serial port ID. The number of serial ports available may vary with device. - Model 2: The serial port ID is automatically filled in after you choose the serial type. The different serial types correspond to different IDs.
Serial Type	- Model 1: Currently only RS485 is available. - Model 2: Choose RS485, RS232, or RS422. To use two or three serial types, configure the first serial type and click Save, and then choose the other serial type and follow the previous operations to proceed.
Baud Rate	Data transmission speed (unit: bits per second). The greater the value, the faster the transmission speed, and the shorter the transmission distance. Usually the default value is used.
Data Bit	The actual number of data bits in a data packet. Usually the default value is used.
Stop Bit	Indicates the end of a unit of transmission. Usually the default value is used.

Parameter	Description
Check Bit	Used to check whether the received data bits are erroneous. Choose Odd, Even, or None (default) as needed.
Port Usage	Keyboard or Control PTZ.

- Click **Apply**.

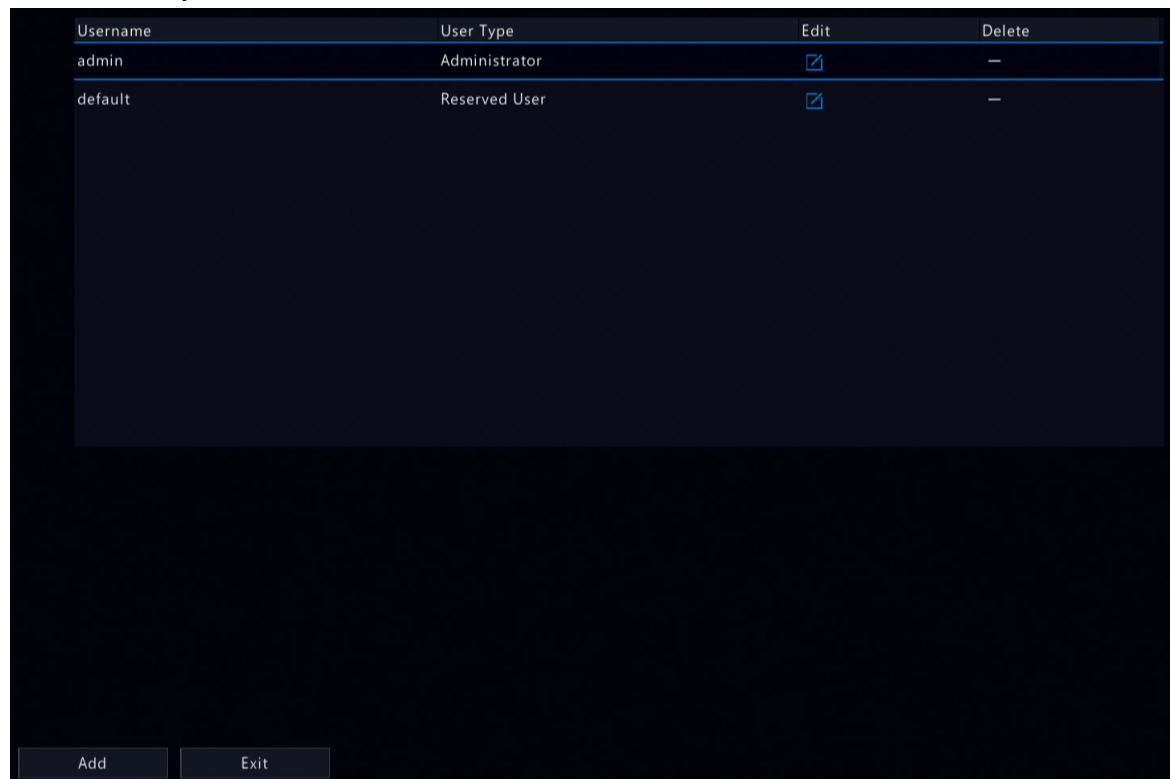
7.5 User Configuration

Users are entities that manage and operate the system. A user type is a set of operation permissions. After a user type is assigned to a user, the user has all the permissions defined in the type.

The system supports four user types:

User Type	Description
admin	The default super administrator, which has the maximum permissions. The initial password is 123456 .  Note: Only admin can add or delete users and edit other users' permissions.
default	The default reserved user, which cannot be added or deleted, only has live view and two-way audio permissions by default, and can be configured by admin only.  Note: If the default user is forbidden to use live view and two-way audio on a camera, the camera will be locked when no user is logged in, and  is displayed in the corresponding window.
Operator	By default, an operator has basic permissions and camera permissions.
Guest	By default, a guest only has camera permissions.

Go to **Menu > System > User**.



Add User

- Click **Add**.

Modify/Add User

Username

User Type Operator 

Password Weak

Confirm

Pattern ☐ Enable Unlock Pattern 

Note: If NVR is added to managing platform, you also need to edit the password on the platform.

Basic Permissions

☒ Configure ☒ Upgrade ☒ View and Export L... ☒ Restart

Smart Permissions

☒ Preview

Camera Permissions

Select Permission	
Live View	☒ Select Camera
Control PTZ	☒ D1
Playback	☒ D2
Manual Recording on NVR	☒ D3
	☒ D4

- Configure the parameters. Enter the username, password, choose a user type, enable/disable unlock pattern, and choose permissions.

Item	Description
Username	Set a username as you need. Cannot be empty or include Chinese characters.
Password/Confirm	Set a strong password.
Pattern	To enable the unlock pattern, select the checkbox. Click  , and then follow on-screen instructions to set a pattern.
Basic Permissions/Smart Permissions	Select the permissions you want to assign to the user.

- Click **OK**.

Delete User

- On the **User** page, select the user you want to delete.
- Click . A confirmation message appears.
- Click **Yes**.

Edit User

- On the **User** page, select the user you want to edit.
- Click , enter the password.

Change Password

Username

admin

Change Password

☐

Password

Weak

Confirm

Sync to Camera

☐ Change Online Private Protocol Camera Pass...

Pattern

☒ Enable Unlock Pattern



☒ Email

Note: If NVR is added to managing platform, you also need to edit the password on the platform.

OK

Back

3. Edit the user type, password, or permissions.
4. Click **OK**.

7.6 Security Configuration

Security configuration includes IP address filtering, Onvif authentication, ARP protection, and watermark.

7.6.1 IP Address Filtering

IP address filtering can ensure only certain source IP addresses can be used to access the DVR's web interface.

1. Go to **Menu > System > Security > IP Address Filtering**.

☐ Enable IP Address Filtering

Control Type

Blocklist

Start IP

- - -

End IP

- - -

Add

No.	Start IP	End IP	Edit	Delete
-----	----------	--------	------	--------

2. Select **Enable IP Address Filtering**.
3. Configure the parameters.

Parameter	Description
Control Type	- Blocklist: Access is forbidden if the IP is on the blocklist. - Allowlist: Access is allowed only when the IP is on the allowlist. If Allowlist is selected but is empty, remote access will be forbidden.
Start IP/End IP	Enter the start and end IP addresses. If you want to add only one IP address, enter it in the Start IP field.

4. Click **Add**.

7.6.2 ONVIF Authentication

When Onvif authentication is enabled, a username and password will be required to access the DVR via Onvif.

This feature is enabled by default. Go to **Menu > System > Security > ONVIF Auth.**

☒ **Enable Authentication**

Note: If enabled, a username and password will be required for access by ONVIF.

7.6.3 ARP Protection

The Address Resolution Protocol (ARP) dynamically maps an IP address to a MAC address. In a local area network, ARP is necessary for devices to communicate with each other through MAC addresses. ARP attacks exploit ARP vulnerabilities to forge IP addresses and MAC addresses. ARP protection can bind the gateway's IP address and a MAC address to prevent ARP spoofing.

 **Note:** For multi-NIC devices, this feature will be disabled automatically if you change the NIC's working mode. For information about changing the working mode, see [Network Configuration](#).

1. Go to **Menu > System > Security > ARP Protection.**
2. Choose the NIC. Skip this step if the device only has one NIC.
3. Select **Enable ARP Protection.**
4. Configure the parameters.

Parameter	Description
Gateway	Gateway you have configured in Menu > Network > Basic > Network.
Gateway MAC Address	Custom: Enter the gateway's physical address in the network switch.
	Auto: Automatically obtains the gateway's physical address in the network switch.

5. Click **Apply.**

7.6.4 Watermark

Use the watermark function to encrypt custom information into video contents to prevent video tampering.

1. Go to **Menu > System > Security > Watermark.**
2. Choose the channel, and select **Enable Watermark.**
3. Enter the watermark contents.
4. Click **Apply.**

8 Backup

This chapter introduces recording backup and image backup.

8.1 Recording Backup

Recording backup refers to backing up videos stored on the DVR's hard disk to a USB storage device. It has the following conditions:

- The USB storage device has been formatted to FAT32 or NTFS.
- Backup permission is required.
- The recording to back up is stored on a hard disk of the DVR.
- The storage device is connected correctly to the DVR.

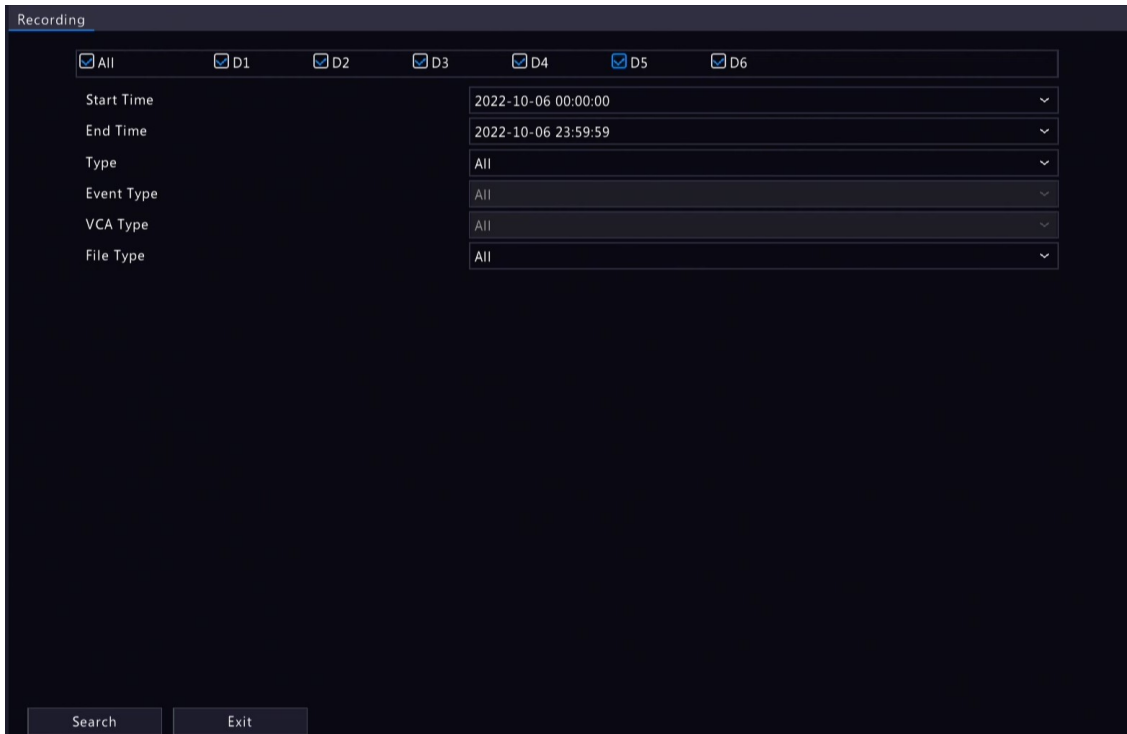
**Note:**

- Recordings are backed up as .mp4 files by default.
- You can back up recordings in HD or SD mode.

Normal Video Backup

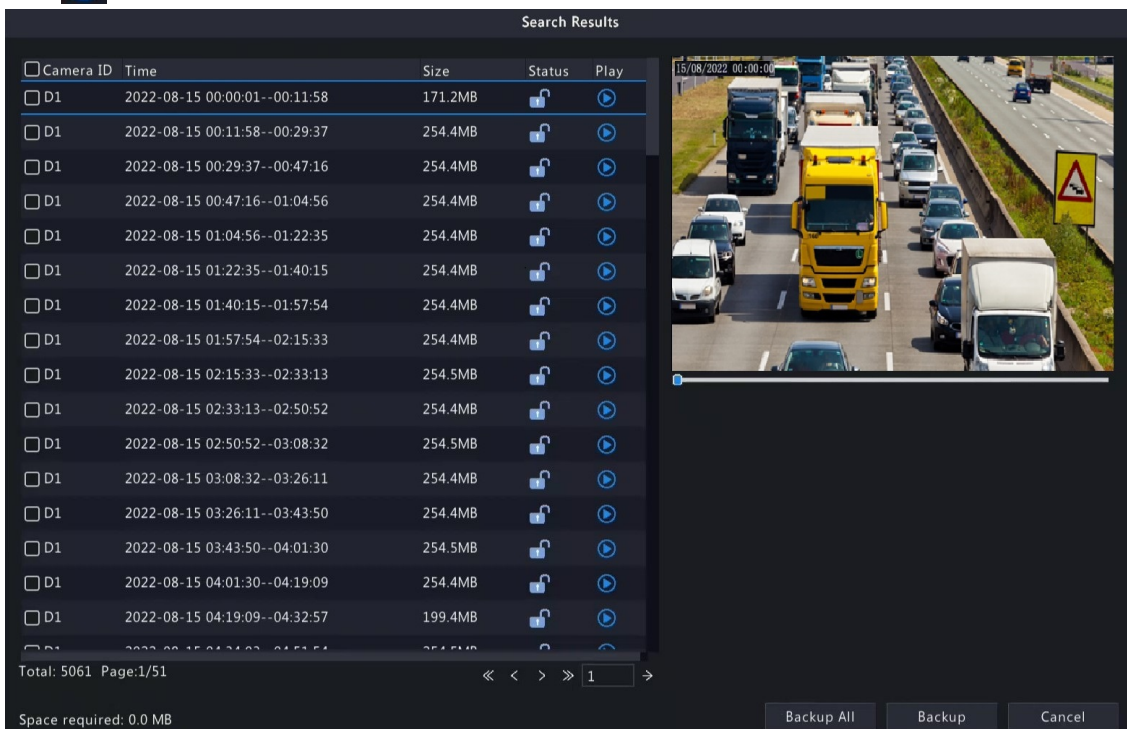
Refers to backing up scheduled recording, manual recording, and event-triggered recording.

1. Go to **Menu > Backup > Recording > Recording**.
2. Select the desired camera(s). All cameras are selected by default.



The 'Recording' window shows configuration options for video backup. It includes checkboxes for 'All', 'D1', 'D2', 'D3', 'D4', 'D5', and 'D6', all of which are checked. Below these are dropdown menus for 'Start Time' (2022-10-06 00:00:00), 'End Time' (2022-10-06 23:59:59), 'Type' (All), 'Event Type' (All), 'VCA Type' (All), and 'File Type' (All). At the bottom are 'Search' and 'Exit' buttons.

3. Set search conditions, including the start time, end time, recording type, event type, VCA type, and file type.
4. Click **Search**. Search results are displayed. The image from the first search result is displayed on the right side. Click  to play the video.



The 'Search Results' window displays a table of search results and a video player on the right. The table has columns for Camera ID, Time, Size, Status, and Play. The video player shows a traffic scene with a yellow truck and a white van.

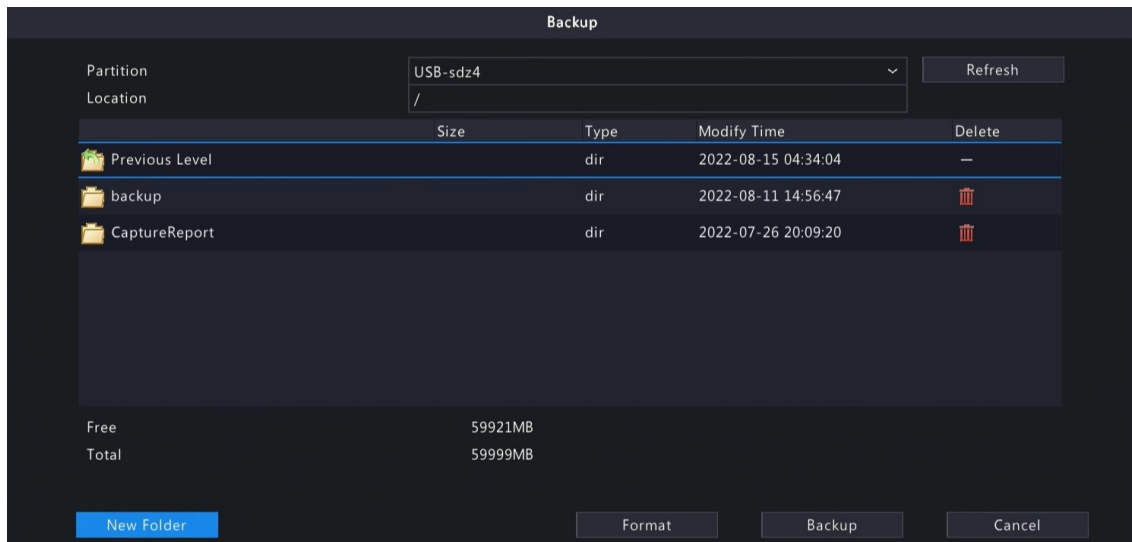
Camera ID	Time	Size	Status	Play
D1	2022-08-15 00:00:01--00:11:58	171.2MB	🔒	▶
D1	2022-08-15 00:11:58--00:29:37	254.4MB	🔒	▶
D1	2022-08-15 00:29:37--00:47:16	254.4MB	🔒	▶
D1	2022-08-15 00:47:16--01:04:56	254.4MB	🔒	▶
D1	2022-08-15 01:04:56--01:22:35	254.4MB	🔒	▶
D1	2022-08-15 01:22:35--01:40:15	254.4MB	🔒	▶
D1	2022-08-15 01:40:15--01:57:54	254.4MB	🔒	▶
D1	2022-08-15 01:57:54--02:15:33	254.4MB	🔒	▶
D1	2022-08-15 02:15:33--02:33:13	254.5MB	🔒	▶
D1	2022-08-15 02:33:13--02:50:52	254.4MB	🔒	▶
D1	2022-08-15 02:50:52--03:08:32	254.5MB	🔒	▶
D1	2022-08-15 03:08:32--03:26:11	254.4MB	🔒	▶
D1	2022-08-15 03:26:11--03:43:50	254.4MB	🔒	▶
D1	2022-08-15 03:43:50--04:01:30	254.5MB	🔒	▶
D1	2022-08-15 04:01:30--04:19:09	254.4MB	🔒	▶
D1	2022-08-15 04:19:09--04:32:57	199.4MB	🔒	▶

Total: 5061 Page: 1/51

Space required: 0.0 MB

Buttons: Backup All, Backup, Cancel

- Choose a way to back up recording(s) as needed.
 - Select the recording(s) you want to back up, and then click **Backup**.
 - Or click **Backup All** to back up all the recordings in the list.



- Select the partition and storage path, and then click **Backup**. You can also create a new folder for the recording(s) by clicking **New Folder**.



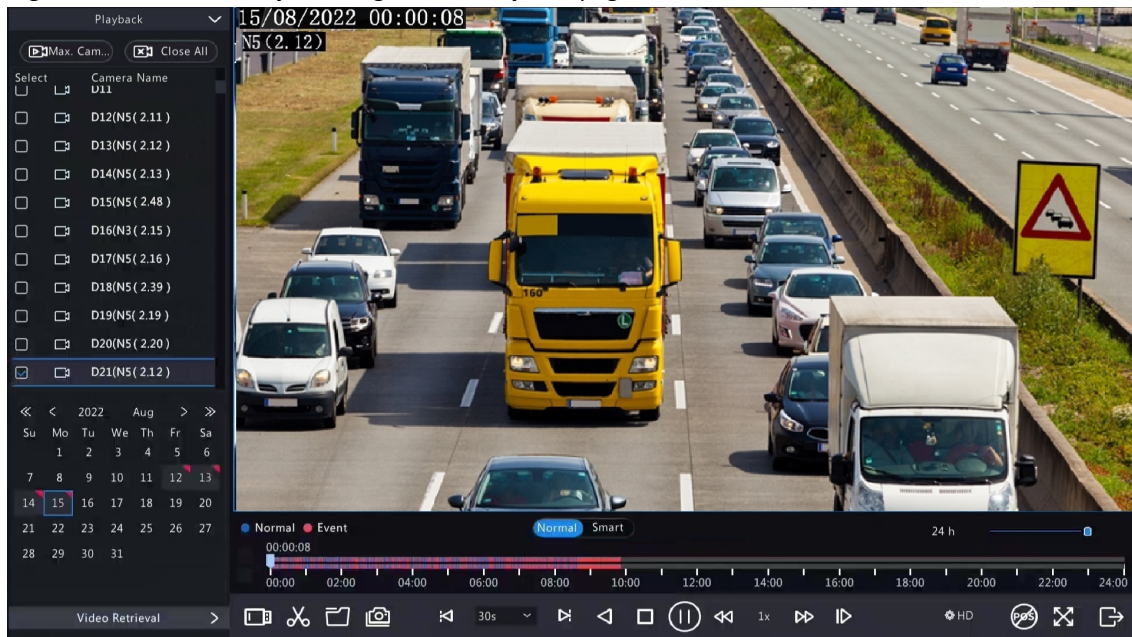
Note:

- Click **Format** to format the USB device. A USB device with more than 2TB capacity can only be formatted to NTFS, with 2TB or less capacity can be formatted to NTFS or FAT32. Only certain DVRs can format a USB device with more than 2TB capacity.
- During backup, a progress bar is displayed to indicate the progress (e.g., Exporting X/Y) , where X indicates the current number being backed up, and Y indicates the total number of recordings. To stop the backup, click **Cancel**.
- A backup file is named in this format: Camera ID_S recording start time_E recording end time.file extension. For example, D1-S20220823000400_E20220823003148.mp4, where S means the start time, and E means the end time.

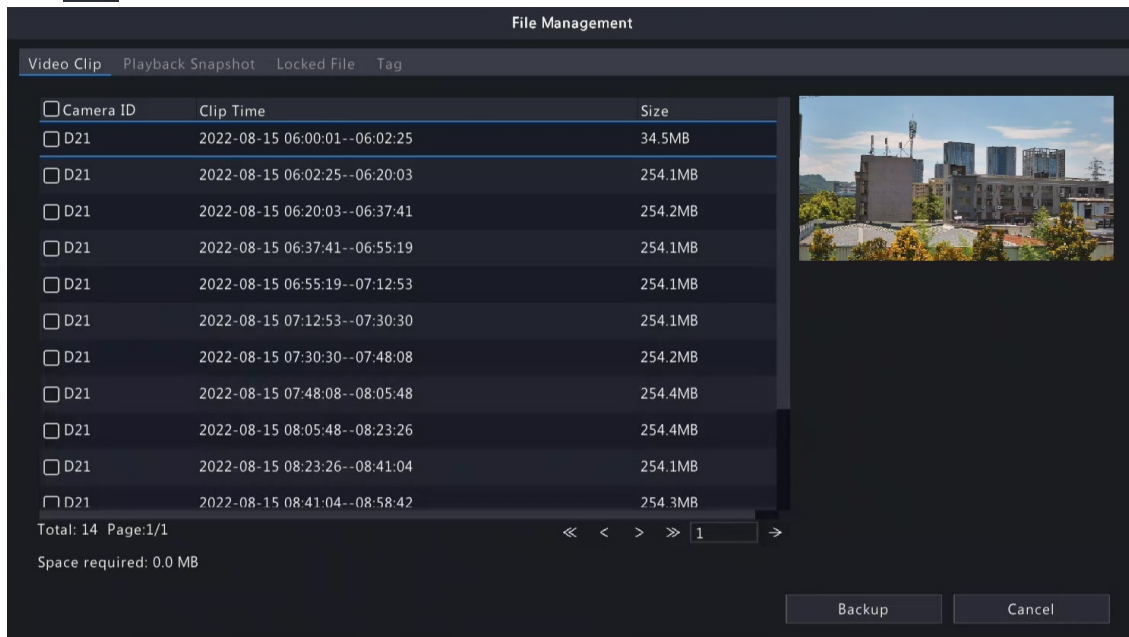
Video Clip Backup

Refers to clipping a recording and saving it to a USB storage device.

