



Quick Start Guide

About this Manual

This Manual is applicable to Network Video Recorder (NVR).

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website.

Please use this user manual under the guidance of professionals.

Legal Disclaimer

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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 LVD Directive 2014/35/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: www.recyclethis.info




 2006/66/EC (battery directive): This product contains a battery that 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), lead (Pb), or mercury (Hg). 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
 NOTE	Provides additional information to emphasize or supplement important points of the main text.
 WARNING	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 DANGER	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 100~240 VAC or 12 VDC according to the IEC60950-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause overheating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

Preventive and Cautionary Tips

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

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the device in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

Chapter1 Panels Description

1.1 Front Panel

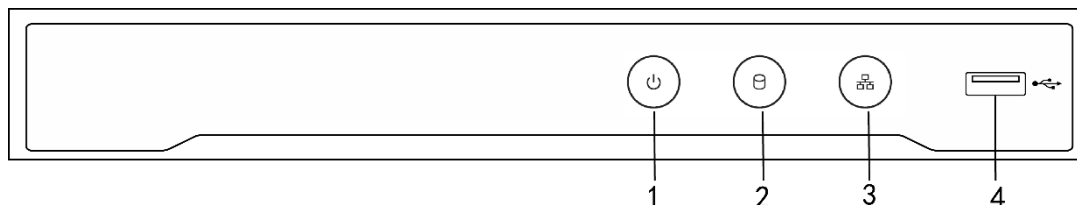
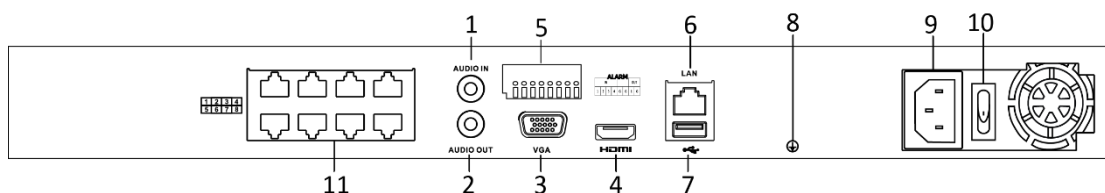


Figure 1-1 DS-7600NI Series

Table 1-1 Panel Description

No.	Name	Connections
1	POWER	Turns green when NVR is powered up.
2	HDD	Flickers red when data is being read from or written to HDD.
3	Tx/Rx	Flickers blue when network connection is functioning properly.
4	USB Interface	Universal Serial Bus (USB) port for additional devices such as USB mouse and USB Hard Disk Drive (HDD).

1.2 Rear Panel



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No.	Name	Description
1	Audio In	RCA connector for audio input.
2	Audio Out	RCA connector for audio output.
3	VGA Interface	DB9 connector for VGA output. Display local video output and menu.
4	HDMI Interface	HDMI video output connector.
5	ALARM IN	Connector for alarm input.
	ALARM OUT	Connector for alarm output.
6	LAN Network Interface	1 10/100/1000 Mbps self-adaptive Ethernet interface
7	USB Interface	Universal Serial Bus (USB 3.0) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
8	Ground	Ground (needs to be connected when NVR starts up).
9	Power Supply	100 to 240 V~.
10	Power Switch	Switch for turning on/off the device.
11	Network Interfaces with PoE function (supported by DS-7600NI-I2/P)	Network interfaces for the cameras and to provide power over Ethernet.

Chapter 2 Installation and Connections

2.1 Installation

During installation of the NVR:

- Use brackets for rack mounting.
- Ensure ample room for audio and video cables.
- When routing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
- Connect the alarm cable.
- Allow at least 2cm (≈0.75-inch) of space between racks mounted devices.
- Ensure the NVR is grounded.
- Environmental temperature should be within the range of -10 to +55° C (+14 to +131° F).
- Environmental humidity should be within the range of 10% to 90%.

2.2 Hard Disk Installation

Before you start:

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

Tools Required: Screwdriver.

Purpose:

The following section introduces the HDD installation for the DS-7600NI and DS-7700NI series NVR. Take the example of DS-7600NI to describe installation steps.

Step 1 Remove the cover from the NVR by unfastening the screws on the rear and side panel.



Figure 2-1 Remove Cover

Step 2 Connect one end of the data cable to the motherboard of NVR and the other end to the HDD.

