



RED|LINE

Network Video Recorder

Quick Start Guide

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Quick Start Guide

About this Manual

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

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

Please use this user manual under the guidance of professionals.

Legal Disclaimer

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REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. OUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, OUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. PLEASE CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. OUR COMPANY SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS

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



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 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

Industry Canada ICES-003 Compliance

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



Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into “Warnings” and “Cautions”

Warnings: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

	
Warnings Follow these safeguards to prevent serious injury or death.	Cautions Follow these precautions to prevent potential injury or material damage.



Warnings

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

Preventive and Cautionary Tips

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

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

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.

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 $-10^{\circ}\text{C} \sim 55^{\circ}\text{C}$, $14^{\circ}\text{F} \sim 131^{\circ}\text{F}$.
8. Environmental humidity should be within the range of 10% ~ 90%.

Hard Disk Installation

Before you start:

Before installing a hard disk drive (HDD), please make sure the power is disconnected from the DVR. A factory recommended HDD should be used for this installation.

Up to 8 SATA hard disks can be installed.

Tools Required: Screwdriver.



As the installation steps of HDD are similar among different models, here we take the steps of certain series as examples.

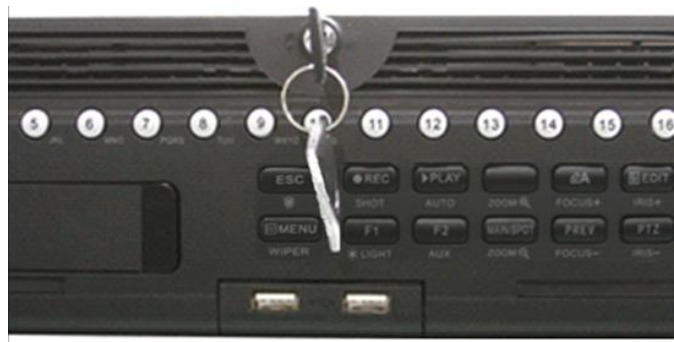
HDD Installation (A)

Steps:

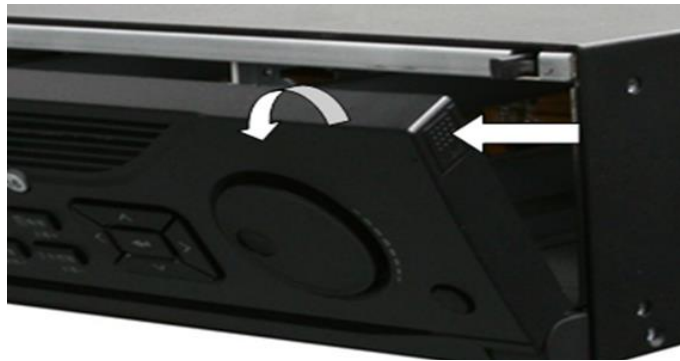
1. Fasten the hard disk mounting handle to the hard disk with screws.



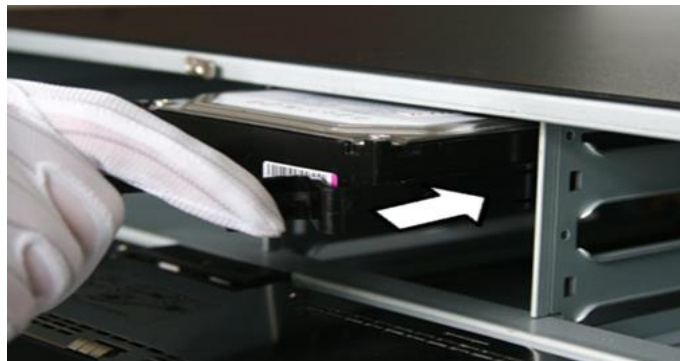
2. Insert the key and turn in clockwise direction to open the panel lock.



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.



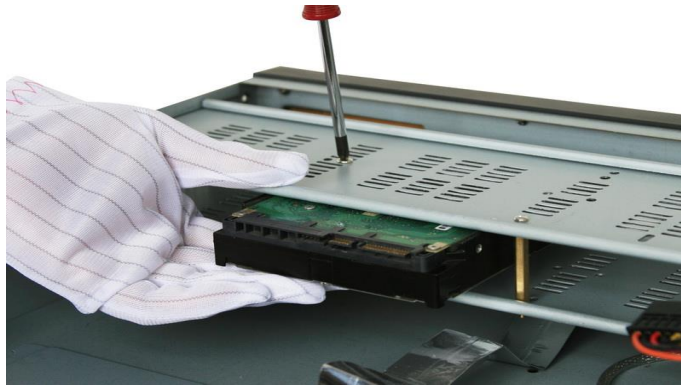
HDD Installation (B)

Steps:

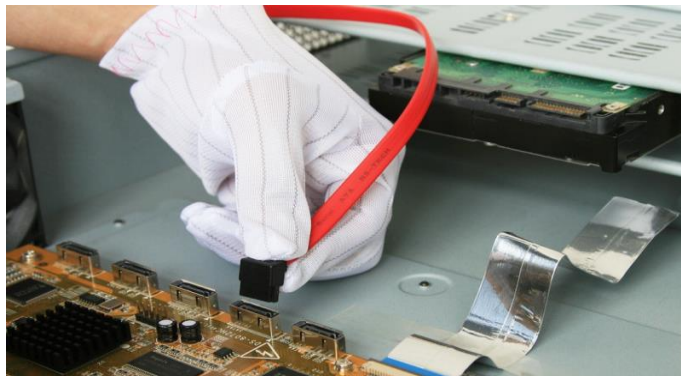
1. Remove the cover from the NVR by unfastening the screws on the back and side.



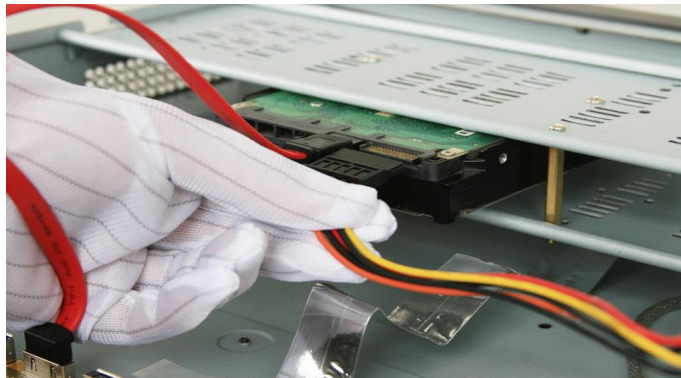
2. Install the HDD in the HDD rack using the provided screws. Fasten the screws on the button to fix the HDD.