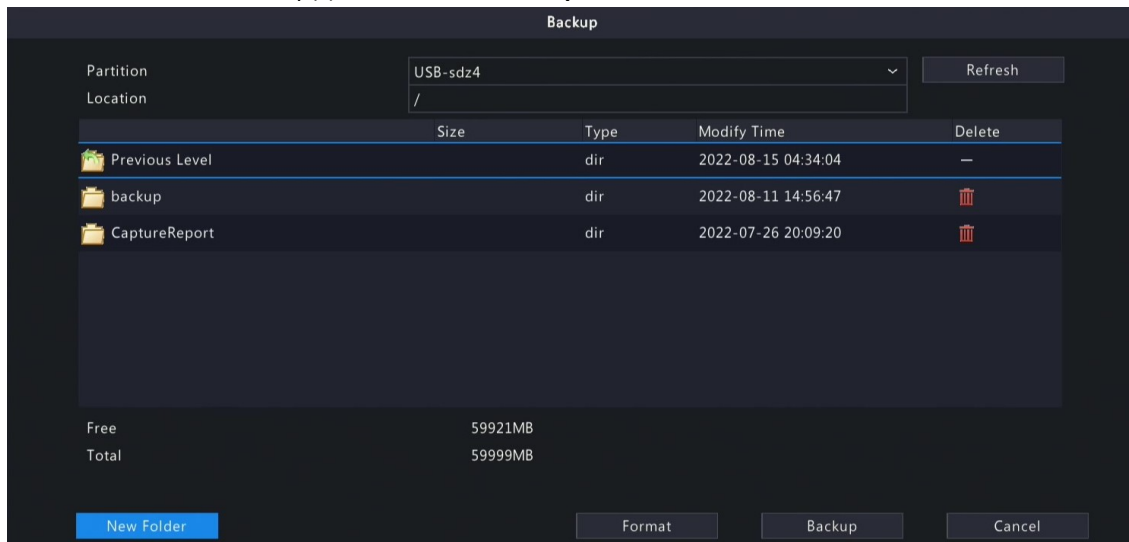
- Right-click and select **Playback** to go to the **Playback** page.



- Click  to select HD or SD on the playback toolbar. The default is HD.
- Select the desired camera to play the recorded video. Click  to clip the video during playback. Click  to save the video clip.
- Click  to view the video clip in the **Video Clip** tab.



- Select the desired video clip(s) and then click **Backup**.



- Select the partition and storage path, click **Backup**. Then the recordings are saved to the specified path on the storage device. You can also create a new folder for the recording(s) by clicking **New Folder**.

8.2 Image Backup

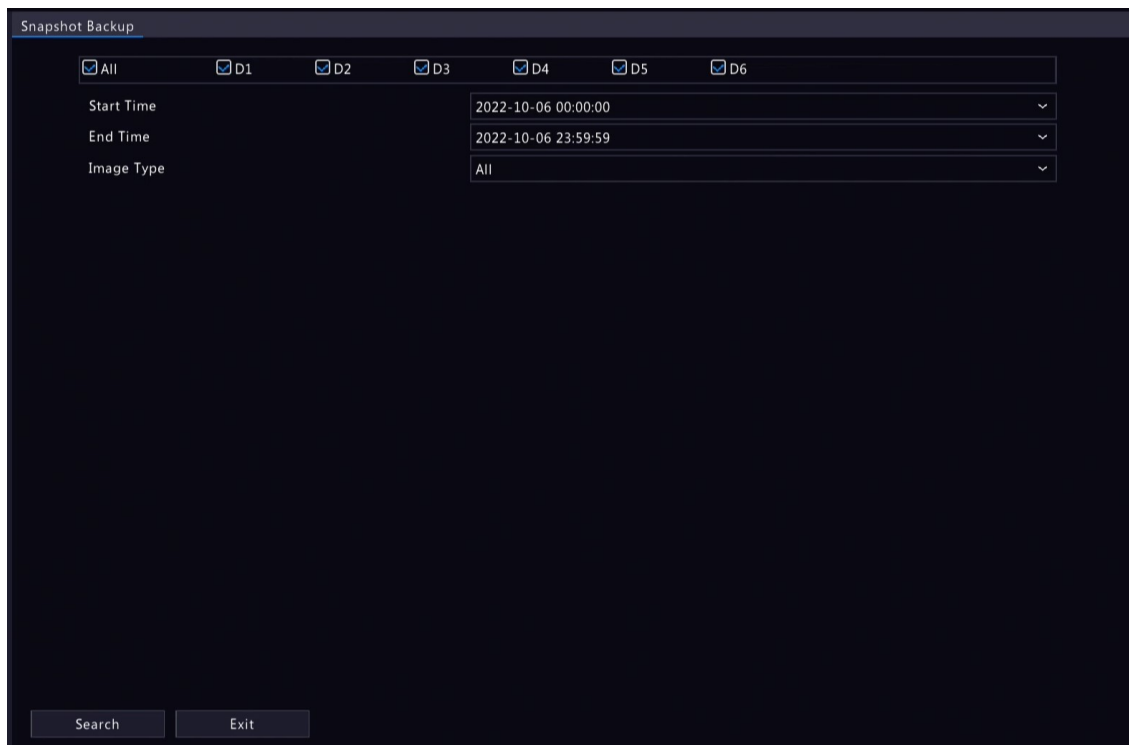
Image backup refers to backing up images stored on the DVR's hard disk to a USB storage device.

 **Note:** The default format of image backup is *.JPG.

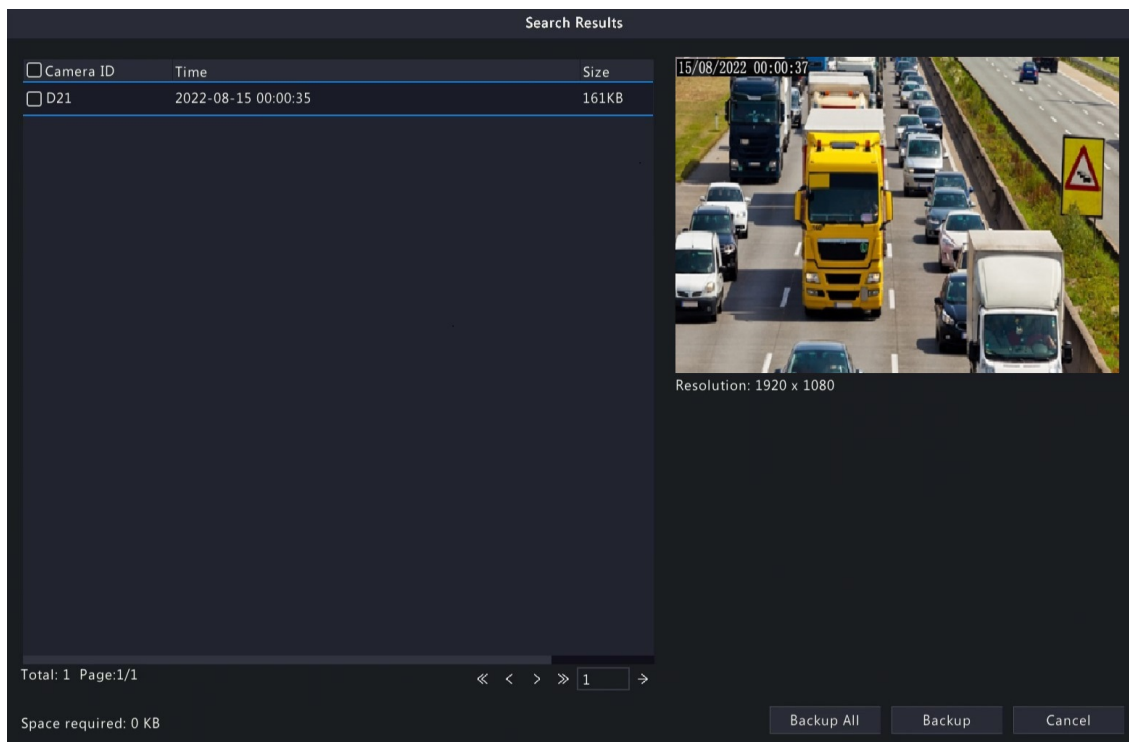
Normal Snapshot Backup

Refers to backing up scheduled snapshot, manual snapshot, and event-triggered snapshot.

- Go to **Menu > Backup > Image > Snapshot Backup**.



2. Select the desired camera(s). All cameras are selected by default.
3. Set search conditions, including the image type, start time, and end time.
4. Click **Search**. Search results are displayed. The image displayed on the right is from the first result in the list by default.



 **Note:** The image resolution depends on the resolution from the output interface and the number of windows displayed when the snapshot is taken.

5. Choose one way to back up image(s) as needed.
 - To back up one or more images, select the desired image(s), and then click **Backup**.
 - To back up all the images in the list, click **Backup All**.
6. Select the partition and storage path, click **Backup**. Then the images are backed up to the specified path on the storage device. You can also create a new folder for the image(s) by clicking **New Folder**.

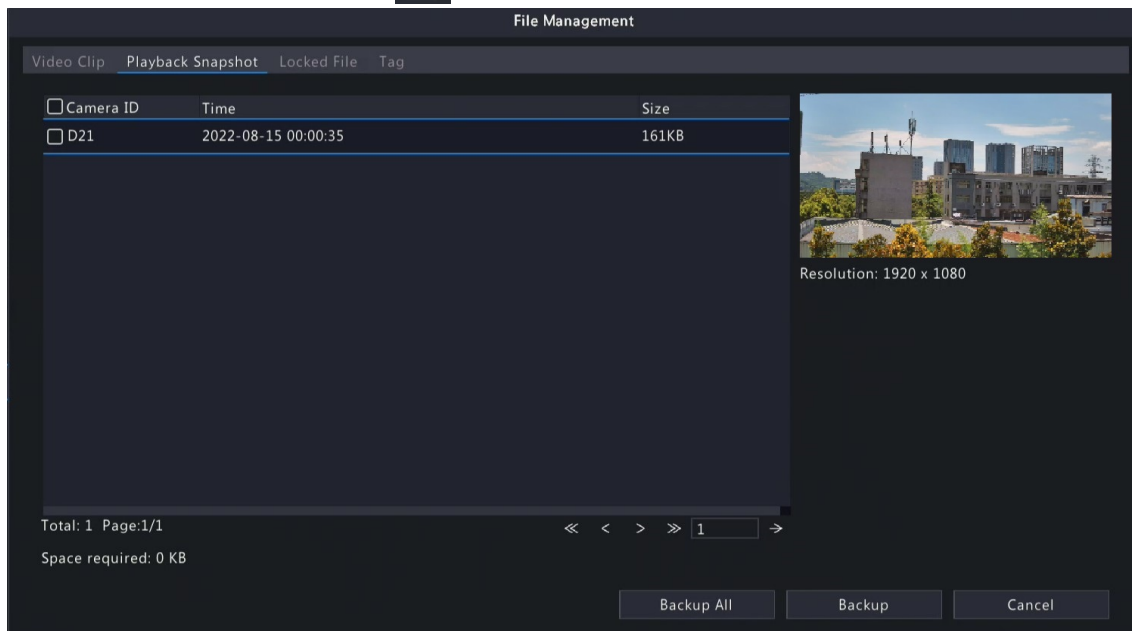
Playback Snapshot Backup

Refers to backing up snapshots that are taken during playback to a USB storage device.

1. Go to the **Playback** page.



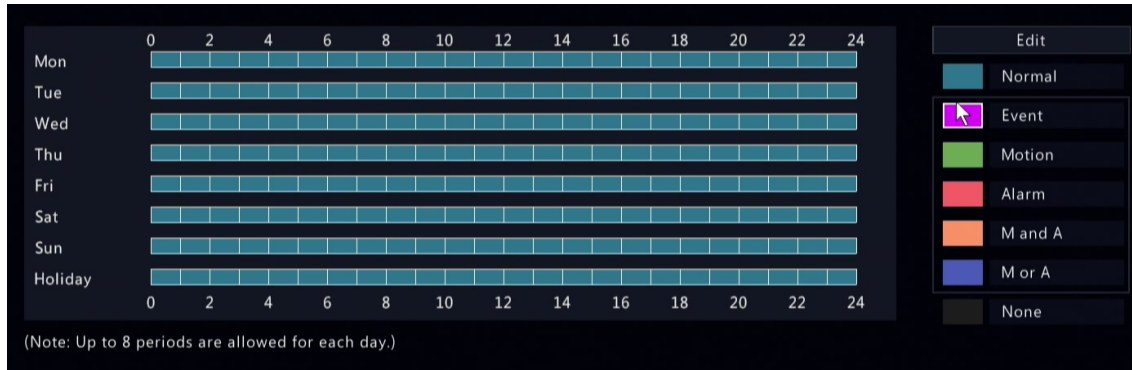
2. Click  to select HD or SD on the playback toolbar. The default is HD.
3. Select the desired camera to play the recorded video. Click  to take a snapshot during the playback.
4. To view the saved snapshot(s), click .



5. Select the desired snapshot(s) and then click **Backup**.

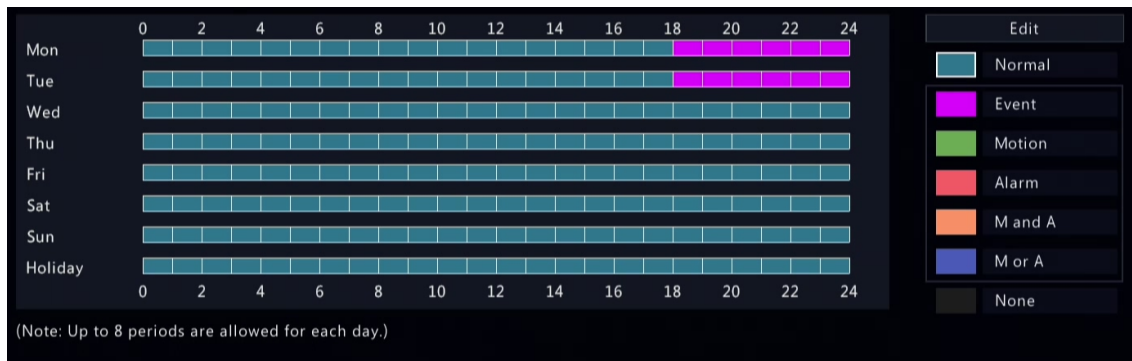
Draw a Schedule

1. Select a recording type.



Recording Type	Description
Normal	Records video during specified time periods.
Event	Records video in the event of an event-triggered alarm.
Motion	Records video in the event of motion.
Alarm	Records video in the event of alarm input. Configure Alarm Input first before making an alarm schedule.
M and A	Records video when motion and alarm input occur simultaneously.
M or A	Records video when motion or alarm input occurs.
None	No recording schedule.

2. Drag on the time schedule to specify time periods for the recording type. The figure below shows a recording schedule with event recording from 18:00 to 24:00 on Monday and Tuesday, and normal recording during the rest of the time.



3. Click **Apply**.

Edit a Schedule

1. Click **Edit**.

Edit

Select Day Monday ▾

All Day		Type	Type
☐		Normal	Normal ▾
00 ▾ 00 ▾	18 ▾ 00 ▾	Type	Normal ▾
18 ▾ 00 ▾	24 ▾ 00 ▾	Type	Event ▾
00 ▾ 00 ▾	00 ▾ 00 ▾	Type	Normal ▾
00 ▾ 00 ▾	00 ▾ 00 ▾	Type	Normal ▾
00 ▾ 00 ▾	00 ▾ 00 ▾	Type	Normal ▾
00 ▾ 00 ▾	00 ▾ 00 ▾	Type	Normal ▾
00 ▾ 00 ▾	00 ▾ 00 ▾	Type	Normal ▾
00 ▾ 00 ▾	00 ▾ 00 ▾	Type	Normal ▾

Copy To ☐ All ☒ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun ☐ Holiday

OK Cancel

2. Select a day.

Monday ▾

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

Holiday

 **Note:** Before you select **Holiday**, go to **System > Time > Holiday** and complete the holiday settings.

3. Clear the **All Day** check box. As a 24/7 normal recording schedule is enabled by default, you cannot modify the schedule unless **All Day** is unchecked.
4. Set time periods and the corresponding recording types.

Edit

Select Day: Monday

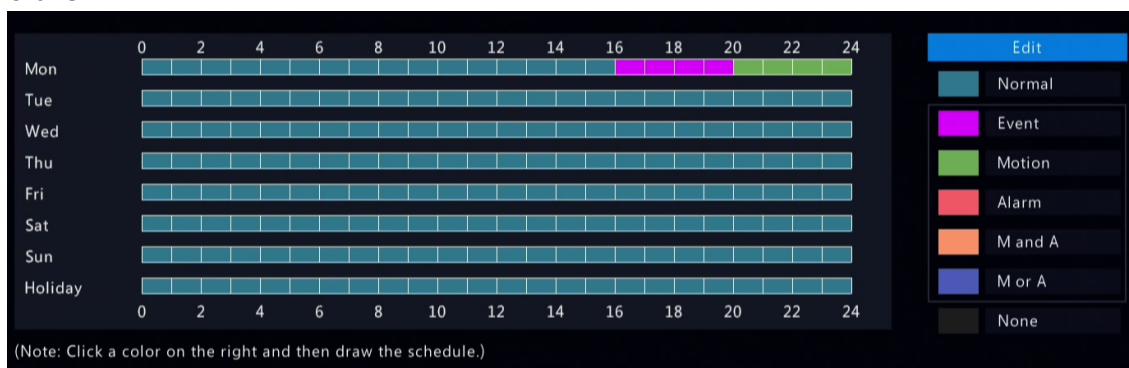
All Day: ☐

Time	Type
00 00 18 00	Normal
18 00 24 00	Event
00 00 00 00	Normal
00 00 00 00	Normal
00 00 00 00	Normal
00 00 00 00	Normal
00 00 00 00	Normal
00 00 00 00	Normal

Copy To: ☐ All ☒ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun ☐ Holiday

OK Cancel

- To apply the same settings to other days, select the desired day(s) after **Copy To**.
- Click **OK**.



- Click **Apply**.

Other Settings

Item	Description
Pre-Record	The duration of video to be recorded before an alarm. The default value is 10s.
Post-Record	The duration of video to be recorded after an alarm. The default value is 60s.
Audio Storage	Set whether to record audio. Audio is not recorded by default.

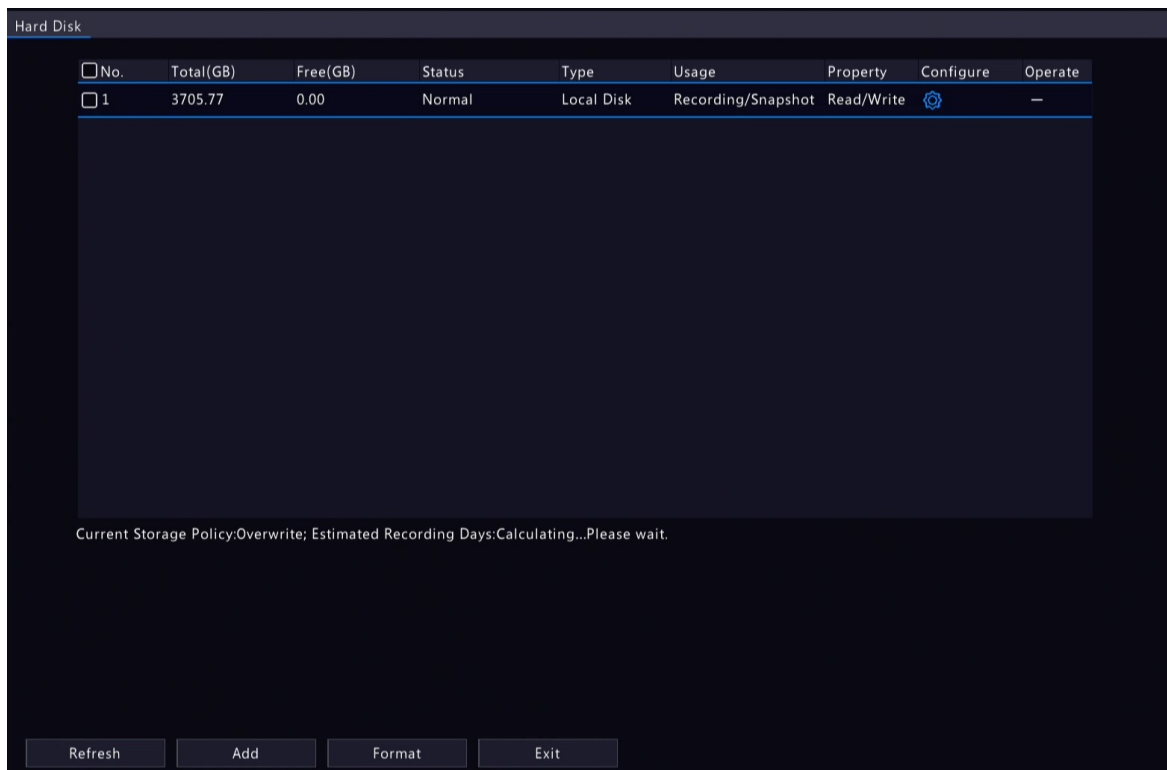
9.2 Disk Management

Configure disk usage and property, add external disks, and format disks.

Note:

- Before you start, make sure all disks are installed properly.
- Only admin can format disks and configure the disk property.

Go to **Menu > Storage > Hard Disk**.



Configure the Disk Usage and Property

1. Click  for the disk to edit.

2. Select the usage and property. You can only configure the usage of NAS and eSATA.

Usage	Description
Recording/Snapshot	Used to automatically store recordings or snapshots.

