Dahua Network Video Recorder User's Manual

V 2.4.3

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Welcome

Thank you for purchasing our network video recorder!

This user’s manual is designed to be a reference tool for your system.

Please open the accessory bag to check the items one by one in accordance with the list below.

Contact your local retailer ASAP if something is missing or damaged in the bag.

Important Safeguards and Warnings

1．Electrical safety

All installation and operation here should conform to your local electrical safety codes.
The product must be grounded to reduce the risk of electric shock.
We assume no liability or responsibility for all the fires or electric shock caused by improper handling or installation.

2．Transportation security

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

3．Installation

Keep upwards. Handle with care.
Do not apply power to the NVR before completing installation.
Do not place objects on the NVR.

4．Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.
We are not liable for any problems caused by unauthorized modifications or attempted repair.

5．Environment

The NVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.
This series product shall be transported, storage and used in the specified environments.
Environment which needs to comply with the following conditions:

- The function of the ITE being investigated to IEC 60950-1 is considered not likely to require connection to an Ethernet network with outside plant routing, including campus environment.
- The installation instructions clearly state that the ITE is to be connected only to PoE networks without routing to the outside plant.

6. Accessories

Be sure to use all the accessories recommended by manufacturer.
Before installation, please open the package and check all the components are included.
Contact your local retailer ASAP if something is broken in your package.

7. Lithium battery

Improper battery use may result in fire, explosion, or personal injury!
When replace the battery, please make sure you are using the same model!
CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Before your operation please read the following instructions carefully.

- **Installation environment**

- ✧ Keep away from extreme hot places and sources；
- ✧ Avoid direct sunlight；
- ✧ Keep away from extreme humid places；
- ✧ Avoid violent vibration；
- ✧ Do not put other devices on the top of the NVR；
- ✧ Be installed in well ventilated place; do not block the vent.

Accessories

Check the following accessories after opening the box：

- **Please refer to the packing list in the box ***

Standards Approvals

For our Wi-Fi series product such as NVR41HS-W-S2, please refer to the following important notices.

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, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least

20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

IEEE 802.11b, 802.11g or 802.11n (20MHz) operation of this product in the U.S.A. is firmware-limited to channels 1 through 11. IEEE 802.11n (40MHz) operation of this product in the U.S.A. is firmware-limited to channels 3 through 9.

1 Features and Specifications

1.1 Overview

This series NVR is a high performance network video recorder. This series product support local preview, multiple-window display, recorded file local storage, remote control and mouse shortcut menu operation, and remote management and control function.

This series product supports centre storage, front-end storage and client-end storage. The monitor zone in the front-end can be set in anywhere. Working with other front-end devices such as IPC, NVS, this series product can establish a strong surveillance network via the CMS. In the network system, there is only one network cable from the monitor centre to the monitor zone in the whole network. There is no audio/video cable from the monitor centre to the monitor zone. The whole project is featuring of simple connection, low-cost, low maintenance work.

This series NVR can be widely used in many areas such as public security, water conservancy, transportation and education.

1.2 Features

Real-time Surveillance	• VGA, HDMI port. Connect to monitor to realize real-time surveillance. Some series support TV/VGA/HDMI output at the same time. • Short-cut menu when preview. • Support popular PTZ decoder control protocols. Support preset, tour and pattern.
Playback	• Support each channel real-time record independently, and at the same time it can support search, forward play, network monitor, record search, download and etc. • Support various playback modes: slow play, fast play, backward play and frame by frame play. • Support time title overlay so that you can view event accurate occurred time • Support specified zone enlargement.
User Management	• Each group has different management powers that can be edited freely. Every user belongs to an exclusive group.
Storage	• Via corresponding setup (such as alarm setup and schedule setup), you can backup related audio/video data in the network video recorder. • Support Web record and record local video and storage the file in the client end.
Alarm	• Respond to external alarm simultaneously (within 200MS), based on user's pre-defined relay setup, system can process the alarm input correctly and prompt user by screen and voice (support pre-recorded audio). • Support central alarm server setup, so that alarm information can remotely notify user automatically. Alarm input can be derived from various connected peripheral devices. • Alert you via email/sms.

Network Monitor	• Through network, sending audio/video data compressed by IPC or NVS to client-ends, then the data will be decompressed and display. • Support max 128 connections at the same time. • Transmit audio/video data by HTTP, TCP, UDP, MULTICAST, RTP/RTCP and etc. • Transmit some alarm data or alarm info by SNMP. • Support WEB access in WAN/LAN.
Window Split	• Adopt the video compression and digital process to show several windows in one monitor. Support 1/4/8/9/16/ 25/36-window display when preview and 1/4/9/16-window display when playback.
Record	• Support normal/motion detect/alarm record function. Save the recorded files in the HDD, USB device, client-end PC, or network storage server. You can search or playback the saved files at the local-end or via the Web/USB device.
Backup	• Support network backup, USB2.0 record backup function, the recorded files can be saved in network storage server, peripheral USB2.0 device, burner and etc.
Network Management	• Supervise NVR configuration and control power via Ethernet. • Support management via WEB.
Peripheral Equipment Management	• Support peripheral equipment management such as protocol setup and port connection. • Support transparent data transmission such as RS232 (RS-422), RS485 (RS-485).
Auxiliary	• Support switch between NTSC and PAL. • Support real-time system resources information and running statistics display. • Support log file. • Local GUI output. Shortcut menu operation via mouse. • IR control function (For some series product only.). Shortcut menu operation via remote control. • Support IPC or NVS remote video preview and control.

1.3 Specifications

1.3.1 NVR100/100-P Series

Model		**100 Series**	**100-P Series**
System	**System Resources**	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 28/56Mbps respectively.	
	OS	Embedded Linux real-time operation system	
	Operation Interface	WEB/Local GUI	
Decode	**Video Decode**	H.264/MJPEG	

Model		100 Series	100-P Series
	Type		
	Decode Capability	Max 2-ch 1080P 30fps or 4-ch 720P 30fps or 8-ch D1 30fps	
Video	Video Input	4/8-ch network compression video input	
	Video Output	1-channel VGA analog video output	
	HDMI	1-ch HDMI output. Version number is 1.4	
	Window Split	1/4/8-window	
Audio	Audio Input	N/A	
	Audio Output	N/A	
	Audio Compression Standard	G.711a	
Alarm	Alarm Input	N/A	
	Alarm Output	N/A	
Funciton	Storage	1 built-in 2.5-inch SATA port	
	Multiple-Channel Playback	Max 8-channel D1 or 4-channel 720P or 2-channel 1080P playback	
Port and Indicator	RS232 Port	N/A	
	RS485 Port	N/A	
	USB Port	2 peripheral USB2.0 ports.	

Model		100 Series	100-P Series
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.	
	PoE	N/A	4
	Power Port	1 power socket. Power adapter power supplying mode. DC 5V 2A power.	1 power socket. Power adapter power supplying mode. DC 48V 1.25A power.
	Power Button	N/A	
	Power On-off Button	N/A	
	IR Receiver Window	N/A	
	Clock	Built-in clock.	
	Indicator Light	N/A	
General	Power Consumption	＜10W (No HDD)	
	Working Temperature	－10℃～＋55℃	
	Working Humidity	10%～90%	
	Air pressure	86kPa～106kPa	
	Dimension	191.8mm×128.2mm×35.8mm	
	Weight	0.32kg～0.36kg (No HDD)	
	Installation Mode	Desk installation	

1.3.2 NVR11/11-P Series

Model	11 Series	11-P Series

Model		11 Series	11-P Series
System	System Resources	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 28/56Mbps respectively.	
	OS	Embedded Linux real-time operation system	
	Operation Interface	WEB/Local GUI	
Decode	Video Decode Type	H.264/MJPEG	
	Decode Capability	Max 2-ch 1080P 30fps or 4-ch 720P 30fps or 8-ch D1 30fps	
Video	Video Input	4/8-ch network compression video input	
	Video Output	1-channel VGA analog video output	
	HDMI	1-ch HDMI output. Version number is 1.4	
	Window Split	1/4/8-window	
Audio	Audio Input	1-ch bidirectional talk input	
	Audio Output	1-ch bidirectional talk output	
	Audio Compression Standard	G.711a	
Alarm	Alarm Input	N/A	
	Alarm Output	N/A	
Funciton	Storage	1 built-in SATA port	

Model		11 Series	11-P Series
	Multiple-Channel Playback	Max 8-channel D1 or 4-channel 720P or 2-channel 1080P playback	
Port and Indicator	**RS232 Port**	N/A	
	RS485 Port	N/A	
	USB Port	2 peripheral USB2.0 ports.	
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.	
	PoE	N/A	4
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V power.	1 power socket. Power adapter power supplying mode. DC 48V power.
	Power Button	N/A	
	Power On-off Button	N/A	
	IR Receiver Window	N/A	
	Clock	Built-in clock.	
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.	
General	**Power Consumption**	＜10W (No HDD)	
	Working Temperature	－10℃～＋55℃	
	Working Humidity	10%～90%	
	Air pressure	86kPa～106kPa	

Model		11 Series	11-P Series
	Dimension	205mm×206.75mm×45.2mm	
	Weight	0.5kg～1kg (No HDD)	
	Installation Mode	Desk installation	

1.3.3 NVR21-S2/NVR21-P-S2/NVR21-8P-S2 Series

Model		21-S2 Series	21-P-S2 Series	21-8P-S2 Series
System	System Resources	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 80Mbps.		
	OS	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	Video Decode Type	H.264		
	Decode Capability	Max 4-ch 1080P 30fps or 8-ch 720P 30fps or 8-ch D1 30fps		
Video	Video Input	4/8-ch network compression video input		
	Video Output	1-channel VGA analog video output		
	HDMI	1-ch HDMI output. Version number is 1.4		
	Window Split	1/4/8-window		
Audio	Audio Input	1-ch bidirectional talk input		
	Audio Output	1-ch bidirectional talk output		

Model		21-S2 Series	21-P-S2 Series	21-8P-S2 Series
	Audio Compression Standard	G.711a		
Alarm	**Alarm Input**	N/A		
	Alarm Output	N/A		
Funciton	**Storage**	1 built-in SATA port		
	Multiple-Channel Playback	Max 8-channel D1 or 8-channel 720P or 4-channel 1080P playback		
Port and Indicator	**RS232 Port**	N/A		
	RS485 Port	N/A		
	USB Port	2 peripheral USB2.0 ports.		
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.		
	PoE	N/A	4	8
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V power.	1 power socket. Power adapter power supplying mode. DC 48V power.	1 power socket. Power adapter power supplying mode. DC 48V power.
	Power Button	N/A		
	Power On-off Button	N/A		
	IR Receiver Window	N/A		

Model		21-S2 Series	21-P-S2 Series	21-8P-S2 Series
	Clock	Built-in clock.		
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.		
General	Power Consumption	＜10W (No HDD)		
	Working Temperature	－10℃～＋55℃		
	Working Humidity	10%～90%		
	Air pressure	86kPa～106kPa		
	Dimension	205mm×206.75mm×45.2mm	205mm×206.75mm×45.2mm	425mm×95mm×260mm
	Weight	0.5kg～2kg (No HDD)		
	Installation Mode	Desk installation		

1.3.4 NVR11H/11H-P Series

Model		11H Series	11H-P Series
System	System Resources	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 28/56Mbps respectively.	
	OS	Embedded Linux real-time operation system	
	Operation Interface	WEB/Local GUI	
Decode	Video Decode Type	H.264/MJPEG	
	Decode Capability	Max 2-ch 1080P 30fps or 4-ch 720P 30fps or 8-ch D1 30fps	

Model		11H Series	11H-P Series
Video	Video Input	4/8-ch network compression video input	
	Video Output	1-channel VGA analog video output	
	HDMI	1-ch HDMI output. Version number is 1.4	
	Window Split	1/4/8-window	
Audio	Audio Input	1-ch bidirectional talk input	
	Audio Output	1-ch bidirectional talk output	
	Audio Compression Standard	G.711a	
Alarm	Alarm Input	N/A	
	Alarm Output	N/A	
Funciton	Storage	1 built-in SATA port	
	Multiple-Channel Playback	Max 8-channel D1 or 4-channel 720P or 2-channel 1080P playback	
Port and Indicator	RS232 Port	N/A	
	RS485 Port	N/A	
	USB Port	2 peripheral USB2.0 ports.	
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.	
	PoE	N/A	4

Model		11H Series	11H-P Series
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V power.	1 power socket. Power adapter power supplying mode. DC 48V power.
	Power Button	N/A	
	Power On-off Button	N/A	
	IR Receiver Window	N/A	
	Clock	Built-in clock.	
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.	
General	Power Consumption	＜10W (No HDD)	
	Working Temperature	－10℃～＋55℃	
	Working Humidity	10%～90%	
	Air pressure	86kPa～106kPa	
	Dimension	325mm×250.58mm×51mm	
	Weight	0.5kg～1kg (No HDD)	
	Installation Mode	Desk installation	

1.3.5 NVR11HS Series

Model		11HS Series
System	System Resources	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 25/56Mbps respectively.
	OS	Embedded Linux real-time operation system

Model		11HS Series
	Operation Interface	WEB/Local GUI
Decode	**Video Decode Type**	H.264
	Decode Capability	● For 8-channel series product: Max 2-ch 1080P 30fps or 4-ch 720P 30fs or 8-ch D1 30fps. ● For 4-channel series product: Max 1-ch 1080P 30fps or 4-ch 720P 30fs or 4-ch D1 30fps.
Video	**Video Input**	4/8-ch network compression video input
	Video Output	1-channel VGA analog video output
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4/8-window
Audio	**Audio Input**	N/A
	Audio Output	N/A
	Audio Compression Standard	G.711a
Alarm	**Alarm Input**	N/A
	Alarm Output	N/A
Funciton	**Storage**	1 built-in SATA port
	Multiple-Channel Playback	● For 8-channel series product: Max 2-ch 1080P 30fps or 4-ch 720P 30fs or 8-channel D1 30fs playback. ● For 4-channel series product: Max 1-ch 1080P 30fps or 4-ch 720P 30fs or 4-ch D1 30fs playback.
Port and Indicator	**RS232 Port**	N/A
	RS485 Port	N/A
	USB Port	2 peripheral USB2.0 ports. One at the front panel and one at the rear panel.
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.
	PoE Port	N/A
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V/1.5A power.
	Power Button	N/A

