Digital Video Recorders

User Manual

Manual Version: V1.00

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

> **ⓘ CAUTION!**
> - 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 9 characters comprising all three elements: letter, special character, digit.
> - Weak: contains at least 8 characters from two of the four types: upper-case letter, lower-case letter, special character, digit.

- 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.

Contents

Preface

This manual describes how to use your DVR 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).

Part I Local Operations

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

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

This section describes local operations.

1 Before You Begin

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.

1.1 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.

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

1.2 Mouse Operations

You can refer to Initial Configuration and complete a quick configuration.

> **📝 NOTE!**
> Unless otherwise specified, all operations described in this manual are performed with a mouse by the right hand. See Mouse Operations for details.

Table 1–1 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.
	Long press	Restore to lowest resolution
Wheel	Scroll up or down	Scroll up or down a list or a window; or zoom in or out on a playback progress bar.

2 Initial Configuration

2.1 Preparation

- Make sure that at least one monitor is correctly connected to the VGA or HDMI interface on the rear panel of the DVR.
- 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 DVR.

2.1 Device Login

The login page appears after the DVR starts up.

Enter the default admin password **123456**, and click **Login**.

2.2 Wizard

The wizard can guide you to complete the most basic setup. The following page appears after your login:

1. Enable or disable the wizard as needed and then click **Next**.
2. Enable **Change Password** to change the password into a strong one, and then click **Next**.

3. Select the time zone, date and time format, set the system time, and then click **Next**.

4. Configure network parameters, and then click **Next**.

5. Select the devices to add in the discovered device list, click **Add**, and then click **Yes** to complete configuration.

![NOTE icon] **NOTE!**

- To add devices through PoE ports, see Option 2 in Adding an IP Device for details.
- The devices added can get online and start live view only if the device password is default; if not, you need to modify the device password.
- If the desired device is not in the device list, you may add it in a preview window or under **Camera > Camera > Camera** (see Adding an IP Device).

3 Live View

3.1 Live View Status

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

Table 3–1 Live View Window Icons

Icon	Description
	Motion detection alarm
	Recording
	Two-way audio

3.2 Window Toolbar

Table 3–2 Live View Window 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.

Icon	Description
	Click to edit image settings.
	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.
	Click to take a snapshot. The window borders will flash white. You may view and back up snapshots under **Storage > Image Backup**.
	Click to turn on audio. Clicking turns 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.
	Rest the mouse pointer on this icon to view encoding information including frame rate, bit rate, and resolution; or click to view camera status.
	Modify IP camera.
	Exit.

3.3 Shortcut Menu

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

Table 3–3 Shortcut Menu
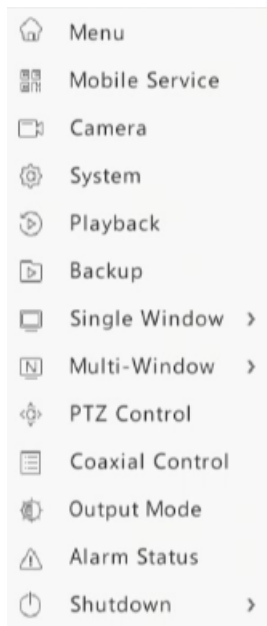
Table 3–4 Shortcut Menu Description

Menu	Description
Menu	Access the main menu. Most of operations described in this manual are performed start from the main menu; for example, click **Camera > Camera** (with **Menu >** omitted).
Mobile Service	Click to display the cloud service window. You may scan the QR code and download an app to manage your DVR.

Menu	Description
Camera	Click to configure cameras, including camera, video, OSD, and image parameters.
System	Click to configure the system, including basic information, time, user, network and etc.
Playback	Play the current day's recording for the camera linked to the current window.
Backup	Click to configure the recording backup.
Single Window	Switch to the single window of other channels from the drop-down list.
Multi-Window	Select the spilt mode from the drop-down list, including 4 windows, 6 windows, 8 windows or 9 windows.
PTZ Control	Available for PTZ cameras only. Click to display the PTZ control window.
Coaxial Control	Available for analog cameras only. Click to display the OSD menu control window.
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.

3.4 **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. Move your mouse to the area you want to zoom in, then use your scroll wheel to zoom in and out.
3. Right click to exit zoom.

3.5 **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 a mode according to the surveillance scenario and drag the slider to adjust brightness, saturation, contrast, sharpness and offset as needed. The settings available may vary with device model.

3. Click **OK** to save the settings and exit.

3.6 Preview Configuration

3.6.1 Basic Configuration

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

1. Click **System** > **Preview**.

Note: Right click and hold for 5 seconds on any page to switch to lowest resolution.

2. Edit preview setting as needed, including video output, image resolution and preview windows. The video output and the number of windows supported may vary with DVR model.

> **NOTE!**
>
> - Right clicking and holding for at least 5 seconds on any page will switch to the lowest resolution.
> - You can enable **Sub Stream First** so the DVR 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.

3.6.2 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 can drag the camera window to another camera's window to change the display sequence.

4 Channel Configuration

4.1 Channel Management

This chapter describes how to add and manage IP devices in your DVR. The IP devices mentioned in this manual mainly refer to IP camera (or network camera). Before you start, make sure the IP devices are connected to your DVR via network.

	CAUTION!
(i)	An IP device should be connected to one DVR only. An IP device managed by multiple DVRs may cause unwanted issues.

4.1.1 Camera Type

You can change analog channel to digital channel in this page.

1. Click **Camera** > **Camera** > **Camera Type**.
2. Select the channel you want to change and choose **Digital**.

Camera ID	☐ Analog	☑ Digital
1	☐	☑
2	☐	☑
3	☐	☑
4	☐	☑

Apply   Exit

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

System Message

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

Yes   No

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

4.1.2 Adding an IP Device

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

1. Option 1

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

Camera	Add/Del	Status	IP Address	Configure	Name	Advanced	Model
D5	🗑	▶	206.0.0.122	⚙	IP Camera 05	—	
D6	🗑	○	206.2.5.33	⚙	IP Camera 06	—	
	➕	—	206.0.0.145	—		⚙	IPC242E-IR5-AI
	➕	—	206.7.10.175	—		⚙	DVS4116
	➕	—	206.7.16.43	—		⚙	HIC5621@DH-F
	➕	—	206.7.16.60	—		⚙	iDS-9664NX-I8
	➕	—	206.7.17.12	—		⚙	IPC2A3L-IR6-AI
	➕	—	206.7.17.13	—		⚙	IPC-S2A2-IR@F
	➕	—	206.7.18.14	—		⚙	HIC5661@H
	➕	—	206.7.18.17	—		⚙	IPC2322EBR-DF
	➕	—	206.7.18.19	—		⚙	IPC232L-IR3-PF
	➕	—	206.7.33.23	—		⚙	HIC3531-IR@D
	➕	—	206.7.33.27	—		⚙	IPC-S214-IR@F
	➕	—	206.7.33.41	—		⚙	IPC2322EBR-DF
	➕	—	206.7.65.67	—		⚙	HIC3531-IR@D
	➕	—	206.7.77.19	—		⚙	IPC244S-IR5-PI
	➕	—	206.7.81.39	—		⚙	IPC2124SR3-DF
	➕	—	206.7.81.46	—		⚙	IPC2124SR3-DF

Idle Receive Bandwidth: 40Mbps

Refresh　　Add All　　Add Manually　　Delete　　Search Segment　　Exit

> **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 resting 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. You may choose one of the following ways to add an IP device:
- Click **Add All** to add all the discovered IP devices allowed (depending on channels supported by the DVR).
- Click ➕ to add the camera.

2. 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 DVR 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.

3. Option 3

Use this option only when the IP device to add supports the standard RTSP, and all you need from the IP device are just view live and playback. IP devices added in this way cannot be configured from the DVR.
1. Click **Camera** > **Camera** > **Camera**.
2. Click **Add Manually**.

Add IP Camera (Custom)

No.	IP Address	Status	Qty	Model
1	206.0.0.122	Added	1	iDS-7816NX-Z2/X
2	206.0.0.145		1	IPC242E-IR5-ADP
3	206.2.5.33	Added	1	DS-2CD3T46FWD
4	206.7.10.175		16	DVS4116
5	206.7.16.43		1	HIC5621@DH-FA
6	206.7.16.60		1	iDS-9664NX-I8/X
7	206.7.17.12		1	IPC2A3L-IR6-AF4(
8	206.7.17.13		1	IPC-S2A2-IR@PAI

Protocol	ONVIF
IP Address	206 . 0 . 0 . 122
Port	80
Username	admin
Password	*****
Total Camera Number	1

Protocol	Search	OK	Cancel

3. Click to select a camera in the list, select **Custom** from the **Protocol** drop-down list, and then click the **Protocol** button.

Protocol

Custom	Custom2
Protocol Name	Custom2
Port	554
Transmission Protocol	UDP
Enable Main Stream	☑
Resource Path	rtsp://<ip>:<port>/
Enable Sub Stream	☑
Resource Path	rtsp://<ip>:<port>/

Apply	OK	Cancel

4. In the **Protocol** window, name the protocol, enter the RTSP port number, select a transmission protocol, input the resource paths, and then click **Apply**.

> **NOTE!**
> Contact the camera manufacturer for resource paths.

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5. Edit settings in the **Add/Configure IP Camera** window as needed, including the IP address, username and password, and then click **OK**. Check status in the camera list.

