Network Video Recorders

User Manual

V2.00

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About This Manual

Thank you for purchasing our product. Contact your local dealer if you have any questions or feedback. No part of this manual may be copied, reproduced, translated, or distributed in any form or by any means without prior consent in writing from our company.

Disclaimer

- To the maximum extent permitted by applicable law, the product described, with its hardware, software, firmware, and documents, is provided on an "as is" basis.
- Best effort has been made to verify the integrity and correctness of the contents in this manual, but no statement, information, or recommendation in this manual shall constitute formal guarantee of any kind, expressed or implied. We shall not be held responsible for any technical or typographical errors in this manual. The contents of this manual are subject to change without prior notice. Update will be added to the new version of this manual.
- Use of this manual and the product and the subsequent result shall be entirely on the user's own responsibility. In no event shall we be liable for any special, consequential, incidental, or indirect damages, including, among others, damages for loss of business profits, business interruption, or loss of data or documentation, or product malfunction or information leakage caused by cyber attack, hacking or virus in connection with the use of this product.
- Video and audio surveillance can be regulated by laws that vary from country to country. Check the law in your local region before using this product for surveillance purposes. We shall not be held responsible for any consequences resulting from illegal operations of the device.
- 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.
- This manual is a guide for multiple product models and so it is not intended for any specific product.
- Due to uncertainties such as physical environment, discrepancy may exist between the actual values and reference values provided in this manual. The ultimate right to interpretation resides in our company.

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

1 Preface

This manual describes how to use your NVR locally or on the Web interface.

In this manual, the terms IP camera and IPC refer to the same thing: network camera, which requires a connection to the network. And the IP device mentioned in this manual refers to an IP camera (also known as network camera) or a Digital Video Server (DVS).

An NVR supports two types of operations: local operations and web-based remote operations. With local operations you connect a monitor and a mouse to the NVR and use the mouse to operate.

The NVR has an embedded web server and allows web-based operations. To do this, you need a PC that has a network connection to the NVR and is installed with a web browser. You just need to navigate to the NVR's IP address and log in to the Web interface like you log in to the system locally.

2 Local Operations

Please be aware that the parameters that are grayed out on the system user interface (UI) cannot be modified.

The parameters and values displayed may vary with device model, and the figures in this manual are for illustration purpose only.

2.1 User Login

Use the default username **admin** and password **123456** for your first login.

CAUTION: The default password is intended only for the first login and should be changed to a strong one containing at least nine characters including letters, digits, and special characters after your first login to ensure security.

1. Right-click anywhere in the window and then choose **Menu**. The login dialog box is displayed.
2. Select the username from the drop-down list, enter your password, and then click **Login**.

2.2 Mouse Operations

Name	Action	Description
Left button	Click	• Select or confirm an item. • Select to edit digits, symbols, upper-case or lower-case letters in a field.
	Double-click	Enter or exit full screen mode in live view.
	Drag	Draw or move a rectangle on the screen, for example, a motion detection area.
Right button	Click	• Show the shortcut menu. • Exit zoom. • Exit the current window when **Cancel** or **Exit** is displayed.
Wheel	Scroll up or down	Scroll up or down a list or a window; or zoom in or out on a playback progress bar.

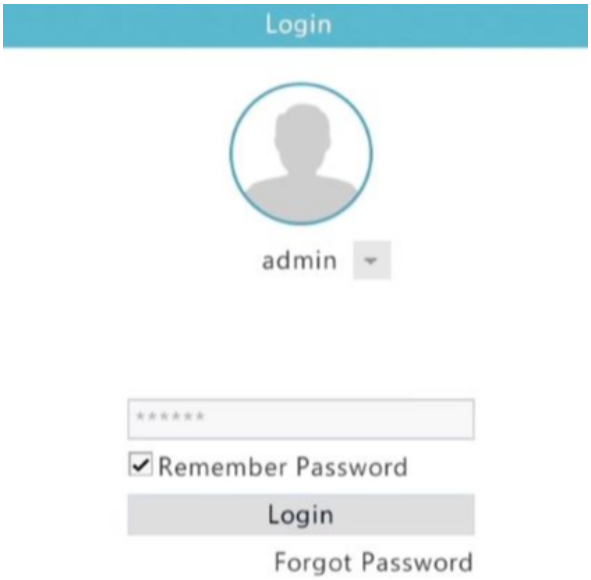
3 Initial Configuration

3.1 Preparation

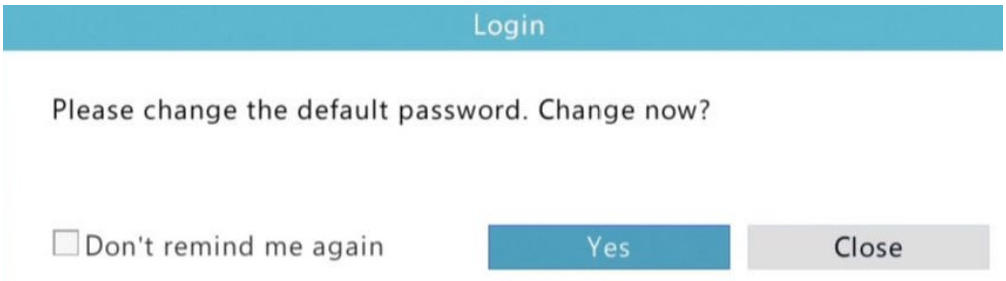
- Make sure that at least one monitor is correctly connected to the VGA or HDMI interface on the rear panel of the NVR.
- Verify that the hard disk(s) are correctly installed. For detailed steps to install a hard disk, please refer to the quick guide shipped with your NVR.

3.2 Login

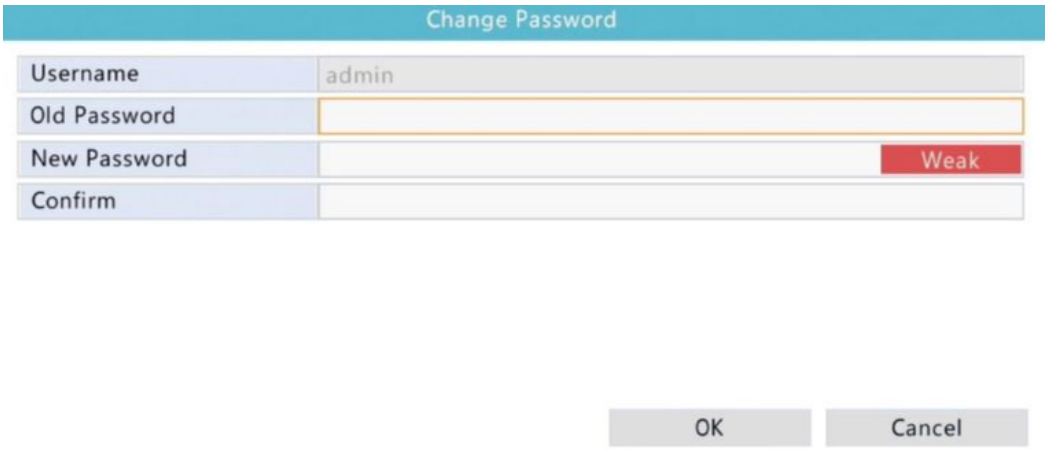
The login page appears after the NVR starts up.



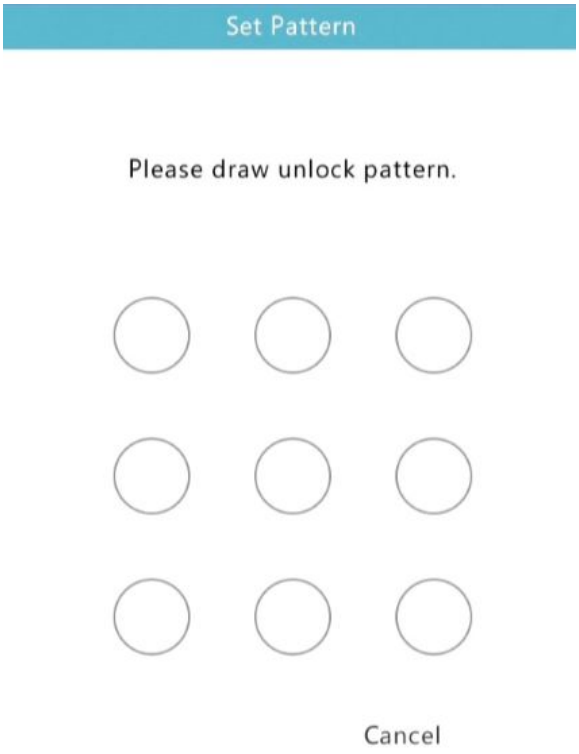
1. Enter the default admin password **123456**, click **Login**, and click **Yes** to change the password.



2. Set a strong password, and then click **OK**.



3. Set the unlock pattern.



Note: Unlock pattern can be enabled/disabled at **System** > **User**. See User Configuration for details.

4 Live View

4.1 Live View Status

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

Table 4-1: Live View Window Icons

Icon	Description
	Two-way audio
	Motion detection alarm

Icon	Description
	Recording

4.2 Window Toolbar

Table 4-2: Window Toolbar Icons

Icon	Description
	Available for PTZ cameras only. Click to display the PTZ control window.
	Click to set OSD.
	Zoom in on an area of interest. See Zoom for details.
	Click to edit image settings. See Image Configuration for details.
	Start two-way audio with the camera. Click  to stop. The sound volume is adjustable. **Note:** Correct audio input and output connections are required.
	Click to play video recorded during the past 5 minutes.
	Hover over your mouse pointer on the icon to view bitrate info; click this button to view the camera ID and IP address or to change the username and password used to connect the camera.
	Click to turn on audio. Click  to turn off audio. The sound volume is adjustable. **Note:** When you turn on audio in the current window, audio of the previous window is turned off.
	Exit.

Zoom

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

1. Click the window and then click  on the window toolbar.
2. In the small window in the lower right corner, click and drag your mouse to the area you want to zoom in. The following shows an example.



Note: The system adjusts the area automatically according to the window size and its aspect ratio. Also, the system has specified a minimum size to ensure zoom effects.

Image Configuration

Adjust image settings to get optimal images from a camera.

1. Click the window and then click on the window toolbar.



2. Select the image mode, including road highlight compensation, standard, bright, vivid, custom, etc.
3. Drag the slider to adjust image parameters.

Table 4-3: Image Parameter Description

Icon	Meaning	Description
	Brightness	The brightness of the image. The higher the value, the brighter the image.
	Saturation	The intensity of color in an image. The higher the value, the purer the colors appear.
	Contrast	The degree of difference between the lightest (white) and darkest (black) parts of an image. The greater the value, the more clear and colorful the images appear.

4. Close the window to complete the image configuration.

4.3 Shortcut Menu

A shortcut menu as shown below appears when you right-click in a window. Some menu items are described in Shortcut Menu Description.



Table 4-4: Shortcut Menu Description

Menu	Description
Camera	Click to configure cameras, including camera, video, OSD, and image parameters.
Menu	Access the main menu. Most of operations described in this manual are performed start from the main menu; for example, go to **Camera** > **Camera** (with **Menu** > omitted).
Playback	Play the current day's recording for the camera linked to the current window.
Light Config	Configure image parameters to get optimal images from a camera.
Mobile Service	Available to certain NVR models. Click to display the cloud service window. You may scan the QR code and download an app to manage your NVR.
VCA Config	Quick access to configure VCA functions, including intrusion detection, cross line detection, enter detection, and leave detection.
Network Config	Click to configure network information. Network configuration is required if your NVR operates in a network.
Window Switch	Switch the display mode of screen, including single window, multiple windows, or corridor window(s).
Start Sequence	Click to display live video from different cameras in turn at sequence intervals.
Output Mode	Choose a video output mode, including standard, soft, bright, vivid, and custom.
Alarm Status	Click to view device alarm status and camera status.
Shutdown	Logout, restart, or shutdown.

Sequence Operation

The sequence operation requires you to configure the screen layout, windows, linked cameras, and sequence interval.

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

1. Select **Window Switch** > **4 Windows** on the shortcut menu.

2. Click **Start Sequence** on the shortcut menu. Sequence starts by displaying four windows on the first screen and then the fifth on the second at the set interval.



Note:

- The default sequence interval is eight seconds and can be set under **System** > **Preview**.
- You may drag video to an intended window on the screen.

4.4 PTZ Control

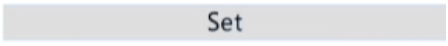
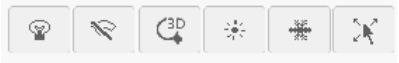
PTZ (pan, tilt and zoom) control is applicable to PTZ cameras only and may vary depending on the functions and protocols supported by the PTZ cameras. Refer to PTZ camera specifications for more details.

PTZ Control Window and PTZ Management Window

1. Click  on the window toolbar. The **PTZ Control** window appears.
2. Click the **Set** button. The **PTZ Management** window appears.

Table 4-5: PTZ Control Window Buttons

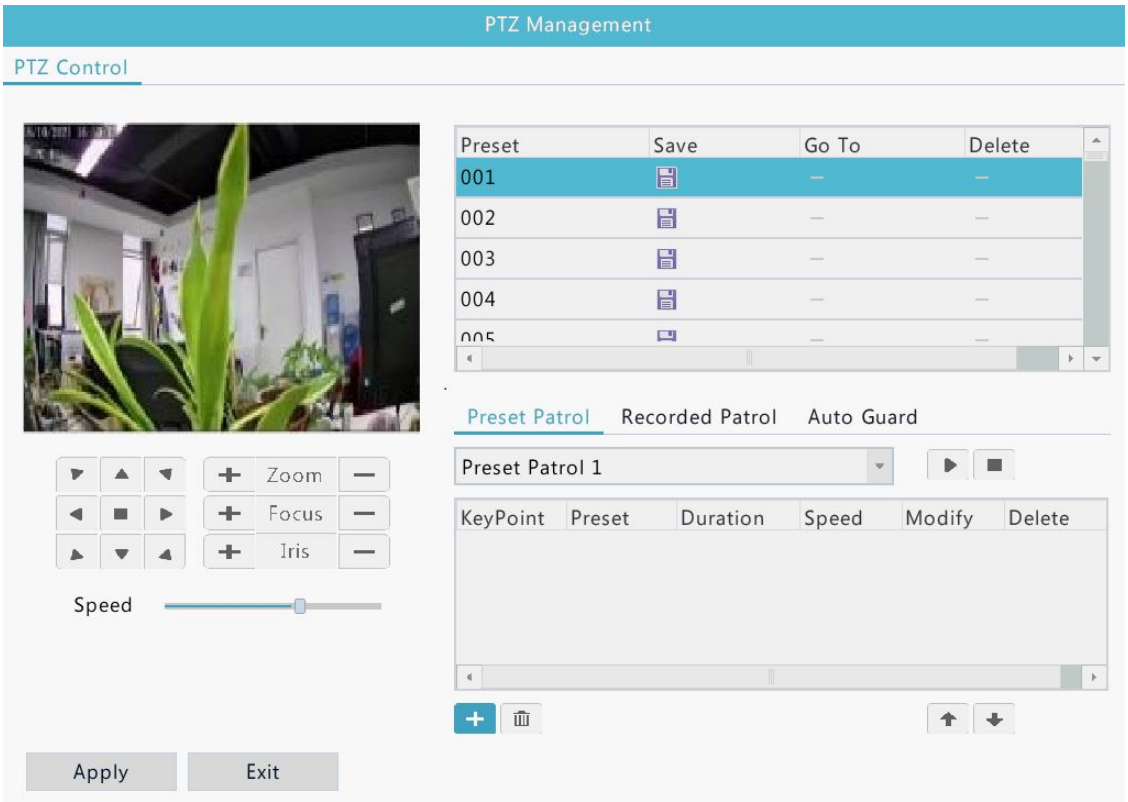
Button	Description
	Control the rotation direction of the PTZ camera or stop rotation.

Button	Description
	Adjust the zoom, focus, and iris of the PTZ camera. **Note:** You can also zoom in or out using the scroll wheel on your mouse.
	Control the rotation speed of the camera. 1 means the slowest, and 9 means the fastest.
	Click to display the **PTZ Management** window.
	• Turn on/off the light. • Turn on/off the wiper. • Use 3D positioning. • Turn on/off the heater. • Turn on/off the function to remove snow. • Turn on/off PTZ shortcut operations. **Note:** • Check 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.
	• Save the current position and status of the camera as a preset. • Call a preset so the PTZ camera goes to the preset position. • Delete a preset. **Note:**  and  are displayed for saved presets only.
Preset / Preset Patrol / Recorded Patrol / Auto Guard	For detailed information, see Preset, Preset Patrol, Recorded Patrol, and Auto Guard respectively.
	Start or stop.

Setting and Calling a Preset

A preset position (preset for short), is a saved view used to quickly steer the PTZ camera to a specific position. A preset consists of the following settings: pan and tilt positions, zoom, focus, and iris.

1. Access the **PTZ Management** window. For the detailed steps, see PTZ Control Window and PTZ Management Window.



2. Add presets.

   (1) Click the directional buttons to steer the PTZ camera to the desired position.

   (2) Adjust the zoom, focus, and iris as needed.

   (3) Select a preset number not in use, and then click  under **Save**.

   (4) Repeat the above steps to add all the presets.

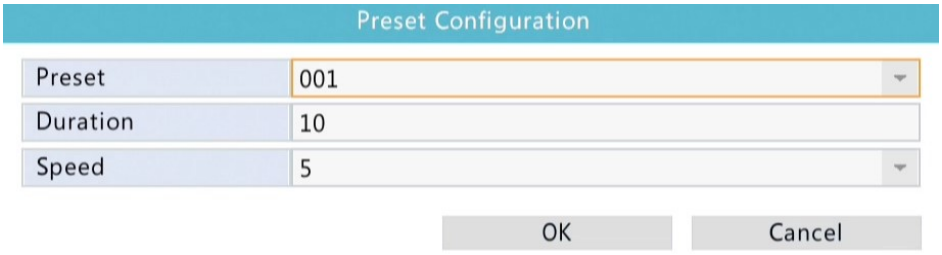
3. To call a preset, click  for the corresponding number. The camera rotates to the preset position.

   Note: Presets can also be triggered by alarms. See Alarm-Triggered Actions for details.

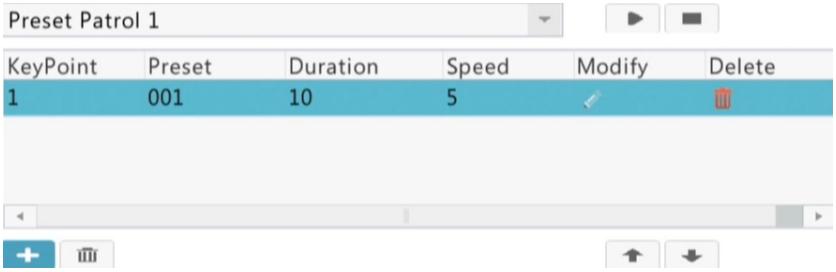
Setting a Preset Patrol

Set the PTZ camera to patrol by presets (go from one preset to the next in specified order). You need to set presets first and then select some as keypoints. Up to four patrol routes (Preset Patrol 1, 2, 3, and 4) are allowed for each PTZ camera, and each patrol route can have up to eight presets (keypoints). After setting presets, follow the steps to set a preset patrol. The following takes preset patrol 1 as an example.

1. In the **PTZ Management** window, click . A window is displayed as follows.



2. Select a preset from the drop-down list, set the duration (time the camera stays at the preset, unit: second), and then set the rotation speed (1: slowest, 9: fastest). Click **OK** to save the settings. The preset is added as a keypoint, as shown in the figure below.



3. Repeat the above steps to add all presets (keypoints), and adjust the sequence of these presets by clicking or . Modify or delete a preset by clicking or . Clicking will delete all the added keypoints.
4. After completing the configuration, click **Apply** to save the settings. Now keypoints for preset patrol 1 is complete.
5. Click right to the drop-down list to start preset patrol 1. To stop, click .

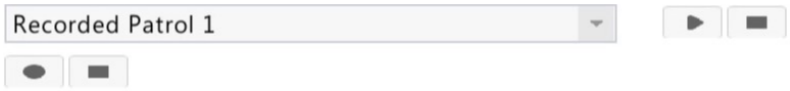
Note: The duration ranges from 0 to 1800 seconds (default: 10). The rotation speed ranges from 1 to 9 levels (default: 5).

Setting a Recorded Patrol

This function requires the camera's support. The drop-down list and the buttons on the right are hidden if this function is not supported by the camera. Currently only one recorded patrol route is allowed.

Record a patrol, including the patrol route, the time that the camera stays at a certain direction, rotation speed, zoom, focus and iris.

1. Click to start recording. Steer the camera to the desired directions, adjust the zoom, focus, and iris as needed during the process.



2. Click to stop recording. All the patrol actions have been recorded.
3. To start the recorded patrol, click . Click to stop.

Setting Auto Guard

Use auto guard so the PTZ camera automatically operates as configured if no operation is performed by any user during a certain time period. Auto guard avoids situations where the camera is left to monitor incorrect scenes by user's negligence.

This function requires the camera's support. The **Auto Guard** tab is hidden if it is not supported.

1. Click **Auto Guard** and then select **Enable**.
2. Set the parameters.

Table 4-6:

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 preset patrol.
Preset/Poute	Select a preset number or preset patrol number.

3. Click **Apply** to save the settings.

5 Channel Configuration

Configure IPC, video, audio, OSD, image, privacy mask, etc.

5.1 Channel Management

This chapter describes how to add and manage IP devices in your NVR. The IP devices mentioned in this manual mainly refer to IP camera (or network camera); sometimes they can also be Digital Video Server (DVS).

