Network Video Recorder

Quick Start Guide

UD.6L0202B1501A02

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Regulatory information

FCC information

FCC compliance: This equipment has been tested and found to comply with the limits for 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

CE

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 Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, 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.

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Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.
This manual is applicable to the models listed in the following table.

Series	Model	Type
9600NI-ST	DS-9608NI-ST DS-9616NI-ST DS-9632NI-ST DS-9664NI-ST	Network Video Recorder
9600NI-RT	DS-9608NI-RT DS-9616NI-RT DS-9632NI-RT DS-9664NI-RT	Network Video Recorder
9600NI-XT	DS-9616NI-XT DS-9632NI-XT DS-9664NI-XT	Network Video Recorder
8600NI-ST	DS-8608NI-ST DS-8616NI-ST DS-8632NI-ST DS-8664NI-ST	Network Video Recorder
7700NI-ST	DS-7708NI-ST DS-7716NI-ST DS-7732NI-ST DS-7764NI-ST	Network Video Recorder
7700NI-SP	DS-7708NI-SP DS-7716NI-SP DS-7732NI-SP	Network Video Recorder
7600NI-ST	DS-7608NI-ST DS-7616NI-ST DS-7632NI-ST	Network Video Recorder
7600NI-SP	DS-7608NI-SP DS-7616NI-SP DS-7632NI-SP	Network Video Recorder

NVR Pre-Installation

The NVR is highly advanced surveillance equipment that should be installed with care. Please take into consideration the following precautionary steps before installation of the NVR.

1. Keep all liquids away from the NVR.
2. Install the NVR in a well-ventilated and dust-free area.
3. Ensure environmental conditions meet factory specifications.
4. Install a manufacturer recommended HDD.

NVR Installation

During the installation of the NVR:

1. Use brackets for rack mounting.
2. Ensure there is ample room for audio and video cables.
3. When routing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
4. Connect the alarm cable.
5. Allow at least 2cm (≈0.75-inch) of space between racks mounted devices.
6. Ensure the NVR is grounded.

7. Environmental temperature should be within the range of -10 ℃ ~ 55 ℃, 14 ℉ ~ 131 ℉.
8. Environmental humidity should be within the range of 10% ~ 90%.

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.

For DS-7600NI-ST&SP, up to 2 SATA hard disks can be installed; for DS-7700NI-ST&SP, up to 4 SATA hard disks can be installed; for DS-9600NI-XT, up to 16 SATA hard disks can be installed, and up to 8 SATA hard disks can be installed for other models.

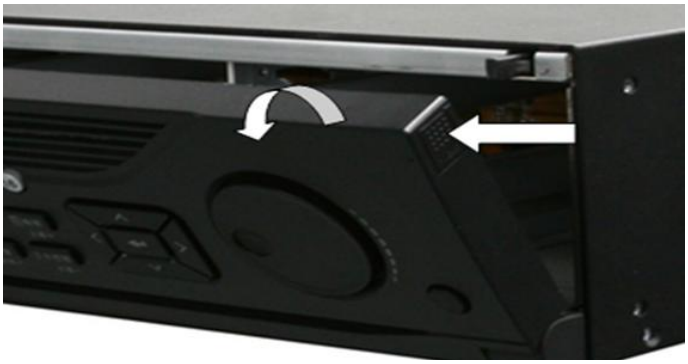
Tools Required: Screwdriver.

Steps (for DS-9600NI-ST/RT/XT):

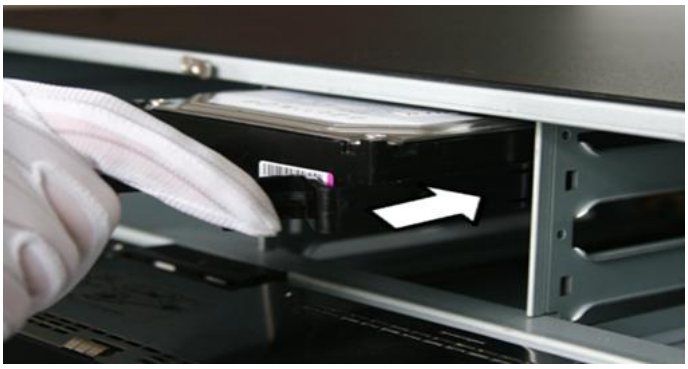
1. Fasten the hard disk mounting handle to the hard disk with screws.

2. Insert the key and turn in clockwise direction to open the panel lock.

3. Press the buttons on the panel of two sides and open the front panel.



4. Insert the hard disk along the slot until it is placed into position.

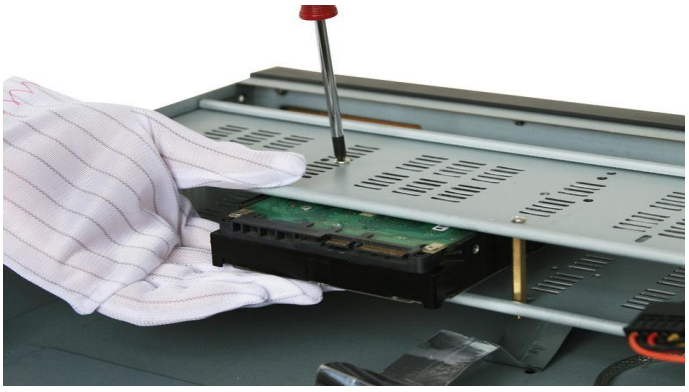


5. Repeat the above steps to install other hard disks onto the NVR. After having finished the installation of all hard disks, close the front panel and lock it with the key again.

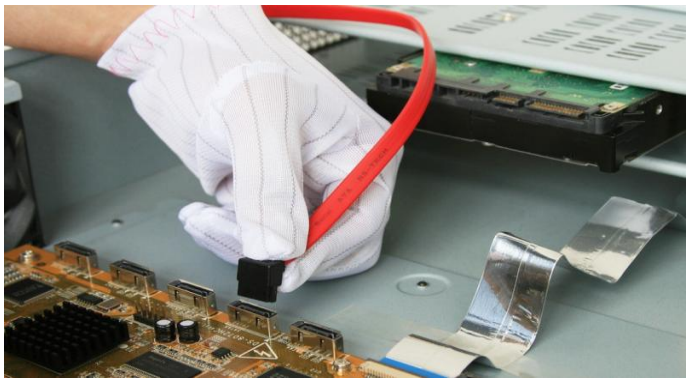
Steps (for DS-8600NI-ST):

1. Remove the cover from the NVR by unfastening the screws on the back and side.

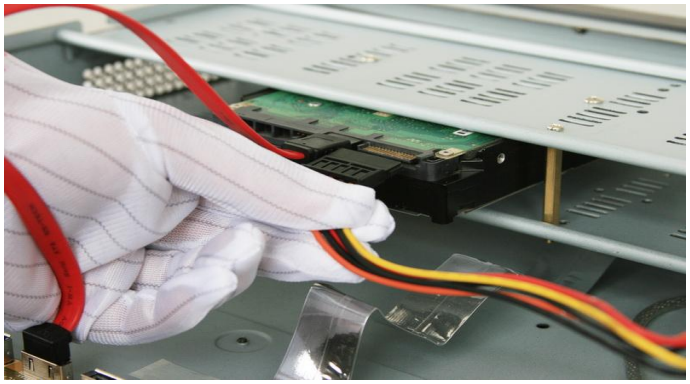
2. Install the HDD in the HDD rack using the provided screws. Fasten the screws on the button to fix the HDD.



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



4. Connect the power cable to the HDD.

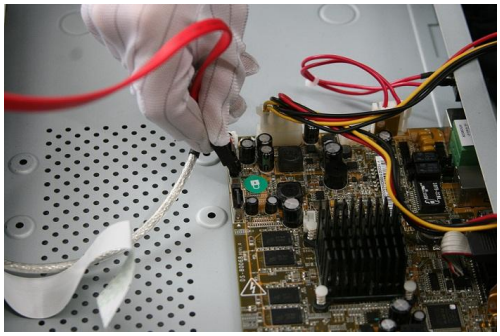


5. Re-install the cover of the NVR and fasten screws.

Steps (for DS-7600NI-ST/SP and DS-7700NI-ST/SP):

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

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

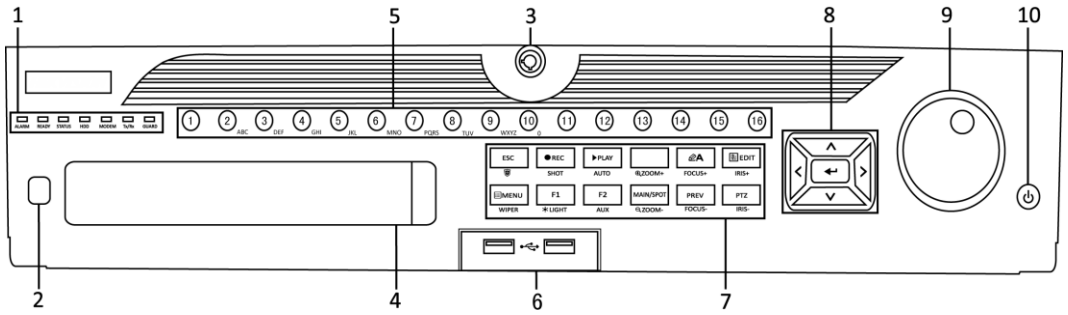


3. Connect the power cable to the HDD.

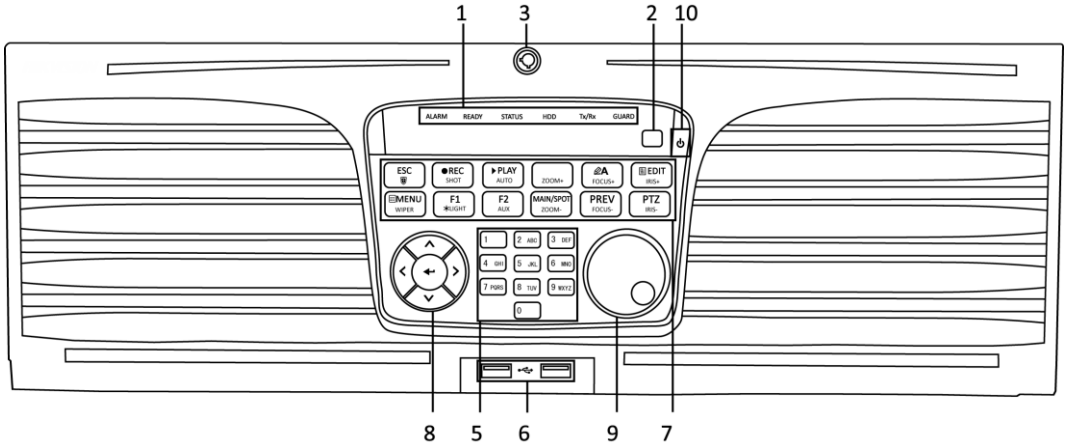
4. Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.