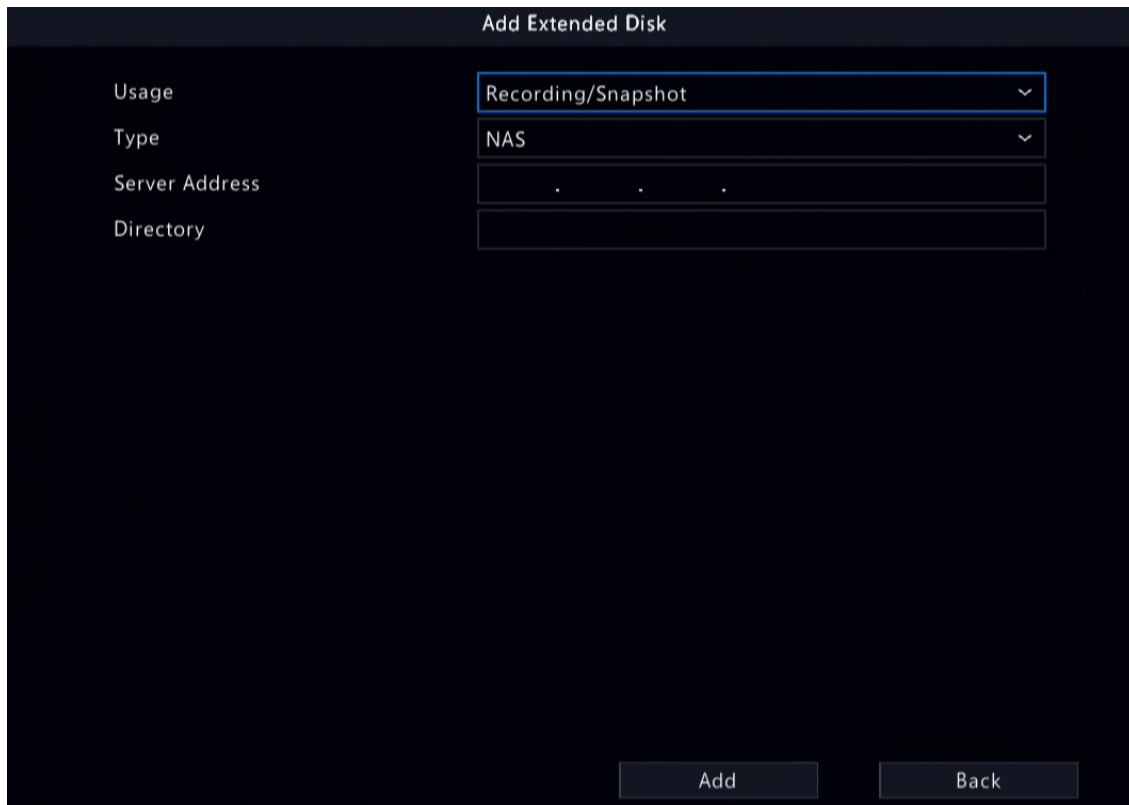
Property	Description
Read/Write	The disk supports recording/snapshot storage, recording playback and snapshot retrieval.
Read Only	The disk only supports recording playback and snapshot retrieval, and does not support recording/snapshot storage.

3. Click **OK**.

Add an External Disk

You can add external disks to the device, including NAS, eSATA, and disk enclosure. eSATA disks and disk enclosures are automatically added when connected to the device. The following describes how to add a NAS.

1. Click **Add**.



The screenshot shows a dark-themed window titled "Add Extended Disk". It contains four input fields on the left and their corresponding values on the right. The "Usage" field is set to "Recording/Snapshot" with a dropdown arrow. The "Type" field is set to "NAS" with a dropdown arrow. The "Server Address" field contains three dots, indicating a placeholder for an IP address. The "Directory" field is empty. At the bottom right, there are two buttons: "Add" and "Back".

Field	Value
Usage	Recording/Snapshot
Type	NAS
Server Address	.
Directory	

2. Enter the NAS server address and directory.
3. Click **Add**.

Format a Disk

Formatting a disk will erase all data stored on it. Please handle with caution.

1. Select the disk you want to format.
2. Click **Format**.
3. A confirmation message appears.
 - Local disk: Click **Yes**.
 - External disk: Select the files you want to format.

Other Operations

Click   to unmount/mount an eSATA disk.

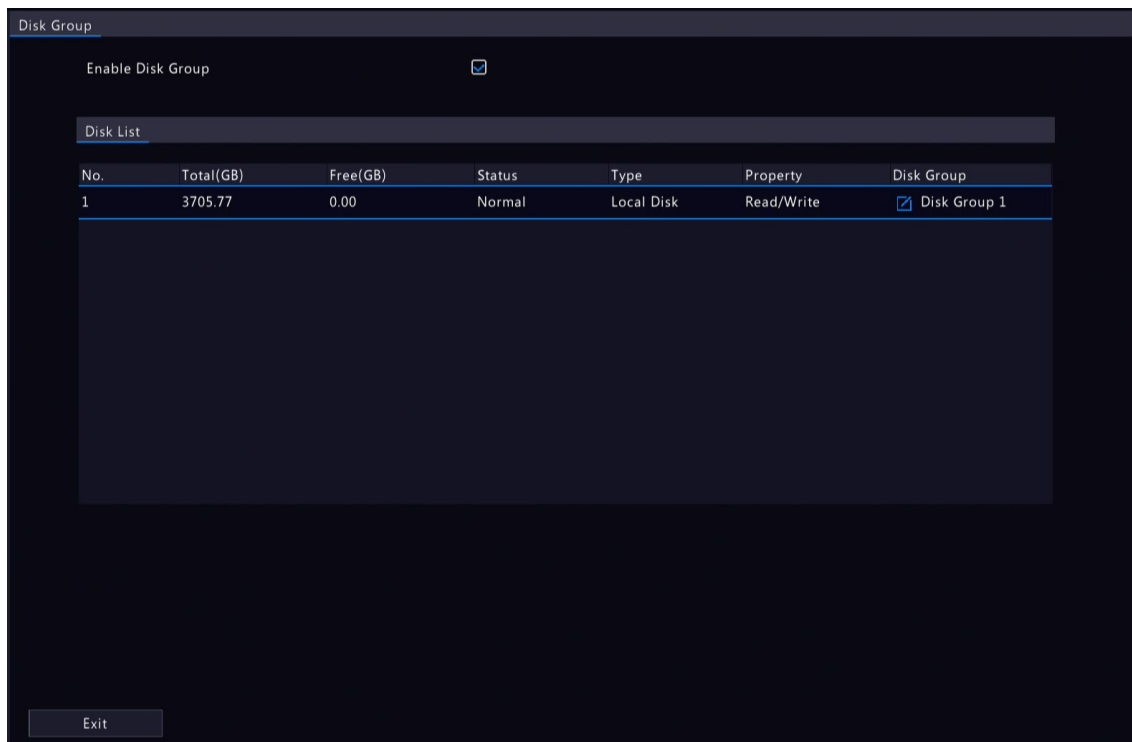
9.3 Disk Group

You can group disks and allocate a disk group for videos and images from a specified camera to meet the different storage duration requirements of cameras. Different arrays can be assigned to different disk groups. See [Space Allocation](#) for details.

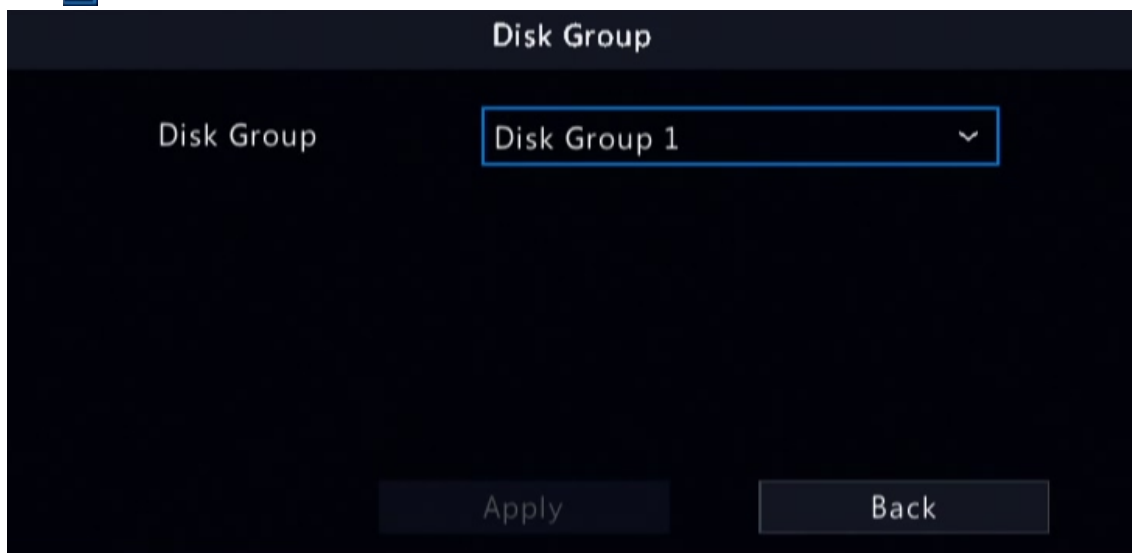
Note:

- Redundant disks cannot be assigned to any disk group.
- Disk group information will be initialized if any disk in the group is formatted.

1. Go to **Menu > Storage > Disk Group**.
2. Select the **Enable Disk Group** check box.



3. Click .



4. Select a disk group for the disk.
5. Click **Apply**.

9.4 Space Allocation

Allocate storage space for videos and images from a specified camera.

1. Go to **Menu > Storage > Allocate Space**.

Select Camera: D1(01)

Used Recording Space(GB): 31

Used Image Space(GB): 0

Select Group: Disk Group 1

Disk Capacity: 3705 GB free of 3705 GB

Group Capacity: 3705 GB free of 3705 GB

Max Recording Space(GB): 0

Max Image Space(GB): 0

Buttons: Copy, Apply, Exit

2. Select a camera, select a disk group for storage by the camera, and allocate storage space for videos and images from this camera on the disk group.

Space Type	Description
Recording Space	Used to store first stream videos, smart snapshots, POS data, people flow data, and heat map images.
Image Space	Used to store common snapshots, such as snapshots captured by schedule or manually.

3. Click **Apply**.
4. (Optional) Click **Copy** to apply the same settings to other camera(s).

9.5 Advanced Settings

Configure the storage policy when the storage is full.

1. Go to **Menu > Storage > Advanced**.

When HDD Full

☒ Overwrite ☐ Stop

2. Select whether to overwrite the existing data or stop storage when the storage is full.

When HDD Full	Description
Overwrite	The disk space is divided into allocated space and remaining space according to whether the disk is used for storage by cameras. - If a camera is not allocated storage space, it will use the remaining disk space, and its oldest data will be overwritten when the remaining space is used up.  Note: As the remaining disk space is variable and older recordings may be overwritten due to insufficient storage space, please allocate storage space with caution. For example, on a device with 20G disk capacity and two cameras, if camera 1 is allocated 10G, camera 2 will use the remaining 10G if it is not allocated storage space. In this case, you can view the last 5 days of recordings from camera 2. However, if you add a new camera to the device, there will be less storage space available to camera 2, and fewer days of recordings can be viewed. - If a camera is allocated storage space, its oldest data will be overwritten when the allocated space is used up.
Stop	This option is only effective to cameras that have been allocated storage space. When enabled, if the allocated space of a camera is used up, new recordings/snapshots will not be saved.

10 Alarm Configuration

Set alarm rules and alarm-triggered actions so as to alert users when an alarm occurs.

10.1 Motion Detection

Motion detection detects motions in specified grids on the image. An alarm is reported when detection rules are triggered.



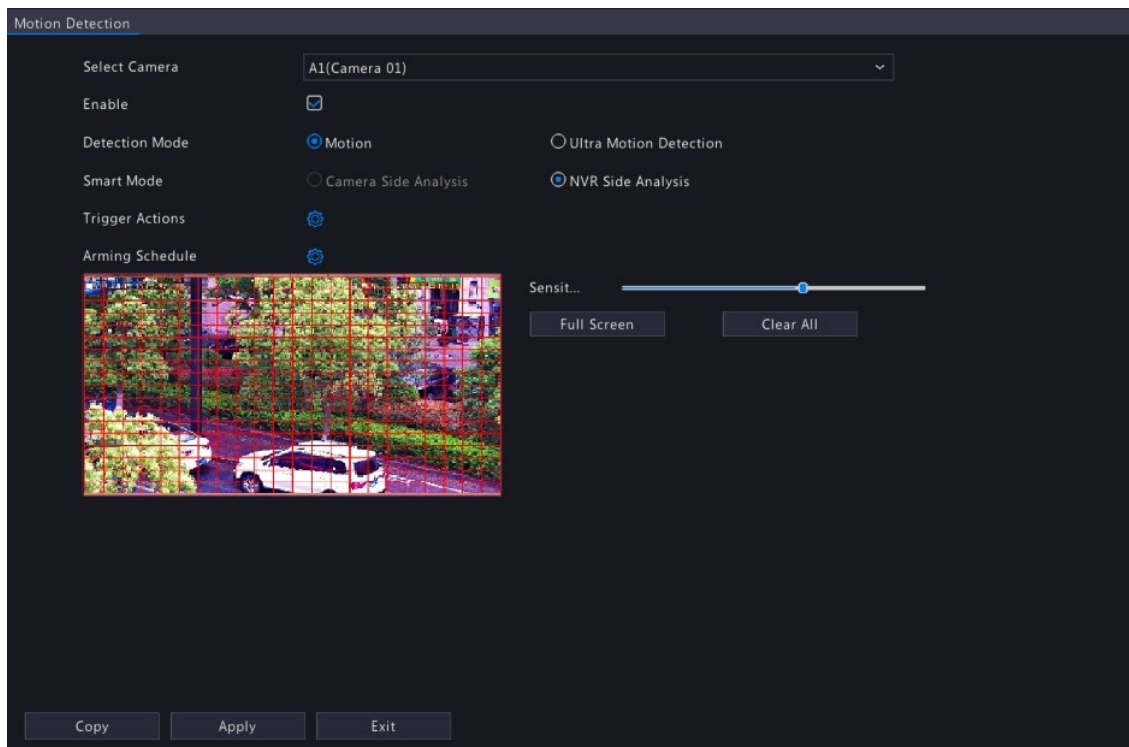
Note:

- The ultra motion detection may be unavailable to certain devices.
- The parameters may vary with DVR model.
- To configure ultra motion detection, enable the **Ultra Motion Detection** mode in [Analyzer Configuration](#).

- Go to **Menu > Alarm > Motion Detection**.
- Select the desired camera, and enable motion detection.
- Select the detection mode: **Motion** or **Ultra Motion Detection**.

Motion Detection

- Select the detection mode as **Motion**.



2. Set the detection area. The default is the full screen. You can adjust grid detection areas as needed.

- To erase grids, click or drag on grid areas.
- To redraw grids, click **Clear All**, and then click or drag on blank areas to draw grids.
- To detect the full screen, click **Full Screen**.

 **Note:** When a moving object is detected, the grids where the object appears on the left-side image are filled by .

3. Drag the slider to adjust detection sensitivity. The higher the sensitivity, the more likely small motions will be detected, and the more likely false alarms will occur. Set based on the scene and your actual needs.
4. Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
5. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s).

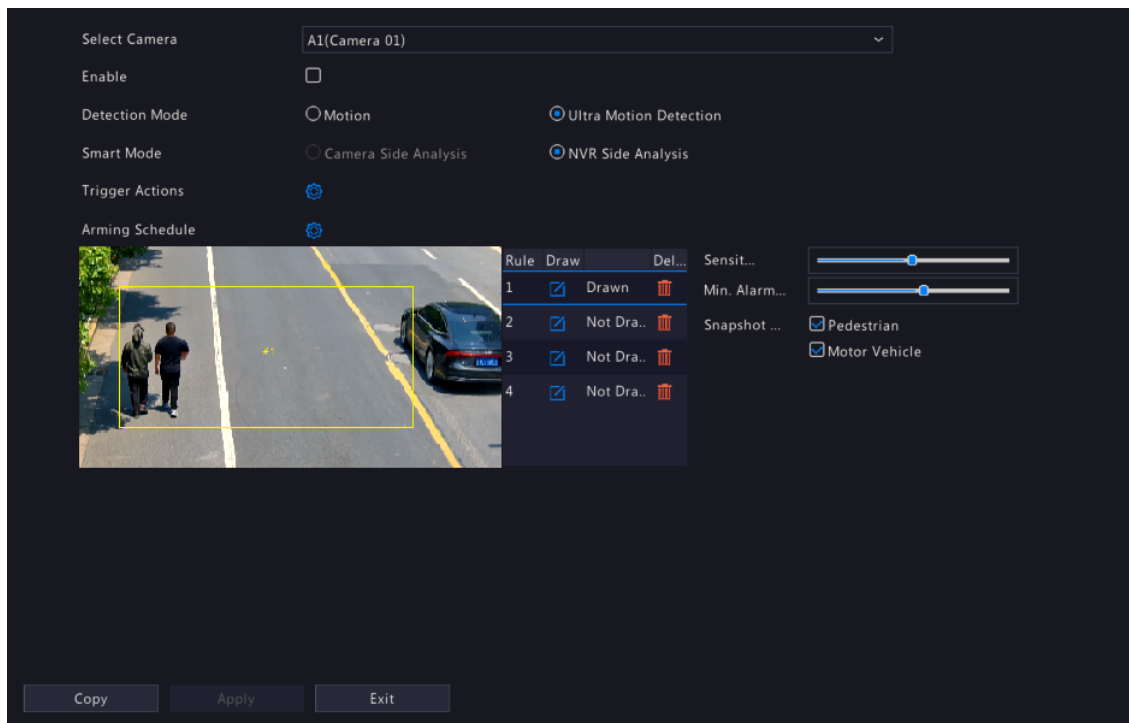
 **Note:** The settings of analog camera can only be copied to analog cameras, and the settings of digital camera can only be copied to digital cameras.

6. Click **Apply**.

Ultra Motion Detection

Ultra motion detection detects motions in specified grids on the image, and judges that the motion object is pedestrian or motor vehicle. An alarm is reported when detection rules are triggered.

1. Select the detection mode as **Ultra Motion Detection**.



- Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click , and the full screen is displayed, then draw a detection area. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed. Rightclick to exit the full screen.  Note: For a rule in Drawn state, you can click  to redraw a detection area. To delete a detection area, click .
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely motion behaviors will be detected, but the false alarm rate will increase.
Min. Alarm Interval (s)	Set the sensitivity by dragging the slider. Alarm interval refers to how frequent the alarm is reported. When a pedestrian or motor vehicle enters the detection area, an alarm will be triggered and reported immediately, and repeated after the alarm interval. The recommended alarm interval is 6s. You can adjust the value as needed.
Snapshot Type	Select the object(s) to be detected, including Pedestrian and Motor Vehicle ,

- Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
- (Optional) To apply the same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s).

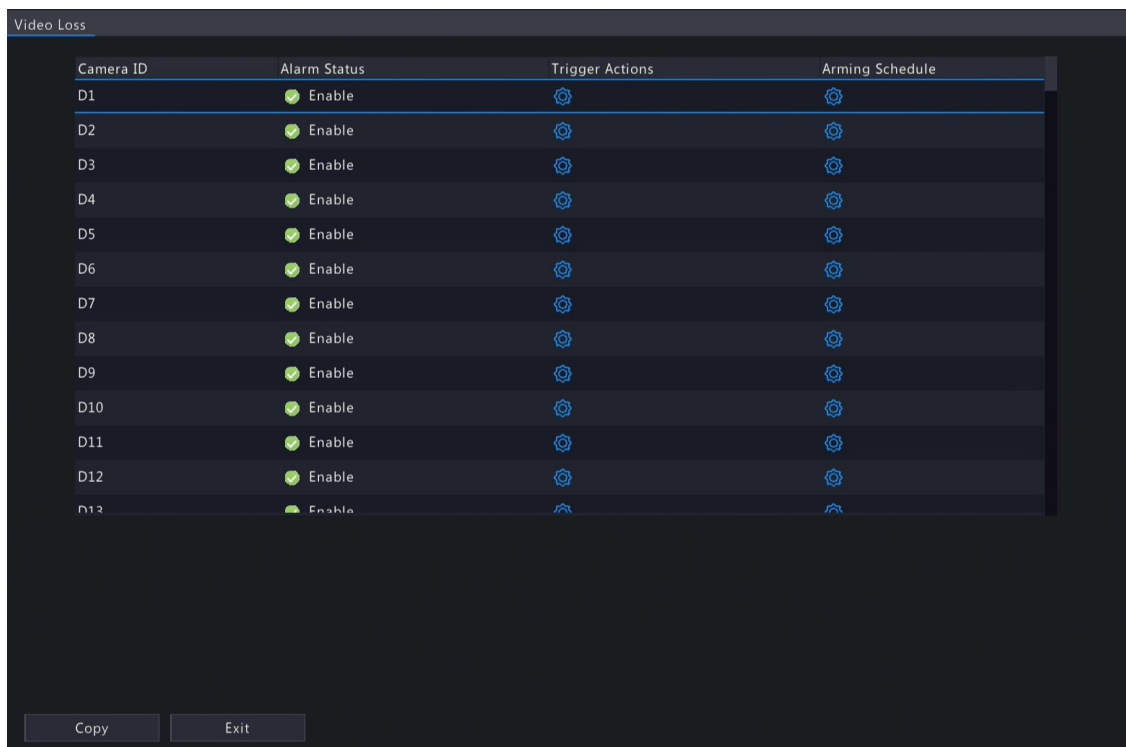
 **Note:** The settings of analog camera can only be copied to analog cameras, and the settings of digital camera can only be copied to digital cameras.

- Click **Apply**.

10.2 Video Loss

A video loss alarm is reported when the DVR loses video signals from a camera.

1. Go to **Menu > Alarm > Video Loss**.



Camera ID	Alarm Status	Trigger Actions	Arming Schedule
D1	Enable		
D2	Enable		
D3	Enable		
D4	Enable		
D5	Enable		
D6	Enable		
D7	Enable		
D8	Enable		
D9	Enable		
D10	Enable		
D11	Enable		
D12	Enable		
D13	Enable		

2. Video loss alarm is enabled by default. To disable video loss alarm for a channel, click , which then changes to .
3. Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
4. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s), and then click **OK**.

10.3 Alarm Input and Output

Configure alarm input and alarm output.

10.3.1 Alarm Input

Configure the alarm mode, arming schedule, and alarm-triggered actions for external alarm input devices.

The external alarm input devices include devices connected to the ALARM IN interfaces on the DVR and the ALARM IN interfaces on the cameras. For example, access control devices.

1. Go to **Menu > Alarm > Input/Output > Alarm Input**.

Alarm Input		Alarm Output						
No.	Alarm Input Name.	Alarm Status	Alarm Type	Edit	Trigger Actions	Arming Sched...	Disarm by Switch	Linked Channel
A<-1	A<-1	Disable	N.C.					
A<-2	A<-2	Disable	N.O.					
A<-3	A<-3	Disable	N.O.					
A<-4	A<-4	Disable	N.O.					
A<-5	A<-5	Disable	N.O.					
A<-6	A<-6	Disable	N.O.					
A<-7	A<-7	Disable	N.O.					
A<-8	A<-8	Disable	N.O.					
A<-9	A<-9	Disable	N.O.					
A<-10	A<-10	Disable	N.O.					
A<-11	A<-11	Disable	N.O.					
A<-12	A<-12	Disable	N.O.					
A<-13	A<-13	Disable	N.O.					

Copy
Apply
Exit

2. Select the alarm input channel to be set.

- A<-1: **A** refers to the ALARM IN interfaces on the DVR, **1** means the first ALARM IN interface. Likewise, **A<-2** means the second ALARM IN interface on the DVR. The number of ALARM IN interfaces may vary with DVR model. See the device datasheet for specifications.
- D<-1: **D** refers to channels, the number means channel ID. **D<-1** means the alarm input device is connected to the ALARM IN interface of the camera whose channel ID is 1. Likewise, **D<-2** means the alarm input device is connected to the ALARM IN interface of the camera whose channel ID is 2. The number is not displayed if the camera has no ALARM IN interface.

3. Click to configure alarm input parameters. After configuration, click **OK**.

Alarm Input

Alarm Input

☐ Enable

Alarm Input Name.

A<-1

One-Click Disarming

☐

Alarm Type

N.O.

