

# **Network Video Recorders**

## **Quick Guide**

## Notice

The information in this manual is subject to change without notice. Every effort has been made in the preparation of this manual to ensure accuracy of the contents, but all statements, information, and recommendations in this manual do not constitute the warranty of any kind, express or implied.

## Environmental Protection

This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

## Preface

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### Audience

This manual is intended for:




- Surveillance system planners
- Field technical support and servicing engineers
- Software installation, configuration, and servicing administrators
- Product users

## Safety and Compliance Information

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### Conventions Used Symbol

The symbols in this chapter are shown in the following table. They are used to remind the reader of the safety precautions during equipment installation and maintenance.

Safety Symbol	Description
	Generic alarm symbol: To suggest a general safety concern.
	ESD protection symbol: To suggest electrostatic-sensitive equipment.
	Electric shock symbol: To suggest a danger of high voltage.

## Safety Information

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### **WARNING!**

Installation and removal of the unit and its accessories must be carried out by qualified personnel. You must read all of the Safety Instructions supplied with your equipment before installation and operation.

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### **Warnings:**

- If the product does not work properly, please contact your dealer. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)
- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all the local codes.
- Please install blackouts equipment into the power supply circuit for convenient supply interruption.
- The separate grounding terminal must be permanently connected to earth.
- For AC supplied model: The plug-socket combination must be accessible at all times as it serves as the main disconnecting device.
- Before the power cable is installed or removed, the power must be turned off.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.



**Caution:** Fiber optic ports – optical safety.



Never look at the transmit laser while the power is on. Never look directly at the fiber ports and the fiber cable ends when they are powered on.

**Caution:** Use of controls or adjustments to the performance or procedures other than those specified herein may result in hazardous laser emissions.

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## Regulatory Compliance

### FCC Part 15

This equipment has been tested and found to comply with the limits for digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

## **LVD/EMC Directive**



This product complies with the European Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC.

## **WEEE Directive–2002/96/EC**



The product this manual refers to is covered by the Waste Electrical & Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner.

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# 1 Installation

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The NVR device is referred to as device in this manual.

You need a cross screwdriver or straight screwdriver to complete the installation.

## Installing the Hard Disk

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### CAUTION!

Disconnect power from the device before installation. Wear antistatic gloves during the installation.

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The following figures are for your reference only. The actual appearance may vary depending on your device model.

Follow the steps:

1. Loosen the screws and remove the chassis cover.



2. Tighten the screws on the hard disk halfway. You are recommended to tighten two screws on the diagonal at first.

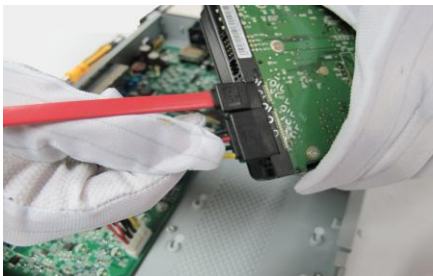




3. Connect the data cable to the hard disk.



4. Connect the power cable to the hard disk.

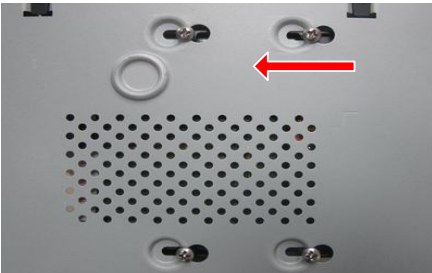


5. Align the screws on the hard disk with the screw holes on the bottom plate and then attach the hard disk (when installing one hard disk, attach the hard disk with its cable connectors facing

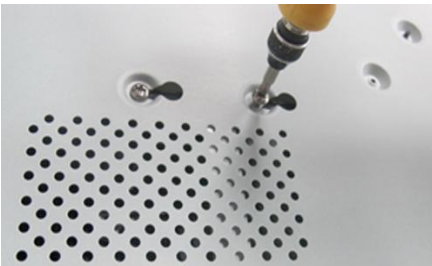
left; when installing two hard disks, attach the hard disks with the cable connectors facing each other).