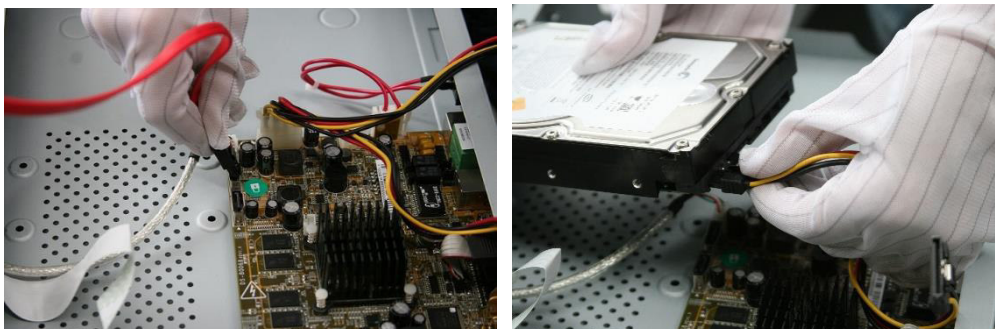


Figure 2-2 Connect Data Cable

Step 3 Connect the power cable to the HDD.



Figure 2-3 Connect Power Cable

Step 4 Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.



Figure 2-4 Fix Hard Disk

2.3 Connections

2.3.1 Alarm Input Wiring

The alarm input is an open/closed relay. To connect the alarm input to the device, use the following diagram.



If the alarm input is not an open/close relay, please connect an external relay between the alarm input and the device.

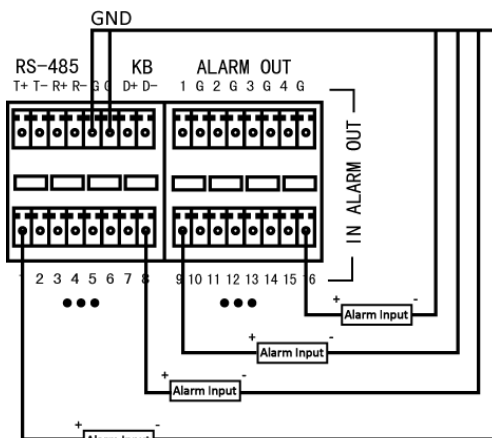


Figure 2-5 Alarm Input Wiring

2.3.2 Alarm Output Wiring

To connect to an alarm output (AC or DC load), use the following diagram:

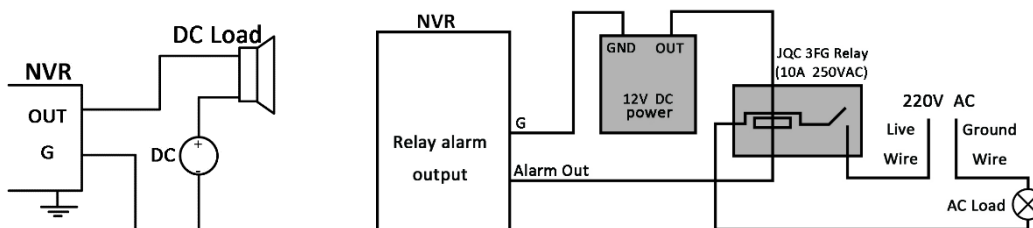


Figure 2-6 Alarm Output Wiring

For DC load, the jumpers can be used within the limit of 12V/1A safely.

To connect an AC load, jumpers should be left open (you must remove the jumper on the motherboard in the NVR). Use an external relay for safety (as shown in the figure above).

There are 4 jumpers (JP6, JP9, JP10, and JP11) on the motherboard, each corresponding with one alarm output. By default, jumpers are connected. To connect an AC load, jumpers should be removed.

Example:

If you connect an AC load to the alarm output 3 of the NVR, then you must remove the JP 3 jumper.

2.3.3 Alarm Connection

To connect alarm devices to the NVR:

Step 1 Disconnect *pluggable block* from the ALARM IN /ALARM OUT terminal block.

Step 2 Unfasten stop screws from the *pluggable block*, insert signal cables into slots and fasten stop screws. Ensure signal cables are tight.

Step 3 Connect *pluggable block* back into terminal block.