Model		11HS Series
	Power On-off Button	N/A
	IR Receiver Window	N/A
	Clock	Built-in clock.
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.
General	Power Consumption	＜10W (No HDD)
	Working Temperature	－10℃～＋55℃
	Working Humidity	10%～90%
	Air pressure	86kPa～106kPa
	Dimension(W* D*H)	260mm×220mm×44mm
	Weight	0.7kg～0.8kg (No HDD)
	Installation Mode	Desk installation

1.3.6 NVR21HS-S2/21HS-P-S2/21HS-8P-S2 Series

Model		NVR21HS-S2 Series	NVR21HS-P-S2 Series	NVR21HS-8P-S2 Series
System	System Resources	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 80Mbps.		
	OS	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	Video Decode Type	H.264		
	Decode Capability	Max 4-ch 1080P 30fps or 8-ch 720P 30fs or 8-ch D1 30fps		
Video	Video Input	4/8-ch network compression video input		
	Video Output	1-channel VGA analog video output		
	HDMI	1-ch HDMI output. Version number is 1.4		

Model		NVR21HS-S2 Series	NVR21HS-P-S2 Series	NVR21HS-8P-S2 Series
	Window Split	1/4/8-window		
Audio	**Audio Input**	1-ch bidirectional talk input		
	Audio Output	1-ch bidirectional talk output		
	Audio Compression Standard	G.711a		
Alarm	**Alarm Input**	N/A		
	Alarm Output	N/A		
Funciton	**Storage**	1 built-in SATA port		
	Multiple-Channel Playback	Max 4-channel 1080P or 8-channel 720P or 8-channel D1 playback		
Port and Indicator	**RS232 Port**	N/A		
	RS485 Port	N/A		
	USB Port	2 peripheral USB2.0 ports.		
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.		
	PoE Port	N/A	4	8
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V power.	1 power socket. Power adapter power supplying mode. DC 48V power.	1 power socket. Power adapter power supplying mode. DC 48V power.
	Power Button	N/A		
	Power On-off Button	N/A		
	IR Receiver Window	N/A		
	Clock	Built-in clock.		
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.		
General	**Power Consumption**	＜10W (No HDD)		

Model		NVR21HS-S2 Series	NVR21HS-P-S2 Series	NVR21HS-8P-S2 Series
	Working Temperature	-10℃～+55℃		
	Working Humidity	10%～90%		
	Air pressure	86kPa～106kPa		
	Dimension(W×D×H)	260mm×220mm×44mm		
	Weight	0.7kg～0.8kg (No HDD)		
	Installation Mode	Desk installation		

1.3.7 NVR41HS-W-S2 Series

Model		41HS-W-S2 Series
System	System Resources	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 80Mbps.
	OS	Embedded Linux real-time operation system
	Operation Interface	WEB/Local GUI
Decode	Video Decode Type	H.264/MJPEG/MPEG4
	Decode Capability	Max 8-ch 1080P or 4-ch 3M or 2-ch 5M.
Video	Video Input	4/8-ch network compression video input
	Video Output	1-channel VGA analog video output
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4/8/9-window
Audio	Audio Input	N/A
	Audio Output	N/A
	Audio Compression Standard	G.711a
Alarm	Alarm Input	N/A
	Alarm Output	N/A
Funciton	Storage	1 built-in SATA port

Model		41HS-W-S2 Series
	Multiple-Channel Playback	Max 8-ch 1080P playback
Port and Indicator	RS232 Port	N/A
	RS485 Port	N/A
	USB Port	2 peripheral USB2.0 ports. One at the front panel and one at the rear panel.
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.
	PoE Port	N/A
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V/2A power.
	Power Button	N/A
	Power On-off Button	N/A
	IR Receiver Window	N/A
	Clock	Built-in clock.
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.
General	Power Consumption	＜30W (No HDD)
	Working Temperature	－10℃～＋55℃
	Working Humidity	10%～90%
	Air pressure	86kPa～106kPa
	Dimension(W*D*H)	375mm×287mm×52mm
	Weight	1.5kg～2.5kg(No HDD)
	Installation Mode	Desk installation

1.3.8 NVR41/41-P/41-8P/41-W Series

Model		41 Series	41-P Series	41-8P Series	41-W Series
System	System Resources	4/8/16-ch series product support 4/8/16 HD connection respectively. Total bandwidth supports 28/56/80Mbps respectively.			
	OS	Embedded Linux real-time operation system			

Model		41 Series	41-P Series	41-8P Series	41-W Series
	Operation Interface	WEB/Local GUI			
Decode	**Video Decode Type**	H.264/MJPEG/MJPEG4			
	Decode Capability	Max 2-ch 5M 25fps or 4-ch 3M 25fps or 4-ch 1080P 30fps or 8-ch 720P 30fs			
Video	**Video Input**	4/8/16-ch network compression video input			
	Video Output	1-channel VGA analog video output			
	HDMI	1-ch HDMI output. Version number is 1.4			
	Window Split	1/4/8/9/16-window			1/4-window
Audio	**Audio Input**	1-ch bidirectional talk input			
	Audio Output	1-ch bidirectional talk output			
	Audio Compression Standard	G.711a			
Alarm	**Alarm Input**	N/A			
	Alarm Output	N/A			
Funciton	**Storage**	1 built-in SATA port			
	Multiple-Channel Playback	Max 4-channel 1080P playback			
	WIFI AP	N/A			Yes
Port and Indicator	**RS232 Port**	N/A			
	RS485 Port	N/A			
	USB Port	2 peripheral USB2.0 ports.			
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.			
	PoE Port	N/A	4	8	N/A
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V power.	1 power socket. Power adapter power supplying mode. DC 48V power.		1 power socket. Power adapter power supplying mode. DC 12V power.

Model		41 Series	41-P Series	41-8P Series	41-W Series
	Power Button	1 button			
	Power On-off Button	N/A			
	IR Receiver Window	N/A			
	Clock	Built-in clock.			
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.			
General	Power Consumption	＜10W (No HDD)			
	Working Temperature	－10℃～＋55℃			
	Working Humidity	10%～90%			
	Air pressure	86kPa～106kPa			
	Dimension	205mm×206.75mm×45.2mm		270mm×204mm×42mm	205mm×206.75mm×45.2mm
	Weight	0.5kg～1kg (No HDD)			
	Installation Mode	Desk installation			

1.3.9 NVR41H/41H-P/41H-8P Series

Model		41H Series	41H-P Series	41H-8P Series
System	System Resources	4/8/16-ch series product support 4/8/16 HD connection respectively. Total bandwidth supports 28/56/80Mbps respectively.		
	OS	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	Video Decode Type	H.264/MJPEG/MJPEG4		
	Decode Capability	Max 2-ch 5M 25fps or 4-ch 3M 25fps or 4-ch 1080P 30fps or 8-ch 720P 30fs		
Video	Video Input	4/8/16-ch network compression video input		
	Video Output	1-channel VGA analog video output		
	HDMI	1-ch HDMI output. Version number is 1.4		

Model		41H Series	41H-P Series	41H-8P Series
	Window Split	1/4/8/9/16-window		
Audio	**Audio Input**	1-ch bidirectional talk input		
	Audio Output	1-ch bidirectional talk output		
	Audio Compression Standard	G.711a		
Alarm	**Alarm Input**	N/A		2-channel
	Alarm Output	N/A		2-channel
Funciton	**Storage**	1 built-in SATA port		
	Multiple-Channel Playback	Max 4-channel 1080P playback		
Port and Indicator	**RS232 Port**	N/A		
	RS485 Port	N/A		
	USB Port	2 peripheral USB2.0 ports.		
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.		
	PoE Port	N/A	4	8
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V power.	1 power socket. Power adapter power supplying mode. DC 48V power.	
	Power Button	1 button		
	Power On-off Button	N/A		
	IR Receiver Window	N/A		
	Clock	Built-in clock.		
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.		
General	**Power Consumption**	＜10W (No HDD)		
	Working Temperature	－10℃～＋55℃		

Model		41H Series	41H-P Series	41H-8P Series
	Working Humidity	10%～90%		
	Air pressure	86kPa～106kPa		
	Dimension	325mm×250.58mm×51mm		
	Weight	0.5kg～1kg (No HDD)		
	Installation Mode	Desk installation		

1.3.10 NVR22-S2/22-P-S2/22-8P-S2 Series

Model		NVR22-S2 Series	NVR22-P-S2 Series	NVR22-8P-S2 Series
System	System Resources	4/8-ch series product support 4/8 HD connection respectively. Total bandwidth supports 80Mbps.		
	OS	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	Video Decode Type	H.264		
	Decode Capability	Max 4-ch 1080P 30fps or 8-ch 720P 30fs or 8-ch D1 30fps		
Video	Video Input	4/8-ch network compression video input		
	Video Output	1-channel VGA analog video output		
	HDMI	1-ch HDMI output. Version number is 1.4		
	Window Split	1/4/8-window		
Audio	Audio Input	1-ch bidirectional talk input		
	Audio Output	1-ch bidirectional talk output		
	Audio Compression Standard	G.711a		
Alarm	Alarm Input	N/A		
	Alarm Output	N/A		
Funciton	Storage	2 built-in SATA ports		
	Multiple-Channel Playback	Max 4-channel 1080P or 8-channel 720P or 8-channel D1 playback		

Model		NVR22-S2 Series	NVR22-P-S2 Series	NVR22-8P-S2 Series
Port and Indicator	RS232 Port	N/A		
	RS485 Port	N/A		
	USB Port	2 peripheral USB2.0 ports.		
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.		
	PoE Port	N/A	4	8
	Power Port	1 power socket. Power adapter power supplying mode. DC 12V power.	1 power socket. Power adapter power supplying mode. DC 48V power.	1 power socket. Power adapter power supplying mode. DC 48V power.
	Power Button	N/A		
	Power On-off Button	N/A		
	IR Receiver Window	N/A		
	Clock	Built-in clock.		
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.		
General	Power Consumption	＜10W (No HDD)		
	Working Temperature	－10℃～＋55℃		
	Working Humidity	10%～90%		
	Air pressure	86kPa～106kPa		
	Dimension(W×D×H)	375mm×287mm×52mm		
	Weight	1.5kg～2.5kg (No HDD)		
	Installation Mode	Desk installation		

1.3.11 NVR42N Series

Model	42N Series

System	**System Resources**	4/8/16/32-channel series product support 4/8/16/32-channel HD connection respectively. Main stream bandwidth supports 40/80/160/160Mbps respectively.
	Operation System	Embedded Linux real-time operation system
	Operation Interface	WEB/Local GUI
Decode	**Video Compression**	H.264/MJPEG/MPEG4
	Decode Capacity	Max supports 16-channel D1, or 8-channel 720P, or 4-channel 1080P, or 4*3M or 2*5M decode.
Video	**Video Input**	4/8/16/32-ch network compression video input
	Video Output	1-channel VGA analog video output.
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4/8/9/16-window
Audio	**Audio Input**	1-ch bidirectional talk input
	Audio Output	1-ch bidirectional talk output
	Audio Compression	G.711a
Alarm	**Alarm Input**	N/A
	Alarm Output	N/A
Function	**Storage**	2 built-in SATA ports.
	Multiple-channel Playback	Max 8-channel 720P/4-channel 1080P playback at the same time.
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.
	RS485 port	One RS485 port to control PTZ. Support various protocols.
	USB2.0 Port	Three peripheral USB2.0 ports.
	Network Connection	1 RJ45 10/100/1000Mbps self-adaptive Ethernet port.