6. Slide the hard disk into position on the bottom plate as indicated in the figure below.



7. Secure the hard disk by tightening the screws on the bottom plate.

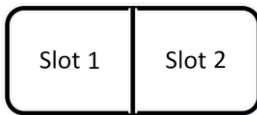


8. Connect data cables and power cables to the motherboard.



9. (Optional) To install another hard disk (if applicable), repeat the above steps.
10. Replace the cover and tighten the screws. Do not place the cables on the hard disk(s).

When you remove the chassis cover facing the rear panel, the hard disk slots are numbered as follows.

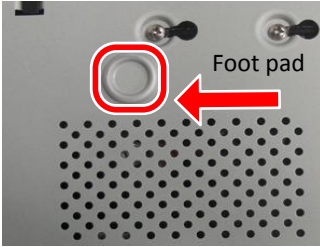


## Installing the Device

Leave a minimum space of 30 cm at the front and back sides of the device and a minimum space of 10 cm at the left and right sides of the device for heat dissipation.

Follow the steps:

1. Remove the stickers of the supplied foot pads and attach the foot pads to the bottom of the device, as shown in the figure below.



2. Place the device on a clean workbench. Do not stack your device or put any heavy object on it.

## 2 Appearance and Connection

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The following figures are for your reference only. The actual appearance may vary depending on your device model.

### Front View



### Front Panel Indicators

The indicators on the front panel are described in the following table.




**Table 2-1** Front Panel Indicators


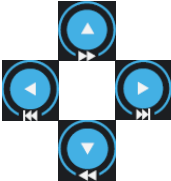










Indicator	Color	Status	Description
RUN (Running indicator)	Blue	Steady on	Device is running correctly.
		Blinking	Device is starting.

Indicator	Color	Status	Description
		Off	Device is shut down.
NET (Network indicator)	Blue	Steady on	Network connection is normal.
		Off	No network connection.
HD (Hard disk indicator)	Red	Steady on	No hard disk is installed, or hard disk is faulty.
		Blinking	Hard disk is running correctly with data being read or written.
		Off	Hard disk is running correctly with no data being read or written, or system is shut down.

## Front Panel Buttons

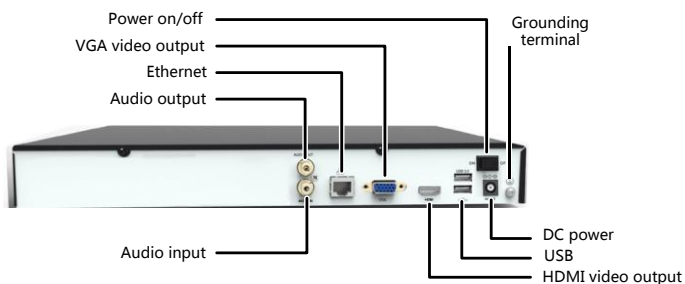
Only some models provide buttons on the front panel.

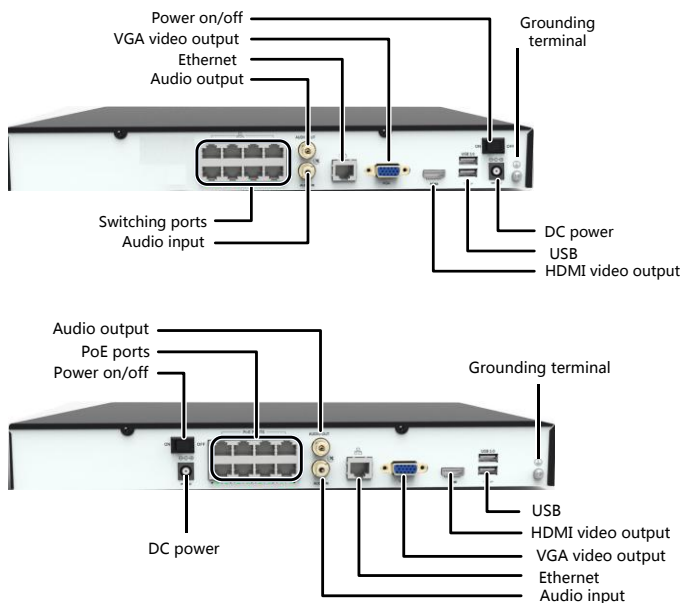
Button	Description
	Press this button to enter the main menu.
	Press this button to switch to the next tab or change the input method.
	Auxiliary function.