OK

Cancel

Item	Description
Alarm Input	Select Enable to enable the alarm input.
Alarm Input Name	The default name is the alarm input number. You may rename it as needed.
One-Click Disarming	Select Enable to enable the one-click disarming. When enabled, the configured actions will not be triggered when A<-1 reports alarms.
Alarm Type	This item is applicable when Alarm Input is enabled. The default is N.O.. - N.O.: Choose this option if the alarm input device is normally closed. The device opens the circuit to input an alarm, triggers the DVR to open the alarm circuit and report an alarm. - N.C.: Choose this option if the alarm input device is normally opened. The device closes the circuit to input an alarm, triggers the DVR to close the alarm circuit and report an alarm.

4. (Optional) Set one-key disarming.
 - (1) To enable one-key disarm, select  in the **Disarm by Switch** column. When enabled, the configured actions will not be triggered when A<-1 reports alarms.
 - (2) To apply one-key disarming to other channel(s), click  in the **Linked Channel** column, select the desired channel(s) or **All**, and then click **Apply**.
5. Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
6. (Optional) To apply the alarm input parameters to other cameras, click **Copy**, and select the desired channel(s) or **Copy To**, and then click **OK**.
7. Click **Apply**.

10.3.2 Alarm Output

Configure the alarm mode and arming schedule for external alarm output devices.

The external alarm output devices include devices connected to the ALARM OUT interfaces on the DVR and the ALARM OUT interfaces on the cameras, such as alarm light and alarm bell.

1. Go to **Menu > Alarm > Input/Output > Alarm Output**.

Alarm Input		Alarm Output		
Alarm Output No.	Default Status	Delay	Edit	Arming Schedule
A->1	N.O.	30(s)		
A->2	N.O.	30(s)		
A->3	N.O.	30(s)		
A->4	N.O.	30(s)		
A->5	N.O.	30(s)		
A->6	N.O.	30(s)		
A->7	N.O.	30(s)		
A->8	N.O.	30(s)		
D1->1	N.O.	30(s)		
D2->1	N.O.	30(s)		
D3->1	N.O.	30(s)		
D7->1	N.O.	30(s)		

Copy
Apply
Exit

2. Select the alarm output channel to be set.
 - A>-1: **A** refers to the ALARM OUT interfaces on the DVR, **1** means the first ALARM OUT interface. **A <-2** means the second ALARM OUT interface on the DVR, and so on. The number of ALARM OUT interfaces may vary with DVR model. See the device datasheet for specifications.
 - D >-1: **D** refers to channels, the number means channel ID. **D->1** means the alarm output device is connected to the ALARM OUT interface of the camera whose channel ID is 1. Likewise, D->2 means the alarm output device is connected to the ALARM OUT interface of the camera whose channel ID is 2. The number is not displayed if the camera has no ALARM OUT interface.
3. Click  to configure alarm output parameters. After configuration, Click **OK**.

Alarm Output

Default Status	N.O. ▾
Alarm Duration	☒ Custom ☐ Maximum
Delay(s)	30
Relay Mode	Bistable ▾
OK Cancel	

Item	Description
Default Status	Select the default status from the drop-down list. The default is N.O.. - N.O.: Choose this option if the external device is normally open. - N.C.: Choose this option if the external device is normally closed.
Alarm Duration/Delay(s)	Set the alarm duration, that is, the length of time that an output alarm lasts after the alarm is ended. - Custom: When enabled, you can set the length of time as needed. After an alarm is cleared on the DVR, the third-party alarm device continues alarm till the end of the set duration.  Note: The delay period supported by channels may vary. For most channels, the valid range is 5 to 3600s. For certain channels, the valid range is 1 to 3600s. - Maximum: When enabled, you cannot set the delay period. The third-party alarm device continues alarm until you clear it manually.
Relay Mode	Set the relay mode, including monostable and bistable. The default is bistable.  Note: Set relay mode to better adapt to third-party alarm devices such as alarm lights. Please set the relay mode according to the trigger mode of the third-party alarm device. - Monostable: The circuit can only remain in one stable state. When a trigger pulse is applied, the circuit switches to another state, and then automatically switches back to the original stable state. The circuit will repeat the same actions when the next trigger pulse arrives. - Bistable: The circuit can remain in two stable states. When a trigger pulse is applied, the circuit switches to another state, and remains in this state after the trigger pulse is removed. When the next trigger pulse is applied, the circuit switches back to the other stable state and remains in that state.

- Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
- (Optional) To apply the alarm output parameters to other cameras, click **Copy**, and select the desired channel(s) or **Copy To**, and then click **OK**.
- Click **Apply**.

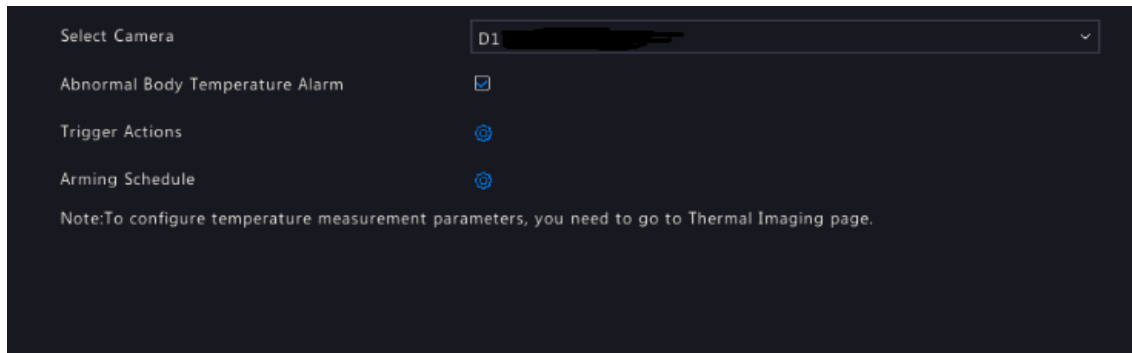
10.4 Temperature Alarm

An alarm occurs when the abnormal body temperature is detected.

Note:

- This function is only available for thermal imaging cameras.
- Before using this function, please enable body temperature measurement in the **Temperature Measurement** page first. See [Thermal Imaging](#) for details.

1. Go to **Menu > Alarm > Temperature Alarm > Body Temperature Alarm**.

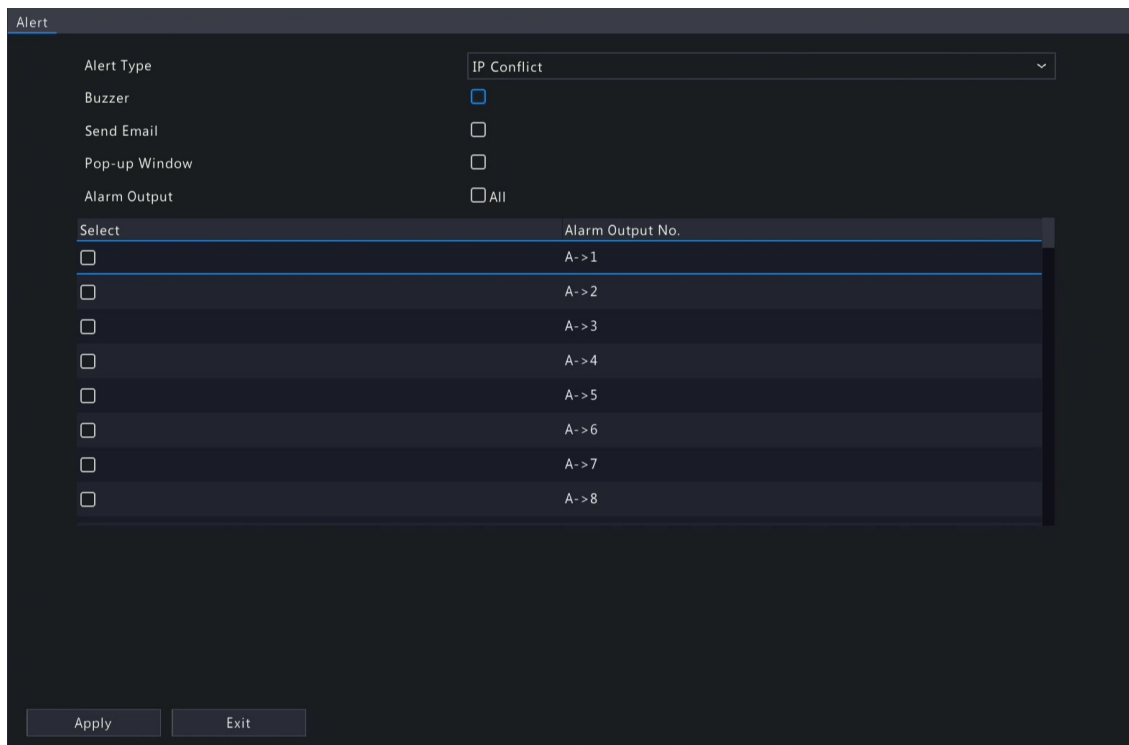


2. Select the infrared light channel, and enable **Abnormal Body Temperature Alarm**.
3. Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
4. Click **OK**.

10.5 Alert

Configure alert actions for device abnormal events. The DVR reports an alarm when an event occurs.

1. Go to **Menu > Alarm > Alert**.
2. Select an alert type from the drop-down list.
 - IP Conflict: IP cameras use the same IP address on the network.
 - Network Disconnected: The DVR is disconnected from the network.
 - Disk Offline: No disk or a disk is not properly connected.
 - HDD Abnormal: A disk is in position but cannot work normally.
 - Illegal Access: Incorrect username/password.
 - Hard Disk Space Low: The disk space is about to use up.
 - Hard Disk Full: The disk space has been used up.
 - Recording/Snapshot Abnormal: Videos/snapshots cannot be stored normally because the disk is offline or abnormal.
3. Set the alert actions, including buzzer, sending email, and pop-up window. See [Alarm-triggered Actions](#) for details.
4. Set the alarm output channel(s). You may select **All**, or select specified alarm output channel(s).



The 'Alert' configuration window shows settings for an 'IP Conflict' alert. It includes checkboxes for 'Buzzer', 'Send Email', 'Pop-up Window', and 'Alarm Output' (set to 'All'). Below these is a table for selecting alarm outputs.

Select	Alarm Output No.
☐	A->1
☐	A->2
☐	A->3
☐	A->4
☐	A->5
☐	A->6
☐	A->7
☐	A->8

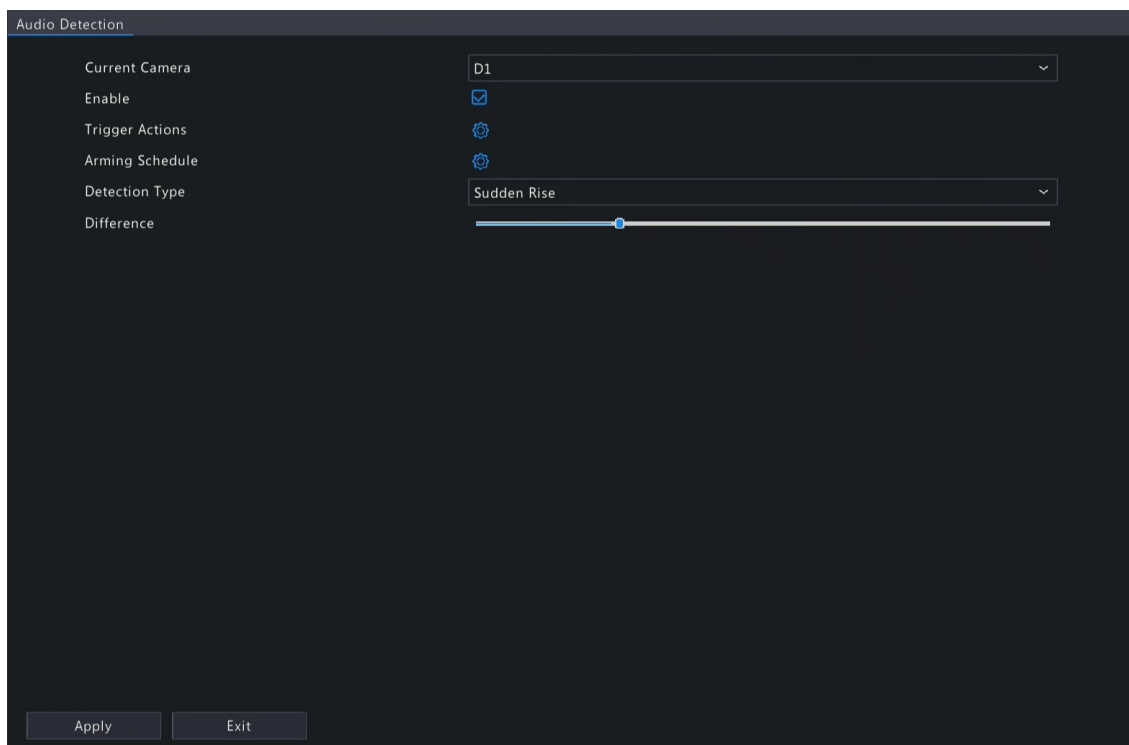
Buttons at the bottom: Apply, Exit.

5. Click **Apply**.
6. Repeat the above operations to configure alert actions for other events.

10.6 Audio Detection

Audio detection detects input audio signals. An alarm is reported when an exception is detected. Make sure an audio collection device (e.g. sound pickup) is connected, and audio detection is enabled. See [Audio](#) for details.

1. Go to **Menu > Alarm > Audio Detection**.



The 'Audio Detection' configuration window shows settings for camera 'D1'. It includes checkboxes for 'Enable' (checked), 'Trigger Actions' (gear icon), and 'Arming Schedule' (gear icon). The 'Detection Type' is set to 'Sudden Rise' with a corresponding slider for 'Difference'.

Buttons at the bottom: Apply, Exit.

2. Select the desired camera, and click **Enable**.
3. Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
4. Set audio detection rules.

Item	Description
Detection Type	Select an audio detection type from the drop-down list. • Sudden Rise: An alarm occurs when the rise of volume exceeds the set value. • Sudden Fall: An alarm occurs when the fall of volume exceeds the set value. • Sudden Change: An alarm occurs when the rise or fall of volume exceeds the set value. • Threshold: An alarm occurs when the volume exceeds the set threshold.
Difference/Threshold	Drag the slider to adjust the difference and threshold. • The difference between two sound volumes. An alarm occurs when the rise or fall of volume exceeds the difference (range: 0-400). This item is applicable when the detection type is Sudden Rise, Sudden Fall, or Sudden Change. • Threshold: The limit value of volume. An alarm occurs when the detected volume exceeds the set value (range: 0-400). This item is applicable when the detection type is Threshold.

5. Click **Apply**.

10.7 Buzzer

Configure the alarm duration of the buzzer on the DVR.

1. Go to **Menu > Alarm > Buzzer**.

Buzzer

Alarm Duration ☐ Maximum ☒ Custom

Custom Duration(sec)

Apply Exit

2. Set the alarm duration. The default is 30s.

- Maximum: When enabled, you cannot set the alarm duration. When an alarm occurs, the buzzer will alarm continuously until the alarm ends.
- Custom: When enabled, you can set how long the buzzer will alarm after it is triggered. The valid range is from 1 to 600(s). When an alarm occurs, the buzzer will alarm continuously within the alarm duration, and stop automatically if the alarm ends first within the duration.

 **Note:** To stop a buzzer alarm manually, right-click in the preview window, select **Manual > Buzzer**. See [Buzzer](#) for details.

3. Click **Apply**.

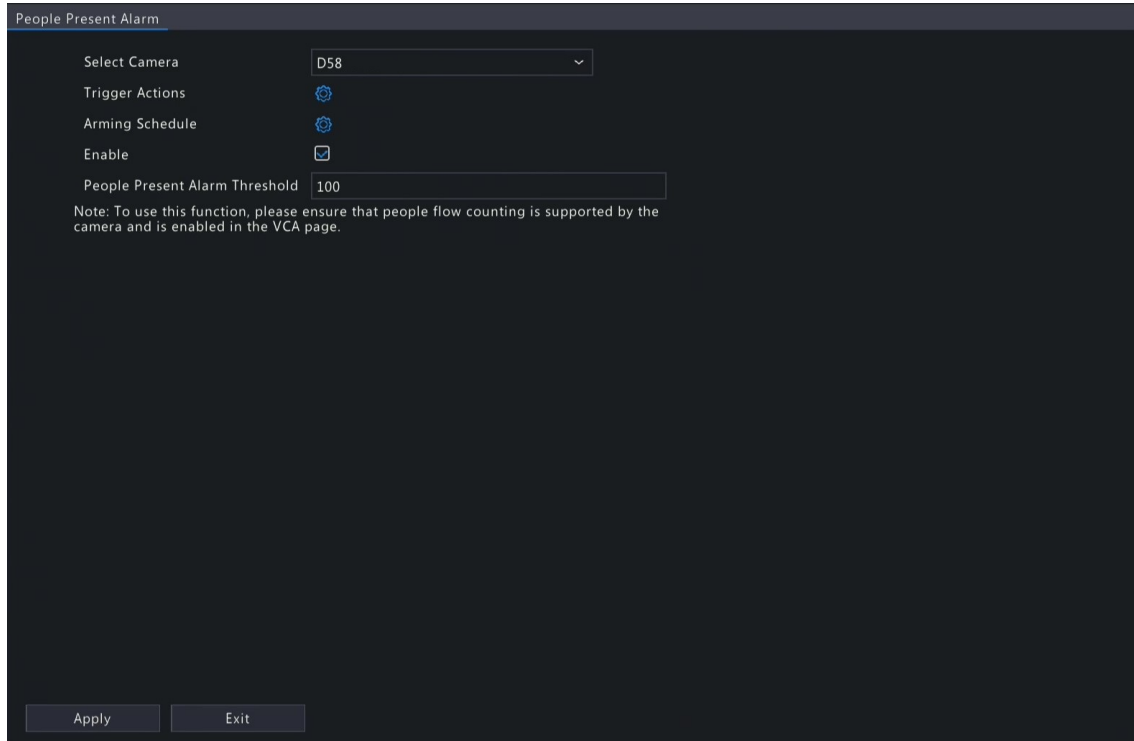
10.8 People Present Alarm

An alarm occurs when the number of people present in a specified area exceeds the set threshold.

 **Note:** To use this function, make sure that people flow counting is supported by the camera and is enabled in the **VCA** page. See [People Flow Counting](#) for details.

Configure People Present Alarm

1. Go to **Menu > Alarm > People Present Alarm**.



2. Select the desired camera, and click **Enable**.
3. Set the alarm-triggered actions and arming schedule. Click the corresponding  to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See [Alarm-triggered Actions](#) and [Arming Schedule](#) for details.
4. Set the people present alarm threshold, which is the maximum number of people allowed in the monitored area. An alarm occurs when the number of people present exceeds the threshold. The valid range is from 1 to 100,000.
5. Click **Apply**.

View Data

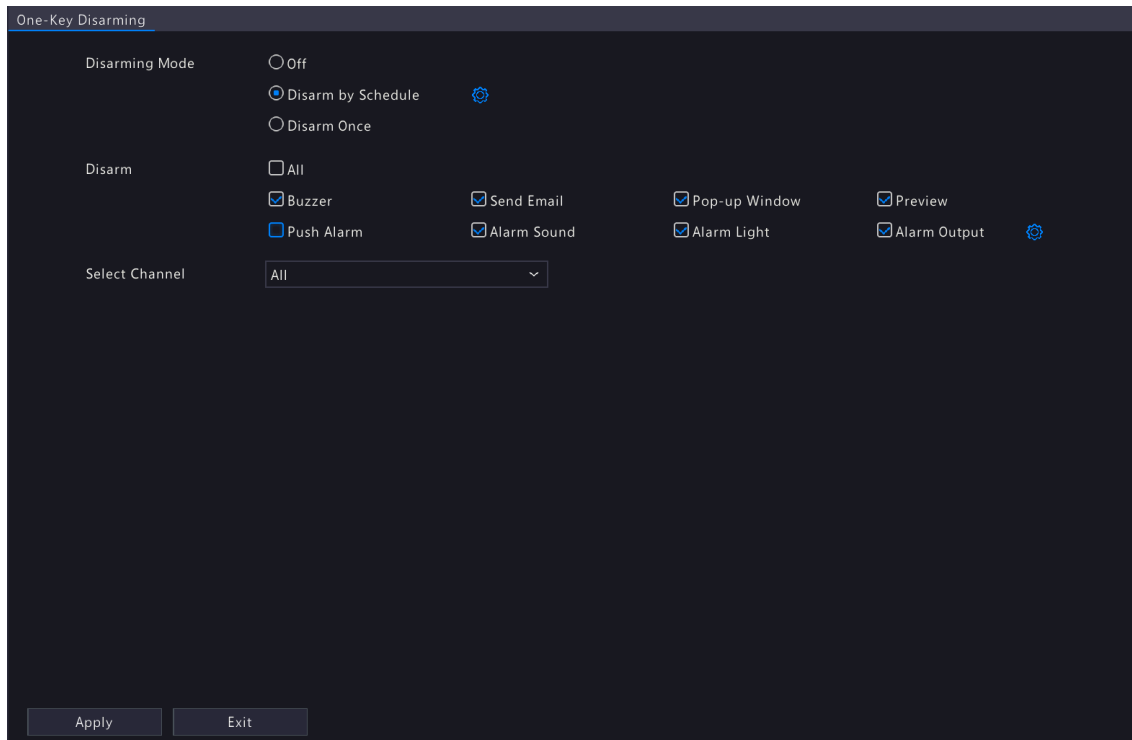
In the preview page, select **People Flow Counting** from the drop-down list in the upper right corner, then you can view the number of people entered, left, and present.



10.9 One-Key Disarming

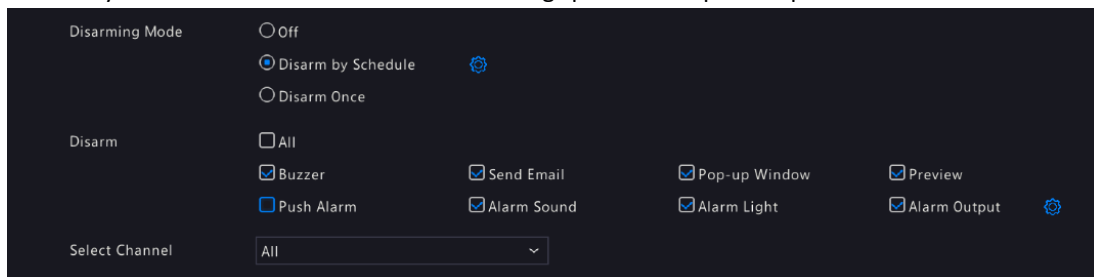
Cancel alarm-triggered actions of DVRs or IPCs with one click.

1. Go to **Menu > Alarm > One-Key Disarming**.



2. Select a disarming mode and configure parameters.

- Off: Disarming is disabled.
- Disarm by Schedule: The device is disarmed during specific time periods per week.



- (1) Click  right to **Disarm by Schedule**, and set the disarming periods. Click **OK** to return to the **One-Key Disarming** page.

AShielding Plan

Select day

No.

1

2

3

4

Mon

Start Time				End Time			
00	⬆	00	⬆	24	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆
00	⬆	00	⬆	00	⬆	00	⬆

Copy To

☐ All
☐ Mon
☐ Tue
☐ Wed
☐ Thu
☐ Fri
☒ Sat
☐ Sun
☐ Holiday

Apply

OK

Cancel



Note:

- Up to 4 disarming periods during one day are allowed.
- To apply the same disarming schedule to other days, select **All** or the intended day(s), and click **OK**.

