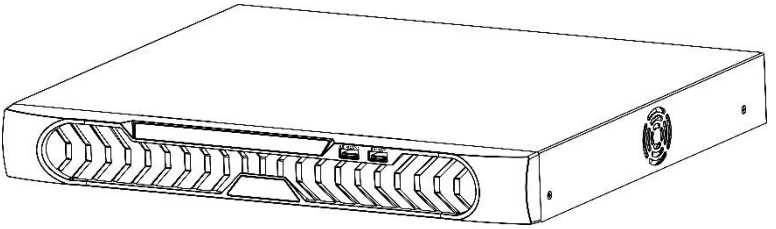
# GANZ GENSTAR NR8-8M72 NVR

# Quick Start Guide



**Issue** **V1.0**

**Date** **2015-05-28**

# Precautions

## Precautions

Fully understand this document before using this device, and strictly observe rules in this document when using this device. If you install this device in public places, provide the tip "You have entered the area of electronic surveillance" in an eye-catching place. Failure to correctly use electrical products may cause fire and severe injuries. To prevent accidents, carefully read the following context:

## Symbols

This document may contain the following symbols whose meanings are described accordingly.

| Symbol | Description |
|---|---|
| DANGER | It alerts you to fatal dangers which, if not avoided, may cause deaths or severe injuries. |
| WARNING | It alerts you to moderate dangers which, if not avoided, may cause minor or moderate injuries. |
| CAUTION | It alerts you to risks. Neglect of these risks may cause device damage, data loss, device performance deterioration, or unpredictable results. |
| TIP | It provides a tip that may help you resolve problems or save time. |
| NOTE | It provides additional information. |

**DANGER**

To prevent electric shocks or other dangers, keep power plugs dry and clean.

**WARNING**

- Strictly observe installation requirements when installing the device. The manufacturer shall not be held responsible for device damage caused by users' non-conformance to these requirements.

- Strictly conform to local electrical safety standards and use power adapters that are marked with the LPS standard when installing and using this device. Otherwise, this device may be damaged.
- Use accessories delivered with this device. The voltage must meet input voltage requirements for this device.
- If this device is installed in places with unsteady voltage, ground this device to discharge high energy such as electrical surges in order to prevent the power supply from burning out.
- When this device is in use, ensure that no water or any liquid flows into the device. If water or liquid unexpectedly flows into the device, immediately power off the device and disconnect all cables (such as power cables and network cables) from this device.
- Do not focus strong light (such as lighted bulbs or sunlight) on this device. Otherwise, the service life of the image sensor may be shortened.
- If this device is installed in places where thunder and lightning frequently occur, ground the device nearby to discharge high energy such as thunder strikes in order to prevent device damage.

**CAUTION**

- Avoid heavy loads, intensive shakes, and soaking to prevent damages during transportation and storage. The warranty does not cover any device damage that is caused during secondary packaging and transportation after the original packaging is taken apart.
- Protect this device from fall-down and intensive strikes, keep the device away from magnetic field interference, and do not install the device in places with shaking surfaces or under shocks.
- Clean the device with a soft dry cloth. For stubborn dirt, dip the cloth into slight neutral cleanser, gently wipe the dirt with the cloth, and then dry the device.
- Do not jam the ventilation opening. Follow the installation instructions provided in this document when installing the device.
- Keep the device away from heat sources such as radiators, electric heaters, or other heat equipment.
- Keep the device away from moist, dusty, extremely hot or cold places, or places with strong electric radiation.
- If the device is installed outdoors, take insect- and moisture-proof measures to avoid circuit board corrosion that can affect monitoring.
- Remove the power plug if the device is idle for a long time.
- Before unpacking, check whether the fragile sticker is damaged. If the fragile sticker is damaged, contact customer services or sales personnel. The manufacturer shall not be held responsible for any artificial damage of the fragile sticker.