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.

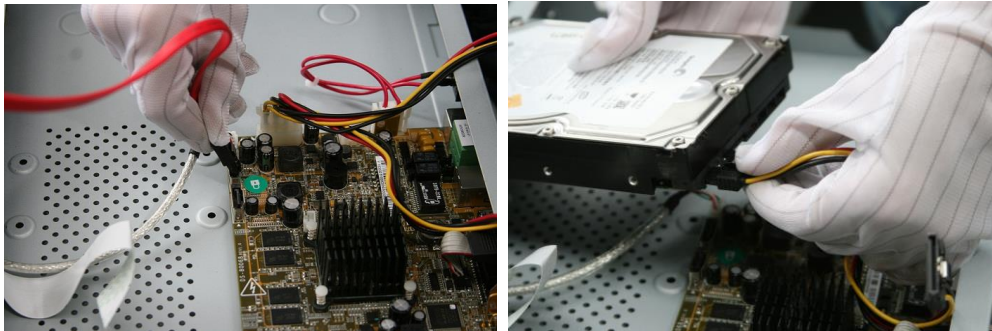
HDD Installation (C)

Steps:

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.

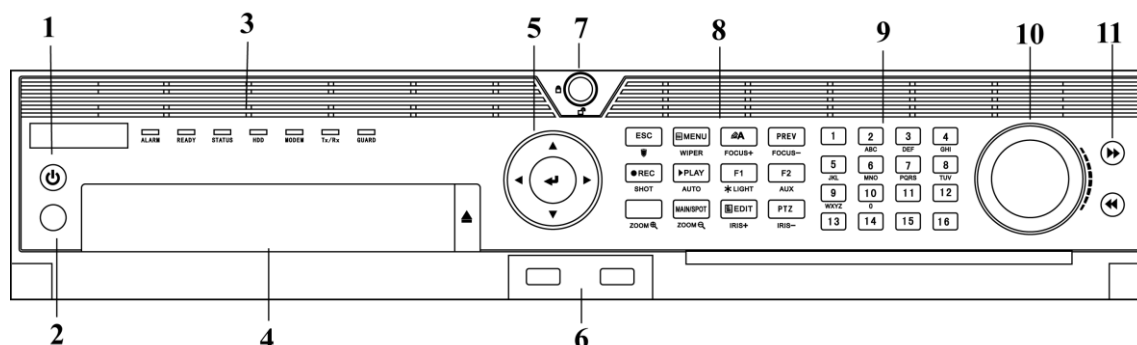


4. Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.



Front Panel

Front Panel 1

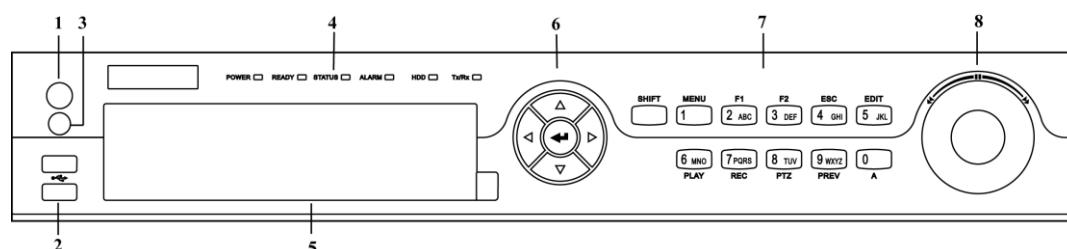


No.	Name	Function Description
1	POWER ON/OFF	Power on/off switch.
2	IR Receiver	Receiver for IR remote
3	Status Indicators	ALARM Turns red when a sensor alarm is detected.
		READY Ready LED is normally blue, indicating that the device is functioning properly.
		STATUS Turns blue when device is controlled 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 Reserved for future usage.
		TX/RX Flashes blue when network connection is functioning properly.
		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.
4	DVD-R/W	Slot for DVD-R/W.
5	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 <i>tick</i> 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

No.	Name		Function Description
			the video by a single frame.
			In Auto-switch mode, it can be used to stop /start auto switch.
6	USB Interfaces		Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
7	Front Panel Lock		You can lock or unlock the panel by the key.
8	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 <i>tick</i> 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/ZOO M-	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 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

No.	Name	Function Description
		camera.
9	Alphanumeric Buttons	<p>Switch to the corresponding channel in Live view or PTZ Control mode.</p> <p>Input numbers and characters in Edit mode.</p> <p>Switch between different channels in Playback mode.</p> <p>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.</p>
10	JOG SHUTTLE Control	<p>Move the active selection in a menu. It will move the selection up and down.</p> <p>In Live View mode, it can be used to cycle through different channels.</p> <p>In the Playback mode: For some series, the ring is used to jump 30s forward/backward in video files.</p> <p>In PTZ control mode, it can control the movement of the PTZ camera.</p>
11	SLOW DOWN/SPEED UP	Slow down/speed up in playback mode.

Front Panel 2



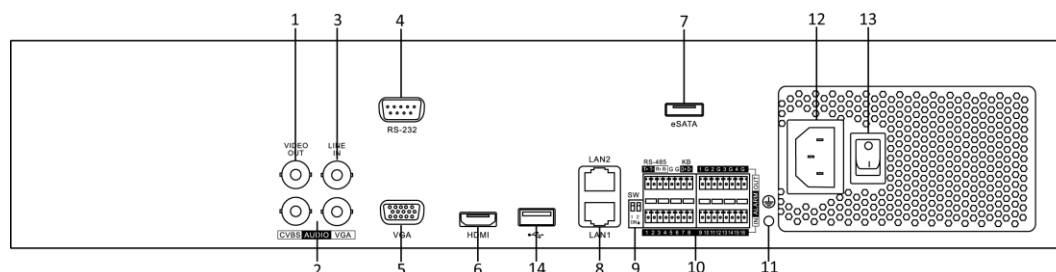
No.	Name	Function Description
1	POWER ON/OFF	Power on/off switch.
2	USB Interface	Connect to USB mouse or USB flash memory.
3	IR Receiver	Receiver for IR remote control. devices.
4	POWER	Power indicator lights in green when DVR is powered up.
	READY	Ready indicator is normally green, indicating that the DVR is functioning properly.
	STATUS	<p>Indicator turns green when DVR is controlled by an IR remote control with the address from 1~254;</p> <p>Indicator turns red when the SHIFT button is used;</p> <p>Indicator does not light when the DVR is controlled by a keyboard or by the IR remote control with the address of 255;</p> <p>Indicator turns green when the DVR is controlled by IR remote control (with the address from 1~254) and keyboard at the same time , and the SHIFT button is not used;</p> <p>Indicator turns orange : (a) when the DVR is controlled by IR remote control (with the address from 1~254) and keyboard at the same time and the SHIFT button is used as well; (b) when the DVR is controlled by IR remote control (with the address from 1~254) and the SHIFT button is used.</p>
	ALARM	Alarm indicator turns red when a sensor alarm is detected.
	HDD	HDD indicator blinks in red when data is being read from or written to HDD.
	Tx/Rx	TX/RX indicator blinks in green when network connection is functioning properly.
5	DVD-ROM	Slot for DVD-ROM.
6	DIRECTION	The DIRECTION buttons are used to navigate between different fields and items in

