Network Video Recorder

Quick Start Guide

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Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. FCC compliance: This equipment has been tested and found to comply with the limits for a Class A 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.

FCC Conditions

This device 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.

EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU.



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: http://www.recyclethis.info.



Regulation (EU) 2023/1542 (Battery Regulation): This product contains a battery and it is in conformity with the Regulation (EU) 2023/1542. The battery cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), or lead (Pb). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
<u>^</u> i Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
<u>^</u> Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
iNote	Provides additional information to emphasize or supplement important points of the main text.

Safety Instruction

Please read all the safety information carefully before using.

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- Firmly connect the plug to the power socket. Do not connect several devices to one power adapter. Power off the device before connecting and disconnecting accessories and peripherals.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- For the device with the sign f indicating hazardous live, the external wiring connected to the terminals requires installation by an instructed person.
- This equipment is not suitable for use in locations where children are likely to be present.



WARNING:

- 1. Do not ingest battery. Chemical Burn Hazard!
- 2. This product contains a coin/button cell battery. If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- 3. Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- 4. Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- 5. Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- 6. Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- 7. Dispose of used batteries according to the instructions.
- 8. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
- 9. The battery is hazardous and should be kept away from children (whether the battery is new or used).

- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.
- Use the device in conjunction with an UPS, and use factory recommended HDD if possible.
- For the device with fan blades or motors, keep body parts away from fan blades or motors. Disconnect the power source during servicing.
- Do not touch the bare components (such as the metal contacts of the inlets) and wait for at least 5 minutes, since electricity may still exist after the device is powered off.
- Never place the device in an unstable location. The device may fall, causing serious personal injury or death.
- If the device uses a 3-prong power supply plug, it must be connected to an earthed mains socket-outlet properly.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- The device shall not be exposed to water dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the device.
- No naked flame sources should be placed on the device, such as lighted candles.
- For the device with ventilation openings, the ventilation openings should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, and curtains.
 The openings shall never be blocked by placing the device on a bed, sofa, rug, or other similar surface.
- The USB port of the equipment is used for connecting to a mouse, keyboard, USB flash drive, or Wi-Fi dongle only. The current for the connected device shall be not more than 0.1 A.
- Under high working temperature (40 °C (104 °F) to 55 °C (131 °F)), the power of some power adaptors may decrease.
- If the device needs to be installed on the wall or ceiling,
 - 1. Install the device according to the instructions in this manual.
 - 2. To prevent injury, this device must be securely attached to the installation surface in accordance with the installation instructions.
- If a power adapter is provided in the device package, use the provided adapter only.
- If the device needs to be wired by yourself, select the corresponding wire to supply power
 according to the electric parameters labeled on the device. Strip off wire with a standard wire
 stripper at corresponding position. To avoid serious consequences, the length of stripped wire
 shall be appropriate, and conductors shall not be exposed.
- Make sure that the power has been disconnected before you wire, install, or disassemble the device
- The device should be placed in a dry environment without corrosive gas (refer to the user manual for details about corrosive gas).
- When the device is running above 45 °C (113 °F), or its HDD temperature in S.M.A.R.T. exceeds
 the stated value, please ensure the device is running in a cool environment, or replace HDD(s)
 to make the HDD temperature in S.M.A.R.T. below the stated value.
- Use brackets for rack mounting.
- When routing cables, ensure the bend radius of the cables are no less than five times of its diameter.

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- Allow at least 2 cm (≈0.75 inch) of space among racks mounted devices.
- Ensure the device is grounded.
- Environmental temperature should be within the range of working temperature.
- Environmental humidity should be within the range of 10% to 90%.

Chapter 1 Indicator and Interface Description

1.1 Front Panel Indicator Description

The indicators at the front panel indicate different working status of your device.

Table 1-1 Common Indicator Description

Indicator	Description
Ů	The indicator turns on when device is powered up.
9	The indicator flashes when data is being read from or written to HDD.
묢	The indicator flashes when network connection is functioning properly.