2.3.4 Controller Connection

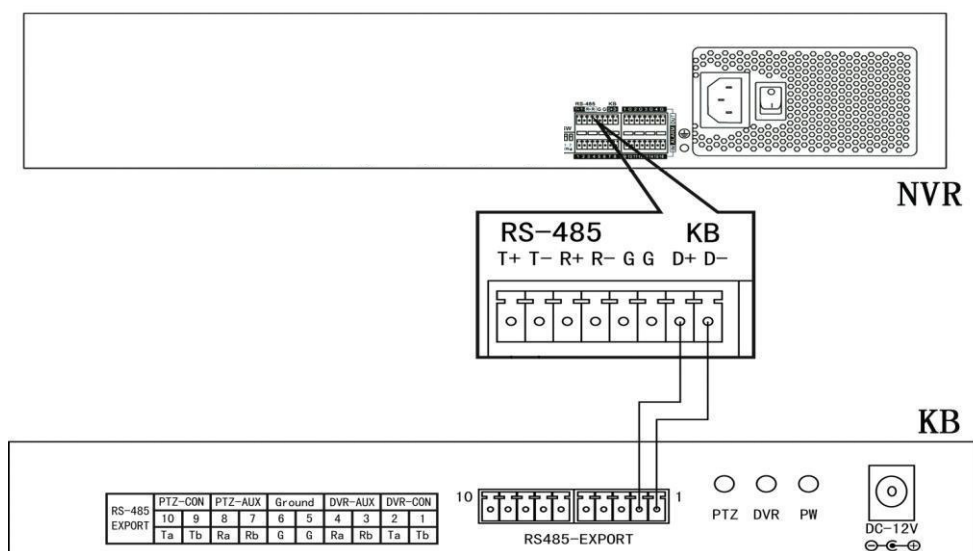


Figure 2-7 Controller Connection

To connect a controller to the NVR:

Step 1 Disconnect *pluggable block* from the KB terminal block.

Step 2 Unfasten stop screws from the KB D+, D- *pluggable block*, insert signal cables into slots and fasten stop screws. Ensure signal cables are in tight.

Step 3 Connect Ta on controller to D+ on terminal block and Tb on controller to D- on terminal block. Fasten stop screws.

Step 4 Connect *pluggable block* back into terminal block.



Make sure both the controller and NVR are grounded.

2.4 HDD Storage Calculation Chart

The following chart shows an estimation of storage space used based on recording at one channel for an hour at a fixed bit rate.

Bit Rate	Storage Used
96K	42M
128K	56M
160K	70M
192K	84M
224K	98M
256K	112M
320K	140M
384K	168M
448K	196M
512K	225M
640K	281M
768K	337M
896K	393M
1024K	450M
1280K	562M
1536K	675M
1792K	787M
2048K	900M
4096K	1.8G
8192K	3.6G
16384K	7.2G



Please note that supplied values for storage space used is just for reference. The storage values in the chart are estimated by formulas and may have some deviation from actual value.

Chapter 3 Menu Operation

3.1 Start up Your Device

Proper startup and shutdown procedures are crucial to expanding the life of the NVR.

To start your device:

Step 1 Check the power supply is plugged into an electrical outlet. It is **HIGHLY** recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power button on the front panel should be red, indicating the device is receiving the power.

Step 2 Press the POWER button on the front panel. The Power LED should turn blue. The unit will begin to start.


After the device starts up, the wizard will guide you through the initial settings, including modifying password, date and time settings, network settings, HDD initializing, and recording.

3.2 Activate Your Device

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.

Step 1 Input the same password in the text field of **Create New Password** and **Confirm New Password**.



You can click  to show the characters input.

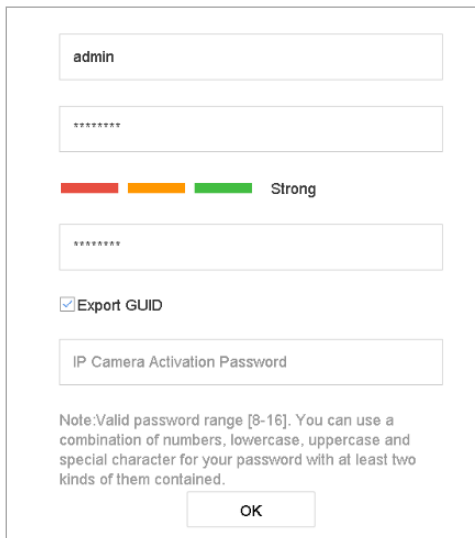
A screenshot of a web-based password setting interface. It features a form with several input fields and a checkbox. The first field contains the text 'admin'. The second field contains seven asterisks. Below these fields is a strength indicator consisting of three colored bars (red, orange, green) and the word 'Strong'. The third field also contains seven asterisks. Below this is a checkbox labeled 'Export GUID' which is checked. The fourth field is labeled 'IP Camera Activation Password'. At the bottom of the form is a note: 'Note: Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.' and an 'OK' button.