		<p>menus.</p> <p>In Playback mode, the Up and Down button is used to speed up and slow down recorded video.</p> <p>In All-day Playback mode, the Left/Right button can be used to select the recorded video of next/previous day; in Playback by Normal Video Search, the Left/Right button can be used to select the next/previous recorded file.</p> <p>In Live View mode, the directional buttons can be used to cycle through channels.</p> <p>In PTZ control mode, it can control the movement of the PTZ camera.</p>
	ENTER	<p>Confirm selection in any of the menu modes. It can also be used to tick checkbox fields.</p> <p>In Playback mode, it can be used to play or pause the video.</p> <p>In Single-frame Playback mode, pressing the ENTER button will advance the video by a single frame.</p> <p>In Auto-switch mode, it can be used to stop /start auto switch.</p>
7	SHIFT	Switch of compound keys between the numeric/letter input and functional control.
	1/MENU	<p>Enter numeral "1";</p> <p>Access the main menu interface.</p>
	2ABC/F1	<p>Enter numeral "2";</p> <p>Enter letters "ABC";</p> <p>The F1 button can be used to select all items on the list;</p> <p>In PTZ Control mode, the F1 button can be used to zoom out (zoom-) the PTZ camera;</p> <p>In live view or playback mode, the F1 button can be used to switch between main and spot video output.</p>
	3DEF/F2	<p>Enter numeral "3";</p> <p>Enter letters "DEF";</p> <p>In PTZ Control mode, the F1 button can be used to zoom in (zoom+) the PTZ camera;</p> <p>The F2 button can be used to cycle through tab pages.</p>
	4GHI/ESC	<p>Enter numeral "4";</p> <p>Enter letters "GHI";</p> <p>Exit and back to the previous menu.</p>
	5JKL/EDIT	<p>Enter numeral "5";</p> <p>Enter letters "JKL";</p> <p>Delete characters before cursor;</p> <p>Select the checkbox and ON/OFF switch;</p> <p>Start/stop record clipping in playback.</p>
	6MNO/PLAY	<p>Enter numeral "6";</p> <p>Enter letters "MNO";</p> <p>In Playback mode, it is used for direct access to playback interface.</p>
	7PQRS/REC	<p>Enter numeral "7";</p> <p>Enter letters "PQRS";</p> <p>Manual record, for direct access to manual record interface; manually enable/disable record.</p>
	8TUV/PTZ	<p>Enter numeral "8";</p> <p>Enter letters "TUV";</p> <p>Access PTZ control interface.</p>
	9WXYZ/PREV	<p>Enter numeral "9";</p> <p>Enter letters "WXYZ";</p> <p>Multi-camera display in live view;</p> <p>In Playback mode or Menu→Playback→Tag playback interface, this button can be used to delete the selected tag.</p>
	0/A	<p>Enter numeral "0";</p> <p>Switch between input methods (upper and lowercase alphabet, symbols and numeric input).</p> <p>In Playback mode, this button can be used to add the default tag.</p>
8	JOG SHUTTLE Control	<p>Move the active selection in a menu. The inner ring will move the selection up and down; the outer ring will move it left and right.</p> <p>In Playback mode, the inner ring is used to jump 30s forward/backward in video files. The outer ring can be used to speed up/slow down the video.</p> <p>In Live View mode, it can be used to cycle through different channels.</p> <p>In PTZ control mode, it can control the movement of the PTZ camera.</p>

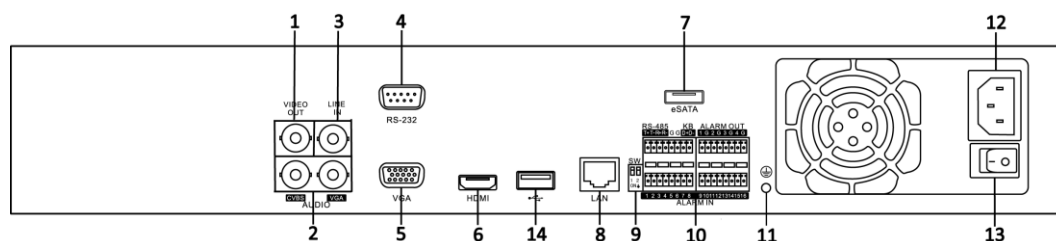
Rear Panel



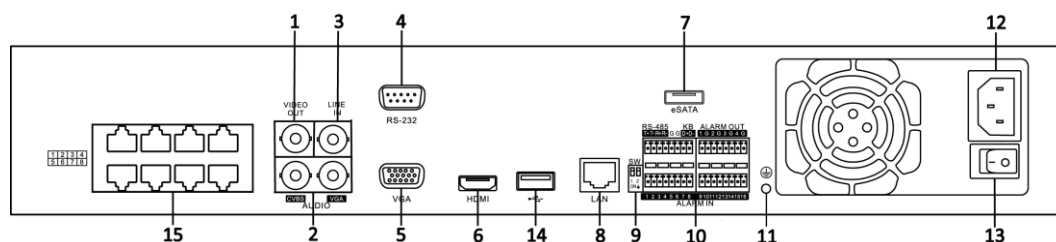
The rear panel varies according to different models. Please refer to the actual product. The following figure is for reference only.