(2) Select actions to be disarmed. The default is all actions. See [Alarm-triggered Actions](#) for details.

- Disarm Once: The device is disarmed during a specified time period.

Disarming Mode

☐ Off
☐ Disarm by Schedule
☒ Disarm Once

Disarming Time

2023-09-21 15:12:35

To

2023-09-21 23:12:35

Disarm

☐ All

☒ Buzzer

☒ Send Email

☒ Pop-up Window

☒ Preview

☐ Push Alarm

☒ Alarm Sound

☒ Alarm Light

☒ Alarm Output

Select Channel

All

(1) Select **Disarm Once**, and set the disarming start time and end time.

(2) Select actions to be disarmed. The default is all actions. See [Alarm-triggered Actions](#) for details.

3. Click **Apply**.

10.10 Manual Alarm

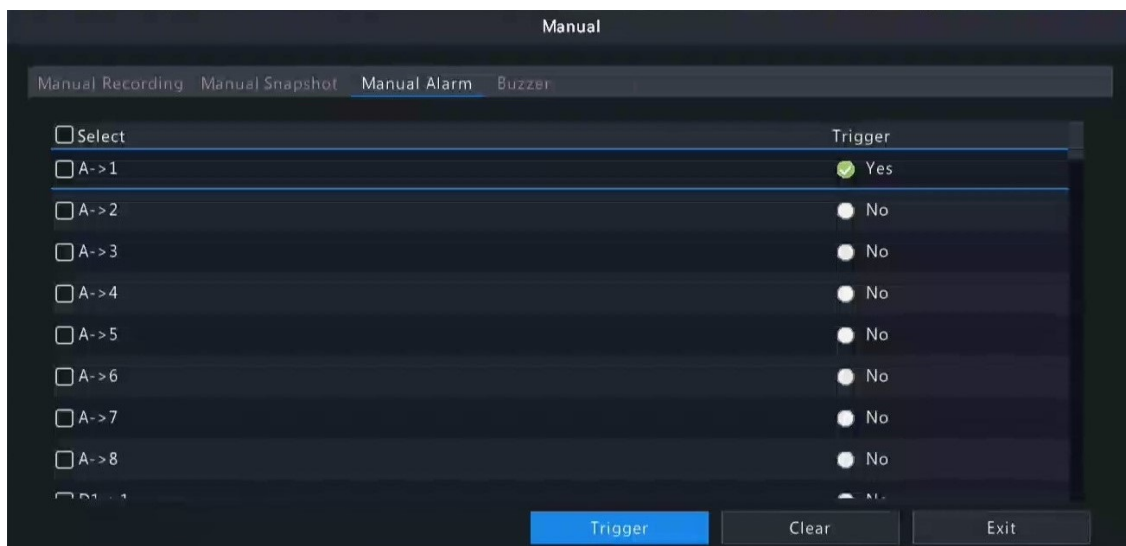
Trigger or clear an alarm output manually.



Note: Manual alarm has the highest priority.

Manual Alarm

1. Right click and select **Manual > Manual Alarm**.

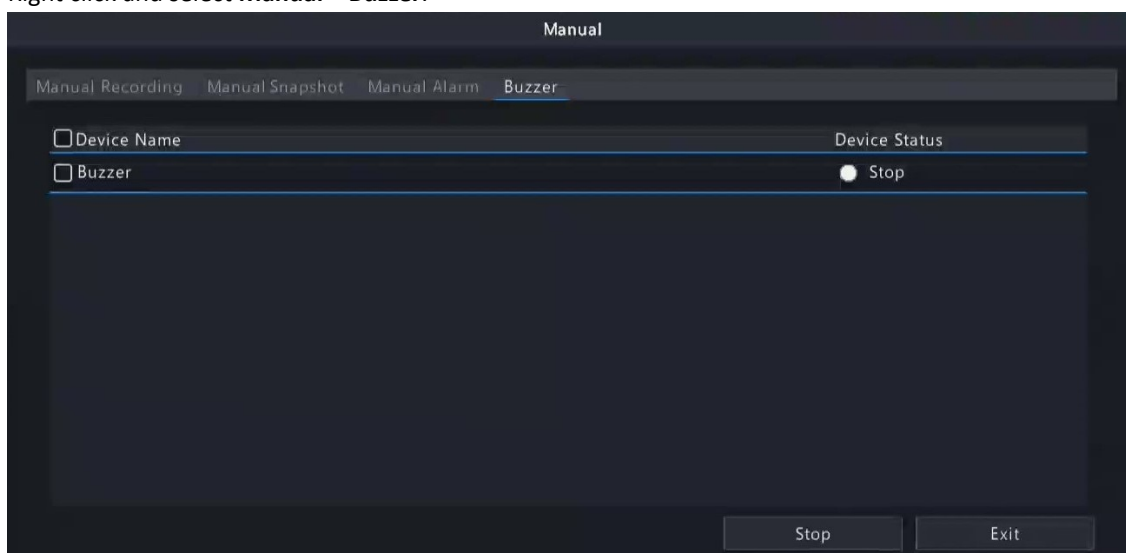


2. Trigger or clear alarm(s) manually.

- Trigger: Select the channel(s) to be triggered and click **Trigger**, and then  changes to .
- Clear: Select the channel(s) to be cleared and click **Clear**, and then  changes to .

Buzzer

1. Right click and select **Manual > Buzzer**.



2. To stop the buzzer, select the buzzer (in Started status) and then click **Stop**.

11 System Maintenance

View system operation status to ensure stable system operation.

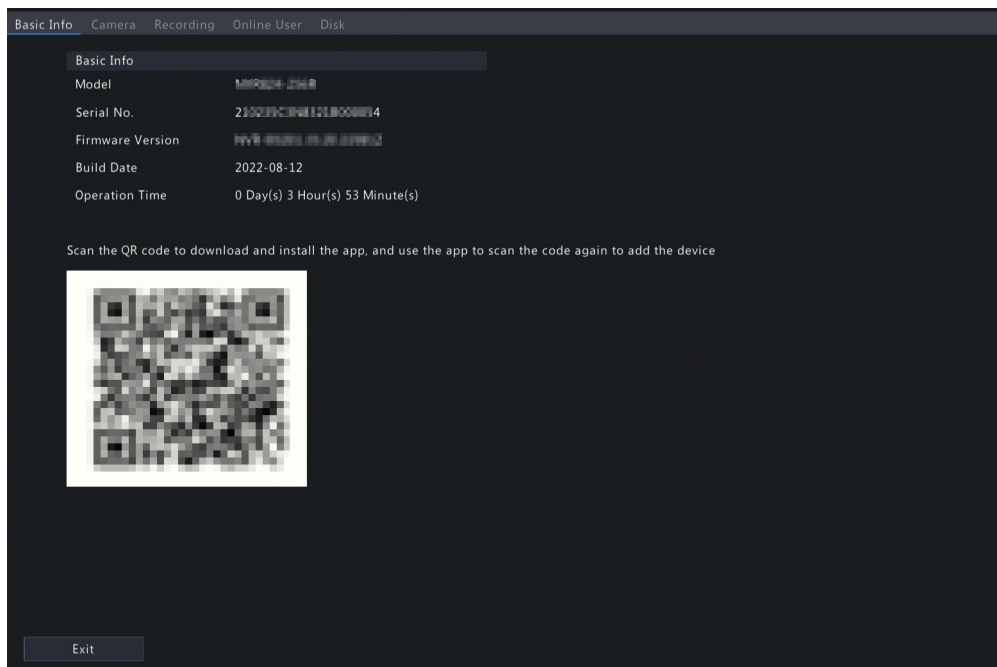
11.1 System Info

View the basic information and operation status of the device.

11.1.1 Basic Info

View the basic information of the device, including DVR model, firmware version, build date, etc.

1. Go to **Menu > Maintenance > System Info > Basic Info**. View the basic information of the device.



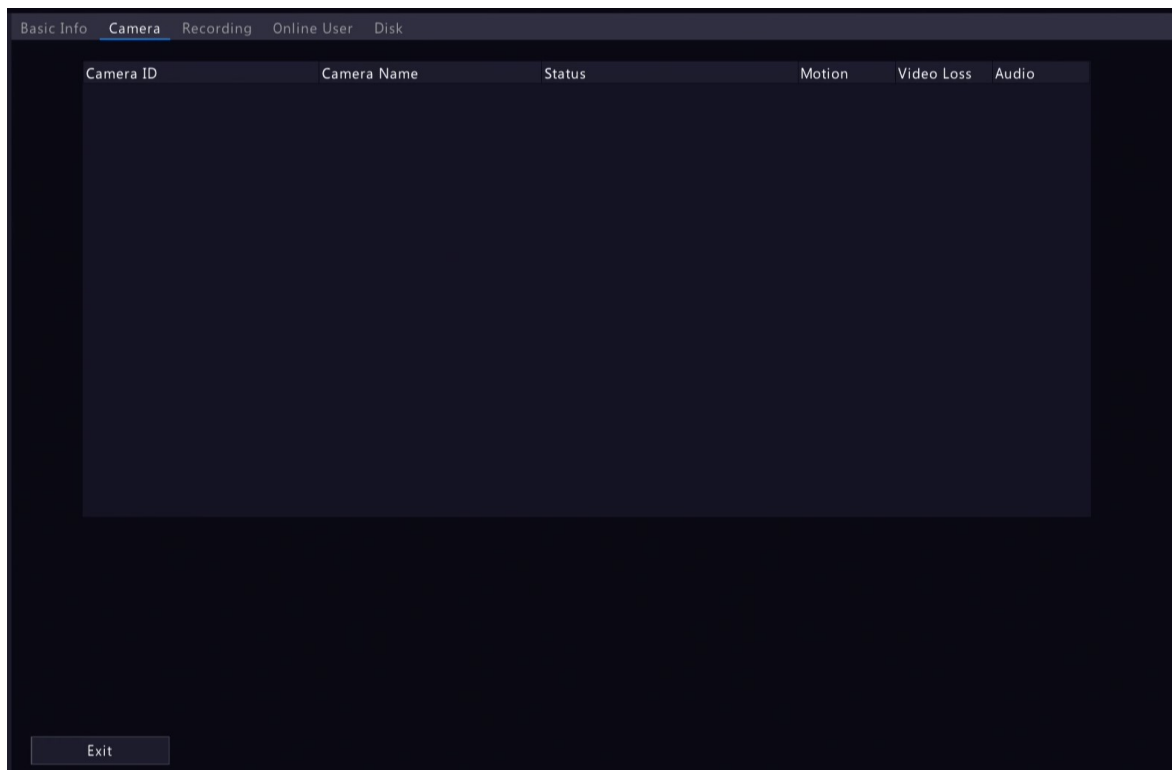
Parameter	Description
Model	DVR model.
Serial No.	Serial number.
Firmware Version	Firmware version of the DVR.
Build Date	Release date of the current firmware version.
Operation Time	Length of time the DVR has been operating since the latest startup.

2. Scan the QR code to download the app and manage the DVR on a mobile phone.

11.1.2 Camera Status

View camera status information.

Go to **Menu > Maintenance > System Info > Camera**. View camera information including name, online/offline status, event type and status.



11.1.3 Recording Status

View the recording status and encoding parameters of the connected cameras.

Go to **Menu > Maintenance > System Info > Recording**. View recording information including recording type, recording status, diagnosis, and encoding parameters.

Basic Info Camera Recording Online User Disk								
Camera ID	Camera Name	Type	Status	Diagnosis	Stream Type	Frame Rat...	Bit Rate(K...	Resolution
A1	Camera 01	Manual	Ongoing	Normal	Main and Sub S...	15	2042	1920X1080
A2	Camera 02	Normal	Ongoing	Normal	Main and Sub S...	8	135	1920X1080
A3	Camera 03	Normal	Ongoing	Normal	Main and Sub S...	8	135	1920X1080
A4	Camera 04	Normal	Ongoing	Normal	Main and Sub S...	8	135	1920X1080

11.1.4 Online User

View the logged-in users, and force non-admin users to log out of the DVR when necessary.

1. Go to **Menu > Maintenance > System Info > Online User**.

Basic Info Camera Recording <u>Online User</u> Disk			
☐ No.	Username	IP Address	Login Time
1	admin	127.0.0.1	2022-08-15 16:18:19
2	admin	202.5.1.138	2022-08-15 16:18:00

Logout Exit

- Choose a non-admin user and then click **Logout**.

 **Note:** Only admin can manage user permissions.

11.1.5 HDD Status

View the status and property of HDDs on the DVR.

Go to **Menu > Maintenance > System Info > Disk**. View hard disk information including the total capacity, free space, status, manufacturer, and property.

Basic Info Camera Recording Online User <u>Disk</u>					
HDD No.	Total(GB)	Free(GB)	Status	Manufacturer	Property
1	3705.77	0.00	Normal	SEAGATE	Read/Write

Total Capacity(GB) 3705.77
Free Space(GB) 0.00

Exit

11.2 Network Information

View network information including network traffic, network statistics and network status.

11.2.1 Network Traffic

View network interface card (NIC) information including connection status, physical address, MTU, NIC type, and real-time traffic.

1. Go to **Menu > Maintenance > Network Info > Network Traffic**.



2. Choose an NIC to view the real-time network traffic.

11.2.2 Network Status

View network parameters of an NIC.

Go to **Menu > Maintenance > Network Info > Network**. Choose an NIC to view its network parameters.

The screenshot shows the 'Network Status' interface. At the top, there are three tabs: 'Network Traffic', 'Network' (selected), and 'Network Statistics'. Below the tabs is a table with the following data:

IPv4 Obtainment Mode	Bind NIC
IPv4 Address	192.168.1.30
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	192.168.1.1
IPv6 Obtainment Mode	Router Advertisement
IPv6 Address	fe80::4aea:63ff:fe00:1122
IPv6 Prefix Length	64
IPv6 Default Gateway	::
Preferred DNS Server	0.0.0.0
Alternate DNS Server	0.0.0.0

At the bottom left, there is an 'Exit' button.

11.2.3 Network Statistics

View bandwidth usage.

Go to **Menu > Maintenance > Network Info > Network Statistics**. Bandwidth usage is displayed.

Network Traffic	Network	Network Statistics
Type	Bandwidth	
IP Camera	0bps	
Remote Live View	0bps	
Remote Playback	0bps	
Idle Receive Bandwidth	40Mbps	
Idle Send Bandwidth	48Mbps	

Exit



Note:

- When idle receive bandwidth is low, cameras cannot get online.
- When idle send bandwidth is low, live view, playback, and recording download will fail.

11.3 Log Search

Logs contain information about user operation and device status. You can use logs to keep track of device operation status and view detailed alarm information.

Log Search

1. Go to **Menu > Maintenance > Log**.

Log

Log

2022-08-15 00:00:00

End Time

2022-08-15 23:59:59

Main Type

Operation

Sub Type

All Types

Username	Operation Time	Camera ID	Play	Main Type	Sub Type	Details
admin	2022-08-15 16:53:30	D111		Operation	Playback/Download	
admin	2022-08-15 16:52:33		—	Operation	Quick Search IP Camera	
admin	2022-08-15 16:52:33		—	Operation	Login	
admin	2022-08-15 16:50:01		—	Operation	Logout	
admin	2022-08-15 16:43:05		—	Operation	Start Network Test	
admin	2022-08-15 16:41:26		—	Operation	Start Network Test	
admin	2022-08-15 16:33:55		—	Operation	Quick Search IP Camera	
admin	2022-08-15 16:33:55		—	Operation	Login	

<

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1

/

6

>

Search

Log Backup

Exit

- Set the start time, end time, main type and sub type.
- Click **Search**.
- Click to view log details.

Log Details

Username

admin

Operation Time

2022-08-15 16:53:30

IP

127.0.0.1

Camera ID

D111

Type

Operation--Playback/Download

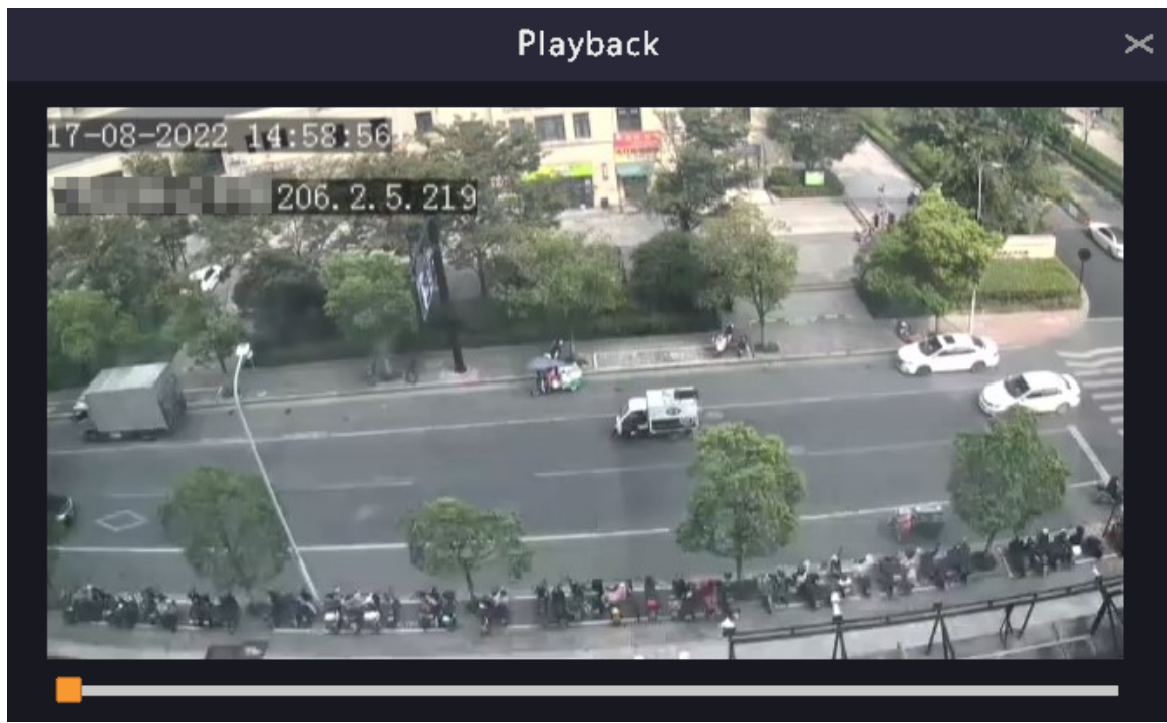
Description:

N/A

Exit

Playback

Click to view the video recorded at the current log time.



Note:

- This feature is not available to certain log types.
- The video is 11 minutes long (1m before and 10m after alarm).

Log Backup

Click **Backup**. The **Backup** page appears. Choose the destination path, click **Backup** to save the logs to the external storage device.

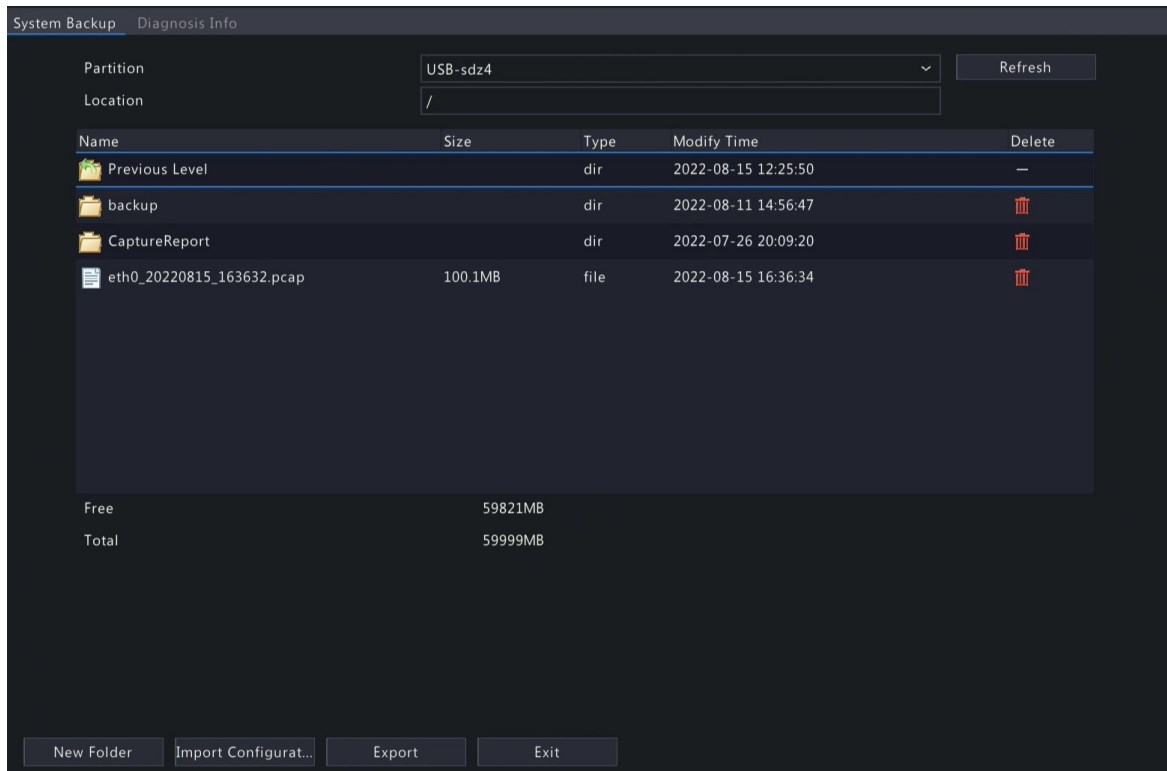
11.4 System Backup

Back up system configuration and device diagnosis information.

11.4.1 System Backup

Import, export, and delete system configurations.

Go to **Menu > Maintenance > Backup > System Backup**.



Perform the following operations as needed:

- Import configurations: Choose the *.xml file in the directory list, click **Import Configuration**, and then confirm to import the configuration file.
- Export configurations: Choose the destination in the directory list, click **Export Configuration**. Then a *.xml file containing the exported configurations is generated in the specified folder later.



Note:

- Caution: The device will restart after you import configurations. If power is disconnected during the process, the system will be unusable.
- Only admin can import or export configurations.

- Delete: Choose the folder or file to be deleted, click means the folder or file cannot be deleted.



Note: Caution: Deleted files cannot be recovered.

- Create folder: Choose the destination path in the directory list, click **New Folder**, enter a folder name to create the folder.
- Refresh: Click the **Refresh** button to refresh the list.