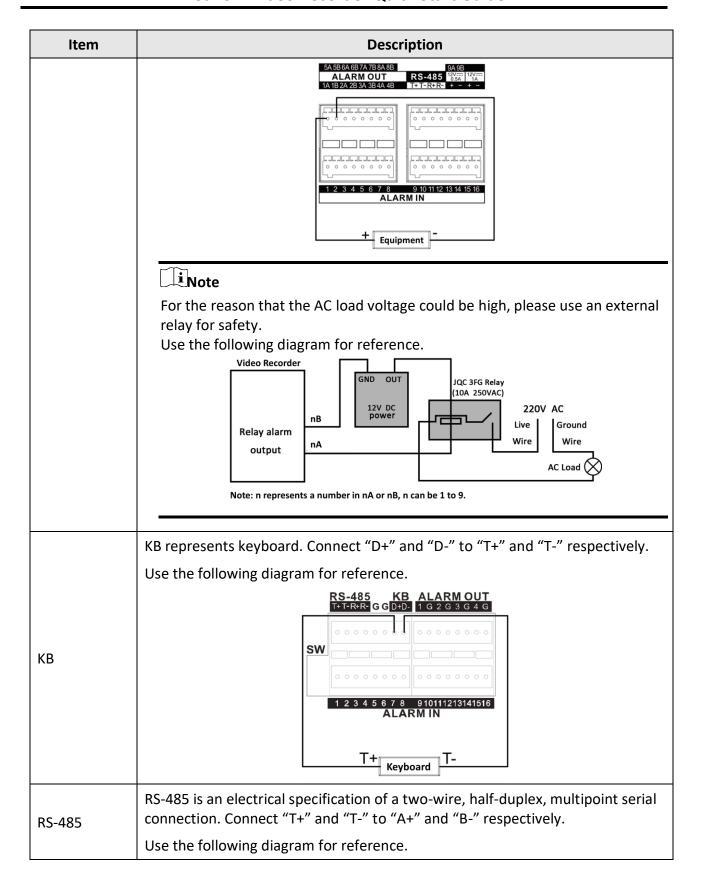
1.2 Interface Description

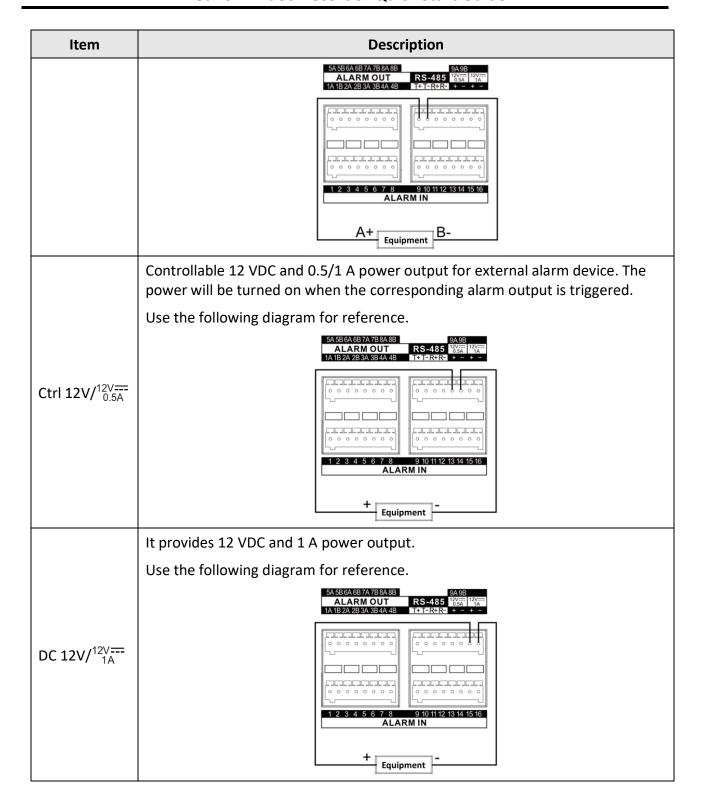
The panel interfaces vary with different models. Refer to the following table for common interface description.

Table 1-2 Common Interface Description

Item	Description
VIDEO IN	BNC interface for Turbo HD and analog video input.
VIDEO OUT	BNC connector for video output.
AUDIO IN	RCA connector for audio input.
AUDIO OUT	RCA connector for audio output.
LINE IN	RCA connector for two-way audio input.
USB	Universal Serial Bus (USB) interface for additional device.
VGA	DB15 connector for local video output and menu display.
HDMI	HDMI interface for video output.
RS-485	RS-485 serial interface for pan/tilt unit, speed dome, etc.
RS-232	RS-232 interface for parameter configuration, or transparent channel.
LAN	RJ-45 self-adaptive Ethernet interface.
eSATA	Storage and expansion interface for record or backup.
GND	Ground.
Power Switch	Switch for turning on/off the device.
Power Supply	100 to 240 VAC, 48 VDC, or 12 VDC power supply.