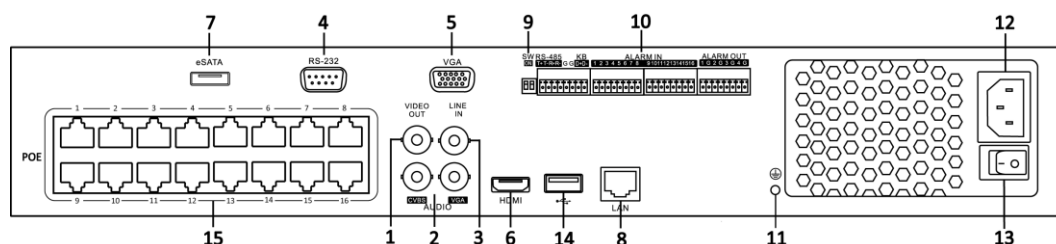
32ch/64ch



4ch/8ch/16ch without POE



8ch with 8 POE interface



16ch/32ch with 16 POE interface

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.

No.	Item	Description
6	HDMI	HDMI video output connector.
7	eSATA	Connects external SATA HDD, CD/DVD-RW.
8	LAN Interface	1 network interface provided for 1.5U chassis series and 2 network interfaces for 2U chassis series.
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	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.

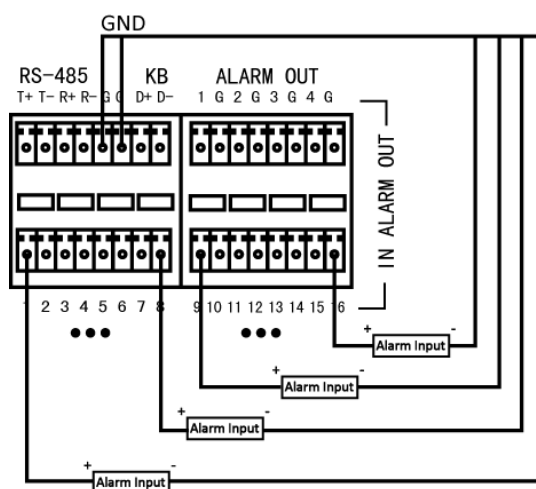
Peripheral Connections

Wiring of Alarm Input

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

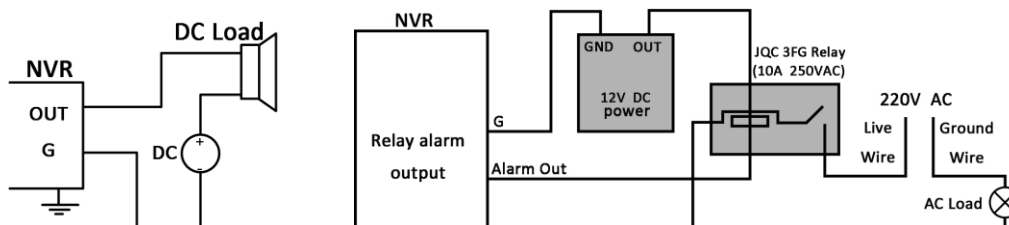


If the alarm input is not an open/close relay, please connect an external relay between the alarm input and the device.



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:

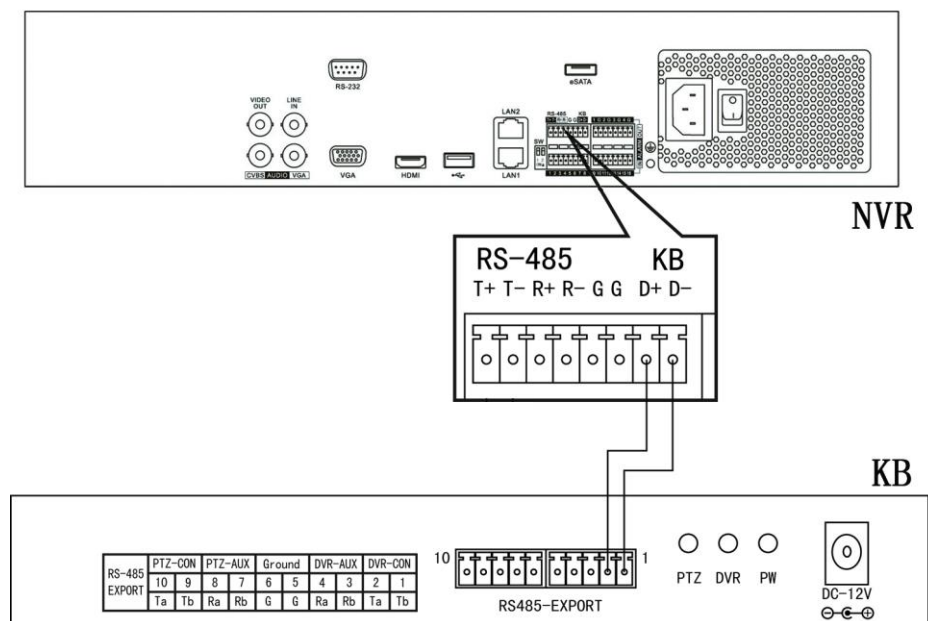
If you connect an AC load to the alarm output 3 of the NVR, then you must remove the JP 3.

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.



Make sure both the controller and NVR are grounded.

