

NVR500 Series

Network Video Recorders

Quick Guide

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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

Audience

This manual is intended for:

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

Precautions

- If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, you might be required to take corrective actions.
- Do not remove the dismantlement-preventive seal from the chassis cover of the device without permission. If you want to open the




chassis, contact the local agent of our company for help. Otherwise, we shall not be held liable for any consequence caused thereby.

- Make sure the device is sturdy and well grounded and meets heat dissipation and lightning protection requirements. Avoid vibration when using the device.
- Provide a stable and compliant power supply before powering on the device.
- Before performing the verification (refer to section “Check Before Power-On”), make sure that the power is disconnected, for fear of bodily injury or equipment damage caused by incorrect cable connection.
- Power interruption may cause hard disk damage or abnormal functions. To shut down the device, strictly follow the instructions. If power interruption often occurs, configure an uninterrupted power supply (UPS).

Safety and Compliance Information

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



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.

Warnings:

- If the product does not work properly, please contact your dealer or the nearest service center. (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 earthing 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.

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 Overview

As new-generation network video recorder for professional clients and commercial customers, NVR500 series incorporates a wide range of features including video management, data management, iSCSI storage, media switch. Delivering characteristics of high performance, stability and capacity, NVR500 uses the redundancy design in key components and provides a rich set of extensible interfaces for different applications including intelligent buildings, schools, hospitals, financial institutions, power substations.

Operating under embedded operation system, NVR500 features compact structure and powerful video/audio decoding ability.

2 Appearance

The photos herein are for illustration only and may vary according to actual conditions.

Front View



Indicators

As shown in the front view, the following table describes the indicators on the front panel. The LED color may vary with the equipment model (blue or green).

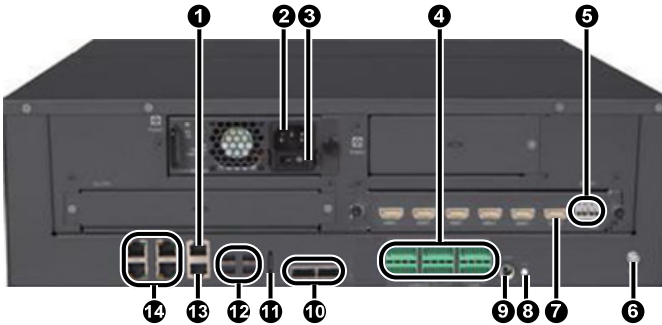
Table 2-1 Status Indicators

Indicators	Color	Status	Description
NET (network indicator)	Green	Constantly on	Network properly connected
		Off	No network connection
PWR (power indicator)	Green	Constantly on	Power connected
		Off	No power
IR (remote control indicator)	Green	Constantly on	Device is selected and can be remotely controlled
		Blinking	Device is being verified
		Off	Device is not selected and cannot be remotely controlled
RUN (running indicator)	Green	Constantly on	Running normally
		Blinking	Starting
		Off	Shut down
SLOT (Card indicator)	Green	Constantly on	Card in slot
		Blinking	No card in slot
LINK (External device indicator)	Green	Constantly on	Device connected
		Blinking	Device unconnected
HD (hard disk indicator)	Green	Constantly on	Running properly without data access
		Blinking	Running properly with data access
	Red	Constantly on	The hard disk is faulty
		Blinking	The disk array is being rebuilt

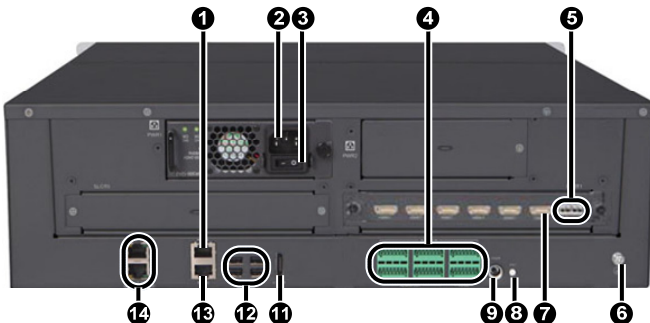
Indicators	Color	Status	Description
	-	Off	Hard disk is not installed or the system shuts down, or the indicator turns red
ALM (alarm indicator)	Red	Constantly on	Equipment alarms
		Off	The system runs normally without alarms

Rear View

NVR516-128-IN



NVR516-64-IN



Interfaces

As shown in the rear view, the following table describes interfaces on the rear panel.

Table 2-2 Interfaces

No	Item	Description	Function and Instructions
①	RS-485/422 Interface	Compatible with RS485 and RS422 serial ports and RJ45 connectors	Connecting to RS485 or RS422 devices
②	AC 100V - 240V	AC power, 100V-240V AC	Connecting to the power supply
③	POWER	Power switch	Turn on/off device when connected to power Note: <i>To protect hard disks, please soft-shut down your equipment before turning off the power.</i>
④	RS-485 Interface	RS485 serial port, Phoenix connector	Connecting to RS485 devices
	ALARM IN	Boolean input, Phoenix connector	Connecting to alarm input device
	ALARM OUT	Relay output, Phoenix connector	Connecting to alarm output device
⑤	GROUND	Equipment grounding	Ground cable
	AUDIO OUT	Analog audio output, BNC interface, Mono, 1.4V (P-P), and 300 Ω	Connecting to an audio output device
	AUDIO IN	Analog audioinput, NC, single channel,2V (P-P),10KΩ	Connecting to an audio input device
⑥	GROUND	<ul style="list-style-type: none"> Equipment grounding 	Ground cable
⑦	HDMI	High-definition digital audio and video output, HDMI interface	Connecting to HDMI display device

No	Item	Description	Function and Instructions
8	RST Button	Reset button	Holding the button for five seconds restores the factory default settings
9	Power Button	Soft shutdown button	Allow you to stop the running system processes when the device is powered on
10	miniSAS interface	2 mini SAS (only available in NVR516-128-IN)	Network storage expansion unit
11	eSATA (Optional)	Interface with external storage device	Connecting to eSATA hard disk
12	USB Interface	USB2.0 interface, limited to 1A	Connecting to an external USB mouse or storage device
13	RS-232 Interface	Compatible with RS232 serial ports and RJ45 connectors	Connecting to devices for commissioning and maintenance
14	LAN interface	10/10/1000BASE-T self-adaptive Ethernet electrical port, RJ45 connector	Connecting to Ethernet

3 Mounting

Installation Check

Open the packing box and check the equipment model, accessory types and quantities to ensure all the components are available. For equipment model and accessory types and quantities, please refer to the packing list.