	Power Port	One power port, power adapter. Input DC 12V.
	Power Button	One button. At the rear panel.
	Power On-off Button	One button. At the front-panel.
	IR Receiver Window	Support IR remote control
	Clock	Built-in clock.
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.
General	**Power Consumption**	＜30W(No HDD)
	Working Temperature	-10℃～+55℃
	Working Humidity	10%－90%
	Air pressure	86kpa－106kpa
	Dimension	375mm×287mm×52mm
	Weight	1.5kg～2.5kg（No HDD）
	Installation	Desk installation

1.3.12 NVR42/42-P/42-8P Series

Model		**42 Series**	**42-P Series**	**42-8P Series**
System	**System Resources**	4/8/16/32-channel series product support 4/8/16/32-channel HD connection respectively. Main stream bandwidth supports 40/80/160/160Mbps respectively.		
	Operation System	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	**Video Compression**	H.264/MJPEG/MPEG4		

	Decode Capacity	Max supports 16-channel D1, or 8-channel 720P, or 4-channel 1080P, or 4*3M or 2*5M decode.		
Video	**Video Input**	4/8/16/32-ch network compression video input		
	Video Output	1-channel VGA analog video output.		
	HDMI	1-ch HDMI output. Version number is 1.4		
	Window Split	1/4/8/9/16-window		
Audio	**Audio Input**	1-ch bidirectional talk input		
	Audio Output	1-ch bidirectional talk output		
	Audio Compression	G.711a		
Alarm	**Alarm Input**	4-ch alarm input		
	Alarm Output	2-ch alarm output		
Function	**Storage**	2 built-in SATA ports.		
	Multiple-channel Playback	Max 8-channel 720P/4-channel 1080P playback at the same time.		
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.		
	RS485 port	One RS485 port to control PTZ. Support various protocols.		
	USB2.0 Port	Three peripheral USB2.0 ports.		
	Network Connection	1 RJ45 10/100/1000Mbps self-adaptive Ethernet port.		
	Power Port	One power port, power adapter. Input DC 12V.	Two power ports. Input DC 12V/DC 48V.	One power ports. Input 100-240V , 47~63Hz.
	Power Button	One button. At the rear panel.		
	Power On-off Button	One button. At the front-panel.		
	IR Receiver	Support IR remote control		

	Window			
	Clock	Built-in clock.		
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.		
General	**Power Consumption**	＜30W(No HDD)		
	Working Temperature	-10℃～+55℃		
	Working Humidity	10%－90%		
	Air pressure	86kpa－106kpa		
	Dimension	375mm×287mm×52mm	375mm×287mm×52mm	295mm×275mm×47mm
	Weight	1.5kg～2.5kg（No HDD）		
	Installation	Desk installation		

1.3.13 NVR42-16P Series

Model		**42-16P Series**
System	**System Resources**	16/32-channel series product support 4/8/16/32-channel HD connection respectively. Main stream/sub stream bandwidth supports 200Mbps.
	Operation System	Embedded Linux real-time operation system
	Operation Interface	WEB/Local GUI
Decode	**Video Compression**	H.264/MJPEG/MPEG4
	Decode Capacity	Max supports 32-channel D1, or 16-channel 720P, or 8-channel 1080P, or 4*3M or 2*5M decode.
Video	**Video Input**	4/8/16/32-ch network compression video input
	Video Output	1-channel VGA analog video output.
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4/8/9/16-window

Audio	**Audio Input**	1-ch bidirectional talk input
	Audio Output	1-ch bidirectional talk output
	Audio Compression	G.711a
Alarm	**Alarm Input**	4-ch alarm input
	Alarm Output	2-ch alarm output
Function	**Storage**	2 built-in SATA ports.
	Multiple-channel Playback	Max 16-channel 720P/8-channel 1080P playback at the same time.
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.
	RS485 port	One RS485 port to control PTZ. Support various protocols.
	USB2.0 Port	One peripheral USB2.0 port. One peripheral USB3.0 port.
	Network Connection	1 RJ45 10/100/1000Mbps self-adaptive Ethernet port.
	Power Port	One power ports. Input 100-240V，47~63Hz.
	Power Button	One button. At the rear panel.
	Power On-off Button	N/A
	IR Receiver Window	N/A
	Clock	Built-in clock.
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light.
General	**Power Consumption**	＜30W(No HDD)
	Working Temperat	-10℃～+55℃

	ure	
	Working Humidity	10%－90%
	Air pressure	86kpa－106kpa
	Dimension	375mm×287mm×52mm
	Weight	1.5kg～2.5kg（No HDD）
	Installation	Desk installation

1.3.14 NVR42-4K/42-8P-4K Series

Model		**NVR42-4K Series**	**NVR42-8P-4K Series**
System	**System Resources**	8/16/32-channel series product support 8/16/32-channel HD connection respectively. The main stream bandwidth supports 48/96/192Mbps.	
	Operation System	Embedded Linux real-time operation system	
	Operation Interface	WEB/Local GUI	
Decode	**Video Compression**	H.264/MJPEG/MPEG4	
	Decode Capacity	H.264: Max supports 16-channel D1, or 8-channel 720P, 4-channel 1080P or 1-channel 4K decode. H.265: Max supports 16-channel D1, or 8-channel 720P, 4-channel 1080P or 1-channel 4K decode.	
Video	**Video Input**	8/16/32-ch network compression video input	
	Video Output	1-channel VGA analog video output.	
	HDMI	1-ch HDMI output. Version number is 1.4	
	Window Split	1/4/8/9/16-window	
Audio	**Audio Input**	1-ch bidirectional talk input	
	Audio Output	1-ch bidirectional talk output	
	Audio Compression	G.711a, G.711u, PCM, G726	
Alarm	**Alarm Input**	8-ch alarm input	
	Alarm	3-ch alarm output	

	Output	Relay output. Relay （DC 30V /1A，AC 125V/0.5A（Activation output）） Including one controllable DC +12V output.	
Function	**Storage**	2 built-in SATA ports.	
	Multiple-channel Playback	Max 8-channel 720P/4-channel 1080P/1-channel 4K playback at the same time.	
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.	
	RS485 port	One RS485 port to control PTZ. Support various protocols.	
	USB Port	2 peripheral USB ports: One USB2.0 at the front panel and one USB3.0 at the rear panel.	
	Network Connection	One RJ45 10/100/1000Mbps self-adaptive Ethernet port.	
	Power Port	One power socket. Power adapter power supplying. Input DC 12V power.	One power port. Input 100-240V，47~63Hz.
	Power Button	One button. At the rear panel.	
	Power On-off Button	N/A	
	IR Receiver Window	N/A	
	Clock	Built-in clock.	
General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light. One device running status indicator light.	
	Power Consumption	＜20W(No HDD)	
	Working Temperature	-10℃～+55℃	
	Working Humidity	10%－90%	
	Air pressure	86kpa－106kpa	
	Dimension	1U, 375mm(W) × 49.8mm(H) × 250mm(D)	
	Weight	1.65kg（No HDD）	

	Installation	Desk/rack installation

1.3.15 NVR52-4KS2/52-8P-4KS2/52-16P-4KS2 Series

Model		**NVR52-4KS2/52-8P-4KS2/52-16P-4KS2 Series**
System	**System Resources**	8/16/32/64-channel series product support 8/16/32/64-channel HD connection respectively. The main stream bandwidth supports 80/160/320/320Mbps.
	Operation System	Embedded Linux real-time operation system
	Operation Interface	WEB/Local GUI
Decode	**Video Compression**	MPEG4，MJPG，H.264，H.265
	Decode Capacity	H.264/H.265: Max supports 64-channel D1, or 32-channel 720P, 16-channel 1080P or 4-channel 4K decode.
Video	**Video Input**	8/16/32/64-ch network compression video input
	Video Output	1-channel VGA analog video output.
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4/8/9/16/25/36-window
Audio	**Audio Input**	1-ch bidirectional talk input
	Audio Output	1-ch bidirectional talk output
	Audio Compression	G.711a, G.711u, PCM, G726 (The bidirectional talk function supports G.711a, G.711u, PCM only.)
Alarm	**Alarm Input**	4-ch alarm input
	Alarm Output	3-ch relay output
Function	**Storage**	2 built-in SATA ports.
	Multiple-channel Playback	Max 64-channel D1/32-channel 720P/16-channel 1080P/4-channel 4K playback at the same time.
	Record Mode	Overwrite
	Backup Mode	Flash disk, DVD burner.

Port and Indicator	**Network Protocol**	IPv4/IPv6/HTTP/UPnP/NTP/SADP/SNMP/PPPoE/DNS/FTP/ONVIF(Version 2.4)/PSIA
	RS232 Port	One RS232 port to debug transparent COM data.
	RS485 port	One RS485 port to control PTZ. Support various protocols.
	USB Port	2 peripheral USB ports: One USB2.0 at the front panel and one USB3.0 at the rear panel.
	Network Connection	One RJ45 10/100/1000Mbps self-adaptive Ethernet port.
	Power Port	One power socket. Power adapter power supplying. Input DC 12V-4A power.
	Power Button	One button. At the rear panel.
	Power On-off Button	N/A
	IR Receiver Window	N/A
General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light. One device running status indicator light.
	Power	DC 12V
	Power Consumption	General series: 9.5W(No HDD) 8 PoE series: 15.2W(No HDD) 16 PoE series: 14.5W(No HDD)
	Working Temperature	-10℃～+55℃
	Working Humidity	10%－90%
	Air pressure	86kpa－106kpa
	Dimension	General series: 375mm(W) × 56mm(H) × 281.4mm(D) PoE series: 375mm(W) × 53mm(H) × 327.3mm(D)
	Weight (No HDD）	General series: : 1.60Kg 8 PoE series: 2.60Kg 16 PoE series: 2.70Kg
	Installation	Desk/rack installation

1.3.16 NVR44/44-8P/44-16P Series

Model		NVR44 Series	NVR44-8P Series	NVR44-16P Series
System	System Resources	8/16/32-channel series product support 8/16/32-channel HD connection respectively. The main stream bandwidth supports 200Mbps.		
	Operation System	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	Video Compression	H.264/MJPEG/MPEG4		
	Decode Capacity	Max supports 16-channel D1, or 8-channel 720P, or 4-channel 3M or 2*5M decode.		
Video	Video Input	8/16/32-ch network compression video input		
	Video Output	1-channel VGA analog video output.		
	HDMI	1-ch HDMI output. Version number is 1.4		
	Window Split	1/4/8/9/16-window		
Audio	Audio Input	1-ch bidirectional talk input		
	Audio Output	1-ch bidirectional talk output		
	Audio Compression	G.711a		
Alarm	Alarm Input	16-ch alarm input		
	Alarm Output	4-ch alarm output		
		Relay output. Relay （DC 30V /1A，AC 125V/0.5A（Activation output）） Including one controllable DC +12V output.		
Function	Storage	4 built-in SATA ports. 1 external eSATA port.		
	Multiple-channel Playback	Max 8-channel 720P/4-channel 1080P playback at the same time.		
Port and Indicator	RS232 Port	One RS232 port to debug transparent COM data.		
	RS485 port	One RS485 port to control PTZ. Support various protocols.		
	USB2.0 Port	2 peripheral USB2.0 ports. One at the front panel and one at the rear panel.		

	Network Connection	One RJ45 10/100/1000Mbps self-adaptive Ethernet port.
	Power Port	One power port. Input 100-240V，50~60Hz.
	Power Button	One button. At the rear panel.
	Power On-off Button	One button. At the front-panel.
	IR Receiver Window	Support IR remote control
	Clock	Built-in clock.
General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light.
	Power Consumption	＜30W(No HDD)
	Working Temperature	-10℃～+55℃
	Working Humidity	10%－90%
	Air pressure	86kpa－106kpa
	Dimension	1.5U, 440mm × 460mm × 68mm
	Weight	5kg～6kg（No HDD）
	Installation	Desk installation

1.3.17 NVR44-4K Series

Specifications		**NVR44-4K**
System	**Main Processor**	Industrial embedded micro processor
	Operation System	Embedded LINUX system
	System Resources	Max 8-channel×1080P connection,
	User Interface	WEB, local GUI
Audio Parameters	**Audio Input**	1-ch MIC bidirectional talk audio input
	Audio Output	1-ch MIC bidirectional talk audio output

	Audio Compression Standard	G.711a, G.711u, PCM, G726
Video Parameters	**Video Input**	8/16/32-ch network compression video input
	Video Output	1-channel VGA 2-channel HDMI.
	Video Compression Standard	H.264
	Window Split Mode	The 1st screen: 1/4/8/9/16-screen. The 2nd screen: 1/4-screen.
Alarm Parameters	**Alarm Input**	16-channel
	Alarm Output	8-channel relay output
Decode Parameters	**Decode Type**	MPEG4，H.264，H.265
	Decode Capability	16-channel×D1;8-channel×720P, 4-channel 1080P;1-channel 4K
Functions	**Record Mode**	Manual recording, motion detection recording, schedule recording and alarm recording. Priority: Manual recording>card number recording-> alarm recording>motion detection recording>schedule recording.
	Multi-Channel Playback	Max support 64M（H265&H264 1:1） playback at the same time.
	Motion Detect	Each screen supports 396/330((PAL 22×18, NTSC 22×15) detection zones. Various sensitivity levels.
	Privacy Mask	Each channel supports 4 privacy mask zones.
	Record Mode	Overwrite
	Backup Mode	Flash disk, eSATA, DVD burner.
Network Function	**Network Protocol**	IPv4/IPv6/HTTP/UPnP/NTP/SADP/SNMP/PPPoE/DNS/FTP/ONVIF/PSIA
	SATA Port	4 SATA Ports
	eSATA Port	1 eSATA port
	RS232 Port	1 RS232 port. To debug and transmit COM data.
	RS485 Port	1 RS485 port. To control peripheral PTZ and etc. Support various protocols.
	USB Port	1 USB 2.0 port at the front panel and 2 USB3.0 ports at the rear panel.
	HDMI Port	2 HDMI ports
	Network Port	2 RJ45 10/100/1000Mbps self-adaptive Ethernetet ports+2 1000Mbps self-adaptive fiber ports
	Power On-off Button	One at the rear panel.

	Indicator Light	4 indicator lights. ● 1 system running status indicator light ● 1 HDD indicator light ● 1 network status indicator light ● 1 power status indicator light
General Parameters	**Power**	AC100~240V
	Power Consumption	General series: ＜17W（No HDD）, PoE series: <26.5W （No HDD）,
	Working Temperature	0℃～50℃
	Working Humidity	10%～90%（No condensation）
	Dimensions (W×H×D)	440×76×405mm
	Weight	General series:4.35 kg（No HDD）, PoE series: 4.65kg （No HDD）,
	Installation Mode	Rack/desktop

1.3.18 NVR54-4KS2/54-16P-4KS2 Series

Specifications		**NVR54-4KS2/54-16P-4KS2 Series**
System	**Main Processor**	Industrial embedded micro processor
	Operation System	Embedded LINUX system
	System Resources	8/16/32/64-channel main stream connection: max supports 80/160/320/320Mbps
	User Interface	WEB, local GUI
Audio Parameters	**Audio Input**	1-ch MIC bidirectional talk audio input
	Audio Output	1-ch MIC bidirectional talk audio output
	Audio Compression Standard	G.711a, G.711u, PCM, G726 (The bidirectional talk supports G.711a, G.711u, PCM only.)
Video Parameters	**Video Input**	8/16/32/64-ch network compression video input
	Video Output	1-channel VGA 2-channel HDMI.
	Video Compression Standard	H.264
	Window Split Mode	1/4/8/9/16/25/36/64-screen.
Alarm Parameters	**Alarm Input**	16-channel
	Alarm Output	6-channel relay output
Decode Parameters	**Decode Type**	MPEG4，MJPG，H.264，H.265
	Decode Capability	H.264/H.265: 64-channel×D1, 32-channel×720P, 16-channel 1080P; 4-channel 4K.