4.1.3 Add an Analog Device

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

4.1.4 Managing an IP Device

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

- Click ⚙ under **Configure** to edit settings including the protocol, IP address, port number, username and password. The **IP Address** 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.

No.	IP Address	Status	Qty	Model
1	206.0.0.122	Added	1	iDS-7816NX-Z2/X
2	206.0.0.145		1	IPC242E-IR5-ADP
3	206.2.5.33	Added	1	DS-2CD3T46FWD
4	206.7.10.175		16	DVS4116
5	206.7.16.43		1	HIC5621@DH-FA
6	206.7.16.60		1	iDS-9664NX-I8/X
7	206.7.17.12		1	IPC2A3L-IR6-AF4(
8	206.7.17.13		1	IPC-S2A2-IR@PAI

Protocol	ONVIF
IP Address	206 . 2 . 5 . 33
Port	80
Username	admin
Password	*****
Total Camera Number	1

Protocol	Search	OK	Cancel

- Click 🗑 to delete an IP device, or select multiple IP devices and then click **Delete**. Channels corresponding to PoE ports or switching ports cannot be deleted.

- Click ⚙ under **Advanced** to change the IP address of an IP camera and the default gateway. — means this function is not available.

Net Config			
Network			
IPv4 Address	206	. 0	. 0	. 145
IPv4 Subnet Mask		.	.	.
IPv4 Default Gateway	0	. 0	. 0	. 0
Username	admin			
Password				

Apply Cancel

4.2 OSD Configuration

On Screen Display (OSD) are characters displayed with video images, for example, camera name, date and time, and people counting statistics.

1. Click **Camera > OSD;** or click OSD on the preview window toolbar.

Select Camera	A3(Camera 03)	
Name	Camera 03	

Date Format	yyyy-MM-dd
Time Format	HH:mm:ss
Show Time	✔
Show Name	✔
Font Color	

■ Time ■ Name

Copy Apply Exit

2. Select the desired camera.
3. Set camera name to display.
4. Enable **Show Name** first, and set OSD camera name as needed.
- Enter the camera name in the **Name** field. The name will be displayed on video image and the OSD name will be synchronized with the camera name. This function is enabled by default.
- The camera name can not exceed 20 characters.
5. Enable **Show Time**, and select date and time formats.
6. Set font color as needed.

> **NOTE!**
>
> You may click **Copy** to apply the same settings to other cameras.

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

4.3 Image Configuration

1. Click **Camera** > **Image**.
2. Select the desired 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 right corner. This function is available only when the camera is connected to the DVR via the private protocol.
> - Image settings apply to both live and recorded videos.

1. 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.
Image Offset	Adjust the image to the left or right.

5 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.

5.1 PTZ Control Window and PTZ Management Window

1. Click <icon> on the window toolbar. The **PTZ Control** window appears. See PTZ Control Window Buttons for detailed descriptions.
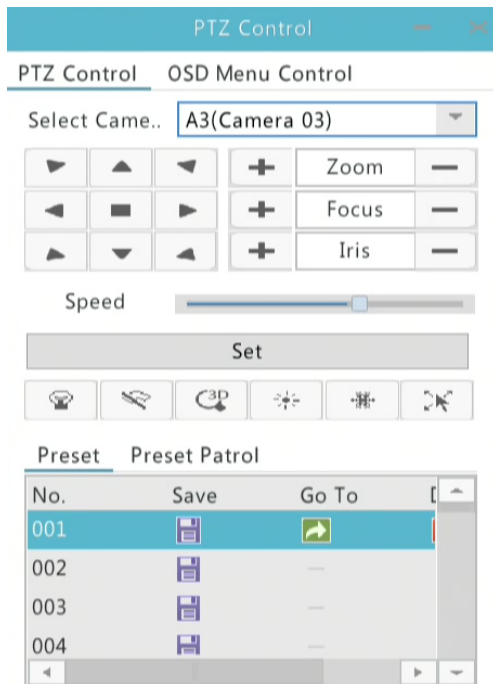
2. Click the **Set** button. The **PTZ Management** window appears.

Table 5–1 PTZ Control Window Buttons

Button	Description
	Control the rotation direction of the PTZ camera or stop rotation.
	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.
	Preset button.
//	● 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.

Button	Description
Preset Patrol /Auto Guard	Preset patrol and auto guard. For detailed information, see **Setting a Preset Patrol**, and **Setting Auto Guard**.
▶ / ■	Start or stop.

5.2 OSD Menu Control

OSD menu is used to configure analog cameras on DVRs.

1. In the preview window of an analog camera, click ◈ on the window toolbar.
2. Click **OSD Menu Control**.
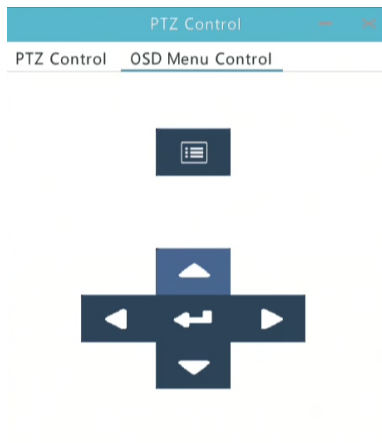
3. Click ▤ or ↵ to open camera settings window, and complete the configurations.
4. Choose the **EXIT** button to save the settings, and then click ↵ to close the window.

5.3 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.
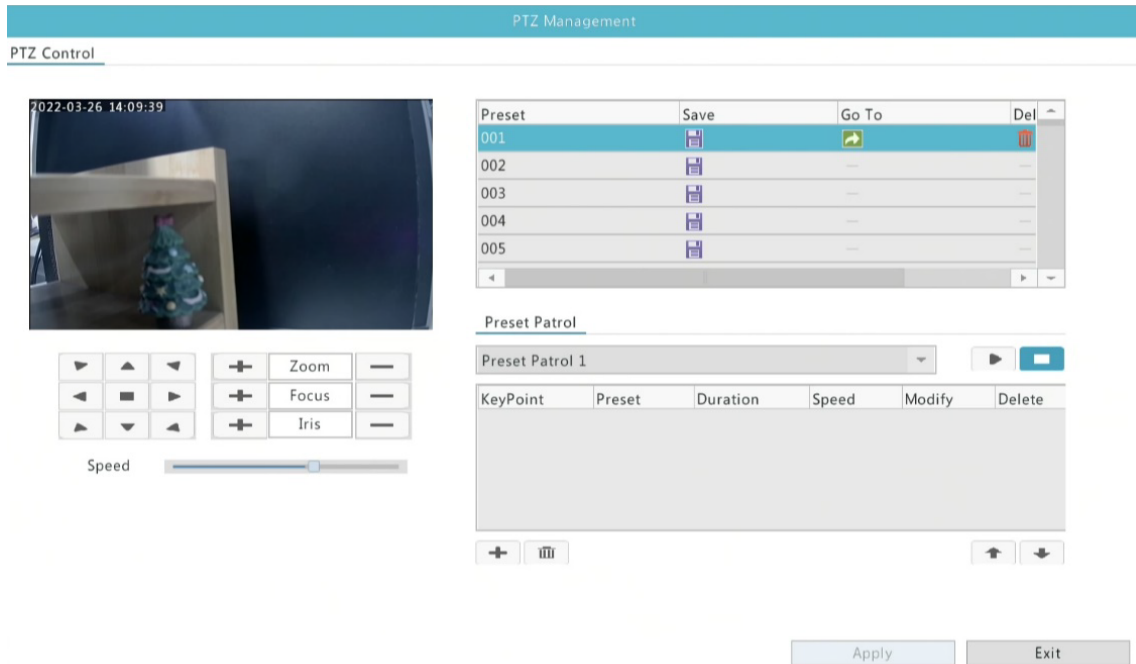
2. Add presets.
   (1) Click the directional buttons to steer the PTZ camera to the desired position.
   (2) Adjust the zoom, focus, and iris as needed.
   (3) Select a preset number not in use, and then click under **Save**.
   (4) Repeat the above steps to add all the presets.
3. To call a preset, 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.

5.4 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.
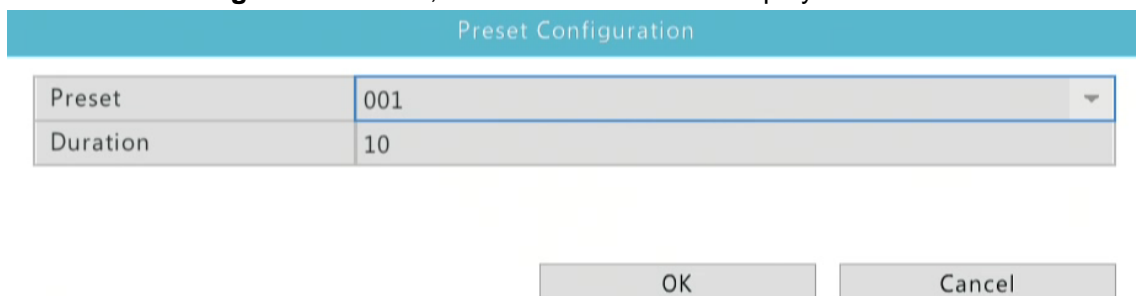
2. Select a preset from the drop-down list, set the duration (time the camera stays at the preset, unit: second).
3. Click **OK** to save the settings. The preset is added as a keypoint, as shown in the figure below.

| Preset Patrol 1 | | | | ▼ | ▶ | ■ |

KeyPoint	Preset	Duration	Speed	Modify	Delete
1	001	10	5	✎	🗑
2	002	10	5	✎	🗑

| ➕ | 🗑 | | | ⬆ | ⬇ |

4. 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.
5. After completing the configuration, click **Apply** to save the settings. Now keypoints for preset patrol 1 is complete.
6. 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).