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

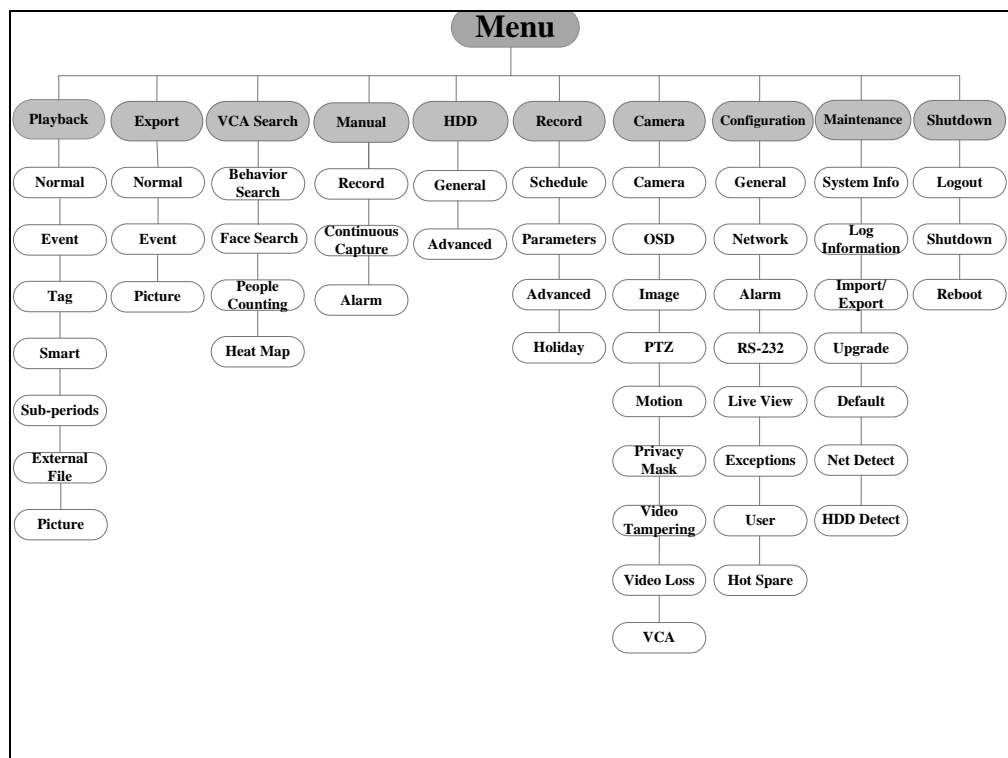


Please note that supplied values for storage space used is just for reference. The storage values in the chart are estimated by formulas and may have some deviation from actual value.

Menu Operation

Menu Structure

Refer to the following figure for the menu structure:



The menu structure may vary according to different models.

Startup and Shutdown

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

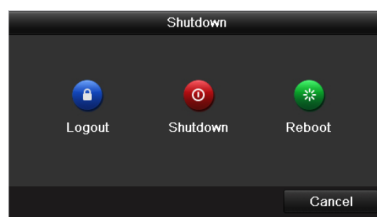
To start your NVR:

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 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 or green. 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.

Setting the Admin Password

Purpose:

For the first-time access, you need to activate the device by setting an admin password. No operation is allowed before activation. You can also activate the device via Web Browser, SADP or Client Software.

Steps:

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

 A dialog box titled "Activation" with a red header. It contains a table with the following fields:

User Name	admin
Create New P...	***** Strong
Confirm New P...	*****

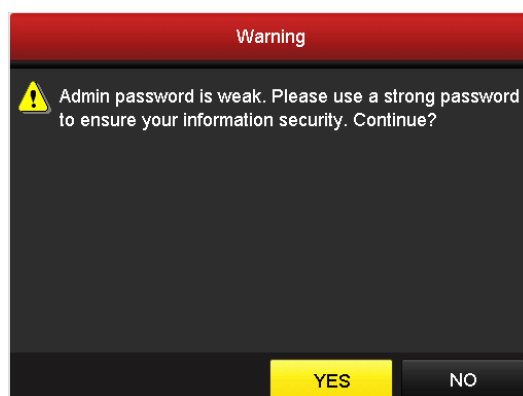
 Below the table, there is a green checkmark icon followed by the text: "Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained." At the bottom, there are three buttons: a red power icon, "OK", and "Cancel".


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

2. Click **OK** to save the password and activate the device.



For the old version device, if you update it to the new version, the following dialog box will pop up once the device starts up. You can click **YES** and follow the wizard to set a strong password.



Login and Logout

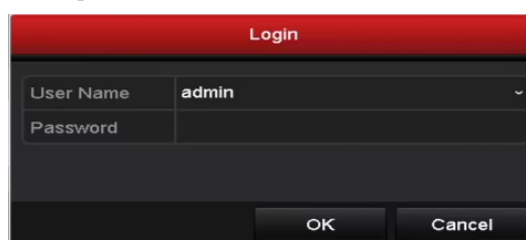
User Login

Purpose:

If NVR has logged out, you must login the device before operating the menu and other functions.

Steps:

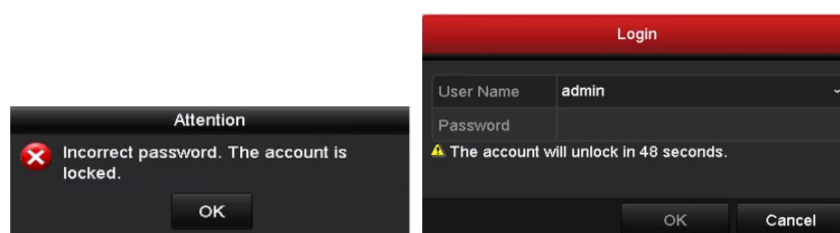
1. Select the **User Name** in the dropdown list.



2. Input **Password**.
3. Click **OK** to log in.



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



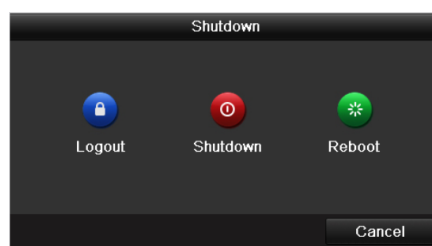
User Logout

Purpose:

After logging out, the monitor turns to the live view mode and if you want to perform some operation, you need to enter user name and password log in again.

Steps:

1. Enter the Shutdown menu.
Menu > Shutdown



2. Click **Logout**.



After you have logged out the system, menu operation on the screen is invalid. It is required to input a user name and password to unlock the system.

Live View

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

Live View Icons

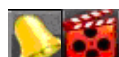
In the live view mode, there are icons at the upper-right corner of the screen for each channel, showing the status of the record and alarm in the channel, so that you can find problems as soon as possible.



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



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



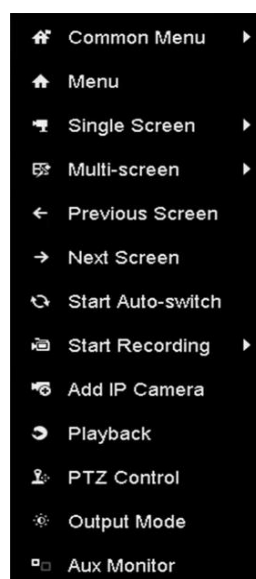
Alarm & Record



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

Right-click Menu

In live view mode, you can right click on the screen to access the following menu:



Name	Description
Common Menu	Quick access to the sub-menus which you frequently visit. Up to 5 sub-menu

Name	Description
	options are supported.
Menu	Enter the main menu of the system by right clicking the mouse.
Single Screen	Switch to the single full screen by choosing channel number from the dropdown list.
Multi-screen	Adjust the screen layout by choosing from the dropdown list.
Previous Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
Start/Stop Auto-switch	Enable/disable the auto-switch of the screens.
Start Recording	Start continuous recording or motion detection recording of all channels.
Add IP Camera	Enter the IP Camera Management interface, and manage the cameras.
Playback	Enter the playback interface and start playing back the video of the selected channel immediately.
Output Mode	Four modes of output supported, including Standard, Bright, Gentle and Vivid.