Functions	**Record Mode**	Manual recording, motion detection recording, schedule recording and alarm recording. Priority: Manual recording>card number recording-> alarm recording>motion detection recording>schedule recording.
	Multi-Channel Playback	Max support 16-channel 1080P playback at the same time.
	Motion Detect	Each screen supports 396/330((PAL 22×18, NTSC 22×15) detection zones. Various sensitivity levels.
	Privacy Mask	Each channel supports 4 privacy mask zones.
	Record Mode	Overwrite
	Backup Mode	Flash disk, eSATA, DVD burner.
Network Function	**Network Protocol**	IPv4/IPv6/HTTP/UPnP/NTP/SADP/SNMP/PPPoE/DNS/FTP/ ONVIF(Version 2.4)/PSIA
	SATA Port	4 SATA Ports
	eSATA Port	1 eSATA port
	RS232 Port	1 RS232 port. To debug and transmit COM data.
	RS485 Port	1 RS485 port. To control peripheral PTZ and etc. Support various protocols.
	USB Port	1 USB 2.0 port at the front panel and 2 USB3.0 ports at the rear panel.
	HDMI Port	2 HDMI ports
	Network Port	2 RJ45 10/100/1000Mbps self-adaptive Ethernet ports
	Power Port	One power socket. Power adapter power supplying. Input AC 100V~240V，50Hz~60Hz.
	Power On-off Button	One at the rear panel.
	Indicator Light	4 indicator lights. ● 1 system running status indicator light ● 1 HDD indicator light ● 1 network status indicator light ● 1 power status indicator light
General Parameters	**Power**	AC90~264V
	Power Consumption	General series: 16.7W（No HDD） 16 PoE series: 17.5W（No HDD）
	Working Temperature	-10℃～55℃
	Working Humidity	10%～90%（No condensation）
	Dimensions (W×H×D)	440×76×411mm
	Weight(No HDD)	General series:4.30Kg, PoE series: 4.65Kg,
	Installation Mode	Rack/desktop

1.3.19 NVR48-4K Series

Specifications		NVR48-4K
System	Main Processor	Industrial embedded micro processor
	Operation System	Embedded LINUX system
	System Resources	Max 8-channel×1080P connection,
	User Interface	WEB, local GUI
Audio Parameters	Audio Input	1-ch MIC bidirectional talk audio input
	Audio Output	1-ch MIC bidirectional talk audio output
	Audio Compression Standard	G.711a, G.711u, PCM, G726
Video Parameters	Video Input	8/16/32-ch network compression video input
	Video Output	1-channel VGA 2-channel HDMI.
	Video Compression Standard	H.264
	Window Split Mode	The 1st screen: 1/4/8/9/16-screen. The 2nd screen: 1/4-screen.
Alarm Parameters	Alarm Input	16-channel
	Alarm Output	6-channel relay output
Decode Parameters	Decode Type	MPEG4，H.264，H.265
	Decode Capability	16-channel×D1;8-channel×720P, 4-channel 1080P;1-channel 4K
Functions	Record Mode	Manual recording, motion detection recording, schedule recording and alarm recording. Priority: Manual recording>card number recording-> alarm recording>motion detection recording>schedule recording.
	Multi-Channel Playback	Max support 64M（H265&H264 1:1） playback at the same time.
	Motion Detect	Each screen supports 396/330((PAL 22×18, NTSC 22×15) detection zones. Various sensitivity levels.
	Privacy Mask	Each channel supports 4 privacy mask zones.
	Record Mode	Overwrite
	Backup Mode	Flash disk, eSATA, DVD burner.
Network Function	Network Protocol	IPv4/IPv6/HTTP/UPnP/NTP/SADP/SNMP/PPPoE/DNS/FTP/ ONVIF/PSIA
	SATA Port	8 SATA Ports
	eSATA Port	1 eSATA port
	RS232 Port	1 RS232 port. To debug and transmit COM data.
	RS485 Port	1 RS485 port. To control peripheral PTZ and etc. Support various protocols.

	USB Port	2 USB 2.0 ports at the front panel and 2 USB3.0 ports at the rear panel.
	HDMI Port	2 HDMI ports
	Network Port	2 RJ45 10/100/1000Mbps self-adaptive Ethernetet ports+2 1000Mbps self-adaptive fiber ports
	Power On-off Button	One at the rear panel.
	Indicator Light	4 indicator lights. ● 1 system running status indicator light ● 1 HDD indicator light ● 1 network status indicator light ● 1 power status indicator light
General Parameters	**Power**	AC100~240V
	Power Consumption	General series: ＜18.8W（No HDD）， PoE series: <27.9W （No HDD），
	Working Temperature	0℃～50℃
	Working Humidity	10%～90%（No condensation）
	Dimensions (W×H×D)	440×95×445mm
	Weight	General series:6.6 kg（No HDD）， PoE series: 6.75kg （No HDD），
	Installation Mode	Rack/desktop

1.3.20 NVR58-4KS2/58-16P-4KS2 Series

Specifications		**NVR58-4KS2/58-16P-4KS2 Series**
System	**Main Processor**	Industrial embedded micro processor
	Operation System	Embedded LINUX system
	System Resources	8/16/32/64-channel main stream max supports 80/160/320/320Mbps
	User Interface	WEB, local GUI
Audio Parameters	**Audio Input**	1-ch MIC bidirectional talk audio input
	Audio Output	1-ch MIC bidirectional talk audio output
	Audio Compression Standard	G.711a, G.711u, PCM, G726 (The bidirectional talk supports G.711a, G.711u, PCM only.)
Video Parameters	**Video Input**	8/16/32/64-ch network compression video input
	Video Output	1-channel VGA 2-channel HDMI.
	Video Compression Standard	H.264

	Window Split Mode	1/4/8/9/16/25/36/64-screen.
Alarm Parameters	**Alarm Input**	16-channel
	Alarm Output	6-channel relay output
Decode Parameters	**Decode Type**	MPEG4，MJPG，H.264，H.265
	Decode Capability	H.264/H.265: 64-channel×D1;32-channel×720P, 16-channel 1080P;4-channel 4K
Functions	**Record Mode**	Manual recording, motion detection recording, schedule recording and alarm recording. Priority: Manual recording>card number recording-> alarm recording>motion detection recording>schedule recording.
	Multi-Channel Playback	Max support 16-channel 1080P playback at the same time.
	Motion Detect	Each screen supports 396/330((PAL 22×18, NTSC 22×15) detection zones. Various sensitivity levels.
	Privacy Mask	Each channel supports 4 privacy mask zones.
	Record Mode	Overwrite
	Backup Mode	Flash disk, eSATA, DVD burner.
Network Function	**Network Protocol**	IPv4/IPv6/HTTP/UPnP/NTP/SADP/SNMP/PPPoE/DNS/FTP/ ONVIF(Version 2.4)/PSIA
	SATA Port	8 SATA Ports
	eSATA Port	1 eSATA port
	RS232 Port	1 RS232 port. To debug and transmit COM data.
	RS485 Port	1 RS485 port. To control peripheral PTZ and etc. Support various protocols.
	USB Port	2 USB 2.0 ports at the front panel and 2 USB3.0 ports at the rear panel.
	HDMI Port	2 HDMI ports
	Network Port	2 RJ45 10/100/1000Mbps self-adaptive Ethernet ports
	Power Port	One power socket. Power adapter power supplying. Input AC 100V~240V，50Hz~60Hz.
	Power On-off Button	One at the rear panel.
	Indicator Light	4 indicator lights. ● 1 system running status indicator light ● 1 HDD indicator light ● 1 network status indicator light ● 1 power status indicator light
General Parameters	**Power**	AC90~264V
	Power Consumption	General series: 16.7W（No HDD） 16 PoE series: 17.5W（No HDD）
	Working Temperature	-10℃～55℃
	Working Humidity	10%～90%（No condensation）

	Dimensions（W×H×D)	439.7×95×450.8mm
	Weight (No HDD)	General series:6.55Kg, PoE series: 7Kg.
	Installation Mode	Rack/desktop

1.3.21 NVR48/48-16P Series

Model		**NVR48 Series**	**NVR48-16P Series**
System	**System Resources**	8/16/32-channel series product support 8/16/32-channel HD connection respectively. The main stream bandwidth supports 200Mbps.	
	Operation System	Embedded Linux real-time operation system	
	Operation Interface	WEB/Local GUI	
Decode	**Video Compression**	H.264/MJPEG/MPEG4	
	Decode Capacity	Max supports 16-channel D1, or 8-channel 720P, or 4-channel 3M or 2*5M decode.	
Video	**Video Input**	8/16/32-ch network compression video input	
	Video Output	1-channel VGA analog video output.	
	HDMI	1-ch HDMI output. Version number is 1.4	
	Window Split	1/4/8/9/16-window	
Audio	**Audio Input**	1-ch bidirectional talk input	
	Audio Output	1-ch bidirectional talk output	
	Audio Compression	G.711a	
Alarm	**Alarm Input**	16-ch alarm input	
	Alarm Output	4-ch alarm output	
		Relay output. Relay （DC 30V /1A，AC 125V/0.5A（Activation output）） Including one controllable DC +12V output.	
Function	**Storage**	4 built-in SATA ports. 1 external eSATA port.	
	Multiple-channel	Max 8-channel 720P/4-channel 1080P playback at the same time.	

	Playback		
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.	
	RS485 port	One RS485 port to control PTZ. Support various protocols.	
	USB2.0 Port	3 peripheral USB2.0 ports. Two at the front panel and one at the rear panel.	
	Network Connection	Two RJ45 10/100/1000Mbps self-adaptive Ethernet ports.	One RJ45 10/100/1000Mbps self-adaptive Ethernet port.
	Power Port	One power port. Input 100-240V，50~60Hz.	
	Power Button	One button. At the rear panel.	
	Power On-off Button	One button. At the front-panel.	
	IR Receiver Window	Support IR remote control	
	Clock	Built-in clock.	
General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light.	
	Power Consumption	＜30W(No HDD)	
	Working Temperature	-10℃～+55℃	
	Working Humidity	10%－90%	
	Air pressure	86kpa－106kpa	
	Dimension	440mm × 460mm × 89mm	
	Weight	5.5kg～6.5kg（No HDD）	
	Installation	Desk installation	

1.3.22 NVR72/72-8P Series

Model	**NVR72 Series**	**NVR72-8P Series**

System	**System Resources**	8/16/32/64-channel series product support 8/16/32/64-channel HD connection respectively. The main stream bandwidth supports 48/96/192/192Mbps.
	Operation System	Embedded Linux real-time operation system
	Operation Interface	WEB/Local GUI
Decode	**Video Compression**	H.264/MJPEG
	Decode Capacity	Max supports 32-channel D1, or 16-channel 720P, or 8-channel 1080P decode.
Video	**Video Input**	8/16/32/64-ch network compression video input
	Video Output	1-channel VGA analog video output.
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4/8/9/16/25/36-window
Audio	**Audio Input**	1-ch bidirectional talk input
	Audio Output	1-ch bidirectional talk output
	Audio Compression	G.711a
Alarm	**Alarm Input**	8-ch alarm output
	Alarm Output	3-ch alarm output
		Relay output. Relay （DC 30V/1A，AC 125V/0.5A（Activation output）） Including one controllable DC +12V output.
Function	**Storage**	2 built-in SATA ports.
	Multiple-channel Playback	Max 16-channel 720P/8-channel 1080P playback at the same time.
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.
	RS485 port	One RS485 port to control PTZ. Support various protocols.
	USB2.0 Port	2 peripheral USB2.0 ports. One at the front panel and one at the rear panel.
	Network Connection	1 RJ45 10/100Mbps self-adaptive Ethernet port.