Note:

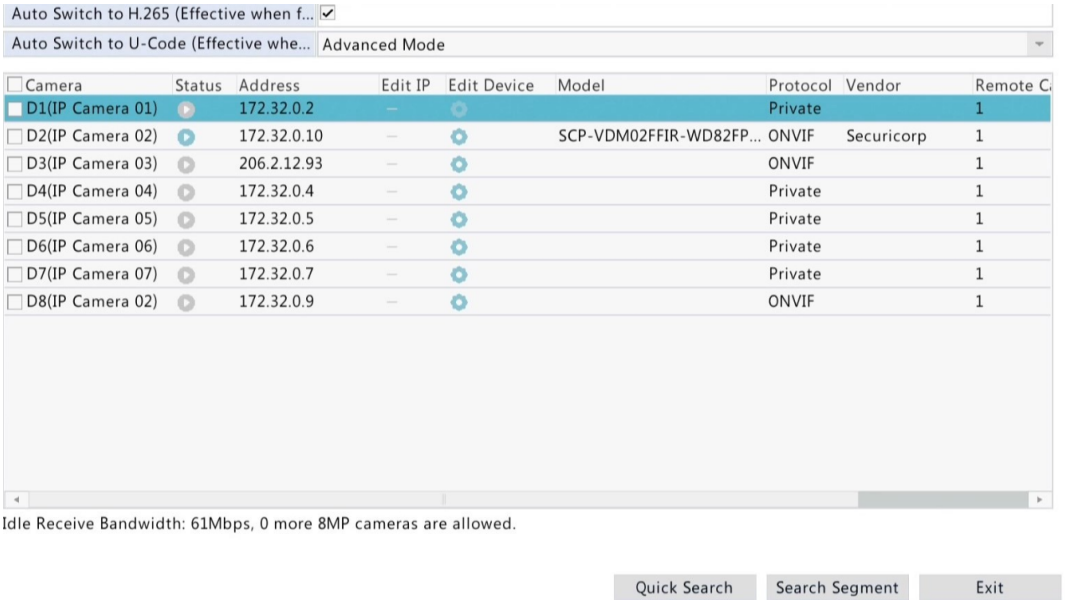
- Before you start, make sure the IP devices are connected to your NVR via network.
- An IP device should be connected to one NVR only. An IP device managed by multiple NVRs may cause unexpected issues.

Adding an IP Device

This section provides multiple options to add an IP device. Some options are only applicable to certain NVR models. Choose one as appropriate.

- Option 1

  1. Go to **Menu** > **Camera** > **Camera**. The system automatically searches for IP devices and lists the discovered.



  Note:

  - under **Status** means an IP device is added successfully, and you may click to view live video from the IP device. means the IP device is offline, and you may view the cause by hovering over the mouse pointer on the .
  - The idle bandwidth is displayed to indicate current bandwidth available for receiving streams.

  2. (Optional) To search a specified network segment, click **Search Segment** and then set the address range.
  3. Click **Quick Search** to add all the discovered IP devices allowed (depending on channels supported by the NVR).

- Option 2

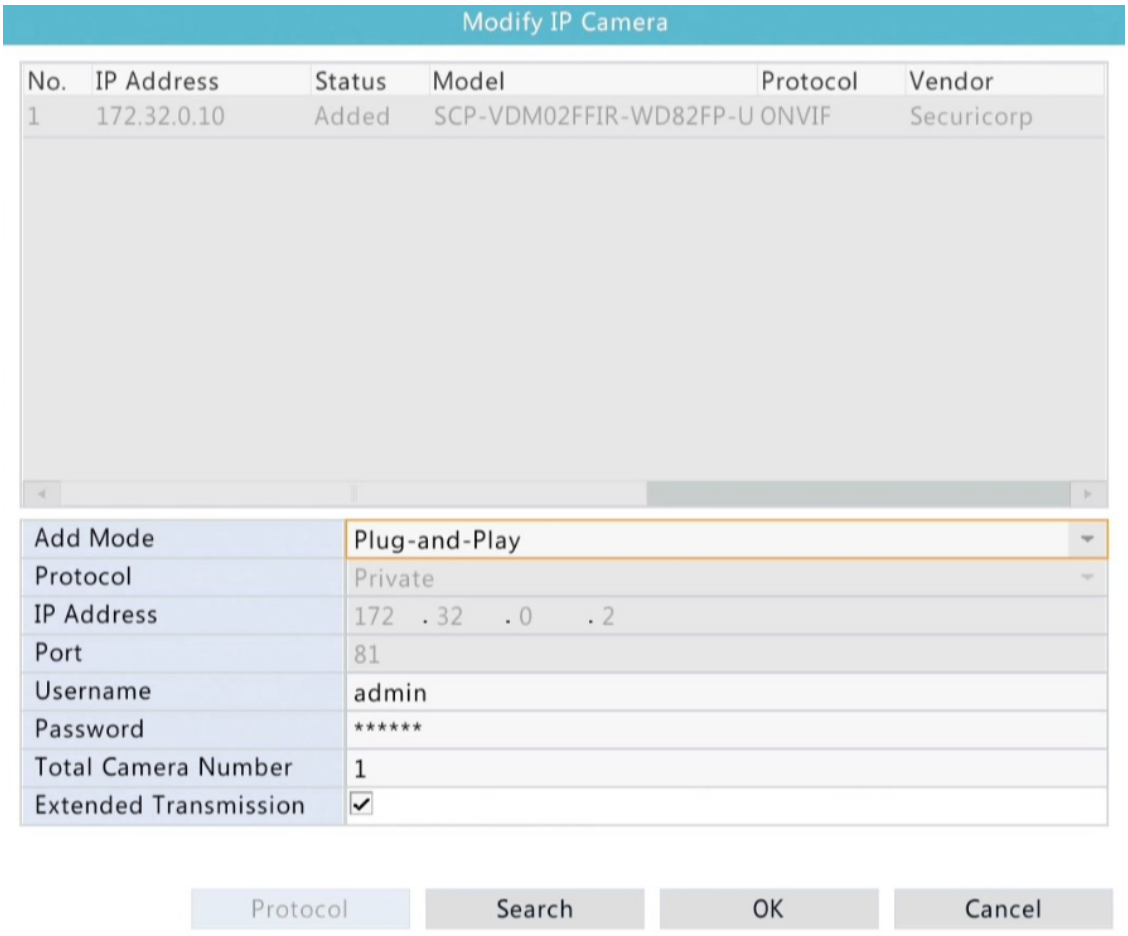
  Connect an IP camera to a PoE port or a switching port with a network cable. The connected camera will be added to the NVR automatically. Check status under **Camera** > **Camera** > **Camera**. means live video from the camera is available. Click to view live video.

  Note: appears under **Status** if the power output from a PoE port is below or above the rated power of the connected camera.

Managing an IP Device

Manage IP devices under **Menu** > **Camera** > **Camera**.

- Click to edit settings including the protocol, IP address, port number, username, and password. The **Camera IP** field displays the IP address that the current channel links to, and you may change the address so the channel links to another device. The username and password must be consistent with that of the IP camera.

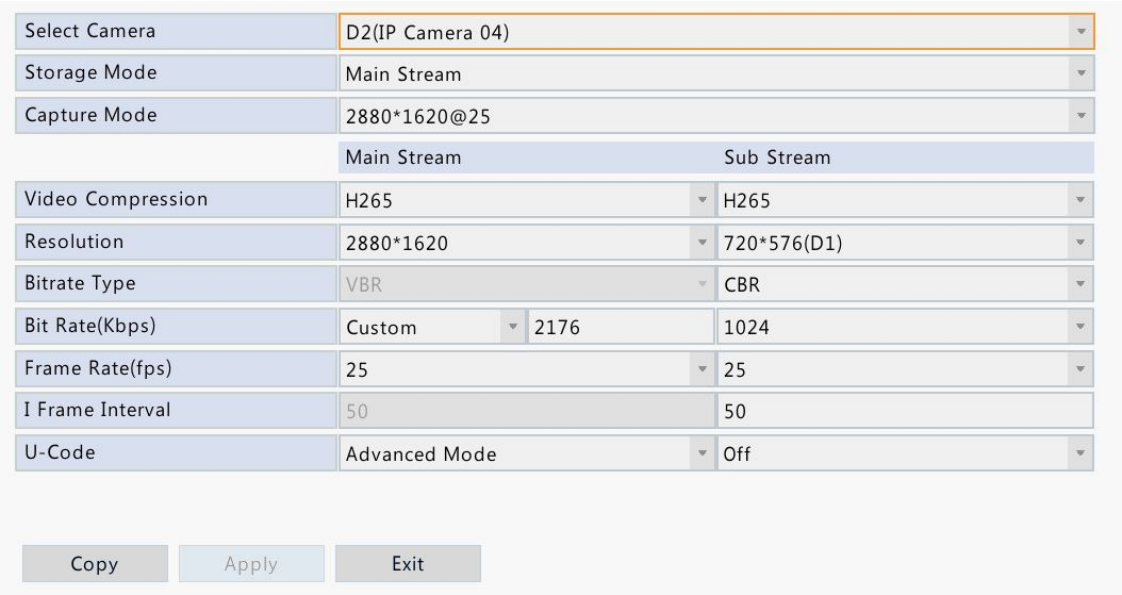


- Click to change the IP address of an IP camera and the default gateway. A DVS' IP address cannot be edited from the NVR. — means this function is not available.

5.2 Video Configuration

Configure storage mode, capture mode, stream type, etc. The parameters and options displayed may vary with camera model and version. Some functions may be unavailable if the camera version is too low. In this case, you need to upgrade the camera first.

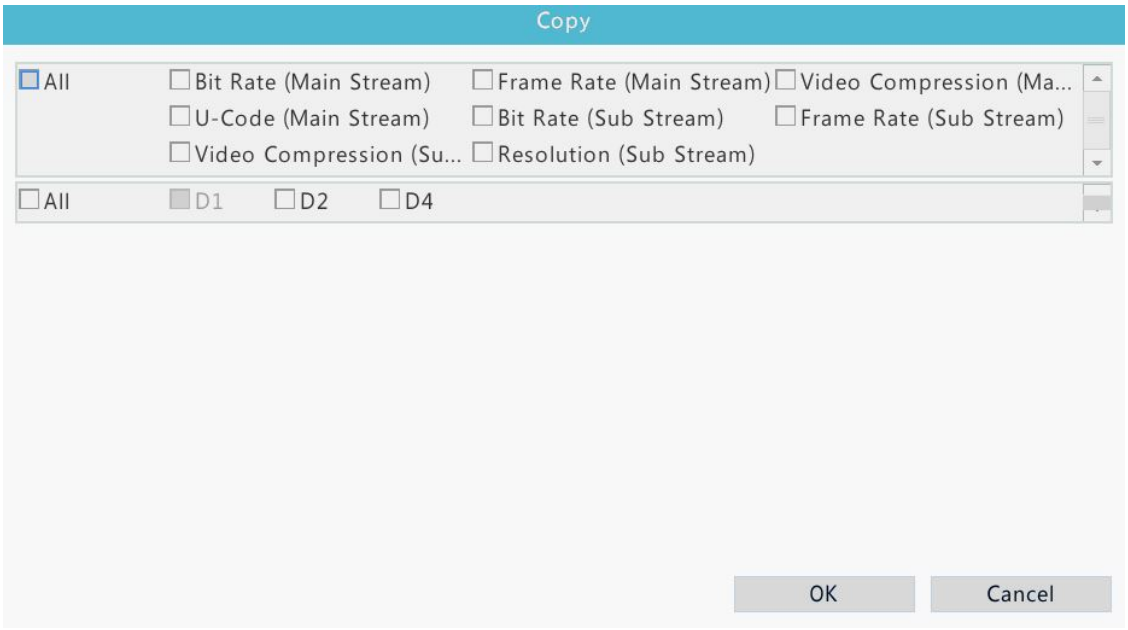
1. Go to **Menu** > **Camera** > **Video**.



2. Select the camera and then configure parameters as needed.

Parameter	Description
Storage Mode	• Main Stream: Main stream that is intended for scheduled recording. • Sub Stream: Low resolution video that is intended for local or remote real-time monitoring. **Note:** By default, the main stream is used for storage.
Capture Mode	Combinations of resolution and frame rate. This parameter is configurable only when the camera is connected to the NVR via the private protocol.
Video Compression	Video compression standard, for example, H.264, H.265. The listed options depend on the standards supported by the camera.
Resolution	Image resolution.
Bitrate Type	• CBR: Constant Bit Rate (CBR) is used to maintain a specific bit rate by varying the quality of video streams. CBR is preferred when limited bandwidth is available. The disadvantage is that video quality will vary and may decrease significantly with increased motion in the scene. • VBR: When using Variable Bit Rate (VBR), video quality is kept as constant as possible, at the cost of a varying bit rate, and regardless of whether or not there is motion in the image. VBR is ideal when high quality is a requirement, especially when there is motion in the picture.
Bit Rate(Kbps)	Number of bits transferred per second. Select a value or select **Custom**, and then set a value as needed.
Frame Rate(fps)	Number of frames per second.
I Frame Interval	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.

3. (Optional) Click **Copy** to apply some current settings such as bit rate and frame rate to other cameras.



Note:

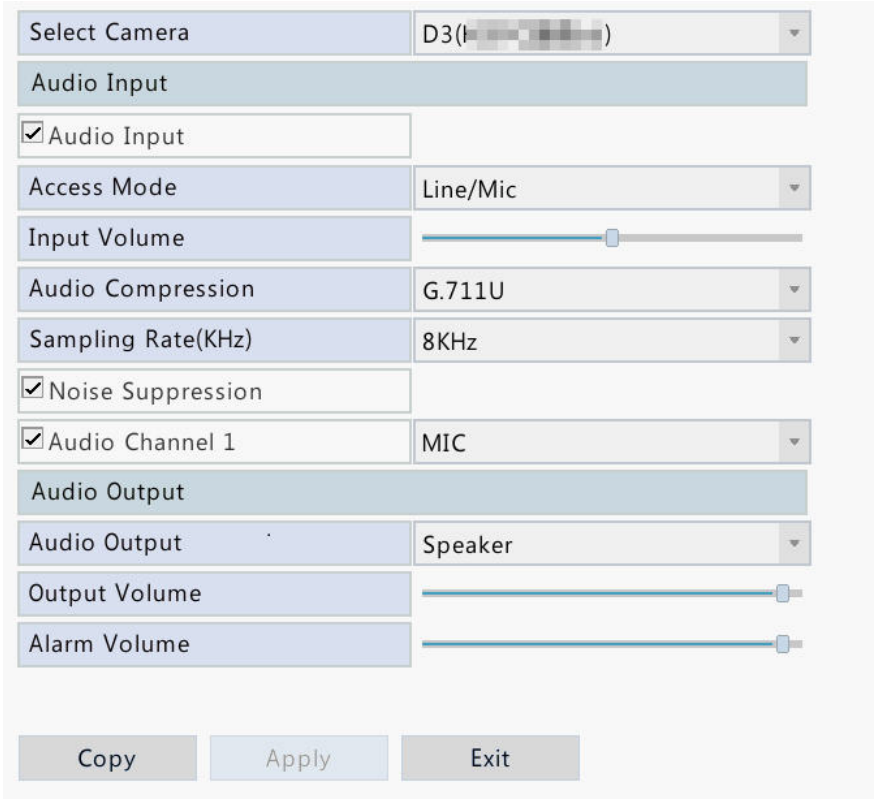
- When you copy **Storage Mode** to other camera(s), if the target camera does not support the storage mode, the operation will fail.
- The video compression automatically adjusts bit rate, therefore when you copy **Video Compression (Main Stream)** and **U-Code (Main Stream)** to other camera(s), **Bit Rate (Main Stream)** will be selected automatically; when you copy **Video Compression (Sub Stream)** to other camera(s), **Bit Rate (Sub Stream)** will be selected automatically.
- Some parameters cannot be selected at the same time.

4. Click **Apply** to save the settings.

5.3 Audio Configuration

Configure audio input and audio output of the IPCs.

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	Select ☑ to enable audio input.
Access Mode	Select the access method according to the IPC's audio interface, including Line and Mic. • 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.
Input Volume	Drag the slider to adjust the audio input volume
Audio Compression	Select the audio compression, including G.711A, G.711U, and AAC-LC. The supported audio compression may vary with IPC model.
Sampling Rate(KHz)	Select the sampling rate based on the audio compression.
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 audio output parameters. Only certain IPC models support audio output.

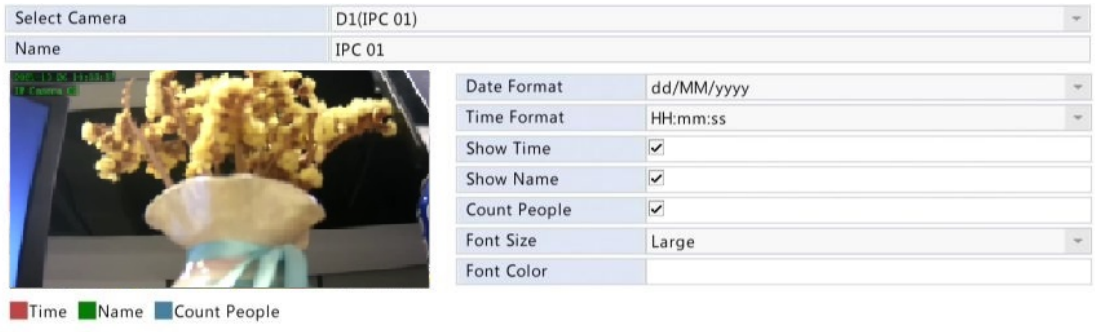
Item	Description
Audio Output	Select the audio output mode. • Speaker: The default mode. • Line: An external speaker or earphone is required.
Output Volume	Drag the slider to adjust the audio output volume.
Alarm Volume	Drag the slider to adjust the alarm volume.

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

5.4 OSD Configuration

On Screen Display (OSD) are characters displayed with video images on the screen, for example, camera name, date and time.

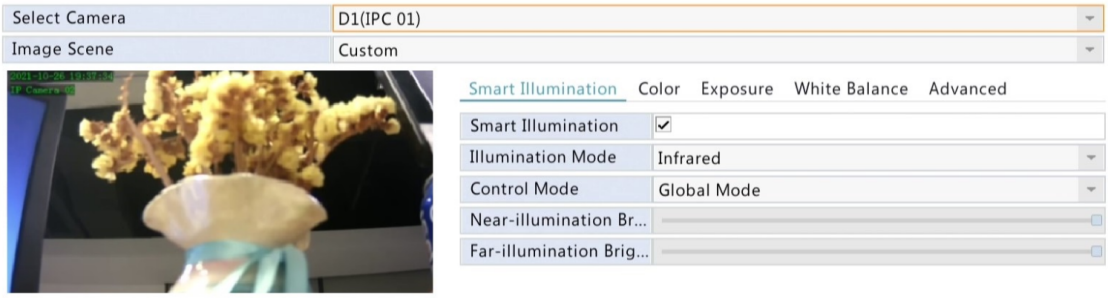
1. Go to **Menu** > **Camera** > **OSD**; or click OSD on the preview window toolbar.
2. Select the desired camera.
3. Enable **Show Name** first, and set OSD camera name as needed.
4. Set time to display. Select **Show Time**, and select date and time formats.
5. Set people counting statistics to display. Select **Count People**. You need to configure people counting function first.
6. Set font size and color as needed.
7. Drag the OSD to the desired position in the preview window on the left.



8. (Optional) Click **Copy** to apply the same settings to other cameras.
9. Click **Apply** to save the settings.

5.5 Image Configuration

1. Go to **Menu** > **Camera** > **Image**.
2. Select the camera and scene.



3. Adjust settings on the tabs as needed to achieve optimal images. See the following sections for detailed information.

Note:

- A scene can be selected only when supported by the IP camera.
- To restore default image settings, 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.

Smart Illumination

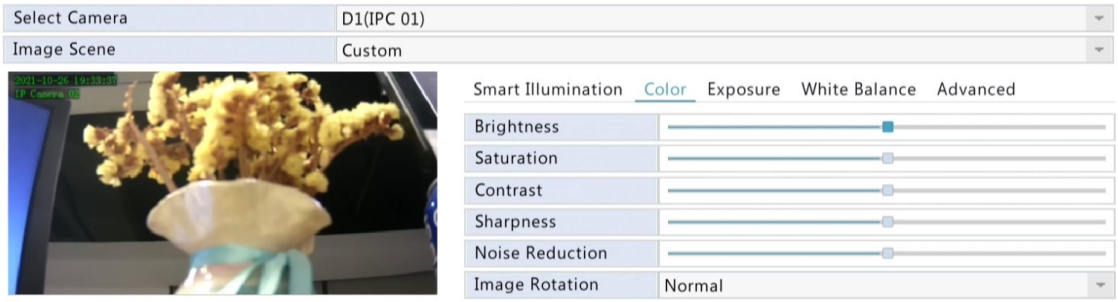
1. Click the **Smart Illumination** tab.
2. Adjust parameters on the right side of the image to achieve smart illumination.

Parameter	Description
Illumination Mode	• Dual Light: The camera adjusts the white light or infrared automatically according to the current lighting condition. • White Light: The camera uses white light illumination. • Infrared: The camera uses infrared light illumination.
Control Mode	• Global Mode: The camera adjusts illumination brightness and exposure to achieve balanced image effects. • Overexposure Restrain: The camera adjusts illumination brightness and exposure to avoid regional overexposure. • Manual: This mode allows you to manually control the intensity of illumination.

Parameter	Description
Near-illumination Brightness	Set the intensity level of the near-illumination brightness. The greater the value, the higher the intensity (0 means that the light is turned off). **Note:** You can set this parameter only when Control Mode is set to Manual.
Far-illumination Brightness	Set the intensity level of the far-illumination brightness. The greater the value, the higher the intensity (0 means that the light is turned off). **Note:** You can set this parameter only when Control Mode is set to Manual.