Installing Hard Disks

For supported hard disk types, consult our authorized sales or technical support staff. The following examples illustrate how to install hard disks on a workbench. The installation process may vary according to conditions.

The hard drive interface is located inside the device. You need to remove the front panel to install the hard disk. The hard disks are hot-swappable and support mixed insertion. The disks can be powered on in order to minimize the impulse current produced during the power-on process.



WARNING!

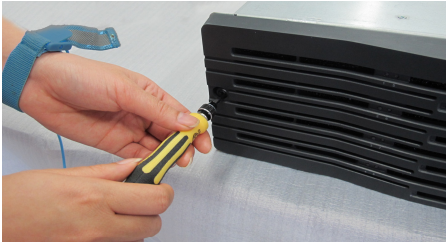
- The hard disk can be hot-plugged only when no data is read or written. The hard disk indicator is not blinking when no data is processed.
 - Please wear anti-static gloves before installing a hard disk.
 - Insert hard disks into the slots of a running device at an interval of at least six seconds
-

Install a hard disk into the NVR500 Series as follows:

1. Fix the hard disk to with screws to the handle bar on the correct side.



2. Loosen the screws that secure the chassis cover with a cross screwdriver.



3. Align the hard disk with the slot and push in the hard disk gently and steadily.



4. Push the hard disk in position with your thumb until the buckles click. Repeat the above steps to install all the hard disks.



5. Cover the front panel and fix the screws to secure the front panel.



Installing the Equipment

The equipment provides front, side and back ventilation channels. Leave room of at least 30cm to the front and back and 10cm to the left and right sides of the equipment for ventilation.

Mounting to the Workbench

1. Get the stickers from the foot pads delivered with the equipment, and attach the pads to the bottom of the equipment where appropriate.
2. Place the equipment on a clean workbench. Now the installation process is complete.

Mounting into a Cabinet

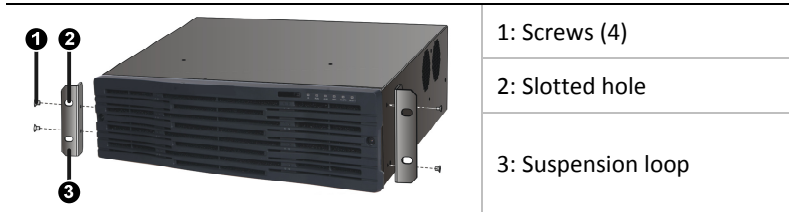


WARNING!

Ensure that the cabinet is equipped with a tray or slide rail before installing the equipment in a cabinet. The equipment must be supported on a tray or slide rail instead of a suspension loop.

1. As shown in the following figure, place the suspension loop with a screw hole close to the chassis. Align the suspension loop with the screw hole, and use two M4*8 screws to fasten the suspension loop to the chassis.

2. Perform the same procedure to mount the suspension loop on the other side of the chassis.



3. Place the equipment on the cabinet support, and slid it into the cabinet. Fix the suspension loop to the floating nut to the front mounting bar of the cabinet with screws led through the slotted hole.

Installing a Power Module (Optional)


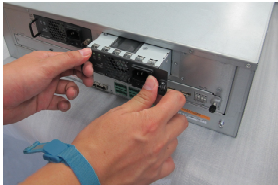


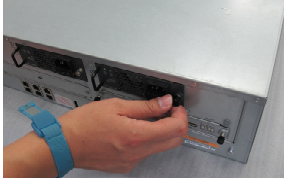
WARNING!

- Before you install a power module, ensure that you have powered down the device to avoid personal injury or device damage.
- Please wear anti-static gloves when installing the power module.

The device supports power modules with power supply range of 100V~240V AC.

Install a power module as follows:

<p>1: Loosen one screw to remove the cover.</p>	<p>2: Insert the power module</p>
	
<p>3: Thread and tighten the screws</p>	



Installing the Decode Card (Optional)



WARNING!

- Before you install the decode card, ensure that you have powered down the device to avoid personal injury or device damage.
- Please wear anti-static gloves when installing the decode card.

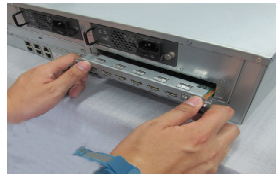
The device supports 4/6-channel HDMI audio & video decoder. You can choose the desired decoder as required.

Install a power module as follows:

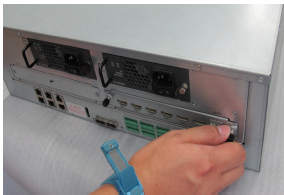
1: Loosen one screw to remove the cover.