Button	Description
	Quit the current window.
	<p>   : Used to select a menu item, a pane; or in PTZ control mode, used to control the PTZ direction.</p> <p> : 30 seconds rewind or forward in playback mode.</p> <p> : Forward/rewind at multiple speed in playback mode.</p>
	<p>Press this button to confirm an operation.</p> <p>In playback mode, press this button to start/pause the play.</p>
	Power button. To power off, press and hold this button for three seconds and then confirm the operation.

## Rear View

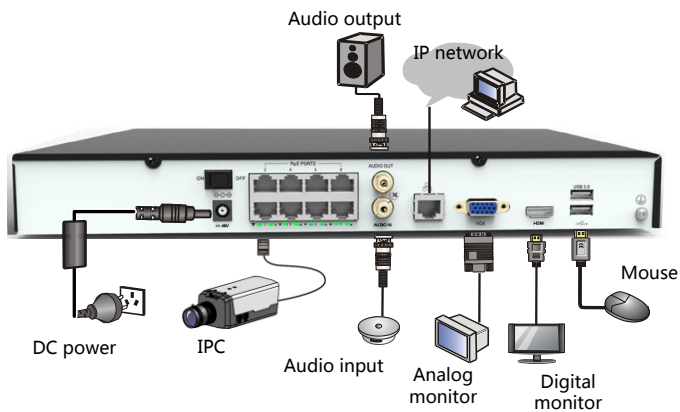
The following takes some models as an example to describe the interfaces on the rear panel. The interfaces may vary with device models. The following figures are for your reference only. The actual appearance may vary depending on your device model.





## Connection

The following takes a model with PoE ports as an example to describe connection.





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**NOTE!**

- A PoE port is used to transfer data and provide DC power for a connected IP camera (if the camera supports PoE function).
  - The total power of PoE ports on the device is 64W, and the maximum output power of a single PoE port is 30W. When multiple powered devices are connected to the device, the device ensures power for the PoE ports with the smaller port numbers first if the total power needed exceeds 64W.
- 

## 3 Power On/Off

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### Before Power-On

Before you power on the device, check and ensure that:

- The device is stably installed with all the screws tightened.
- No object is put on the device.
- All the cables are correctly connected.
- The power supply conforms to specifications.

### Power On

Connect the device to the power and then press the power button.

### Power Off



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**CAUTION!**

Do not directly disconnect power when the device is running or shutting down. A sudden power failure may cause device damage.

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#### Option 1:

Hold the power button on the front panel for three seconds and then confirm the power-off operation.



### Option 2:

Click **Menu > Shutdown > Shutdown** and then click **OK** to confirm the operation.

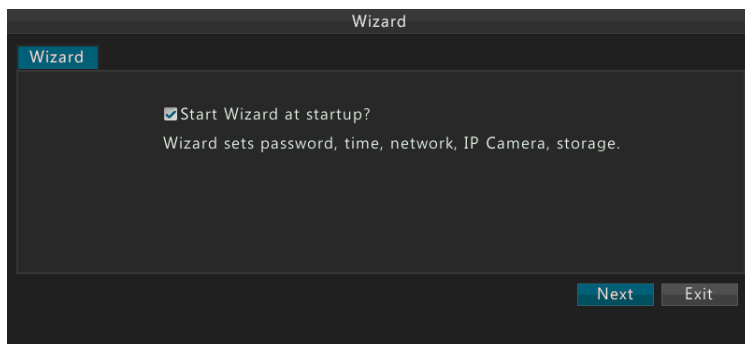
## 4 Common Configuration

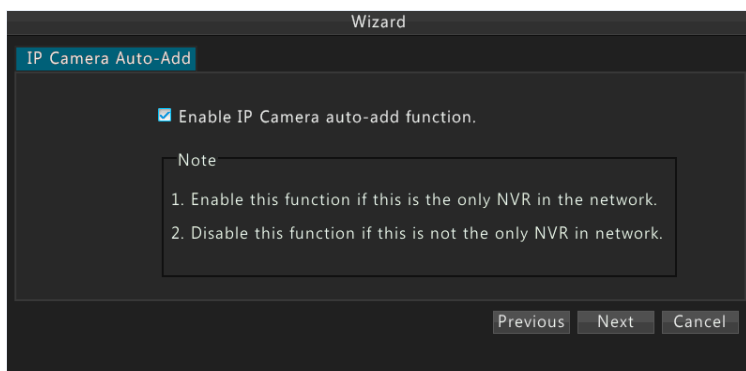
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You can use the device through the local operations or the Web operations. Local operations are described in the following sections. Web operations are described in [Accessing Through the Web](#).