Item	Description
USIM Card	UIM/SIM card slot.
Ψ	SMA antenna interface.
ALARM IN	The alarm input receives alarm input signal. The equipment positive terminal (+) should connect to a number, and the equipment negative terminal (-) should connect to "-" or "G".
	Use the following diagram as a connection example for alarm input.
	5A 5B 6A 6B 7A 7B 8A 8B ALARM OUT 1A 1B 2A 2B 3A 3B 4A 4B 17 + T = R + R - + - + -
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ALARM IN + Equipment
	The alarm output sends out alarm signal.
ALARM OUT	When an equipment uses DC power supply, its positive terminal (+) should connect to a number with "A", and its negative terminal (-) should both connect to the corresponding number with "B" and then connect to "-" or "G".
	Use the following diagram as an alarm output connection example for DC equipment.
	5A 5B 6A 6B 7A 7B 8A 8B ALARM OUT 1A 1B 2A 2B 3A 3B 4A 4B T+T-R+R- T+T-R+R- 1A 1B 2A 2B 3A 3B 4A 4B
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ALARM IN + Equipment
	When an equipment uses AC power supply, its positive terminal (+) should connect to a number with "A", and its negative terminal (-) should connect to the corresponding number with "B".
	Use the following diagram as an alarm output connection example for AC equipment.





Chapter 2 HDD Installation

Disconnect the power from the device before installing a hard disk drive (HDD). A factory recommended HDD should be used for this installation.

2.1 Bracket Installation

Bracket installation is applicable when it requires removing the device cover and installing HDD on the internal bracket.

Steps

- 1. Unfasten screws on the back and push the cover backwards to remove the cover.
- 2. Fix the HDD on the bracket with screws.



Please uninstall the upper layer bracket first before installing HDD on the lower layer bracket.

3. Connect the data cable and power cable.





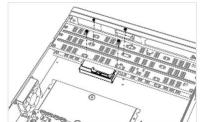


Figure 2-2 Fix HDD

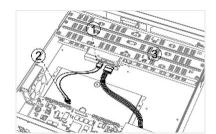


Figure 2-3 Connect Cable

i Note

You can repeat the steps above to install other HDDs.

4. Reinstall the device cover and fasten screws.

2.2 Front Panel Plug-Pull Installation

Front panel plug-pull installation is applicable when you need to open the device front panel with key and install the HDD.

- 1. Fix mounting ears to HDD with screws.
- 2. Unlock the front panel with the attached key and press the buttons on both sides of the front panel to open it.
- 3. Insert the HDD until it is fixed firmly.

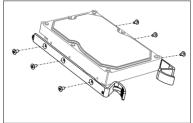


Figure 2-4 Fix Mounting Ears F

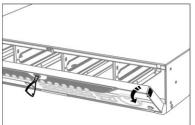


Figure 2-5 Open Front Panel

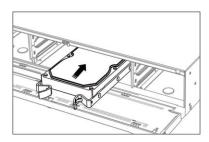


Figure 2-6 Insert HDD

- 4. Optional: Repeat the steps above to install other HDDs.
- 5. Close the front panel and lock it with key.

2.3 HDD Case Installation

HDD case installation refers to the method that you install the HDD in the case, and then plug the HDD case into the slot.

• Type 1

Steps

- 1. Unlock the front panel with panel key.
- 2. Pull the front panel out of the device and make it a little above the left handle.



The angle between the front panel and the device must be within 10°.

- 3. Press the blue button to pop up the handle, then hold the handle and pull the HDD case out of the slot.
- 4. Fix the hard disk in the HDD case.
 - 1) Place a hard disk in the case. The SATA interface must face the case bottom.
 - 2) Adjust the hard disk position. Ensure the hard disk rear aligns with HDD bottom.
 - 3) Use a screwdriver to fasten the four screws into the screw holes at both sides.
- 5. Push the HDD case back into the slot.

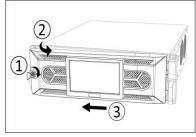


Figure 2-7 Remove Panel

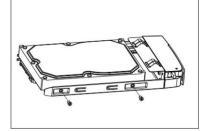


Figure 2-8 Fix HDD

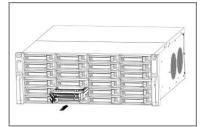


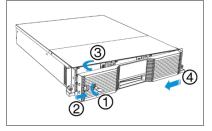
Figure 2-9 Push HDD Case into Slot

- 6. Press the handle until you hear a click.
- 7. Repeat above steps to install other hard disks.
- 8. Close the front panel and lock it with the panel key.