Adding IP Cameras

Purpose:

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


Before you start:

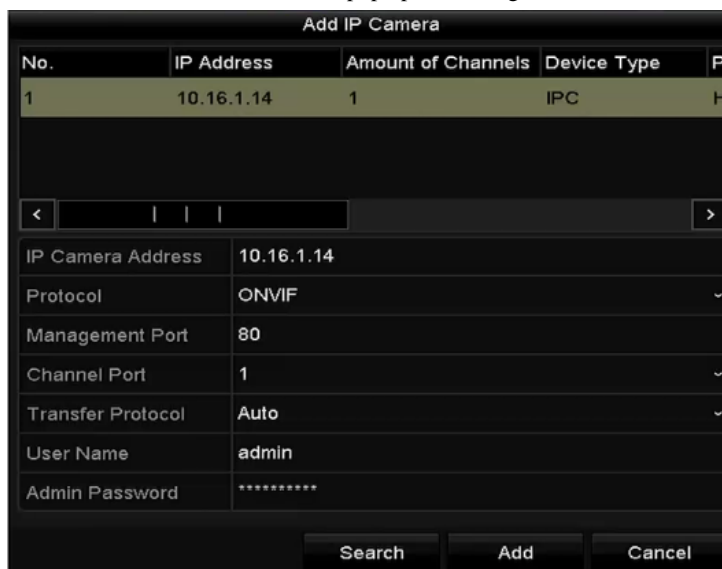
Ensure the network connection is valid and correct, and the IP camera to add has already been activated. Please refer to the User Manual for activating the inactive IP camera.

You can select one of the following three options to add the IP camera.

• **OPTION 1:**

Steps:

1. Click to select an idle window in the live view mode.
2. Click the  icon in the center of the window to pop up the adding IP camera interface.



No.	IP Address	Amount of Channels	Device Type	P
1	10.16.1.14	1	IPC	H

IP Camera Address	10.16.1.14
Protocol	ONVIF
Management Port	80
Channel Port	1
Transfer Protocol	Auto
User Name	admin
Admin Password	*****

Search Add Cancel

3. Select the detected IP camera and click the **Add** button to add it directly, and you can click the **Search**

button to refresh the online IP camera manually.


Or you can choose to custom add the IP camera by editing the parameters in the corresponding textfield and then click the **Add** button to add it.

- **OPTION 2:**

Steps:

1. Select the **Add IP Camera** option from the right-click menu in live view mode or click Menu> Camera> Camera to enter the IP camera management interface.



2. The online cameras with same network segment will be detected and displayed in the camera list.
3. Select the IP camera from the list and click the  button to add the camera. Or you can click the **One-touch Adding** button to add all cameras (with the same login password) from the list.



Make sure the camera to add has already been activated.

- **OPTION 3:**

Steps:

- 1) On the IP Camera Management interface, 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.



If the IP camera to add has not been activated, you can activate it from the IP camera list on the camera management interface.

- 3) (Optional) Check the checkbox of **Continue to Add** to add other IP cameras.
- 4) Click **Add** to add the camera.

For the successfully added IP cameras, the Security status shows the security level of the password of camera: strong password, weak password and risk password.



Icon	Explanation	Icon	Explanation
	Edit basic parameters of the camera		Add the detected IP camera.
	The camera is disconnected; you can click the icon to get the exception information of camera.		Delete the IP camera
	Play the live video of the connected camera.		Advanced settings of the camera.
	Upgrade the connected IP camera.	Security	Show the security status of the camera to be active/inactive or the password strength (strong/medium/weak/risk)

One-touch RAID Configuration

Purpose:

The 2U chassis models support the RAID storage function. And for the RAID 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.

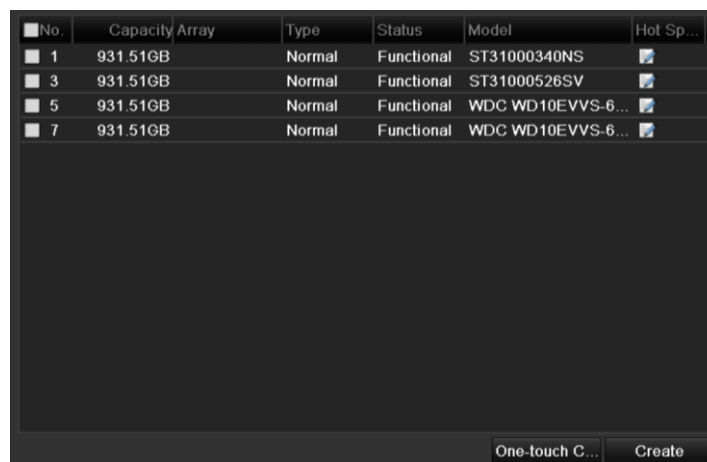
Before you start:

As the default array type is RAID 5, at least 3 HDDs must be installed in you device. And if more than 10 HDDs are installed, 2 arrays can be configured.

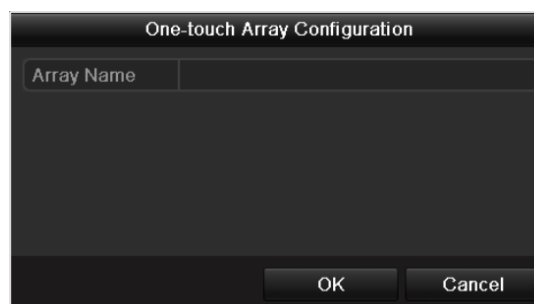
Steps:

1. Enter the Physical Disk Settings interface.

Menu > HDD > RAID



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



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



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.

4. 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.







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 click 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.



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.



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.