5.5 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 focus.

1. Click ● to start recording. Steer the camera to the desired directions, adjust the zoom, focus, iris as needed during the process.
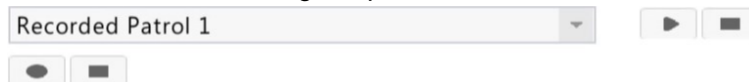
| Recorded Patrol 1 | | ▼ | ▶ | ■ |

| ● | ■ |

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

5.6 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. Select the desired mode from the drop-down list and then complete other settings accordingly. Click **Apply** to save the settings.

Enable	☑
Idle State(s)	60
Mode	Preset ▾
Preset	▾

6 Recording

Video recording has different levels of priority, which from high to low is: event recording, manual recording, and scheduled recording.

6.1 Encoding Settings

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. Click **Camera** > **Encoding** > **Video**.

Select Camera	A1(Camera 01)	▾		
Frontend Resolution	NO VIDEO			▾
	Main Stream		**Sub Stream**	
Video Compression	H265	▾	H265	▾
Resolution	1920*1080(1080P)	▾	352*288(CIF)	▾
Bitrate Type	CBR	▾	CBR	▾
Bit Rate(Kbps)	1024	▾	128	▾
Frame Rate(fps)	8	▾	8	▾
I Frame Interval	16		16	
Audio Stream	☑		☑	
Audio Source	RCA	▾	RCA	▾

Copy   Apply   Exit

2. Select the camera and then edit settings as needed. Some parameters are described in the table below.

Table 6–1 Encoding Settings

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. By default, the main stream is used for storage.
Stream Type	● Normal: main stream that is intended for scheduled recording. ● Event: main stream that is intended for recording triggered by events such as alarm inputs or motion detection alarms. ● Sub Stream: low resolution video that is intended for local or remote real-time monitoring.

Parameter	Description
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.
Audio Stream	Enable or disable audio stream.

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

6.2 **Draw or Edit a Schedule**

Make a recording schedule by drawing (pressing and dragging) or by editing (using the **Edit** button).
1. Click **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 **Pre-Record** and **Post-Record** as needed.
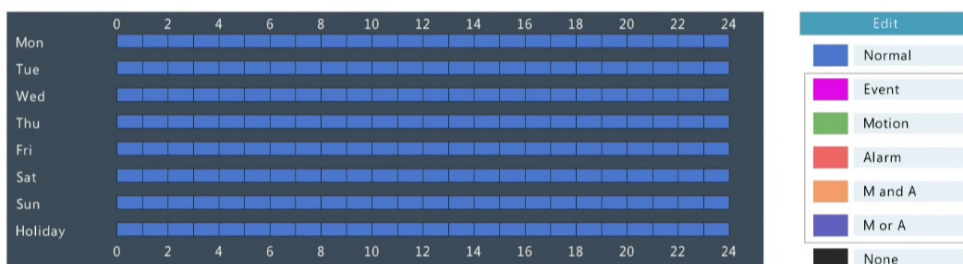
(Note: Click a color on the right and then draw the schedule.)

4. 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.

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

6.3 Scheduled Recording

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.

See Draw or Edit a Schedule for the detailed steps. Make sure the schedule type is **Normal**. The set schedule appears in blue, which stands for scheduled recording.
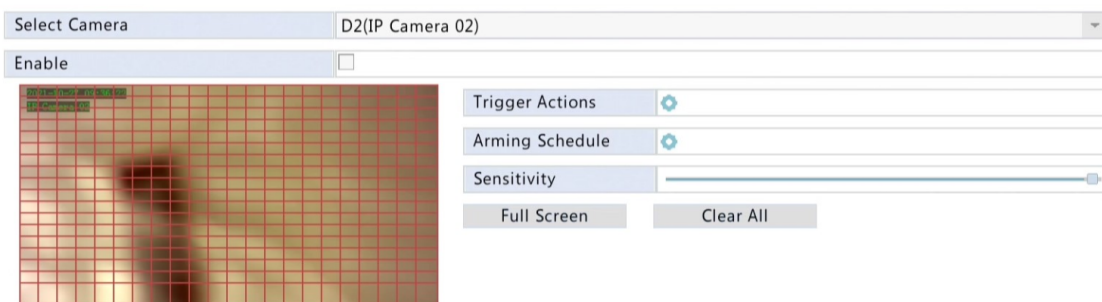
6.4 Motion Detection Recording

When enabled, a motion detection alarm occurs if an object inside the detection area moves to a certain extent (see Motion Detection for more details).

1. Click **Alarm** > **Motion** > **Motion Detection**.
2. Select the camera from the list, and then select the check box to enable motion detection.

3. In the preview window on the left side, click and drag your mouse to specify a motion detection area (red grid). Use the sliders to adjust detection sensitivity.

4. Configure motion detection recording: click ⚙ right to **Trigger Actions**, click the **Recording** tab, select the desired camera, and then click **OK**.

5. (Optional) Configure an arming schedule (time when actions will be triggered): click ⚙ right to **Arming Schedule** and then set time periods as needed.

6. Set a recording schedule under **Storage** > **Recording Schedule**. For the detailed steps, see Draw or Edit a Schedule. Make sure the schedule type is **Motion**. The set schedule appears in green, which stands for motion detection recording. The following figure shows an example.
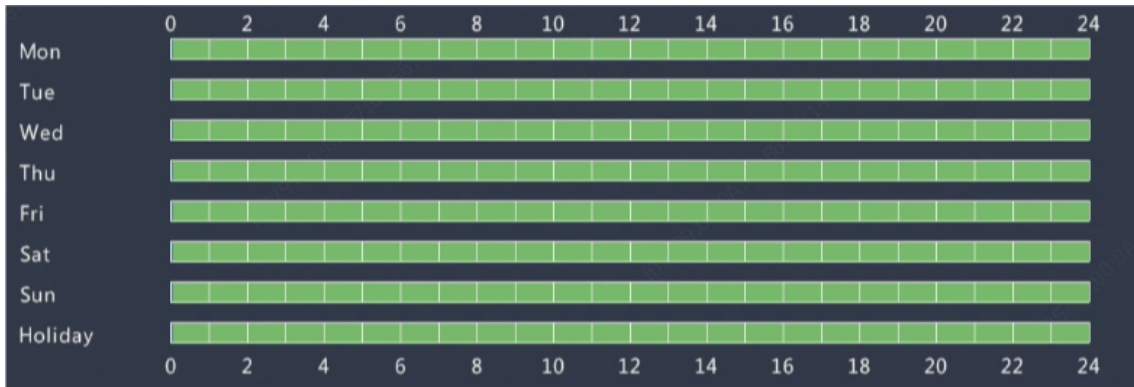
6.5 Holiday Recording

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. Click **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.

Holiday Name						
Status	✔ Enable				☐ Disable	
Repeat	✔ No				☐ Yes	
Mode	✔ By Day				☐ By Week	
Start Time	2019	▾	05	▾	08	▾
End Time	2019	▾	05	▾	08	▾

3. Click **OK**. The holiday appears in the list.
4. Click **Storage** > **Recording Schedule** and then set a recording schedule as described in Draw or Edit a Schedule. Make sure **Holiday** is selected in the **Select Day** drop-down list. In the following example, motion detection recording is enabled on the set holiday.
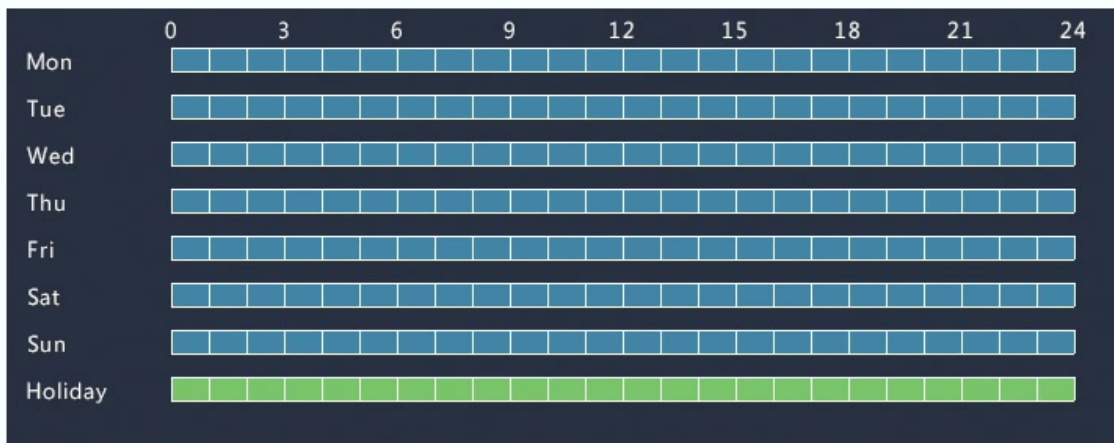
6.6 Other Recording Types

- Event: Including the types below. Any of these types will trigger event recording.
- Motion detection AND alarm triggered (**M and A** for short): recording is triggered only when a motion detection alarm AND an input alarm occur simultaneously.
- Motion detection OR alarm triggered (**M or A** for short): recording is triggered when a motion detection alarm OR an input alarm occurs.