Type 2

Steps

- 1. Unlock the front panel with panel key.
- 2. Press the button at the left side of front panel.
- 3. Pull out the front panel.
- 4. Press the blue button to pop up the handle, then hold the handle and pull the HDD case out of the slot.
- 5. Install a hard disk in the HDD case.
 - 1) Use a screwdriver to unfasten two screws at one case panel side. The case panel would be able to be rotated at the bottom.
 - 2) Place a hard disk in the case. The SATA interface must face the case bottom.
 - 3) Adjust the hard disk position. Ensure the hard disk rear aligns with HDD bottom.
 - 4) Fasten all screws into the screw holes.
- 6. Push the HDD case back into the slot.





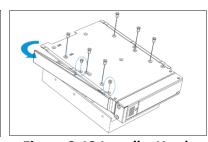


Figure 2-10 Remove Front Panel

Figure 2-11 Pull out HDD
Case

Figure 2-12 Install a Hard Disk in to the HDD Case

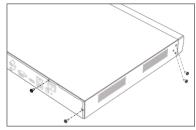
- 7. Press the HDD case handle until you hear a click.
- 8. Repeat above steps to install other hard disks.
- 9. Close the front panel, and lock it with the panel key.

2.4 Fix-on-Bottom Installation

Fix-on-bottom installation is applicable when you need to install and fix the HDD on the device bottom.

- 1. Remove the cover from device by unfastening the screws on panels.
- 2. Connect the data cable and power cable.
 - 1) Connect one end of data cable to the device motherboard.
 - 2) Connect the other end of data cable to HDD.
 - 3) Connect one end of power cable to HDD.
 - 4) Connect the other end of power cable to the device motherboard.
- 3. Set the device up, match HDD screw threads with the reserved holes on the device bottom, and fix HDD with screws.
- 4. Optional: Repeat the steps above to install other HDDs.
- 5. Reinstall the device cover and fasten screws.

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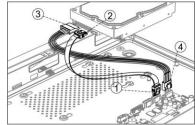


Figure 2-14 Connect Cables

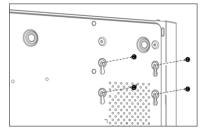


Figure 2-15 Fix HDD to Device Bottom

Chapter 3 Menu Operation

3.1 Startup

Proper startup is crucial to expand the device life. It is HIGHLY recommended to use an Uninterruptible Power Supply (UPS) with the device.

Steps

- 1. Plug power supply into an electrical outlet.
- 2. Press the power button (certain models may have power button on the front or rear panel). The device begins to start.

3.2 Activate via Local Menu

For the first-time access, you need to activate the device by setting an admin password. No operation is allowed before activation. You can also activate the device via web browser, SADP or client software.

Steps

- 1. Select your region, the system language, etc.
- 2. Enter the admin password twice.



We highly recommend you to create a strong password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.

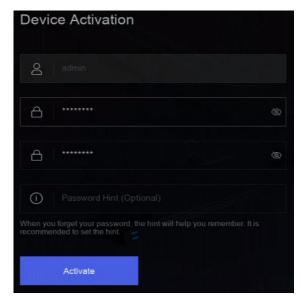


Figure 3-1 Activate via Local Menu

- 3. Enter the password to activate the network cameras.
- 4. Optional: Set **Password Hint**. When you forget your password, the hint will help you remember.
- 5. Click Activate.



- After the device is activated, you should properly keep the password.
- You can duplicate the password to the network cameras that are connected with default protocol.

What to do next

Set unlock pattern, password recovery method(s), and other device parameters.

3.3 Set Unlock Pattern

Admin user can use the unlock pattern to login. You can configure the unlock pattern after the device is activated.

Steps

1. Use the mouse to draw a pattern among the 9 dots on the screen. Release the mouse when the pattern is done.



- The pattern shall have at least 4 dots.
- Each dot can be connected once only.
- 2. Draw the same pattern again to confirm it. When the two patterns match, the pattern is configured successfully.



Figure 3-2 Set Unlock Pattern

3.4 Log in to Device

You must log in to the device before operating the menu and other functions.

Steps

- 1. Right click your mouse to display the shortcut menu.
- 2. Select an item as your desire. For example, select **Enter Desktop**.
- 3. Use the unlock pattern or password to log in.



- The unlock pattern is only available for the admin.
- If you have enabled the unlock pattern, you can click **Password Login** to log in the selected user by password.

4. Click Login.

For the admin, if you have entered the wrong password 7 times, the account will be locked for 60 seconds. For guest or operator, if you have entered the wrong password for 5 times, the account will be locked for 60 seconds.

3.5 Logout, Shutdown, and Reboot

You can log out of the system, shut down, or reboot the device.

- 1. Click at the upper-right corner.
- 2. Click Logout, Shutdown, or Reboot as your desire.