Front Panel

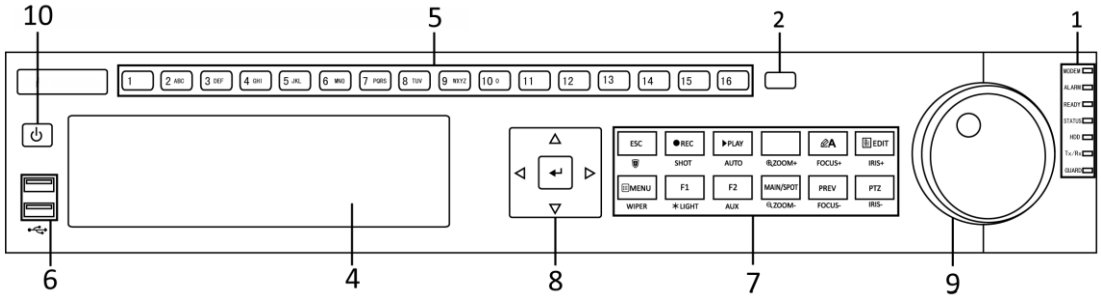
DS-9600NI-ST/RT



DS-9600NI-XT



DS-8600NI-ST

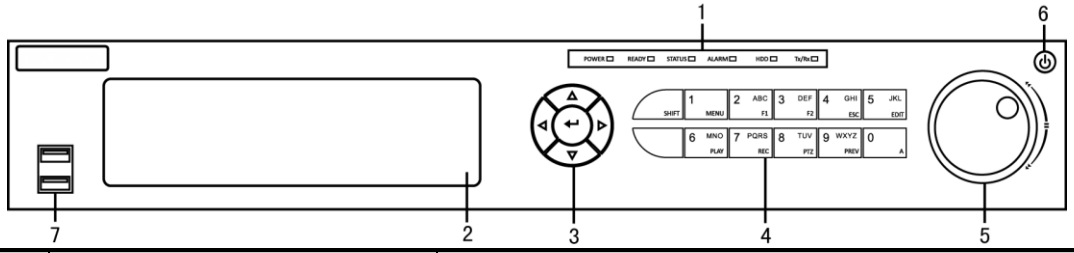


No.	Name		Function Description
1	Status Indicators	ALARM	Turns red when a sensor alarm is detected.
		READY	Ready LED is normally blue, indicating that the device is functioning properly.
		STATUS	Turns blue when device is controlled by an IR remote.
			Turns red when controlled by a keyboard and purple when IR remote and keyboard is used at the same time.
		HDD	Flashes red when data is being read from or written to HDD.
		MODEM (not for DS-9600NI-XT)	Reserved for future usage.
		TX/RX	Flashes blue when network connection is functioning properly.

No.	Name		Function Description
		GUARD	Guard LED turns blue when the device is in armed status; at this time, an alarm is enabled when an event is detected.
			The LED turns off when the device is unarmed. The arm/disarm status can be changed by pressing and holding on the ESC button for more than 3 seconds in live view mode.
2	IR Receiver		Receiver for IR remote
3	Front Panel Lock (for DS-9600NI-ST/RT/XT series)		You can lock or unlock the panel by the key.
4	DVD-R/W		Slot for DVD-R/W.
5	Alphanumeric Buttons		Switch to the corresponding channel in Live view or PTZ Control mode.
			Input numbers and characters in Edit mode.
			Switch between different channels in Playback mode.
			The light of the button is blue when the corresponding channel is recording; it is red when the channel is in network transmission status; it is pink when the channel is recording and transmitting.
6	USB Interfaces		Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
7	Composite Keys	ESC	Back to the previous menu.
			Press for Arming/disarming the device in Live View mode.
		REC/SHOT	Enter the Manual Record setting menu.
			In PTZ control settings, press the button and then you can call a PTZ preset by pressing Numeric button.
			It is also used to turn audio on/off in the Playback mode.
		PLAY/AUTO	The button is used to enter the Playback mode.
			It is also used to auto scan in the PTZ Control menu.
		ZOOM+	Zoom in the PTZ camera in the PTZ Control setting.
		A/FOCUS+	Adjust focus in the PTZ Control menu.
			It is also used to switch between input methods (upper and lowercase alphabet, symbols and numeric input).
		EDIT/IRIS+	Edit text fields. When editing text fields, it will also function as a Backspace button to delete the character in front of the cursor.
			On checkbox fields, pressing the button will *tick* the checkbox.
			In PTZ Control mode, the button adjusts the iris of the camera.
			In Playback mode, it can be used to generate video clips for backup.
			Enter/exit the folder of USB device and eSATA HDD.
		MAIN/SPOT/ZOOM-	Switch between main and spot output.
			In PTZ Control mode, it can be used to zoom out the image.
		F1/ LIGHT	Select all items on the list when used in a list field.
			In PTZ Control mode, it will turn on/off PTZ light (if applicable).
			In Playback mode, it is used to switch between play and reverse play.
		F2/ AUX	Cycle through tab pages.
			In synchronous playback mode, it is used to switch between

No.	Name		Function Description
			channels.
		MENU/WIPER	Press the button will help you return to the Main menu (after successful login).
			Press and hold the button for 5 seconds will turn off audible key beep.
			In PTZ Control mode, the MENU/WIPER button will start wiper (if applicable).
			In Playback mode, it is used to show/hide the control interface.
		PREV/FOCUS-	Switch between single screen and multi-screen mode.
			In PTZ Control mode, it is used to adjust the focus in conjunction with the A/FOCUS+ button.
		PTZ/IRIS-	Enter the PTZ Control mode.
			In the PTZ Control mode, it is used to adjust the iris of the PTZ camera.
8	**Control Buttons**	**DIRECTION**	The DIRECTION buttons are used to navigate between different fields and items in menus.
			In the Playback mode, the Up and Down button is used to speed up and slow down recorded video. The Left and Right button will select the next and previous record files.
			In Live View mode, these buttons can be used to cycle through channels.
			In PTZ control mode, it can control the movement of the PTZ camera.
		ENTER	The ENTER button is used to confirm selection in any of the menu modes.
			It can also be used to *tick* checkbox fields.
			In Playback mode, it can be used to play or pause the video.
			In single-frame Playback mode, pressing the button will advance the video by a single frame.
			In Auto-switch mode, it can be used to stop /start auto switch.
9	**JOG SHUTTLE Control**		Move the active selection in a menu. It will move the selection up and down.
			In Live View mode, it can be used to cycle through different channels.
			In the Playback mode: For DS-9600NI-ST/RT/XT series, the ring is used to jump 30s forward/backward in video files. For DS-8600NI-ST series, the outer ring is used to speed up or slow down the record files and the inner ring is used to jump 30s forward/backward in records files.
			In PTZ control mode, it can control the movement of the PTZ camera.
10	**POWER ON/OFF**		Power on/off switch.

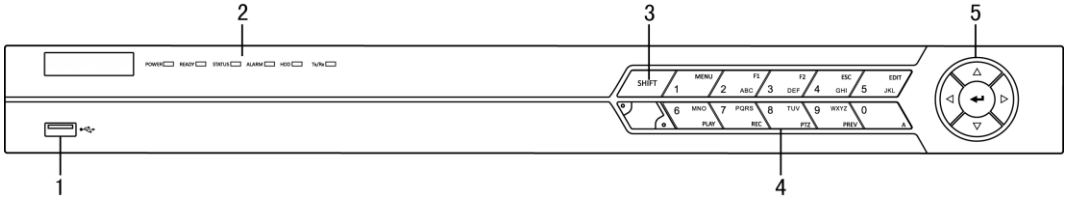
DS-7700NI-ST/SP



No.	Name		Function Description
1	Status Indicators	POWER	Turns green when NVR is powered up.
		READY	The LED is green when the device is running normally.
		STATUS	The light is green when the IR remote control is enabled; The light is red when the function of the composite keys (SHIFT) are used; The light is out when none of the above condition is met.
		ALARM	The light is red when there is an alarm occurring.
		HDD	Blinks red when HDD is reading/writing.
		Tx/Rx	Blinks green when network connection is functioning normally.
2	DVD-R/W		Slot for DVD-R/W.
3	Control Buttons	DIRECTION	In menu mode, the direction buttons are used to navigate between different fields and items and select setting parameters.
			In playback mode, the Up and Down buttons are used to speed up and slow down record playing, and the Left and Right buttons are used to move the recording 30s forwards or backwards.
			In the image setting interface, the up and down button can adjust the level bar of the image parameters. In live view mode, these buttons can be used to switch channels.
		ENTER	The Enter button is used to confirm selection in menu mode; or used to check checkbox fields and ON/OFF switch.
			In playback mode, it can be used to play or pause the video.
			In single-frame play mode, pressing the Enter button will play the video by a single frame.
			In auto sequence view mode, the buttons can be used to pause or resume auto sequence.
4	Composite Keys	SHIFT	Switch between the numeric or letter input and functions of the composite keys. (Input letter or numbers when the light is out; Realize functions when the light is red.)
		1/MENU	Enter numeral “1”;
			Access the main menu interface.
		2/ABC/F1	Enter numeral “2”;
			Enter letters “ABC”;
			The F1 button when used in a list field will select all items in the list.