When you choose an Event type of recording, make sure you have enabled the corresponding alarm function and configured alarm-triggered recording. The configuration steps are similar. See Motion Detection Recording for more details.

7 Playback

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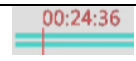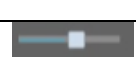
Instant playback plays the video recorded during the last 5 minutes. If no recording is found, it means there is no recording during this period.

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.
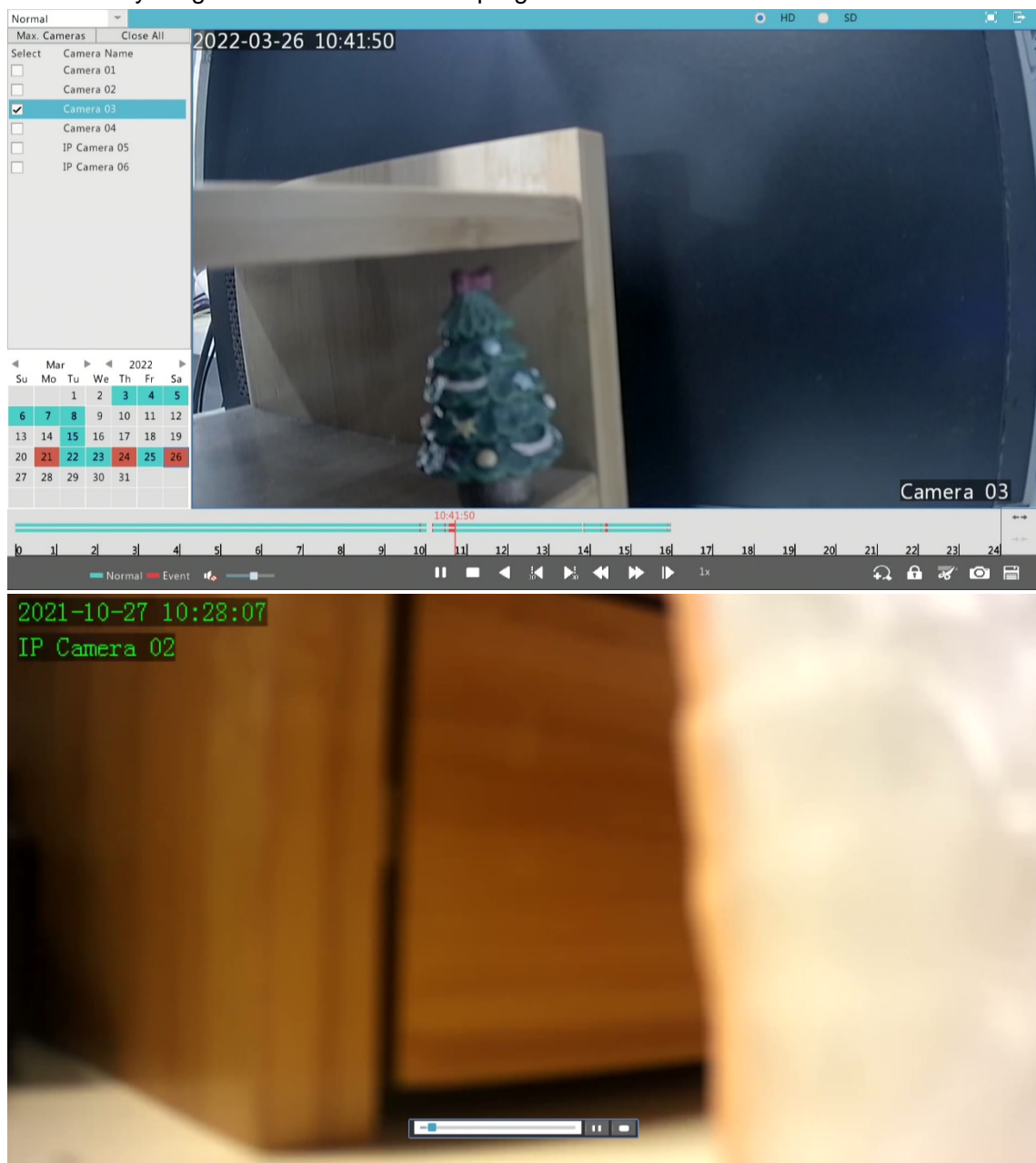
7.2 **Playback Toolbar**

Table 7–1 Playback Toolbar Buttons

Button	Description
00:24:36	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.
0 1 2	Timeline.
←→ / →←	Zoom in or out on the timeline. **NOTE:** Alternatively, scroll your mouse wheel.
▶/Ⅱ/□/◀	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.
✄ / ✄Ⅱ	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.

7.3 **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.

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

7.4 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.
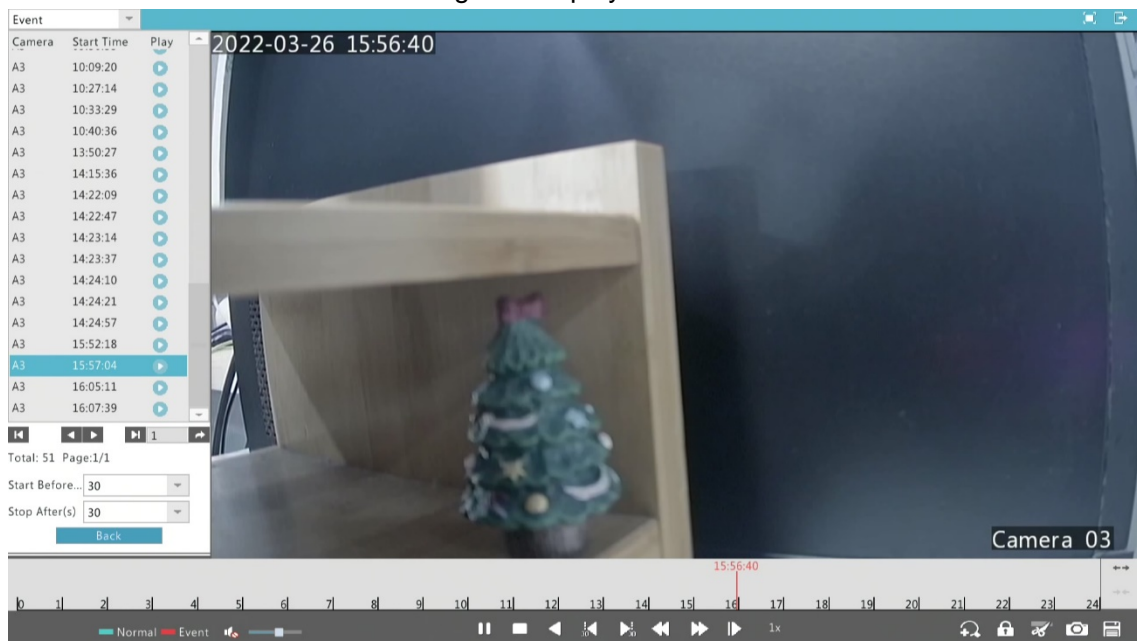
7.5 Playback by Smart

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 ![play icon] for the desired camera to start smart playback.

3. Click ![smart search icon]. The smart search window is displayed. By default, the full screen is the smart search area. To clear all, click ![clear icon]; to restore the full-screen search area, click ![restore icon].

4. Set smart search rules, including detection area and sensitivity.

5. Click ![search icon] to start search. To quit, click ![quit icon].

7.6 File Management

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

1. Click ![lock icon] for the recording you want to lock in the playback window. Locked files will not be overwritten when storage is used up.

2. Click ![save icon] and then click the **Locked File** tab to view the locked file. To unlock a file, click ![locked icon], and the icon changes to ![unlocked icon]. To back up a file, select the file and then click **Backup**.
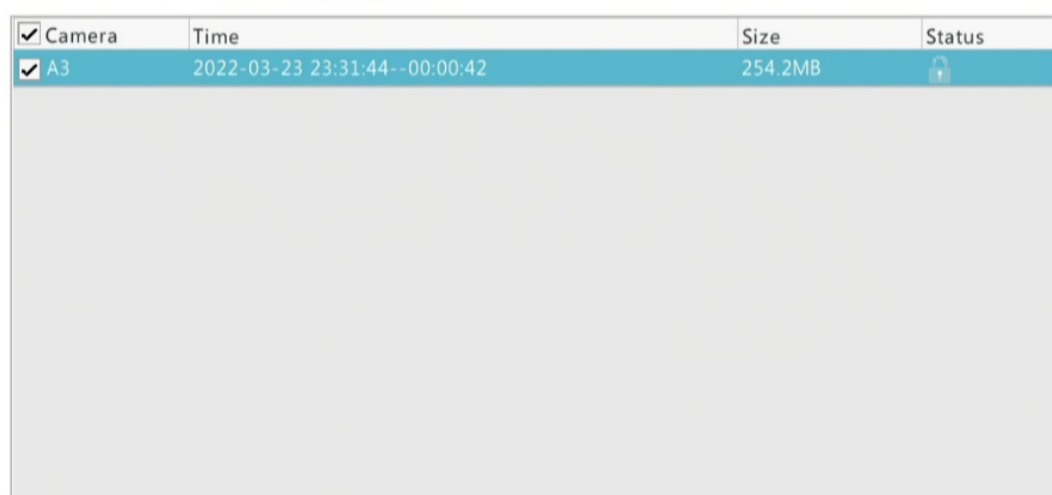
8 Backup

8.1 Recording Backup

Backup, also known as recording backup, is the process of searching for video stored on a hard disk of the DVR 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 DVR. The default backup format is .mp4.