2: Insert the decode card



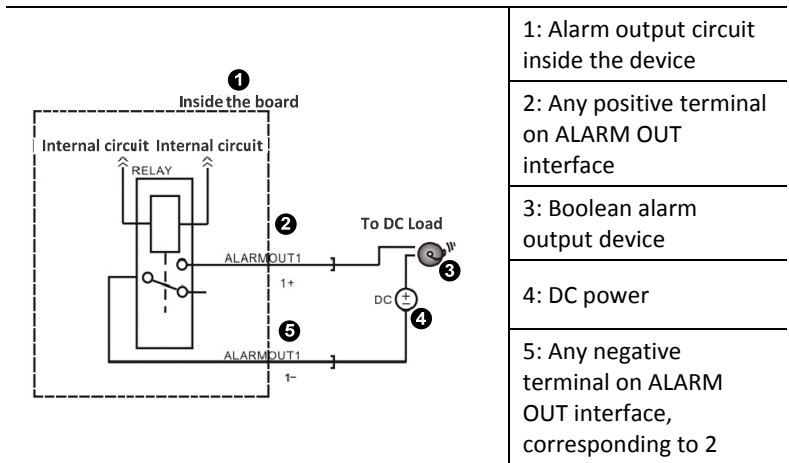
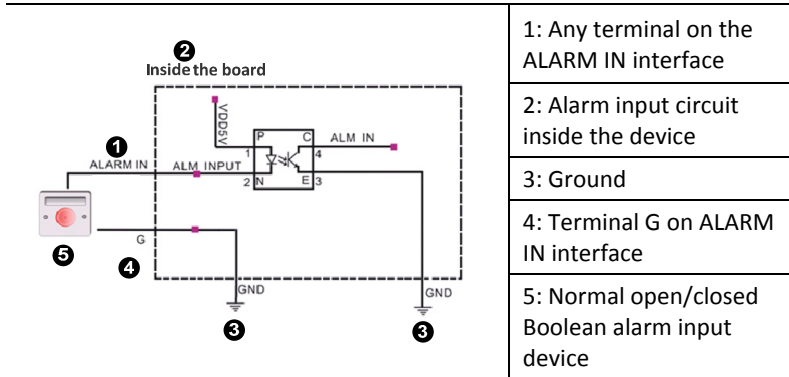
3: Thread and tighten the screws.

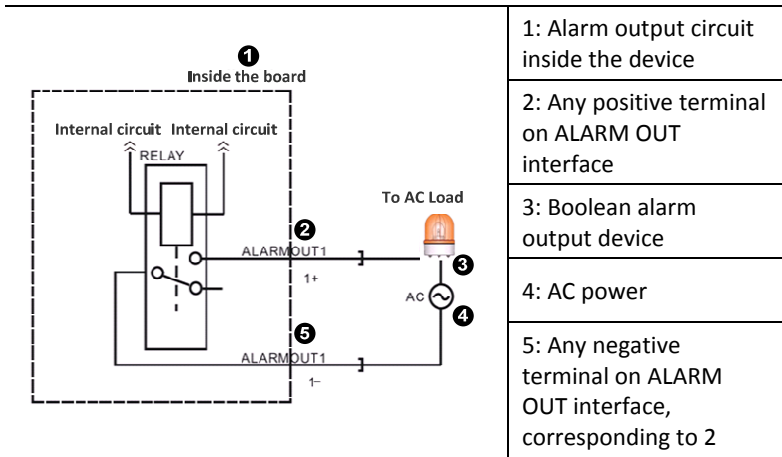


4 Connecting Cables

Connecting to Alarm Input/Output Device

Twisted pair is recommended. 22-28AWG insulating core wire, preferably 24AWG or 26AWG can be used.





1: Alarm output circuit inside the device

2: Any positive terminal on ALARM OUT interface

3: Boolean alarm output device

4: AC power

5: Any negative terminal on ALARM OUT interface, corresponding to 2

Connecting to a Third-Party Device

The device supports two types of RS485 interface: RJ45 and Phoenix connector for connection with third-party devices.

RS485 Serial Cables

Twisted pair is recommended. 22-28AWG insulating core wire, preferably 24AWG or 26AWG can be used.

Refer to the table below for the maximum length of RS485 serial cables with different baud rates.

Table 4-1 Maximum length of RS485 serial cables with different baud rates

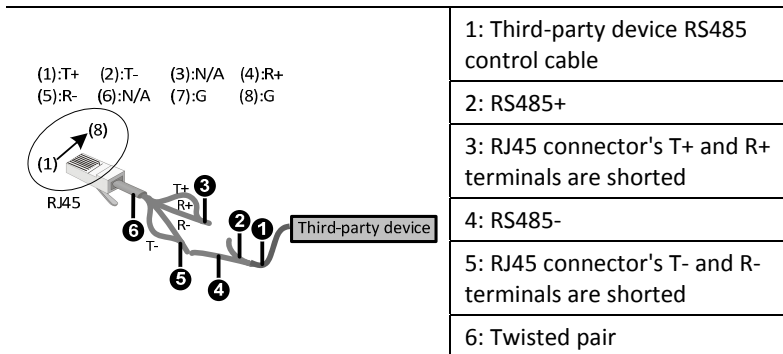
Baud rate (bps)	Maximum length (m)
1200, 2400, 4800, 9600, 19200	900
38400	850
57600	550
115200	250

Connecting to a third-party device via RS485 interface

Use an RS485 (422 compatible) connector under the RJ45 category to connect to a third-party device.

A third-party device control cable must be an RS485 cable that meets the following requirements:

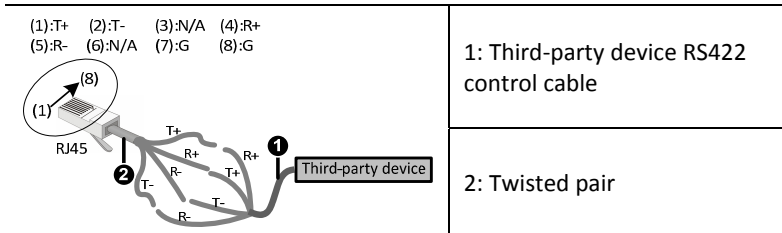
- The RJ45 connector's T+ and R+ terminals are shorted and then connected to the third-party device's RS485+ connector; the RJ45 connector's T- and R- terminals are shorted and then connected to the RS485 connector of the third-party device, as shown in the following figure.
- If the third-party device is grounded, the third-party device control cable's Terminal G is connected to the RJ45 connector's Terminal G (No.7 or 8).



When using an RS422 cable as a third-party device control cable, connect the cable as follows:

- Connect RJ45's T+ to the third-party device's R+; RJ45's T- to the third-party device's R-; RJ45's R+ to the third-party device's T+; RJ45's R- to the third-party device's T-, as shown in the following figure.