# Special Announcement

All complete products sold by the manufacturer are delivered along with nameplates, operation instructions, and accessories after strict inspection. The manufacturer shall not be held responsible for counterfeit products.

This manual may contain misprints, technology information that is not accurate enough, or product function and operation description that is slightly inconsistent with the actual product. The manufacturer will update this manual according to product function enhancement or changes and regularly update the software and hardware described in this manual. Update information will be added to new versions of this manual without prior notice.

This manual is only for reference and does not ensure that the information is totally consistent with the actual product. For consistency, see the actual product.

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# 1 Specifications

| Parameters | | Description |
|---|---|---|
| System specification | CPU | Embedded SOC chip for NVR |
| | Operating system | Embedded Linux |
| | Hard disk interface | 1 SATA2.0 interface, up to 4TB capacity for the disk |
| | Network interface | 1 RJ-45 10 /100 Mbps adaptive Ethernet interface<br>8 independent 10 /100 Mbps PoE Ethernet interfaces, compliant with the IEEE802.3af standard |
| | Audio interface | 1 audio output, 1 audio input, support for bidirectional intercom |
| | Video interface | 1 HDMI, 1 VGA<br>Support for Synchronous output<br>Support for 1920×1080, 1280×720, and 1024×768 output resolution |
| | USB interface | 2 USB2.0 |
| | Alarm interface | N/A |
| | RS485 | N/A |
| | RS232 | N/A |
| Performance specification | Network video input | 8-ch |
| | Access bandwidth | 48Mb/s, the main stream supports 36Mb/s |
| | Output bandwidth | 48Mb/s |
| | Synchronous playback | 1080p, 4-ch |
| | Video resolution | 5MP/1080p/720p/D1 |

| | | |
|---|---|---|
| | Local preview | 8-ch, support 1/4/9 split-screen video playing window, 1 screen support 5MP, 1080p, 720p and D1 decoding display, 4 screen support 1080p,720p and D1 decoding display, 9 screen support D1 decoding display, support video sequencing playing. |
| Environmental features | Power supply | AC 110/220V, MAX 180W |
| | Power consumption of the mainboard | 3.5W |
| | PoE power consumption | 120W |
| | Operating temperature | -5℃–45℃ |
| | Operating humidity | ≤ 90% (non-condensing) |
| Physical features | Physical size | 372 mm × 310 mm × 44.45mm (length × width × height) |
| | Net weight | 2560g |
| | Installation mode | Desktop |

# 2 NVR Networking

The network video recorder (NVR) has nine network interfaces, with one 100 Mbps network interface and eight PoE network interfaces. The eight PoE network interfaces can be connected to devices within a distance of less than 100 meters.

Connection must be made via standard cables.

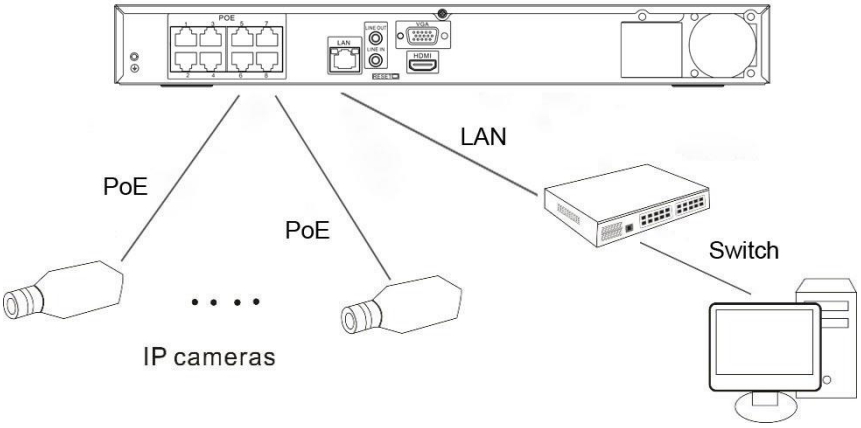
### POE Network Interfaces

After the PoE network interfaces are connected to IP cameras, the NVR automatically adds the IP cameras and enables 7*24 recording.