	Power Port	One power port, power adapter. Input DC 12V.	One power port. Input 100-240V，47~63Hz.
	Power Button	One button. At the rear panel.	
	Power On-off Button	One button. At the front-panel.	
	IR Receiver Window	Support IR remote control	
	Clock	Built-in clock.	
General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light.	
	Power Consumption	＜30W(No HDD)	
	Working Temperature	-10℃～+55℃	
	Working Humidity	10%－90%	
	Air pressure	86kpa－106kpa	
	Dimension	1U case. 295mm×275mm×47mm	
	Weight	1.5kg～2.5kg (No HDD）	
	Installation	Desk installation	

1.3.23 NVR74/74-8P/74-16P Series

Model		**NVR74 Series**	**NVR74-8P Series**	**NVR74-16P Series**
System	**System Resources**	8/16/32/64-channel series product support 8/16/32/64-channel HD connection respectively. The main stream bandwidth supports 48/96/192/192Mbps.		
	Operation System	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	**Video Compression**	H.264/MJPEG		

	Decode Capacity	Max supports 32-channel D1, or 16-channel 720P, or 8-channel 1080P decode.	
Video	**Video Input**	8/16/32/64-ch network compression video input	
	Video Output	1-channel VGA analog video output.	
	HDMI	1-ch HDMI output. Version number is 1.4	
	Window Split	1/4/8/9/16/25/36-window	
Audio	**Audio Input**	1-ch bidirectional talk input	
	Audio Output	1-ch bidirectional talk output	
	Audio Compression	G.711a	
Alarm	**Alarm Input**	16-ch alarm input	
	Alarm Output	6-ch alarm output	
		Relay output. Relay （DC 30V /1A，AC 125V/0.5A（Activation output）） Including one controllable DC +12V output.	
Function	**Storage**	4 built-in SATA ports. 1 external eSATA port.	
	Multiple-channel Playback	Max 16-channel 720P/8-channel 1080P playback at the same time.	
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.	
	RS485 port	One RS485 port to control PTZ. Support various protocols.	
	USB2.0 Port	3 peripheral USB2.0 ports. One at the front panel and two at the rear panel.	
	Network Connection	Two RJ45 10/100Mbps self-adaptive Ethernet ports.	One RJ45 10/100Mbps self-adaptive Ethernet port.
	Power Port	One power port. Input 100-240V，50~60Hz.	
	Power Button	One button. At the rear panel.	
	Power On-off Button	One button. At the front-panel.	
	IR Receiver	Support IR remote control	

	Window	
	Clock	Built-in clock.
General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light.
	Power Consumption	＜30W(No HDD)
	Working Temperature	-10℃～+55℃
	Working Humidity	10%－90%
	Air pressure	86kpa－106kpa
	Dimension	1.5U, 440mm × 460mm × 68mm
	Weight	5kg～6kg（No HDD）
	Installation	Desk installation

1.3.24 NVR78/78-16P/78-RH Series

Model		**NVR78 Series**	**NVR78-16P Series**	**NVR78-RH Series**
System	**System Resources**	8/16/32/64-channel series product support 8/16/32/64-channel HD connection respectively. The main stream bandwidth supports 48/96/192/192Mbps.		
	Operation System	Embedded Linux real-time operation system		
	Operation Interface	WEB/Local GUI		
Decode	**Video Compression**	H.264/MJPEG		
	Decode Capacity	Max supports 32-channel D1, or 16-channel 720P, or 8-channel 1080P decode.		
Video	**Video Input**	8/16/32/64-ch network compression video input		
	Video Output	1-channel VGA analog video output.		
	HDMI	1-ch HDMI output. Version number is 1.4		2-ch HDMI output (from different video

			sources)
	Window Split	1/4/8/9/16/25/36-window	
Audio	**Audio Input**	1-ch bidirectional talk input	
	Audio Output	1-ch bidirectional talk output	
	Audio Compression	G.711a	
Alarm	**Alarm Input**	16-ch alarm input	
	Alarm Output	6-ch alarm output	
		Relay output. Relay （DC 30V/1A，AC 125V/0.5A（Activation output）） Including one controllable DC +12V output.	
Function	**Storage**	8 built-in SATA ports. 1 external eSATA port.	8 built-in SATA ports at the front panel. Support hot swap, Raid0, Raid1, Raid5, Raid6. 1 external eSATA port.
	Multiple-channel Playback	Max 16-channel 720P/8-channel 1080P playback at the same time.	
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.	
	RS485 port	One RS485 port to control PTZ. Support various protocols.	
	USB2.0 Port	4 peripheral USB2.0 ports. Two at the front panel and two at the rear panel.	
	Network Connection	Two RJ45 10/100/1000 Mbps self-adaptive Ethernet ports.	One RJ45 10/100/1000 Mbps self-adaptive Ethernet port. / Two RJ45 10/100/1000 Mbps self-adaptive Ethernet ports.
	Power Port	One power port. Input 100-240V，50~60Hz.	
	Power Button	One button. At the rear panel.	
	Power On-off Button	One button. At the front-panel.	
	IR Receiver Window	Support IR remote control	
	Clock	Built-in clock.	

General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light.	
	Power Consumption	＜35W(No HDD)	
	Working Temperature	-10℃～+55℃	
	Working Humidity	10%－90%	
	Air pressure	86kpa－106kpa	
	Dimension	440mm×460mm×89mm	444mm×430mm×89mm
	Weight	5.5kg～6.5kg（No HDD）	8.5kg ～ 9.5kg （ No HDD）
	Installation	Desk installation	

1.3.25 NVR70/70-R Series

Model		**NVR70 Series**	**NVR70-R Series**
System	**System Resources**	8/16/32/64-channel series product support 8/16/32/64-channel HD connection respectively. The main stream bandwidth supports 48/96/192/192Mbps.	
	Operation System	Embedded Linux real-time operation system	
	Operation Interface	WEB/Local GUI	
Decode	**Video Compression**	H.264/MJPEG	
	Decode Capacity	Max supports 32-channel D1, or 16-channel 720P, or 8-channel 1080P decode.	
Video	**Video Input**	8/16/32/64-ch network compression video input	
	Video Output	1-channel VGA analog video output.	
	HDMI	1-ch HDMI output.	2-ch HDMI output (from different video sources)
	Window Split	1/4/8/9/16/25/36-window	

Audio	**Audio Input**	1-ch bidirectional talk input	
	Audio Output	1-ch bidirectional talk output	
	Audio Compression	G.711a	
Alarm	**Alarm Input**	16-ch alarm input	
	Alarm Output	6-ch alarm output	
		Relay output. Relay （DC 30V/1A，AC 125V/0.5A（Activation output）） Including one controllable DC +12V output.	
Function	**Storage**	16 built-in SATA ports at the front panel. Support removable HDD installation mode. 1 external eSATA port.	16 built-in SATA ports at the front panel. Support hot swap, Raid0, Raid1, Raid5, Raid6. 1 external eSATA port.
	Multiple-channel Playback	Max 16-channel 720P/8-channel 1080P playback at the same time.	
Port and Indicator	**RS232 Port**	One RS232 port to debug transparent COM data.	
	RS485 port	One RS485 port to control PTZ. Support various protocols.	
	USB2.0 Port	4 peripheral USB2.0 ports. Two at the front panel and two at the rear panel.	
	Network Connection	Two RJ45 10/100Mbps self-adaptive Ethernet ports.	
	Power Port	One power port. Input 100V～240V，50~60Hz.	
	Power Button	One button. At the rear panel.	
	Power On-off Button	One button. At the front-panel.	
	IR Receiver Window	Support IR remote control	
	Clock	Built-in clock.	
General	**Indicator Light**	One power status indicator light. One network status indicator light. One HDD status indicator light.	
	Power	＜35W(No HDD)	

	Consumption	
	Working Temperature	-10℃～+55℃
	Working Humidity	10%－90%
	Air pressure	86kpa－106kpa
	Dimension	3U　case: 448mm×490mm×133.2mm
	Weight	10.5kg～11.5kg（No HDD）
	Installation	Desk installation

1.3.26 NVR42V-8P Series

Model		**NVR42V-8P**
System	**System Resources**	8/16/32-channel series product support 8/16/32-channel HD connection respectively. Main stream bandwidth supports 80/160/160Mbps respectively.
	Operation System	Embedded Linux real-time operation system
	Operation Interface	WEB/Local GUI
Decode	**Video Compression**	H.264/MJPEG/MPEG4
	Decode Capacity	Max supports 16-channel D1, or 8-channel 720P, or 4-channel 1080P, or 4*3M or 2*5M decode.
Video	**Video Input**	8/16/32-ch network compression video input
	Video Output	1-channel VGA analog video output.
	HDMI	1-ch HDMI output. Version number is 1.4
	Window Split	1/4/8/9/16-window
Audio	**Audio Input**	1-ch bidirectional talk input
	Audio Output	1-ch bidirectional talk output
	Audio Compression	G.711a
Alarm	**Alarm Input**	2-ch alarm input
	Alarm Output	1-ch alarm output
Function	**Storage**	2 built-in SATA ports.
	Multiple-chann	Max 8-channel 720P/4-channel 1080P playback at the same time.

	el Playback	
Port and Indicator	**RS232 Port**	N/A
	RS485 port	N/A
	USB Port	Two USB2.0 ports at the front panel and one USB3.0 port at the rear panel. .
	Network Connection	1 RJ45 10/100/1000Mbps self-adaptive Ethernet port and 8 PoE ports.
	Power Port	One power port. Input DC 53V--2.3A
	Power Button	One button. At the rear panel.
	Power On-off Button	N/A
	IR Receiver Window	Support IR remote control
	Clock	Built-in clock.
	Indicator Light	One power status indicator light. One network status indicator light. One HDD status indicator light. One alarm status indicator light.
General	**Power Consumption**	＜30W(No HDD)
	Working Temperature	-10℃～+55℃
	Working Humidity	10%－90%
	Air pressure	86kpa－106kpa
	Dimension	100mm×220mm×146mm
	Weight	1.5kg～2.5kg（No HDD）
	Installation	Desk installation

2 Front Panel and Rear Panel

2.1 Front Panel

2.1.1 NVR11/11-P/41/41-P/41-W/21-S2/21-P-S2/21-8P-S2 Series

The front panel is shown as in Figure 2-1.

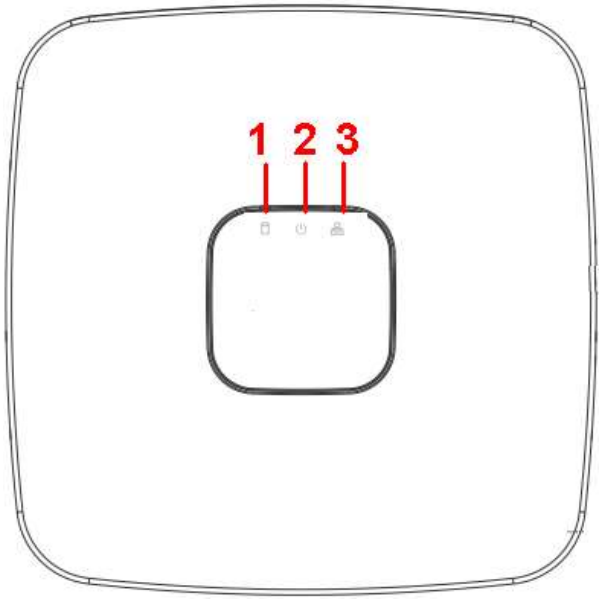


Figure 2-1

Please refer to the following sheet for detailed information.

SN	Name	Function
1	HDD status indictor light	The red light becomes on when HDD is abnormal.
2	Power indicator light	The red light becomes on when the power connection is OK.
3	Network status indicator light	The red light becomes on when the network connection is abnormal.

2.1.2 NVR11H/11H-P/41H/41H-P/41H-8P Series

The front panel is shown as in Figure 2-2.

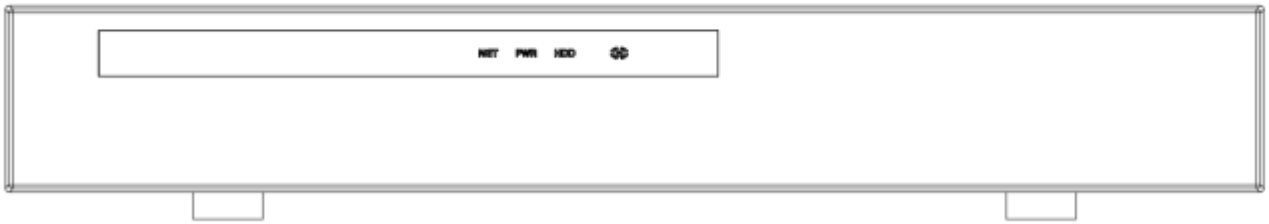


Figure 2-2

Please refer to the following sheet for detailed information.

Icon	Name	Function
NET	Network status indicator light	The red light becomes on when the network connection is abnormal.
PWR	Power indicator light	The red light becomes on when the power connection is OK.
HDD	HDD status indictor light	The red light becomes on when HDD is abnormal.
IR	Remote control receiver	It is to receive signal from the remote control.

2.1.3 NVR11HS Series

The front panel is shown as below. See Figure 2-3.

Figure 2-3

Please refer to the following sheet for detailed information.

Icon	Name	Function
	Network status indicator light	The red light becomes on when the network connection is abnormal.
	Power status indicator light	The red light becomes on when the power connection is OK.
	HDD status indicator light	The red light becomes on when the HDD is abnormal.
	USB port	Connect to USB mouse,USB devices and etc.

2.1.4 NVR41HS-W-S2 Series

The front panel is shown as below. See Figure 2-4.

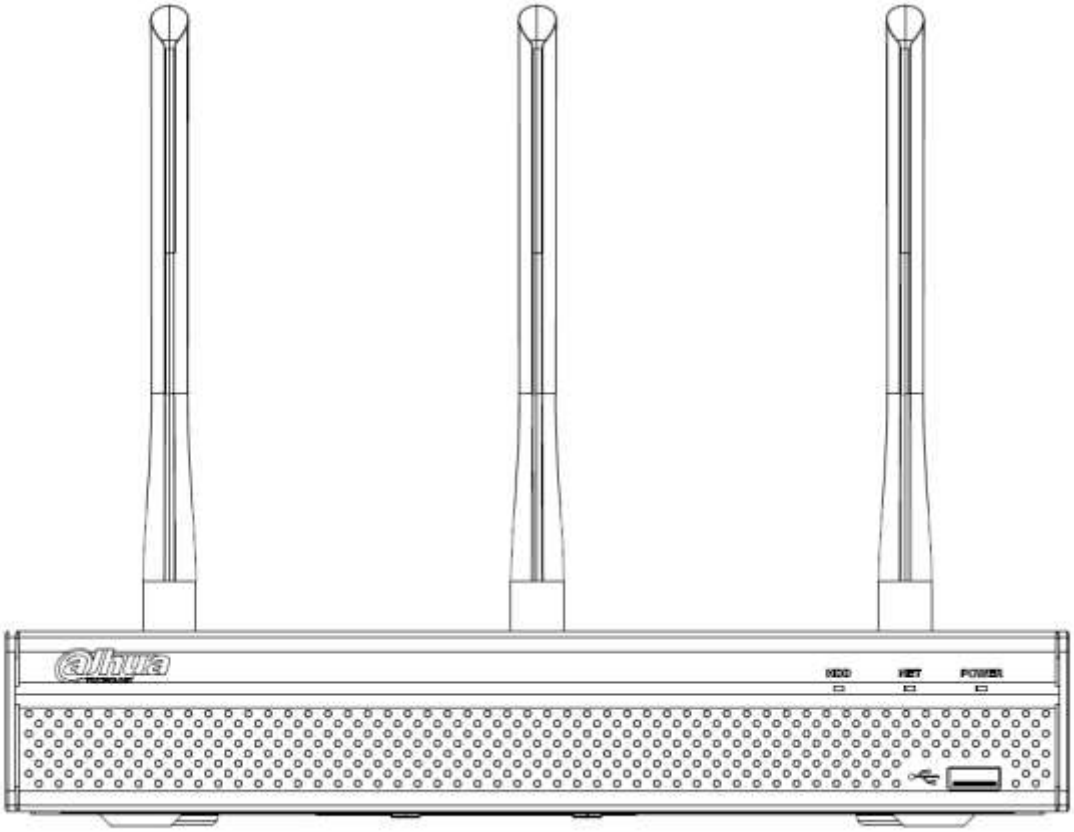


Figure 2-4

Please refer to the following sheet for front panel button information.