### Wizard

After the device is started, you can follow the Wizard to set the password, time, network, IP camera and storage. The Wizard is displayed as follows.





The Wizard is described as follows:

- **Change Password:** The default password is “123456”.
- **IP Camera:** Search for and add IP cameras in the same network segment.

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#### NOTE!

- The **IP Camera** window will be displayed if you do not select **Enable IP Camera auto-add function**. If you select **Enable IP Camera auto-add function**, the **IP Camera** window will not display.
- By default, all the found IP cameras can be added if the number is within the allowed limit. If the status of an IP camera is **Connected**, it means the camera is added successfully. If the status is **Disconnected**, check whether the network connection is normal or the username and password of the camera are correct.

- 
- **Storage:** a 24-hour recording plan is enabled for all the channels by default. You can choose a channel and set the recording type as needed.

You can use the preview function after the Wizard completes, but you need to log in first to use other functions. The default username is “admin”, and the default password is “123456”.

## Channel Management

Make sure the IP cameras you want to configure are connected to your device through the network.

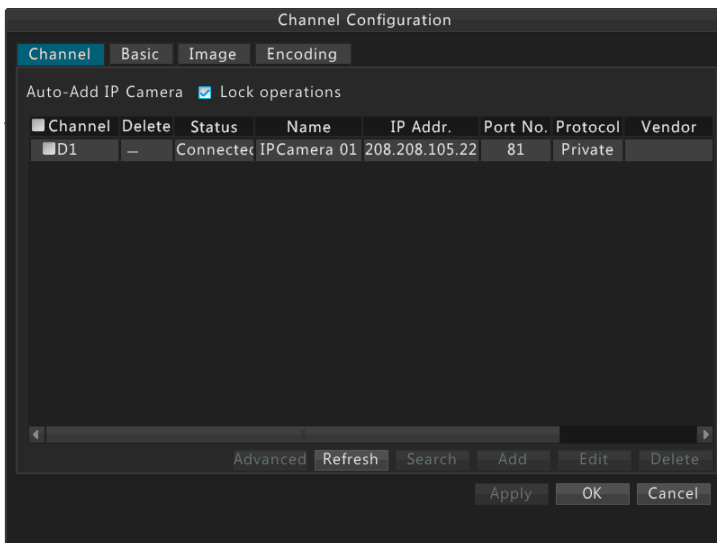
### Adding an IP Camera by Auto-add



#### NOTE!

- The device with PoE ports or switching ports does not support the **Auto-Add** operation.
- If there is more than one device in the network, do not enable **Auto-Add IP Camera**. Add IP cameras by search or manually.

1. Click **Menu > Channel > Channel**.
2. Enable **Auto-Add IP Camera** and click **OK**. And then the IP cameras in the same network are added automatically.



## Adding an IP Camera by Search

1. Click **Menu > Channel > Channel**.
2. Click **Search**. A quick search for the IP camera is performed automatically.
3. Click **Search Segment** and then specify a network segment.

The screenshot shows the 'Add/Modify' window with the 'Search Segment' tab selected. A table lists two IP addresses. A 'Quick Search' dialog is open, allowing the user to specify a range of IP addresses for searching. Below the table, there are fields for channel configuration and search parameters.

Select	IP Addr.	Name	Device Model	Protocol	Port	Vendor
1	208.208.105.5					
2	193.168.0.3					

Quick Search Dialog:  
Start IP: 208.208.105.1  
End IP: 208.208.105.255  
Buttons: Search, Cancel

Channel Configuration:  
Channel IP: [ ] Protocol: [ ]  
Username: [ ] Port: [ ]  
Password: [ ]  
Buttons: Add, Cancel



### NOTE!

If you want to search IP cameras automatically, click **Quick Search**.