### 100 Mbps Network Interface

The 100 Mbps network interface can be connected to other network devices. Network shows the network topology of the NVR.

Network topology of the NVR



# 3 Hard Disk

## 3.1 Precautions

**CAUTION**

- Formatting will clear all video data on the hard disk. Use this function only when necessary.
- Be sure to uninstall the hard disk before removing it from the NVR during runtime; otherwise, the hard disk may be damaged or data may be lost.
- The NVR must be connected to a stable power supply during runtime; otherwise, the hard disk may be damaged or data may be lost.
- The maximum capacity of a single hard disk cannot exceed 4 TB.

## 3.2 Hard Disk Recommendation

Seagate or Western Digital hard disks which are highly stable and inexpensive are recommended.

## 3.3 Video Storage Duration

Video storage duration

| Maximum Hard Disk Capacity | Maximum Bit Rate | Video Storage Duration |
|---|---|---|
| 1 × 4 TB | 18 Mbps | 21 days |

Formulas for calculating the video storage duration:

Step 1 Use the following formula to calculate the storage capacity **q** (unit: MByte) required to record a single video per hour:

q = d/8×3600/1024

**d** indicates the bit rate (unit: Kbit/s).

Step 2 Use the following formula to calculate the video storage duration **t** (unit: day)

$$t = \frac{n \times w}{q \times h \times c}$$

**w** indicates the capacity (unit: Mbyte) of a single hard disk.

**n** indicates the number of disks.

**h** indicates the recording duration per day.

**c** indicates the number of video inputs of the NVR.

Examples of video storage duration shows examples of video storage duration (**h** is 24 hours).

Examples of video storage duration

| Hard Disk Capacity | Bit Rate | Video Count | Video Storage Duration |
|---|---|---|---|
| 1×4TB | D1, 1.5Mbps | 4 | 64 days |
| 1×4TB | 720p, 3Mbps | 4 | 32 days |
| 1×4TB | 1080p, 4.5Mbps | 4 | 21 days |

**NOTE**

The data listed in the preceding table is only for your reference. The recording time estimate may be different from the actual recording time. The user shall be liable for any loss incurred as a result thereof.

## 3.4 Hard Disk Installation

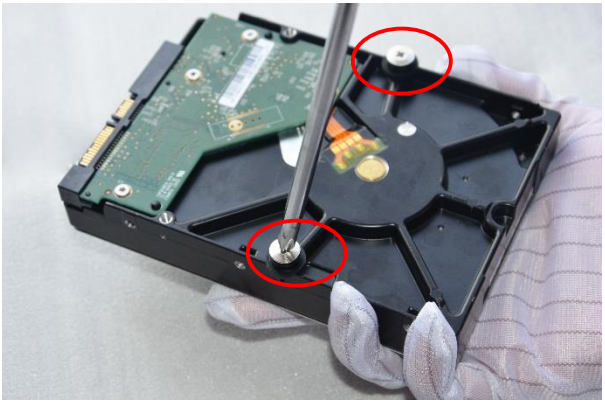
Take the following steps to install a hard disk:

Step 3 Unscrew the four fixing screws on both sides and one fixing screw on the back, then remove the upper cover, as shown in Removing the upper cover.