Color

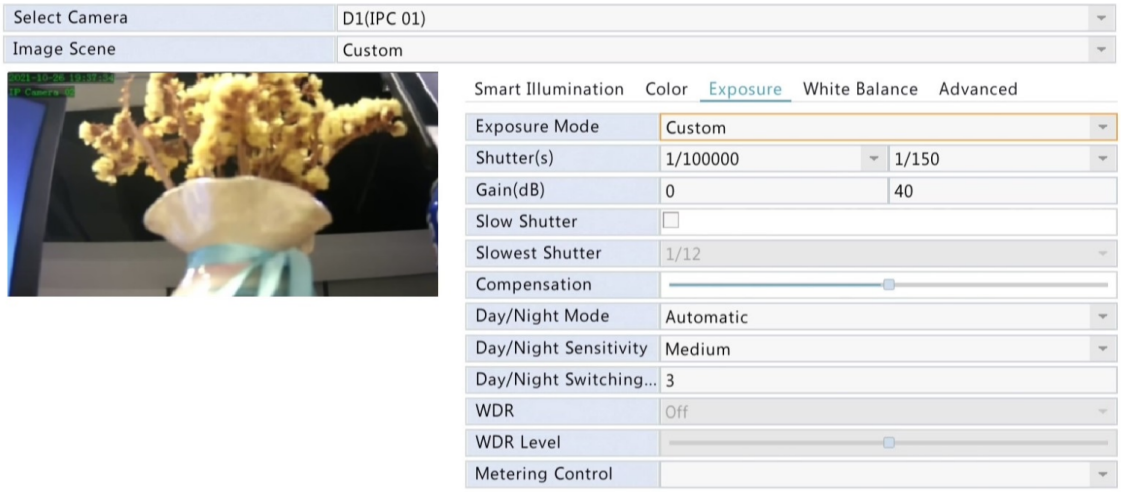
1. Click the **Color** tab.
2. Adjust the settings as needed. Some important parameters are described in the table below.



Parameter	Description
Brightness	The greater the value, the brighter the images appear.
Saturation	The amount of color in a specified hue.
Contrast	The degree of difference between the lightest (white) and darkest (black) parts of an image. Setting a greater value increases contrast.
Sharpness	Contrast of boundaries of objects in an image.
Noise Reduction	Reduce noise in images to improve image quality.
Image Rotation	• Normal: Displays images without rotation. • 180°: Displays images flipped vertically and horizontally. • 90° CW and 90° CCW: Display images in corridor format. The camera must be installed correctly (rotated 90° clockwise or counterclockwise).

Exposure

1. Click the **Exposure** tab.

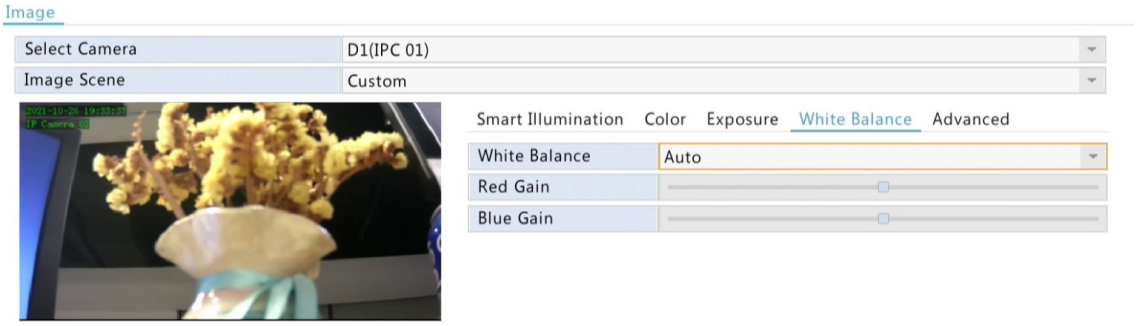


2. Adjust the settings as needed. Some important parameters are described in the table below.

Parameter	Description
Exposure Mode	Select the correct exposure mode to achieve the desired exposure effect.
Shutter(s)	Shutter is used to control the 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.
Gain(dB)	Control image signals so that the camera can output standard video signals in different light conditions.
Slow Shutter	Improve image brightness in low light conditions.
Slowest Shutter	Set the slowest shutter speed for the camera during exposure.
Compensation	Adjust the compensation value as required to achieve the desired image effects.
Day/Night Mode	• Automatic: In this mode, the camera can automatically switch between night mode and day mode according to the ambient lighting condition to output optimum images. • Night: The camera outputs high-quality black and white images according to the ambient lighting condition. • Day: The camera outputs high-quality color images according to the ambient lighting condition.
Day/Night Sensitivity	Light threshold for switching between day mode and night mode. A higher sensitivity value 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.
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.
WDR	Enable WDR to ensure clear images in high contrast conditions.
WDR Level	After enabling WDR, you can improve image quality by adjusting the WDR level.
Metering Control	• Center-Weighted Average Metering: Measure light mainly in the central part of the image. • Evaluative Metering (BLC): Measure light in the specified area of the image. • 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**.

White Balance

1. Click the **White Balance** tab.

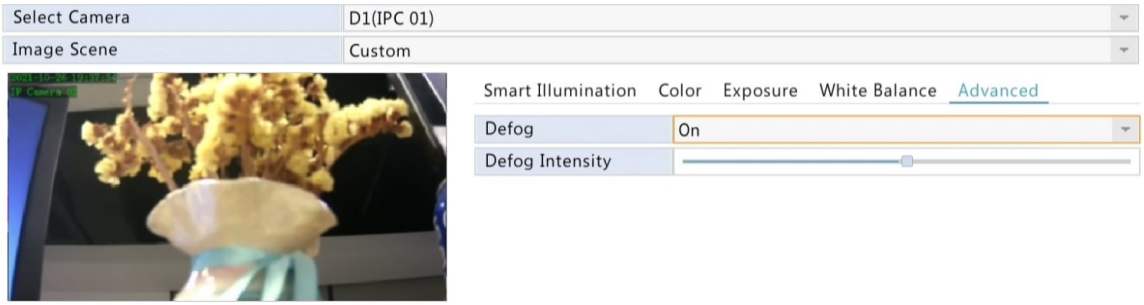


2. Adjust the settings on this tab. Some important parameters are described in the table below.

Parameter	Description
White Balance	Adjust the red or blue gain of the image: • Auto: The camera adjusts the red or blue gain automatically according to the lighting condition (the color tends to be blue). • Finetune: Allow you to adjust the red or blue gain 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). • Lock: Lock the current color temperature to avoid change.
Red Gain	Adjust the red gain manually.
Blue Gain	Adjust the blue gain manually.

Advanced

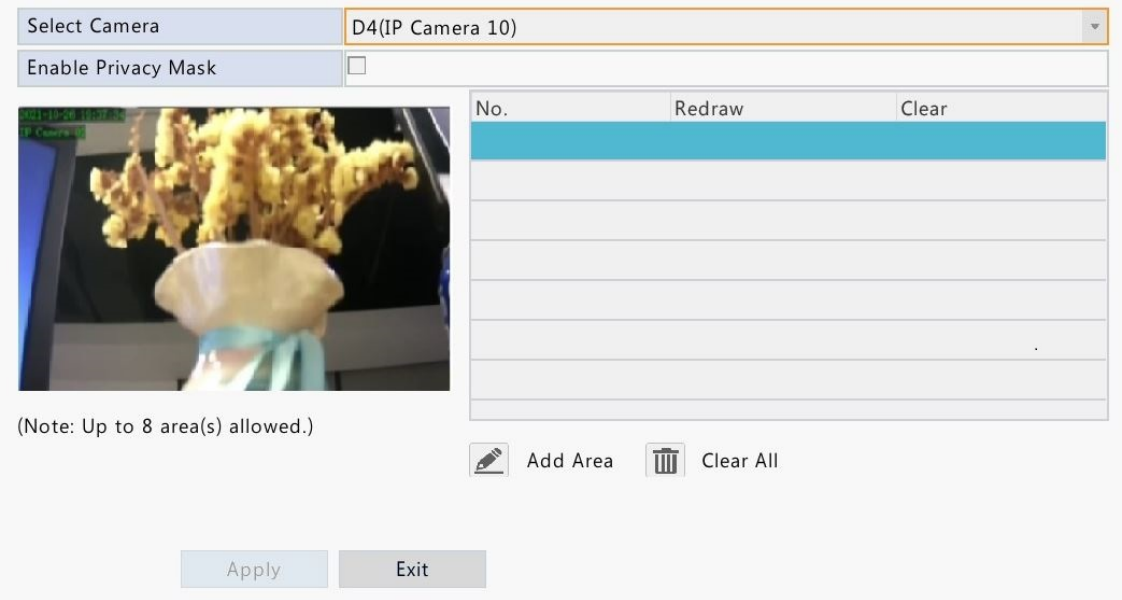
1. Click the **Advanced** tab.
2. Use defog to improve image quality in foggy days.



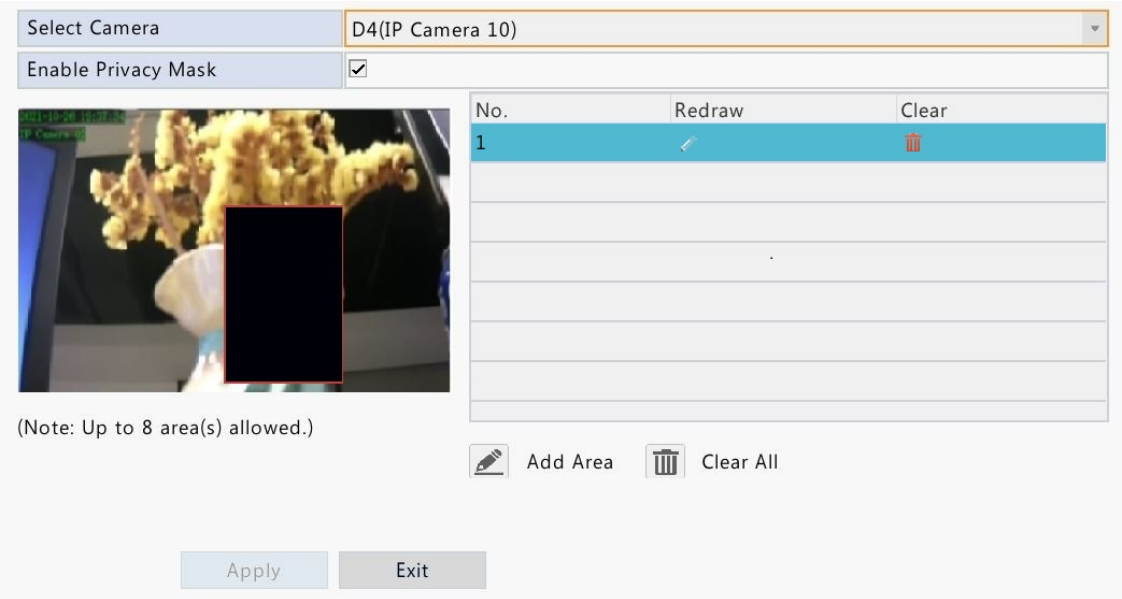
5.6 Privacy Mask

Privacy mask is used to cover certain areas on the image for privacy, for example, ATM keyboard. When a PTZ camera rotates and zooms, the privacy mask moves and zooms with the camera and the masked area is always covered.

1. Go to **Menu** > **Camera** > **Privacy Mask**.



2. Select the desired channel from the drop-down list.
3. Enable privacy mask.
4. Click , and then use the mouse to specify a rectangle area on the left-side image. The number of areas supported varies with NVR model. Some NVRs support 4 areas and some support 8 areas.



- Adjust the size and position of the mask: Point to a handle of the mask and drag to resize it. Point to any position of the mask and drag it to the desired position.
- Redraw: Click to clear all the existing area(s) and draw an area again.
- Delete: Select the mask and click ; Or click to delete all the masks.

5. Click **Apply**.

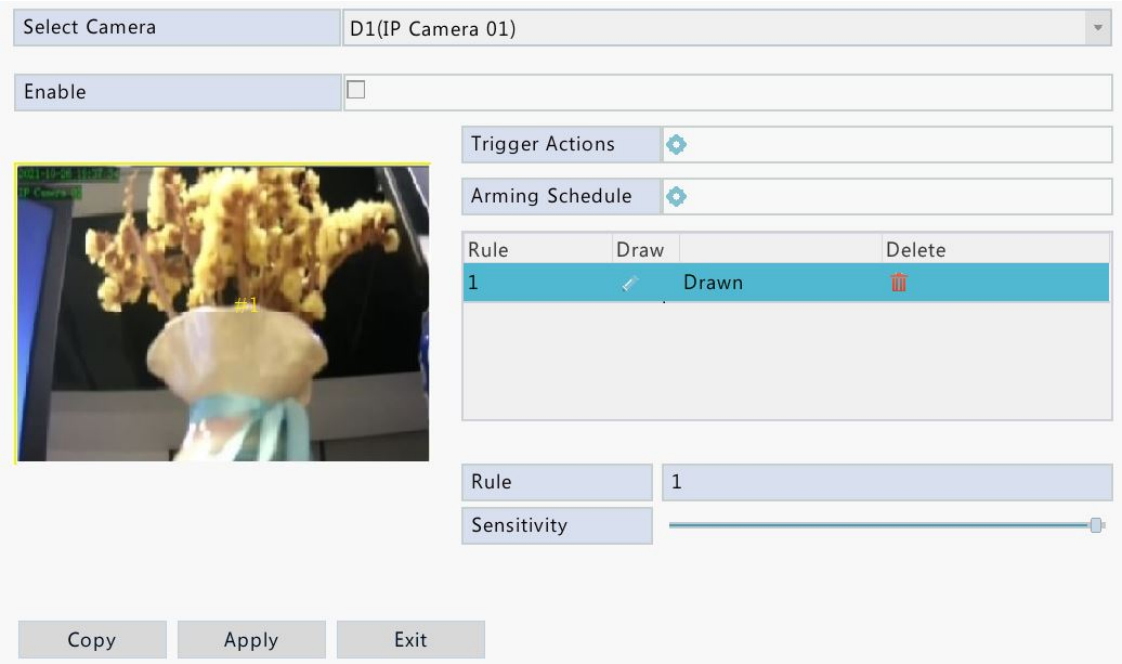
6 VCA

VCA includes human body detection, smart intrusion prevention, behavior analysis, face detection, auto tracking, and VCA search. The VCA functions and parameters may vary with NVR model.

6.1 Human Body Detection

Human body detection detects humans in a specified area. An alarm is reported when the detection rule is triggered.

1. Go to **Menu** > **VCA** > **Human Body Detection**.



2. Select the desired channel, and enable human body detection.
3. Set the detection rule. Only 1 detection rule is allowed.

   Click , and the full screen is displayed. Drag in the preview window to draw a rectangular detection area. Only 1 detection area is allowed. Right-click to exit the full screen.

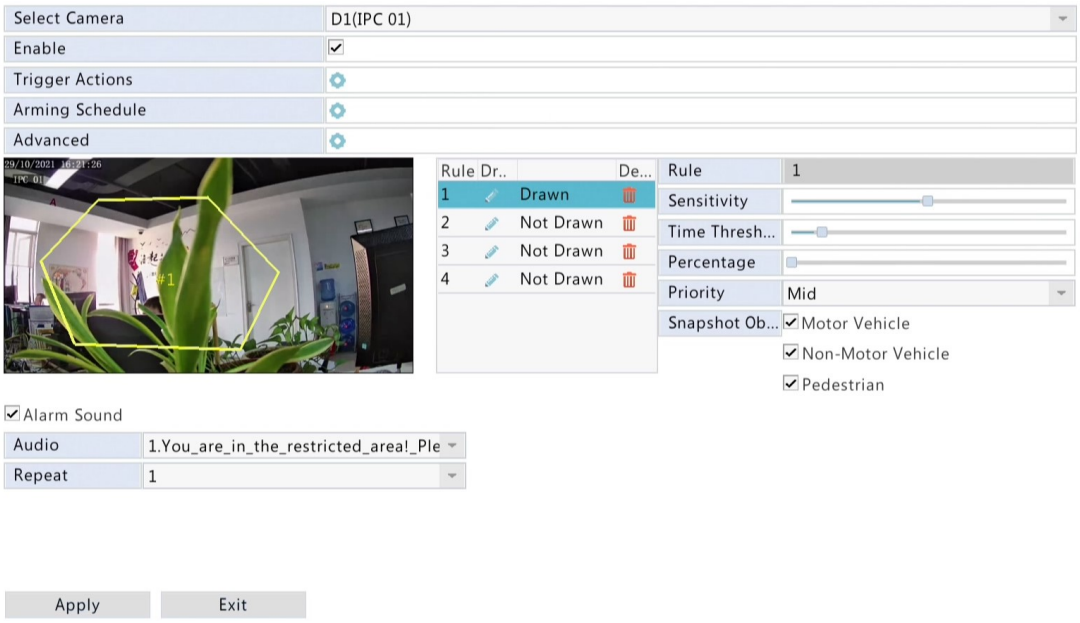
   Note: To redraw the detection area, select the set rule, and click . To delete the detection area, click .
4. Drag the slider to adjust detection sensitivity. The higher the sensitivity, the more likely humans will be detected, and the more likely false alarms will occur. Set based on the scene and your actual needs.
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 same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s).
7. Click **Apply**.

6.2 Smart Intrusion Prevention

Smart intrusion prevention includes cross line detection, intrusion detection, enter area, and leave area.

6.2.1 Intrusion Detection

Intrusion detection is used to detect objects entering specified area(s) and trigger actions as needed.

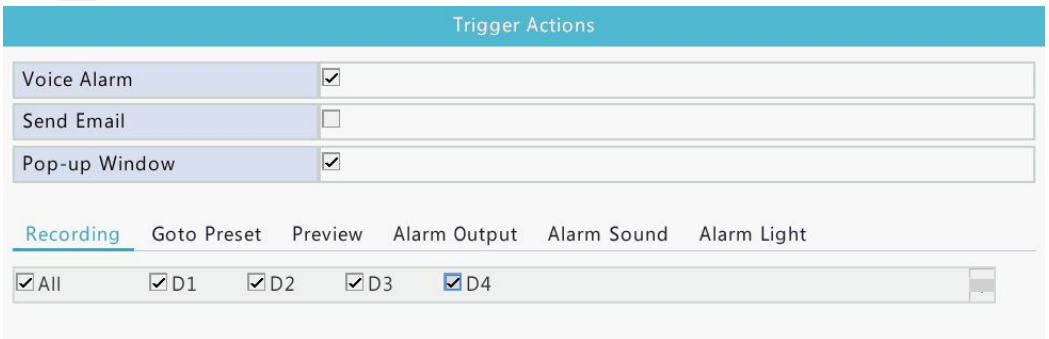


1. Go to **Menu** > **VCA** > **Smart Intrusion Prevention** > **Intrusion Detection**.
2. Select the desired camera and enable intrusion detection.
3. Click and draw detection areas on the screen.

   Note: When drawing a detection area, you can use up to 6 points to specify the area. Up to four detection areas are allowed.
4. Set detection rules.

Parameters	Description
Sensitivity	Drag the **Sensitivity** slider to adjust detection sensitivity. The higher the sensitivity, the easier the object will be detected. The default is 50. Adjust detection sensitivity as needed to achieve optimal effects.
Time Threshold(s)	The minimum length of time an object stays in the detection area(s).
Percentage	The proportion of target object size to the size of the detection area.
Priority	The priority includes high, medium and low. When there are multiple detection rules, the rule area with high priority is detected first.
Snapshot object	Snapshot object includes motor vehicle, non-motor vehicle and pedestrian.
Alarm sound	An alarm occurs when the threshold or the percentage is exceeded.

5. Click right to **Trigger Actions** and set action(s) to trigger. For more details, see Alarm-Triggered Actions.

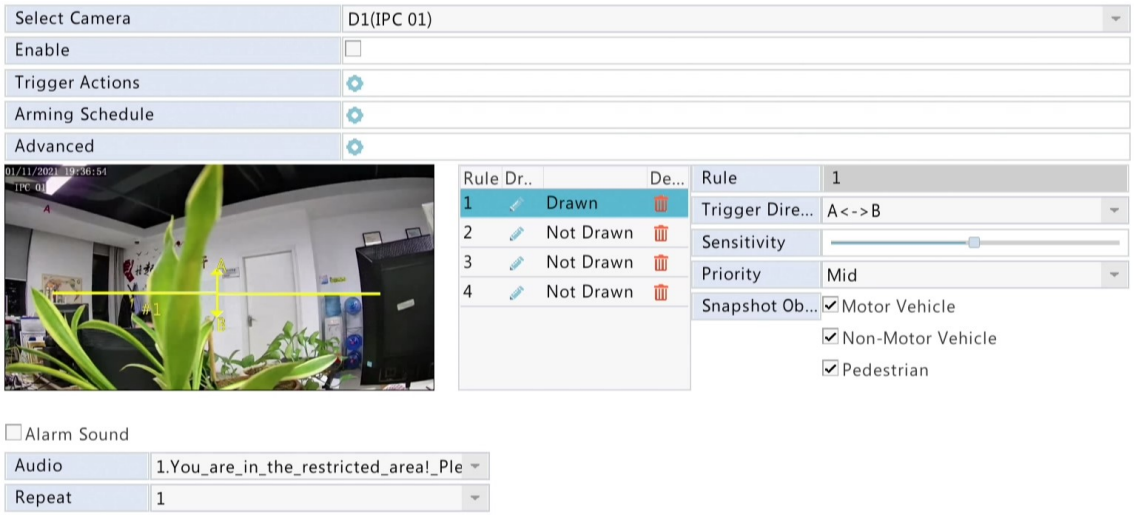


6. (Optional) Click right to **Arming Schedule** and then set the time when actions will be triggered.
7. Click right to **Advanced** and then set the ratio of the object in the detection area (the image size is 10000 x 10000). The valid range for max. and min. sizes is 1-9999. Invalid values would be auto filtered.