Figure 3-1 Setting Admin Password

**WARNING**

We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the 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 reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 2 In the **IP Camera Activation** text field, enter the password to activate the IP camera (s) connected to the device.

Step 3 Click **OK** to save the password and activate the device.

**NOTE**

After the device is activated, you should properly keep the password.

3.3 Configure Unlock Pattern for Login

For the admin user, you can configure the unlock pattern for device login.

Step 1 After the device is activated, you can enter the following interface to configure the device unlock pattern.

Step 2 Use the mouse to draw a pattern among the 9 dots on the screen. Release the mouse when the pattern is done.

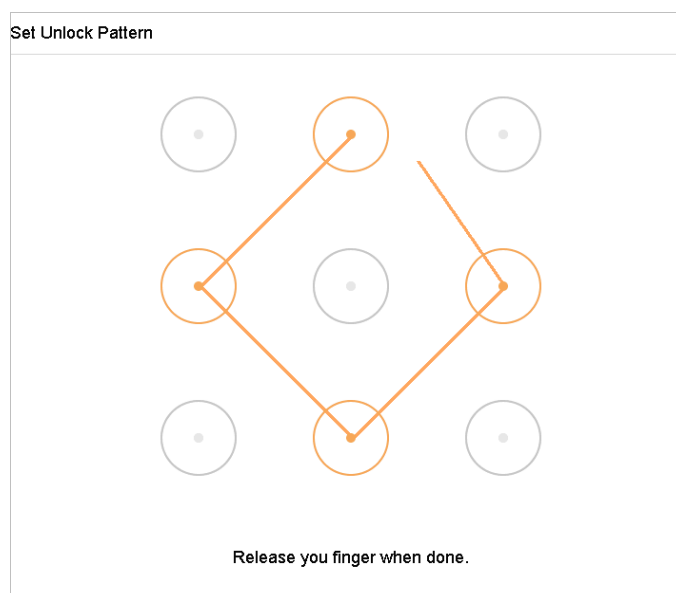


Figure 3-2 Draw the Pattern

 NOTE

- Connect at least 4 dots to draw the pattern.
- Each dot can be connected for once only.

Step 3 Draw the same pattern again to confirm it. When the two patterns match, the pattern is configured successfully.

 NOTE

If the two patterns are different, you must set the pattern again.

3.4 Login to the System

Purpose:

If the device has logged out, you must log in the device before operating the menu and other functions. You can select to log in by unlock pattern or password input either.

Step 1 Right click the mouse on the screen and select the menu to enter the interface.

Step 2 Select the **User Name** in the dropdown list.

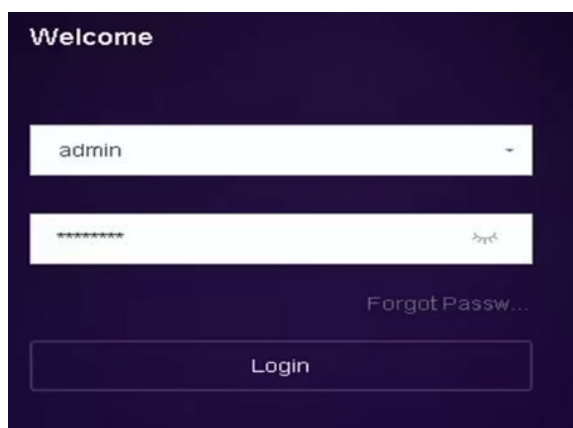
The image shows a login interface with a dark blue background. At the top, the word "Welcome" is displayed in white. Below it, there is a white dropdown menu with "admin" selected. Underneath the dropdown is a white password input field with a masked password "*****" and a small icon to toggle visibility. To the right of the password field is a link that says "Forgot Passw...". At the bottom of the interface is a large white button with the text "Login" in blue.