No.	Name		Function Description
			In PTZ Control mode, it will turn on/off PTZ light and when the image is zoomed in, the key is used to zoom out.
		3/DEF/F2	Enter numeral “3”;
			Enter letters “DEF”;
			The F2 button is used to change the tab pages.
			In PTZ control mode, it zooms in the image.
		4/GHI/ESC	Enter numeral “4”;
			Enter letters “GHI”;
			Exit and back to the previous menu.
		5/JKL/EDIT	Enter numeral “5”;
			Enter letters “JKL”;
			Delete characters before cursor;
			Check the checkbox and select the ON/OFF switch;
			Start/stop record clipping in playback.
		6/MNO/PLAY	Enter numeral “6”;
			Enter letters “MNO”;
			Playback, for direct access to playback interface.
		7/PQRS/REC	Enter numeral “7”;
			Enter letters “PQRS”;
			Open the manual record interface.
		8/TUV/PTZ	Enter numeral “8”;
			Enter letters “TUV”;
			Access PTZ control interface.
		9/WXYZ/PREV	Enter numeral “9”;
			Enter letters “WXYZ”;
			Multi-channel display in live view.
		0/A	Enter numeral “0”;
			Shift the input methods in the editing text field. (Upper and lowercase, alphabet, symbols or numeric input).
			Double press the button to switch the main and auxiliary output.
5	**JOG SHUTTLE Control**		Move the active selection in a menu. It will move the selection up and down.
			In Live View mode, it can be used to cycle through different channels.
			In the Playback mode, it can be used to jump 30s forward/backward in video files.
			In PTZ control mode, it can control the movement of the PTZ camera.
6	**POWER ON/OFF**		Power on/off switch.
7	**USB Interfaces**		Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).

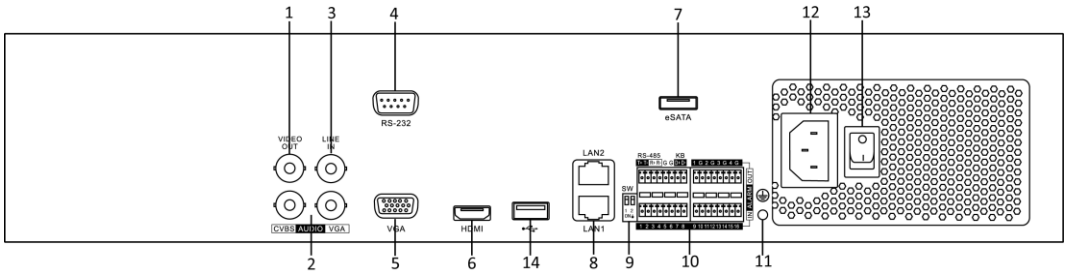
DS-7600NI-ST/SP:



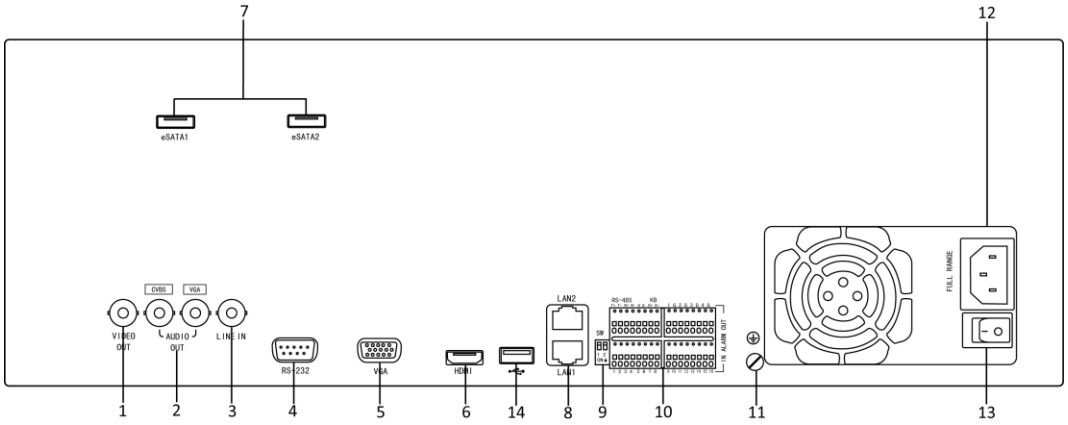
No.	Name		Function Description
1	**USB Interface**		Connects USB mouse or USB flash memory devices.
2	**Status Indicators**	**POWER**	Turns green when NVR is powered up.
		READY	The LED is green when the device is running normally.
		STATUS	The light is green when the IR remote control is enabled; The light is red when the function of the composite keys (SHIFT) are used; The light is out when none of the above condition is met.
		ALARM	The light is red when there is an alarm occurring.
		HDD	Blinks red when HDD is reading/writing.
		Tx/Rx	Blinks green when network connection is functioning normally.
3	**SHIFT**		Switch between the numeric or letter input and functions of the composite keys. (Input letter or numbers when the light is out; Realize functions when the light is red.)
4	**Composite Keys**	**SHIFT**	Switch between the numeric or letter input and functions of the composite keys. (Input letter or numbers when the light is out; Realize functions when the light is red.)
		1/MENU	Enter numeral "1"; Access the main menu interface.
		2/ABC/F1	Enter numeral "2"; Enter letters "ABC"; The F1 button when used in a list field will select all items in the list. In PTZ Control mode, it will turn on/off PTZ light and when the image is zoomed in, the key is used to zoom out.
		3/DEF/F2	Enter numeral "3"; Enter letters "DEF"; The F2 button is used to change the tab pages. In PTZ control mode, it zooms in the image.
		4/GHI/ESC	Enter numeral "4"; Enter letters "GHI"; Exit and back to the previous menu.
		5/JKL/EDIT	Enter numeral "5"; Enter letters "JKL"; Delete characters before cursor; Check the checkbox and select the ON/OFF switch; Start/stop record clipping in playback.
		6/MNO/PLAY	Enter numeral "6"; Enter letters "MNO"; Playback, for direct access to playback interface.

No.	Name		Function Description
		7/PQRS/REC	Enter numeral “7”;
			Enter letters “PQRS”;
			Open the manual record interface.
		8/TUV/PTZ	Enter numeral “8”;
			Enter letters “TUV”;
			Access PTZ control interface.
		9/WXYZ/PREV	Enter numeral “9”;
			Enter letters “WXYZ”;
			Multi-channel display in live view.
		0/A	Enter numeral “0”;
			Shift the input methods in the editing text field. (Upper and lowercase, alphabet, symbols or numeric input).
			Double press the button to switch the main and auxiliary output.
5	**Control Buttons**	**DIRECTION**	In menu mode, the direction buttons are used to navigate between different fields and items and select setting parameters.
			In playback mode, the Up and Down buttons are used to speed up and slow down record playing, and the Left and Right buttons are used to move the recording 30s forwards or backwards.
			In the image setting interface, the up and down button can adjust the level bar of the image parameters. In live view mode, these buttons can be used to switch channels.
		ENTER	The Enter button is used to confirm selection in menu mode; or used to check checkbox fields and ON/OFF switch.
			In playback mode, it can be used to play or pause the video.
			In single-frame play mode, pressing the Enter button will play the video by a single frame.
			In auto sequence view mode, the buttons can be used to pause or resume auto sequence.