4. Add an IP camera
  - To add one IP camera, select the camera, and then click **Add**.
  - To add more than one camera at a time, select the cameras and then click **Batch Add**, or select **All** to add all cameras. If the number of selected IP cameras does not exceed the limit, all the selected IP cameras will be added.
5. On the **Channel** tab, check the connection status.

Channel	Delete	Status	Name	IP Addr.	Port No.	Protocol	Vendor
D1	—	Disconnect	IPCamera 01	193.168.0.2	81	Private	
D2	—	Disconnect	IPCamera 02	193.168.0.3	81	Private	
D3	—	Disconnect	IPCamera 03	193.168.0.4	81	Private	
D4	—	Disconnect	IPCamera 04	193.168.0.5	81	Private	
D5	—	Disconnect	IPCamera 05	193.168.0.6	81	Private	
D6	—	Disconnect	IPCamera 06	193.168.0.7	81	Private	
D7	—	Disconnect	IPCamera 07	193.168.0.8	81	Private	
D8	—	Disconnect	IPCamera 08	193.168.0.9	81	Private	
D10	✗	Disconnect	IPCamera 10	206.5.2.251	80	ONVIF	
D11	✗	Connected	IPCamera 11	206.5.99.13	81	Private	
D12	✗	Connected	IPCamera 12	206.5.99.14	81	Private	
D13	✗	Disconnect	IPCamera 13	206.5.99.15	81	Private	

Advanced Refresh Search Add Edit Delete

Apply OK Cancel

By default, all the found IP cameras can be added if the number is within the allowed limit. If the status of an IP camera is **Connected**, it means the camera is added successfully. If the status is **Disconnected**, check whether the network connection is normal or the username and password of the camera are correct.

## Adding an IP Camera Manually

1. Click **Menu > Channel > Channel**.
2. Click **Add**.

Channel IP	<input type="text"/>
Protocol	ONVIF
Port	<input type="text"/>
Username	<input type="text"/>
Password	<input type="password"/>

- Input the IP address and then select the protocol that the device supports. Input the service port number, username and password, and then click **OK**.
- On the **Channel** tab, check the connection status.

Channel	Delete	Status	Name	IP Addr.	Port No.	Protocol	Vendor
D1	—	Disconnec	IPCamera 01	193.168.0.2	81	Private	
D2	—	Disconnec	IPCamera 02	193.168.0.3	81	Private	
D3	—	Disconnec	IPCamera 03	193.168.0.4	81	Private	
D4	—	Disconnec	IPCamera 04	193.168.0.5	81	Private	
D5	—	Disconnec	IPCamera 05	193.168.0.6	81	Private	
D6	—	Disconnec	IPCamera 06	193.168.0.7	81	Private	
D7	—	Disconnec	IPCamera 07	193.168.0.8	81	Private	
D8	—	Disconnec	IPCamera 08	193.168.0.9	81	Private	
D10	✗	Disconnec	IPCamera 10	206.5.2.251	80	ONVIF	
D11	✗	Connecte	IPCamera 11	206.5.99.13	81	Private	
D12	✗	Connecte	IPCamera 12	206.5.99.14	81	Private	
D13	✗	Disconnec	IPCamera 13	206.5.99.15	81	Private	