Removing the upper cover

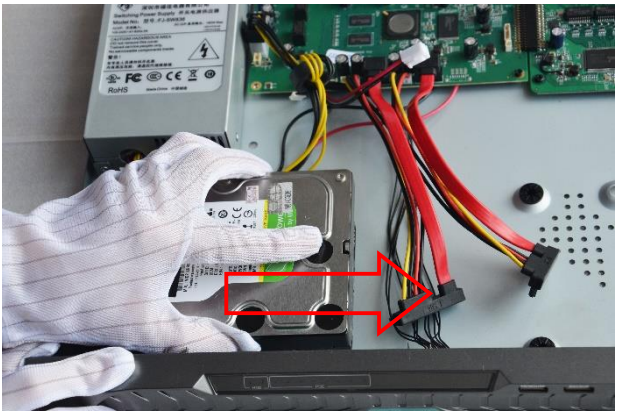
Step 4 Take out the hard disk fixing screws and silicone cushion included in the accessory package, route the fixing screw through the silicone cushion, and install it to the screw holes, as shown in Installing the hard disk fixing screw.

Installing the hard disk fixing screw



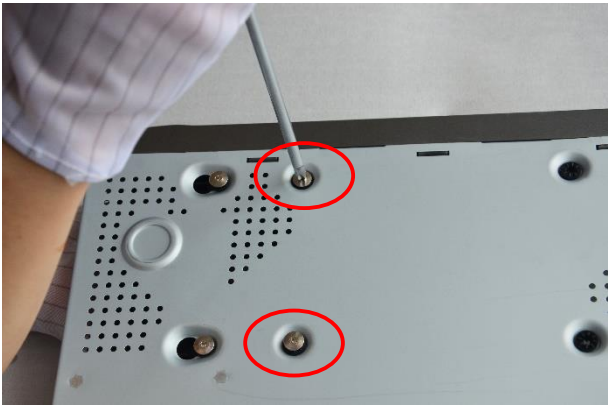
Step 5 Route the hard disk fixing screws through the holes on the base, push the hard disk to the appropriate position according to the direction of the arrow, as shown in Inserting the hard disk.

Inserting the hard disk



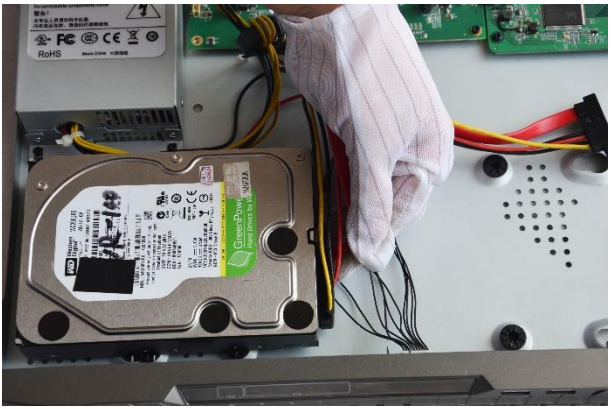
Step 6 Turn the device over, and fasten the rest two hard disk fixing screws, as shown in Fixing the hard disk.

Fixing the hard disk



Step 7 Insert the hard disk data cable and power cable, as shown in Inserting the .

Inserting the cable



Step 8 Put on the upper cover, and fasten the fixing screws, as shown in Put on the upper cover.

Put on the upper cover

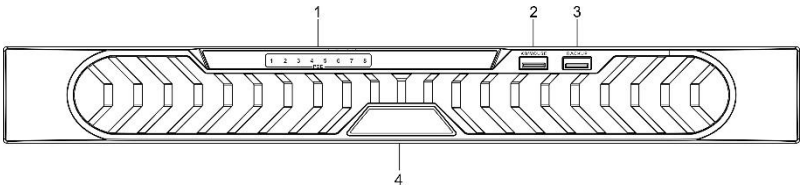
**----End**

# 4 Operation Instruction

## 4.1 Front panel

Front panel shows the front panel of the NVR. Elements of the front panel shows the description of front panel.