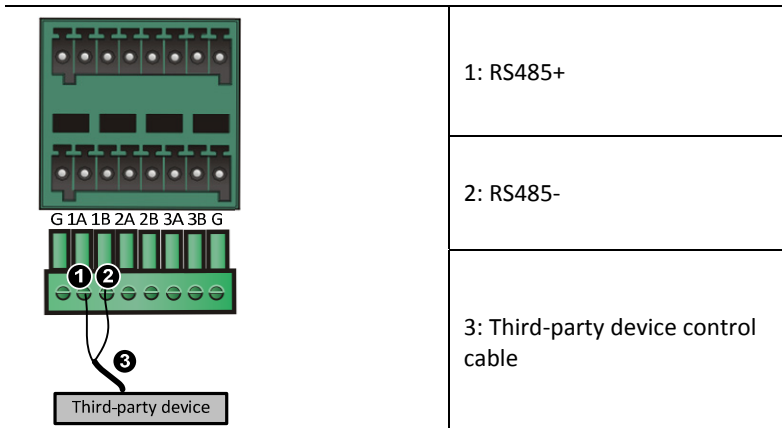
- If the third-party device is grounded, the third-party device control cable's Terminal G is connected to the RJ45 connector's Terminal G (No.7 or 8).



Connect a third-party device using a Phoenix connector's RS485 terminal.

Do as follows:

- Connect the Phoenix connector's Terminal A to the RS485 terminal of the third-party device; Terminal B to the RS485- terminal of the third party device as shown below.
- If the third-party device is grounded, the third-party device control cable's Terminal G is connected to Terminal G of the Phoenix connector.



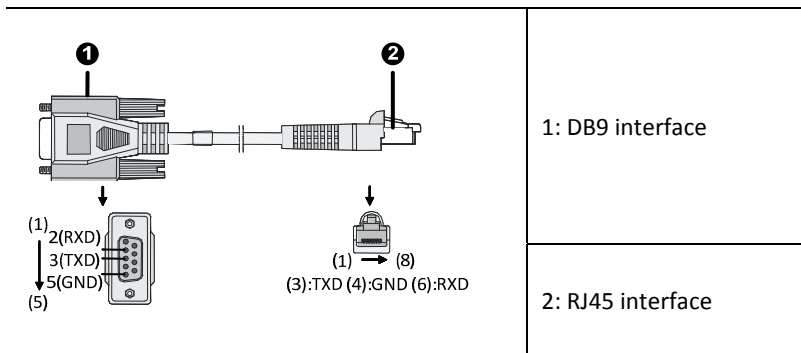


CAUTION!

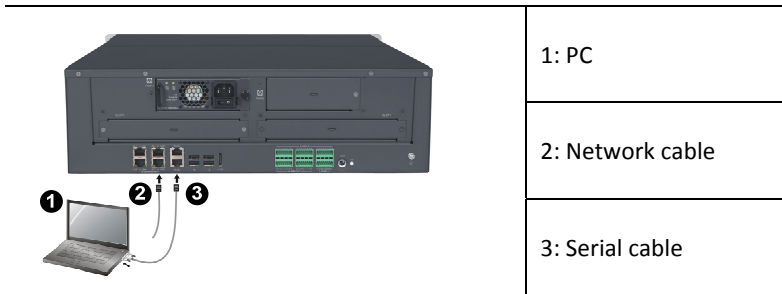
Connect to a special-purpose keyboard using the phoenix connector's RS485 的 3A、3B interface terminal similarly to connecting a third-party device.

Connecting RS232 Serial and Network Cables

Through an RS232 serial port, connect the equipment to a serial device such as a PC. For maintenance, use the following serial cables (take PCX-based DB9 as an example).



As shown in the following figure (NVR516-128-IN as an example), please connect the RS232 serial and network cables as required. The following figure provides an example of connection through an electrical interface. Connect the other end of a network cable according to the actual conditions. The connection is not discussed here.

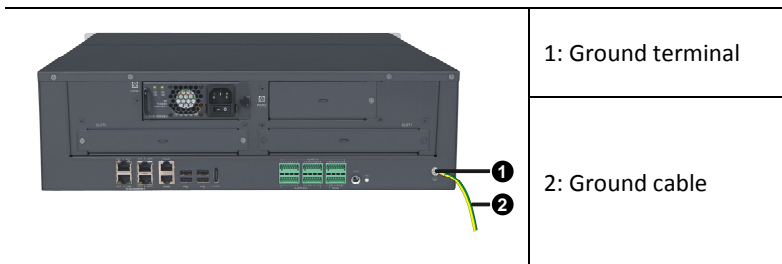


Connecting a Groundcable

To ensure personal and equipment safety(lightning protection and resistance against interference), ground the device properly.

The ground cable must not exceed 30m and provide a grounding resistance of less than 5 Ω . For specific requirements, refer to the standards for the IEC61024 series.

As shown in the following figure (NVR516-128-IN as an example), connect one end of the ground cable to the ground terminal of the device and the other end to a reliable grounding point.



5 Switching On/Off the Device

Check Before Power-On

To avoid bodily injury or damage to components, check the following items before turning off the power.

- The device is firmly and securely installed without any screw left unscrewed.
- Do not place anything on the device.
- All the installed cables are connected correctly.
- Use a power supply approved for the device.

Turning on the Device

Connect the power supply and power on the device. If the power LED indicator on the backplane of the device is lit, it indicates that the device is powered on successfully.

Soft Shutdown

Soft shutdown means a device is turned off to terminate the running system processes, so that the device enters power saving mode. It is recommended that you disconnect the device from the power supply when the device is left idle for a long time.

Soft Shutdown Using the ON/OFF Button

Press the **Soft Shutdown** button on the backplane of the device, or press the **ON/OFF** key on the remote control, to perform soft shutdown after confirmation by logging in to the man-machine interface.

Soft Shutdown through Man-Machine Interface

Choose **Menu > Maintenance > Shutdown**. Click **Shutdown** to perform soft shutdown after confirmation.

Soft Shutdown through Web Interface

Choose **Maintenance > Device Maintenance > Shutdown**. Click **Shutdown** to perform soft shutdown after confirmation.



WARNING!