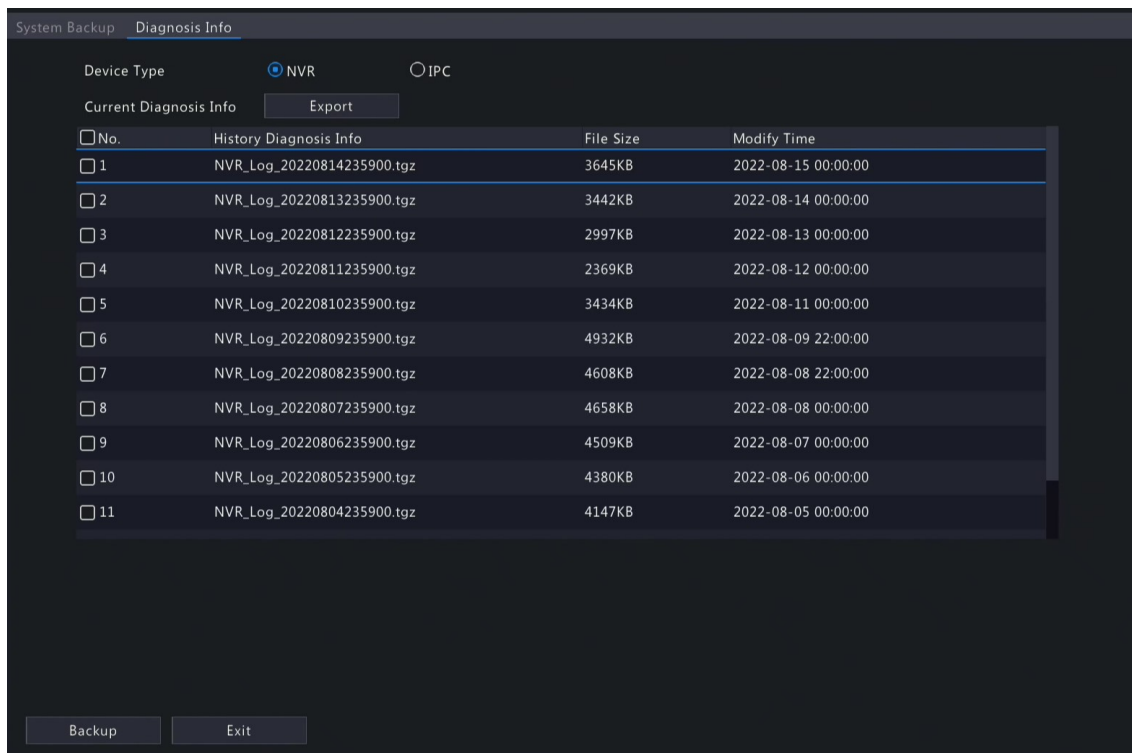
11.4.2 Diagnosis Info

View and back up diagnosis information of the DVR and the connected cameras. The DVR keeps 14 days of diagnosis information and overwrites the earliest when the storage is full.

Go to **Menu > Maintenance > Backup > Diagnosis Info**.

NVR Diagnosis Info

1. Choose **NVR** as the device type.

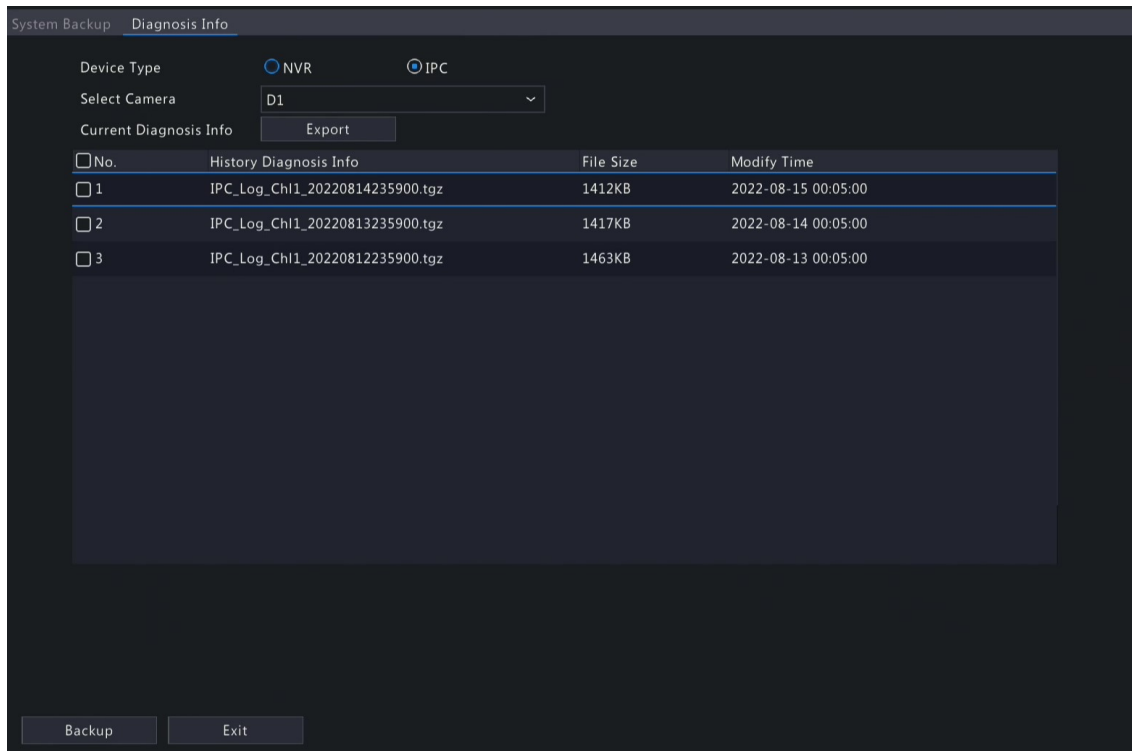


2. Export NVR diagnosis information.

- Current Diagnosis Info: Diagnosis information since the latest startup. Click **Export** to export diagnosis information to the external storage device.
- History Diagnosis Info: All the history diagnosis information in the list. Select the desired item(s), click **Backup**. On the **Backup** page, choose the destination path, click **Backup**.

Camera Diagnosis Info

1. Choose **IPC** as the device type.



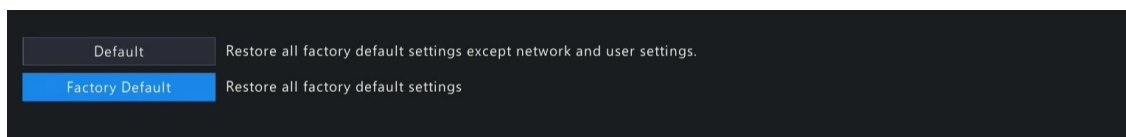
2. Choose the desired camera from the list.
3. Export diagnosis information of the selected camera.

- Current Diagnosis Info: Diagnosis information since the latest startup. Click **Export** to export diagnosis information to the external storage device.
- History Diagnosis Info: All the history diagnosis information in the list. Select the desired item(s), click **Backup**. On the **Backup** page, choose the destination path, click **Backup**.

11.5 Restore System

Restore default system settings.

1. Go to **Menu > Maintenance > Restore**.



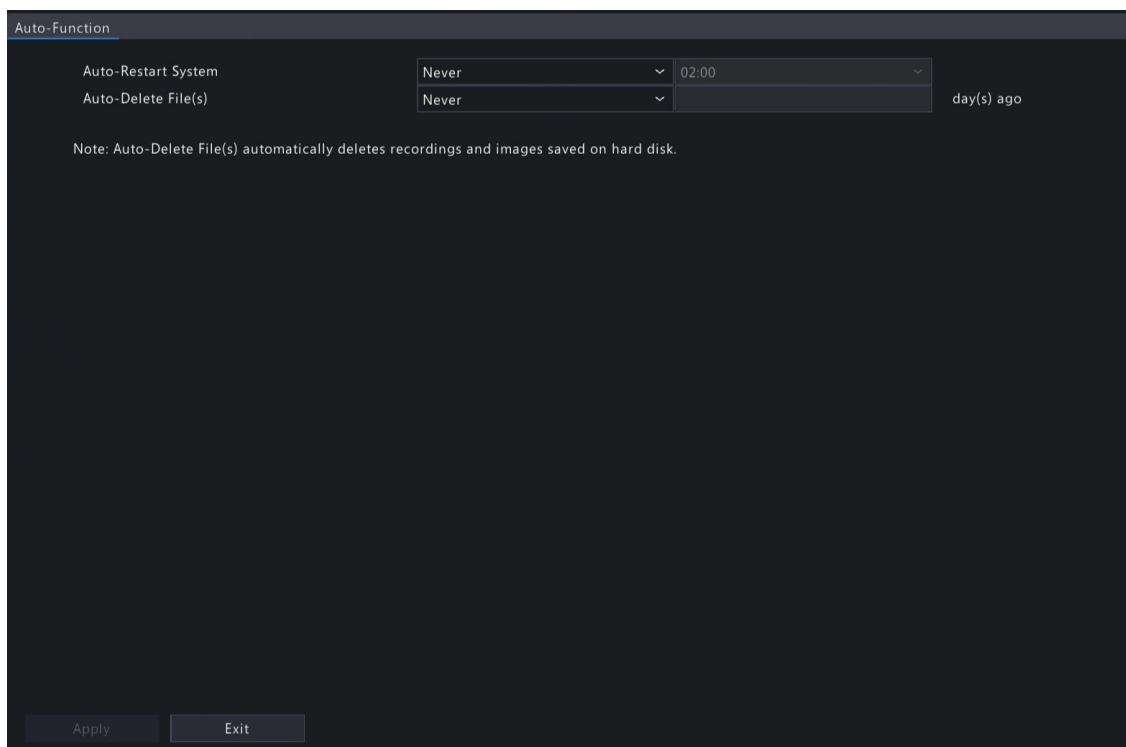
2. Choose **Default** or **Factory Default** as needed. A message appears. The DVR will restart and restore the default settings after you confirm. Choose a method according to your actual needs:
 - Restore: Restore default settings except network settings, user settings, and time settings.
 - Factory Default: Restore all default settings.

 **Note:** Either option will not delete the recorded videos and operation logs.

11.6 Auto-Function

The device can restart or delete files automatically at the preset time. Only admin can perform this operation.

1. Go to **Menu > Maintenance > Auto-Function**.



2. Configure the parameters.
 - Auto-Restart System: The system restarts automatically at the set time.
 - Auto-Delete File(s): The system automatically deletes videos and images saved on the hard disk. Range: 1-240.
3. Click **Apply**.

11.7 System Upgrade

Upgrade the firmware of the NVR and the connected cameras.

Two upgrade methods are available. The device will restart after the upgrade is completed.

- Cloud upgrade: Upgrade through the cloud server.
- Local upgrade: Upgrade using the upgrade files saved in a USB storage device.



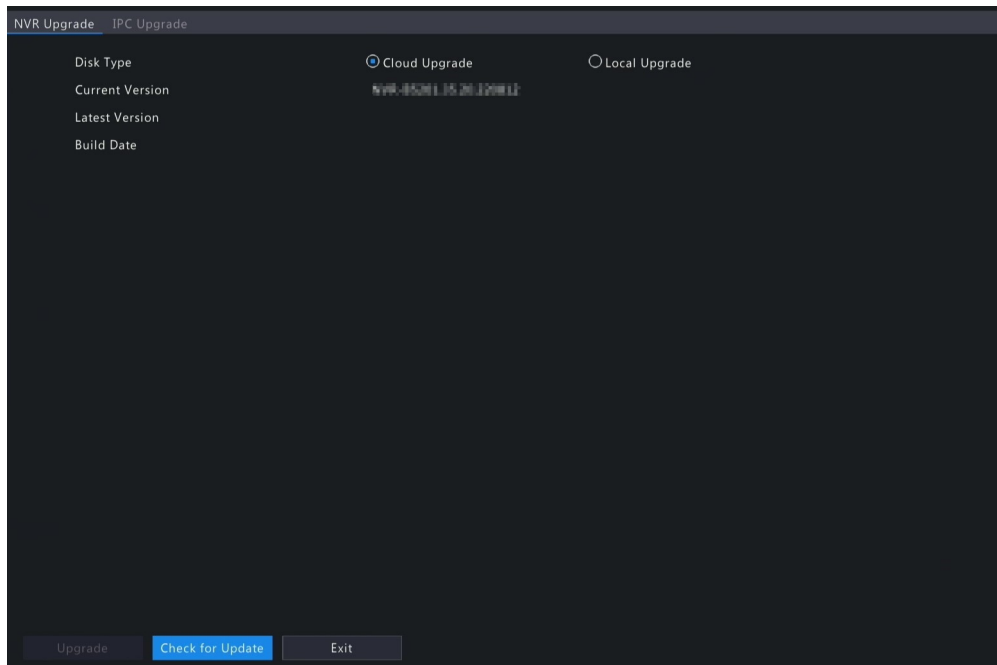
Note:

- Make sure the device is always connected to power and network during the upgrade. Use an Uninterrupted Power Supplies (UPS) if necessary.
- Before you start a cloud upgrade, make sure the DNS server is functional. Go to **Menu > Network > Basic > Network**. See [Network Configuration](#) for detailed information.
- The cloud upgrade speed is limited by the network transmission speed.

11.7.1 NVR Upgrade

Upgrade the firmware of the NVR.

1. Go to **Menu > Maintenance > System Upgrade > NVR Upgrade**.



2. Choose **Cloud Upgrade** or **Local Upgrade**.

- Cloud Upgrade

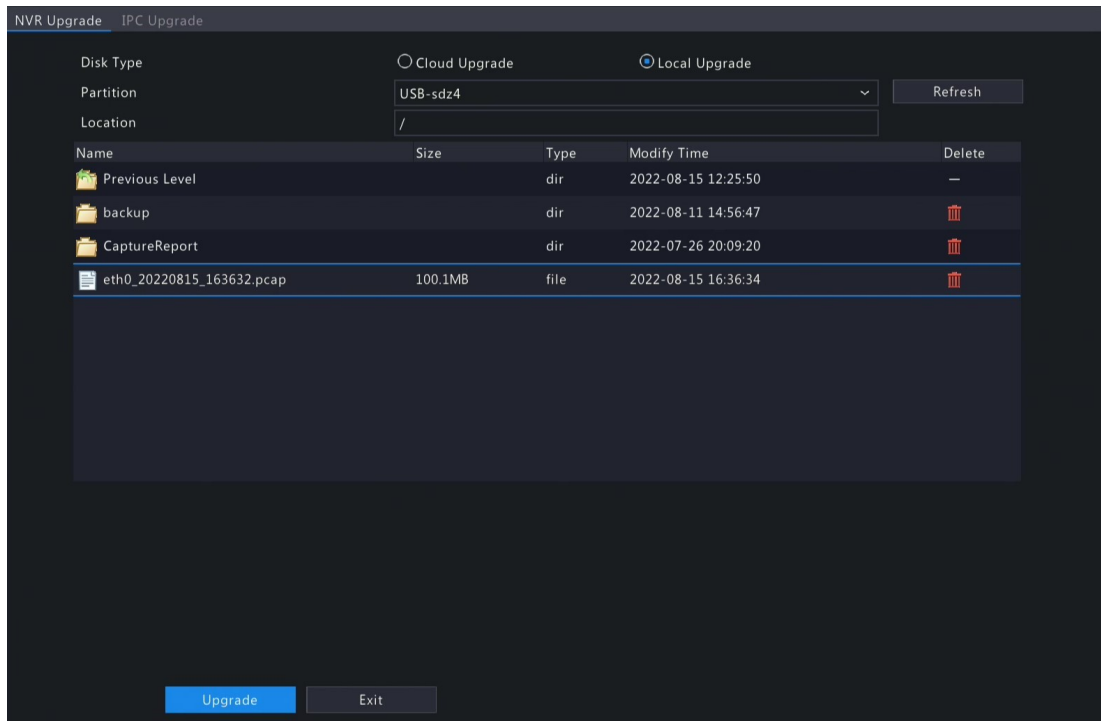
Click **Check for Update**. The system checks for updates.

- If updates are available, the new version number and its build date are displayed. Click **Upgrade** to start.
- If no updates are available, the system indicates that the current version is already the latest.
- Local Upgrade

Select the upgrade file in the USB storage device, click **Upgrade** to start.



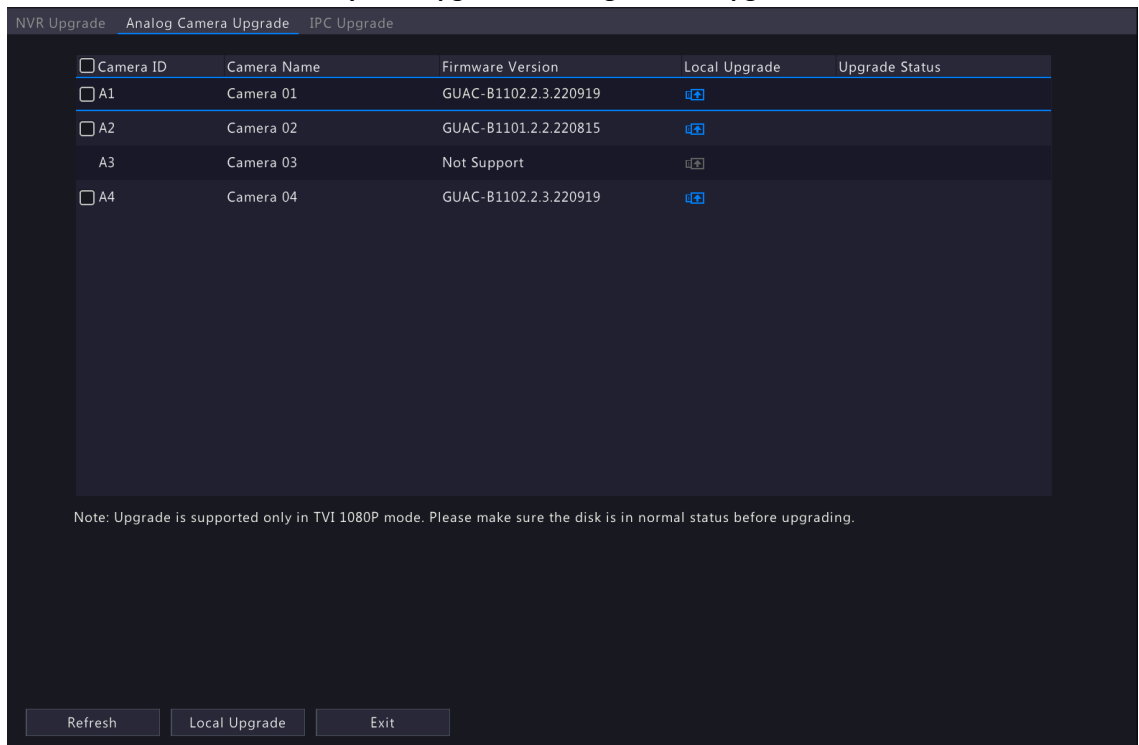
Note: If the upgrade failed, the failure cause will be displayed, and the device will restart automatically. Fix the problem and then try again.



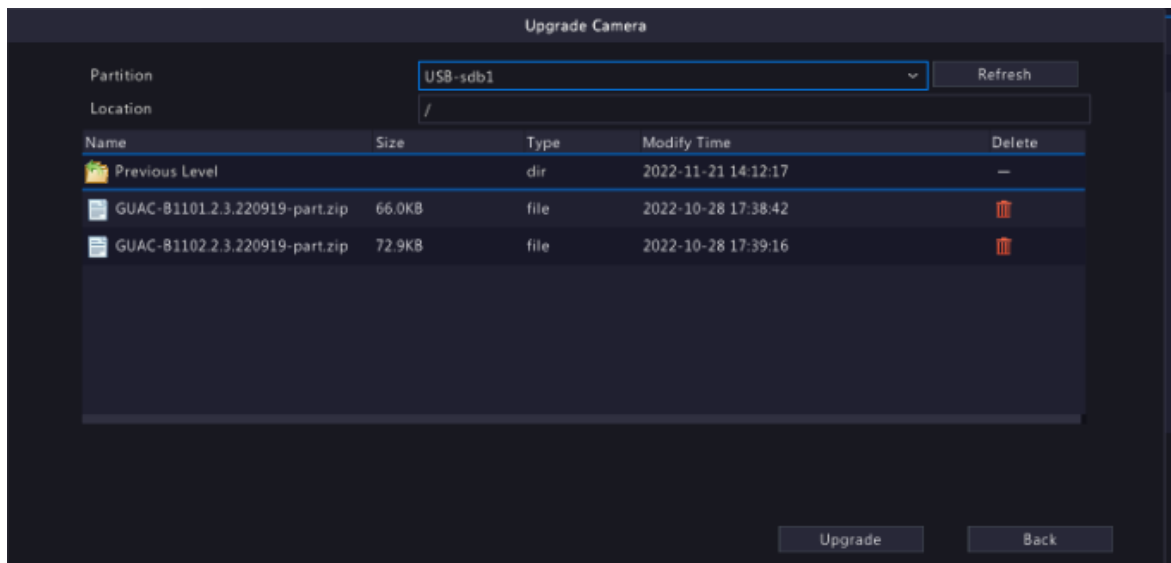
11.7.2 Analog Camera Upgrade

Upgrade the firmware of the analog camera. Upgrade is supported only in TVI 1080P mode.

1. Go to **Menu > Maintenance > System Upgrade > Analog Camera Upgrade**.



2. Click to upgrade a camera, or select multiple cameras and then click **Local Upgrade**.

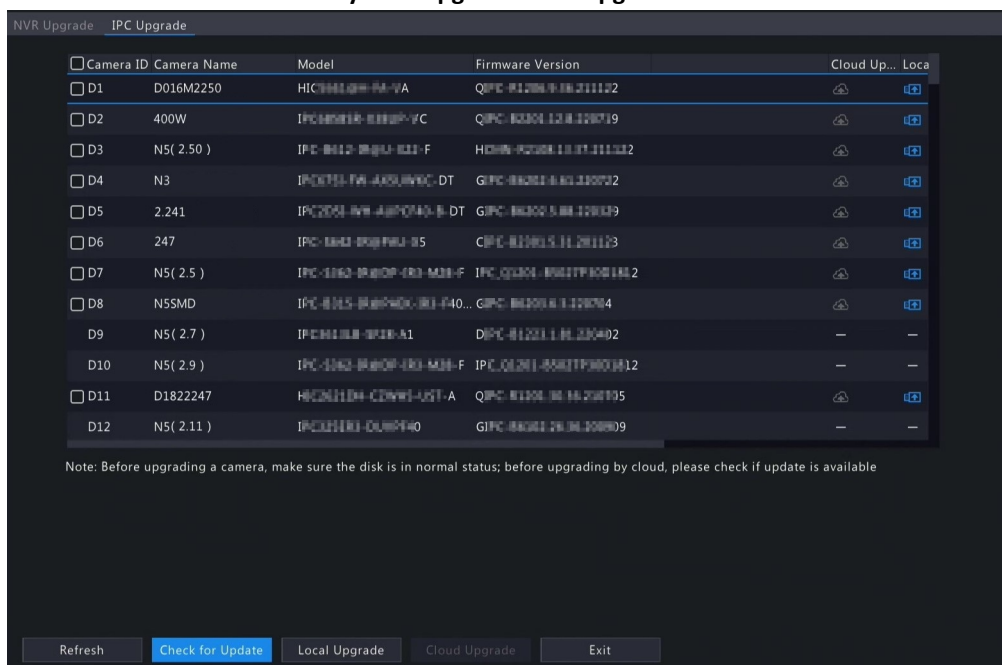


- On the **Upgrade Camera** page, select the upgrade file in the USB storage device, and then click **Upgrade**.

11.7.3 IPC Upgrade

Upgrade the firmware of the IPC. This function is only applicable to cameras connected via the Private protocol.

- Go to **Menu > Maintenance > System Upgrade > IPC Upgrade**.



- Choose **Cloud Upgrade** or **Local Upgrade**.

