



HIKVISION

Digital Video Recorder

Quick Start Guide

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Quick Start Guide

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About this Manual

This Manual is applicable to the HD-SDI series DVR.

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 (<http://overseas.hikvision.com/en/>).

Please use this user manual under the guidance of professionals.

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Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 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 (A)/NMB-3(A) 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.

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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
7200HFHI-SL	DS-7204HFHI-SL DS-7208HFHI-SL	Network DVR
7200HFHI-SE	DS-7204HFHI-SE DS-7208HFHI-SE	Network DVR
7200HFHI-ST	DS-7204HFHI-ST DS-7208HFHI-ST	Network DVR
7300HFHI-SL	DS-7304HFHI-SL DS-7308HFHI-SL DS-7316HFHI-SL	Network DVR
7300HFHI-ST	DS-7304HFHI-ST DS-7308HFHI-ST DS-7316HFHI-ST	Network DVR
8100HFHI-SL	DS-8104HFHI-SL DS-8108HFHI-SL DS-8116HFHI-SL	Network DVR
8100HFHI-ST	DS-8104HFHI-ST DS-8108HFHI-ST DS-8116HFHI-ST	Network DVR

DVR Installation

During the installation of the DVR:

1. Use brackets for rack mounting.
2. Ensure there is ample room for audio and video cables.
3. When installing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
4. Connect both the alarm and RS-485 cable.
5. Allow at least 2cm (≈0.75-inch) of space between racks mounted devices.
6. Ensure the DVR is grounded.
7. Environmental temperature should be within the range of -10 °C ~ 55 °C, 14 °F ~ 131 °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 on your DVR.

Tools Required: Screwdriver.



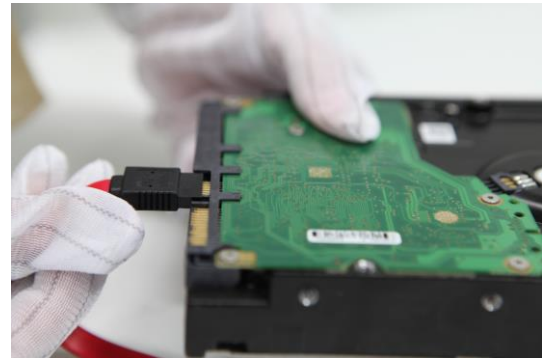
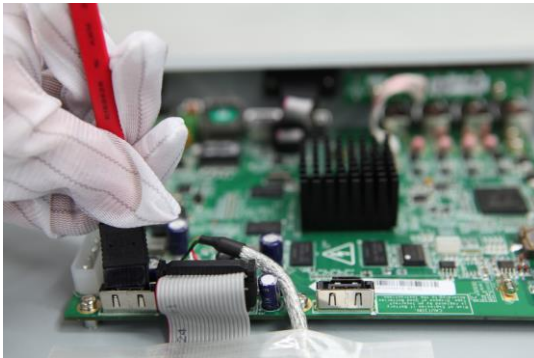
As the installation steps of HDD are similar among different models, here we take the steps of the DS-7200HFHI-SE as an example.

Steps:

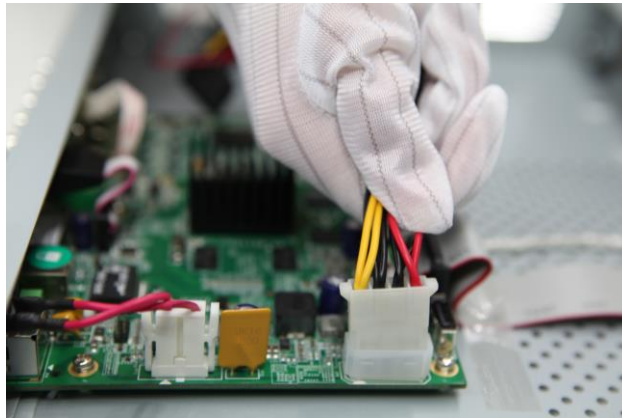
1. Remove the cover from the DVR by unfastening the screws on the back and side.



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



3. Connect the power cable to the HDD.

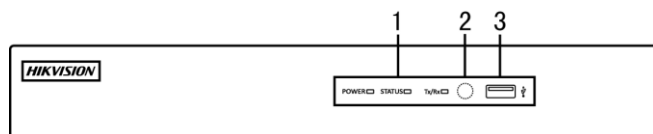


4. Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.

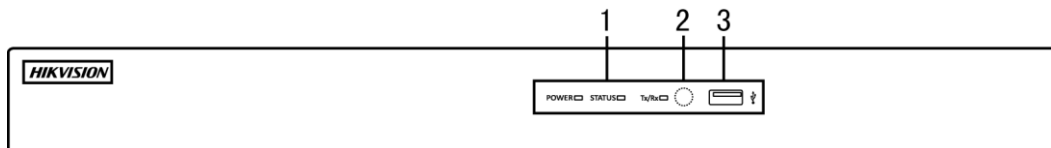


5. Re-install the cover of the DVR and fasten screws.

Front Panels



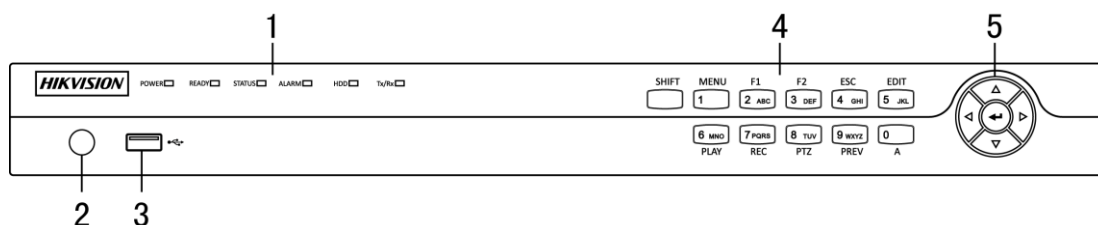
Front Panel of DS-7204HFHI-SE & DS-7200HFHI-SL



Front Panel of DS-7208HFHI-SE

Description of Front Panel

No.	Name	Function Description
1	POWER	Power indicator turns yellow when the power switch on the real panel is turned on.
	STATUS	Status indicator blinks red when data is being read from or written to HDD.
	TX/RX	TX/RX indicator blinks yellow when network connection is functioning properly.
2	IR Receiver	Receiver for IR remote
3	USB Interfaces	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).