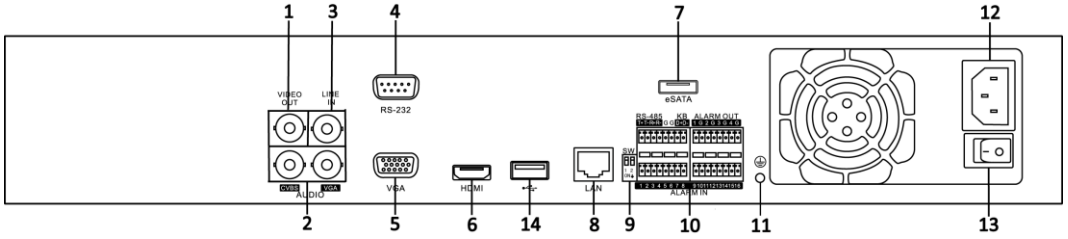
Rear Panel



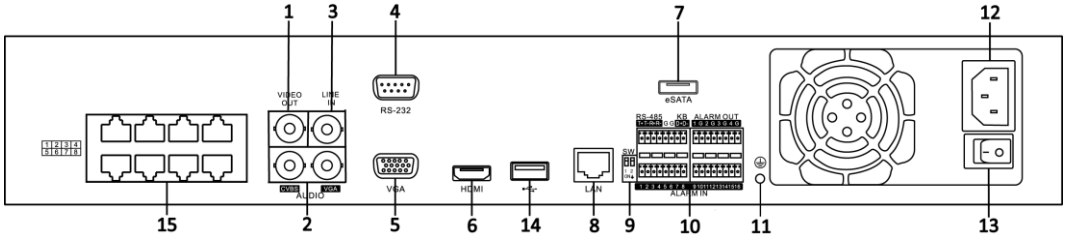
DS-9600NI-ST/RT and DS-8600NI-ST



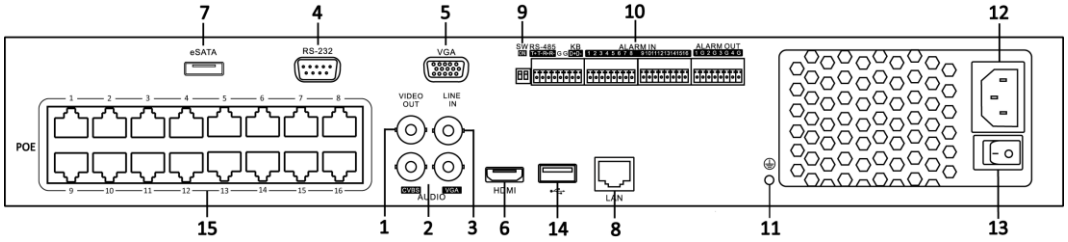
DS-9600NI-XT



DS-7700NI-ST



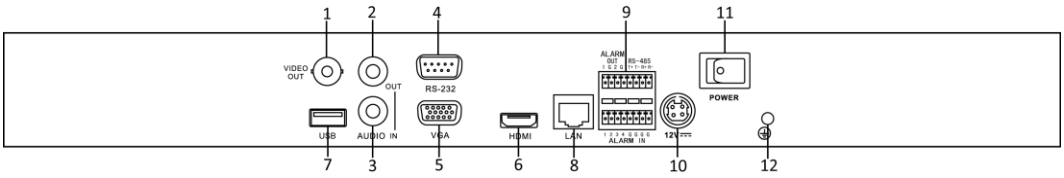
DS-7708NI-SP



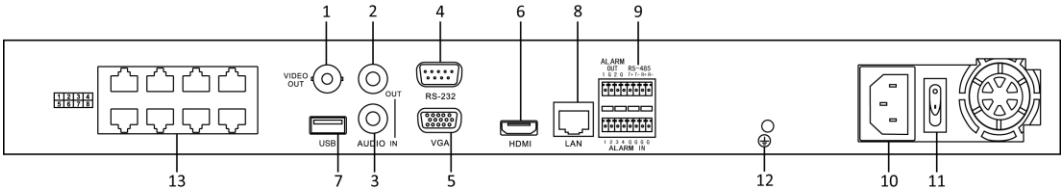
DS-7716 / 7732NI-SP

No.	Item	Description
1	**VIDEO OUT**	BNC connector for video output.
2	**CVBS AUDIO OUT**	BNC connector for audio output. This connector is synchronized with CVBS video output.
	VGA AUDIO OUT	BNC connector for audio output. This connector is synchronized with VGA video output.
3	**LINE IN**	BNC connector for audio input.
4	**RS-232 Interface**	Connector for RS-232 devices.
5	**VGA**	DB9 connector for VGA output. Display local video output and menu.
6	**HDMI**	HDMI video output connector.
7	**eSATA**	Connects external SATA HDD, CD/DVD-RW. 2 eSATA interfaces for DS-9600NI-XT.
8	**LAN Interface**	1 network interface provided for DS-7700NI-ST/SP and 2 network interfaces for DS-9600NI-ST/RT/XT and DS-8600NI-ST.
9	**Termination Switch**	RS-485 termination switch. Up position is not terminated. Down position is terminated with 120Ω resistance.
10	**RS-485 Interface**	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of PTZ receiver respectively.
	Controller Port	D+, D- pin connects to Ta, Tb pin of controller. For cascading devices, the first NVR's D+, D- pin should be connected with the D+, D- pin of the next NVR.
	ALARM IN	Connector for alarm input.
	ALARM OUT	Connector for alarm output.
11	**GROUND**	Ground(needs to be connected when NVR starts up).
12	**AC 100V ~ 240V**	AC 100V ~ 240V power supply.
13	**POWER**	Switch for turning on/off the device.
14	**USB interface**	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
15	**Network Interfaces with PoE function (supported by DS-7700NI-SP)**	Network interfaces for the cameras and to provide power over Ethernet.

The RS-485 interface and termination switch of the device are reserved for future use.



DS-7600NI-ST



DS-7600NI-SP

No.	Item	Description
1	**VIDEO OUT**	BNC connector for video output.
2	**AUDIO OUT**	BNC connector for audio output.
3	**AUDIO IN**	BNC connector for audio input. (Also for two-way audio)
4	**RS-232 Interface**	Connector for RS-232 devices.
5	**VGA**	DB9 connector for VGA output. Display local video output and menu.
6	**HDMI**	HDMI video output connector.
7	**USB**	Connects USB disks and devices.
8	**LAN Interface**	1 network interface.
9	**RS-485 Interface**	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of PTZ receiver respectively.
	ALARM IN	Connector for alarm input.
	ALARM OUT	Connector for alarm output.
10	**Power Supply**	12VDC power supply.
11	**Power Switch**	Switch for turning on/off the device.
12	**Ground**	Ground (needs to be connected when NVR starts up).
13	**Network Interfaces with PoE function (supported by DS-7600NI-SP)**	Network interfaces for the cameras and to provide power over Ethernet.

NOTE

The RS-485 interface of the device is reserved for future use.

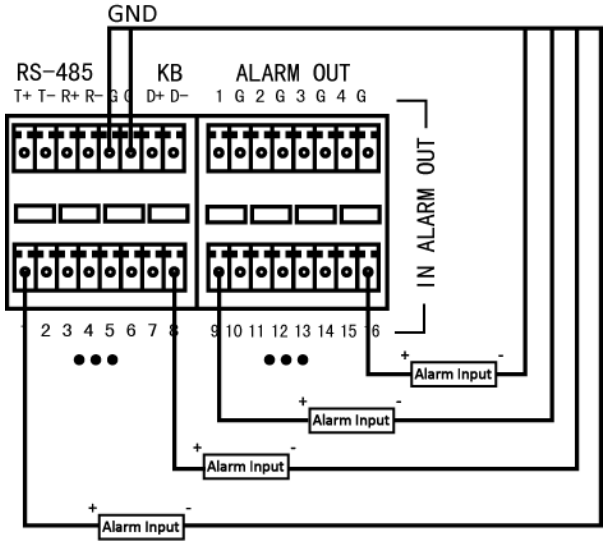
Peripheral Connections

Wiring of Alarm Input

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

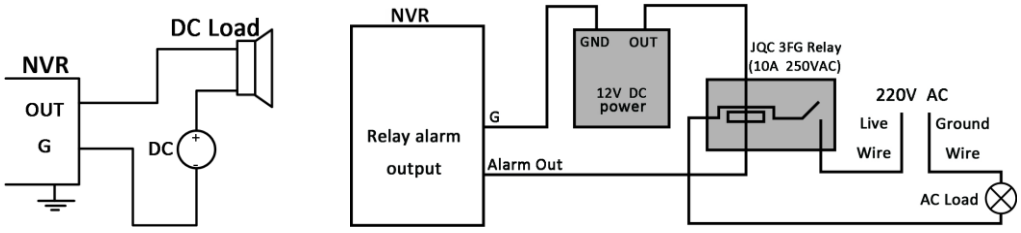
NOTE

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



Wiring of Alarm Output

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



DC Load Connection Diagram **AC Load Connection Diagram**

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 (JP1, JP2, JP3, and JP4) 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.

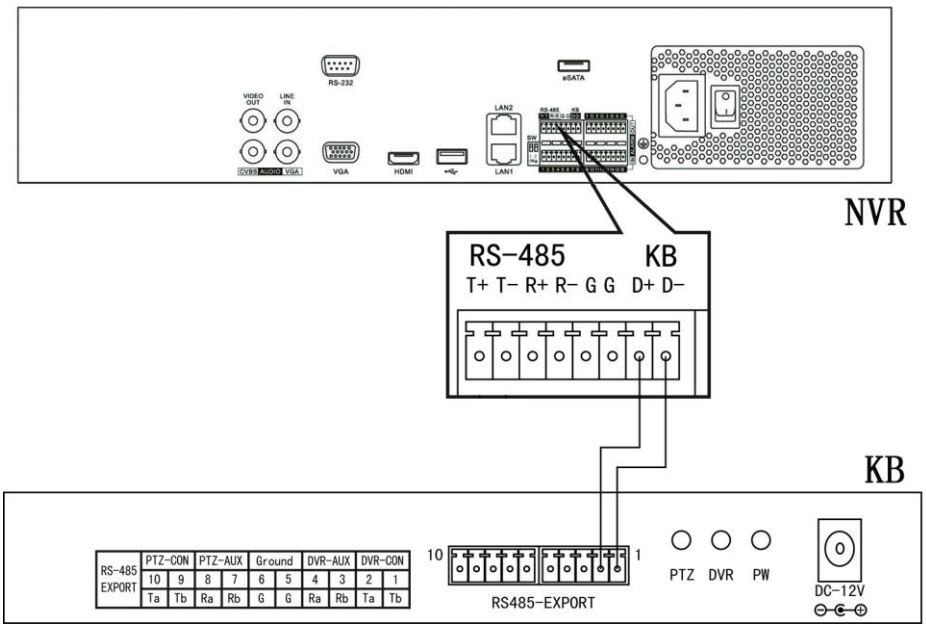
Using of Alarm Connectors

To connect alarm devices to the NVR:

1. Disconnect *pluggable block* from the ALARM IN /ALARM OUT terminal block.
2. Unfasten stop screws from the *pluggable block*, insert signal cables into slots and fasten stop screws. Ensure signal cables are in tight.

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

Controller Connection



To connect a controller to the NVR:

1. Disconnect pluggable block from the KB terminal block.

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.

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

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

NOTE

Make sure both the controller and NVR are grounded.