8. Click **Apply** to save the settings.

6.2.2 Cross Line Detection

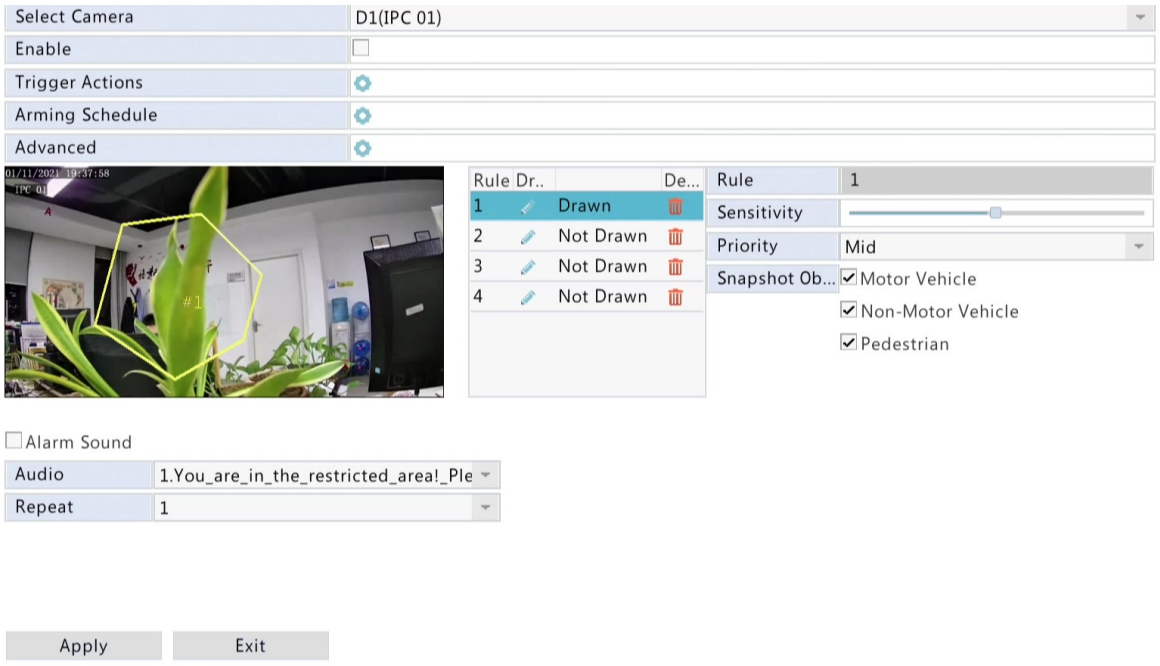
Cross line detection is used to detect whether any object crosses a virtual line on the screen and trigger alarms as needed.



1. Go to **Menu** > **VCA** > **Smart Intrusion Prevention** > **Cross Line Detection**.
2. Select the desired camera and enable cross line detection.
3. Click  and draw detection line(s) on the screen. Up to four lines are allowed.
4. Set detection rules, including entrance direction, sensitivity, priority, snapshot object, and alarm sound.
5. Click  right to **Trigger Actions** and set action(s) to trigger. For more details, see Alarm-Triggered Actions.
6. (Optional) Click  right to **Arming Schedule** and then set the time when actions will be triggered.
7. Click  right to **Advanced** and then set the ratio of the object in the detection area.
8. Click **Apply** to save the settings.

6.2.3 Enter Area

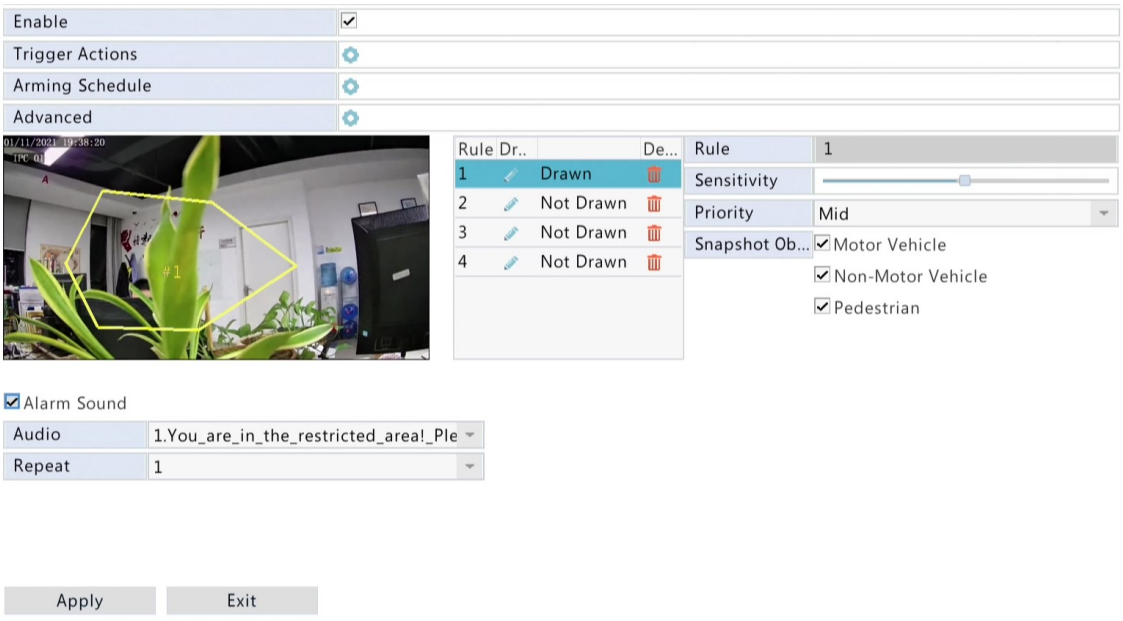
Enter area detection is used to detect whether any object enters the area on the screen and trigger alarms as needed.



1. Go to **Menu** > **VCA** > **Smart Intrusion Prevention** > **Enter Area**.
2. Select the desired camera and enable enter area.
3. Click  and draw detection areas on the screen. Up to four areas are allowed.
4. Set detection rules, including sensitivity, priority, snapshot object, and alarm sound.
5. Click  right to **Trigger Actions** and set action(s) to trigger. For more details, see Alarm-Triggered Actions.
6. (Optional) Click  right to **Arming Schedule** and then set the time when actions will be triggered.
7. Click  right to **Advanced** and then set the ratio of the object in the detection area.
8. Click **Apply** to save the settings.

6.2.4 Leave Area

Leave area detection is used to detect whether any object leaves the area on the screen and trigger alarms as needed.



1. Go to **Menu** > **VCA** > **Smart Intrusion Prevention** > **Leave Area**.

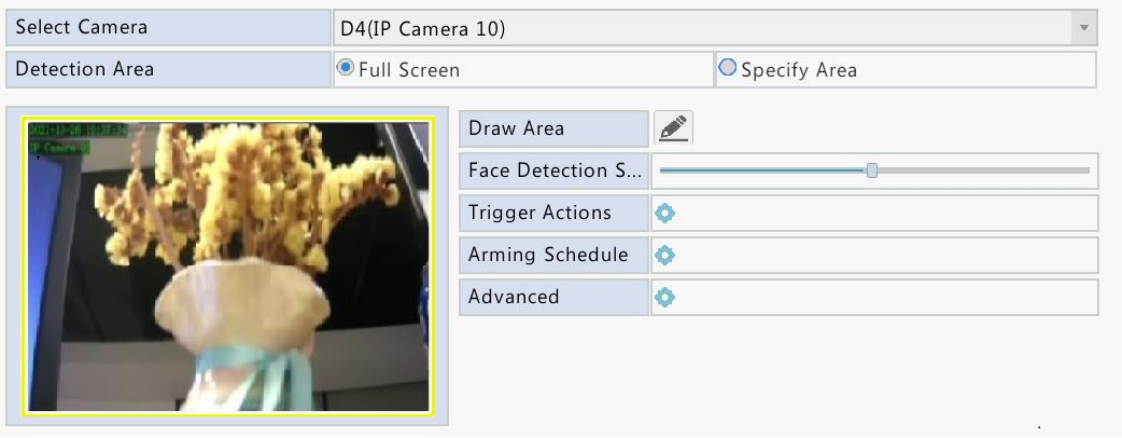
2. Select the desired camera and enable leave area.
3. Click and draw detection areas on the screen. Up to four areas are allowed.
4. Set detection rules, including sensitivity, priority, snapshot object, and alarm sound.
5. Click right to **Trigger Actions** and set action(s) to trigger. For more details, see Alarm-Triggered Actions.
6. (Optional) Click right to **Arming Schedule** and then set the time when actions will be triggered.
7. Click right to **Advanced** and then set the ratio of the object in the detection area.
8. Click **Apply** to save the settings.

6.3 Face Detection

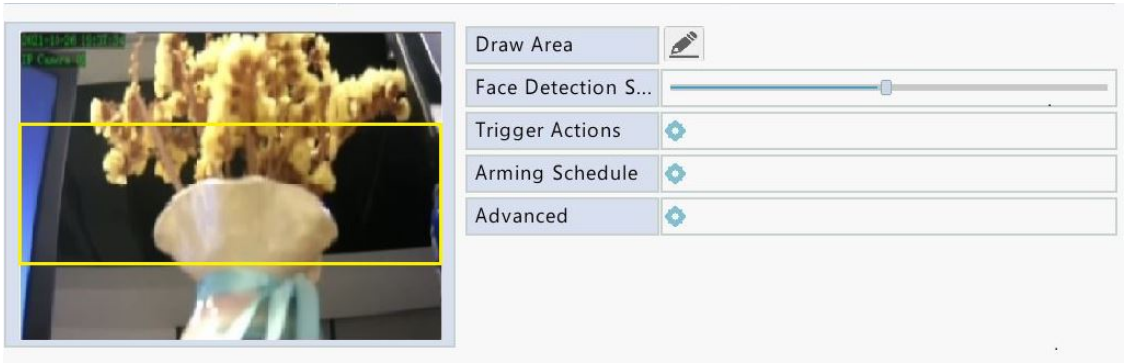
Face detection detects and captures faces in a specified detection area.

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

1. Go to **Menu** > **VCA** > **Face Detection**.



2. Select a camera.
3. 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**, click , then the full screen will be displayed and a default detection box appears. You can adjust the position of the area or draw an area as needed. Right-click to exit the full screen.



   - 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.
4. 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.

5. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
6. Click right to **Advanced**, configure the parameters as needed, and then click **OK**.

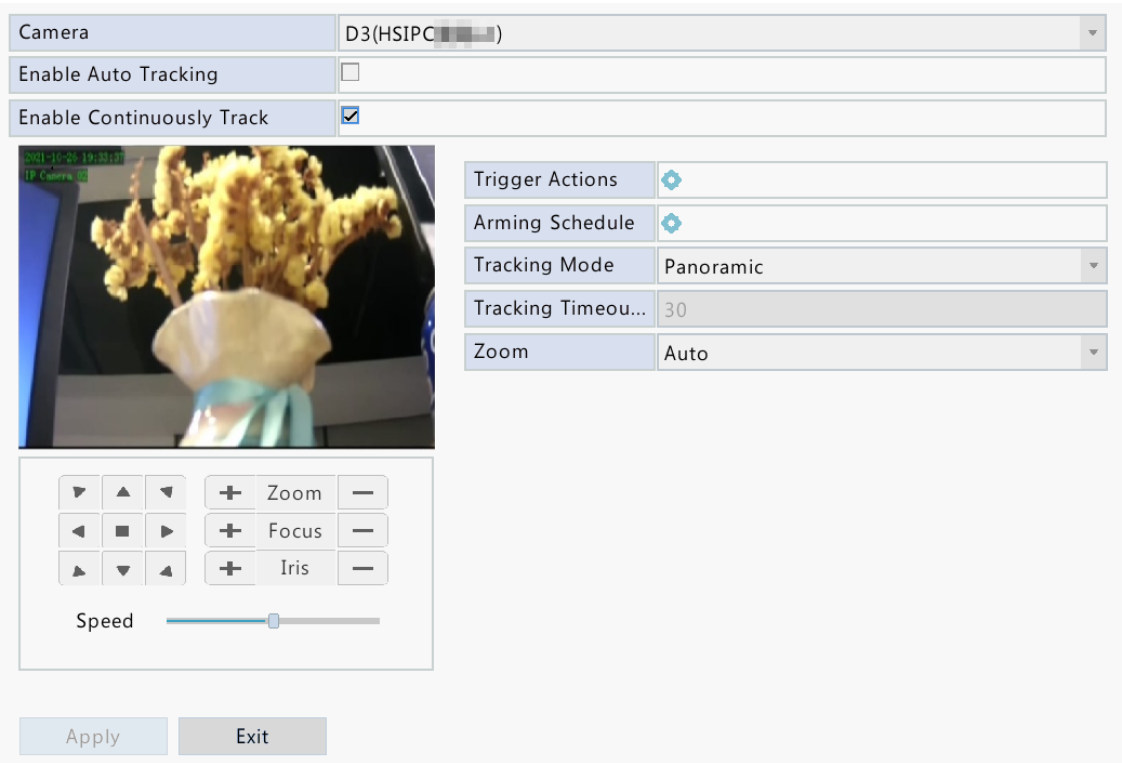
Parameter	Description
Min. Pupillary Distance(px)	The minimum distance (measured in pixels) between two pupils. Faces with pupillary distance smaller than the value will not be captured. **Note:** The default value varies by image resolution, and the valid range varies by NVR model.
Face Selection Mode	• Effect Priority: Set the **Number of Selected Photos**, then the NVR 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 NVR 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. • Periodic Selection: Set the **Selection Interval**, for example, 600ms, then the NVR selects a face snapshot every 600ms to report.
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.

7. Click **Apply** to save the settings.

6.4 Auto Tracking

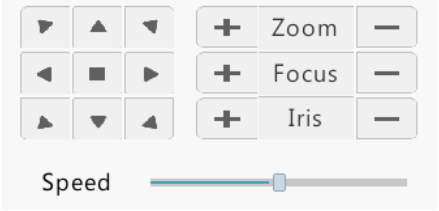
Auto tracking detects moving objects in the live video and tracks the first object detected.

1. Go to **Menu** > **VCA** > **Auto Tracking**.



2. Select a camera and enable auto tracking.
3. Set the tracking parameters.

Table 6-1:

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.

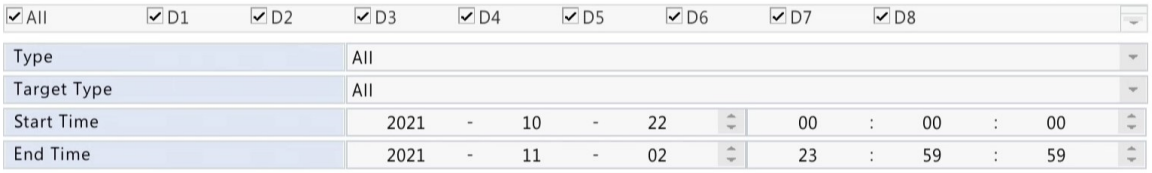
4. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
5. Click **Apply**.

6.5 VCA Search

VCA searches for data of each VCA function. Only certain cameras support this function. The search result, application scenario and settings vary with the VCA function.

6.5.1 Behavior Search

Use behavior search to search for recordings triggered by detected behaviors.

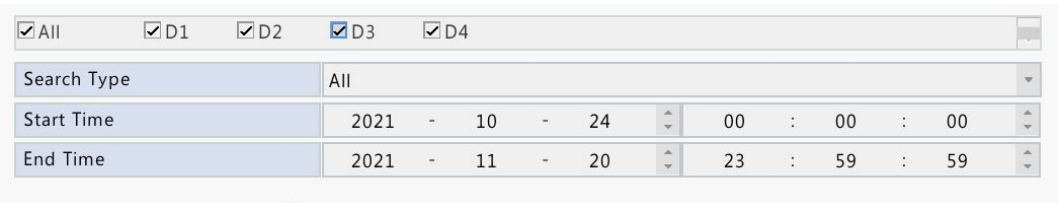


1. Go to **Menu** > **VCA** > **VCA Search** > **Behavior Search**.
2. Select camera(s), search type, and target type, and set the start time and end time.
3. Click **Search**. Search results are displayed.
4. View search results in a chart or table. Back up search results as needed.

6.5.2 Face Snapshot Search

Search for face snapshots.

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



2. Select camera(s) and search type, and set the start time and end time.
3. Click **Search**. Search results are displayed.
4. View search results in a chart or table. Back up search results as needed.

6.6 Alarm-Triggered Actions

Configure actions to be triggered when an alarm occurs to alert user or the specified people.

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

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

Some actions are detailed below.

Send Email

The NVR e-mails an alarm message to a specified email address when an alarm occurs. Please set the recipient information in Email. Up to 6 recipients are allowed.

Pop-up Window

A window pops up when an alarm occurs.

Recording

The NVR records video from a specified camera when an alarm occurs.

Goto Preset

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

Preview

The NVR plays live video in full screen when an alarm occurs.

Alarm Output

The NVR outputs an alarm to trigger actions by a third-party device when an alarm occurs.

Alarm Sound

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

Alarm Light

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

6.7 Arming Schedule

Configure an arming schedule to determine when the NVR receives alarms and performs predefined alarmtriggered actions.

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

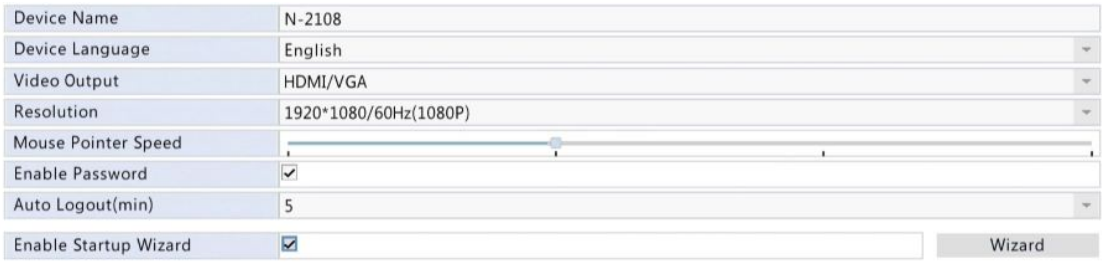
Note:

- 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 NVR and configured with camera side analysis of **Intrusion Detection**, **Cross Line Detection**, **Enter Area**, **Leave Area**, or **Human Body Detection**, the arming schedule configured for these functions on the NVR will be synchronized to the camera.

7 System Configuration

7.1 General Configuration

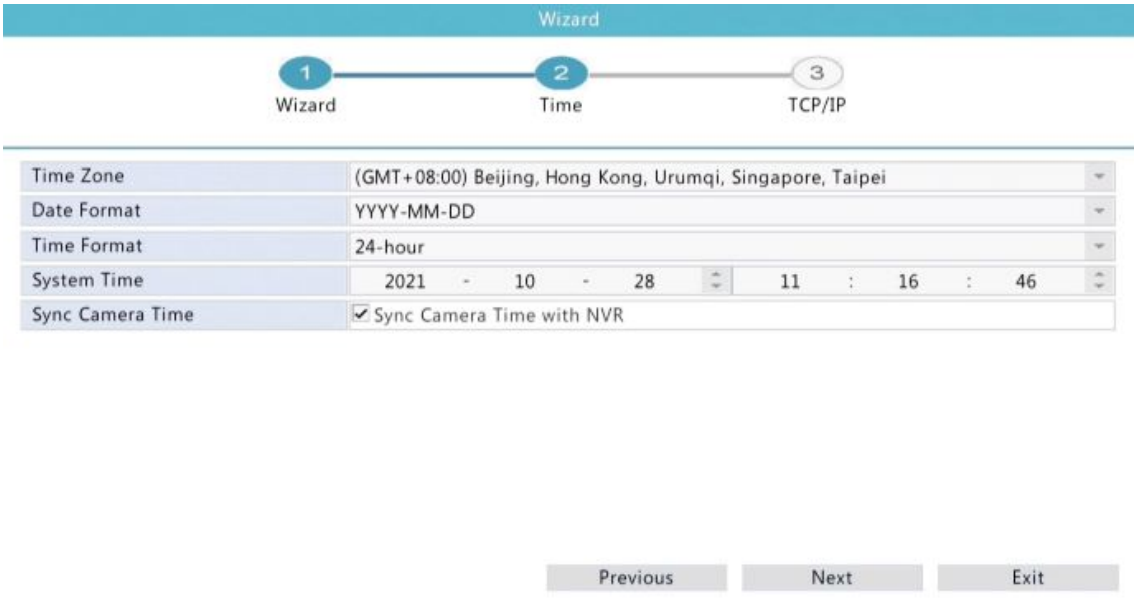
1. Go to **Menu** > **System** > **General**.
2. Configure the parameters.



Note:

- Only admin can set **Enable Password**.
- If **Enable Password** is not selected, no password is required for local login at system startup. However, a username and password are still required when you log in after a logout.

3. (Optional) You may also set startup wizard here by clicking **Wizard**.



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4. Click **Apply** to save the settings.

7.2 Network Configuration

Network configuration is required if your NVR operates in a network.