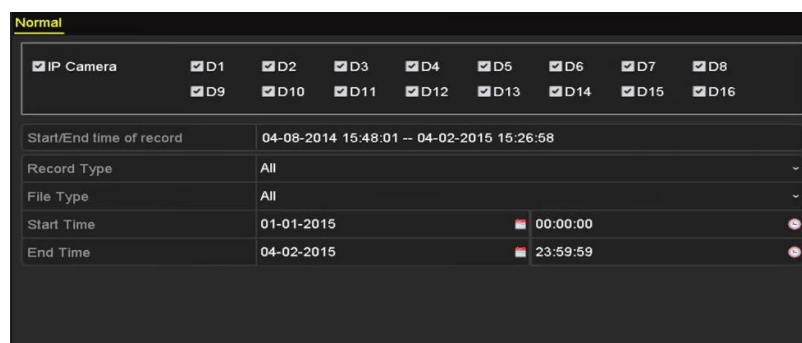
Backup

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

Steps:

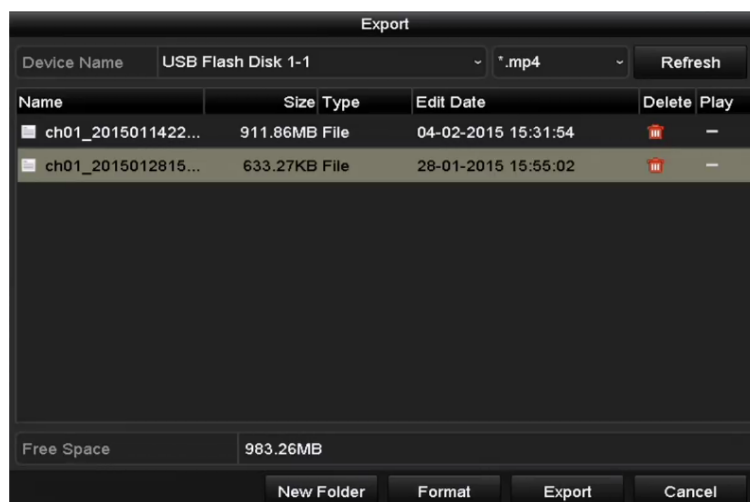
1. Enter Video Export interface.

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.



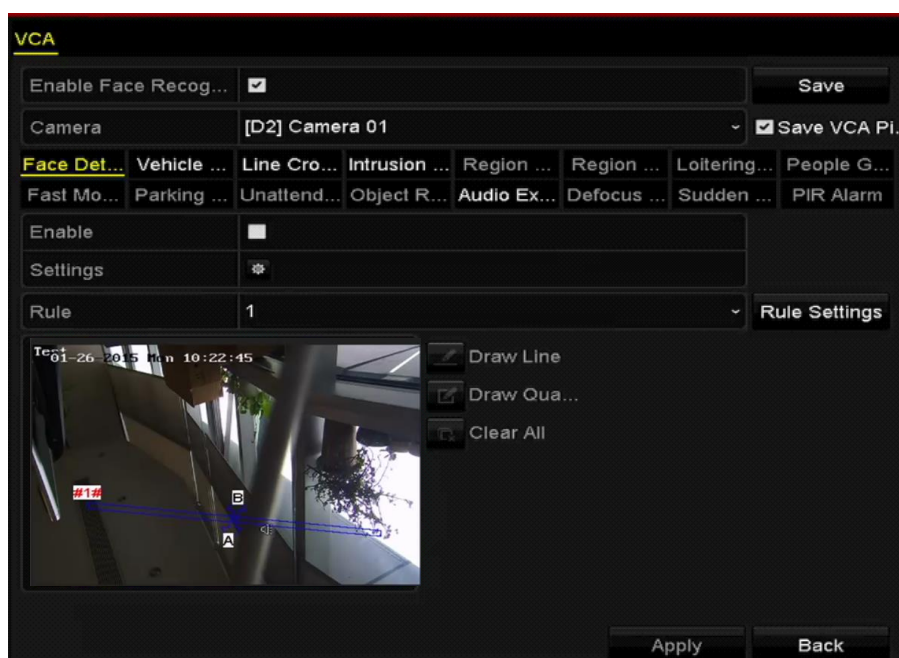
VCA Detection

Purpose:

The NVR supports the VCA detection alarm (*face detection, vehicle detection, line crossing detection and intrusion detection, region entrance detection, region exiting detection, loitering detection, people gathering detection, fast moving detection, parking detection, unattended baggage detection, object removal detection, audio loss exception detection, sudden change of sound intensity detection, and defocus detection*) sent by IP camera. The VCA detection must be enabled and configured on the IP camera settings interface first.

Steps:

1. Enter VCA Alarm interface of Camera Management and select a camera you want to detect VCA alarm.
Menu> Camera> VCA



2. Enable the VCA detection and configure the rule settings. Please refer to the *User Manual* for detailed instructions.



Please refer to the *User Manual* for detailed instructions to set the VCA rules.

VCA Search

The NVR supports the VCA search for the behavior analysis, face capture, people counting and heat map.

Face Search: Based on the uploaded face picture resources and the defined similarity degree (0~100), fast search the matched face pictures and video files from the face detection results.

Behavior Search: Search and view the behavior detection (including the line crossing detection, intrusion detection, unattended baggage detection, etc.) results in pictures and video files.

Plate Search: You can search and view the matched captured vehicle plate picture and related information according to the plate searching conditions including the start time/end time, country and plate No..

People Counting: Calculate the number of people entered or exited from a certain configured area and show in chart of daily/weekly/monthly/annual report.

Heat Map: Analyze the visit times and dwell time of customers in a configured area. The heat map is a graphical representation of data represented by colors.



Please refer to the *User Manual* for detailed instructions of VCA Search.

Behavior Search

☒ IP Camera

☒ D1 ☒ D2 ☒ D3 ☒ D4 ☒ D5 ☒ D6 ☒ D7 ☒ D8
☒ D9 ☒ D10 ☒ D11 ☒ D12 ☒ D13 ☒ D14 ☒ D15 ☒ D16
☒ D17 ☒ D18 ☒ D19 ☒ D20 ☒ D21 ☒ D22 ☒ D23 ☒ D24
☒ D25 ☒ D26 ☒ D27 ☒ D28 ☒ D29 ☒ D30 ☒ D31 ☒ D32
☒ D33 ☒ D34 ☒ D35 ☒ D36 ☒ D37 ☒ D38 ☒ D39 ☒ D40
☒ D41 ☒ D42 ☒ D43 ☒ D44 ☒ D45 ☒ D46 ☒ D47 ☒ D48
☒ D49 ☒ D50 ☒ D51 ☒ D52 ☒ D53 ☒ D54 ☒ D55 ☒ D56
☒ D57 ☒ D58 ☒ D59 ☒ D60 ☒ D61 ☒ D62 ☒ D63 ☒ D64

Start Time

03-26-2015

00:00:00

End Time

03-26-2015

23:59:59

Type

All

Search

Back

Accessing by Web Browser



You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, please strengthen your own protection. If the product does not work properly, please contact with your dealer or the nearest service center.