Front panel



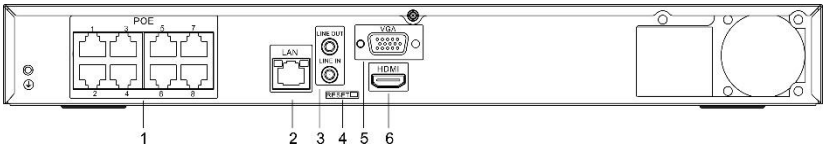

Elements of the front panel

| NO. | Element | Description |
|---|---|---|
| 1 | PoE indicator | PoE network status indicator<br>This indicator flashes when data is transmitted. |
| 2 | KB/MOUSE | Supports connection to a USB mouse and keyboard. |
| 3 | BACKUP | Supports connection to a USB flash drive or USB removable hard disk. |
| 4 | PWR | Power indicator<br>When the NVR is operating, the PWR indicator is steady on.<br>When the NVR is shut down, the PWR indicator is turned off. |

## 4.2 Rear panel

Rear panel shows the rear panel of the NVR and the interfaces on it. Elements of the real panel shows the description of front panel.

Rear panel




Elements of the real panel

| NO. | Name | Description |
|---|---|---|
| 1 | PoE network interface | 8 PoE network interfaces |
| 2 | LAN | RJ45 10 /100 Mbps adaptive Ethernet interface |
| 3 | LINE OUT/LINE IN | Audio output and audio input |
| 4 | RESET | Factory reset button |
| 5 | VGA | Video output interface |
| 6 | HDMI | |

## 4.3 Startup

Before starting the NVR, ensure that the NVR is connected to a power supply.

When the NVR is connected to a power supply, it starts automatically upon the initial power-on.

**CAUTION**

- Before starting the NVR, ensure that the NVR is connected to a power supply properly and a monitor is connected to the HDMI or VGA interface of the NVR correctly.
- The NVR may not operate normally when a power supply exception occurs. Damage to the NVR would possibly occur in extreme situations. To avoid this, the user is advised to use a regulated power supply.

When the NVR is started, the power indicator becomes steady on and the NVR starts a self-test and displays the test result on the screen. The startup process takes about 2 minutes.

When all the hardware abnormality is detected, the self-test screen stays on. You can click **continue** or **shutdown** in the lower right corner of the screen. If you click **continue**, the NVR enters the login screen.

**NOTE**

The hard disk of the NVR must be provided by the user. Hard disk detection is performed during startup. If the detection fails, possible causes include：

- The hard disk is new and unformatted. In this case, format the hard disk based on chapter 5 "Quick Setup"
- The hard disk is formatted, but the file system is inconsistent with the one supported by the NVR.
- The hard disk is damaged.

## 4.4 Shutdown

To shut down the NVR, click in the upper right corner of the main screen. The shutdown screen is displayed, as shown in Shutdown interface.

Shutdown interface

Enter the correct password and click **Shutdown**. When authentication is successful, the

shutdown successful page is displayed, then cut off the power.

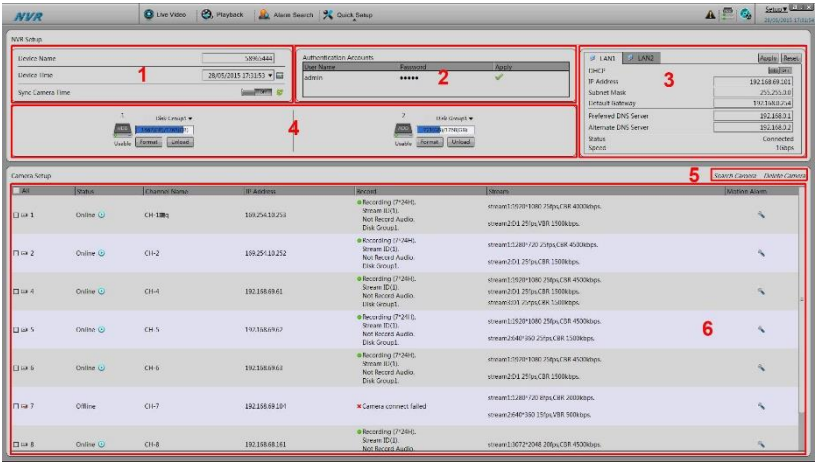
**----End**

# 5 Quick Setup

Quick setup provides NVR network configuration, disk management, time setting, IP camera search, video configuration, camera network configuration, stream configuration, and mobile detection configuration.