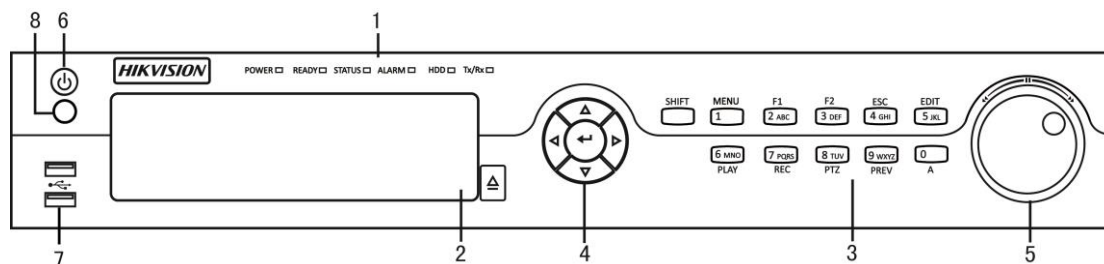
Front Panel of DS-7200HFHI-ST

Description of Control Panel Buttons

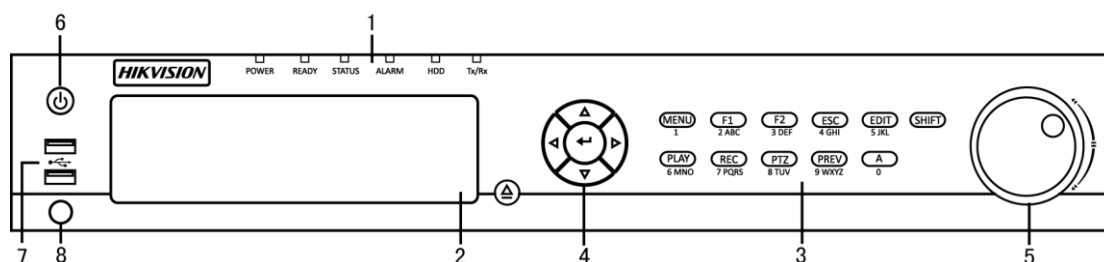
No.	Name	Function Description
1	POWER	Power indicator turns yellow once the power switch turns on.
	READY	Ready indicator turns yellow when system is running.
	STATUS	Status indicator turns red when SHIFT mode is on.
	ALARM	Alarm indicator turns red when a sensor alarm is detected.
	HDD	HDD indicator blinks red when data is being read from or written to HDD.
	TX/RX	TX/RX indicator blinks yellow when network connection is functioning properly.
2	IR Receiver	Receiver for IR remote.
3	USB Interface	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).

No.	Name	Function Description	
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 all-day 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).		
5	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.	

No.	Name	Function Description
	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 the video by a single frame.
		In Auto-switch mode, it can be used to stop /start auto switch.



Front Panel of DS-7300HFHI-SL



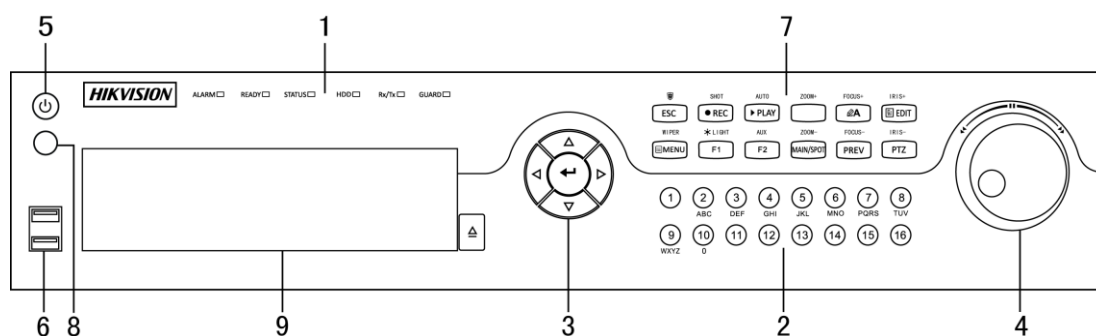
Front Panel of DS-7300HFHI-ST

Description of Front Panel

No.	Name	Function Description
1	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	Indicator turns green when DVR is controlled by an IR remote control with the address from 1~254; Indicator turns red when the SHIFT button is used; Indicator does not light when the DVR is controlled by a keyboard or by the IR remote control with the address of 255; 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; 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.
	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.
2	DVD-R/W	Slot for DVD-R/W.

No.	Name	Function Description	
3	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.
			In live view or playback mode, the F1 button can be used to switch between main and spot video output.
		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”;
			In Playback mode, it is used for direct access to playback interface.
		7/PQRS/REC	Enter numeral “7”;
			Enter letters “PQRS”;
Manual record, for direct access to manual record interface; manually enable/disable record.			
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).		
4	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.	

No.	Name	Function Description
	ENTER	In PTZ control mode, it can control the movement of the PTZ camera.
		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 the video by a single frame.
		In Auto-switch mode, it can be used to stop /start auto switch.
5	POWER	Power on/off switch.
6	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.
7	USB Interface	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
8	IR Receiver	Receiver for IR remote control.



Front Panel of DS-8100HFHI-ST & SL

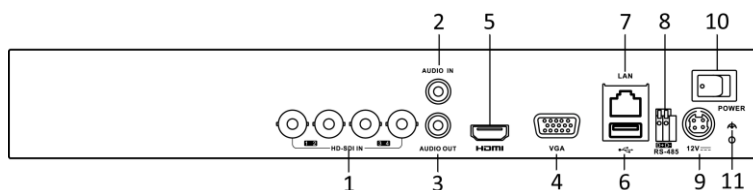
Description of Front Panel

No.	Name	Function Description
1	Status Indicators	ALARM Alarm indicator turns red when a sensor alarm is detected.
		READY Ready indicator is normally blue, indicating that the DVR is functioning properly.
		STATUS Indicator turns blue when DVR is controlled by an IR remote. Indicator turns red when controlled by a keyboard and orange when IR remote and keyboard is used at the same time. Indicator does not light when the DVR is controlled by the IR remote control with the address of 255.
		HDD HDD indicator blinks in red when data is being read from or written to HDD.
		TX/RX TX/RX indicator blinks in blue when network connection is functioning properly.
		GUARD Indicator turns blue when the device is armed; Indicator does not light when the device is disarmed; The arm/disarm state can be initiated by pressing and holding on the ESC button for more than 3 seconds in live view mode.
2	Alphanumeric Buttons	Switch to the corresponding channel in Live view or PTZ Control mode.