8.1.1 Normal Backup

1. Click **Backup** > **Recording Backup**. All cameras are selected by default.

☑ All	☑ A1	☑ A2	☑ A3	☑ A4	☑ D5	☑ D6	

Recording Type	All							▼
Event Type	All							▼
File Type	All							▼
Start Time	2022	-	03	-	26	00	: 00	: 00
End Time	2022	-	03	-	26	23	: 59	: 59

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

	Camera	Time	Size	Status	Play
☐	A1	2022-03-26 00:00:00--00:31:34	39.0MB	🔓	▶
☐	A1	2022-03-26 00:31:34--03:56:24	254.5MB	🔓	▶
☐	A1	2022-03-26 03:56:24--07:21:34	254.5MB	🔓	▶
☐	A1	2022-03-26 07:21:34--10:53:14	254.5MB	🔓	▶
☐	A1	2022-03-26 10:53:14--14:23:47	254.5MB	🔓	▶
☐	A1	2022-03-26 14:23:47--17:08:01	201.1MB	🔓	▶
☐	A2	2022-03-26 00:00:00--02:48:20	210.4MB	🔓	▶
☐	A2	2022-03-26 02:48:20--06:09:40	254.5MB	🔓	▶
☐	A2	2022-03-26 06:09:40--09:30:38	254.5MB	🔓	▶
☐	A2	2022-03-26 09:30:38--13:04:30	254.5MB	🔓	▶
☐	A2	2022-03-26 13:04:30--16:32:27	254.5MB	🔓	▶
☐	A2	2022-03-26 16:32:27--17:07:39	45.0MB	🔓	▶
☐	A3	2022-03-26 00:00:01--00:22:25	195.5MB	🔓	▶

Search Results — 2022-03-26 00:00:00 / No Signal / Camera 01

Total: 54 Page: 1/1

Space required: 0.0 MB

[Backup All] [Backup] [Cancel]

> **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.

8.1.2 Video Clip Backup

A recording can be clipped and saved to a USB storage device.

1. Open the playback window. For the detailed steps, see Playback.
2. After playback starts, click ✂ and ✂‖ on the playback toolbar to clip videos.
3. Click ⊟ and then click the **Video Clip** tab to view video clips.

Camera	Clip Time	Size
✓ A3	2022-03-26 00:00:01--00:00:03	0.6MB

Total: 1 Page: 1/1   ◄◄ ◄ ► ►► 1 ➜

Space required: 0.6 MB

Backup   Cancel

4. Select the desired video clip(s) and then click **Backup**.
5. Select a destination in the USB storage device and then click **Backup**. The selected video clips are saved to the specified directory.

8.2 Image Backup

The default format of image backup is JPG.
1. Click **Storage** > **Image Backup**.

✓ All	✓ A1	✓ A2	✓ A3	✓ A4	✓ D5	✓ D6				
Image Type			All							▼
Start Time			2022	-	03	-	26	00	:	00	:	00
End Time			2022	-	03	-	26	23	:	59	:	59

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

Search Results

	Camera	Time	Size
	A3	2022-03-26 10:17:31	7KB
✓	A3	2022-03-26 10:17:32	7KB
✓	A3	2022-03-26 00:00:06	31KB

Resolution: 1572 x 892

Total: 3 Page: 1/1   ◄◄ ◄ ► ►► 1 ➜

Space required: 38 KB

Backup All   Backup   Back

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

3. Select the desired file(s) and then click **Backup**. You can also click **Backup All** to backup all files.
4. Select a destination in the USB storage device and then click **Backup**. The selected files are saved to the specified directory.

9 Alarm

9.1 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 DVR 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. Click **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.
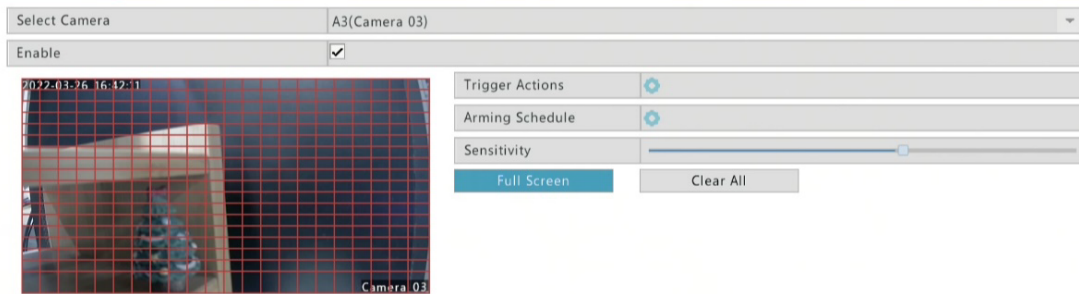
4. Click right to **Trigger Actions** and set action(s) to trigger. For more details, see Alarm-Triggered Actions.
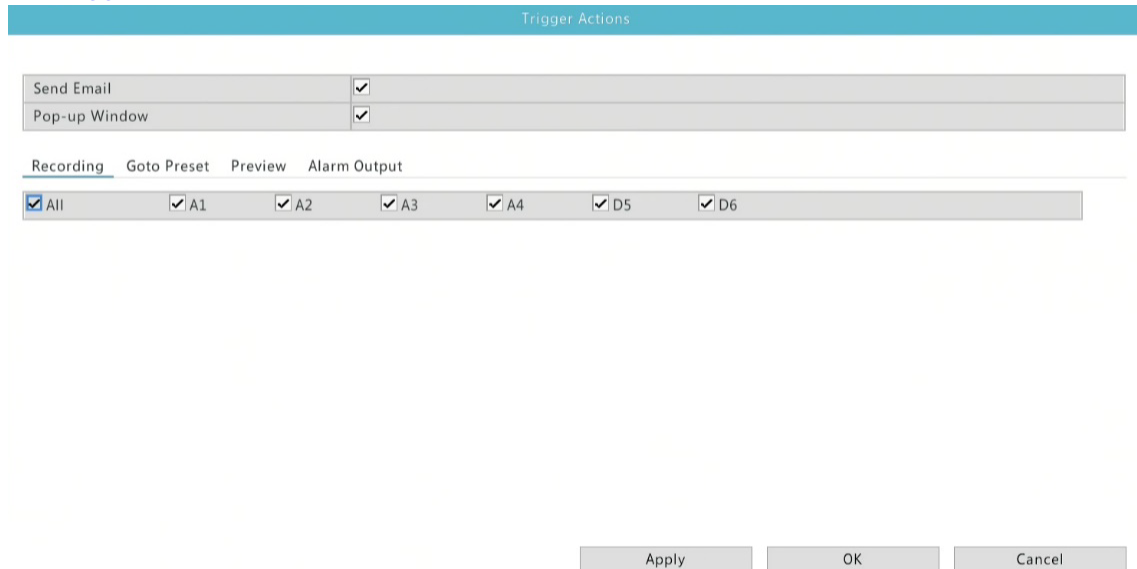
5. (Optional) Click ⚙ right to **Arming Schedule** and then set the time when actions will be triggered.

Arming Schedule								
Current Camera	A3							
Select Day	Monday							▾

Start Time				End Time			
00	:	00	⇕	24	:	00	⇕
00	:	00	⇕	00	:	00	⇕
00	:	00	⇕	00	:	00	⇕
00	:	00	⇕	00	:	00	⇕
00	:	00	⇕	00	:	00	⇕
00	:	00	⇕	00	:	00	⇕
00	:	00	⇕	00	:	00	⇕
00	:	00	⇕	00	:	00	⇕

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

Apply   OK   Cancel

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

9.2 Video Loss

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

1. Click **Alarm** > **Video Loss**. To disable video loss alarm for a channel, click 🟢, which then changes to 🔴.

Camera	Status	Trigger Actions	Arming Schedule
D1	🔴 Disabled	⚙	⚙
D2	🔴 Disabled	⚙	⚙
D3	🔴 Disabled	⚙	⚙
D4	🔴 Disabled	⚙	⚙
D5	🟢 Enabled	⚙	⚙
D6	🟢 Enabled	⚙	⚙
D7	🟢 Enabled	⚙	⚙
D8	🟢 Enabled	⚙	⚙

2. Click ⚙ under **Trigger Actions** and set action(s) to trigger. For more details, see <u>Alarm-Triggered Actions</u>.

> 📝 **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.

9.3 Alert

The DVR 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. Click **Alarm** > **Alert**.
2. Select an alert type, and then select the desired actions.

Alert Type	Illegal Access	▾
Send Email	☑	
Pop-up Window	☑	

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

9.4 Alarm-Triggered Actions

An alarm can trigger actions, for example, buzzer, recording, and preview. The supported actions may vary with DVR model.

1. **Alarm-Triggered Buzzer**

   The DVR makes a buzzing sound when an alarm occurs.

2. **Alarm-Triggered E-mail**

   The DVR e-mails an alarm message to a specified email address when an alarm occurs.

3. **Alarm-Triggered Pop-up Window**

   A window pops up when an alarm occurs.