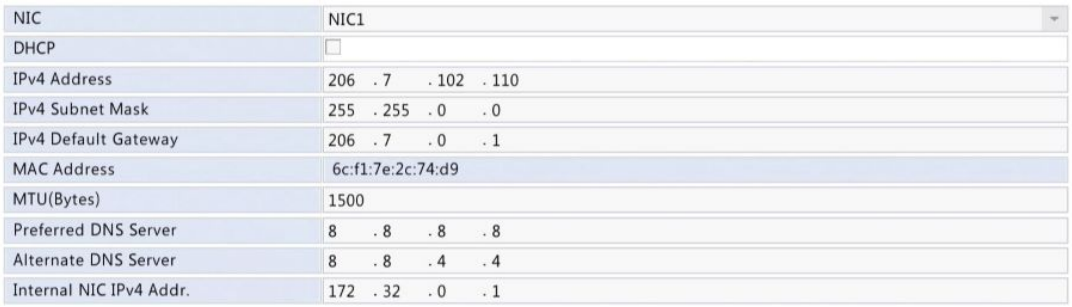
Note: The default IP address is 192.168.1.30 for NIC 1 and 192.168.2.30 for NIC 2, and likewise.

7.2.1 TCP/IP

1. Go to **Menu** > **System** > **Network** > **Network**.
2. Set the network parameters as needed. DHCP is enabled by default.

   You can choose a working mode if your NVR has two NICs:

- Multi-address mode: The two NICs work independently and can be configured separately. Either NIC can be chosen as the default route, and data will be forwarded through this NIC when the NVR connects to the extranet.
- Load balance mode: The two NICs are bound to the same IP address and work together to share network traffic.
- Net fault-tolerance mode: The two NICs are bound to the same IP address. In cases where one NIC fails, the other takes over service seamlessly from the faulty one to ensure network connectivity.



3. Click **Apply** to save the settings.

Note:

- For an NVR with multiple NICs, you can configure the NICs and choose a default route (currently NIC1).
- You can configure an internal NIC IPv4 address for your NVR.

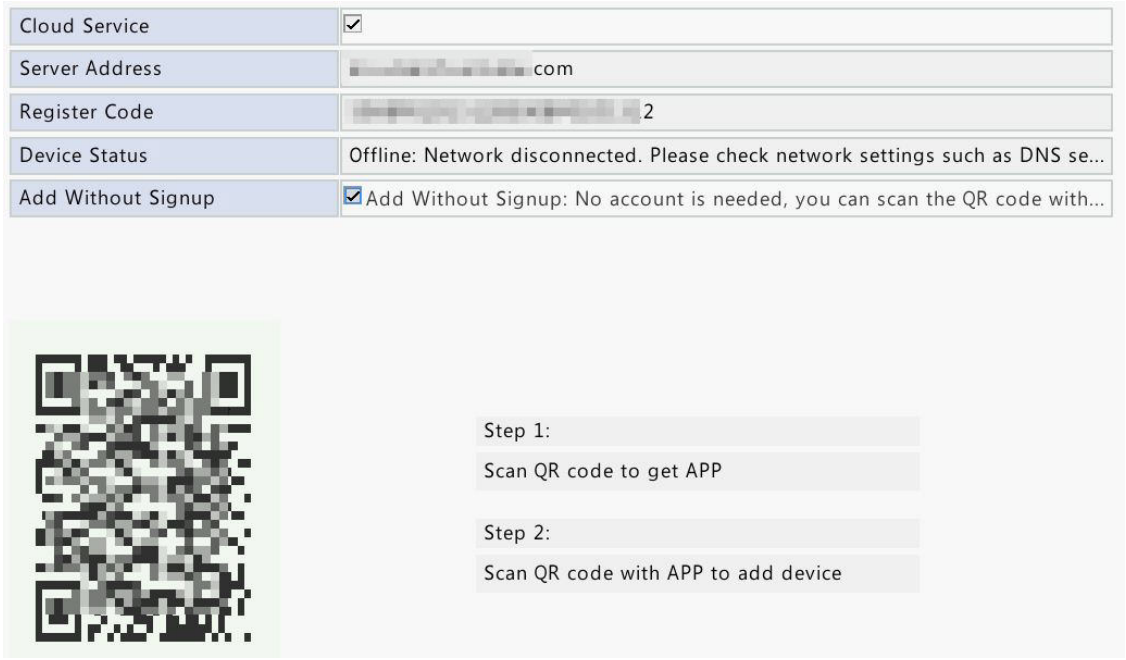
CAUTION:

- If you switch the working mode, the enabled ARP protection will be disabled automatically.
- The valid MTU ranges from 576 to 1500 (1280-1500 for IPv6). To use IPv6, make sure the NVR and PC can connect to each other using IPv6 addresses. To view live or recorded videos, make sure the IPv4 addresses are also connectable.

7.2.2 Mobile Service

The NVR allows access from the cloud website (en-uniarch.uniview.com) or from Uniarch mobile client. You need to sign up for a cloud account at en-uniarch.uniview.com first. Make sure the NVR is connected to the Internet.

1. Go to **Menu** > **System** > **Network** > **Mobile Service**.
2. Cloud service is enabled by default.
3. To add the NVR to cloud at the cloud website: log in to your account at en-uniarch.uniview.com and then add the NVR by entering the register code and device name.
4. To add the NVR to cloud using the app: scan the QR code using your mobile phone to download the app. Install the app and then log in with your cloud account. Scan the QR code to add the NVR to cloud.
5. Select **Add Without Signup**, and you can scan the QR code using the app to add the NVR to cloud without signing up for an account.



Note:

- You may access the NVR through cloud if the device status is Online. The username is your cloud account name, and the device name is the name you entered at the cloud website.
- If the device is offline, the possible causes will be displayed for your reference.
- To delete the NVR from cloud, click **Delete**.

6. Click **Apply** to save the settings.

7.2.3 DDNS

If your NVR is connected to the Internet through PPPoE, the IP address of the network changes every time it connects to the ISP server without your awareness. This is inconvenient when you remotely access your NVR with an IP address. To avoid this issue, you can register with an DDNS server to obtain a domain name for your NVR and then access your NVR by visiting the domain name instead of an IP address (http://*DDNS server address*/*NVR's domain name*) using a web browser.

1. Go to **Menu** > **System** > **Network** > **DDNS**.
2. Enable **DDNS**, select a DDNS type, and then complete other settings.
   - If the DDNS type is **DynDNS** or **No-IP**, enter the domain name, username and password. The domain name is the one that you have successfully registered at a domain name registration website (e.g., DynDNS). The username and password are those of the account you have registered at the domain name registration website (e.g., DynDNS).



   - If the DDNS type is **MyDDNS**, enter a valid domain name for your NVR and then click **Test** to see if the domain name is available.

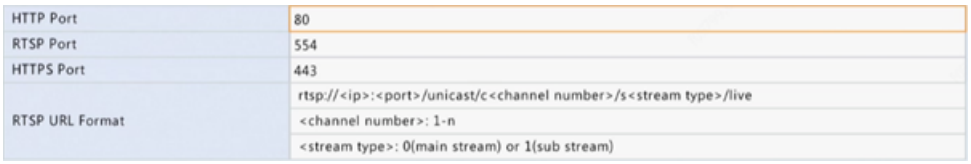


3. Click **Apply** to save the settings.

7.2.4 Port

Normally the default port numbers need no modification. This function is mainly used together with the port mapping function. See Port Mapping for more details.

1. Go to **Menu** > **System** > **Network** > **Port**.
2. Configure ports as planned. Each port number must be unique.



3. Click **Apply** to save the settings.

Note:

- A valid port number ranges from 1 to 65535, among which 21, 23, 2000, 3702 and 60000 are reserved.
- An RTSP URL can be used to view live video of a channel of the current NVR from another NVR.

7.2.5 Port Mapping

Two port mapping methods are available:

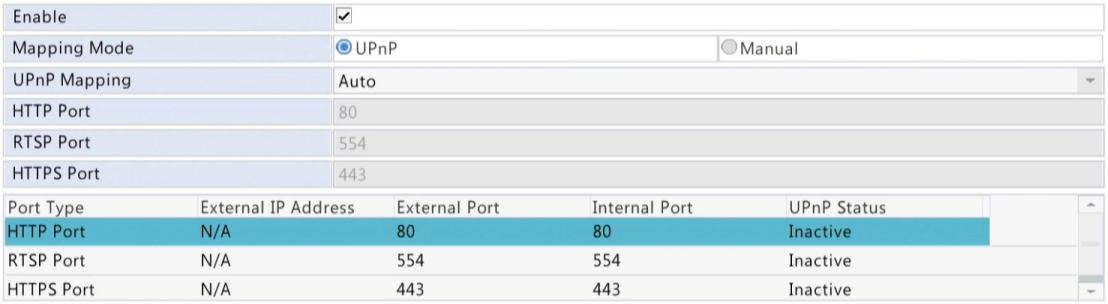
- Universal Plug and Play (UPnP)
- Internal and external mapping

UPnP

UPnP enables the NVR to discover other devices on the network and establish network services such as data sharing and communication.

To use UPnP in your NVR, you must enable UPnP in the connected router. With UPnP enabled for Network Address Translation (NAT), the ports on the NVR can be mapped automatically to the router, and computers can access your NVR from outside the LAN.

1. Go to **Menu** > **System** > **Network** > **Port Mapping**.
2. UPnP is enabled by default. Select the desired mapping type from the drop-down list. To map ports manually, select **Manual** and then set external ports for the router.



Note:

- Automatic mapping (Auto) is recommended. Ports will conflict if not configured properly.
- For an NVR with multiple NICs, port mapping should be configured based on the NIC specified as the default route.

3. Click **Refresh** and check that **Active** is displayed for these ports under **UPnP Status**.
4. Click **Apply** to save the settings.

Manual Port Mapping

If your router does not support UPnP, then you need to configure internal and external ports manually.

Note:

- The principle of port mapping is that the internal and external ports of the NVR are consistent with that of the router.
- Some routers may require the same internal and external ports for the NVR and the router.

1. Go to **Menu** > **System** > **Network** > **Port Mapping**.
2. Select **Manual** for **Mapping Mode**, and then set external ports manually.



3. Click **Apply** to save the settings.

Note: After port mapping is completed, you may access the Web client of your NVR by entering the following information in the address bar of your web browser: router's WAN port IP address: external HTTP port. For example, if 10.2.2.10 is the IP address and 82 is the HTTP port, then you enter http://10.2.2.10:82.

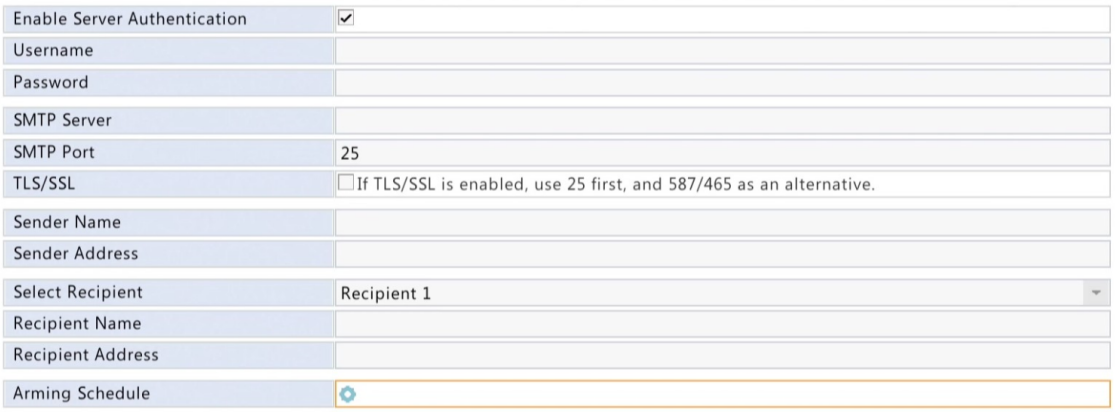
7.2.6 Email

After Email is enabled as a triggered action (in Trigger Actions windows) and configured properly, the NVR sends an email notification to specified email address(es) if an alarm occurs within the time period(s) set in the arming schedule. The email contains basic alarm information such as alarm type, alarm time, camera ID, and camera name, etc.

Before using this function, make sure the NVR has a functional connection to an SMTP server with which you have a valid email account. Depending on the intended recipients, a connection to the Internet may be required.

Only certain NVR models support this function.

1. Go to **Menu** > **System** > **Network** > **Email**.
2. Configure the related parameters. If server authentication is required, you need to enter the correct username and password. Click **Test** to send a test email.



Note:

- Enter a valid SMTP server address and port number, and then enable TLS/SSL by selecting the check box if required.
- Only certain NVR models support image attachment. You may click **Test** to check whether the email can be sent successfully.

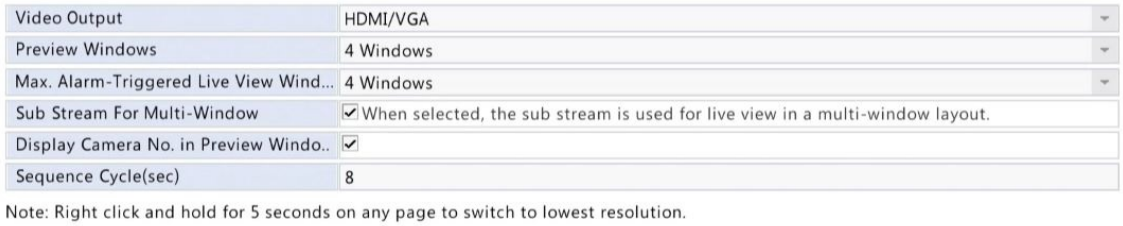
3. Click **Apply** to save the settings.

7.3 Preview Configuration

Basic Configuration

Normally, live view (video) is available after you complete the basic setup by following the wizard.

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



2. Edit preview setting as needed, including video output, preview windows, live view windows, and sequence cycle.

   Note: You can enable **Sub Stream For Multi-Window** so the NVR uses the sub stream to establish live video from multiple cameras simultaneously. This function is disabled by default.

3. Click **Apply** and complete the configuration.

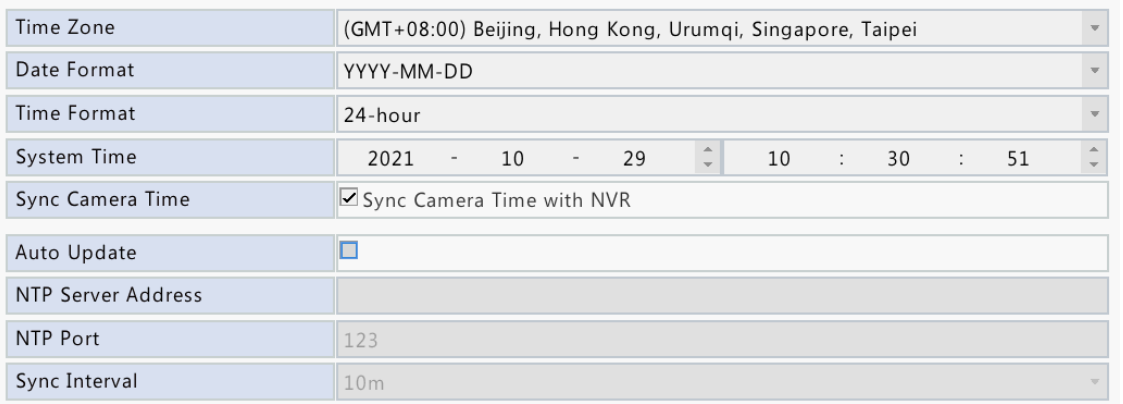
Preview Configuration

Each preview window (window for short) links to a camera. By default, window 1 links to camera D1, window 2 links to camera D2, and so on. You may want to change the link to display live video from a camera in another specified window.

7.4 Time Configuration

7.4.1 Time Configuration

1. Go to **Menu** > **System** > **Time** > **Time**.
2. Choose the time zone, date format, and time format, and set the system time. The following shows an example.



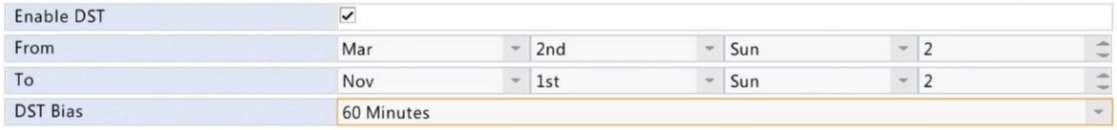
3. Enable **Sync Camera Time** to synchronize camera time with the NVR.

   CAUTION: Use this function with caution if you have more than one NVR on the network. An IP camera synchronizing time with multiple NVRs simultaneously will cause chaotic recordings.

4. To sync NVR system time with NTP server, select **Auto Update** and configure relevant parameters.
5. Click **Apply** to save the settings.

7.4.2 DST

1. Go to **Menu** > **System** > **Time** > **DST**.
2. Enable **DST** by selecting the check box, and then set the start time, end time, and DST bias correctly. The following shows an example.



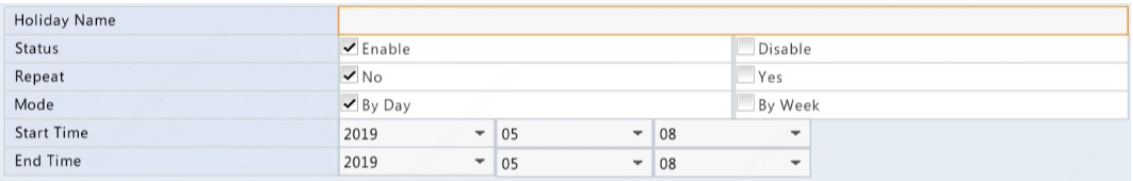
3. Click **Apply** to save the settings.

Note: Cameras will synchronize time with the NVR after getting online, you can set **DST Bias** to synchronize once every 30, 60, 90, or 120 minutes.

7.5 Holiday Configuration

Holiday recording allows you to specify certain time periods as holidays for scheduled recording. First you specify certain date(s) as holidays, and then configure recording schedules on these days.

1. Go to **Menu** > **System** > **Holiday**.
2. Click the **Add** button in the lower right corner. The **Holiday** window is displayed. Complete the settings including the holiday name, start and end dates. By default a holiday is enabled when added and does not repeat.



3. Click **OK**. The holiday appears in the list.
   - 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.

7.6 User Configuration

Add, delete users or edit user permissions. Only admin can perform these operations. A user type is a set of permissions in the system. When a user type is assigned to a user, this user has all the permissions specified for the user type.

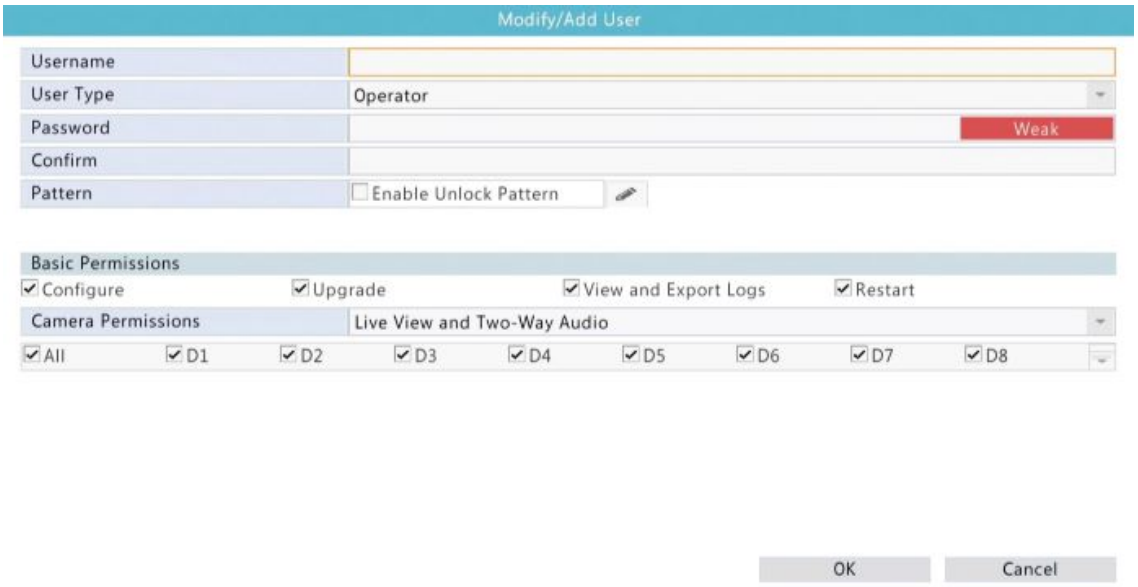
There are two user types in the system:

- Admin: Default super administrator in the system, has full system access. Its initial password is **123456**.
- Guest: Only has access to cameras by default.

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



2. To add a user, click **Add**, and then set the username, user type, password, and permissions as needed.
3. (Optional) Set the unlock pattern, then click **OK**.



4. To edit or delete a user, click  or  as needed. If you change the password for a user, the new password takes effect at the user's next login.