3.6 Network Settings

3.6.1 Configure TCP/IP Settings

TCP/IP settings must be properly configured before you can operate the device over network.

Steps

- 1. Go to Desktop \rightarrow System Settings \rightarrow Network \rightarrow Network \rightarrow TCP/IP.
- 2. Configure network parameters as needed.

Note

- Turn on **DHCP** to obtain IP settings automatically if a DHCP server is available on the network.
- Valid MTU value range is from 500 to 1500.

3. Click Apply.



Figure 3-3 TCP/IP Settings

3.6.2 Configure LTS Connect

LTS Connect enables the mobile phone application and the service platform page to access and manage your connected NVR, providing convenient remote access to the surveillance system.

Steps

- 1. Go to Desktop → System Settings → Network → PT Cloud.
- 2. Turn on **Enable** to activate the function. Then the service terms will pop up.
- 3. Accept the service terms.
- 4. Download LTS Connect app, and register an account at the app.
- 5. Optional: Click **More Settings** to configure the following parameters.

Stream Encryption

After enabling, verification code would be required during remote access and live view.

Platform Time Sync

The device will sync time with PT Cloud instead of NTP server.

Adaptive Bitrate Streaming

When the network environment is poor, the device would automatically adjust video bitrate to ensure playing fluency.

Server IP Address

You can customize the server IP address.

- 6. Click to edit verification code.
- 7. Use LTS Connect app to scan the device QR code and bind your device.



If the device is already bound with an account, you can click **Unbind** to unbind with the current account.

What to do next

You can access and manage your video recorder through LTS Connect app.

3.7 Add Network Camera

Before you can get live video or record the video files, you should add network cameras to the device.

Before You Start

- Ensure your network camera is on the same network segment as your device.
- Ensure the network connection is valid and correct.
- Ensure the network camera is activated.

- 1. Go to **Desktop** \rightarrow **Device Access** \rightarrow **Device** \rightarrow **Video Device**.
- 2. Click Add.
- 3. Enter network camera parameters.
- 4. Click **Add**.

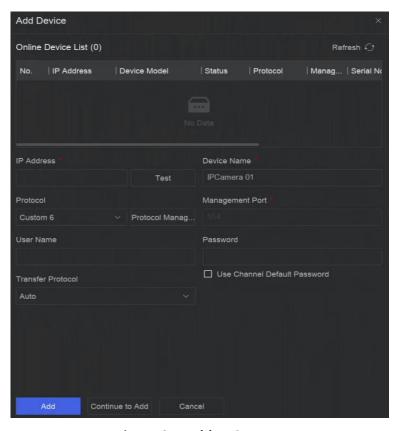


Figure 3-4 Add IP Camera

3.8 Live View

After the system completes the startup process, right click your mouse and select **Exit Full Screen** to enter live view mode.

Use the toolbar at the playing window bottom to achieve functions of capture, instant playback, audio on/off, digital zoom, live view strategy, etc.

3.9 Recording Settings

Before You Start

Ensure the device has at least one disk.

Steps

- 1. Go to Desktop \rightarrow Storage Management \rightarrow Storage Schedule \rightarrow Video Recording.
- 2. Select a camera.
- 3. Turn on Enable.
- 4. Select a recording schedule type. The record type includes **All-Day Continuous**, **All-Day Event**, **Custom**, etc.



• If recording schedule type is **Custom**, choose **Continuous** or **Event**, and drag the cursor on the

time bar to draw the recording schedule.

- If recording schedule type is a template, you can click **Configure Template** to edit the corresponding template.
- 5. Save the settings.

3.10 Playback

The recorded video files and pictures on HDD can be played back. Refer to the user manual for details of each playback mode.

Steps

1. Go to Playback.



Figure 3-5 Playback

- 2. Select camera(s) in the list.
- 3. Select a date on the calendar.
- 4. Use the toolbar at the bottom to control the playing progress.

Chapter 4 Access via Web Browser

You can get access to the device via web browser. The following web browsers are supported: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, Mozilla Firefox, and Google Chrome. The supported resolutions include 1024*768 and above. The use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, please strengthen your own protection. If the product does not work properly, please contact your dealer or the nearest service center.

Steps

- 1. Open web browser, enter the IP address of the device, and press **Enter**.
- 2. Log in to the device.
 - If the device has not been activated, activate the device first by setting the password for the admin user account.
 - If the device is already activated, enter the user name and password to log in.
- 3. Follow the installation prompts to install the plug-in before viewing the live video and managing the device.

iNote

- You may have to close the web browser to finish the installation of the plug-in.
- After login, you can perform the operation and configuration of the device, including the live view, playback, log search, configuration, etc.