4. **Alarm-Triggered Recording**

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

5. **Alarm-Triggered Snapshot**

   The DVR takes a snapshot when an alarm occurs.

6. **Alarm-Triggered Preset**

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

7. **Alarm-Triggered Preview**

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

8. **Alarm-Triggered Alarm Output**

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

10 Network Configuration

Network configuration is required if your DVR 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

10.1 TCP/IP

1. Click **System** > **Network** > **Ethernet NIC**.
2. Set the network parameters as needed. DHCP is enabled by default.

You can choose a working mode if your DVR 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 DVR 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.

NIC	NIC1			
Enable DHCP	☐			
IPv4 Address	206	. 0	. 0	. 169
IPv4 Subnet Mask	255	. 240	. 0	. 0
IPv4 Default Gateway	206	. 2	. 25	. 177
MAC Address	48:ea:63:34:81:91			
MTU(Bytes)	1500			
Preferred DNS Server	8	. 8	. 8	. 8
Alternate DNS Server	8	. 8	. 4	. 4

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

> **NOTE!**
> - For a DVR 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 DVR.

> **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 DVR and PC can connect to each other using IPv6 addresses. To view live or recorded videos, make sure the IPv4 addresses are also connectable.

10.2 Mobile Service

The DVR allows access from the cloud website (www.star4live.com) or from DVR mobile client. You need to sign up for a cloud account at www.star4live.com first. Make sure the DVR is connected to the Internet.

1. Click **System** > **Network** > **Mobile Service**.

2. Cloud service is enabled by default.

3. To add the DVR to cloud at the cloud website: log in to your account at www.star4live.com and then add the DVR by entering the register code and device name.

4. To add the DVR 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 DVR to cloud.

Cloud Service	☑
Server Address	www.star4live.com
Register Code	012345678901234567890 1234
Device Status	Offline: The device is unreachable. Please make sure network settings (such as DNS server address and port ma...
Add Without Signup	☑

Add Without Signup: No account is needed, you can scan the QR code with the APP to add the XVR. This requires you to enable Cloud Service and set a strong ad...

| Step 1 |
| Scan QR code to get APP |

| Step 2 |
| Scan QR code with APP to add device |

Apply   Exit

> **NOTE!**
>
> - You may access the DVR 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 DVR from cloud, click **Delete**.

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

10.3 DDNS

If your DVR 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 DVR with an IP address. To avoid this issue, you can register with an DDNS server to obtain a domain name for your DVR and then access your DVR by visiting the domain name instead of an IP address (http://*DDNS server address/DVR's domain name*) using a web browser.

1. Click **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).

Enable	☑	
DDNS Type	DynDNS	▾
Server Address	members.dyndns.org	
Port	80	
Domain Name		
Username		
Password		
Confirm		

Apply Exit

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

Enable	☑	
DDNS Type	MyDDNS	▾
Server Address	www.star4live.com	
Port	80	
Domain Name		
Device Status	Offline	
Device Address	www.star4live.com/	

Test Apply Exit

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

10.4 Email

After Email is enabled as a triggered action (in **Trigger Actions** windows) and configured properly, the DVR 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 DVR 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 DVR models support this function.

1. Click **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.

35

Enable Server Authentication	☑
Username	
Password	
SMTP Server	
SMTP Port	25
TLS/SSL	☐ If TLS/SSL is enabled, use 25 first, and 587/465 as an alternative.
Sender Name	
Sender Address	
Select Recipient	Recipient 1 ▾
Recipient Name	
Recipient Address	
Arming Schedule	⚙

<div style="text-align:right">

Test	Apply	Exit

</div>

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

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

10.5 Port

Normally the default port numbers need no modification. This function is mainly used together with the port mapping function. See Adding an IP Device for more details.

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

HTTP Port	80
RTSP Port	554
HTTPS Port	443
RTSP URL Format	rtsp://<ip>:<port>/unicast/c<channel number>/s<stream type>/live
	<channel number>: 1-n
	<stream type>: 0(main stream) or 1(sub stream)

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 DVR from another DVR.

10.6 Port Mapping

Two port mapping methods are available:
- Universal Plug and Play (UPnP)
- Internal and external mapping

1. UPnP

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

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

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

Enable	✓			
Mapping Mode	● UPnP		○ Manual	
UPnP Mapping	Auto			▼
HTTP Port	80			
RTSP Port	554			
HTTPS Port	443			

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

Refresh	Apply	Exit

📝 **NOTE!**

- Automatic mapping (Auto) is recommended. Ports will conflict if not configured properly.

- For a DVR 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.

2. 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 DVR are consistent with that of the router.

- Some routers may require the same internal and external ports for the DVR and the router.

---

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

Enable	☑	
Mapping Mode	○ UPnP	◉ Manual
HTTP Port	80	
RTSP Port	554	
HTTPS Port	443	

Refresh	Apply	Exit

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

> 📝 **NOTE!**
> After port mapping is completed, you may access the Web client of your DVR 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.

11 Disk Configuration

11.1 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. Click **Storage** > **Hard Disk**.

☐ No.	Total(GB)	Free(GB)	Status	Type	Usage	Property	Configure
☐ 1	16764.00	14109.75	Normal	Local	Recording	Read/Write	⚙

Refresh	Format	Exit

2. To edit disk property, click [icon], 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.

11.2 Space Allocation

Allocate space to store videos of a specified camera.

1. Click **Storage** > **Allocate Space**.

Select Camera	A3(Camera 03)	▼
Used Recording Space(GB)	900	
Used Image Space(GB)	0	
Disk Capacity	16764 GB free of 16764 GB	
Max Recording Space(GB)	0	
Max Image Space(GB)	0	

Copy	Apply	Exit

2. Select the desired camera and then set the maximum recording space and maximum image space.
3. Click **Apply** to save the settings.
4. (Optional) Click **Copy** to apply the same settings to other camera(s).

11.3 Advanced Configuration

Set whether to overwrite recordings when storage is full.

1. Click **Storage** > **Advanced.**

Disk Policy	● Overwrite	○ Stop

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.

12 System Configuration

12.1 Basic Configuration

1. Click **System** > **Basic** > **Basic Info**.
2. Configure the parameters.

Device Name	XVR-104G2
Device Language	English
Enable Password	✔
Mouse Pointer Speed	
Auto Logout(min)	5

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

12.2 Time Configuration

12.2.1 Time

1. Click **System** > **Time** > **Time**.
2. Select the correct time zone, and then set date and time formats and the system time. The following shows an example.

Time Zone	(GMT+08:00) Beijing, Hong Kong, Urumqi, Singapore, Taipei
Date Format	YYYY-MM-DD
Time Format	24-hour
System Time	2022 - 03 - 30 10 : 29 : 56

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

12.2.2 DST

1. Click **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.

Enable DST	☑							
From	Mar	▼	2nd	▼	Sun	▼	2	⬍
To	Nov	▼	1st	▼	Sun	▼	2	⬍
DST Bias	60 Minutes							▼

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

📝 **NOTE!**

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

12.2.3 Time Sync

Use this function to synchronize camera time with the DVR. Time sync is enabled by default, and cameras will synchronize time with the DVR after getting online, and then synchronize once every 30 minutes.

1. Click **System** > **Time** > **Time Sync**.
2. Select **Sync Camera Time** and then click **Apply**.

ⓘ **CAUTION!**

Use this function with caution if you have more than one DVR on the network. An IP camera synchronizing time with multiple DVRs at the same time will cause chaotic recordings.

12.3 User Configuration

Add, delete users or edit user permissions. Only admin can perform these operations. Device password is required for user configuration.

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 four user types in the system:

● Admin: Default super administrator in the system, has full system access. Its initial password is 123456.
● Default: Default user reserved in the system, cannot be created or deleted, and only has access to live view and two-way audio.
● Operator: Has basic permissions and access to cameras.
● Guest: Only has access to cameras by default.

1. Click **System** > **User**.

Username	User Type	Edit	Delete
admin	Administrator	✎	—
default	Reserved User	✎	—

2. To add a user, click **Add**, and then set the username, user type, password and permissions as needed. Click **OK** to save the settings.

3. (Option) Click to change password for a user, and the new password takes effect at the user's next login.

13 System Maintenance

13.1 System Information

Click **Maintenance** > **System Info** to view the basic DVR information for maintenance purpose.

13.1.1 Basic Info

Click the **Basic Info** tab to view the basic information such as the device model, serial number, firmware version, and operation time.

Basic Info	
Model	XVR-104G2
Serial No.	219802C02TG165000001
Firmware Version	XVR-B3713.5.5.211217
Operation Time	0 Day(s) 1 Hour(s) 34 Minute(s)

13.1.2 Recording info

Click the **Recording** tab to view detailed recording information, such as recording type, status, stream type and etc.

Camera ID	Name	Type	Status	Diagnosis	Stream Type	fps	
A1	Camera 01	Normal	Ongoing	Normal	Main Stream	8	
A2	Camera 02	Normal	Ongoing	Normal	Main Stream	8	
A3	Camera 03	Normal	Ongoing	Normal	Main Stream	25	
A4	Camera 04	Normal	Ongoing	Normal	Main Stream	8	
D5	IP Camera 05	None	No Recording	Camera Offline	None	0	
D6	IP Camera 06	None	No Recording	Camera Offline	None	0	

13.2 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. Click **Maintenance** > **Log**.
2. Set query conditions, including the start and end times, main type and sub type.
3. Click **Query**.