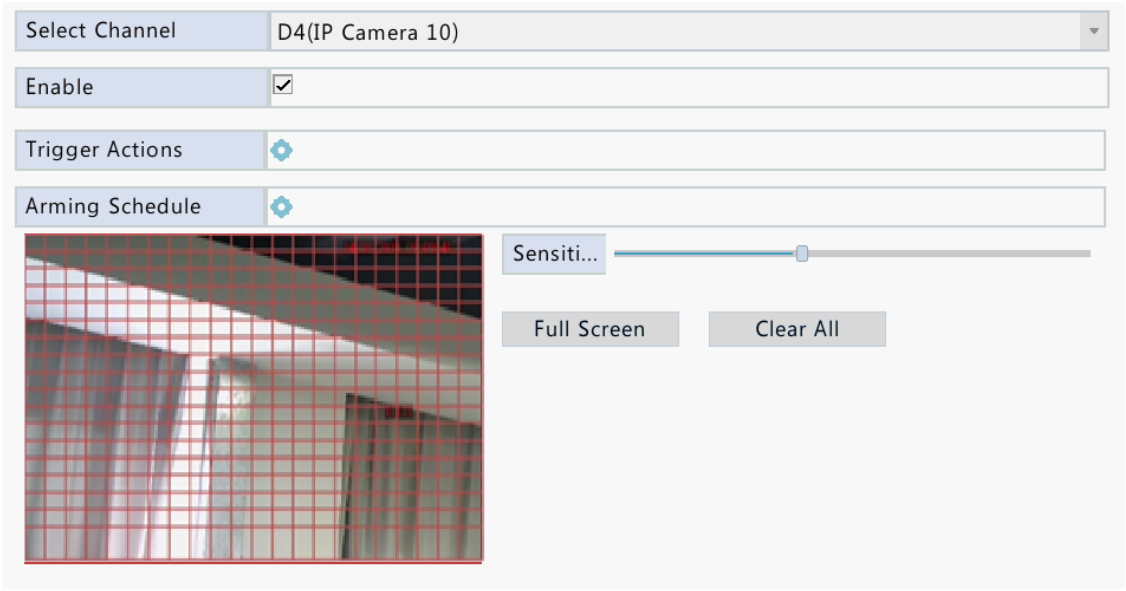
8 Alarm

8.1 Motion Detection

When enabled, a motion detection alarm occurs if an object inside the detection area moves to certain extent, and an alarm icon appears in the upper right corner.

Motion detection is enabled on the NVR by default. Unless modified, the detection area covers the full screen, and recording is triggered only for the current camera. The settings remain if you disable motion detection and then enable it.

1. Go to **Menu** > **Alarm** > **Motion**.
2. Select the desired camera and then select **Enable** to enable motion detection.
3. Use the mouse to draw a detection area, and drag the slider to set detection sensitivity. The higher the sensitivity, the more likely a moving object will be detected.



4. Click  right to **Trigger Actions** and set action(s) to trigger. For more details, see Alarm-Triggered Actions.

Note:

- The number of cameras that can be connected may vary with NVR model.
- Actions that can be triggered may vary with alarm type.

5. (Optional) Click right to **Arming Schedule** and then set the time when actions will be triggered.

Note:

- The default schedule is 24×7. You may change it as needed and set up to eight different periods for each day. Time periods cannot overlap.
- To apply the same arming schedule to other days, select the intended days right to **Copy To**.

6. Click **Apply** to save the settings.
7. (Optional) Click **Copy** to apply the same settings to other cameras.

8.2 Video Loss

A video loss alarm occurs when the NVR loses video signals from a camera. Video loss alarm is enabled by default.

1. Go to **Menu** > **Alarm** > **Video Loss**. To disable video loss alarm for a channel, click , which then changes to .
2. Click under **Trigger Actions** and set action(s) to trigger. For more details, see Alarm-Triggered Actions.

Note: Video loss alarm cannot trigger recording, preset and preview (live view) actions for the current camera.

3. Click under **Arming Schedule** and then set the time when actions will be triggered.
4. (Optional) Click **Copy** to apply the same settings to other cameras.

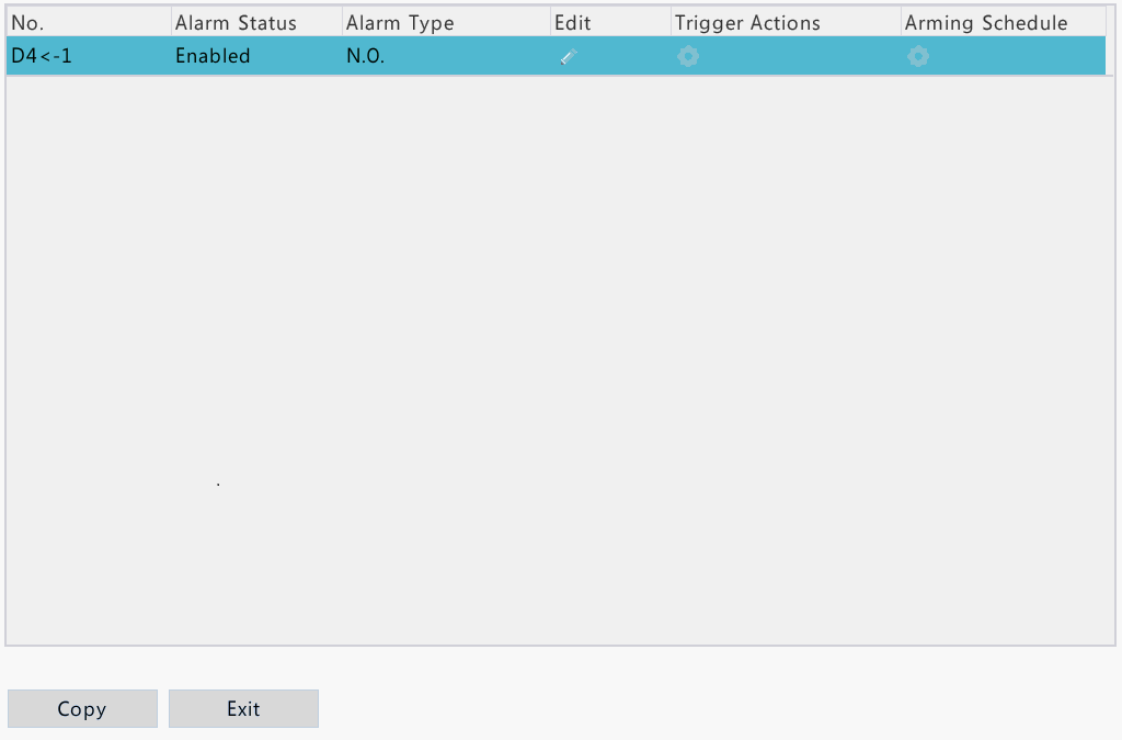


8.3 Alarm Input and Output

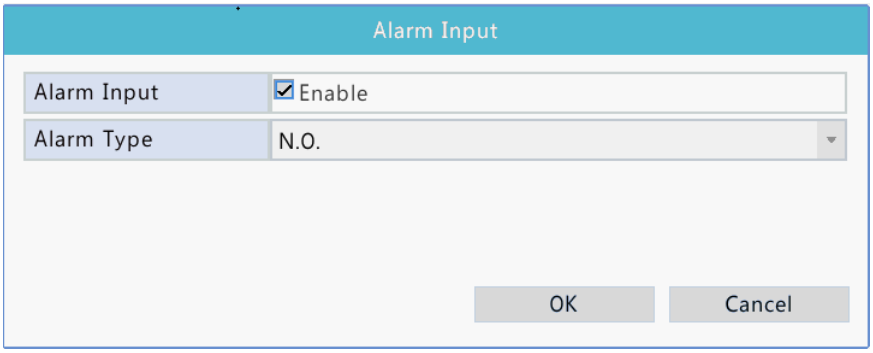
8.3.1 Alarm Input

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

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



2. Select the alarm input channel to be set.
   - 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, and then click **OK**.



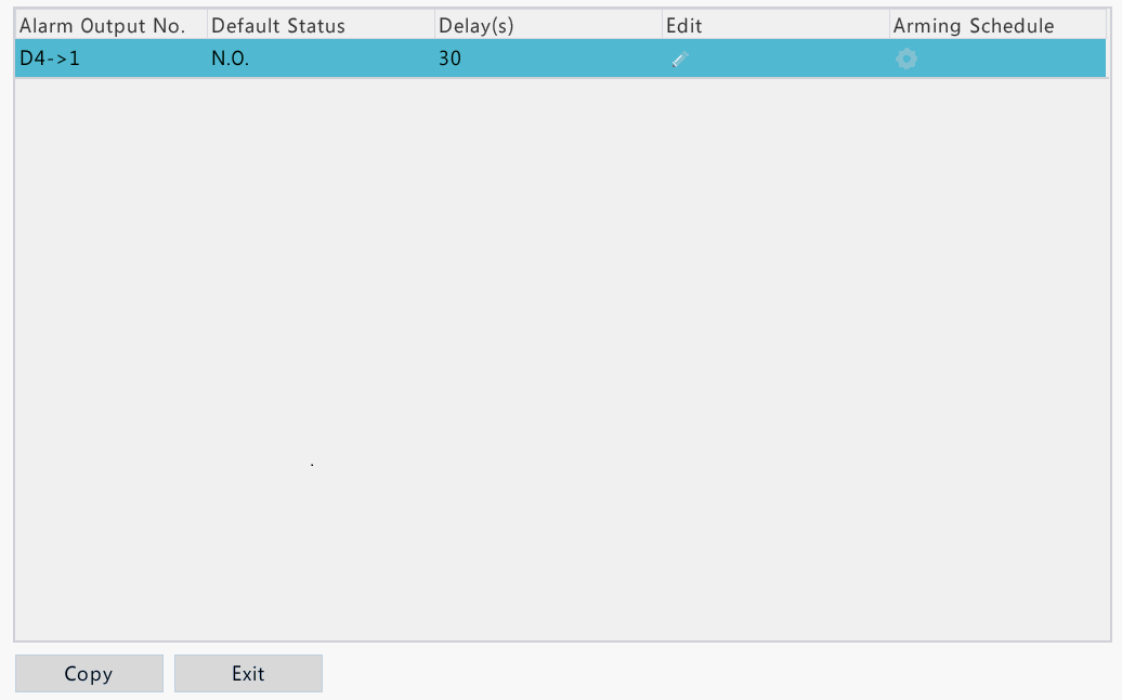
Item	Description
Alarm Input	Select **Enable** to enable alarm input.
Alarm Type	This item is applicable when Alarm Input is enabled. The default is **N.O.**. • N.O.: Choose this option if the alarm input device is normally closed. The device opens the circuit to input an alarm, triggers the NVR to open 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 NVR to close the alarm circuit and report an alarm.

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 alarm input parameters to other cameras, click **Copy**, and select the desired channel(s) or **Copy To**, and then click **OK**.

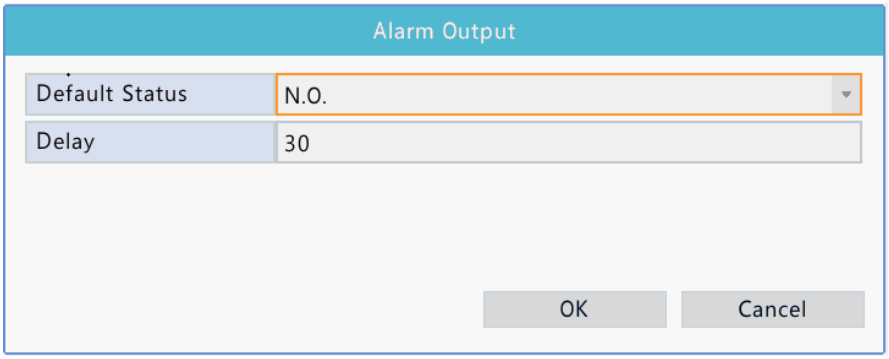
8.3.2 Alarm Output

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

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



2. Select the alarm output channel to be set.
   - 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, and then click **OK**.



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.
Delay	After an alarm is cleared on the NVR, the third-party alarm device continues alarm till the end of the set duration.

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 alarm output parameters to other cameras, click **Copy**, and select the desired channel(s) or **Copy To**, and then click **OK**.

8.4 Alert

The NVR reports an alert when an event occurs in the system. The following are some alerts and their definitions in the system.

- **IP Conflict**: Devices on the network use the same IP address.
- **Network Disconnected**: Network connection is lost.
- **Disk Offline**: A disk is not properly connected or is damaged.
- **Disk Abnormal**: A disk can be detected but cannot be accessed.
- **Illegal Access**: A failed login attempt for a username that does not exist or a password that is incorrect.

Perform the following steps to configure an alert:

1. Go to **Menu** > **Alarm** > **Alert**.
2. Select an alert type, and then select the desired actions.



3. Click **Apply** to save the settings.

8.5 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 Configuration for details.

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



2. Select the desired channel, and enable audio detection.
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.

Item	Description
	• 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**.

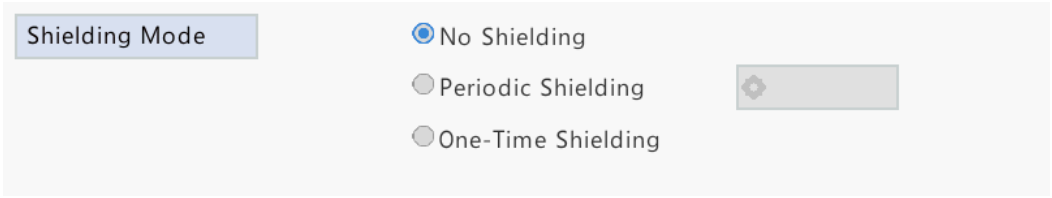
5. Click **Apply**.

8.6 One-Key Shielding Linkage

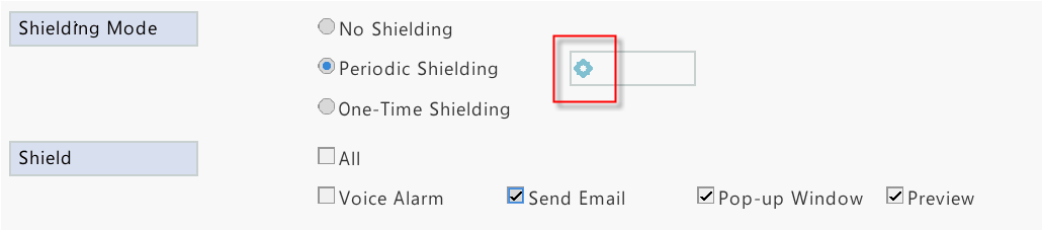
Cancel alarm-triggered actions of NVRs or IPCs with one click.

8.6.1 NVR Shielding Linkage

1. Go to **Menu** > **Alarm** > **One-Key Shielding Linkage** > **NVR Shielding Linkage**.



2. Select a shielding mode and configure parameters.
   - No Shielding: Shielding is disabled.
   - Periodic Shielding: The device is shielded during specific time periods per week.

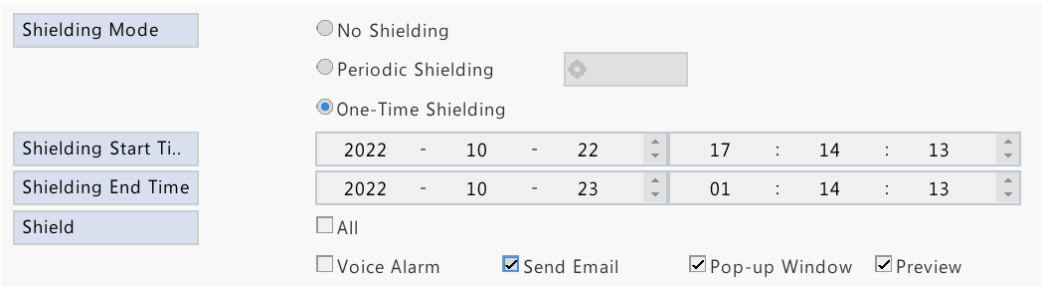


   (1) Click right to **Periodic Shielding**, and set the shielding periods. Click **OK** to return to the **NVR Shielding Linkage** page.

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

   (2) Select actions to be shielded. The default is all actions. See Alarm-triggered Actions for details.

   - One-Time Shielding: The device is shielded during a specified time period.



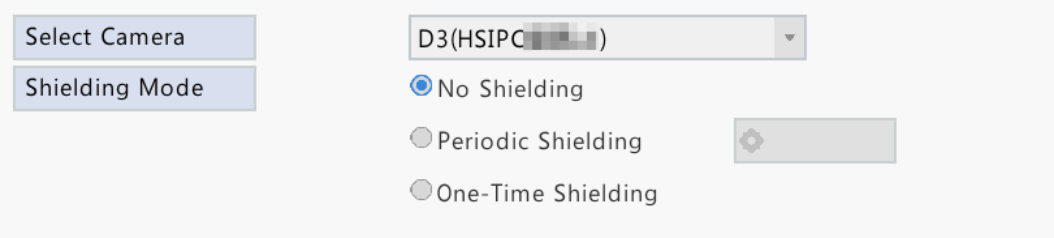
   (1) Select **One-Time Shielding**, and set the shielding start time and end time.

   (2) Select actions to be shielded. The default is all actions. See Alarm-triggered Actions for details.

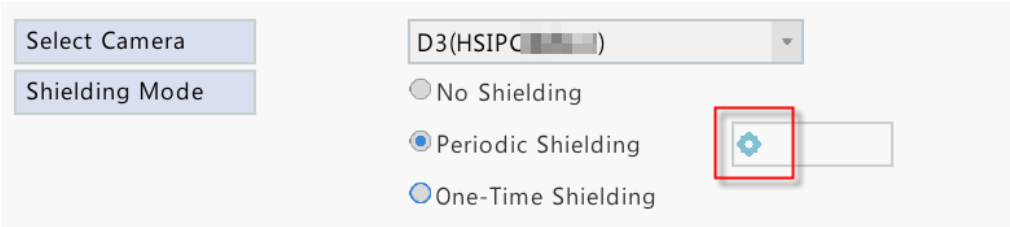
3. Click **Apply**.

8.6.2 IPC Shielding Linkage

1. Click **Menu** > **Alarm** > **One-Key Shielding Linkage** > **IPC Shielding Linkage**.



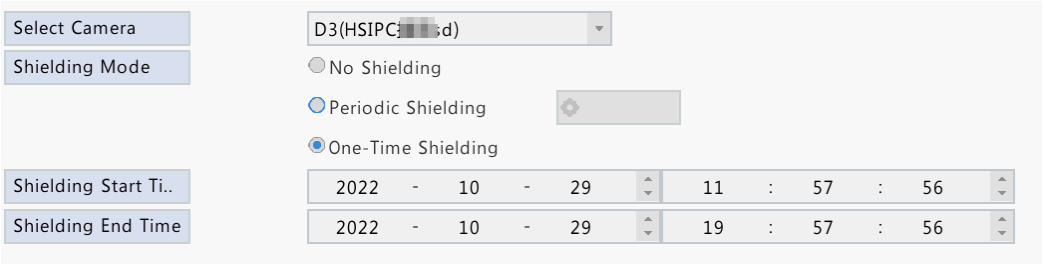
2. Select a camera.
3. Select a shielding mode and configure parameters.
   - No Shielding: Shielding is disabled.
   - Periodic Shielding: The device is shielded during specific time periods per week.



   Select **Periodic Shielding**, click , and set the shielding periods, and click **OK**.

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

   - One-Time Shielding: The device is shielded during a specified time period.



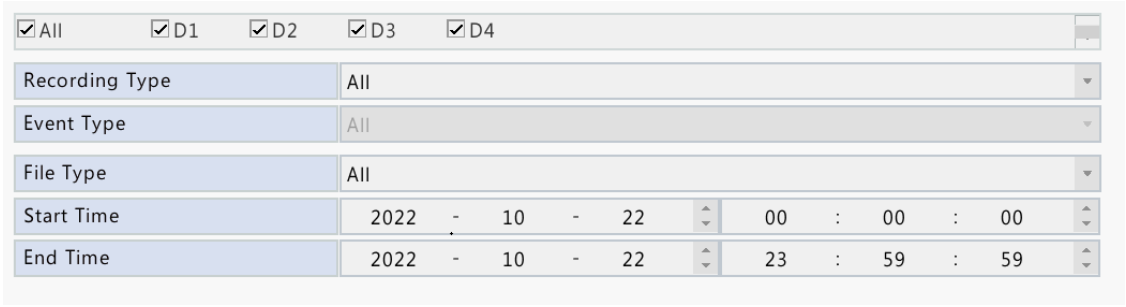
4. Click **Apply**.

9 Storage

9.1 Recording Backup

Backup, also known as recording backup, is the process of searching for video stored on a hard disk of the NVR and then saving it to a USB storage device. Make sure the USB storage device has been formatted into FAT32 or NTFS format and is connected to the NVR. The default backup format is .mp4.

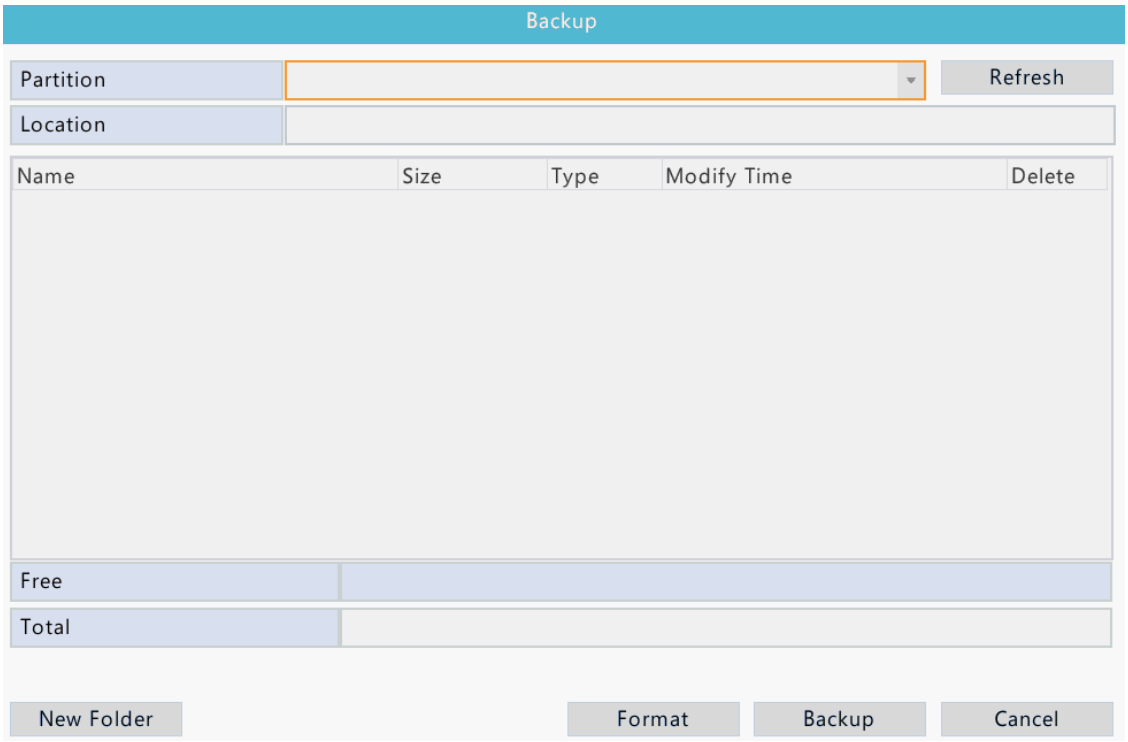
1. Go to **Menu** > **Storage** > **Recording Backup**. All cameras are selected by default.