Figure 3-3 Login Interface

Step 3 Input Password.

Step 4 Click **Login** to log in.

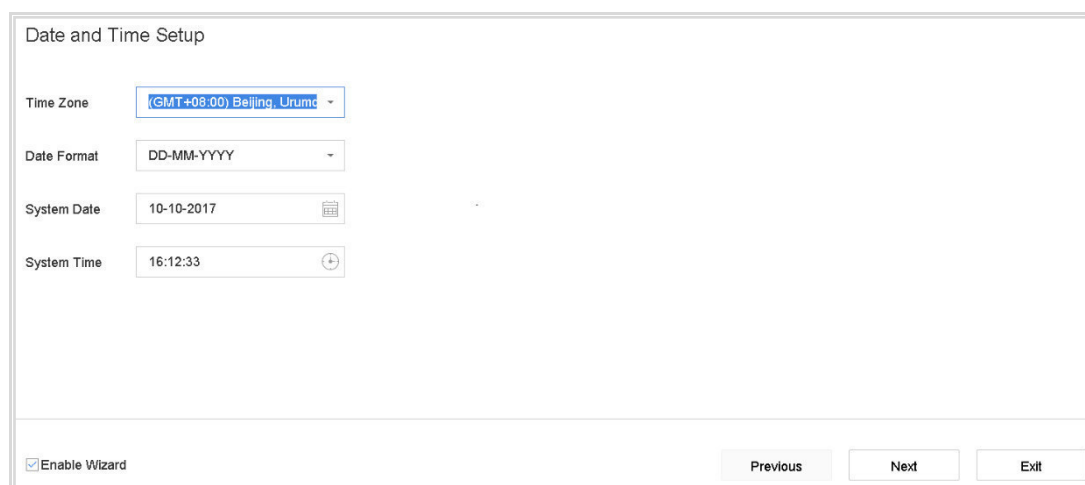
 NOTE

In the Login dialog box, if you enter the wrong password 7 times, the current user account will be locked for 60 seconds.

3.5 Enter Wizard to Configure Quick Basic Settings

The Setup Wizard can walk you through some important settings of the device. By default, the Setup Wizard starts once the device has loaded.

Check the checkbox to enable Setup Wizard when device starts. Click **Next** to continue the setup wizard. Follow the guide of the Setup Wizard to configure the system resolution, system date/time, network settings, HDD management, record settings, etc.



The screenshot shows the 'Date and Time Setup' wizard. It includes the following fields and controls:

- Time Zone:** A dropdown menu set to '(GMT+08:00) Beijing, Urumqi'.
- Date Format:** A dropdown menu set to 'DD-MM-YYYY'.
- System Date:** A text input field containing '10-10-2017' with a calendar icon to its right.
- System Time:** A text input field containing '16:12:33' with a clock icon to its right.
- Enable Wizard:** A checked checkbox at the bottom left.
- Navigation Buttons:** 'Previous', 'Next', and 'Exit' buttons at the bottom right.

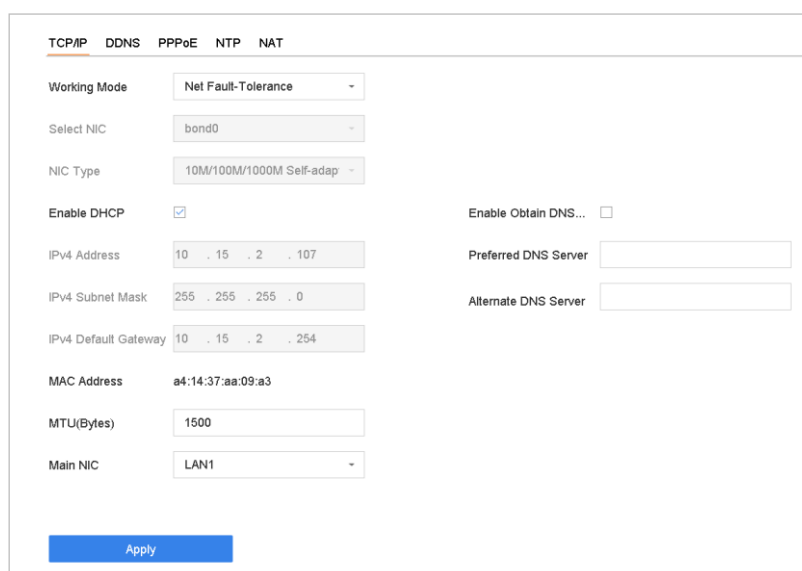
Figure 3-4 Wizard

3.6 Network Settings

Purpose:

Network settings must be properly configured before you operate device over network.