Start Time		2022	-	03	-	21		00	:	00	:	00	
End Time		2022	-	03	-	21		23	:	59	:	59	
Main Type	All												
Sub Type	All Types												

Username	Operation Time	Camera	Play	Main Type	Sub Type
	2022-03-21 17:46:34	A3	▶	Alarm	Motion Detection Ended
	2022-03-21 17:46:24	A3	▶	Alarm	Motion Detection Started
	2022-03-21 17:46:15	A3	▶	Alarm	Motion Detection Ended
	2022-03-21 17:46:04	A3	▶	Alarm	Motion Detection Started
	2022-03-21 17:40:59	A3	▶	Alarm	Motion Detection Ended
	2022-03-21 17:40:49	A3	▶	Alarm	Motion Detection Started
	2022-03-21 17:39:19	A3	▶	Alarm	Motion Detection Ended
	2022-03-21 17:39:09	A3	▶	Alarm	Motion Detection Started
admin	2022-03-21 17:38:35		—	Operation	Add Holiday
admin	2022-03-21 17:38:28		—	Operation	Modify Holiday

1 / 9

Query   Export   Exit

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**.

13.3 Backup

13.3.1 Import/Export

Configurations and diagnosis information can be exported to a storage device and saved as files for backup. A configuration file can also be imported to the DVR to restore configurations. The configuration file of a DVR can be imported to multiple DVRs of the same model if you want them to have the same settings. If the imported configuration file contains camera information, the related camera will be added to all the DVRs.

Only admin can perform these operations.

1. Click **Maintenance** > **Backup** > **Import/Export**.

Partition						Refresh
Location						

Name	Size	Type	Modify Time	Delete

Free	
Total	

New Folder   Export Diagnosis Info   Import   Export   Exit

2. To export device configurations, specify the destination directory and then click **Export**. A .xml file will be created in the specified directory when export is completed.

3. To import device configurations, double-click the target folder containing the .xml file, select the file, and then click **Import**

(i) **CAUTION!**
Delete files with caution. Deleted files cannot be recovered.

13.3.2 History Diagnosis Info

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

1. Click **Maintenance** > **Backup** > **History Diagnosis Info**.

No.	Filename	File Size	Modify Time
1	20220307000000_log.tgz	83KB	2022-03-07 08:00:00
2	20220306000000_log.tgz	82KB	2022-03-06 08:00:00
3	20220305000000_log.tgz	82KB	2022-03-05 08:00:00
4	20220304000000_log.tgz	81KB	2022-03-04 08:00:00
5	20220224000000_log.tgz	81KB	2022-02-24 08:00:00
6	20220223000000_log.tgz	80KB	2022-02-23 08:00:00
7	20220222000000_log.tgz	80KB	2022-02-22 08:00:00
8	20220221000000_log.tgz	81KB	2022-02-21 08:00:00
9	20220220000000_log.tgz	82KB	2022-02-20 08:00:00
10	20220219000000_log.tgz	82KB	2022-02-19 08:00:00
11	20220218000000_log.tgz	86KB	2022-02-18 08:00:00
12	20220217000000_log.tgz	81KB	2022-02-17 08:00:00
13	20220216000000_log.tgz	80KB	2022-02-16 08:00:00
14	20220215000000_log.tgz	80KB	2022-02-15 08:00:00

| Refresh	Export	Export All	Exit

2. Click **Export** to export current diagnosis information, or click **Export All** to export all history diagnosis information. History diagnosis info is generated at 00:00 every day.

13.4 System Restoration

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

1. Click **Maintenance** > **Restore**.

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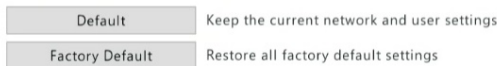
2. Click **Default** to restore factory default settings except network and user settings, or click **Factory Default** to restore all factory default settings.

13.5 Auto-Function

Set the DVR to restart as scheduled and delete files (including recordings and snapshots) as needed. Only admin can perform this operation.

1. Click **Maintenance** > **Auto-Function**.

| Auto-Restart | Every Day ▾ | 02:00 ▾ |
| Auto-Delete File(s) | Custom ▾ | 1 | day(s) ago |

2. Set an auto-restart time, and choose a way to delete files automatically.

> **CAUTION!**
> Files deleted automatically cannot be recovered.

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

13.6 HDD

13.6.1 S.M.A.R.T. Test

Click **Maintenance** > **HDD** > **S.M.A.R.T. Test** to do 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**.

☑ Continue to use the disk when it fails to pass evaluation.

Select Disk	Slot1	▾
Test Type	Short	▾
Test Status	Not tested	
Vendor	SEAGATE	
Model	ST18000VE000-2Z3101	
Firmware Version	EV01	
Disk Temperature(℃)	48	
Operation Time(day)	215	
Self-Evaluation	Pass	
Overall Evaluation	Healthy	

ID	Attribute Name	Status	Flag	Threshold	Value	Worst	Raw Value
1	Raw_Read_Error_Rate	Healthy	0x000f	44	83	64	185442488
3	Spin_Up_Time	Healthy	0x0003	0	88	87	0
4	Start_Stop_Count	Healthy	0x0032	20	100	100	133
5	Reallocated_Sector_Count	Healthy	0x0033	10	100	100	0
7	Seek_Error_Rate	Healthy	0x000f	45	85	60	310090267

| Test | Apply | Exit |

> **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.

13.6.2 Disk Check

Disk check can check bad sectors in hard disks.

1. Click **Maintenance** > **HDD** > **Disk Check**.

| Select Disk | Slot1 | ▼ |
| Detect Type | Key Area | ▼ |

HDD Capacity	16764.00 GB
Block Capacity	10.48 GB
Status	Not detected
Error Count	0

Detect   Stop   Error Info

■ Normal   ■ Damaged

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.

13.7 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.

13.7.1 XVR Upgrade

1. Click **Upgrade** > **XVR Upgrade**.

Type	◉ Upgrade By Cloud	○ Upgrade By Disk
Current Version	XVR-B3713.5.5.211217	
Latest Version		
Build Date		

Upgrade   Check New Version   Exit

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 XVR 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.

13.7.2 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.

14 Shutdown

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

⏻	Shutdown	›		⮕	Logout
				⁑	Restart
				⏻	Shutdown
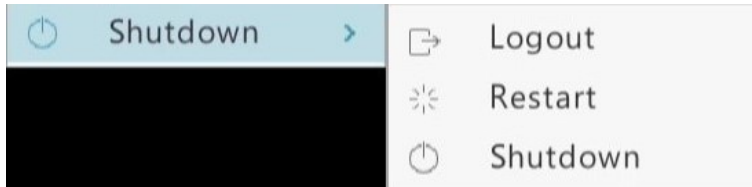
ⓘ CAUTION!

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

Part II Web-Based Operations

1 Before You Begin

You may access and manage your DVR 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 DVR.
- The PC uses the Windows 7 or Windows 8 operating system.
- A Web browser has been installed on the PC. Microsoft Internet Explorer 9.0 or later is supported.
- A 32-bit Web browser is still required even if you are using a 64-bit operating system.

📝 NOTE!

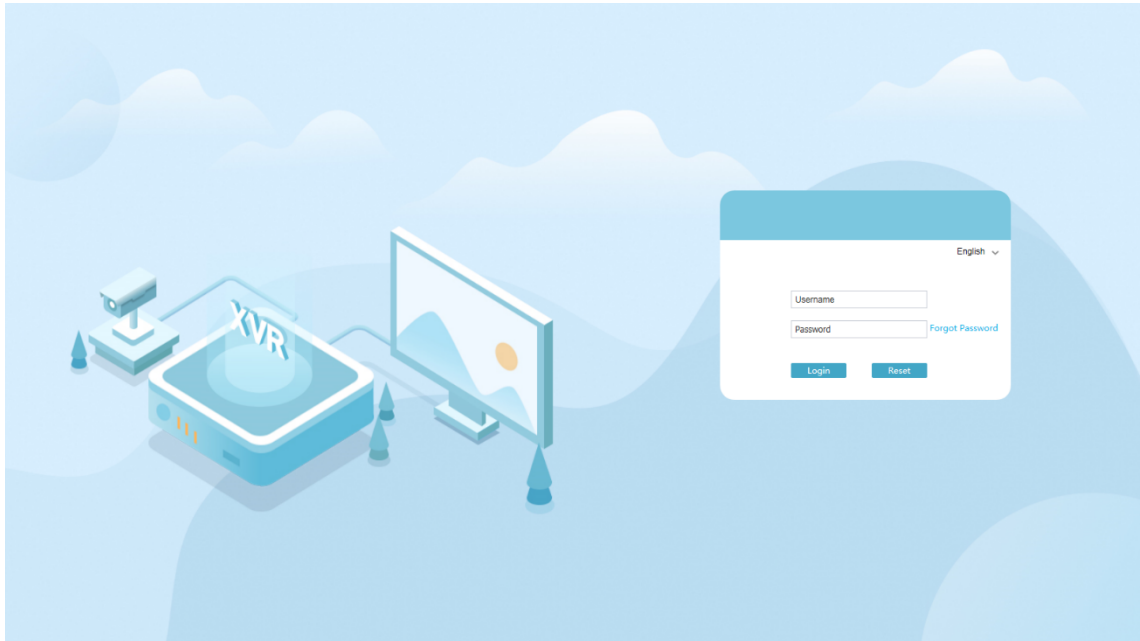The parameters that are grayed out on the Web GUI cannot be modified.