2. Set search conditions and then click **Search**. Search results are displayed.

   Note: You can lock/unlock and play recording files in this window.

3. Select the desired recording(s) and then click **Backup**. You can also click **Backup All** to backup all files.



4. Select a partition.
5. Set the destination in the USB storage device and then click **Backup**. The recording(s) will be saved to the specified directory.

   Note:

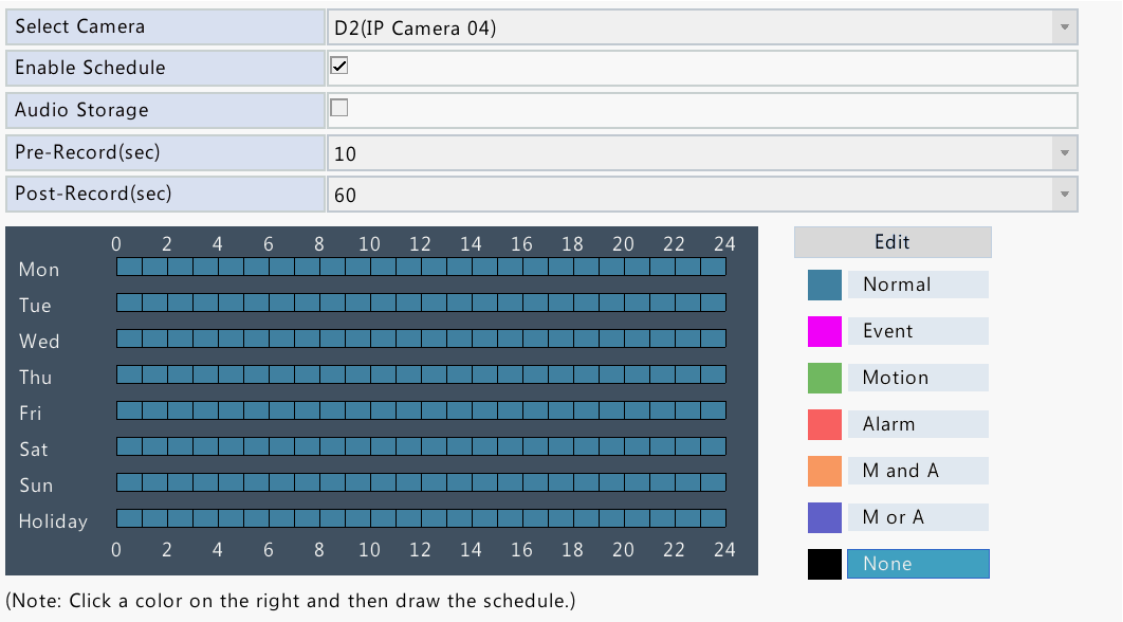
   - You may want to create a new folder for the recording(s) by clicking **New Folder**.
   - If the connected storage device has a capacity that is greater than 2T, clicking **Format** will format the device to NTFS file system; if the capacity is 2T or less, the device will be formatted to FAT32 or NTFS. Only certain devices can format a storage device that has a greater capacity than 2T.
   - A progress bar (e.g., **Exporting** X/Y) is displayed to indicate the progress, where X indicates the current number being backed up, and Y indicates the total number of recordings. To cancel the operation, click **Cancel**.
   - A backup file is named in this format: camera name-recording start time.file extension. For example, Ch9-20150630183546.mp4.

9.2 Recording Schedule

Scheduled recording records video according to the set schedule and it is different from manual recording and alarm-triggered recording. A 24×7 recording schedule is enabled by default and may be edited as needed to record video in specified periods only.

Make a recording schedule by drawing (pressing and dragging) or by editing (using the **Edit** button).

1. Go to **Menu** > **Storage** > **Recording Schedule**.



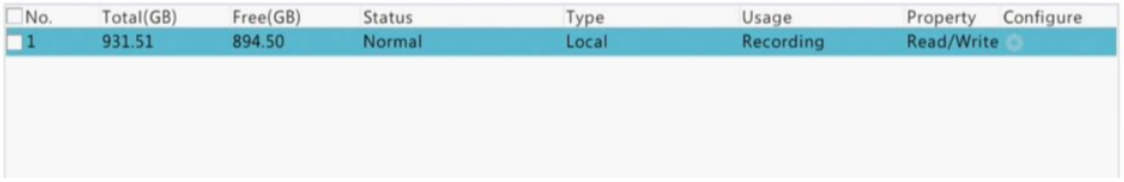
2. Select the camera from the list. Schedule is enabled by default. If it is disabled, select to enable it.
3. Set whether to record audio.
4. Set **Pre-Record** and **Post-Record** as needed.
5. Click a color icon on the right under the **Edit** button and then draw a schedule on the left. You may also click Edit and set schedule details in the **Edit** window.

   Note: When editing a schedule, you may clear the **All Day** check box and set up to eight different periods for each day. To apply the settings to other day(s), select the day(s) right to **Copy To**.
6. Click **Apply**.
7. (Optional) Click **Copy** to apply the same settings to other cameras.

9.3 Disk Management

View disk information, including total and free disk space, disk status, disk type, disk usage, and disk property. Admin users can format disks and edit disk property.

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



2. To edit disk property, click , and then modify disk property (**Read/Write** or **Read Only**) as needed.

   Note: Disk property can be edited if the disk is used for recording.
3. To format a disk, select the disk and then click **Format**. A confirmation message appears. Click **Yes**.

   Note:
   - Local disks will be formatted automatically when installed.
   - Format a disk with caution. All data will be removed.

9.4 Space Allocation

Allocate space to store videos of a specified camera.

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



2. Select the desired camera and then set the maximum recording space.

   Note: You can select **Auto** or **Custom** to allocate the maximum recording space. For more information, see Advanced Configuration.

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

9.5 Advanced Configuration

Set whether to overwrite recordings when storage is full.

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



2. Choose the disk policy.
3. Click **Apply** to save the settings.

Option	Allocate	Description
Overwrite	0	The camera shares unallocated space, and its oldest recordings will be overwritten when the space is used up.
	Other values	The camera's oldest recordings will be overwritten when its allocated space is used up.
Stop	0	The camera shares unallocated space, and its oldest recordings will still be overwritten when the space is used up.
	Other values	The camera's new recordings will not be saved when its allocated space is used up.

10 System Maintenance

10.1 System Information

10.1.1 Basic Info

Go to **Menu** > **Maintenance** > **System Info** > **Basic Info** to view the basic NVR information such as the device model, serial number, firmware version, and operation time.



10.1.2 Recording status

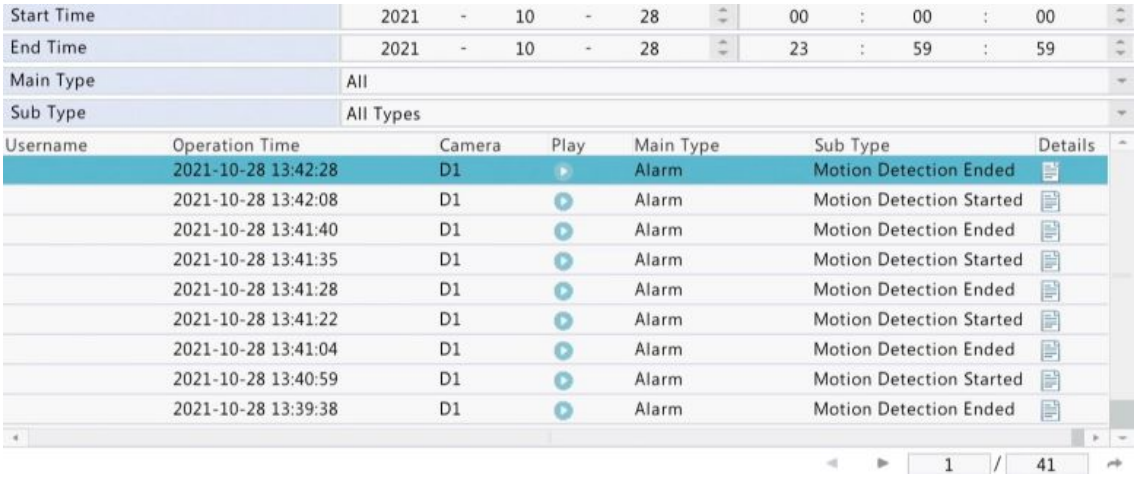
Go to **Menu** > **Maintenance** > **System Info** > **Recording** to view recording status and stream settings.

Camera ID	Name	Resolution	fps	kbps	Stream Type	Status
D1	IPC 01	2560X1440	25	143	Main Stream	Ongoing
D2	IP Camera 02	1920X1080	25	165	Main Stream	Ongoing
D3	IP Camera 03	0X0	0	0	None	No Recording
D4	IP Camera 04	0X0	0	0	None	No Recording
D5	IP Camera 05	0X0	0	0	None	No Recording
D6	IP Camera 06	0X0	0	0	None	No Recording
D7	IP Camera 07	0X0	0	0	None	No Recording
D8	IP Camera 02	0X0	0	0	None	No Recording

10.2 Log Query

Logs contain information about user-performed operations and device status. By analyzing logs, you can keep track of device operation status and view detailed alarm information.

1. Go to **Menu** > **Maintenance** > **Log**.
2. Set query conditions, including the start time, end time, main type, and sub type.
3. Click **Query**.

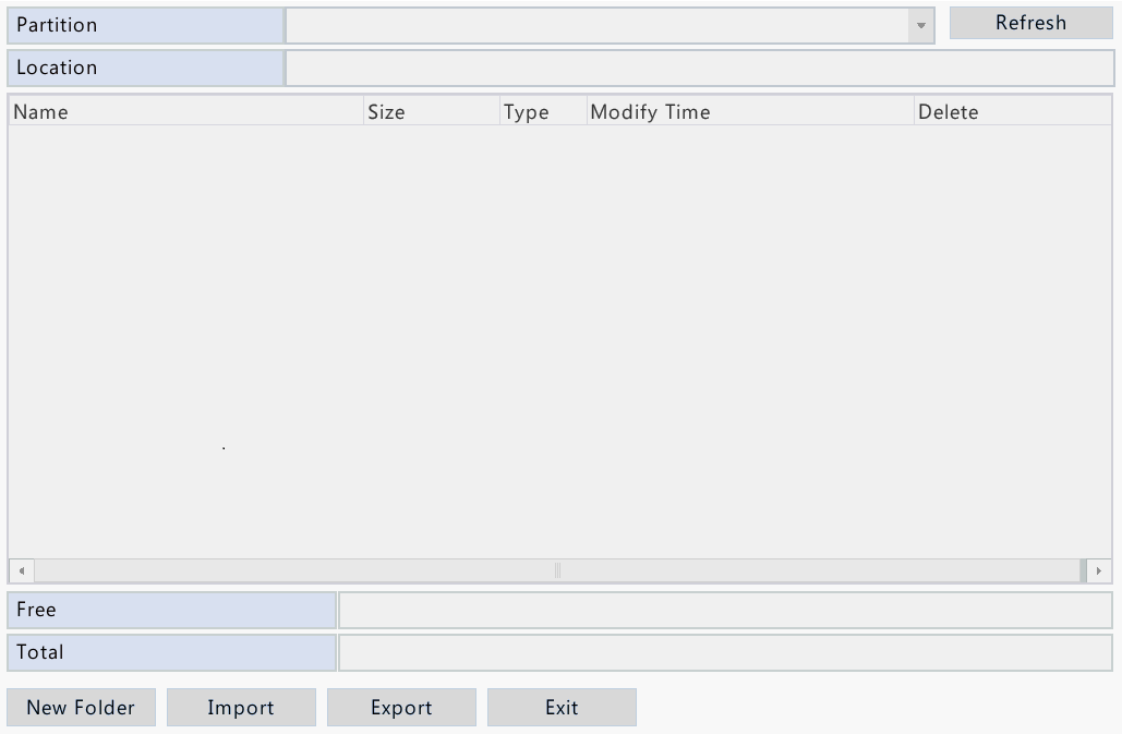


4. If is displayed under **Play**, you may click to view the recording that started one minute before the alarm time and ended ten minutes after the alarm time. — means this function is not available.
5. To export logs to an external storage device, click **Export**, set the export destination and format, and then click **Backup**.

10.3 Maintenance

10.3.1 Maintenance

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



2. Perform the following operations as needed:
   - Import configurations: Choose the *.xml file in the directory list, click **Import**, and then confirm to import the configuration file.
   - Export configurations: Choose the destination in the directory list, click **Export**, and then a *.xml file containing the exported configurations is generated in the specified folder later.

     Note:
     - 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: Deleted files cannot be recovered.
   - Create folder: Choose the destination path in the directory list, click **New Folder**, and enter a folder name to create the folder.
   - Refresh: Click the **Refresh** button to refresh the list.

10.3.2 Diagnosis Info

The device can save diagnosis info for 14 days and will overwrite the oldest when space is full.

1. Go to **Menu** > **Maintenance** > **Maintain** > **Diagnosis Info**.



2. Select a device type:
   - NVR: For NVR, history diagnosis info is generated at 00:00 every day. To export current diagnosis info, click **Export** right to **Current Diagnosis Info**. To export history diagnosis info, click **Batch Export** right to **History Diagnosis Info**.
   - IPC: For IPC, history diagnosis info is generated at 00:05 every day. Select channels and then click **Export** right to **Current Diagnosis Info** for current diagnosis info. To export history diagnosis info, click **Batch Export** right to **History Diagnosis Info**.

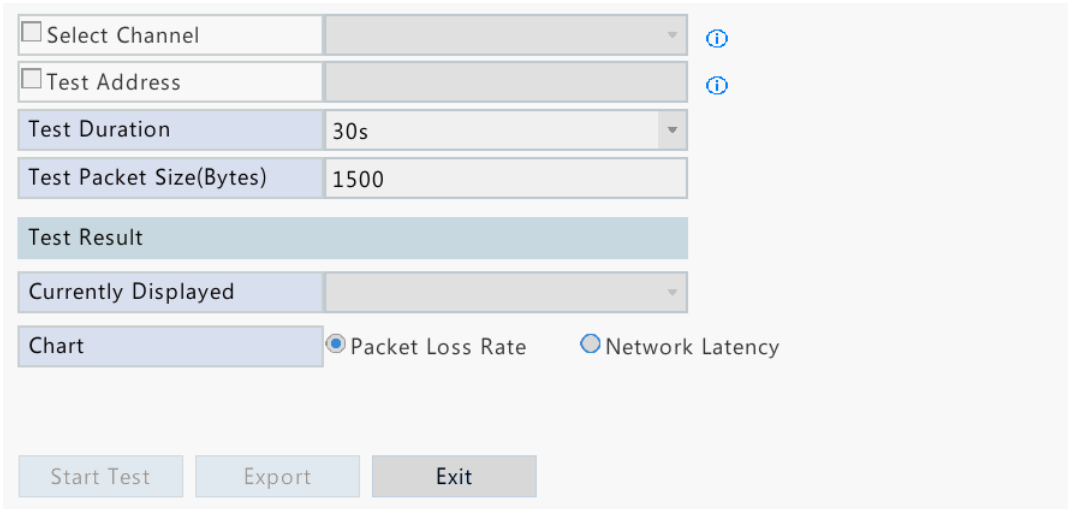
     Note: For IPC, diagnosis info is recorded based on channel, which means, if an IPC is added to multiple channels, all the channels will record diagnosis info for the IPC.

10.3.3 Network Test

Monitor the network traffic, network latency, packet loss rate, etc.

Configure Network Test

1. Go to **Menu** > **Maintenance** > **Maintain** > **Network Test**.



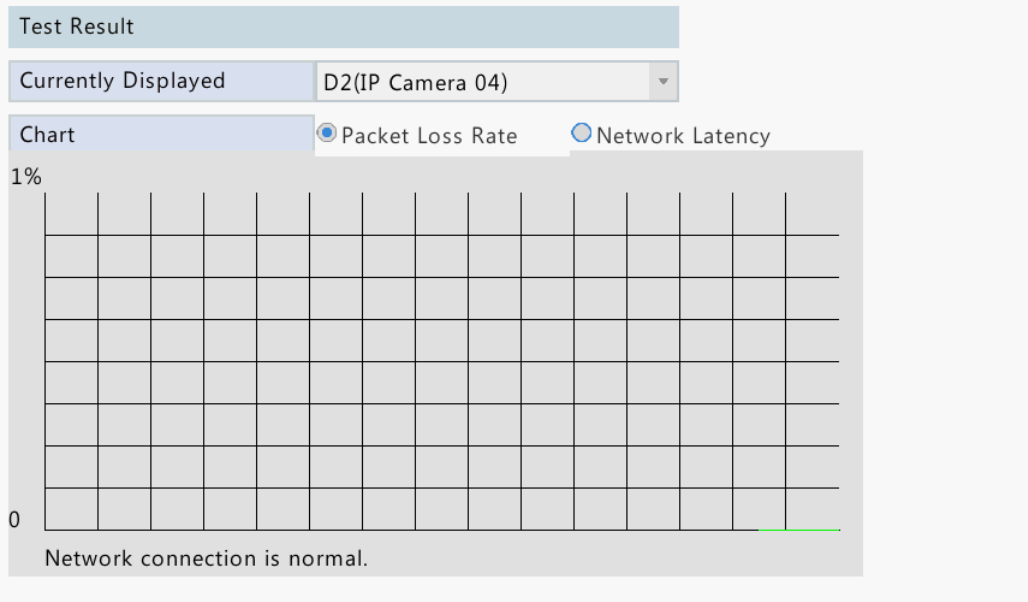
2. Select the **Select Channel** checkbox, select the channel(s) you want to monitor. Up to 5 channels are allowed.
3. Select the **Test Address** checkbox, and then enter the address you want to test. You may enter an IP address or a domain name. Up to 2 IP addresses (separated with a semicolon) are allowed.
4. Choose the test duration. The system will test the network status during this time. Options are 30s (default), 1 min, 5 min, 10 min, 30 min, and 1 hour.
5. Set the size of test packets. The default is 1500 Bytes. The range is [64-4000]. Set according to the actual network condition.
6. Click **Start Test** to test the packet loss rate and network latency.

View Test Results

If the test is successful, the system saves test data and shows the packet loss rate and network latency.

Note: If you click **Stop Test** before the test is completed, the system will save the existing test data and show the test result.

1. You can click the **Currently Displayed** drop-down list to choose the channel or address to be tested.
2. Click **Packet Loss Rate** or **Network Latency** to view the test result.



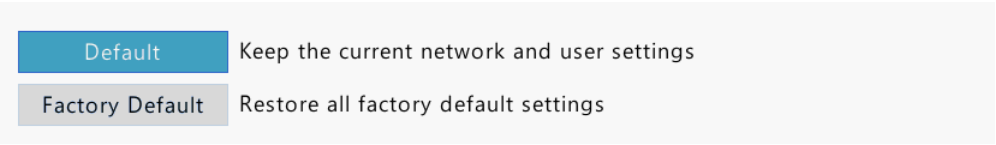
Export Test Results

1. Click **Export**. The **Backup** page appears.
2. Choose the destination path, click **Backup** to export test results to the external storage device.
3. The exported file is a .tgz package, including ping logs of all the test objects and one summary file.

10.4 System Restoration

Use this function to restore some or all factory default settings. The NVR will restart automatically to complete this operation. Recordings and operation logs will not be deleted.

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



2. Click **Default** to restore factory default settings except network and user settings, or click **Factory Default** to restore all factory default settings.

10.5 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: 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.

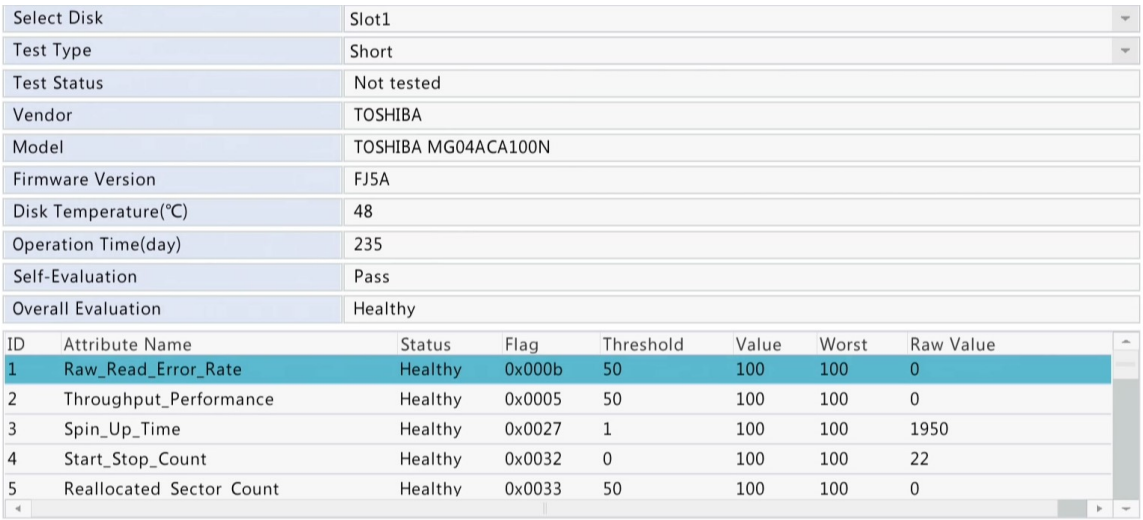
3. Click **Apply**.