Step 1 Go to **System > Network > TCP/IP**.



The screenshot shows the 'TCP/IP' configuration page with the following settings:

- Working Mode:** Net Fault-Tolerance
- Select NIC:** bond0
- NIC Type:** 10M/100M/1000M Self-adap
- Enable DHCP:**
- Enable Obtain DNS...:**
- IPv4 Address:** 10 . 15 . 2 . 107
- Preferred DNS Server:** [Empty text box]
- IPv4 Subnet Mask:** 255 . 255 . 255 . 0
- Alternate DNS Server:** [Empty text box]
- IPv4 Default Gateway:** 10 . 15 . 2 . 254
- MAC Address:** a4:14:37:aa:09:a3
- MTU(Bytes):** 1500
- Main NIC:** LAN1
- Apply:** A blue button at the bottom.

Figure 3-5 Network Settings

Step 2 Select the **General** tab.

Step 3 In the **General Settings** interface, you can configure the following settings: NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.

Step 4 If the DHCP server is available, you can check the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.

Step 5 After having configured the general settings, click the **Apply** button to save the settings.


3.7 Add IP Cameras

Purpose:

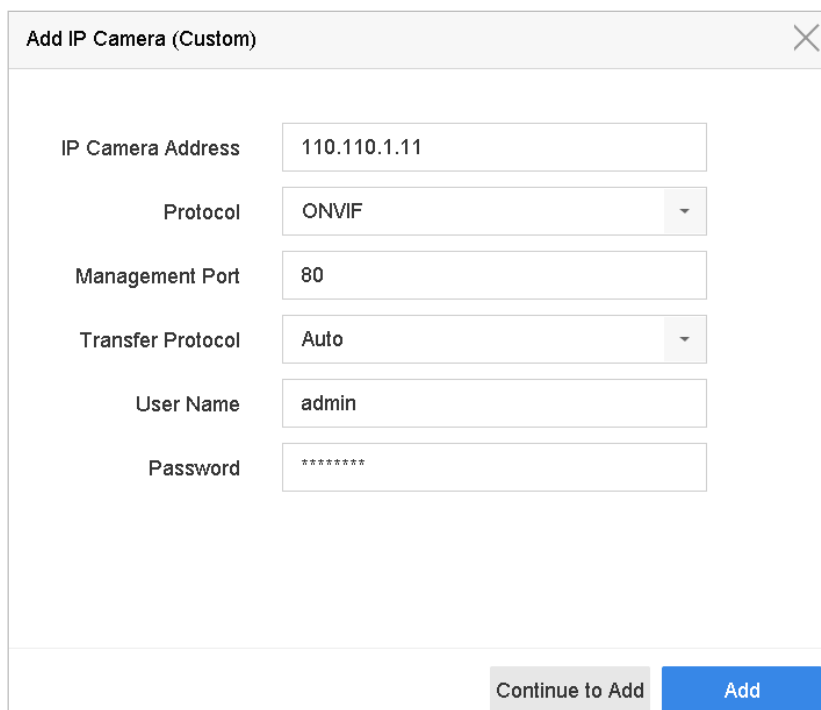
Before you can get live video or record the video files, you should add the network cameras to the connection list of the device.

Before you start:

Ensure the network connection is valid and correct, and the IP camera to add has already been activated.

Step 1 Click  on the main menu bar to enter the Camera Management.

Step 2 Click the **Custom Add** tab on the title bar to enter the Add IP Camera interface.



IP Camera Address	110.110.1.11
Protocol	ONVIF
Management Port	80
Transfer Protocol	Auto
User Name	admin
Password	*****

Continue to Add Add

Figure 3-6 Add IP Camera

Step 3 Enter IP address, protocol, management port, and other information of the IP camera to add.

Step 4 Enter the login user name and password of the IP camera.