In the course of normal operation of the equipment or device is closed, do not disconnect the power while the equipment is running properly or shutting down, so as to not to damage the equipment

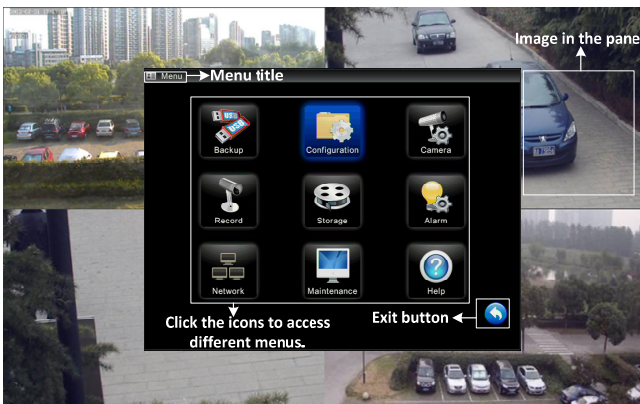
6 Common Configurations

The NVR500 Series can be operated through man-machine and Web interfaces.

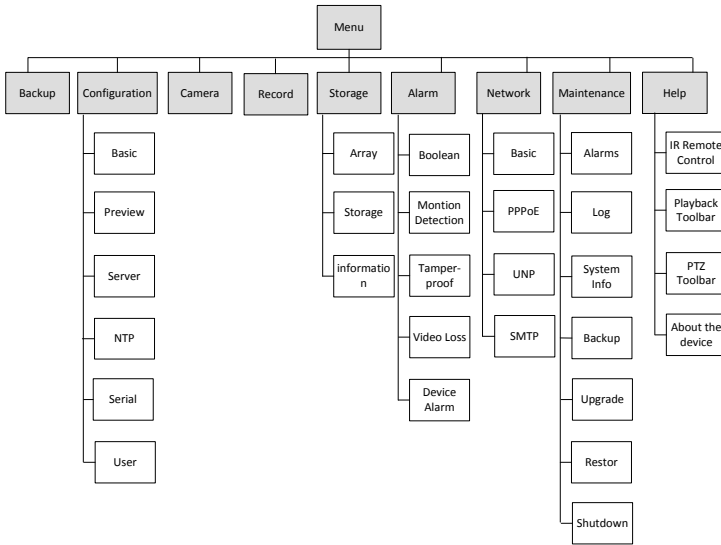
Man-Machine Interface

About the Interface

After the device starts, enter the man-machine interface when the display shows a progress bar. You can use the mouse or the front panel for configuration and service monitoring on the man-machine interface.



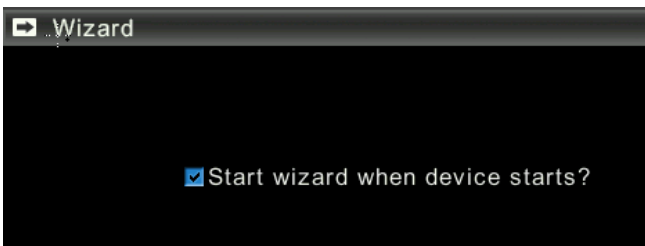
Menu Structure



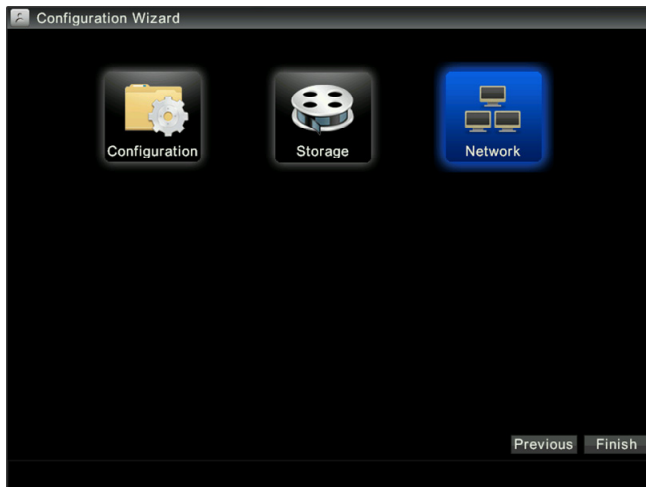
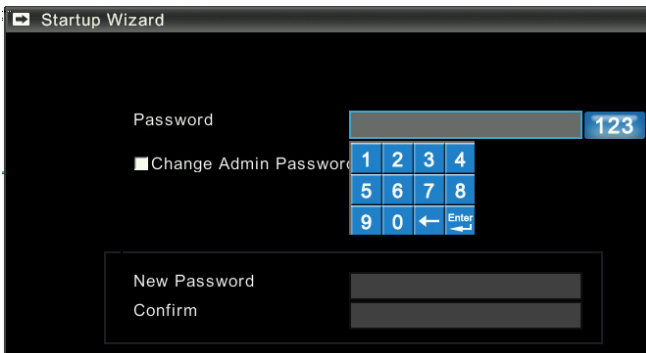
Initial Configuration

You can simply configure the device to work properly as instructed by the startup wizard. If you do not want the startup wizard to guide you through fast configuration, just skip the wizard and log in as admin. Follow steps 3 to 5 for fast configuration.

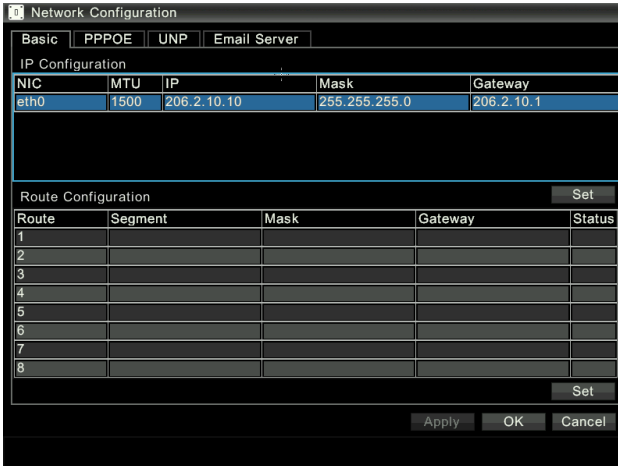
1. Determine whether to start wizard when device starts and click Next.