10.6 Hard Disk Detection

10.6.1 S.M.A.R.T. Test

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

S.M.A.R.T. (enabled by default) checks the head, platter, motor, and circuit of hard disks to evaluate their health status. The overall evaluation results include **Healthy**, **Failure**, and **Bad Sectors**. It is recommended to replace the disk immediately if the status is **Failure**.



Note:

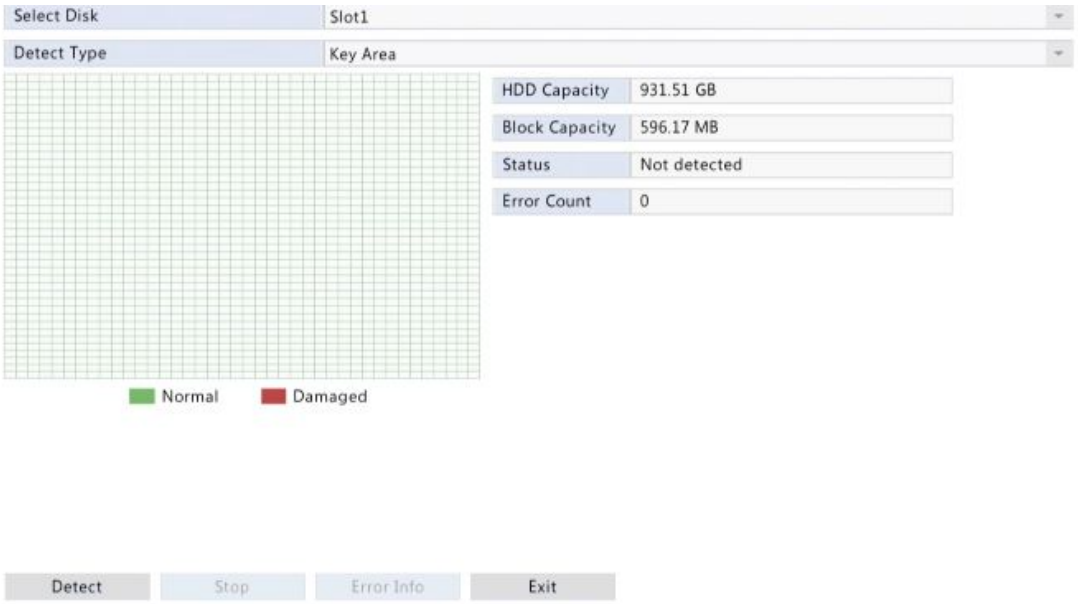
- Some hard disks only support some of the test items.
- The system provides three test types: Short, Extended, and Conveyance. Extended tests detect more thoroughly and thus take longer time than Short tests. Conveyance tests mainly detect data transmission problems.

CAUTION: Using a faulty disk is risky. Faulty disks should be replaced immediately. Contact your local dealer for information about hard disks.

10.6.2 Disk Check

Disk check can check bad sectors in hard disks.

1. Go to **Menu** > **Maintenance** > **HDD** > **Disk Check**.



2. Select the desired disk and detection type (key area or full detect), and then click **Detect** to start detection. Click **Stop** if you want to stop.

   CAUTION: The detection stops automatically when the error count reaches 100.

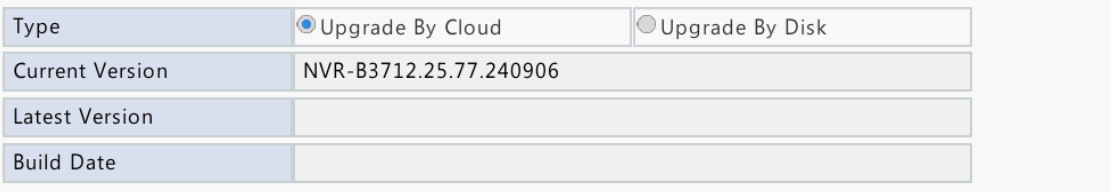
11 System Upgrade

Upgrade the device locally (using an upgrade file saved in a USB storage device) or by cloud (through a cloud server).

CAUTION: Make sure power is not interrupted during upgrade. A power failure during system upgrade may cause startup failure. Use an Uninterrupted Power Supply (UPS) if necessary.

11.1 NVR Upgrade

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



2. Choose **Upgrade By Cloud** or **Upgrade By Disk**.

   - Upgrade by cloud

     Click **Check New Version** to see whether a new version is available. Click **Upgrade** to start upgrade if a newer version is displayed.

     Note:

     - Before you begin, ensure that the NVR is connected to a fully functional DNS server (configured under **System** > **Network**).
     - The time that a cloud upgrade takes is affected by network connection status.

   - Upgrade by disk

     Select the directory where the upgrade file is, click **Upgrade** to start upgrade.

11.2 IPC Upgrade

Click **Check** to see if the version of the connected IP camera is up to date. You may upgrade cameras by cloud ( ) or by disk ( ) one by one, or select multiple cameras and then click **Upgrade by Cloud** or **Upgrade By Disk** to upgrade cameras in batches.

12 Playback

12.1 Instant Playback

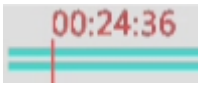
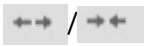
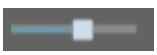
Instant playback plays the video recorded during the last 5 minutes seconds. If no recording is found, it means there is no recording during this period.

1. Click the desired window, and then click on the toolbar to start instant playback.
2. You may drag the slider to control the progress. Pause and resume as needed.



12.2 Playback Toolbar

Table 12-1: Playback Toolbar Buttons

Button	Description
	Show playback progress. **Note:** • A small window displaying video of the selected window is displayed as you drag the slider, helping locate the part of the video you want to view. • The first progress bar indicates playback progress of the video playing in the highlighted window. The second indicates the overall playback progress for all the selected cameras.
	Timeline.
	Zoom in or out on the timeline. **Note:** Alternatively, scroll your mouse wheel.
	Play, pause, stop, and reverse.
	Rewind or forward 30 seconds.
	Speed down or speed up. **Note:** Click  to restore the normal playback speed after clicking , and vice versa.
	Forward by frame.
	Start or stop clipping video.
	Lock.
	Manage files (clips, locked files, tags).
	Zoom in on images. For more details, see Zoom.
	Turn off/on audio.
	Adjust sound volume for the current window.
	Full screen.
	Exit.

12.3 Playback by Camera and Date

Use this method to search and play recordings by camera and date.

1. Right-click the mouse and then choose **Playback**.
2. Select the desired camera. By clicking **Max. Cameras** in the upper left corner you will select the maximum number of cameras allowed.

   Note: You can select multiple cameras for synchronous playback. Clicking **Max. Camera** selects the maximum number of cameras allowed, and clicking **Close All** stops playback for all cameras. The performance varies with NVR model.

3. Select the desired date on the calendar and then click  to start playback. Double-clicking the date will start playback directly.

Note:

- The calendar uses different colors to indicate different recording types. No color means no recording. Blue means normal recording. Red means event-triggered recording. Green means smart recording.
- In the upper right corner: **High Definition** means video recorded with the main or sub stream; **Standard Definition** means video recorded with the third stream.

12.4 Playback by Event

Search for and play recordings triggered by event during a specified time period.

1. In the playback window, select **Event** from the drop-down list in the upper left corner.
2. Select the desired event type, for example, motion.
3. Select the desired camera, set the time period, and then click **Search**.
4. Click  for the desired recording to start playback.



12.5 Playback by Smart Search

This function provides an efficient way to review recordings containing smart search results such as detected motions. In smart playback mode, the system analyzes recordings for smart search results. If such results are detected, the progress bar is highlighted in green, and the video plays at the normal speed, allowing you enough time to catch details; otherwise, the video plays at 16x speed to save time.

1. In the playback window, select **Smart** from the drop-down list in the upper left corner.
2. Click  for the desired camera to start smart playback.
3. Click . The smart search window is displayed. By default, the full screen is the smart search area. To clear all, click ; to restore the full-screen search area, click .
4. Set smart search rules, including detection area and sensitivity.
5. Click  to start search. To quit, click .



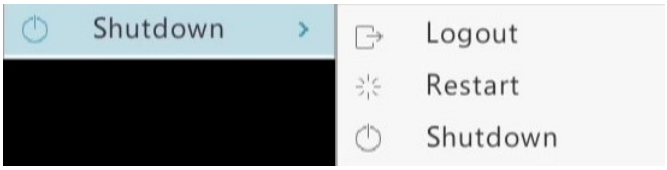
12.6 File Management

File management allows you to manage video clips, tags, and lock or unlock files.

1. Click  for the recording you want to lock in the playback window. Locked files will not be overwritten when storage is used up.
2. Click  and then click the **Locked File** tab to view the locked file. To unlock a file, click , and the icon changes to . To back up a file, select the file and then click **Backup**.

13 Shutdown

Click **Shutdown** to log out, restart, or shut down as needed.



CAUTION: Unsaved settings will be lost if the NVR is shut down unexpectedly, for example, due to a power failure. An incorrect shutdown during a system upgrade may cause startup failures.

14 Web-Based Operations

14.1 Before You Begin

You may access and manage your NVR remotely using a web browser on a PC (through the Web interface). Check the following before you begin:

- Access will be authenticated during login, and operation permissions will be required.
- The PC is operating properly and has a network connection to the NVR.
- The PC uses the Windows 7 or Windows 8 operating system.
- A Web browser has been installed on the PC. Microsoft Internet Explorer 8.0 or higher is recommended. Firefox, Chrome and Opera browsers are also supported.

- A 32-bit Web browser is still required even if you are using a 64-bit operating system.

Note: The parameters that are grayed out on the Web GUI cannot be modified.

14.2 Login

1. Open a Web browser on your PC and browse to the login page by entering the IP address (**192.168.1.30** by default) of your NVR. You may need to install a plug-in as prompted at your first login. Close the Web browser when the installation starts.
2. In the login dialog box, enter the correct username and password (**123456** for admin) and then click **Login**.

Note: The default password is intended only for your first login. We strongly recommend you set a strong password to ensure account security.

- Strong: contains at least 8 characters from at least three of the four types: upper-case letter, lower-case letter, special character, digit.
- Medium: contains at least 8 characters from two of the four types: upper-case letter, lower-case letter, special character, digit.
- Weak: contains less than 8 characters from only one of the four types: upper-case letter, lower-case letter, special character, digit.

14.3 Live View

The **Live View** page is displayed when you are logged in. The following figure shows an example.

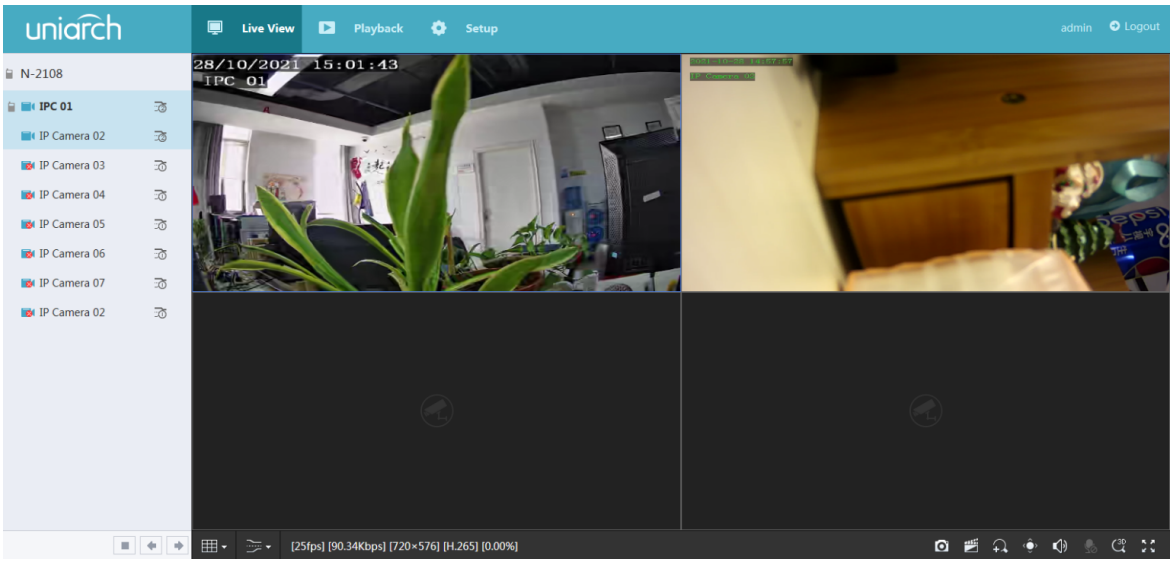


Table 14-1: Live View Window Control Buttons

Button	Description	Button	Description
/	Main/Sub stream	/	Start or stop live view in all windows
/	Previous and next screen		Switch screen layout
	Full screen		Select stream type
[25fps] [92.19Kbps] [720×576] [H.265] [0.00%]	Shows the current frame rate, bit rate, resolution, and packet loss rate		Take a snapshot
	Start zoom		Local recording
/	Turn on or off audio; adjust sound volume	/	Adjust MIC volume

Button	Description	Button	Description
	3D positioning		Open or close the control panel

Note:

- Only the main stream  is displayed when the camera is offline or it supports only one stream.
- A snapshot file is named in this format: IP_camera ID_snapshot time. The snapshot time is in YYYYMMDDHHMMSSMS format. By default, snapshots are saved in this directory: C:\Users\username \Surveillance\Snap\system date. The system date is in yyyy-mm-dd format.
- A local recording is named in this format: IP_camera ID_S recording start time E recording end time. The recording start and end times are in hh-mm-ss format. By default, local recordings are saved in this directory: C:\Users\username\Surveillance\Record\system date. The system date is in yyyy-mm-dd format.

14.4 Playback

Click **Playback** on the top to show the **Playback** page. The following figure shows an example.

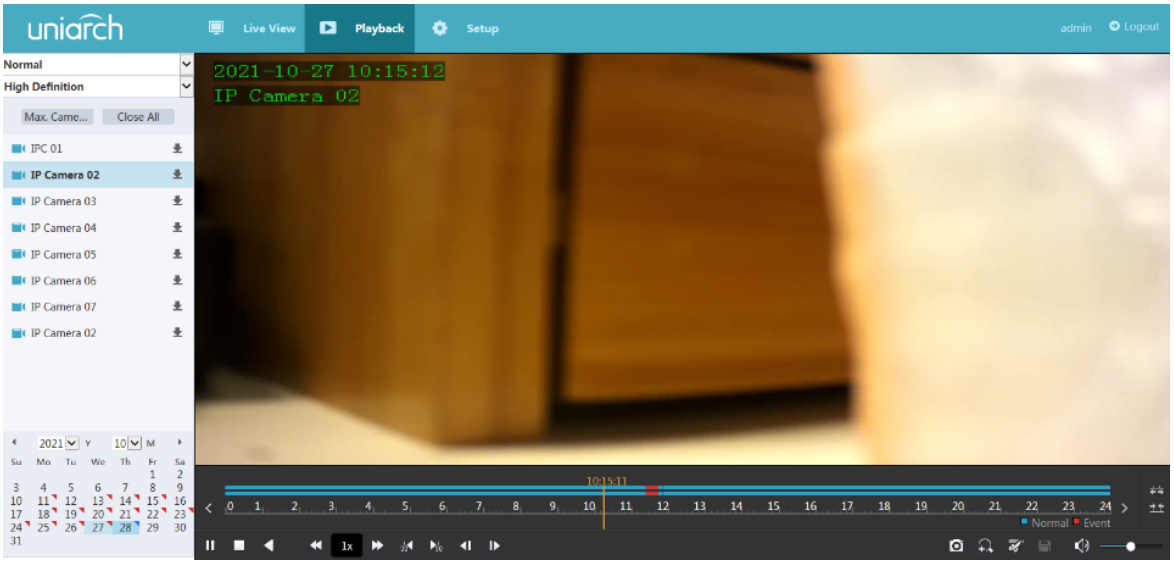
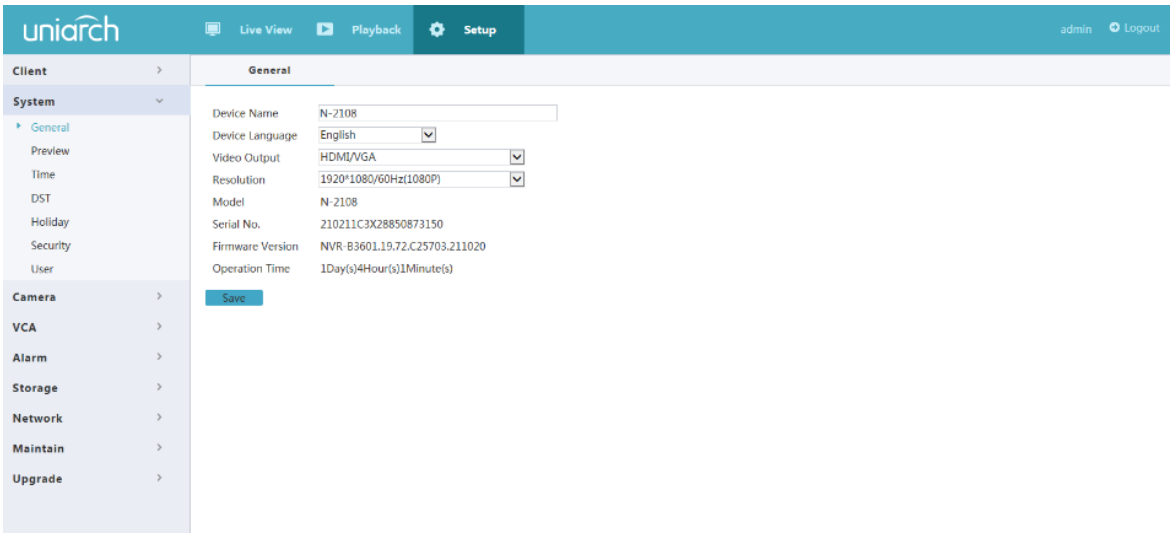


Table 14-2: Playback Control Buttons

Button	Description	Button	Description
	Play/Pause		Stop
	Reverse		Speed down or speed up
	Rewind or forward 30 seconds		Rewind or forward by frame
	Previous or next period		Clip video/pause
	Save video clip		Take a snapshot
	Zoom		Adjust sound volume; turn on or off sound

14.5 Configuration

Click **Setup** on the top, and then click the menus on the left to configure parameters.



15 Appendix

15.1 Appendix A Acronyms

Acronym	Description
CBR	Constant Bit Rate
DDNS	Dynamic Domain Name Service
DHCP	Dynamic Host Configuration Protocol
DST	Daylight Saving Time
DVS	Digital Video Server
FTP	File Transfer Protocol
HDMI	High Definition Multimedia Interface
HTTPS	Hypertext Transfer Protocol Over Secure Sockets Layer
IPC	IP Camera
MTU	Maximum Transfer Unit
NAT	Network Address Translation
NIC	Network Interface Card
NTP	Network Time Protocol
NVR	Network Video Recorder
ONVIF	Open Network Video Interface Forum
PoE	Power over Ethernet
PPPoE	Point-to-Point Protocol over Ethernet
PTZ	Pan, Tilt, Zoom
S.M.A.R.T.	Self-Monitoring, Analysis and Reporting Technology
UPnP	Universal Plug-and-Play
USB	Universal Serial Bus
VGA	Video Graphics Array

Acronym	Description
VBR	Variable Bit Rate

15.2 Appendix B FAQs

Problem	Possible Cause and Solution
Forgot the login password	Click **Forgot Password** in the login dialog box as admin. A dialog box appears. • Note down the serial number and then contact your technical support for a temporary password. Log in with the temporary password and then reset your password. • Use your mobile app to scan the QR code (**Me > Tool > Forgot Device Password**).
The Web plugin (ActiveX) cannot be loaded.	• Close your web browser when the installation starts. • Disable the firewall and close the anti-virus program on your computer. • 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 NVR's IP address to the trusted sites in your IE (**Tools > Internet Options > Security**). • Add your NVR'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 has been disabled, and the anti-virus program has been stopped on your computer. • If not, maybe it is because the graphics card driver on your computer is not working properly. Try installing the driver again.
A camera is offline, and **No Link** is displayed.	Click **System** > **Network** > **Mobile Service**. The cause is displayed under **Status**. Common causes include disconnected network, incorrect username or password, weak password, insufficient bandwidth. • Check network connection and network configurations. • If it indicates incorrect username or password, check that the camera password set in the NVR 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. • If it indicates insufficient bandwidth, delete other online IP devices in the NVR.
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 NVR to use the sub stream first for live view.
A camera goes online and offline repeatedly.	• Check if network connection is stable. • Upgrade the firmware for the camera and the NVR. Contact your dealer for the latest versions.
Live view is normal, but the recording cannot be found.	• Check that a recording schedule has been properly configured. • Check if the time and time zone configured in the NVR are correct. • Check if the hard disk storing the recording has been damaged. • Check if the desired recording has been overwritten.

Problem	Possible Cause and Solution
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 NVR.	• Use the power adapter delivered with your NVR. • The disk is not compatible with your NVR. Contact your dealer for a list of compatible disk models.
The mouse does not work.	• Use the mouse delivered with your NVR. • Make sure no cable is extended.