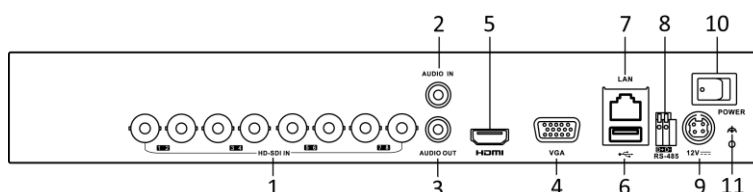
No.	Name		Function Description
			Input numbers and characters in Edit mode.
			Switch between different channels in Playback mode.
			The light of the button is blue when the corresponding channel is recording; it is red when the channel is in network transmission status; it is pink when the channel is recording and transmitting.
3	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 the video by a single frame.	
		In Auto-switch mode, it can be used to stop /start auto switch.	
4	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: 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.
5	POWER		Power on/off switch.
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	Exit and back to the previous menu.
			Arm/disarm the DVR 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	Enter the Playback menu;
			Auto scan in the PTZ Control mode.
		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).		

No.	Name	Function Description
	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/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 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	IR Receiver	Receiver for IR remote control.
9	DVD-R/W	Slot for DVD-R/W.

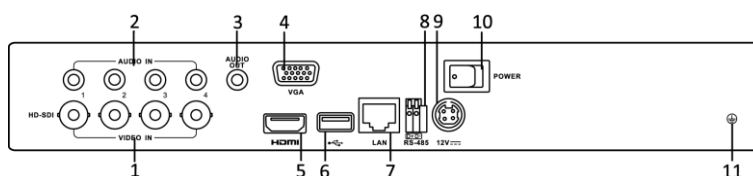
Rear Panels



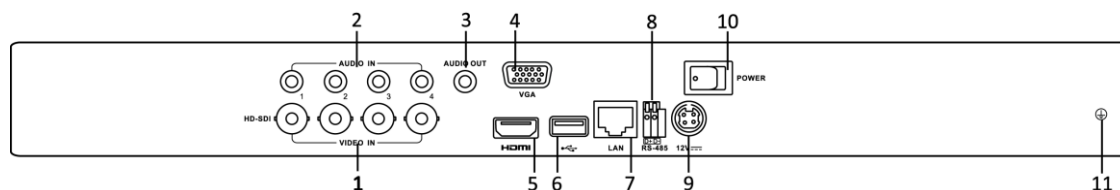
DS-7204HFHI-SL



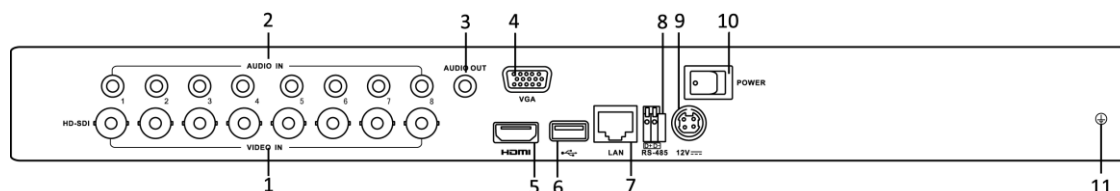
DS-7208HFHI-SL



DS-7204HFHI-SE

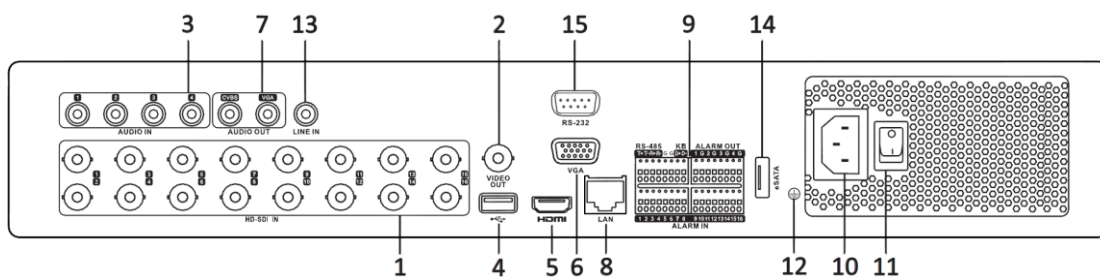


DS-7204HFHI-ST

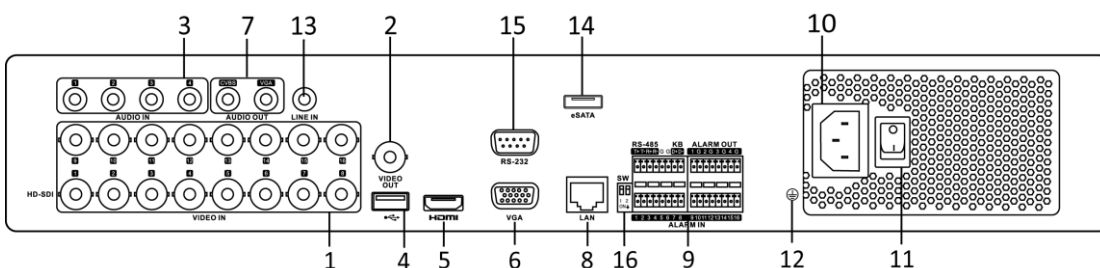


DS-7208HFHI-SE and DS-7208HFHI-ST

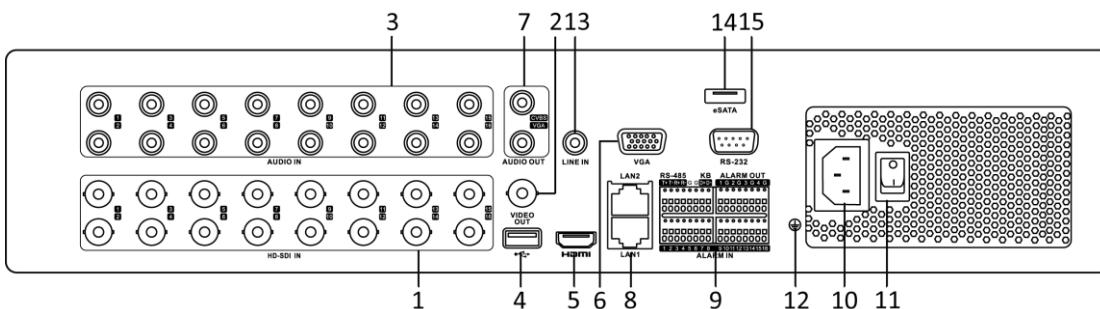
No.	Item	Description
1	VIDEO IN	HD-SDI interface for video input.
2	AUDIO IN	RCA connector
3	AUDIO OUT	RCA connector
4	VGA	DB15 connector for VGA output. Display local video output and menu.
5	HDMI	HDMI video output connector.
6	USB Port	Universal Serial Bus (USB) port for additional devices.
7	Network Interface	Connector for network
8	RS-485 Interface	Connector for RS-485 devices.
9	Power Supply	DC 12V power supply.
10	Power Switch	Switch for turning on/off the device.
11	GND	Ground