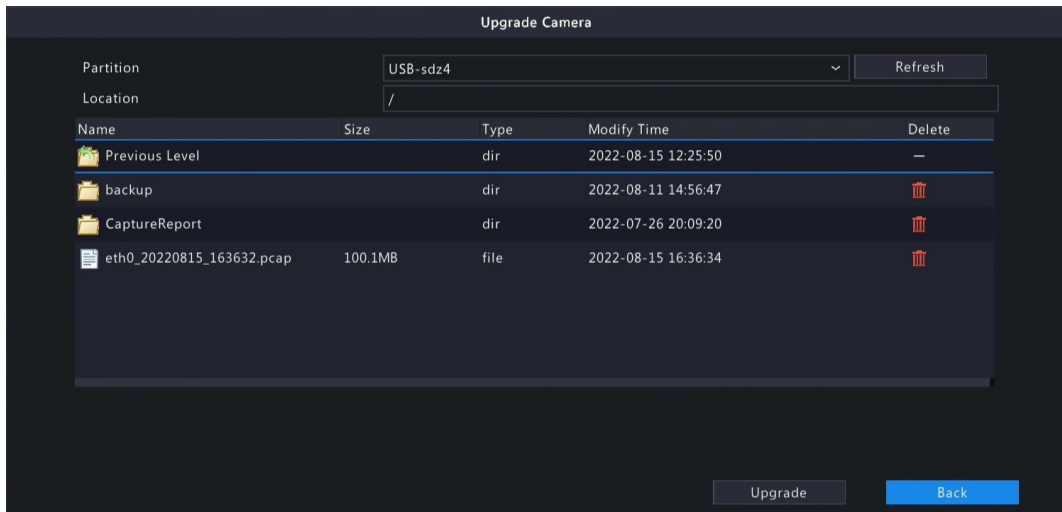
- Cloud Upgrade

Click **Check for Update**. The system checks for updates.

- If updates are available, the new version number and its build date are displayed. Click to upgrade a camera, or select multiple cameras and then click **Upgrade** to upgrade in batches.
- If no updates are available, the system indicates that the current version is already the latest.

- Local Upgrade

(1) Click to upgrade a camera, or select multiple cameras and then click **Local Upgrade**.



- (2) On the **Upgrade Camera** page, select the upgrade file in the USB storage device, and then click **Upgrade**.

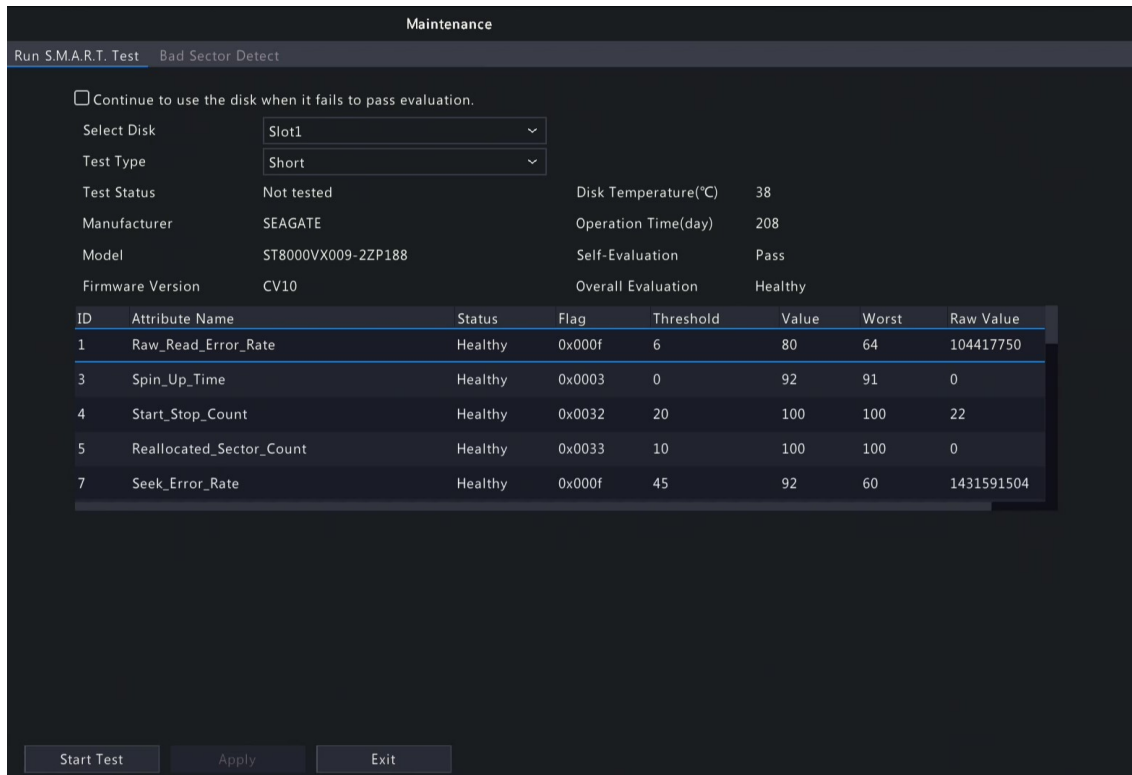
11.8 HDD Check

Perform S.M.A.R.T. test and bad sector detection. The actual functions available may vary with device.

11.8.1 Run S.M.A.R.T. Test

S.M.A.R.T. tests the hard disk including its head, platter, motor, circuit, etc. and evaluates the disk health status.

1. Go to **Menu > Maintenance > HDD > S.M.A.R.T. Test**.



2. (Optional) Select ☒, so the device can continue using the hard disk even if the disk fails in the self-assessment. However, this may incur great risks. Please choose carefully.
3. Choose the disk slot and test type.
 - Short: Less test contents, faster speed.
 - Extended: More comprehensive and thorough, longer time.
 - Conveyance: Detects problems in data transmission.

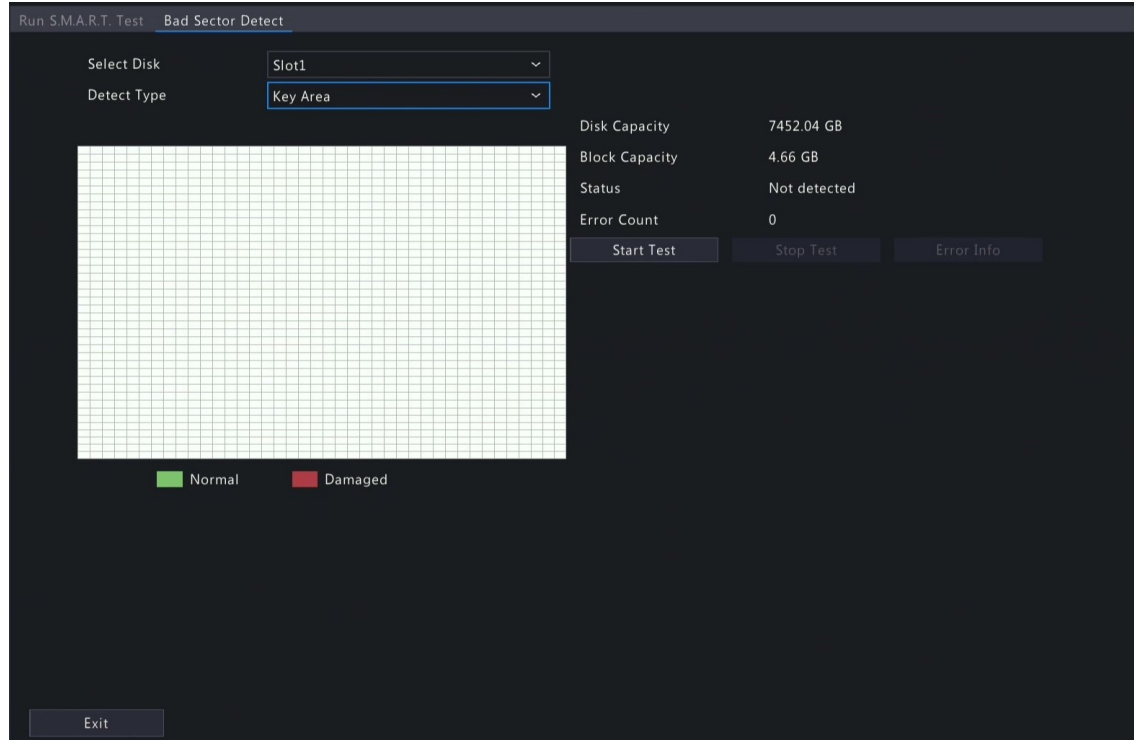
4. Click **Start Test**. The **Test Status** column shows the real-time progress, for example, Testing: 10%. View test results after the test is completed.

The overall evaluation provides three kind of status: Healthy, Failure, Bad Sectors. It is recommended to replace faulty disks immediately. Contact our technical support for more information.

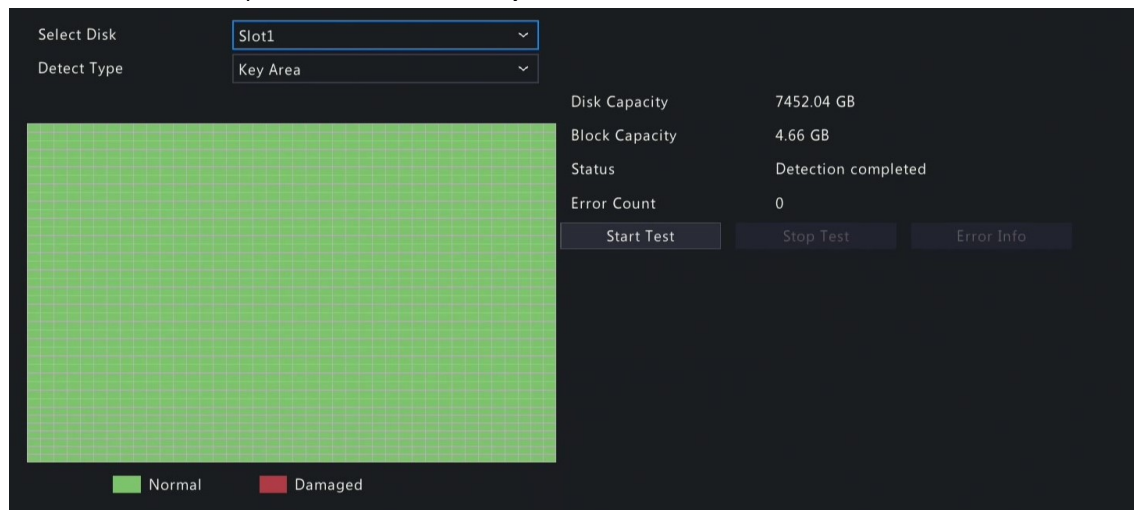
11.8.2 Bad Sector Detection

The device system detects bad sectors in hard disks in a read-only manner.

1. Go to **Menu > Maintenance > HDD > Bad Sector Detect**.



2. Choose the disk slot and detection type.
3. Click **Start Test**. To stop the detection, click **Stop Test**.

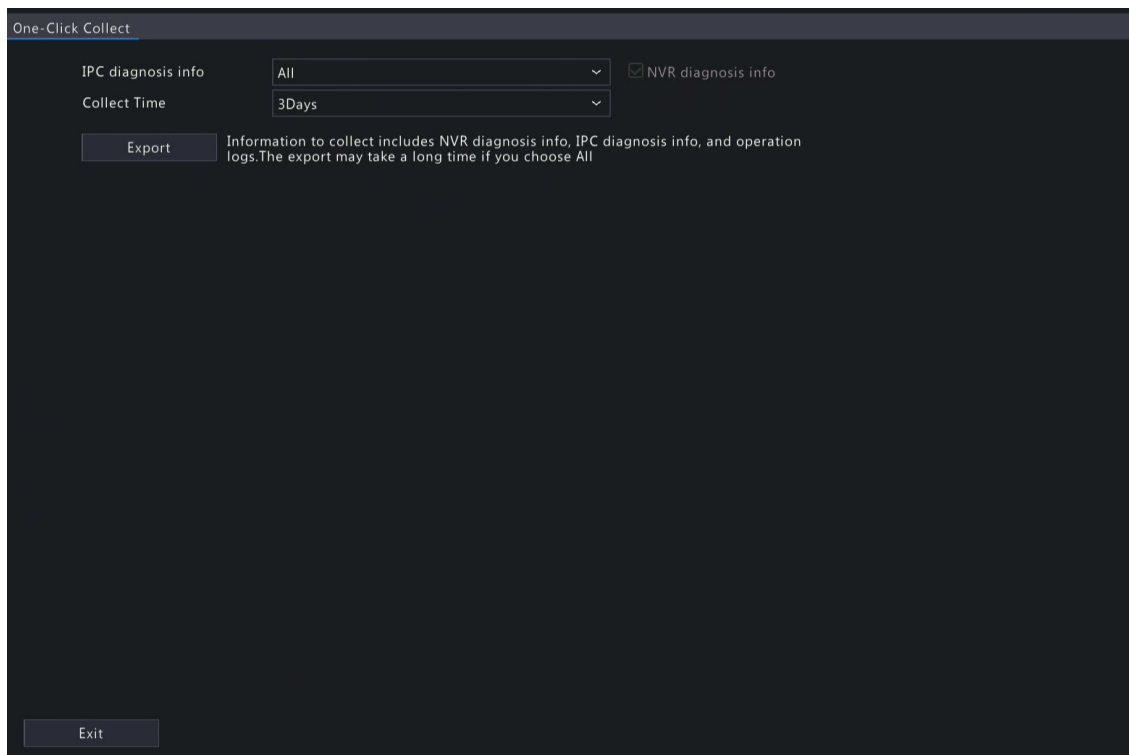


-  means the detected area is in good condition.
-  means the detected area is damaged. The detection stops automatically when the error count reaches 100.

11.9 One-Click Collection

Collect NVR and camera diagnosis information.

1. Go to **Menu > Maintenance > One-Click Collect**.



2. Choose the camera and select a number of days of diagnosis information to be collected. NVR diagnosis information is always collected.
3. Click **Export** to collect camera diagnosis information, NVR diagnosis info, and operation logs.

 **Note:** Choose the days according to the actual requirements. The export process may take a long time if you choose **All**.

12 Playback

12.1 Instant Playback

Instant playback plays the video recorded during the last 5 minutes.

Make sure that the video is recorded during the last 5 minutes. Instant playback does not work if there's no recording during this time.

1. In the preview page, select the target window, and click  on the window toolbar.

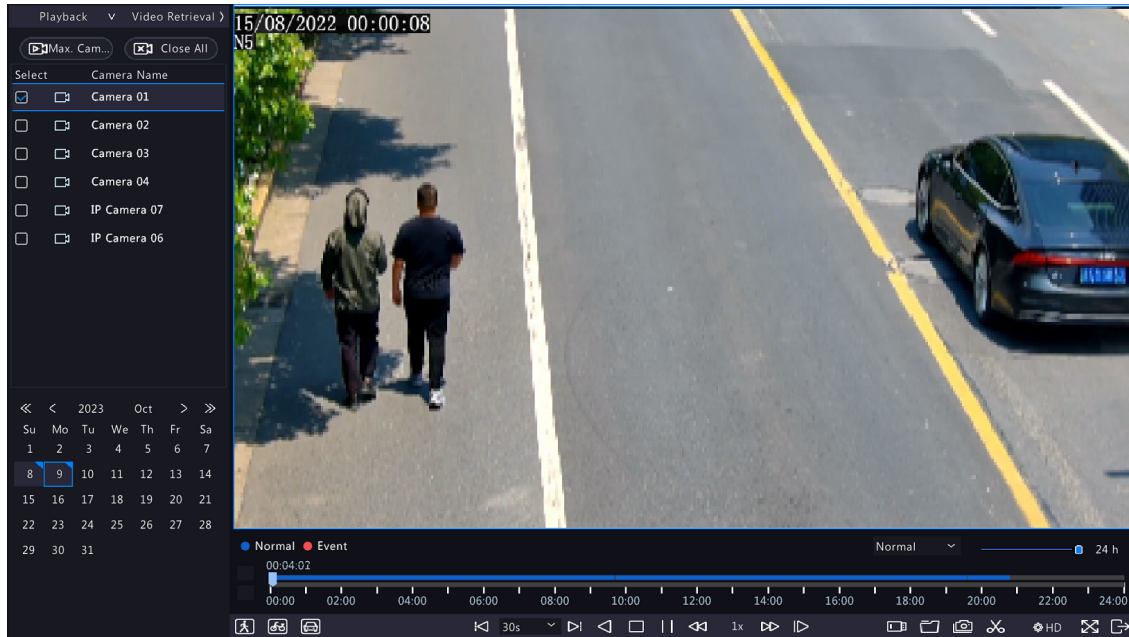


2. Drag the slider on the progress bar to fast forward; Click  to pause.
3. Click  to exit the playback.

12.2 Normal Playback

Normal playback plays all recordings of the selected camera(s).

1. In the preview page, right-click the desired window and select **Playback**. The system plays the video of the selected camera. You can also choose other cameras to play videos in this page.
 - You can choose multiple cameras for synchronous playback.
 - Click **Max. Cameras** to select the maximum number of cameras allowed. The performance may vary with DVR model.
 - Click **Close All** to stop playback for all cameras.



2. Double-click the desired date, or select the date and then click  to start playback. By default, the system plays the video of the current day.

 **Note:** The calendar uses different flags to indicate different recording types: blue for normal recording, red for event-triggered recording, and no flag for none.

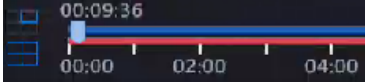
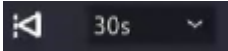
3. The DVR plays HD videos by default. You can switch to SD mode if SD videos are stored.

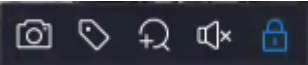
The supported video clarity depends on the storage mode, and HD videos are supported by all the storage mode. To store SD videos, go to **Menu > Camera > Encoding** to set the storage mode. See [Encoding Settings](#) for details.

 **Note:**

- If no images are displayed in the preview page in SD mode, it indicates SD videos are not stored.
- If SD video is available in SD playback mode, SD video is played by default; it switches to HD video automatically when you double-click the window to maximize it in a multi-window layout.

Table 12-1: Playback Toolbar

Button	Description
	Show playback progress.  Note:  indicates 4 cameras are selected.  indicates the playback progress in the first window.  indicates the playback progress in the second window, and so on. - Different colors on the progress bar mean different recording types: blue for normal recording, red for event-triggered recording, green for smart event recording.
	Timeline.  Note: In normal playback mode, hover over the timeline to view a thumbnail image to quickly pinpoint an event.
	Zoom in or out on the timeline. Alternatively, click on the timeline and use the scroll wheel to zoom in or out.
	Select , , or , and the corresponding human body, non-motor vehicle, or motor vehicle recordings will be shown green on the progress bar.  Note: - Select ☒ Skip normal reco., and the playback page will only play recordings of the corresponding object type. - This function is only available to the single-channel playback.
	File saved on a USB storage device.
	Start/stop clipping video.
	Manage files (clips, snapshots, locked files, tags);  indicates there is a newly saved file.
	Take a snapshot. The window borders will flash white.
	Rewind/forward 30s, or choose from the drop-down list.
	Reverse.
	Stop playback and return to the start point.
	Play/pause.
	Slow down/speed up.  Note: Click  to restore the normal playback speed after clicking , and vice versa.
	Forward by frame.

Button	Description
	Set the video clarity, including HD or SD.
	Full screen.
	Exit the playback screen.
	Click a playback window to show the window toolbar.
	Take a snapshot.
	Add a tag at the current time point.
	Digital zoom. See Digital zoom for details.
	Turn on/off audio.
	Adjust the sound volume.
	Lock.

12.3 Smart Playback

In smart playback mode, the system searches smart events in the recording and adjusts the playback speed accordingly. If smart results are detected such as motions, the video plays at normal speed; otherwise, the video plays at 16x speed to save time.

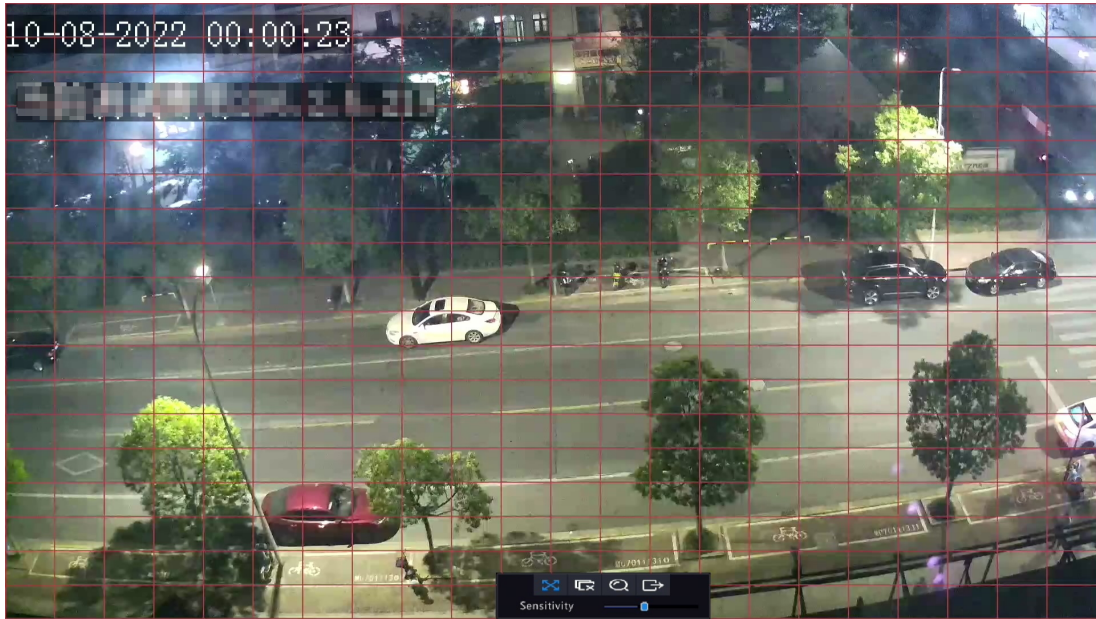
Note:

- This function is available for cameras that support smart functions.
- By default the system searches motion in video.
- Only one camera can be selected for smart playback.

1. In the playback page, select **Smart**.



2. Select the desired camera.
3. Double-click the date you want to play, or select the date and then click  or  to start playback.
4. Set smart search rules. The default smart search area is the full screen. To specify a smart search area, follow the steps below.
 - (1) Click  to go to the **Smart** page.



- (2) Click  to clear the existing areas, then click and drag on the image to specify an area.

Table 12-2: Smart Search Buttons

Button	Description	Button	Description
	Motion detection: Full screen.		Clear the specified areas.
	Start search smart playback of the specified areas.		Exit the Smart page.
	Adjust detection sensitivity.		

12.4 External File Playback

This function allows you to play recordings stored in an external storage devices such as USB drive or portable hard drive.

1. In the playback page, click  on the screen toolbar.
2. Click **Refresh** and then wait for the DVR to read the external storage device.
3. Double-click the desired recording file, or select the file and then click  or  to start playback.



12.5 Tag Playback

Use tags to mark specific events in the video for quick location and playback.

Add Tag

1. In the playback page, select the desired camera and date, and click  to start playback.
2. Click anywhere on the image, and then select  in the pop-up toolbar.