Specifications

Specifications of DS-9600NI-ST

Model		DS-9608NI-ST	DS-9616NI-ST	DS-9632NI-ST	DS-9664NI-ST
Video/Audio input	IP video input	8-ch	16-ch	32-ch	64-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)			
Network	Incoming bandwidth	50Mbps	100Mbps	200Mbps	200Mbps
	Outgoing bandwidth	240Mbps	240Mbps	160Mbps	160Mbps
	Remote Connection	128			
Video/Audio output	Recording resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)			
	HDMI output	1-ch, resolution: 1920 × 1080P /60Hz, 1920×1080P /50Hz, 1600 × 1200/60Hz, 1280 × 1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	Audio output	2-ch, BNC (Linear, 600Ω)			
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	Capability	8-ch@720P, 4-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P
Hard disk	SATA	8 SATA interfaces for 4 HDDs + 1 DVD-R/W (default), or 8HDDs			
	eSATA	1 eSATA interface			
	Capacity	Up to 4TB capacity for each HDD			
Disk array	Array type	RAID0, RAID1, RAID5, RAID10			
	Number of array	8			
External interface	Network interface	2 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interfaces			
	Serial interface	RS-232; RS-485; Keyboard;			
	USB interface	3 ×USB 2.0			
	Alarm in/out	16/4			
Others	Power supply	100 ~ 240 VAC, 6.3 A, 50 ~ 60 Hz			
	Consumption (without hard disk or DVD-R/W)	≤ 35 W	≤ 40 W	≤ 45 W	≤ 45 W
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)			
	Working humidity	10 % ~ 90 %			
	Chassis	19-inch rack-mounted 2U chassis			
	Dimensions (W ×D ×H)	445 ×470 ×90 mm (17.5" ×18.5"×3.5")			
	Weight (without hard disk or DVD-R/W)	≤ 8 Kg (17.64 lb)			

Specifications of DS-9600NI-RT

Model		DS-9608NI-RT	DS-9616NI-RT	DS-9632NI-RT	DS-9664NI-RT
Video/Audio input	IP video input	8-ch	16-ch	32-ch	64-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)			
Network	Incoming bandwidth	50Mbps	100Mbps	200Mbps	200Mbps
	Outgoing bandwidth	240Mbps	240Mbps	160Mbps	160Mbps
	Remote Connection	128			
Video/Audio output	Recording resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)			
	HDMI output	1-ch, resolution: 1920 ×1080P /60Hz, 1920×1080P /50Hz, 1600 ×1200/60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	Audio output	2-ch, BNC (Linear, 600Ω)			
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	Capability	8-ch@720P, 4-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P
Hard disk	SATA	8 SATA interfaces for 4 HDDs + 1 DVD-R/W (default), or 8HDDs			
	eSATA	1 eSATA interface			
	Capacity	Up to 4TB capacity for each HDD			
Disk array	Array type	RAID0, RAID1, RAID5, RAID10			
	Number of array	8			
	Number of virtual disk	8			
External interface	Network interface	2 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interfaces			
	Serial interface	RS-232; RS-485; Keyboard;			
	USB interface	3 ×USB 2.0			
	Alarm in/out	16/4			
Others	Power supply	100 ~ 240 VAC, 6.3 A, 50 ~ 60 Hz			
	Consumption (without hard disk or DVD-R/W)	≤ 35 W	≤ 40 W	≤ 45 W	≤ 45 W
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)			
	Working humidity	10 % ~ 90 %			
	Chassis	19-inch rack-mounted 2U chassis			
	Dimensions (W ×D ×H)	445 ×470 ×90 mm (17.5" ×18.5"×3.5")			
	Weight (without hard disk or DVD-R/W)	≤ 8 Kg (17.64 lb)			

Specification of DS-9600NI-XT

Model		DS-9616NI-XT	DS-9632NI-XT	DS-9664NI-XT
Video/Audio input	IP video input	16-ch	32-ch	64-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)		
Network	Incoming bandwidth	100Mbps	200Mbps	200Mbps
	Outgoing bandwidth	240Mbps	160Mbps	160Mbps
	Remote Connection	128		
Video/Audio output	Recording resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)		
	HDMI output	1-ch, resolution: 1920 × 1080P /60Hz, 1920×1080P /50Hz, 1600 × 1200/60Hz, 1280 × 1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz		
	VGA output	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 × 720 /60Hz, 1024 ×768 /60Hz		
	Audio output	2-ch, BNC (Linear, 600Ω)		
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Capability	16-ch@720P, 8-ch@1080P		
Hard disk	SATA	16 SATA interfaces for 16 HDDs		
	eSATA	2 eSATA interfaces		
	Capacity	Up to 4TB capacity for each HDD		
Disk array	Array type	RAID0, RAID1, RAID5, RAID10		
	Number of array	16		
External interface	Network interface	2 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interfaces		
	Serial interface	RS-232; RS-485; Keyboard;		
	USB interface	3 ×USB 2.0		
	Alarm in	16		
	Alarm out	4		
Others	Power supply	100 ~ 240 VAC, 6.3 A, 50 ~ 60 Hz		
	Consumption (without hard disks)	≤ 45 W		
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)		
	Working humidity	10 % ~ 90 %		
	Chassis	19-inch rack-mounted 3U chassis		
	Dimensions (W ×D ×H)	445 ×496 ×146 mm (17.5" ×19.5"×5.7")		
	Weight (without hard disks)	≤ 12.5 Kg (27.56 lb)		

Specifications of DS-8600NI-ST

Model		DS-8608NI-ST	DS-8616NI-ST	DS-8632NI-ST	DS-8664NI-ST
Video/Audio input	IP video input	8-ch	16-ch	32-ch	64-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)			
Network	Incoming bandwidth	50Mbps	100Mbps	200Mbps	200Mbps
	Outgoing bandwidth	240Mbps	240Mbps	160Mbps	160Mbps
	Remote Connection	128			
Video/Audio output	Recording resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)			
	HDMI output	1-ch, resolution: 1920 ×1080P /60Hz, 1920 ×1080P /50Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	Audio output	2-ch, BNC (Linear, 600Ω)			
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	Capability	8-ch@720P, 4-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P
Hard disk	SATA	8 SATA interfaces for 4 HDDs + 1 DVD-R/W (default), or 8HDDs			
	eSATA	1 eSATA interface			
	Capacity	Up to 4TB capacity for each HDD			
Disk array	Array type	RAID0, RAID1, RAID5, RAID10			
	Number of array	8			
External interface	Network interface	2 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interfaces			
	Serial interface	RS-232; RS-485; Keyboard;			
	USB interface	3 ×USB 2.0			
	Alarm in/out	16/4			
Others	Power supply	100 ~ 240 VAC, 6.3 A, 50 ~ 60 Hz			
	Consumption (without hard disk or DVD-R/W)	≤ 35 W	≤ 40 W	≤ 45 W	≤ 45 W
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)			
	Working humidity	10 % ~ 90 %			
	Chassis	19-inch rack-mounted 2U chassis			
	Dimensions (W ×D ×H)	445 ×470 ×90 mm (17.5" ×18.5"×3.5")			
	Weight (without hard disk or DVD-R/W)	≤ 8 Kg (17.64 lb)			

Specification of DS-7700NI-ST

Model		DS-7708NI-ST	DS-7716NI-ST	DS-7732NI-ST	DS-7764NI-ST
Video/Audio input	IP video input	8-ch	16-ch	32-ch	64-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)			
Network	Incoming bandwidth	50Mbps	100Mbps	200Mbps	200Mbps
	Outgoing bandwidth	240Mbps	240Mbps	160Mbps	160Mbps
	Remote Connection	128			
Video/Audio output	Recording resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	Frame rate	Main stream: 25 fps (P) / 30 fps (N)			
		Sub-stream: 25 fps (P) / 30 fps (N)			
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)			
	HDMI output	1-ch, resolution: 1920 ×1080P /60Hz, 1920 ×1080P /50Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	Audio output	2-ch, BNC (Linear, 600Ω)			
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	Capability	8-ch@720P, 4-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P
Hard disk	SATA	4 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs			
	eSATA	1 eSATA interface			
	Capacity	Up to 4TB capacity for each HDD			
External interface	Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface			
	Serial interface	RS-232; RS-485; Keyboard			
	USB interface	3 ×USB 2.0			
	Alarm in	16			
	Alarm out	4			
Others	Power supply	100 ~ 240 VAC, 6.3 A, 50 ~ 60 Hz			
	Consumption (without hard disk or DVD-R/W)	≤ 35 W	≤ 40W	≤ 45 W	≤ 45 W
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)			
	Working humidity	10 % ~ 90 %			
	Chassis	19-inch rack-mounted 1.5U chassis			
	Dimensions (W ×D ×H)	445 ×390 ×70 mm (17.5" ×15.3" ×2.8")			
	Weight (without hard disk or DVD-R/W)	≤ 4 Kg (8.82 lb)			

Specification of DS-7700NI-SP

Model		DS-7708NI-SP	DS-7716NI-SP	DS-7732NI-SP
Video/Audio input	IP video input	8-ch	16-ch	32-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)		
Network	Incoming bandwidth	50Mbps	100Mbps	200Mbps
	Outgoing bandwidth	240Mbps	240Mbps	160Mbps
	Remote Connection	128		
Video/Audio output	Record resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Frame rate	Main stream: 25 fps (P) / 30 fps (N)		
		Sub-stream: 25 fps (P) / 30 fps (N)		
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)		
	HDMI output	1-ch, resolution: 1920 ×1080P /60Hz, 1920 ×1080P /50Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz		
	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz		
	Audio output	2-ch, BNC (Linear, 600Ω)		
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Capability	8-ch@720P, 4-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P
Hard disk	SATA	4 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs		
	eSATA	1 eSATA interface		
	Capacity	Up to 4TB capacity for each HDD		
External interface	Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface		
	Serial interface	RS-232; RS-485; Keyboard		
	USB interface	3 ×USB 2.0		
	Alarm in	16		
	Alarm out	4		
PoE	Interface	8 independent 100 Mbps PoE network interfaces	16 independent 100 Mbps PoE network interfaces	
	Max. Power	180W	200W	
	Supported standard	AT and AF		
Others	Power supply	100 ~ 240 VAC, 6.3 A, 50 ~ 60 Hz		
	Consumption (without hard disk, DVD-R/W or PoE)	≤ 35W	≤ 40W	≤ 45W
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)		
	Working humidity	10 % ~ 90 %		
	Chassis	19-inch rack-mounted 1.5U chassis		
	Dimensions (W ×D ×H)	445 ×390 ×70 mm (17.5" ×15.3" ×2.8")		
	Weight (without hard disk or DVD-R/W)	≤ 4 Kg (8.8 lb)		

Specifications of DS-7600NI-ST

Model		DS-7608NI-ST	DS-7616NI-ST	DS-7632NI-ST
Video/Audio input	IP video input	8-ch	16-ch	32-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)		
Network	Incoming bandwidth	50Mbps	100Mbps	200Mbps
	Outgoing bandwidth	240Mbps	240Mbps	160Mbps
	Remote Connection	128		
Video/Audio output	Recording resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Frame rate	Main stream: 25 fps (P) / 30 fps (N)		
		Sub-stream: 25 fps (P) / 30 fps (N)		
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)		
	HDMI output	1-ch, resolution: 1920 × 1080P /60Hz, 1920 × 1080P /50Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz		
	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz		
	Audio output	1-ch, BNC (Linear, 600Ω)		
	Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Synchronous playback	8-ch	16-ch	16-ch
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Capability	8-ch@720P, 4-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P
Hard disk	SATA	2 SATA interfaces		
	Capacity	Up to 4TB capacity for each HDD		
External interface	Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface		
	Serial interface	RS-232; RS-485;		
	USB interface	2 ×USB 2.0		
	Alarm in	4		
	Alarm out	2		
Others	Power supply	12 VDC		
	Consumption (without hard disk)	≤ 13 W		
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)		
	Working humidity	10 % ~ 90 %		
	Chassis	19-inch rack-mounted 1U chassis		
	Dimensions (W ×D ×H)	445 ×261 ×44.5 mm (17.5" ×10.3" ×1.8")		
	Weight (without hard disk)	≤ 4 Kg (8.82 lb)		