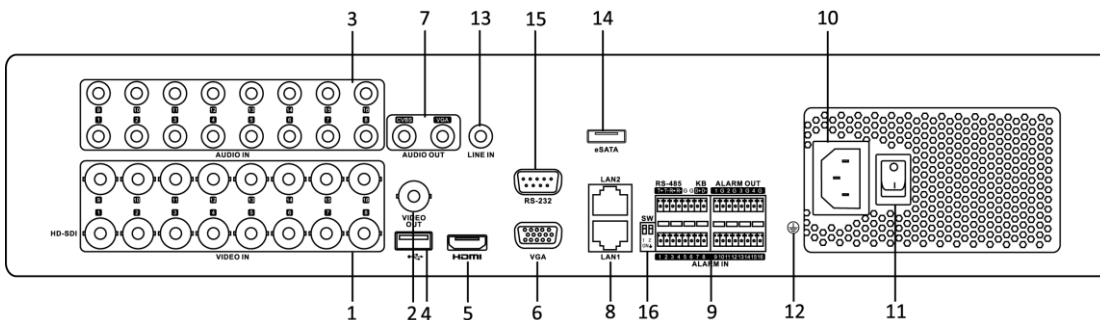
DS-7300HFHI-SL



DS-7300HFHI-ST



DS-8100HFHI-SL



DS-8100HFHI-ST

No.	Item	Description
1	VIDEO IN	HD-SDI interface for video input.
2	VIDEO OUT	BNC connector for video output.
3	AUDIO IN	RCA connector
4	USB Port	Universal Serial Bus (USB) port for additional devices.
5	HDMI	HDMI video output connector.
6	VGA	DB15 connector for VGA output. Display local video output and menu.
7	AUDIO OUT	RCA connector
8	Network Interface	Connector for network
9	RS-485 Interface	Connector for RS-485 devices. T+ and T- pins connect to R+ and R-

No.	Item	Description
		pins of PTZ receiver respectively.
		D+, D- pin connects to Ta, Tb pin of controller. For cascading devices, the first DVR's D+, D- pin should be connected with the D+, D- pin of the next DVR.
		Connector for alarm input.
		Connector for alarm output.
10	Power Supply	AC 100 ~ 240V power supply.
11	Power Switch	Switch for turning on/off the device.
12	GND	Ground
13	LINE IN	BNC connector for audio input.
14	eSATA	Connects external SATA HDD, CD/DVD-RW.
15	RS-232 Interface	Connector for RS-232 devices.
16	Termination Switch (for DS-7300HFHI-ST and DS-8100HFHI-ST)	RS-485 termination switch. Up position is not terminated. Down position is terminated with 120Ω resistance.

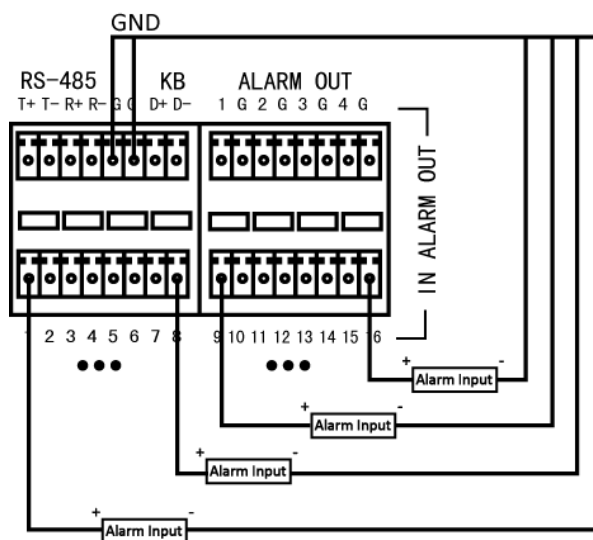
Peripheral Connections

Wiring of Alarm Input

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

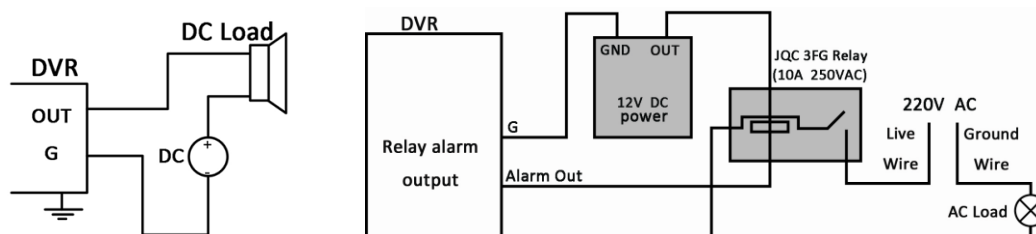


If the alarm input is not an open/close relay, please connect an external relay between the alarm input and the device.



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 DVR). 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 DVR, then you must remove the JP 3.

Alarm Connection

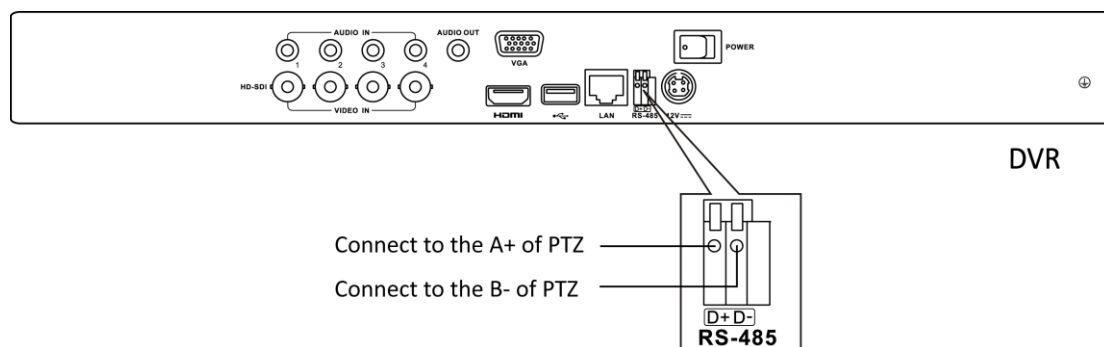
To connect alarm devices to the DVR:

1. Disconnect *pluggable block* from the ALARM IN /ALARM OUT terminal block.
2. Press and hold the orange part of the *pluggable block*; insert signal cables into slots and release the orange part. Ensure signal cables are in tight.