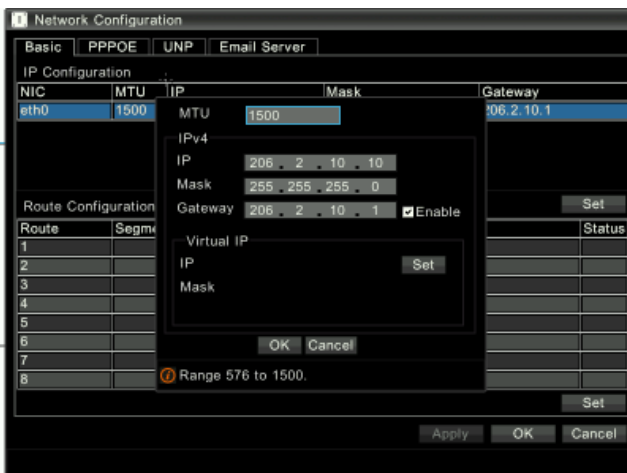
2. Enter the admin user's password (admin by default). Click **Next** and the interface of Configuration Wizard interface appears.



3. Configure the network parameters.
 - a. Click **Network Configuration** to enter the Network Configuration interface.



b. On the Basic tab, configure the IP address, subnet mask, and default gateway. Normally, set other network parameters to defaults.



c. After configuration, click **OK**. Configuring eth0 card causes the system to restart service and then return to the Configuration Wizard interface.

4. Configure system parameters.
 - a. Click **System Configuration**. The System Configuration interface appears.
 - b. In the Server Configtab, select the management mode based on the actual networking conditions. Normally, set other system parameters to defaults.

Device Name: DEVICE1

Device ID: DEVICE1

Management Mode: Server Stand-alone

Device Name: DEVICE1

Device ID: DEVICE1

Management Mode: Server Stand-alone

Server IP: 192 . 168 . 111 . 26

Protocol: IMOS

- c. After configuration, click **OK**. Changing the management mode will restart the device.
5. Configure storage parameters.
 - a. Click **Storage Configuration**. The Storage Configuration interface appears.
 - b. Building an array
 - i. In the Build Array box under the Array tab, enter the array name, select the array type, and idle slots;
 - ii. Click **Create**. The newly created array is shown on the array list.



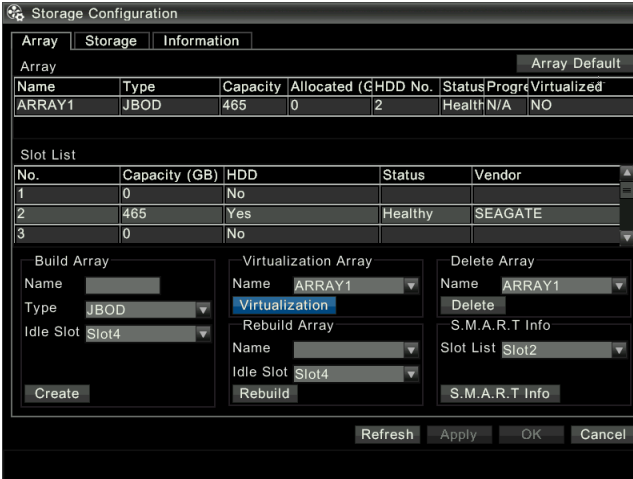
c. Virtualizing an array

Be sure to virtualize an array before using it. To do so, select the array in the Virtualization Array box and click **Virtualization**.



NOTE!

Virtualization takes time. After virtualization is complete, "virtualized" in the array list is displayed as "Yes".



d. Configuring storage resources

On the Storagetab, configure storage resource parameters. The following table lists the important parameters.



e. Configuring storage plans

- i. On the Storage tab, click **Storage Plan** to configure a general or exceptional storage plan.
- ii. After configuration, click **OK**. The system returns to the Storage Configuration tab.
- iii. Click **OK**. The system returns to Configuration Wizard interface.



NOTE!

- On the day of exception plan, only storage plans outside of the exception period are implemented. Conventional plans are implemented in other days.
 - The periods under a storage plan cannot overlap each other.
-

6. After all configurations, click **Finish** to save the settings and then you can perform various operations.

Quickly Adding IPC

Only an admin user can add IPC. Before adding the IPC, confirm that:

- The IPC is functional, and the network is connected;
- The IPC resolution must not exceed 1920 in width and 1088 in height.

The procedure is as follows:

1. Enter the video channel configuration interface.

To do so, choose **Menu>Channel Management>Video Channel**.

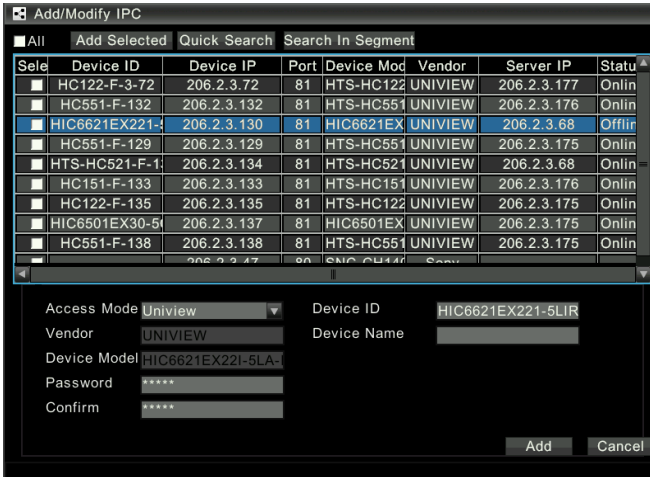
2. Quickly search for the IPC.

Click **Search** to enter the IPC Search interface. By default, a quick search is performed when the interface is displayed.