Advanced Refresh Search Add Edit Delete

Apply OK Cancel

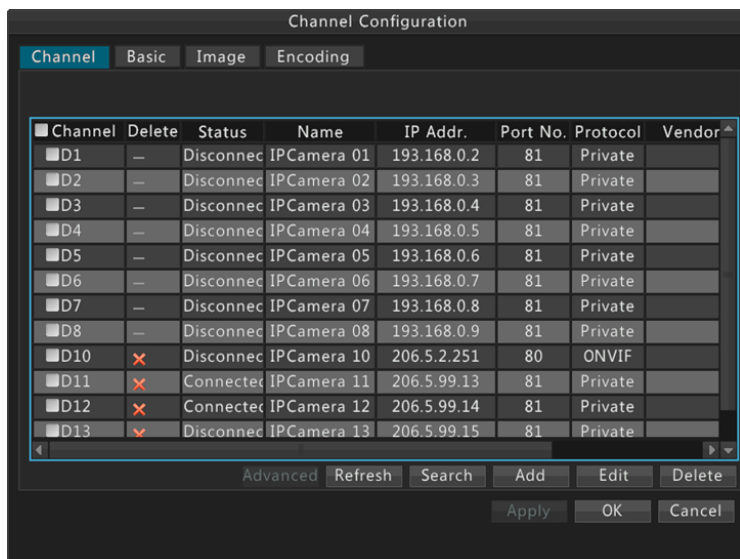
## Adding an IP Camera by Plug-and-Play



### NOTE!

- Adding an IP camera by **Plug-and-Play** is only applicable to the device with PoE ports or switching ports.
- The channels connected through PoE ports or switching ports do not support **Delete** operation.

- Connect the IP camera to a PoE port or a switching port on the rear panel with a network cable.
- Click **Menu > Channel > Channel**. The device uses plug-and-play as the default way to add IP cameras. After adding an IP camera successfully, the device changes the IP address of the camera into the IP address of the internal NIC.






## Preview




### Preview Pane Toolbar

Click the preview pane and the preview pane toolbar appears.



**Table 4-1** Pane Toolbar Description



Icon	Name	Description
	PTZ Control	For a PTZ camera, click this icon to display the PTZ control panel.
	Manual Recording	Click to start recording the live view to the hard disk. To stop manual recording, click the icon again.
	Instant Playback	Click to play the recording of the past 5 minutes.

Icon	Name	Description
	Digital Zoom	Click to zoom in the selected area to the full screen.
	Image Config	Click to select a mode and configure image settings.
	Exit	Click to quit the current toolbar.

## Status Icon

Channel status is indicated by the icons in the preview pane.

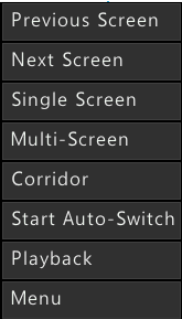
**Table 4-2** Icon Description

Icon	Name	Description
	Alarm	Indicates that a motion-detection alarm or a tampering alarm is reported.
	Recording	Indicates that the video in the pane is being recorded manually.

## Right-Click Menu

The pop-up menu appears when you right-click the pane.

**Table 4-3** Right-Click Menu Description

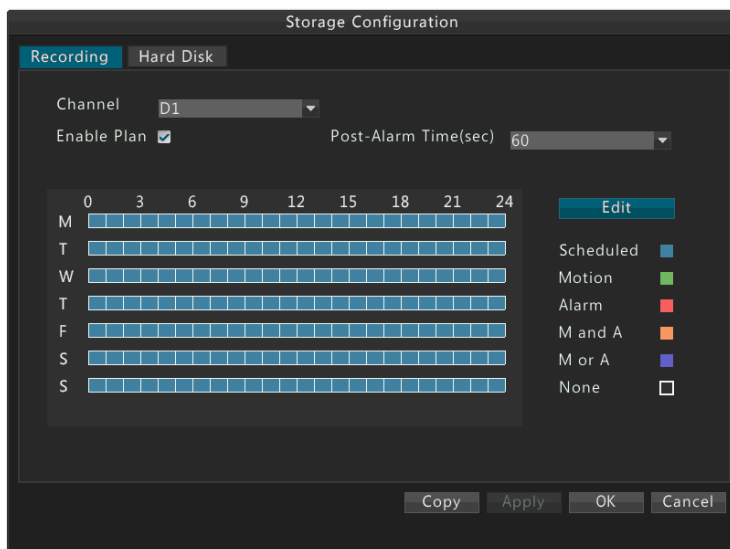
Item	Description	Figure
Previous/Next Screen	Switch to the previous or next screen	
Single Screen	Click and select an IP camera from the submenu to display in full screen mode.	
Multi-Screen	Change the screen-split mode.	
Corridor	Display video on 3, 5 and 7 screens.	



Item	Description	Figure
Start/Stop Auto-Switch	Enable/disable the Auto-Switch function in the current screen-split mode.	
Playback	Play recording in the pane.	
Menu	Open the main menu.	

## Scheduled Recording

1. Click **Menu > Storage > Recording**. Select the channel for which you want to schedule recording and then click **Edit**.