Specifications of DS-7600NI-SP

Model		DS-7608NI-SP	DS-7616NI-SP	DS-7632NI-SP
Video/Audio input	IP video input	8-ch	16-ch	32-ch
	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)		
Network	Incoming bandwidth	50Mbps	100Mbps	200Mbps
	Outgoing bandwidth	240Mbps	240Mbps	160Mbps
	Remote Connection	128		
Video/Audio output	Recording resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Frame rate	Main stream: 25 fps (P) / 30 fps (N)		
		Sub-stream: 25 fps (P) / 30 fps (N)		
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)		
	HDMI output	1-ch, resolution: 1920 ×1080P /60Hz, 1920 ×1080P /50Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz		
	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 ×1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz		
	Audio output	1-ch, BNC (Linear, 600Ω)		
Decoding	Live view / Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Capability	8-ch@720P, 4-ch@1080P	16-ch@720P, 8-ch@1080P	16-ch@720P, 8-ch@1080P
Hard disk	SATA	2 SATA interfaces		
	Capacity	Up to 4TB capacity for each HDD		
External interface	Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface		
	Serial interface	RS-232; RS-485;		
	USB interface	2 ×USB 2.0		
	Alarm in	4		
	Alarm out	2		
PoE	Interface	8 independent 100 Mbps PoE network interfaces		
	Consumption	120W		
	Standard	AF		
Others	Power supply	100 ~ 240 VAC, 6.3 A, 50 ~ 60 Hz		
	Consumption (without hard disk or PoE)	≤ 35W	≤ 40W	≤ 45W
	Working temperature	-10 ℃ ~ +55 ℃ (14 ℉ ~ 131 ℉)		
	Working humidity	10 % ~ 90 %		
	Chassis	19-inch rack-mounted 1U chassis		
	Dimensions (W ×D ×H)	445 ×261 ×44.5 mm (17.5" ×10.3" ×1.8")		
	Weight (without hard disk)	≤ 4 Kg (8.82 lb)		

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.

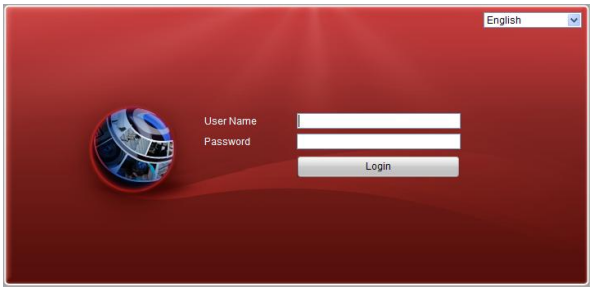
Bit Rate	Storage Used
96K	42M
128K	56M
160K	70M
192K	84M
224K	98M
256K	112M
320K	140M
384K	168M
448K	196M
512K	225M
640K	281M
768K	337M
896K	393M
1024K	450M
1280K	562M
1536K	675M
1792K	787M
2048K	900M
4096K	1.8G
8192K	3.6G
16384K	7.2G

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.

Accessing by Web Browser

Logging In

You can get access to the device via web browser. Open web browser, input the IP address of the device and then press Enter. The login interface appears.



Input the user name and password, and click the **Login** button.

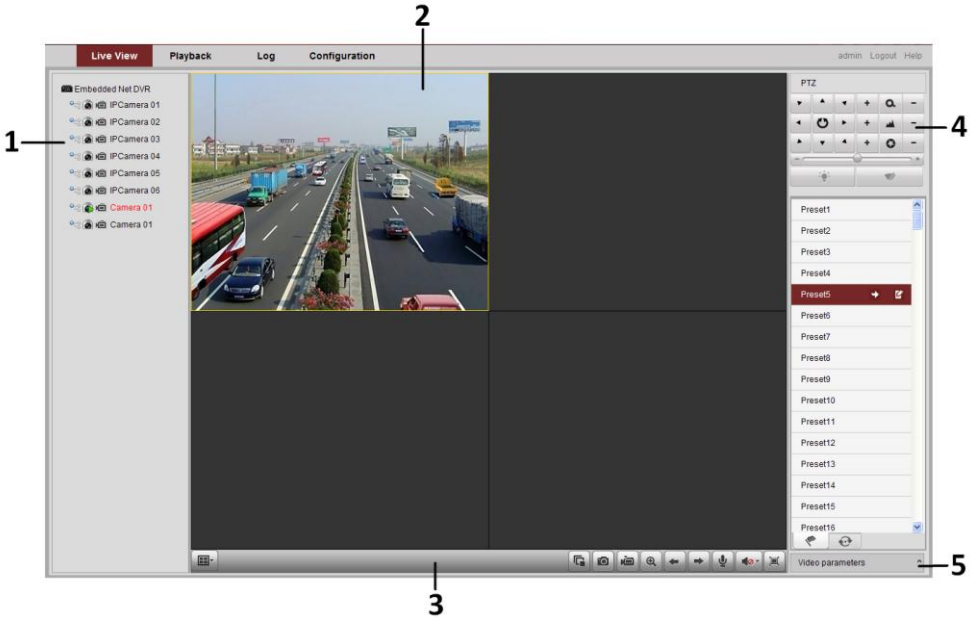
NOTE

- The default IP address is 192.0.0.64.
- The default user name is admin, and password is 12345. You are highly recommended to change the initial password right after the first login to avoid safety problem.
- 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.

When you log in for the first time, the system will remind you to install the Plug-in control. After the installation, you can configure and manage the device remotely.

Live View

The live view interface appears by default when you log in the device.



Interface Introduction

No.	Name	Description
1	Channel List	Displays the list of channels and the playing and recording status of each channel. NOTE The stream type can be switched by clicking the icon before the channel name: stands for main stream and for sub-stream.
2	Live View Window	Displays the image of channel, and multi-window division is supported.
3	Play Control Bar	Play control operations are supported.
4	PTZ Control	Pan, tilt, zoom operations are supported, as well as preset and patrol editing and calling. NOTE PTZ function can only be realized if the connected camera supports PTZ control.
5	Video Parameters Configuration	Brightness, contrast, saturation and hue of the image can be edited.

Start Live View

Steps:

1. In the live view window, select a playing window by clicking the mouse.
2. Double click a camera from the device list to start the live view.
3. You can click the button on the toolbar to start the live view of all cameras on the device list.
   Refer to the following table for the description of buttons on the live view window:

Icon	Description	Icon	Description
	Select the window-division mode		Open/Close audio
	Start/Stop all live view		Start/Stop two-way Audio
	Capture pictures in the live view mode		Adjust volume
	Start/Stop all recording		Enable/Disable digital zoom
	Previous/Next page		Full screen

Recording

Before you start

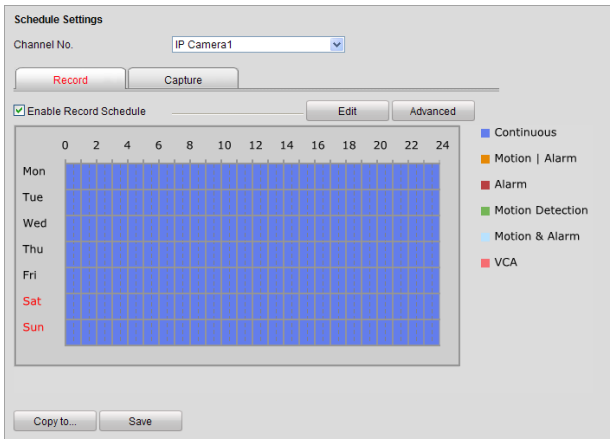
Make sure the device is connected with HDD or network disk, and the HDD or network disk has been initialized for the first time to use.

Two recording types can be configured: Manual and Scheduled. The following section introduces the configuration of scheduled recording.

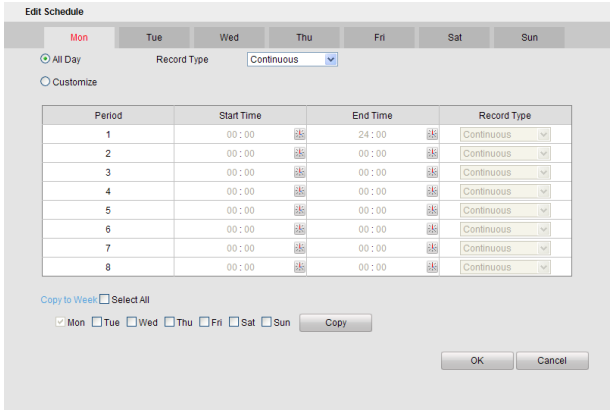
Steps:

1. Click Remote Configuration> Camera Settings> Record Schedule to enter Record Schedule settings interface.
2. Select the camera to configure the record schedule.

3. Check the checkbox of Enable Schedule to enable recording schedule.



4. Choose the day in a week to configure scheduled recording.
5. Click **Edit** to edit record schedule**.**



1) Configure All Day or Customize Record:

- If you want to configure the all-day recording, please check the **All Day** checkbox.
- If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time.**

Up to 8 segments can be configured and each segment cannot be overlapped.

2) Select a **Record Type**. The record type can be Continuous, Motion, Alarm, Motion & Alarm, Motion | Alarm and VCA.

3) Check the checkbox of **Select All** and click **Copy** to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click **Copy**.

4) Click **OK** to save the settings and exit the **Edit Schedule** interface.