Step 5 Click **Add** to finish the adding of the IP camera.

Step 6 (Optional) Click **Continue to Add** to continue to add other IP cameras.

3.8 Start Live View

Enter the live view mode ().

- You can select a window and double click a camera from the list to play the video from the camera in the selected window.
- Use the toolbar at the playing window bottom to realize the capture, instant playback, audio on/off, digital zoom, live view strategy, show information, start/stop recording, etc.

3.9 One-Touch RAID Configuration



The RAID is supported by DS-9600NI-I8 and DS-9600NI-I16 series NVR only.

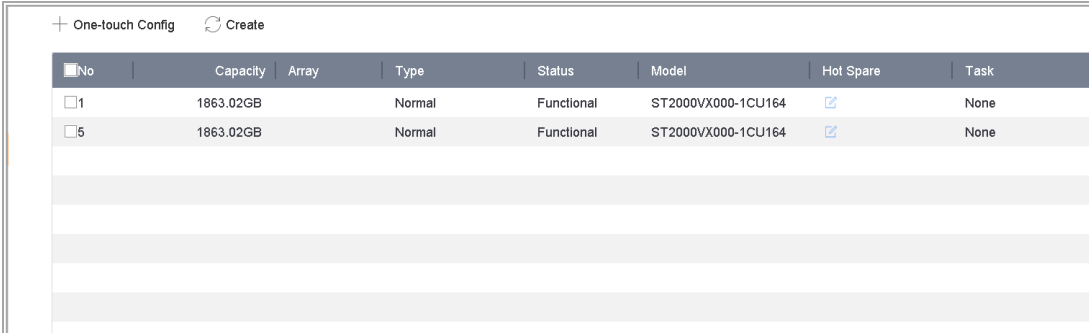
Purpose:

The device supports the RAID storage function. Through one-touch configuration, you can quickly create the disk array. By default, the array type to be created is RAID 5.

Before you start:

- Enable RAID function.
- Install at least 3 HDDs. If more than 10 HDDs are installed, 2 arrays will be created. To maintain reliable and stable running of the HDDs, it is recommended to use enterprise-level HDDs with the same model and capacity.

Step 1 Go to **Storage > RAID Setup > Physical Disk**.





No	Capacity	Array	Type	Status	Model	Hot Spare	Task
<input type="checkbox"/> 1	1863.02GB		Normal	Functional	ST2000VX000-1CU164		None
<input type="checkbox"/> 5	1863.02GB		Normal	Functional	ST2000VX000-1CU164		None

Figure 3-7 Physical Disk

Step 2 Click **One-touch Config**.

Step 3 Edit the array name in **Array Name** text field and click **OK** to start configuring.



If you install 4 or more HDDs, a hot spare disk for array rebuilding will be created.

Step 4 A message box will pop up when the array creation is completed, click **OK** on it.


Step 5 Optionally, the device will automatically initialize the created array. Go to **Storage > RAID Setup > Array** view the information of created array.

3.10 Recording Settings

Before you start:

Make sure that the disk has already been installed or added. If not, please install or add a disk and initialize it. You may refer to the user manual for detailed information.

Option 1:

In the live view mode, select a connected camera window and click the  icon at the toolbar to start recording.

Option 2:

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

Step 2 Select a camera.

Step 3 Check the **Enable Schedule**.

Step 4 Select a **Record Type**. The record type can be Continuous, Motion Detection, Alarm, Motion | Alarm, Motion & Alarm, Event, etc.