Icon	Name	Function
HDD	HDD status indicator light	The blue light is on when the HDD is malfunction.
NET	Network status indicator light	The blue light is on when the network connection is abnormal.
POWER	Power status indicator light	The blue light is on when the power connection is OK.
⇐	USB2.0 port	Connect to peripheral USB 2.0 storage device, mouse, burner and etc.

2.1.5 NVR41-8P Series

The front panel is shown as below. See Figure 2-5.

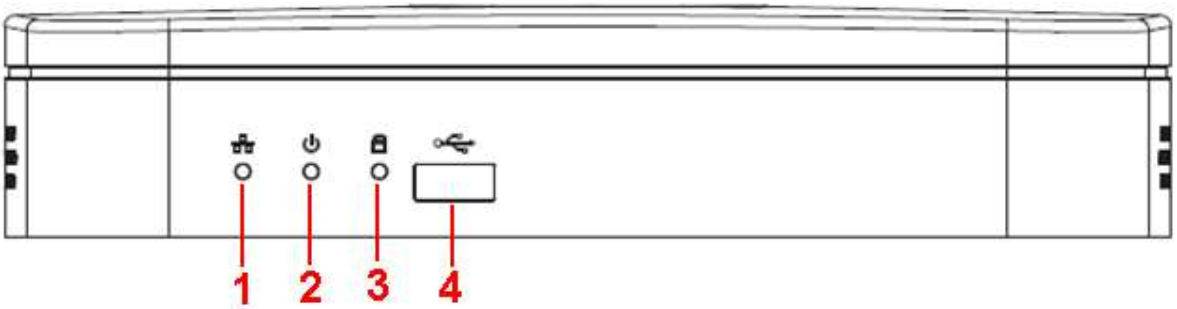


Figure 2-5

Please refer to the following sheet for detailed information.

SN	Name	Function
1	Network status indicator light	The red light becomes on when the network connection is abnormal.
2	Power indicator light	The red light becomes on when the power connection is OK.
3	HDD status indictor light	The red light becomes on when HDD is abnormal.
4	USB	USB port

2.1.6 NVR42/42-P/42-8P/72/72-8P Series

The front panel is shown as below. See Figure 2-6.

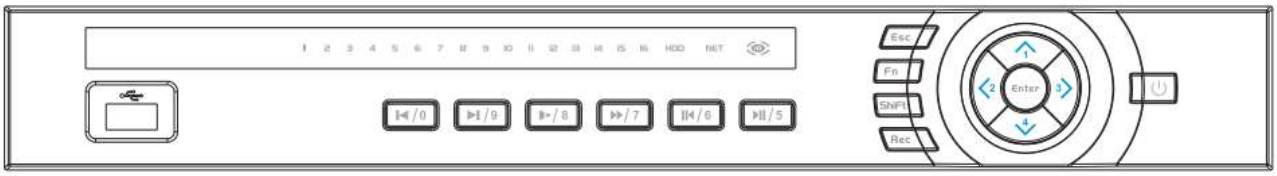


Figure 2-6

Please refer to the following sheet for front panel button information.

Name	Icon	Function
Power button	⏻	Power button, press this button for three seconds to boot up or shut down NVR.
Shift	Shift	In textbox, click this button to switch between numeral, English(Small/Capitalized),donation and etc.
Up/1 Down/4	▲、▼	Activate current control, modify setup, and then move up and down.
		Increase/decrease numeral.
		Assistant function such as PTZ menu.
		In text mode, input number 1/4 (English character G/H/I)
Left/2 Right/3	◄ ►	Shift current activated control,
		When playback, click these buttons to control playback bar. In text mode, input number 2(English character A/B/C) /3(English character D/E/F)
ESC	ESC	Go to previous menu, or cancel current operation.
		When playback, click it to restore real-time monitor mode.
Enter	ENTER	Confirm current operation
		Go to default button

		Go to menu
Record	REC	Manually stop/start recording, working with direction keys or numeral keys to select the recording channel.
Slow play/8	▮▸	Multiple slow play speeds or normal playback. In text mode, input number 8 (English character T/U/V).
Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image color.
		Backspace function: in numeral control or text control, press it for 1.5seconds to delete the previous character before the cursor.
		In motion detection setup, working with Fn and direction keys to realize setup.
		In text mode, click it to switch between numeral, English character(small/capitalized) and etc.
		Realize other special functions.
Fast play/7	▸▸	Various fast speeds and normal playback. In text mode, input number 7 (English character P/Q/R/S).
Play previous/0	|◀	In playback mode, playback the previous video In text mode, input number 0.
Reverse/Pause/6	||◀	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.
Play Next/9	▶|	In playback mode, playback the next video In menu setup, go to down ward of the dropdown list. In text mode, input number 9 (English character W/X/Y/Z)
Play/Pause /5	▶||	In normal playback click this button to pause playback In pause mode, click this button to resume playback. In text mode, input number 5(English character J/K/L).
USB port		To connect USB storage device, USB mouse.
Network abnormal indicator light	Net	Network error occurs or there is no network connection, the light becomes red to alert you.
HDD abnormal indicator light	HDD	HDD error occurs or HDD capacity is below specified threshold value, the light becomes red to alert you.
Record light	1-16	System is recording or not. It becomes on when system is recording.

IR Receiver	IR	It is to receive the signal from the remote control.

2.1.7 NVR21HS-S2/21HS-P-S2/21HS-8P-S2/22-S2/22-P-S2/22-8P-S2 Series

The NVR21HS-S2/21HS-P-S2/21HS-8P-S2 series front panel is shown as below. See Figure 2-7.

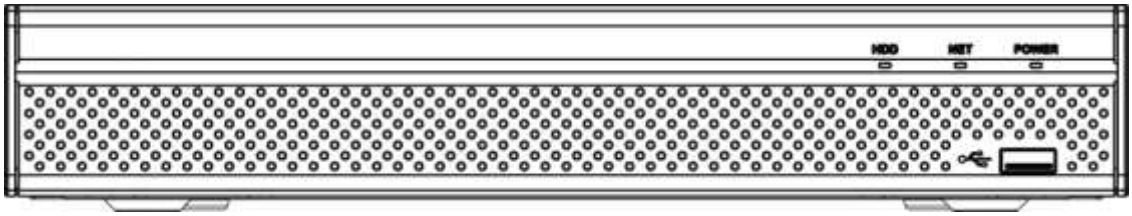


Figure 2-7

The NVR22-S2/22-P-S2/22-8P-S2 series front panel is shown as in Figure 2-8.

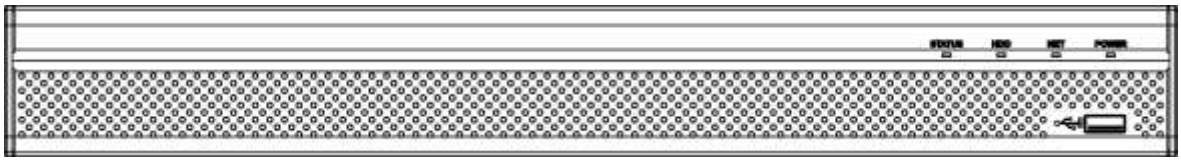


Figure 2-8

Please refer to the following sheet for front panel button information.

Icon	Name	Function
STATUS	Status indicator light	The blue light is on when the device is malfunction. **Note** NVR21HS-S2 series product does not support STATUS indicator light.
HDD	HDD status indicator light	The blue light is on when the HDD is malfunction.
NET	Network status indicator light	The blue light is on when the network connection is abnormal.
POWER	Power status indicator light	The blue light is on when the power connection is OK.
	USB port	Connect to peripheral USB storage device, mouse and etc.

2.1.8 NVR42-16P/42N/42-4K/42-8P-4K/44-4K/48-4K/52-4KS2/52-8P-4KS2/52-16P-4KS2/54-4KS2/58-4KS2 Series

The NVR42-16P/42N/42-4K/42-8P-4K/52-4KS2/52-8P-4KS2/52-16P-4KS2 series front panel is shown as in Figure 2-9.

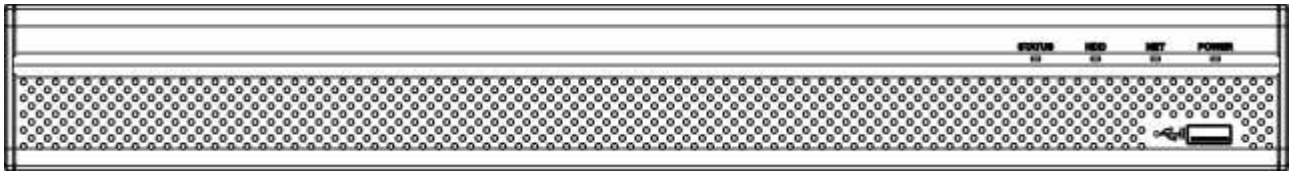


Figure 2-9

The NVR44-4K/54-4KS2/54-16P-4KS2 series front panel is shown as in Figure 2-10.

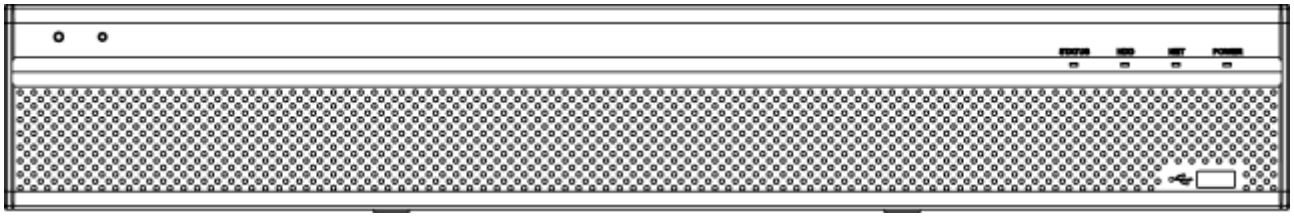


Figure 2-10

The NVR48-4K/58-4K/58-16P-4KS2 series front panel is shown as in Figure 2-11.

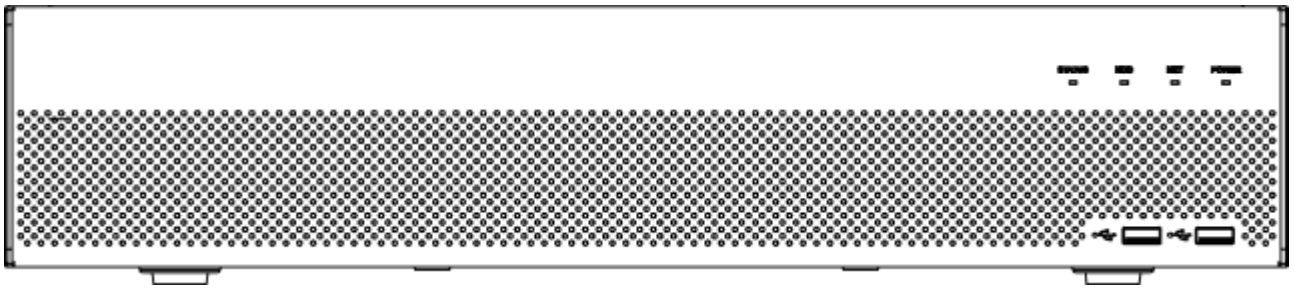


Figure 2-11

Please refer to the following sheet for front panel button information.

Icon	Name	Function
STATUS	Status indicator light	The blue light is on when the device is malfunction.
HDD	HDD status indicator light	The blue light is on when the HDD is malfunction.
NET	Network status indicator light	The blue light is on when the network connection is abnormal.
POWER	Power status indicator light	The blue light is on when the power connection is OK.
	USB2.0 port	Connect to peripheral USB 2.0 storage device, mouse, burner and etc.

2.1.9 NVR44/44-8P/44-16P/74/74-8P/74-16P Series

The front panel is shown as in Figure 2-12.

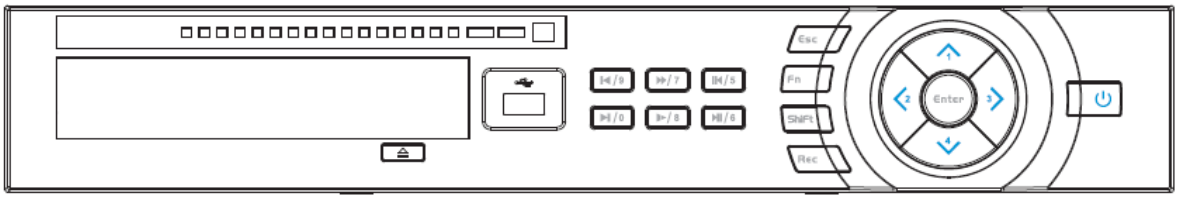


Figure 2-12

Please refer to the following sheet for front panel button information.