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

RS-485 and Controller Connection

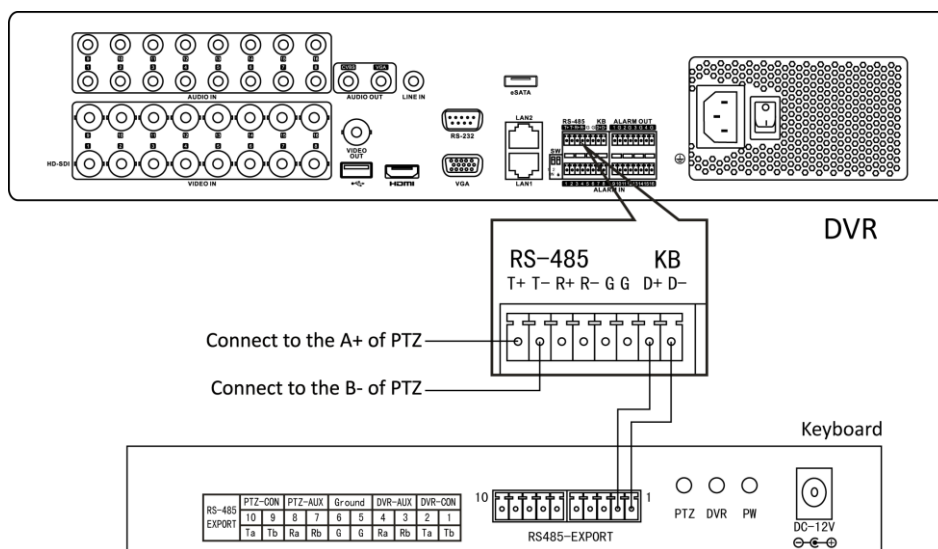
For DS-7200HFHI-SL, DS-7200HFHI-SE & DS-7200HFHI-ST



To connect PTZ to the DVR:

1. Disconnect *pluggable block* from the RS-485 terminal block.
2. Press and hold the orange part of the *pluggable block*; insert signal cables into slots and release the orange part. Ensure signal cables are in tight.
3. Connect A+ on PTZ to D+ on terminal block and B- on controller to D- on terminal block. Fasten stop screws.
4. Connect *pluggable block* back into terminal block.

For DS-7300HFHI-ST&SL & DS-8100HFHI-ST&SL



To connect PTZ to the DVR:

1. Disconnect *pluggable block* from the RS-485 terminal block.
2. Press and hold the orange part of the *pluggable block*; insert signal cables into slots and release the orange part. Ensure signal cables are in tight.
3. Connect A+ on PTZ to T+ on terminal block and B- on controller to T- on terminal block. Fasten stop screws.
4. Connect *pluggable block* back into terminal block.

To connect a controller to the DVR:

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

2. Press and hold the orange part of the *pluggable block*; insert signal cables into slots and release the orange part. 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 DVR are grounded. Here we take the controller connection of the DS-8100HFHI-ST as an example.

Termination Switch Operation



This function is applicable to the DS-7300HFHI-ST&SL and DS-8100HFHI-ST&SL.

Purpose:

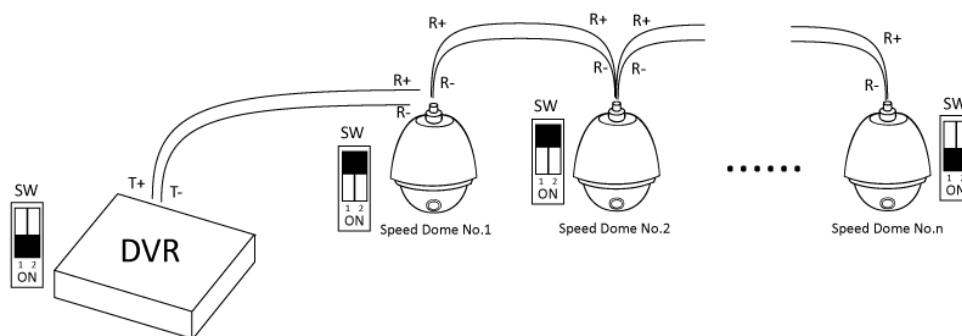
To connect the DVR with several speed domes, the bus topology can be adopted, which means the speed domes are connected with each other via the R+ and R- of RS-485 serial interface. But due to the impedance of 485 wire, the longer the wire is, the greater the impedance gets.

To avoid the signal reduction caused by the great impedance of long distance transmission, please connect two 120Ω resistors in the circuit: one resistor between the DVR and the nearest speed dome, and the other one after the furthest speed dome.

Steps:

1. Turn on the SW switches on the DVR and the furthest speed dome.
2. Keep other SW switches off.

The connection diagram and status of each SW switch are shown in the following figure.



For the DS-7300HFHI-SL and DS-8100HFHI-SL series DVR, the termination switch is placed on the mainboard instead of the rear panel. Open the upper cover and turn on/off the SW switch if needed.