Quick setup screen shows the quick setup screen.

Quick setup screen




**Description**

1. NVR basic information and time synchronization

- Basic information of the NVR

  You can set the name and system time of the NVR.

- Time synchronization of IP cameras: It can be done manually or automatically.

If the manual mode is selected, click to synchronize the time of IP cameras. If the auto mode is selected, the NVR synchronizes the time of IP cameras automatically.

2. Authentication accounts of managed cameras

**CAUTION**

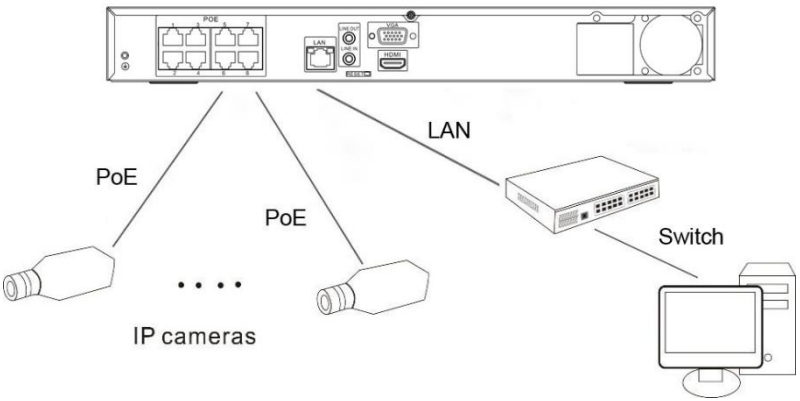
Only successfully authenticated cameras can be used normally. Before adding a camera, add the authentication account and password of the camera to the list.

To log in to an IP camera, you need to enter the correct authentication account. Only successfully authenticated IP cameras can be managed. Double-click the user name and password text field to modify the user name and password.

3. NVR network configuration

- The default IP address of the NVR is: 192.168.0.121.
- You can enable automatic IP address acquisition and set the IP address, subnet mask, default gateway, and DNS address of the NVR. The network connection status and speed are displayed in real time. For details about the parameters, see the *Network Video Recorder (NVR) User Guide*. Network topology of the NVR shows the network topology of the NVR.

Network topology of the NVR




4. Hard disk management

**CAUTION**

- Formatting will clear all video data on the hard disk. Use this function only when necessary.
- Be sure to uninstall the hard disk before removing it from the NVR during runtime; otherwise, the hard disk may be damaged or data may be lost.
- The NVR must be connected to a stable power supply during runtime; otherwise, the hard disk may be damaged or data may be lost.

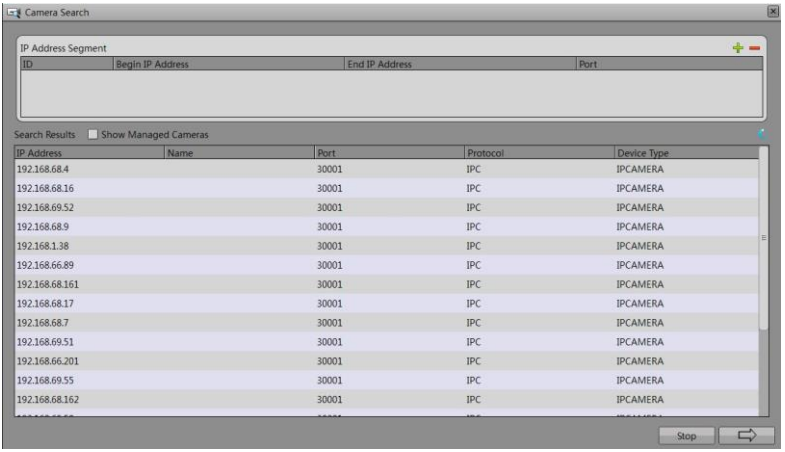
You can manage the hard disk of the NVR as follows:

- Format the hard disk. Click **Format**. In the displayed dialog box, click **Yes**.
- Check the status of the hard disk (usable, abnormal, unformatted, and unavailable).
- Check the used space and total space of the hard disk.