Logging In

You can get access to the device via web browser. You may use one of the following listed web browsers: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, Mozilla Firefox, and Google Chrome. The supported resolutions include 1024*768 and above.

Steps:

1. Open web browser, input the IP address of the device and then press Enter.
2. Login to the device.
 - If the device has not been activated, you need to activate the device first before login.

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



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

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

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



You may have to close the web browser to finish the installation of the plug-in.

Live View

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



The live view interface may differ according to different models.

Interface Introduction















No.	Name	Description
1	Channel List	Displays the list of channels and the playing and recording status of each channel.
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 editing and calling. PTZ function can only be realized if the connected camera supports PTZ control.

Starting 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
	Select different stream type for live view by clicking the icon  : live view in main stream;  : live view in sub stream;  :live view in transcoded stream.		

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 **Configuration> Storage> Schedule Settings** to enter Record Schedule settings interface.
2. Select the camera to configure the record schedule.
3. Check the checkbox of **Enable** to enable recording schedule.

Record Schedule

Capture

Channel No.

IP Camera1

☒ Enable

Continuous

Delete
Delete All

Advanced

Mon

0 2 4 6 8 10 12 14 16 18 20 22 24

Tue

0 2 4 6 8 10 12 14 16 18 20 22 24

Wed

0 2 4 6 8 10 12 14 16 18 20 22 24

Thu

0 2 4 6 8 10 12 14 16 18 20 22 24

Fri

0 2 4 6 8 10 12 14 16 18 20 22 24

Sat

0 2 4 6 8 10 12 14 16 18 20 22 24

Sun

0 2 4 6 8 10 12 14 16 18 20 22 24

Continuous

Motion | Alarm

Alarm

Motion

Motion & Alarm

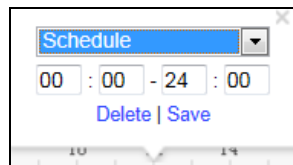
Event

Copy to...

Save


4. Choose the day in a week configure the recording schedule.

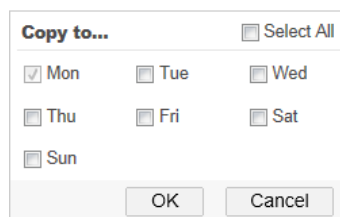
- 1) Click a day to set the start time and end time for recording.



- 2) Select the **Record Type** for the period. The record type can be Schedule, Motion, Alarm, Motion & Alarm, Motion | Alarm and Event.

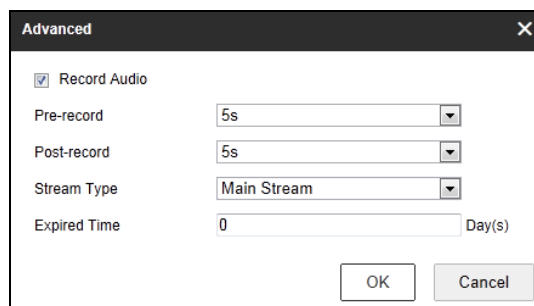
- 3) Click **Save** to save the settings.


- 4) Click the  icon of the day to copy the settings of current day to other days of the week if required.



- 5) Click **OK** to save the settings.

5. Click **Advanced** to configure advanced record parameters.

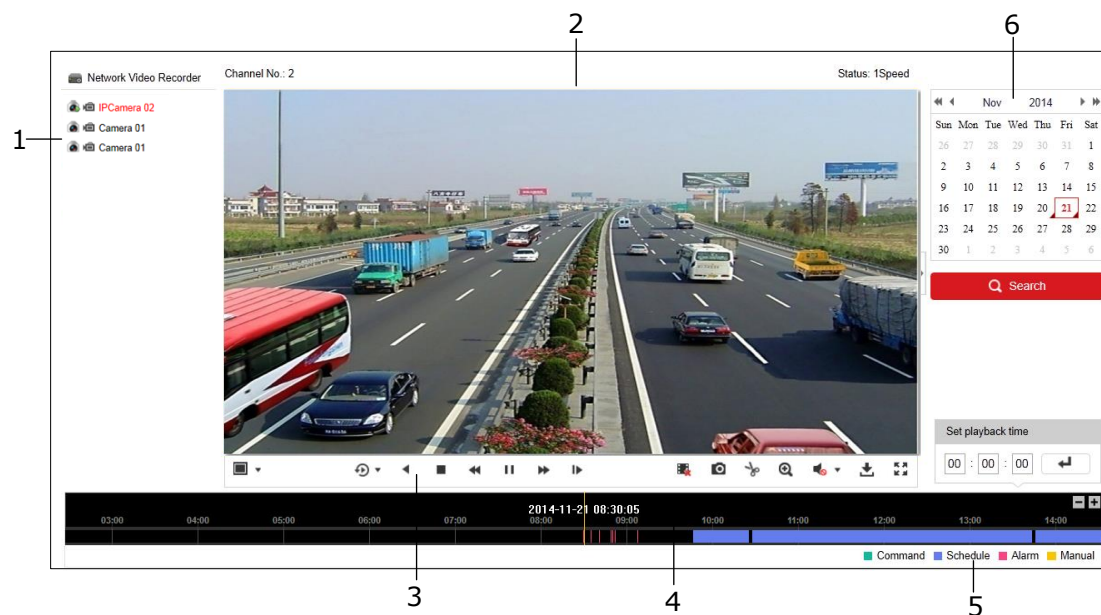


6. You can click  **Copy to...** to configure advanced record parameters to copy the schedule of current camera to other cameras.

7. Click **Save** to activate the above settings.

Playback

Click the **Playback** tab to enter the playback interface.




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	Recording Type	Show the icons of different recording types.
6	Calendar	You can select the date to play the video files.


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.

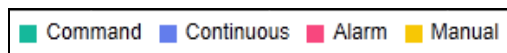
Playback Control Buttons Description


Button	Description	Button	Description
	Play/Pause		Stop
	Speed down		Speed up
	Play by single frame		Capture
	Stop all playback		Download
	Start/Stop video clipping		Open/Close audio
	Full screen		Reverse playback

Button	Description	Button	Description
	Transcoded Playback		

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.




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.

Resolution	Auto	▼
Bitrate	2048K	▼
Frame Rate	Full Frame Rate	▼

3. Click the  button, if it turns to , the transcoding process is completed.
4. Click the  button to start transcoded playback.