6. Click **Advanced** to configure advanced record parameters**.**
7. Click **Save** to validate the above settings.
8. (Optional) You can click the **Copy to…** button to copy the same setting to other cameras.

Playback

Interface Introduction

No.	Name	Description
1	Channel List	Displays the list of channels and the playing status of each channel.
2	Playback Window	Displays the image of channel.
3	Play Control Bar	Play control operations are supported.
4	Time Line	Displays the time bar and the records marked with different colors.
5	Playback Status	Displays the playback status, including channel number and playback speed.
6	Calendar	You can select the date to play.

Start Playback

Steps:

1. Click **Playback** on the menu bar to enter playback interface.
2. Click the camera from the device list for playback.
3. Select the date from the calendar and click **Search**.
4. Click the button to play the searched video file on the current date.
5. Use the buttons on the toolbar to operate in playback mode.

Playback Control Buttons Description

Area	Description	Area	Description
	Play/Pause		Stop
	Slow down		Speed up
	Play by single frame		Capture
	Stop all playback		Download
	Video clip		Open/Close audio

Area	Description	Area	Description
	Full screen		Transcoded playback
	Reverse playback		Window division

6. You can drag the progress bar with the mouse to locate the exact playback point. You can also input the time in the textbox 

and click  button to locate the playback point.

The color of the video on the progress bar stands for the different video types.

NOTE

To play back record files of multiple cameras at the same time, you may set the window division mode by clicking the  button and choose a window, and then repeat the above steps 2-4.

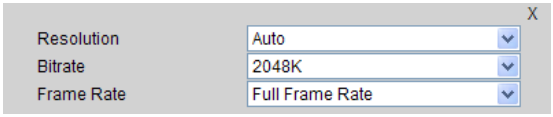
Transcoded Playback

Purpose:

To save the bandwidth cost, the transcoded playback can be adopted.

Steps:

1. Make sure the playback of current channel is stopped.
2. Move the mouse to the  icon and edit the required parameters for transcoded playback, including Resolution, Bitrate, and Frame Rate.



3. Click the  button, if it turns to  , then the trancoding process is compeleted.
4. Click the  button to start transcoded playback.

Log

You can view and export the log files at any time, including operation, alarm, exception and information of device.

Before you start:

The Log function can be realized only when the device is connected with HDD or network disk.

Steps:

2. Click **Log** on the menu bar to enter the Log interface.
3. Set the log search conditions to refine your search, including the Major Type, Minor Type, Start Time and End Time.
4. Click the **Search** button to start searching log files.
5. The matched log files will be displayed on the list.

NOTE

Up to 2000 log files can be found each time, and 100 log files can be displayed on each page.

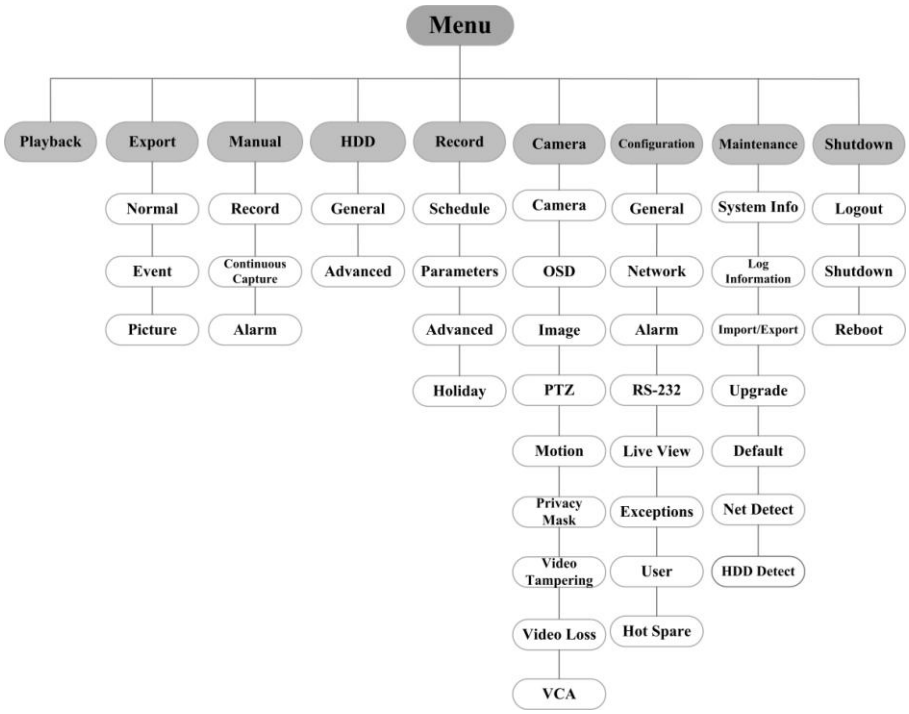
You can click the 

button to save the searched log files to local directory.

Menu Operation

Menu Structure

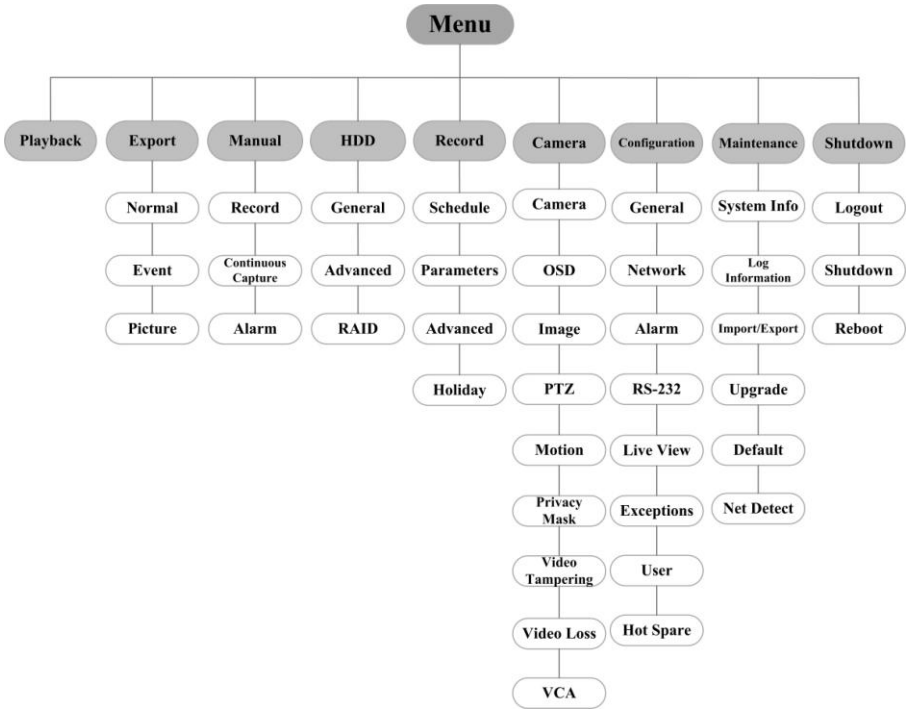
The menu structure of the DS-9600/8600/7700/7600NI-ST, DS-7700/7600NI-SP and DS-9600NI-XT (RAID disabled) Series NVR:



NOTE

For the DS-9600NI-XT series NVR, the **RAID** apperas under the HDD menu when the RAID function is enabled.

The menu structure of the DS-9600NI-RT Series NVR:



Startup and Shutdown

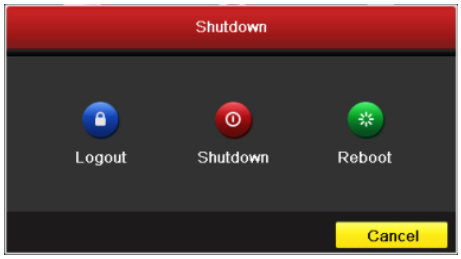
Proper startup and shutdown procedures are crucial to expanding the life of the NVR.

To start your NVR:

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 (for the DS-9600 and DS-8600 series NVR) on the front panel should be red, indicating the device gets the power supply.
2. Press the POWER button on the front panel. The Power LED should turn blue (for the DS-9600 and DS-8600 series NVR) or green (for the DS-7700 and DS-7600 series NVR). The unit will begin to start. After the device starting up, the wizard will guide you through the initial settings, including modifying password, date and time settings, network settings, HDD initializing, and recording.

To shut down the NVR:

1. Enter the Shutdown menu.
   Menu > Shutdown



2. Select the **Shutdown** button.
3. Click the **Yes** button.

Live View

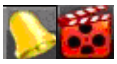
Some icons are provided on screen in Live View mode to indicate different camera status. These icons include:

Live View Icons

In the live view mode, there are icons at the upper-right corner of the screen for each channel, showing the status of the record and alarm in the channel, so that you can find problems as soon as possible.

 Alarm (video loss, tampering, motion detection or sensor alarm)

 Record (manual record, continuous record, motion detection or alarm triggered record)

 Alarm & Record

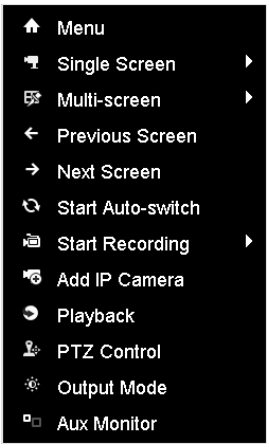
 Event/Exception (event and exception information, appears at the lower-left corner of the screen.)