Add Tag

Tag Time

2022-08-15 00:00:28

Tag Name

OK

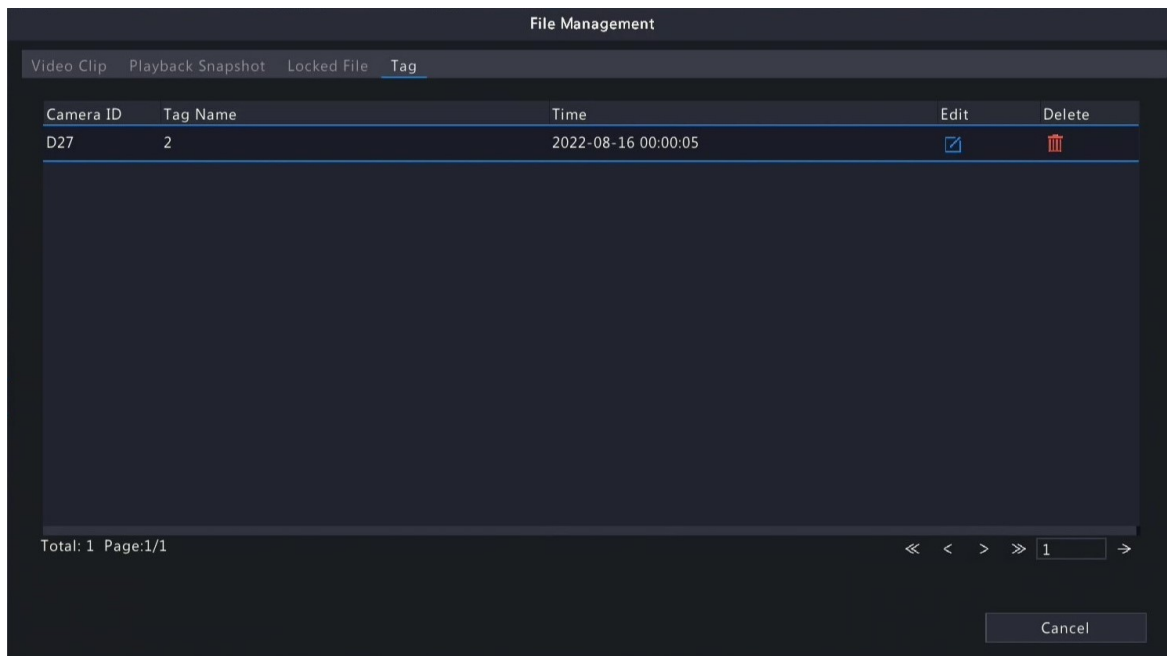
Cancel

3. Enter the tag name. Tag time cannot be edited, which is the time when the tag was added.
4. Click **OK** to save the settings.

Tag Management

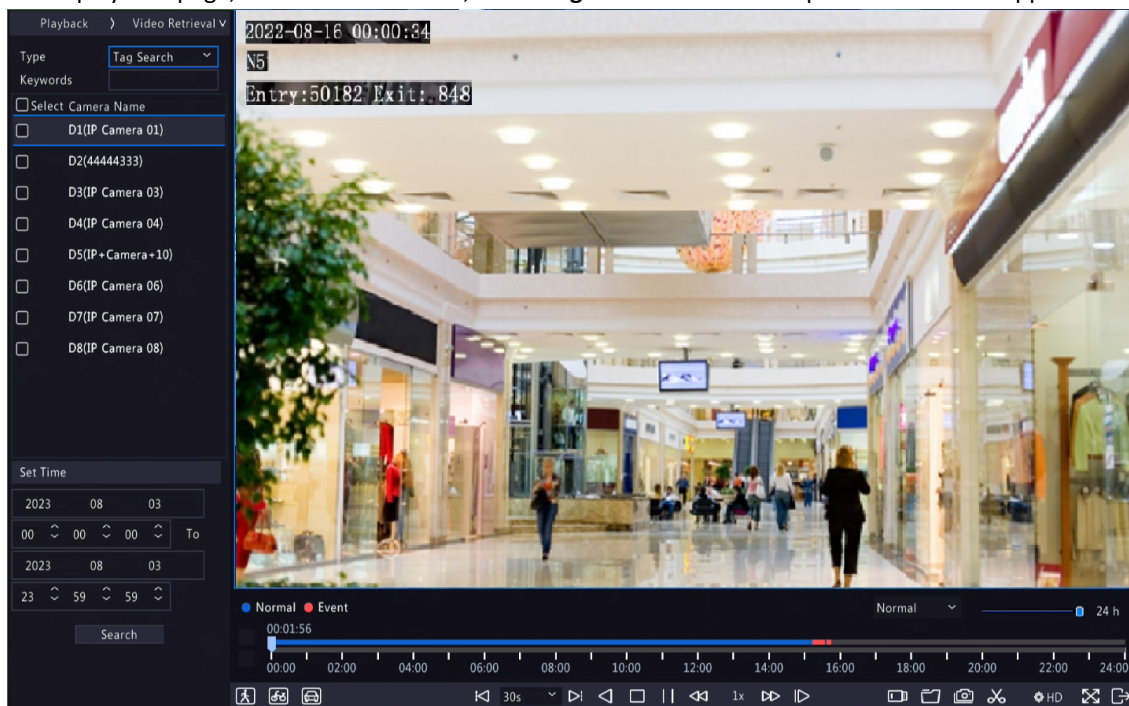
The added tags are saved to **File Management**. To view the newly added tag, click  on the screen toolbar.

To rename a tag, click . To delete a tag, click .

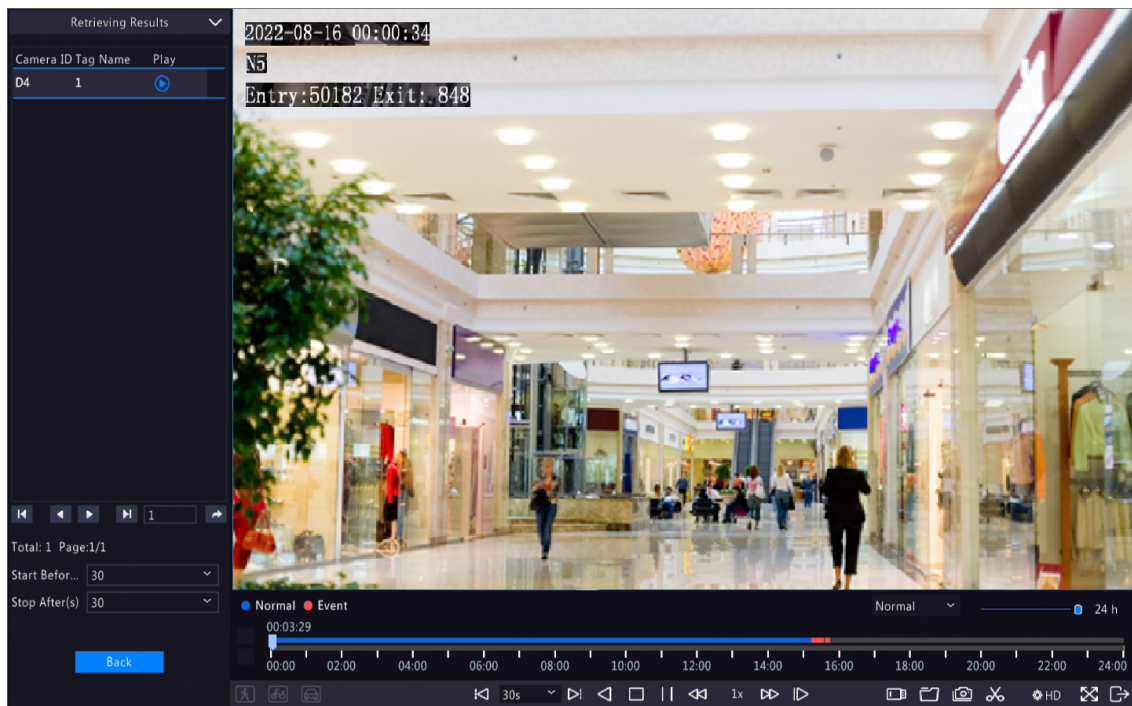


Playback by Tag

1. In the playback page, click **Video Retrieval**, select **Tag Search** from the drop-down list in the upper left corner.



2. Select the desired cameras with tags, enter keywords, set the time period, and then click **Search**.



3. Double-click the tag you want to play, or select the tag and then click  or  to start playback.

12.6 Playback by Search

This function allows you to search and play recordings by an event type, such as motion detection, alarm input, video loss, VCA, tag, and people present alarm.

 **Note:** Before playback, make sure that the alarm and alarm-triggered storage for the event are enabled.

1. In the preview window, right-click and select **Playback**.
2. In the playback page, click **Video Retrieval**, select the type and sub type, and enter keywords.



3. Select the desired camera(s) and time period, and then click **Search**.
4. Double-click the result you want to play, or select the result and then click  or  to start playback.

12.7 File Management

File management allows you to manage video clips, tags, snapshots taken during playback, and lock/unlock files.

Video Clip

You may clip and back up videos during playback. See [Video Clip Backup](#) for details.

Playback Snapshot

You may take a snapshot during playback and then back up the snapshot. See [Playback Snapshot Backup](#) for details.

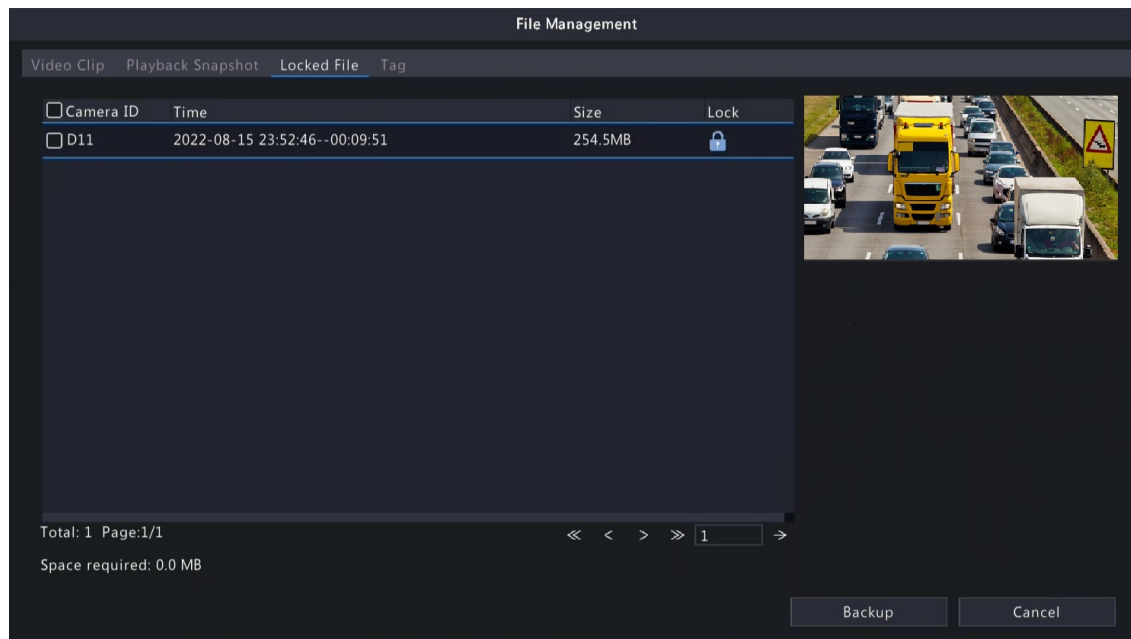
Locked File

You may lock, unlock, and back up a recording file.

1. In the playback page, select the desired camera and date, and click  to start playback.
2. Drag the slider to play the desired part of the video, click on the image to display the toolbar, and then select .

Locking a recording file will prevent all the files stored in the same disk partition (254.4MB in size) from being overwritten.

3. Click  on the screen toolbar to view the locked file in the **Locked File** tab.
 - To unlock a file, click , and then the icon changes to .
 - To back up a file, select the file and then click **Backup**.



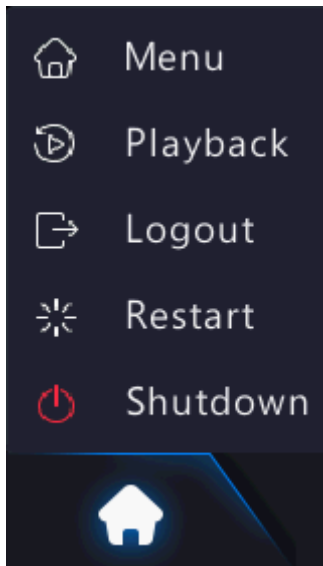
Tag

You may view, edit, or delete tags as needed. See [Tag Management](#) for details.

13 Shutdown

This chapter describes device shutdown, logout, and restart.

Shutdown refers to turn off the operating system of the device with power supply connected. Please disconnect the power supply if the device will be shut down for a long time.



- To shut down the DVR, long press the power button on the front panel (if available) for more than 3 seconds till an on-screen message appears, and then click **Yes**.
- To shut down, log out, or restart the DVR, hover the mouse at the bottom of the preview page to display the screen toolbar, click  and then select shut down, log out, or restart as needed.

 **Note:** Unsaved settings will be lost if the DVR is shut down unexpectedly, for example, due to a power failure. A shutdown during a system upgrade may cause startup failures.

14 Web-Based Operations

You may access and manage the DVR remotely using a web browser on your PC (through the Web interface).

14.1 Preparation

Check the following before you begin:

- Access will be authenticated during login, and operation permissions will be required.
- The DVR is operating properly and has a network connection to the PC.
- A Web browser is installed on the PC. Chrome 60 or later is recommended. Firefox 60 or later, Microsoft Internet Explorer 10.0 or later, Edge 79 or later are also supported.
- The PC uses an operating system of Windows 7 or later.
- A 32-bit or 64-bit Web browser is required if you are using a 64-bit operating system.

 **Note:**

- The parameters that are grayed out on the Web interface cannot be edited. The parameters and values displayed may vary with DVR model.
- The figures below are for illustration purpose only and may vary with DVR model.

14.2 Login

Follow these steps to log in to the Web interface (take IE10 browser as an example).

1. Open a Web browser on your PC, enter the IP address of the DVR in the address bar (**192.168.1.30** by default), and then press Enter.
2. Install the plug-in.
 - You need to install the plug-in as prompted at your first login, which is mainly used for processing media streams. Close all the Web browsers when the installation starts. Follow the on-screen instructions to complete the installation and then open the browser again to log in.



[Please click here to download and install the latest plug-in. Close your browser before installation.](#)

- You may also find the plug-in manually by entering <http://IP address/ActiveX/WebPlayer.exe> in the address bar, and press Enter.



Note:

- The plugin-free function may vary with device model.
- For non-IE browsers, you can log in to the Web interface without installing the plug-in, but some functions on the live view, playback, and setup pages are unavailable.

3. In the login page, enter the default username and password (admin/123456) and then click **Login**.

The login page for the NVR824-256R device. It features a dark blue header with the model name 'NVR824-256R' and a language dropdown menu set to 'English'. Below the header, there are two input fields: 'Username' and 'Password'. To the right of the password field is a blue link that says 'Forgot Password'. At the bottom, there are two buttons: 'Login' and 'Reset'.

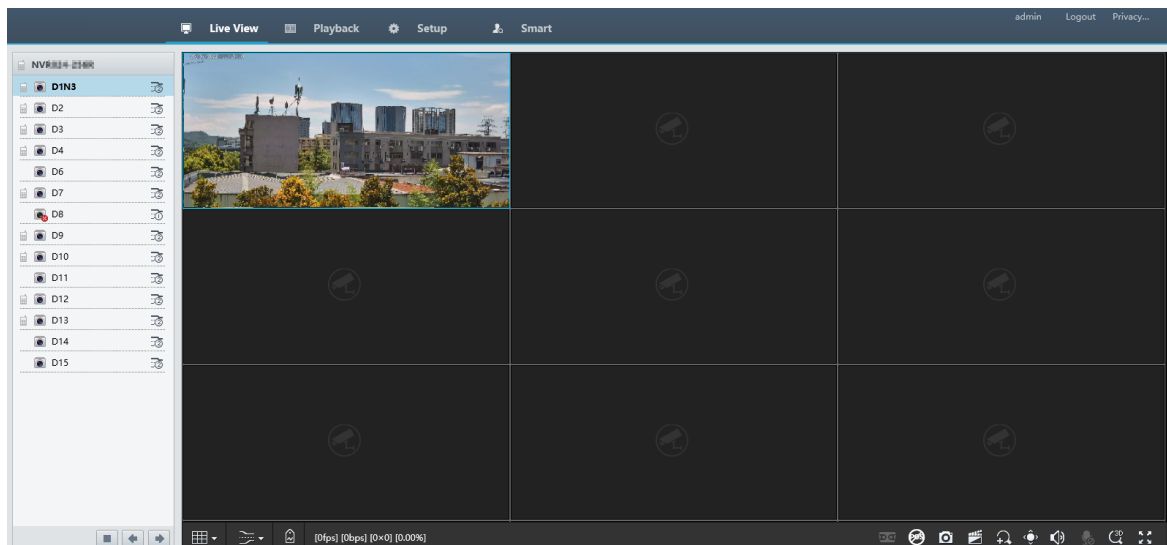


Note: The default password is intended only for your first login. You are strongly recommended to set a strong password to ensure account security.

- Strong password: At least 9 characters including all three elements: letter, special character, and digit.
- Weak password: Less than 9 characters including two or less of the three elements: letter, special character, and digit.

14.3 Live View

The **Live View** page is displayed when you are logged in. Select the desired channel on the left, and view the live video.



The operations may vary with DVR model.

Table 14-1: Live View Window Control Buttons

Button	Description	Button	Description
	Two-way audio		Main/sub/third stream
	Start/stop live video in all windows		Previous/next screen
	Switch screen layout		Select stream type
	Enable/disable intelligent mark		Frame rate/bit rate/resolution/packet loss
	Open/close the control panel		Take a snapshot
	Local recording		Digital zoom
	Turn on/off audio		Start/stop two-way audio
	3D positioning		Full screen
	Multi-sensor preview	-	-

Note:

-  right to device name means two-way audio with the DVR.  right to channel name means two-way audio with the camera.
- Only the main stream  is displayed when the camera is offline or it supports only one stream.
- Snapshots are saved in a snapshot file folder named with the IP address, and snapshot files are named in *Camera ID_ time* format and saved in this directory: \Snap\IP\Camera ID_time. The time is in YYYYMMDDHHMMSSMS format.
- Local recordings are saved in a recording file folder named with the IP address, and recording files are named in *Camera ID_S recording start time_E recording end time* format and saved in this directory: \Record\IP\Camera ID_S recording start time_E recording end time. The recording start and end times are in YYYYMMDDHHMMSSMS format.

14.4 Playback

Click **Playback** to go to the **Playback** page. You can select the playback type, clarity, and camera to view recorded videos.

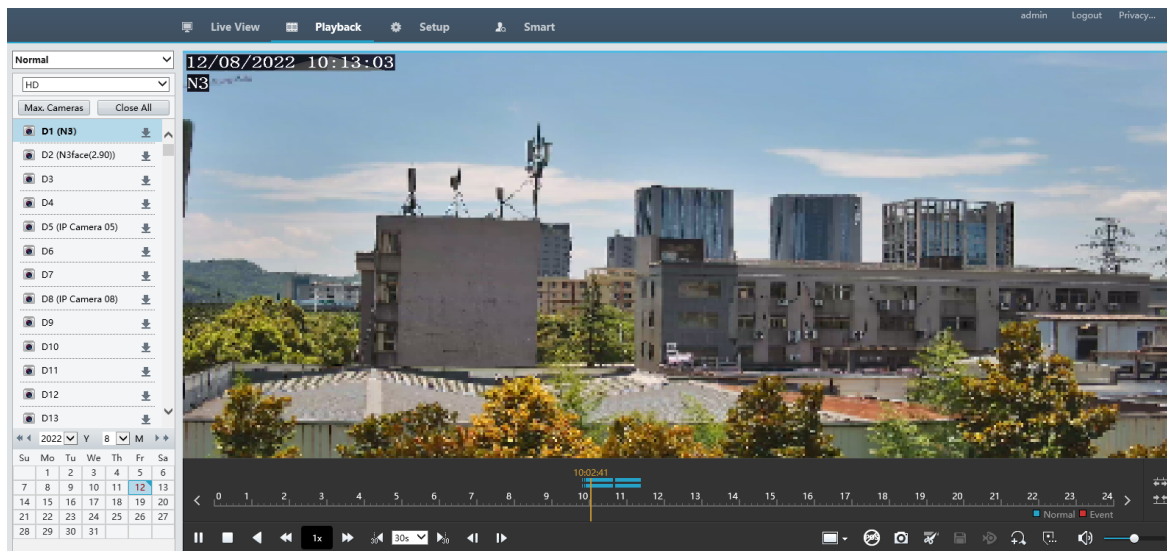


Table 14-2: Playback Control Buttons

Button	Description	Button	Description
	Play/pause		Stop
	Reverse		Slow down/speed up
	Rewind/forward 30s. You can change the time as needed.		Rewind/forward by frame
	Set the display ratio, including full or original		Take a snapshot
	Start/stop clipping video		Save video clip
	Enable/disable digital zoom		Add a custom tag
	Zoom in/out on the timeline		Adjust sound volume; turn on/off sound
	Previous/next period		

14.5 Configuration

Click **Setup** on the top, and set the relevant parameters.

14.6 Smart

Click **Smart** on the top, and configure the relevant parameters. See [VCA Configuration](#) for details.

15 Appendix FAQ

Problem	Possible Cause and Solution
Forgot the login password.	Click Forgot Password in the login page as admin, then follow the on-screen instructions to retrieve password.
Cannot load the Web plugin.	- Close your web browsers when the installation starts. - Disable the firewall and close the anti-virus program on your PC. - Enable your Internet Explorer (IE) to check for newer versions of the stored pages every time you visit the webpage (Tools > Internet Options > General > Settings). - Add your DVR's IP address to the trusted sites in your IE (Tools > Internet Options > Security). - Add your DVR's IP address to the Compatibility View list in your IE (Tools > Compatibility View Settings). - Clear your IE's cache.
No images are displayed in live view on the Web interface.	Check if the bit rate is 0Mbps in the live view window. - If yes, check if the firewall/anti-virus program is disabled on your PC. - If not, check if the graphics card driver on your PC is working properly. Try installing the driver again.
A camera is offline, and No Link is displayed.	Click Menu > Maintenance > System Info. The cause is displayed under Status. Common causes include disconnected network, incorrect username or password, weak password, and insufficient bandwidth. - Check network connection and other configuration. - If it indicates incorrect username or password, check that the camera password set in the DVR is the one used to access the camera's Web interface. - If it indicates denied access for weak password, log in to the camera's Web interface and set a strong password.

Problem	Possible Cause and Solution
	• If it indicates insufficient bandwidth, delete other online IP devices on the DVR.
The NVR displays live video for some cameras and No Resource for others.	• Set the camera to encode the sub stream, and decrease its resolution to D1. • Set the DVR to use the sub stream first for live view.
A camera goes online and offline repeatedly.	• Check if network connection is stable. • Upgrade the software version of the camera and DVR. Contact your dealer for the latest versions.
Live view is normal, but the recording cannot be found.	• Check if a recording schedule is properly configured. • Check if the time and time zone configured in the DVR are correct. • Check if the hard disk storing the recording is damaged. • Check if the desired recording has been overwritten.
Motion detection is not effective.	• Check that motion detection is enabled, and the motion detection area is properly configured. • Check that detection sensitivity is properly set. • Check that the arming schedule is properly configured.
A hard disk cannot be identified by the DVR.	• Use the power adapter delivered with the DVR. • Disconnect the power supply of the DVR, and then mount the hard disk again. • Try another disk slot. • The disk is not compatible with your DVR. Contact your dealer for a list of compatible disk models.
The mouse does not work.	• Use the mouse delivered with your DVR. • Make sure no cable is extended.