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	1800M
8192K	3600M
16384K	7200M

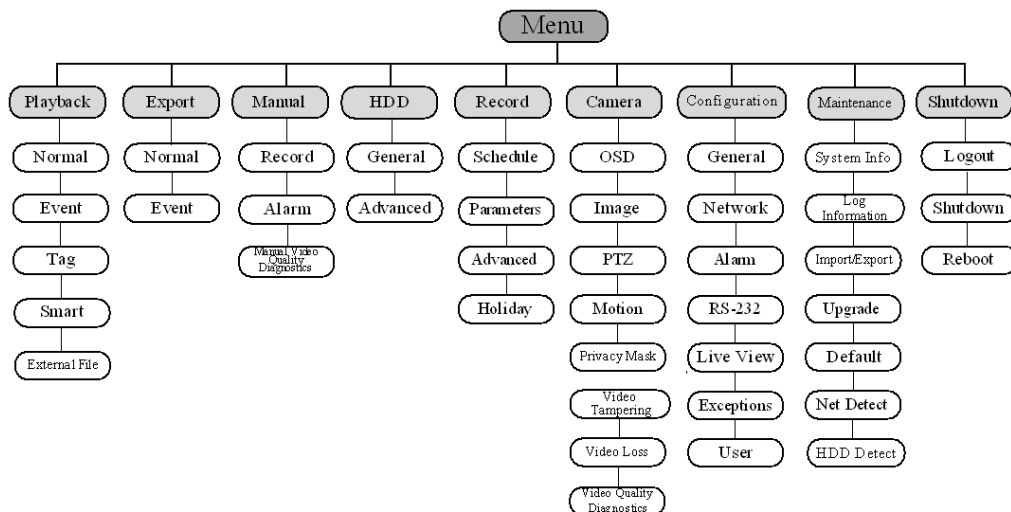


Please note that supplied values for storage space used are just for reference. Storage space used is estimated by formulas and may have some deviation from actual value.

Menu Operation

Menu Structure

The menu structure of the DVR is as follows:



Menu structure varies according to different series.

Startup and Shutdown

Proper startup and shutdown procedures are crucial to expand the service time of the DVR.

To start the DVR:

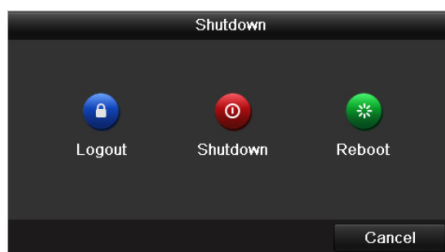
Check the power supply is plugged into an electrical outlet. It is **HIGHLY** recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. Turn on the power switch on the rear panel; the Power indicator LED on the front panel should be yellow.

To shut down the DVR:

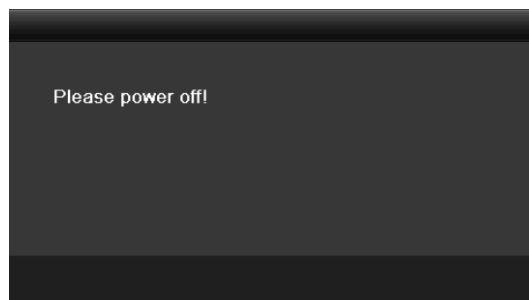
Steps:

1. Enter the Shutdown menu.

Menu > Shutdown



2. Select the **Shutdown** button.
3. Click the **Yes** button.
4. Turn off the power switch on the rear panel when the note appears (supported by DS-7200HFHI-SE and DS-7200HFHI-SL series).



After the device starting up, the wizard will guide you through the basic settings, including editing password, date and time settings, network settings, HDD initializing, and recording.

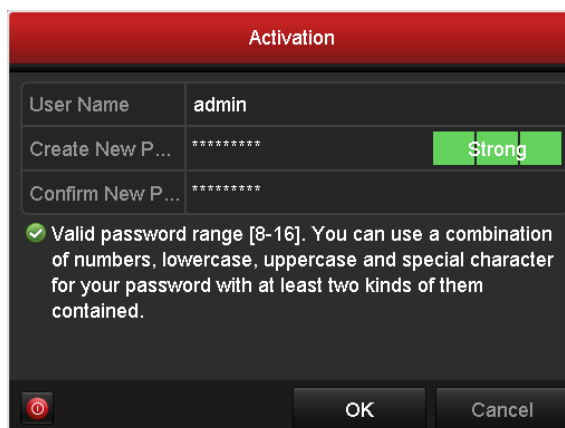
Setting the Admin Password


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**.

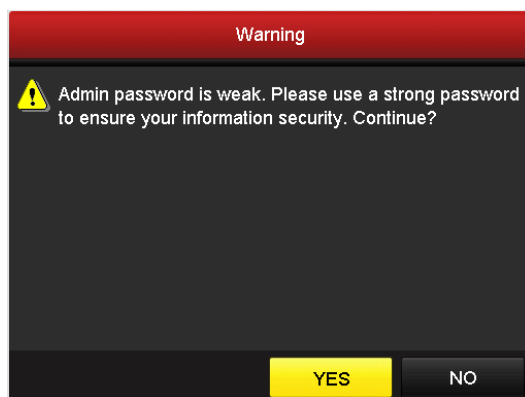


 **STRONG PASSWORD RECOMMENDED**– We highly recommend you create a strong password of your own choosing (using 8-16 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password 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

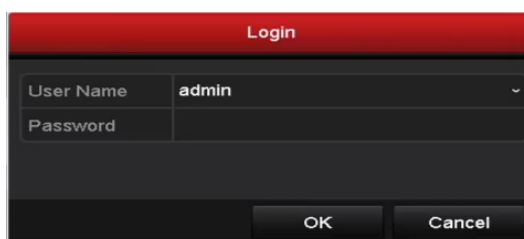
User Login

Purpose:

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

Steps:

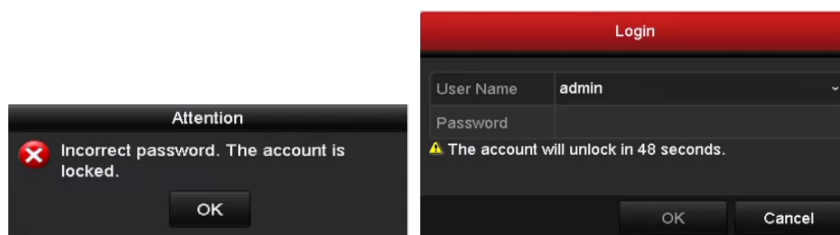
1. Select the **User Name** in the dropdown list.



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.