5. Camera search and deletion

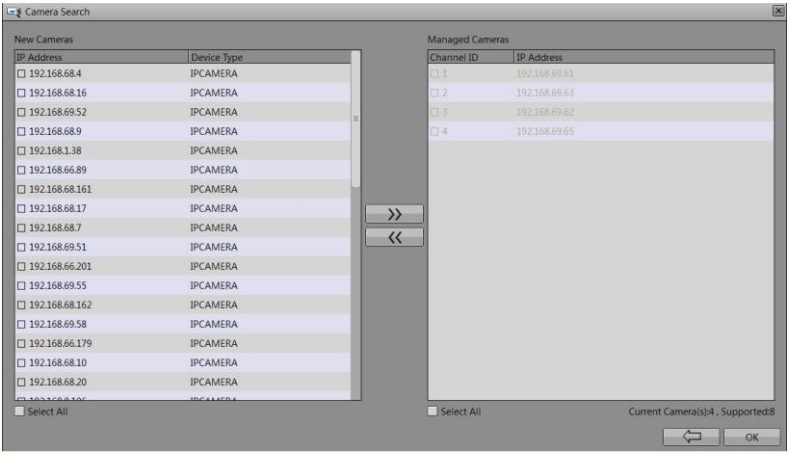
When you need to search camera for management, click **Search Camera**, the **Camera Search** page is displayed, then click **Scan**, it will scan for the camera automatically, as shown in Camera searching .

Camera searching page



Click , the camera selecting page is displayed as shown in Camera selecting . Select the cameras you want and then click **Ok** to complete selection of IP cameras.

Camera selecting page




To remove managed cameras, click 1 in the camera list, select the cameras to be removed, and click **Delete Camera**.

6. IP camera setup

You can view the status of an IP camera and set the name, IP address, recording policy, stream parameter, and motion detection parameter of the IP camera.

- Viewing the status of an IP camera

  The camera status may be Online, Offline, and Incorrect account. For an online IP camera, click on-line to view live video.

- Changing the channel name

  Enter a channel name in the **Name** text field.

- Setting a recording policy

  Click the recording policy to be modified. The **Recording Policy Configuration** page is displayed. For how to set a recording policy, see the *Network Video Recorder (NVR) User Guide*.

- Setting a stream

  Click the stream to be modified. The **Stream** page is displayed, as shown in Stream .

Stream page

Set stream parameters, select **On** for **Apply to all the same devices**, and click **OK**. The parameter settings are applied to all IP cameras that have the same resolution as the configured resolution.

- Setting a motion detection alarm

  Click the motion detection information to be modified. The **Motion Alarm** page is displayed. Set the arming time and detection zone when the motion detection alarm function is enabled.

**----End**

# 6 Web Access

The NVR is embedded with a Flash-enabled web server and supports mainstream browsers such as Internet Explorer, Chrome, Firefox, and Safari. Operations such as quick setup, live preview, video playback, alarm search, NVR configuration, and camera configuration can be performed via the web.

The default IP address of the NVR is 192.168.0.121. To access the NVR, enter the IP address of the NVR in the address bar of a web browser, for example, http://192.168.0.121.

**CAUTION**

- Before accessing the NVR via the web, ensure that the network connection is correct and smooth.
- Identify the interface used in network connection and enter the corresponding IP address in the address bar of your browser.

Step 9 Enter the IP address of the NVR in the address bar of Internet Explorer and press **Enter**. The web-based login screen of the NVR is displayed, as shown in Login screen.