Name	Icon	Function
Power button		Power button, press this button for three seconds to boot up or shut down NVR.

Shift	Shift	In textbox, click this button to switch between numeral, English(Small/Capitalized),donation and etc.
Up/1 Down/4	▲、▼	Activate current control, modify setup, and then move up and down.
		Increase/decrease numeral.
		Assistant function such as PTZ menu.
		In text mode, input number 1/4 (English character G/H/I)
Left/2 Right/3	◄ ►	Shift current activated control,
		When playback, click these buttons to control playback bar. In text mode, input number 2(English character A/B/C) /3(English character D/E/F)
ESC	ESC	Go to previous menu, or cancel current operation.
		When playback, click it to restore real-time monitor mode.
Enter	ENTER	Confirm current operation
		Go to default button
		Go to menu
Record	REC	Manually stop/start recording, working with direction keys or numeral keys to select the recording channel.
Slow play/8	▮▸	Multiple slow play speeds or normal playback. In text mode, input number 8 (English character T/U/V).
Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image color.
		Backspace function: in numeral control or text control, press it for 1.5seconds to delete the previous character before the cursor.
		In motion detection setup, working with Fn and direction keys to realize setup.
		In text mode, click it to switch between numeral, English character(small/capitalized) and etc.
		Realize other special functions.
Fast play/7	▸▸	Various fast speeds and normal playback. In text mode, input number 7 (English character P/Q/R/S).
Play previous/0	|◄	In playback mode, playback the previous video In text mode, input number 0.
Reverse/Pause/6	||◄	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.

Play Next/9	►|	In playback mode, playback the next video In menu setup, go to down ward of the dropdown list. In text mode, input number 9 (English character W/X/Y/Z)
Play/Pause /5	►||	In normal playback click this button to pause playback In pause mode, click this button to resume playback. In text mode, input number 5(English character J/K/L).
USB port		To connect USB storage device, USB mouse.
Network abnormal indicator light	Net	Network error occurs or there is no network connection, the light becomes red to alert you.
HDD abnormal indicator light	HDD	HDD error occurs or HDD capacity is below specified threshold value, the light becomes red to alert you.
Record light	1-16	System is recording or not. It becomes on when system is recording.

2.1.10 NVR48/48-16P/78/78-16P Series

The Front panel is shown as follows. See Figure 2-13.

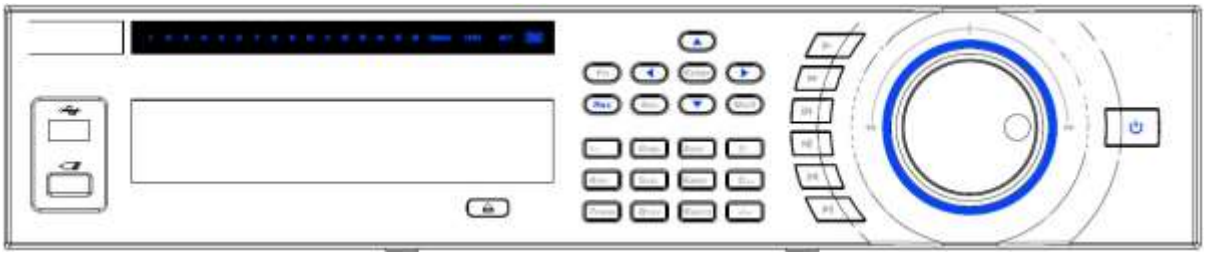


Figure 2-13

Please refer to the following sheet for front panel button information.

Name	Icon	Function
Power button		Power button, press this button for three seconds to boot up or shut down NVR.
Number button	0-9	Input Arabic number Switch channel
Input number more than 10	-/--	If you want to input a number more than 10, please click this button and then input.
Shift		In textbox, click this button to switch between numeral, English(Small/Capitalized),donation and etc.
		Enable or disable tour.
Up/ Down	▲、▼	Activate current control, modify setup, and then move up and down.

		Increase/decrease numeral.
		Assistant function such as PTZ menu.
Left/ Right	◄ ►	Shift current activated control, and then move left and right.
		When playback, click these buttons to control playback bar.
ESC	ESC	Go to previous menu, or cancel current operation.
		When playback, click it to restore real-time monitor mode.
Enter	ENTER	Confirm current operation
		Go to default button
		Go to menu
Record	REC	Manually stop/start recording, working with direction keys or numeral keys to select the recording channel.
Slow play	▶	Multiple slow play speeds or normal playback.
Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image color.
		Backspace function: in numeral control or text control, press it for 1.5seconds to delete the previous character before the cursor.
		In motion detection setup, working with Fn and direction keys to realize setup.
		In text mode, click it to switch between numeral, English character(small/capitalized) and etc.
		In HDD management interface, you can click it to switch HDD record information and other information (Menu prompt)
		Realize other special functions.
Fast play	▶▶	Various fast speeds and normal playback.
Play previous	|◀	In playback mode, playback the previous video
Reverse/Pause	⏸◀	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.
Play Next	▶|	In playback mode, playback the next video In menu setup, go to down ward of the dropdown list.
Play/Pause	▶⏸	In normal playback click this button to pause playback In pause mode, click this button to resume playback.

Window switch	**Mult**	Click it to switch one-window/multiple-window.
Shuttle(outer ring)		In real-time monitor mode it works as left/right direction key. Playback mode, counter clockwise to forward and clock wise to backward.
Jog(inner dial)		Up/down direction key. Playback mode, turn the inner dial to realized frame by frame playback. (Only applies to some special versions.)
USB port		To connect USB storage device, USB mouse.
Remote control indicator light	ACT	Remote control indicator light
Status indicator light	Status	If there is Fn indicator light, current status indicator light is null.
Power indicator light	PWR	Power indicator light
Channel indictor light	1-32	**For 4/8/16-channel series product.** The corresponding channel light becomes on when system is recording. **For 32/64-channel series product:** When the light flashes slowly, it means the corresponding channel of 1-16 channel is recording now (Such as channel 1). When the light flashes fast, it means the corresponding channel of 17-32 channel is recording now (Such as channel 17) When the light becomes on, It means the corresponding 2 channels are recoding now (Such as channel 1 and channel 17.).
IR Receiver	IR	It is to receive the signal from the remote control.

2.1.11 NVR78-RH Series

The front panel is shown as below. See Figure 2-14.

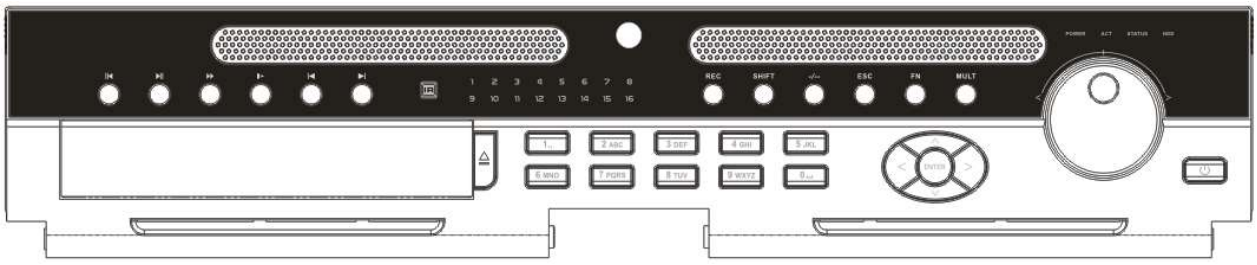


Figure 2-14

Please refer to the following sheet for front panel button information.

Name	Icon	Function
Power button	⏻	Power button, press this button for three seconds to boot up or shut down NVR.
Number button	0-9	Input Arabic number Switch channel
Input number more than 10	-/--	If you want to input a number more than 10, please click this button and then input.
Shift	↑	In textbox, click this button to switch between numeral, English(Small/Capitalized),donation and etc.
		Enable or disable tour.
Up/ Down	▲、▼	Activate current control, modify setup, and then move up and down.
		Increase/decrease numeral.
		Assistant function such as PTZ menu.
Left/ Right	◄ ►	Shift current activated control, and then move left and right.
		When playback, click these buttons to control playback bar.
ESC	ESC	Go to previous menu, or cancel current operation.
		When playback, click it to restore real-time monitor mode.
Enter	ENTER	Confirm current operation
		Go to default button
		Go to menu
Record	REC	Manually stop/start recording, working with direction keys or numeral keys to select the recording channel.
Slow play	▮▸	Multiple slow play speeds or normal playback.
Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image color.
		Backspace function: in numeral control or text control, press it for 1.5 seconds to delete the previous character before the cursor.
		In motion detection setup, working with Fn and direction keys to realize setup.
		In text mode, click it to switch between numeral, English character(small/capitalized) and etc.
		In HDD management interface, you can click it to switch HDD record information and other information (Menu prompt)
		Realize other special functions.

Fast play	⏩	Various fast speeds and normal playback.
Play previous	|◀	In playback mode, playback the previous video
Reverse/Pause	||◀	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.
Play Next	▶|	In playback mode, playback the next video In menu setup, go to down ward of the dropdown list.
Play/Pause	▶||	In normal playback click this button to pause playback In pause mode, click this button to resume playback.
Window switch	Mult	Click it to switch one-window/multiple-window.
Shuttle(outer ring)		In real-time monitor mode it works as left/right direction key. Playback mode, counter clockwise to forward and clock wise to backward.
Jog(inner dial)		Up/down direction key. Playback mode, turn the inner dial to realized frame by frame playback. (Only applies to some special versions.)
USB port		To connect USB storage device, USB mouse.
Remote control receiver	IR	It is to receive signal from the remote control.
Remote control indicator light	ACT	Remote control indicator light
Status indicator light	Status	The light is on if device operates properly.
Power indicator light	POWER	Power indicator light
Record light	1-16	It becomes on when system is recording.
HDD abnormal status indictor light	HDD	It becomes on when there is no HDD, HDD error occurs, or HDD is full.

2.1.12 NVR70/70-R Series

The front panel is shown as in Figure 2-15.

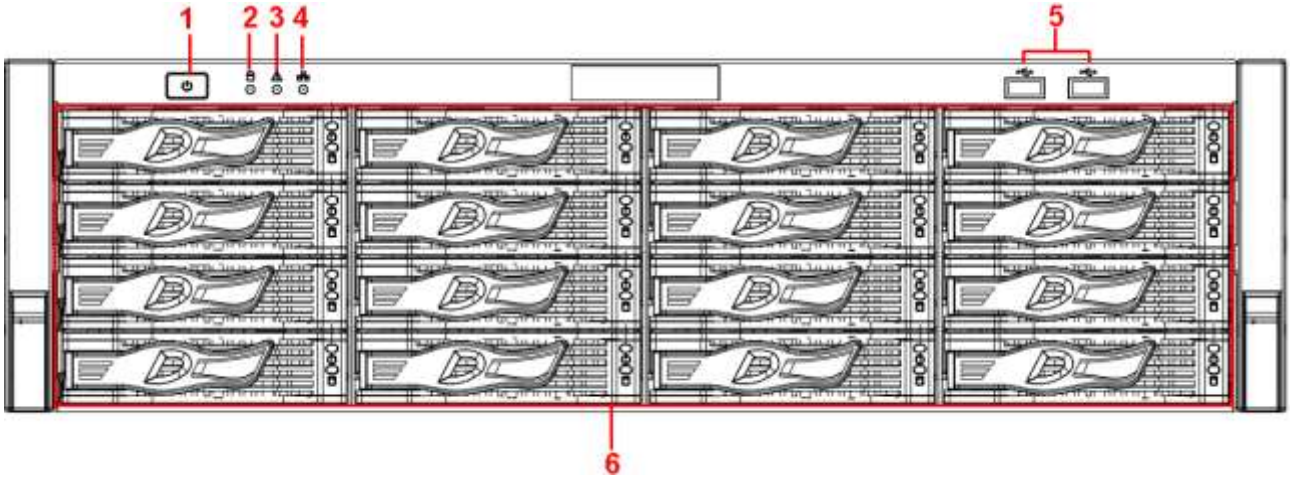


Figure 2-15

Please refer to the following sheet for front panel button information.

SN	Name	Icon	Function
1	Power button		Press it once to turn on the device. Press it for a long time to turn off the device (**Usually we do not recommend**). Press power button for a long time or pull out the power cable may result in device auto restart.
2	System HDD Indicator light		The blue light flashes when system is reading or writing the system HDD. In the system HDD, there are device important configuration file, factory default configuration file, device initial boot up data.
3	Alarm indicator light		The alarm indicator light becomes on once an alarm occurred. It becomes on via the software detection. The alarm includes local alarm, no disk and etc.
4	Network indicator light		The network indicator light is blue and it flashes when you connect the device to the network.
5	USB2.0 port		Connect to USB2.0 storage device, mouse, USB burner and etc.
6	16 HDD slot	-	/

After you remove the front panel, you can see there are 16 HDDs. From the left to the right and from the top to the bottom, it ranges from 1~4, 5~8, 6~12, 13~16. See Figure 2-16.

You can see there are two indicator light s on the HDD bracket.

- The power indicator light is at the top. The light is yellow after you connected the device to the power.
- The read-write indicator light is at the bottom. The blue light flashes when system is reading or writing the data.