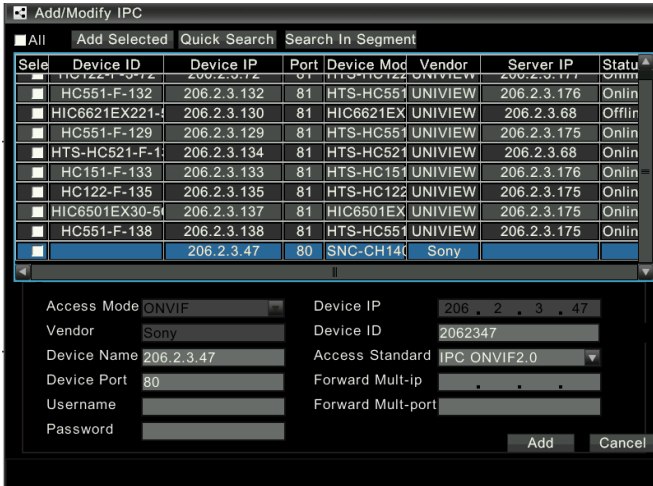
3. Add our company's IPC.

- Add single IPC: Select one of our IPCs you want to add. The IPC parameters are displayed below the list.(You can modify related parameters, Important parameters are described in the following table.) Click **Add** to add the IPC.
- Add IPCs in batches: Select a number of our IPCs you want to add. Click **Batch Add** and the system will add IPCs in batches according to default parameters.



4. Adding third-party IPCs

- Add single third-party IPC: Select a third-party IPC you want to add. The IPC parameters are displayed below the list. (You can modify related parameters, important parameters are described in the following table.) Click **Add** to add the IPC.
- Add IPCs in batches: Select a number of third-party IPCs you want to add. Click **Batch Add** and the system will add IPCs in batches according to default parameters.




Preview

Pane Toolbar on the Preview Interface

In preview mode, click a pane. A toolbar related to the pane appears below the pane.

Table 6-1 Button Description in Pane Toolbar





Icon	Name	Description
	Stop live	Stops playing the live video in the current pane
	PTZ control	Click this button to enter the PTZ control interface in preview mode.
	Manual record	Records the live video in the current pane to a local destination. Click the button again to stop manual recording.
	Instant playback	Plays back the videos recorded within 5 minutes before the current time point.
	E-magnify	Zoom in on the live or recorded video in the current pane on a certain scale.
	Capture image	Saves images in the current pane to a designated folder.







Icon	Name	Description
		<p>Note:</p> <ul style="list-style-type: none"> • Images captured are stored by date in the root directory of your USB drive (a folder is automatically created and named "snap_date"). For example, images captured on March 24, 2013 are stored in a folder named "snap_2013-03-24". • Before capturing images, ensure that you have inserted a USB drive into the device. • Images captured in preview mode are named as follows: user name (camera name) current time.jpg.
	Exit the tool bar	Exit the toolbar for the current pane.

Preview Status

On the preview screen, video and alarm status of each channel can be identified by the identifier on the corresponding preview screen.

Table 6-2 Preview Icons

Icon	Name	Description
	Video playback	This icon is shown in video playback mode (the playback toolbar).
	Motion detection alarm	This icon is shown when a motion detection alarm occurs.
	Temperature alarm	This icon is shown when a low or high temperature alarm occurs.
	Tamper alarm	This icon is shown when the front panel is removed.

Icon	Name	Description
	Fan alarm	This icon is shown when a fan alarm occurs.
	Boolean input alarm	This icon is shown when a Boolean input channel alarm occurs.
	Alarm triggering	This icon is shown when alarm triggering preview screen occurs.
	Shield alarm	This icon is shown when a shield alarm occurs.
	Mute	This icon is shown in mute mode.
	Manual record	This icon is shown in manual record mode.

Right-click Context Menu

In the preview screen, the right-click context menu is shown in the following figure. Menu functions are described in the following table.

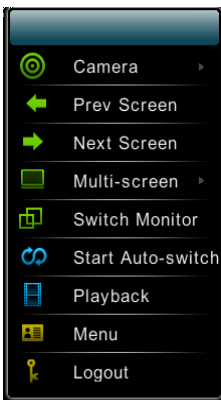


Table 6-3 Preview Operations

Menu Item	Description
Camera	<p>When the selected pane switches to a digital channel screen, you can start or stop previewing digital channels such as IPC.</p> <p>Note: <i>When the camera connected on the channel gets offline, the corresponding digital channel will become unavailable. You can perform preview only when the camera comes online.</i></p>
Prev Screen/ Next Screen	<p>Displays the images available for preview on the previous or next screen based on current split screen mode and screen number during polling switching.</p>
Multi-Screen	<p>Switches the split-screen mode.</p> <p>Note:</p> <ul style="list-style-type: none"> ● <i>Screens 3, 5 and 7 show videos in the corridor.</i> ● <i>In split-screen mode, services in panes other than the current screen will be disabled automatically.</i>
Switch Monitor	<p>Switches between screens on a man-machine interface</p>
Start Auto-Switch	<p>In the preview screen, poll-switch between videos on various channels.</p>
Video playback	<p>Enters the channel video playback interface.</p> <p>Note: <i>You can display this interface only when you preview images after logging into the device.</i></p>
Main Menu	<p>Used to access the main menu</p> <p>Note: <i>You must log into the device.</i></p>
Logout	<p>Logs out and returns to the preview mode before login.</p> <p>Note: <i>You can display this interface only when you preview images after logging into the device.</i></p>

Recording

This article describes how to manually record audio and video data on different channels and store the data to a hard disk.

1. On the preview screen, select a pane for video recording. Click **Manual Record** to start recording.



2. An icon will appear above the pane.
3. To stop manual recording, click **Stop Recording** on the toolbar.

Playback

The device can play back the videos recorded within 5 minutes before the current time point to facilitate instant playback in case of exceptions. Before instant playback, ensure that videos are recorded within 5 minutes before the current time point.

Do as follows:

On the preview screen, select the pane for video recording. Click the **Instant Playback** icon to start playing.



Backup

On the man-machine interface, search a hard disk for video records and save the video records in the USB storage device as files.

Prerequisites

- The USB storage device is FAT32-partitioned and formatted, and properly connected to the device.
- You are permitted to play back videos.
- Ensure that video records are stored on the device's hard disks.