Adding IP Cameras

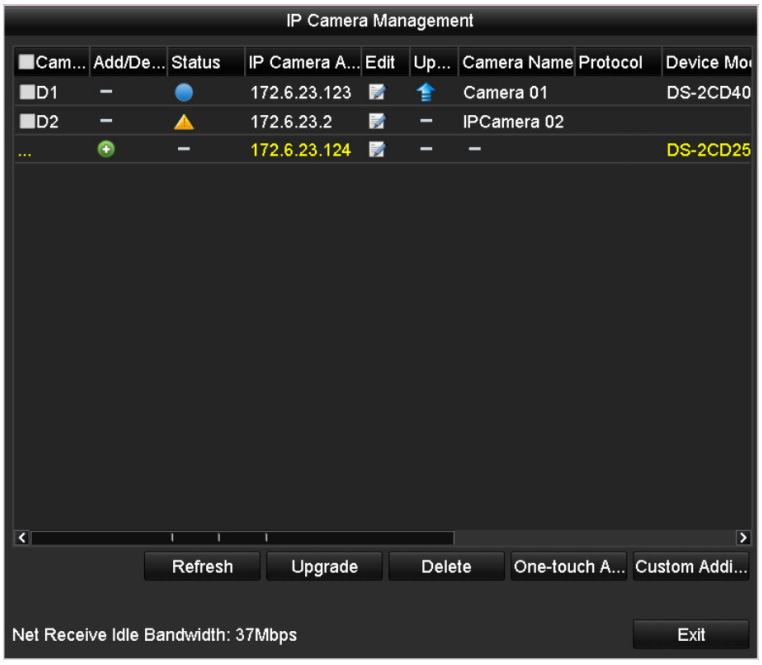
You should add and configure the online IP cameras to enable the live view and recording function.

Steps:

1. Right-click the mouse when you in the live view mode to show the right-click menu.



2. Select **Add IP Camera** in the pop-up menu to enter the IP Camera Management interface.



3. The online cameras with same network segment will be displayed in the camera list. Click the button to add the camera.

   Or you can click the **One-couch Adding** button to add all the online IP cameras.

   NOTE

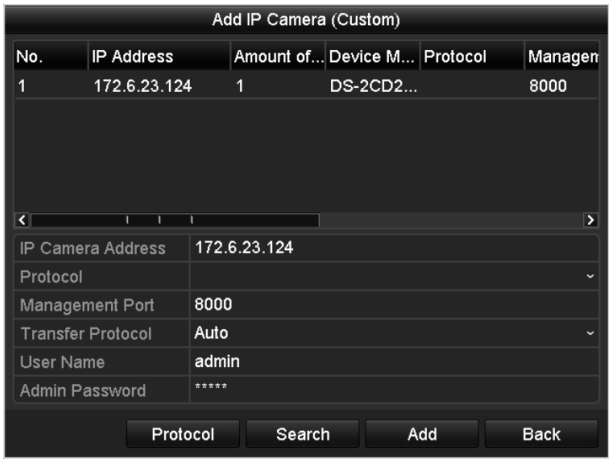
   The added camera is marked in white while the camera has not been added is marked in yellow.

   Explanation of the icons

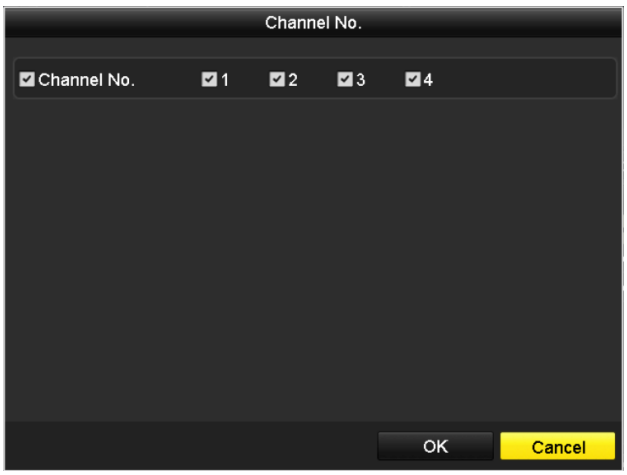
Icon	Explanation	Icon	Explanation
	Edit basic parameters of the camera		Add the detected IP camera.
	The camera is connected.		The camera is disconnected; you can click the icon to get the exception information of camera.
	Delete the IP camera		Advanced settings of the camera.
	Update the IP camera		

4. To add other IP cameras:

1) Click the **Custom Adding** button to pop up the Add IP Camera (Custom) interface.



2) You can edit the IP address, protocol, management port, and other information of the IP camera to be added.
3) Click **Add** to add the camera.
4) (For the encoders with multiple channels only) check the checkbox of Channel No. in the pop-up window, as shown in the following figure, and click **OK** to finish adding.



One-touch RAID Configuration

Purpose:

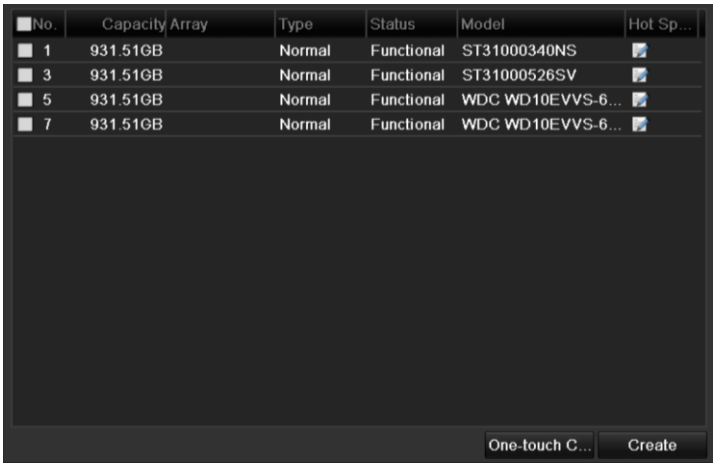
For the DS-9600NI-RT/XT series NVR, the disk array must be configured if you want to save recording and log files locally. Through one-touch configuration, you can quickly create the disk array. By default, the array type to be created is RAID 5.

Before you start:

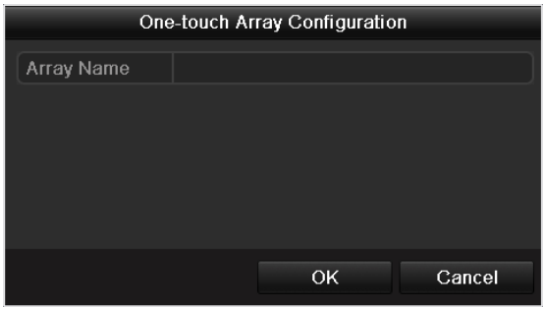
As the default array type is RAID 5, at least 3 HDDs must be installed in you device.

Steps:

1. (For DS-9600NI-XT series only) Enable the RAID function by checking the checkbox in the disk mode configuration interface.
   Menu > HDD > Advanced
2. Enter the Physical Disk Settings interface.
   Menu > HDD > RAID



3. Click **One-touch Configuration** to enter the One-touch Array Configuration interface.



4. Edit the array name in the **Array Name** text filed and click **OK** button to start configuring array.

NOTE

If you install 4 HDDs or above for one-touch configuration, a hot spare disk will be set by default. It is recommended to set hot spare disk for automatically rebuilding the array when the array is abnormal.

5. When the array configuration is completed, click **OK** button in the pop-up message box to finish the settings**.**

Recording

Before you start:

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

Purpose:

Two kinds of record types are introduced in the following section, including Instant Record and All-day Record. And for other record types, you may refer to the user manual for detailed information.

NOTE

After rebooting all the manual records enabled are canceled.

Instant Recording

On the live view window of each channel, there is a quick setting toolbar which shows on the bottom of the window when you click on it.

Click the icon to enable the record, and the icon turns to . And click icon to disable the record, then the icon turns to .

All-day Recording

Steps:

1. On the live view window, right lick the window and move the cursor to the **Start Recording** option, and select **Continuous Record** or **Motion Detection Record** on your demand.
2. And click the **Yes** button in the popup Attention message box to confirm the settings.
   Then all the channels will start to record in the selected mode.

Playback

Play back the record files of a specific channel in the live view menu. Channel switch is supported.

- **Option 1:**

Choose a channel under live view using the mouse and click the button in the shortcut operation menu.

NOTE

Only record files recorded during the past five minutes on this channel will be played back.

- **Option 2:**

Steps:

1. Enter the Playback menu.
   Mouse: right click a channel in live view mode and select Playback from the menu.
   Front Panel: press PLAY button to play back record files of the channel under single-screen live view.
   Under multi-screen live view, record files of the selected channel will be played back.

NOTE

Pressing numerical buttons will switch playback to related channels during playback process.

2. Playback management.

   The toolbar in the bottom part of Playback interface can be used to control playing process.

   Just check the channel or channels if you want to switch playback to another channel or execute simultaneous playback of multiple channels.

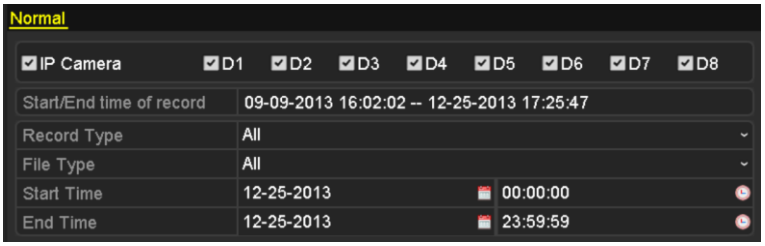
Backup

Recorded files can be backed up to various devices, such as USB flash drives, USB HDDs or a DVD writer.

Steps:

1. Enter Video Export interface.

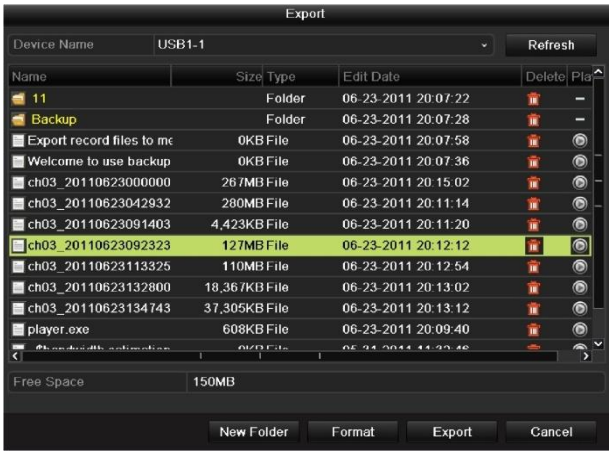
   Choose the channel(s) you want to back up and click on the **Quick Export** button.



2. Enter Export interface, choose backup device and click **Export** button to start exporting.

3. Check backup result.

   Choose the record file in Export interface and click button  to check it.



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