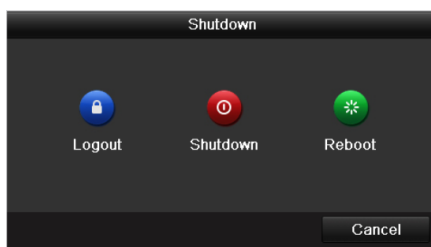
User Logout

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



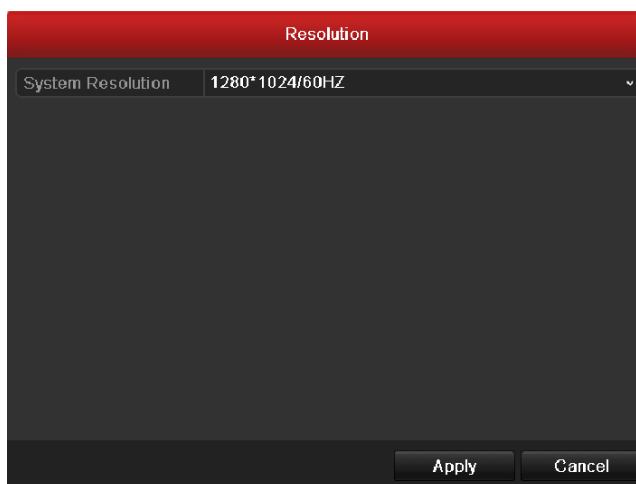
2. Click **Logout**.

Using the Setup Wizard

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

Operating the Setup Wizard:

1. Select the system resolution from the dropdown menu. The default resolution is 1280 ×1024/60Hz.
Click **Apply** to save the resolution settings.



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

Network Settings

Purpose:

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

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network



2. Select the **General** tab.
3. In the **General Settings** interface, you can configure the following settings: Working mode (applicable for DS-8100HFHI-ST&SL only), NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.
If the DHCP server is available, you can check the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.



The valid value of MTU is from 500 to 1500.

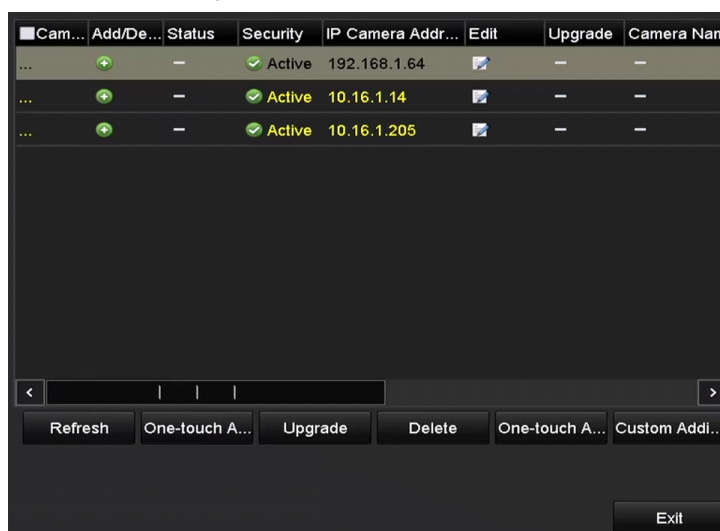
4. After having configured the general settings, click the **Apply** button to save the settings.


Adding IP Cameras

- **OPTION 1:**

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.

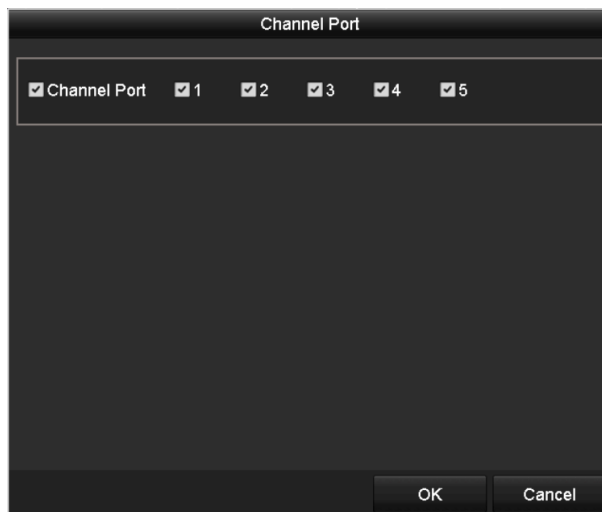


2. The online cameras with same network segment will be detected and displayed in the camera list.
3. Select the IP camera from the list and click the  button to add the camera (with the same admin password of the DVR's). Or you can click the **One-touch Adding** button to add all cameras (with the same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



Make sure the camera to add has already been activated by setting the admin password, and the admin password of the camera is the same with the DVR's.

4. (For the encoders with multiple channels only) check the checkbox of Channel Port in the pop-up window, as shown in the following figure, and click **OK** to add multiple channels.



- **OPTION 2:**

Steps:

- 1) On the IP Camera Management interface, click the **Custom Adding** button to pop up the Add IP Camera (Custom) interface.



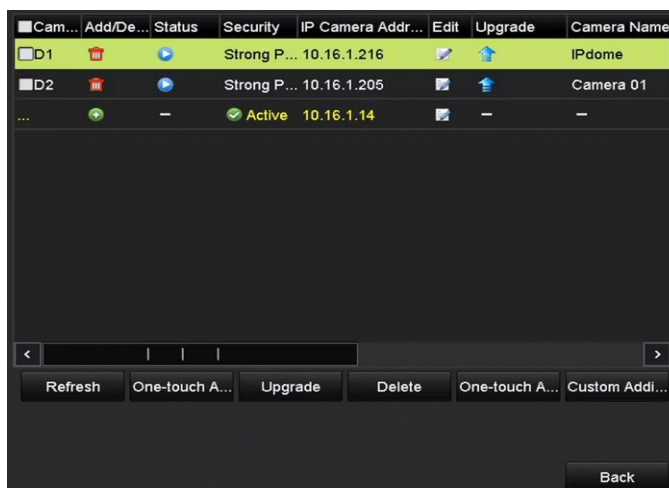
- 2) You can edit the IP address, protocol, management port, and other information of the IP camera to be added.



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) 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.



Explanation of the icons

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)

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 right top 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.



Indicating that there is an alarm or are alarms. Alarm includes (video loss, tampering, motion detection or sensor alarm, etc.).



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



Alarm & Recording

PTZ Control

To enter the PTZ control panel, there are two ways supported.

OPTION 1:

In the PTZ settings interface, click the **PTZ** button on the lower-right corner which is next to the Back button.

OPTION 2:

In the Live View mode, you can press the PTZ Control button on the front panel or on the remote control, or choose the PTZ Control icon , or select the PTZ option in the right-click menu.

Click the **Configuration** button on the control panel, and you can enter the PTZ Settings interface.



In PTZ control mode, the PTZ panel will be displayed when a mouse is connected with the device. If no mouse is connected, the **PTZ** icon appears in the lower-left corner of the window, indicating that this camera is in PTZ control mode.