2. Configure the recording time and recording type..

Select Day Monday

☐ All Day Type Normal

<span>00 : 00</span>	<span>10 : 00</span>	Type <span>Normal</span>
<span>12 : 00</span>	<span>13 : 00</span>	Type <span>Normal</span>
<span>17 : 00</span>	<span>19 : 00</span>	Type <span>Normal</span>
<span>00 : 00</span>	<span>00 : 00</span>	Type <span>Normal</span>
<span>00 : 00</span>	<span>00 : 00</span>	Type <span>Normal</span>
<span>00 : 00</span>	<span>00 : 00</span>	Type <span>Normal</span>
<span>00 : 00</span>	<span>00 : 00</span>	Type <span>Normal</span>
<span>00 : 00</span>	<span>00 : 00</span>	Type <span>Normal</span>
<span>00 : 00</span>	<span>00 : 00</span>	Type <span>Normal</span>

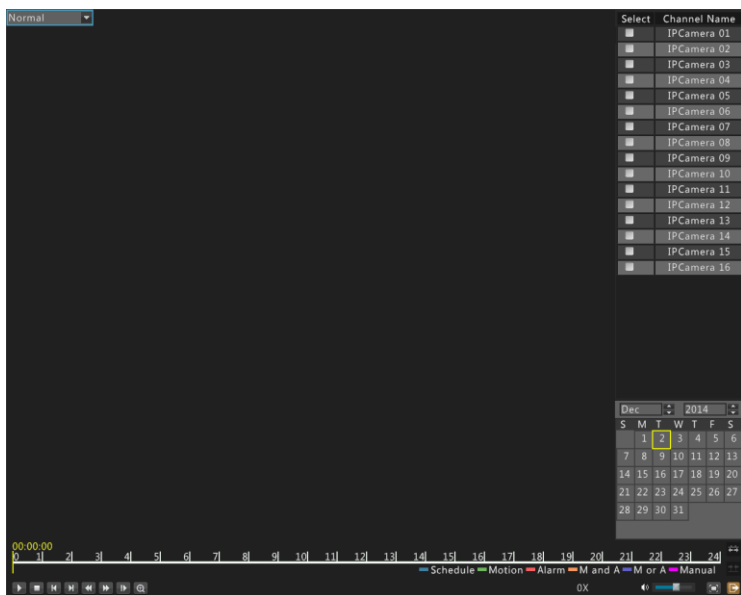
Copy To ☐ All ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

OK Cancel

3. Click **OK** to complete the configuration.

## Playback

1. In the preview mode, right-click a pane and select **Playback** from the menu.
2. Select a channel from the list, and select the day you want to query from the calendar.



3. Click the **Play** button to start playback. By default the video starts from the first recording. When the video is playing, you may start from anywhere you want by moving the slider in the progress bar.

## Accessing Through the Web

Before logging in to the Web interface, make sure that your PC and the device are in the same network.

1. Open the Web browser on your PC and visit the IP address of the device (192.168.0.30 by default). For your first login, you need to install the ActiveX as prompted. When you install the ActiveX, please close all the browsers.
2. Enter the username and password and then click **Login**. The default username is “admin” and password is “123456”.
3. Configure the device as required after login.

## 5 Specifications

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For more specifications, see the datasheet.

**Table 5-1** Technical Specifications

Item	Description
Dimensions (WxDxH)	<ul style="list-style-type: none"><li>• Height: 1U</li><li>• 360.0 mm x 254.3 mm x 43.6 mm (14.2" x 10.0" x 1.7")</li></ul>
Weight (bare device)	< 1.5 kg (3.31 lb)
Power	<ul style="list-style-type: none"><li>• Device without PoE ports: 12 V DC, &lt; 2A</li><li>• Device with PoE ports: 52 V DC, &lt; 1.8A</li></ul>
Maximum power consumption (fully-loaded with disk)	<ul style="list-style-type: none"><li>• Device without PoE ports: &lt; 24W</li><li>• Device with PoE ports: &lt; 94W</li></ul>
Operation temperature	-10°C to +55°C (14°F to 131°F)
Operation humidity	10% to 90% (non-condensing)
Altitude	-60 m to +5000 m (-196.85 ft to 16,404.2 ft)

BOM: 3101C07X