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 DVR. 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 icon] **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.

---

3 Live View

The **Live View** page is displayed when you are logged in. The following figure shows an example.
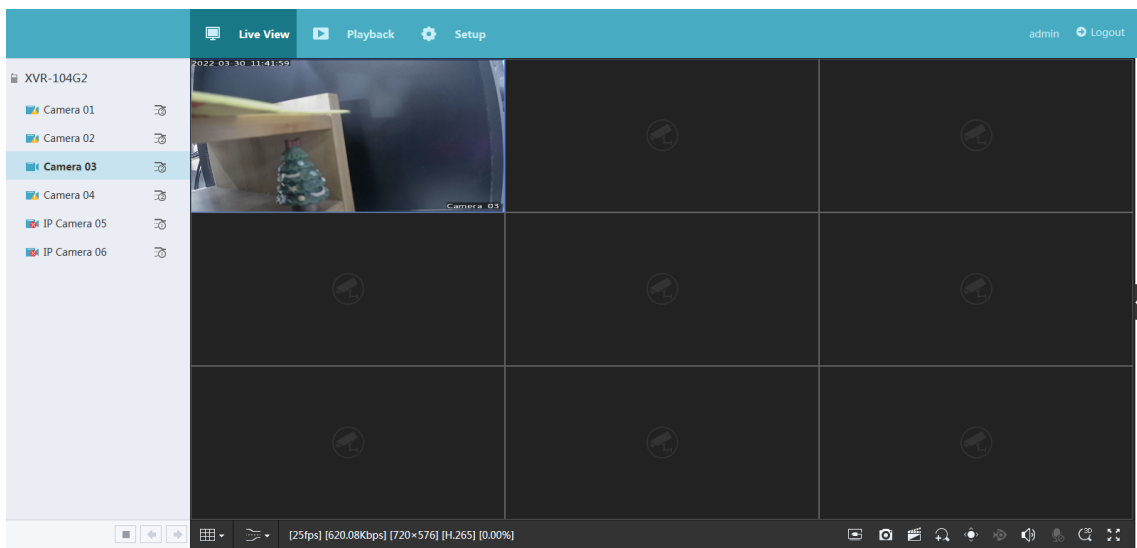
Button	Description	Button	Description
/	Main/Sub stream	/	Start or stop live view in all windows
/	Previous and next screen		Switch screen layout
	Full screen		Select stream type
[25fps] [92.19Kbps] [720×576] [H.265] [0.00%]	Shows the current frame rate, bit rate, resolution, and packet loss rate		Take a snapshot
	Start zoom		Local recording
	Turn on or off audio; adjust sound volume	/	Adjust MIC volume
	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.

4 Playback

Click **Playback** on the top to show the **Playback** page. The following figure shows an example.
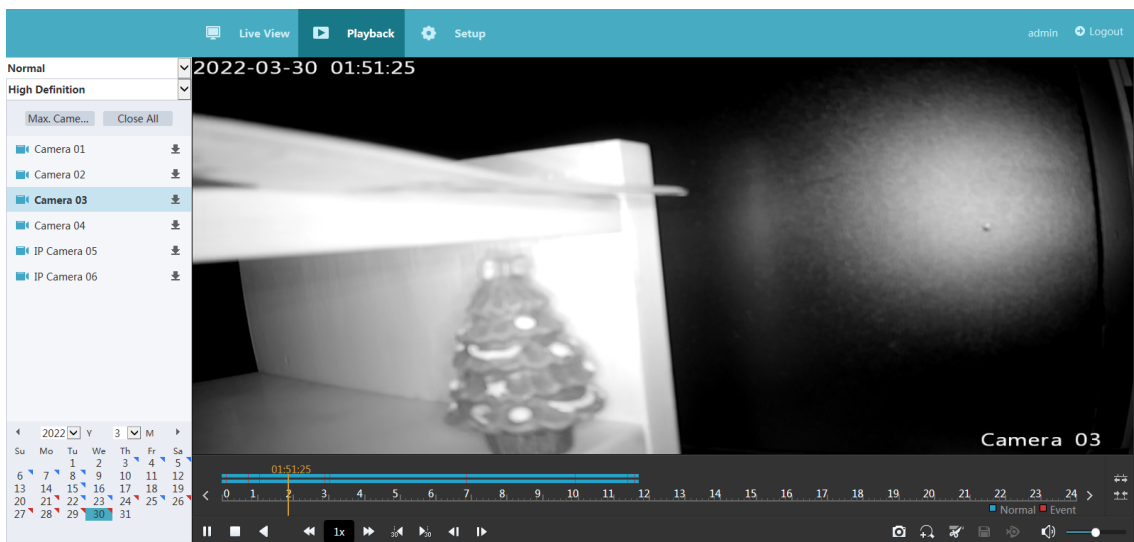
Button	Description	Button	Description
	Play/Pause		Stop
	Reverse		Speed down or speed up
	Rewind or forward 30 seconds		Rewind or forward by frame
	Previous or next period		Clip video/pause
	Save video clip		Take a snapshot
	Zoom		Adjust sound volume; turn on or off sound

5 Configuration

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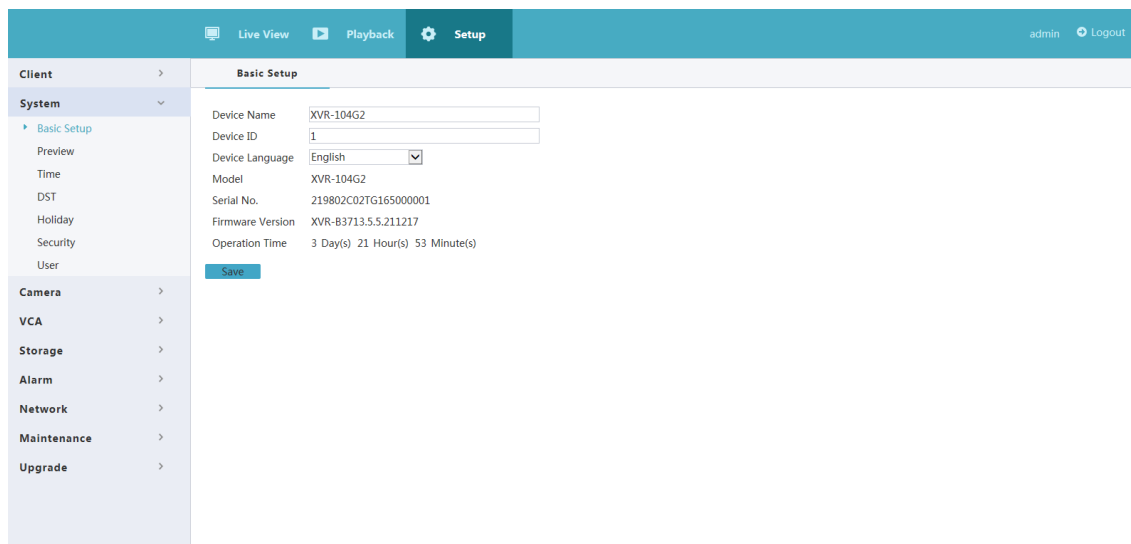
Appendix A Acronyms

Acronym	Description
CBR	Constant Bit Rate
DDNS	Dynamic Domain Name Service
DHCP	Dynamic Host Configuration Protocol
DVR	Digital Video Recorder
DST	Daylight Saving Time
HDMI	High Definition Multimedia Interface
HTTPS	Hypertext Transfer Protocol Over Secure Sockets Layer
IPC	IP Camera
HTTP	Maximum Transfer Unit
NAT	Network Address Translation
NIC	Network Interface Card
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

Acronym	Description
UPnP	Universal Plug-and-Play
USB	Universal Serial Bus
VGA	Video Graphics Array
VBR	Variable Bit Rate

Appendix B FAQs

Acronym	Description
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 DVR's IP address to the trusted sites in your IE (**Tools > Internet Options > Security**). ● Add your DVR's IP address to the Compatibility View list in your IE (**Tools > Compatibility View Settings**). ● Clear your IE's cache.
No images are displayed in live view on the Web interface.	Check if the bit rate is 0Mbps in the live view window. ● If yes, check if the firewall 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 DVR is the one used to access the camera's Web interface. ● If it indicates denied access for weak password, log in to the camera's Web interface and set a strong password. ● If it indicates insufficient bandwidth, delete other online IP devices in the DVR.
The DVR displays live video for some cameras and **No Resource** for others.	● Set the camera to encode the sub stream, and decrease its resolution to D1. ● Set the DVR to use the sub stream first for live view.
A camera goes online and offline repeatedly.	● Check if network connection is stable. ● Upgrade the firmware for the camera and the DVR. Contact your dealer for the latest versions.

Acronym	Description
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 DVR are correct. ● Check if the hard disk storing the recording has been damaged. ● Check if the desired recording has been overwritten.
Motion detection is not effective.	● Check that motion detection is enabled, and the motion detection area is properly configured. ● Check that detection sensitivity is properly set. ● Check that the arming schedule is properly configured.
A hard disk cannot be identified by the DVR.	● Use the power adapter delivered with your DVR. ● The disk is not compatible with your DVR. Contact your dealer for a list of compatible disk models.
The mouse does not work.	● Use the mouse delivered with your DVR. ● Make sure no cable is extended.