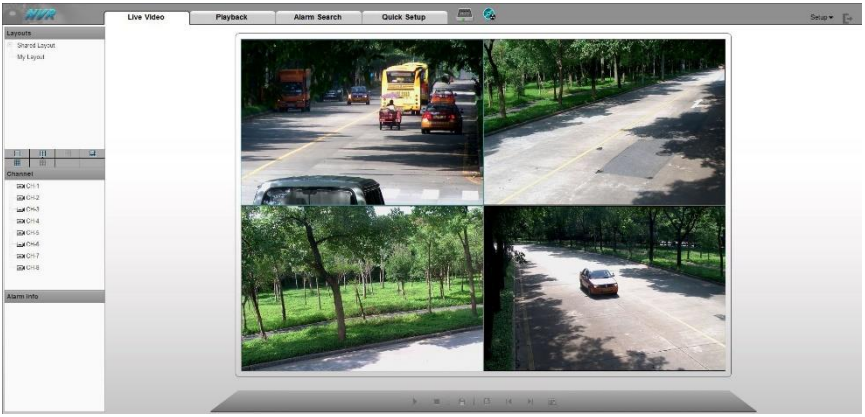
Login screen

Step 10 Enter the correct user name and password. The main screen of the NVR is displayed, as shown in Main screen.

**NOTE**

- The superuser and its password are both **admin** (case-sensitive). Change the password after the first login.
- If incorrect passwords are entered more than three times within 1 hour, the user is locked and prevented from logging in. Only the administrator can unlock the user. For details about unlocking, see the *Network Video Recorder (NVR) User Guide*.
- The superuser **admin** cannot be locked.

Main screen




The main screen provides the functions of live video viewing, video playback, alarm search, quick setup, camera configuration, and NVR configuration. For details, see the *Network Video Recorder (NVR) User Guide*.

**-----End**

# 7 FAQ

## 1. Why is the NVR self-test screen frozen?

Use the methods below to fix the problem:

Method 1: Check whether the NVR is equipped with a hard disk.

Method 2: Check whether the NVR is equipped with an unformatted hard disk.

Method 3: Check whether the hard disk is damaged.

If a hard disk is not required, Click **continue** in the lower right corner of the screen to resume the startup process.

## 2. Why does the screen display incomplete information or is skewed?

Use the following methods below to fix the problem:

Method 1: Use the automatic adjustment function of the monitor.

Method 2: Click **Adjust** on the login screen. The **Monitor Setup** screen is displayed. For operation details, see chapter 4 "Operation Instruction" of the *Network Video Recorder (NVR) User Guide*.

## 3. Why no image is displayed on the monitor?

Use the following methods below to fix the problem:

Method 1: Check the power supply of the monitor.

Method 2: Check whether the monitor is connected to the NVR correctly.

Method 3: Restart the NVR.

Method 4: Check whether the monitor supports the default resolution (1024×768) of the NVR.

**H a z a r d o u s S u b s t a n c e D e**

# declaration

| Component | Hazardous Substance or Element | | | | | |
|---|---|---|---|---|---|---|
| | Plumbum (Pb) | Mercury (Hg) | Cadmium (Cd) | Hexavalent Chromium (Cr6+) | Polybrominated Biphenyls (PBB) | Polybrominated Diphenyl Ethers (PBDE) |
| Structural part | × | ○ | ○ | ○ | ○ | ○ |
| Board/circuit module | × | ○ | ○ | ○ | ○ | ○ |
| Cable connector | × | ○ | ○ | ○ | ○ | ○ |
| Accessories | × | ○ | ○ | ○ | ○ | ○ |

○: indicates that the concentration of the hazardous substance in all homogeneous substances of the component is within the limit specified in SJ/T 11363-2006 **Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products**.

×: indicates that the concentration of the hazardous substance in at least one homogeneous substance of the component exceeds the limit specified in SJ/T 11363-2006 **Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products**.

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