Description of the PTZ panel icons

Icon	Description	Icon	Description	Icon	Description
	Direction button and the auto-cycle button		Zoom+, Focus+, Iris+		Zoom-, Focus-, Iris-
	The speed of the PTZ movement		Light on/off		Wiper on/off
	3D-Zoom		Image Centralization		Menu
	Switch to the PTZ control interface		Switch to the one-touch control interface		Switch to the general settings interface
	Previous item		Next item		Start pattern / patrol
	Stop the patrol / pattern movement		Exit		Minimize windows

Record Settings

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.

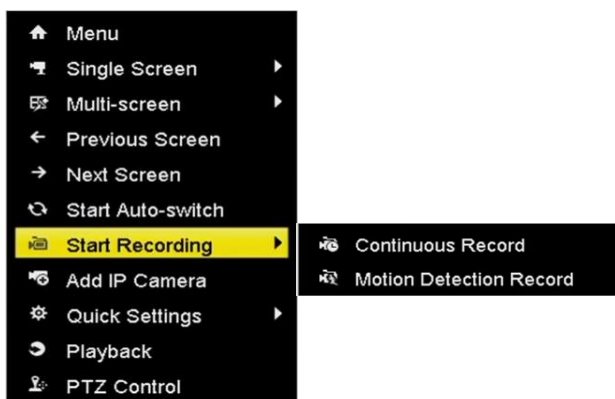


Click the  icon to enable the record, and the icon turns to . And click  icon to disable the record, then the icon turns to .

All-day Recording

Perform the following steps to set the all-day recording.

On the live view window, right click the window and move the cursor to the Start Recording option, and select Normal Record or Motion Detection Record on your demand.




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.

- **OPTION 1:**

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



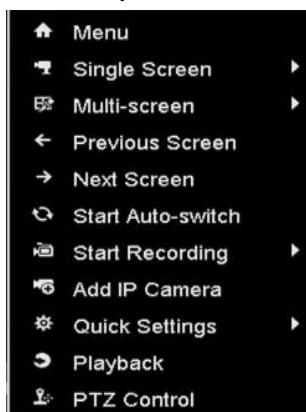
Only record files recorded during the last five minutes on this channel will be played back.



● **OPTION 2:**

1. Enter the Playback menu.

Right click a channel in live view mode and select Playback from the menu.



To the DS-7300HFHI-ST&SL and DS-8100HFHI-ST&SL series DVR, pressing numerical buttons on the front panel 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.



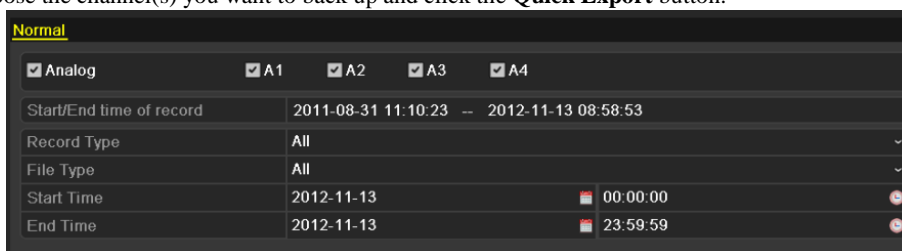
Just check the channel or channels if you want to switch playback to another channel or execute simultaneous playback of multiple channels.

Backup

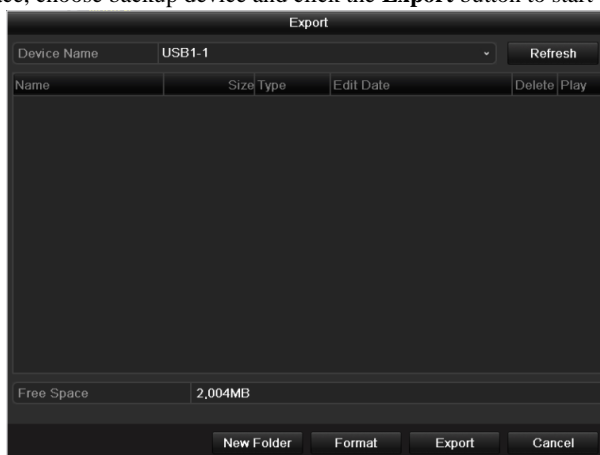
Recorded files can be backed up to various devices, such as USB flash drives, USB HDDs or USB DVD writers. To export recorded files:

1. Enter Video Export interface.

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

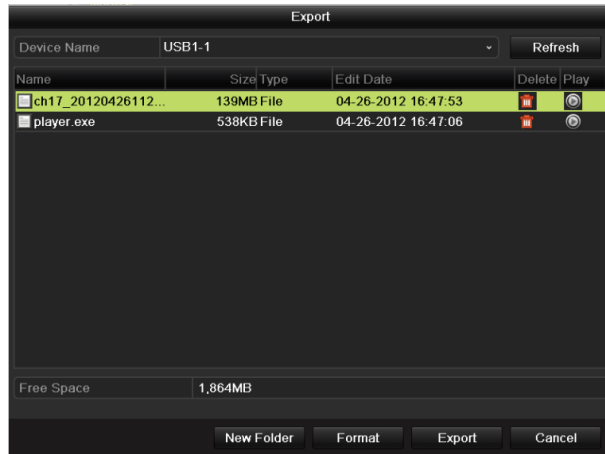


2. Enter Export interface, choose backup device and click the **Export** button to start exporting.



3. Check backup result.

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



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.

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.

Activation

User Name: admin

Password: [masked] Strong

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

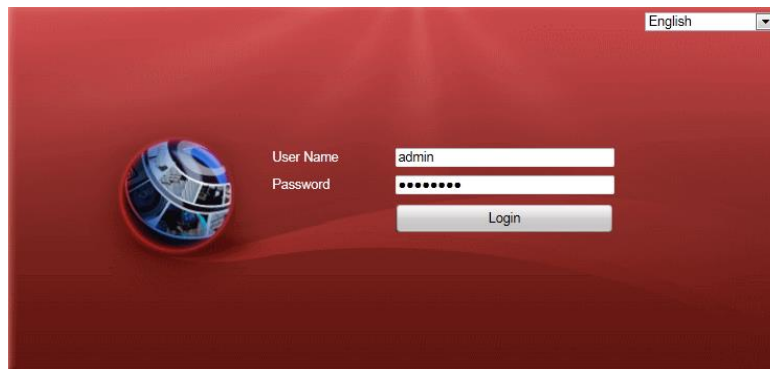
Confirm: [masked]

OK

- 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.



First Choice for Security Professionals