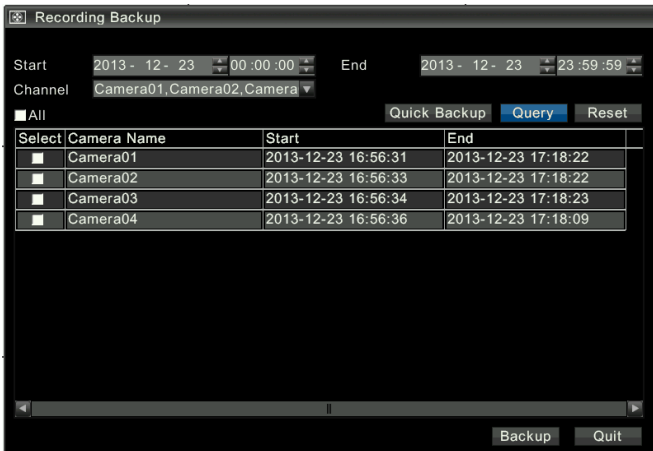
Procedure

1. Access the interface for record backup interface.

To do so, choose **Menu>Recording Backup**.

2. Query videos.

After selecting one or more channels on which you want to query video records. Enter the start/end time. Click **Query** to display search results.



3. Select video records you want to back up.

Select one or more video records you want to back up. Click **Backup** to enter the backup interface.

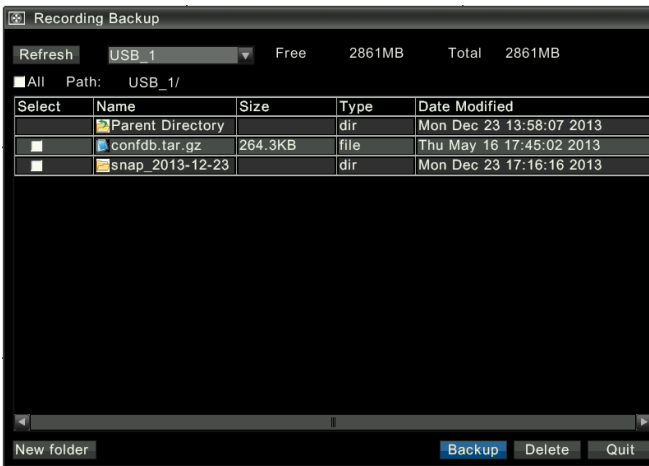


CAUTION!

After selecting the channel and entering the start/end time, click Quick Backup. On the interface for record backup, all the video records within the specified time periods on the selected channel will be backed up by default.

4. Select the backup path.

Select a partition of a USB storage device from the USB drive drop-down list. Select a folder, or double-click to enter the directory and then select a folder.



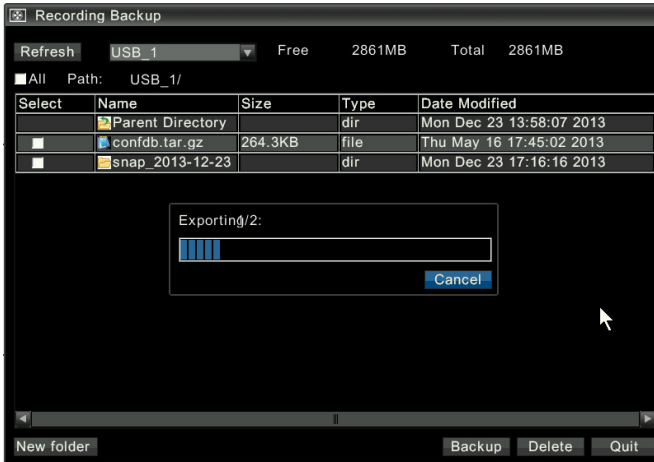
5. Backing up a video

Click **Backup** to start video backup.



CAUTION!

During the backup process, the progress bar will show "backing up X/Y:" x indicates the video records currently being backed up; y represents the total number of video records you want to back up. During the backup process, click Cancel on the progress bar to stop video backup.





NOTE!

- If the duration of a video record for backup is less than half an hour, the record will be saved as a separate file; if the record exceeds half an hour, the record will be automatically split into half-hour units and saved as separate video files.
 - A backup video file is named as follows: camera name-video start time-end time-random value.file format. For example: camera 01-20121222000000-20121223103000-719885386.ts.
 - Click Refresh to show the free and full capacities of the current partition on the USB storage device.
-

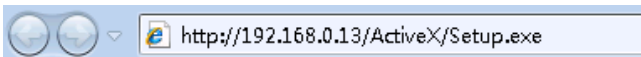
Web Interface

1. Start a Web browser on the client computer. Enter the IP address of the device in the address box (192.168.0.30 for network port 1 of NVR500; 192.168.1.30 for network port 2 ; 192.168.2.30 for network port 3; and 192.168.3.30 for network port 4 by default).
2. Press Enter. For first login, load all latest controls as prompted by the system. You should preferably install controls in the default directory.
3. Enter the user name and password in the login dialog box (admin by default), and click Log In to access the web interface.



CAUTION!

If you change to another OS user on the client and log in to the web page again after controls are successfully installed, you need to load the controls manually. Otherwise, you cannot log in. To load controls manually, enter `/ActiveX/Setup.exe` in the address bar after the device's IP address, and press ENTER.



After successfully logging in to the web interface, perform related configuration operations.

7 Specifications

For more information about technical specifications of the device, refer to the datasheets.

Item	Description
Hard disk interface	16 SATA interfaces
mini SAS extended Interface	NVR516-128-IN can connect to two network storage expansion unit at the same time and support up to 32 hard disks
Dimensions (W × D × H)	2U high 130.5mm×477.1mm×481.6mm (with front panel)
Power supply	90V-230V AC; 50Hz/60Hz
Consumption	<200W (16 SATA Hard disks)
Working temperature	-10°C to +55°C
Working humidity	10% to 90% (noncondensing)
Working altitude	-60m to 5000m

8 HDD Storage Calculation Chart

The following chart shows an estimation of storage space used based on recording at one channel for 24 hours at a fixed bit rate.

Table 8-1 Storage Calculation

Bit Rate (Kbps)	Storage Used (GB)
256	2.900
512	5.801
768	8.701
1024	11.602

Bit Rate (Kbps)	Storage Used (GB)
1536	17.402
2048	23.203
3072	34.805
4096	46.406

BOM: 3101C032