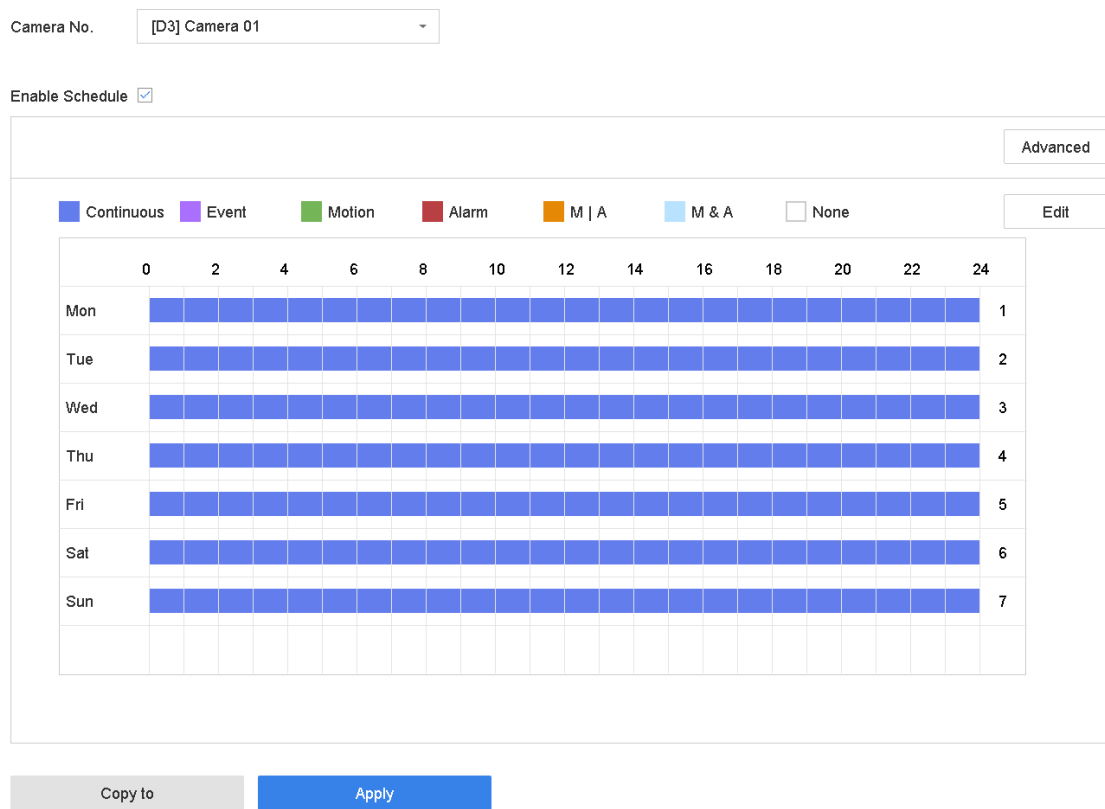


Figure 3-8 Record Schedule

Step 5 Select a day and click-and-drag the mouse on the time bar to set the record schedule.

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

3.11 Playback

The recorded video files on the hard disk can be played back in the following modes: instant playback, all-day playback for the specified channel, and playback by normal/smart/custom /sub-periods/external file. Refer to the *User Manual* for detailed information.



Step 1 Enter the playback mode ().

Step 2 Check one or more cameras in the camera list to start playing the video.

Step 3 Select a date in the calendar.

- Use the toolbar in the bottom part of playback interface to control the playing and realize a series of operations.
- Click the channel(s) to perform simultaneous playback of multiple channels.

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Figure 3-9 Playback Interface

Chapter 4 Access by Web Browser



You shall acknowledge that 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 with your dealer or the nearest service center.

Purpose:

You can get access to the device via web browser. You may use one of the following listed web browsers: 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.

Step 1 Open web browser, input the IP address of the device and then press Enter.

Step 2 Login to the device.

- If the device has not been activated, you need to activate the device first before login.

Activation

User Name admin

Password Strong

Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.

Confirm

OK

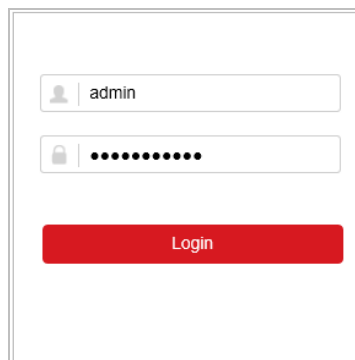
Figure 4-1 Set Admin Password

- 1) Set the password for the admin user account.
- 2) Click **OK** to login to the device.



STRONG PASSWORD RECOMMENDED– We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

- If the device is already activated, enter the user name and password in the login interface, and click the **Login** button.



The image shows a login interface within a rectangular frame. It contains two input fields: the top one has a user icon and the text 'admin'; the bottom one has a lock icon and ten dots representing a password. Below these fields is a prominent red button with the word 'Login' in white text.

Figure 4-2 Login

Step 3 Install the plug-in before viewing the live video and managing the camera. Please follow the installation prompts to install the plug-in.

 **NOTE**

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.



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