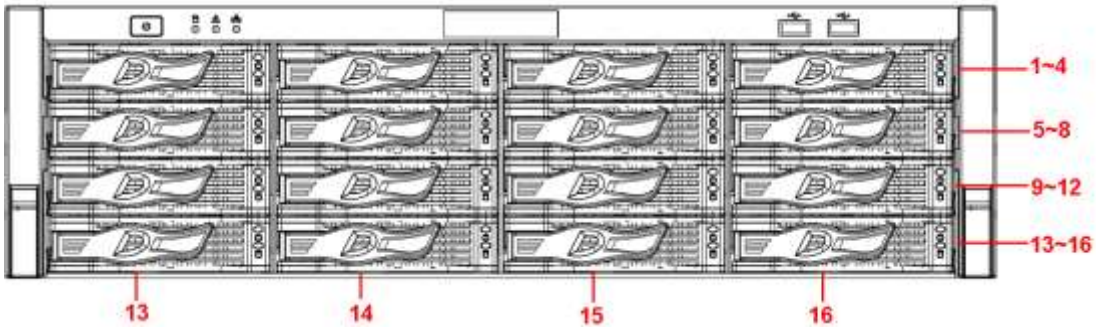


Figure 2-16

2.1.13 NVR42V-8P Series

The front panel is shown as below. See Figure 2-17

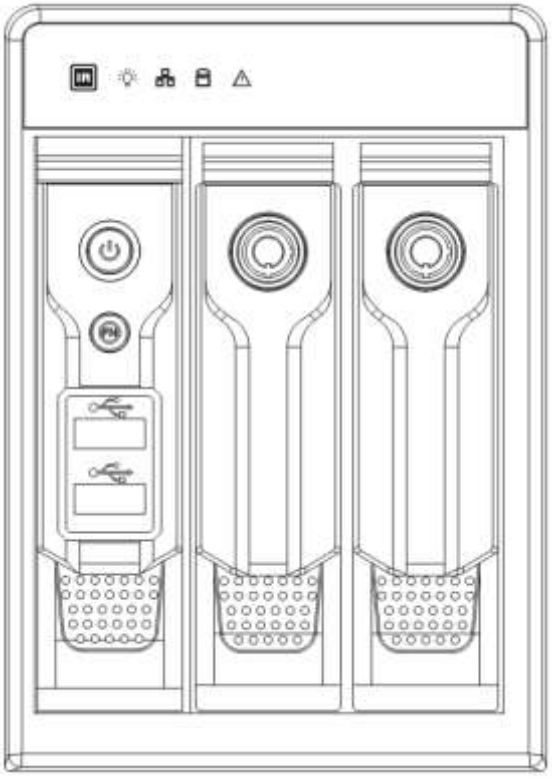


Figure 2-17

Please refer to the following sheet for front panel button information.

Name	Icon	Function
Power button	⏻	Power button, press this button for three seconds to boot up or shut down NVR.
Assistant	Fn	● One-window monitor mode, click this button to display assistant function: PTZ control and image color. ● Backspace function: in numeral control or text control, press it for 1.5 seconds to delete the previous character before the cursor. ● In motion detection setup, working with Fn and direction keys to realize setup. ● In text mode, click it to switch between numeral, English

		character (small/capitalized) and etc. ● In HDD management interface, you can click it to switch HDD record information and other information (Menu prompt) ● Realize other special functions.
USB2.0 port		To connect USB2.0 storage device, USB2.0 mouse, burner and etc.
IR receive window		It is to receive the IR signal from the remote control.
Power indicator light		Power indicator light.
HDD abnormal indicator light		HDD error occurs or HDD capacity is below specified threshold value, the light becomes red to alert you.
Network abnormal indicator light		Network error occurs or there is no network connection, the light becomes red to alert you.
Alarm indicator light		The light becomes on when an alarm occurred.

2.2 Rear Panel

2.2.1 NVR100/100-P Series

The NVR100 rear panel is shown as below. See Figure 2-18.

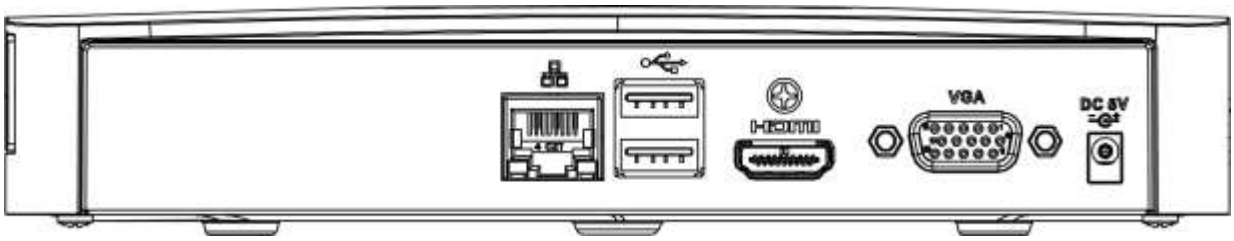


Figure 2-18

The NVR100-P rear panel is shown as below. See Figure 2-19.

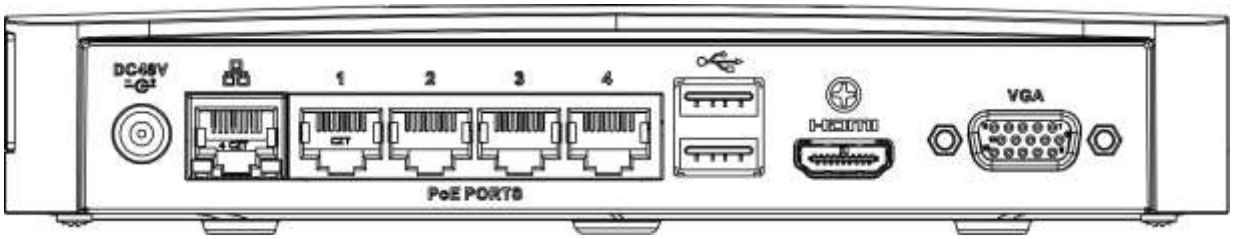


Figure 2-19

Please refer to the following sheet for detailed information.

Port Name	Connection	Function
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.

Port Name	Connection	Function
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
DC 12V	Power input port	Power socket. ● For NVR100 series, input DC 5V/2A. ● For NVR100-P series, input DC 48V/1.25A.
PoE PORT	PoE port	Built-in switch. Support PoE function. For PoE series product, you can use this port to provide power to the network camera.

2.2.2 NVR11/11-P Series

The NVR11 rear panel is shown as below. See Figure 2-20.

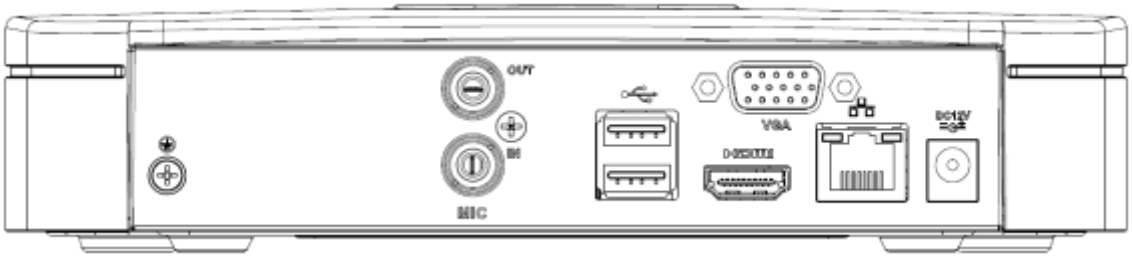


Figure 2-20

The NVR11-P rear panel is shown as below. See Figure 2-21.

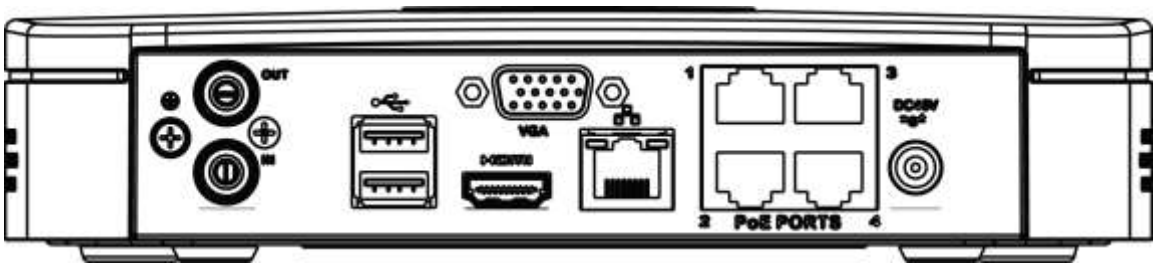


Figure 2-21

Please refer to the following sheet for detailed information.

Port Name	Connection	Function
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
	GND	Ground end
DC 12V	Power input port	Power socket. ● For NVR11 series, input DC 12V/2A. ● For NVR11-P series, input DC 48V/1.25A.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
PoE PORT	PoE port	Built-in switch. Support PoE function. For PoE series product, you can use this port to provide power to the network camera.

2.2.3 NVR41/41-P/41-8P/41-W Series

The NVR41 rear panel is shown as below. See Figure 2-22.

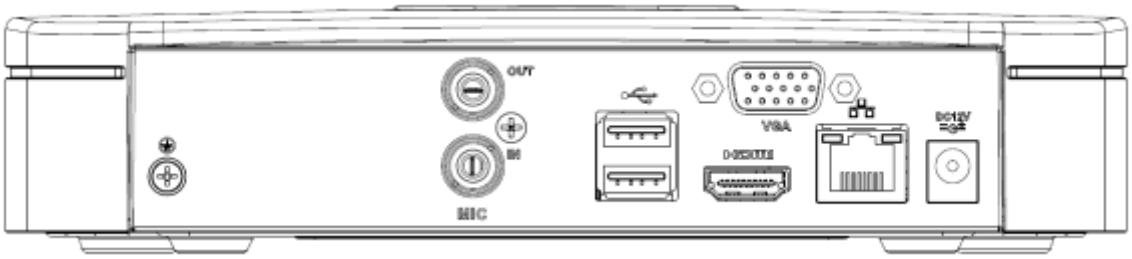


Figure 2-22

The NVR41-P rear panel is shown as below. See Figure 2-23.

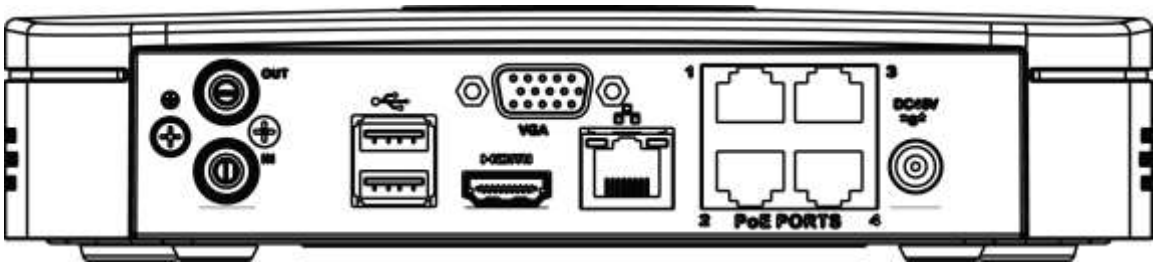


Figure 2-23

The NVR41-8P rear panel is shown as below. See Figure 2-24.

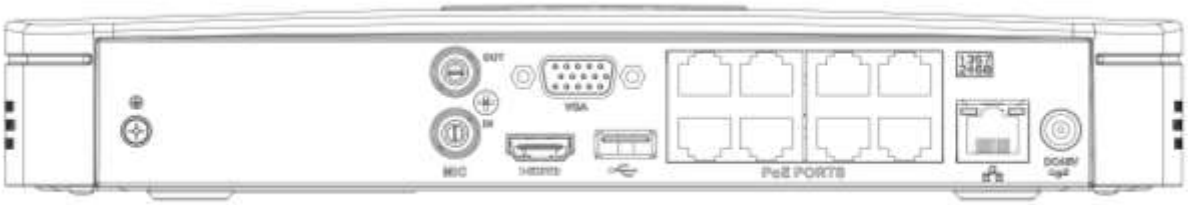


Figure 2-24

The NVR41-W rear panel is shown as below. See Figure 2-25.

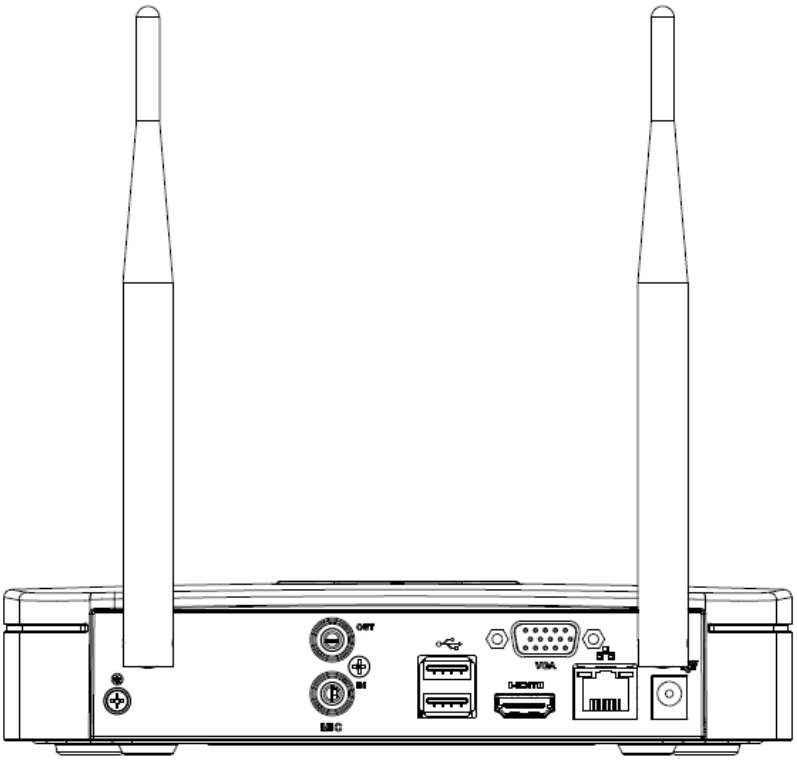


Figure 2-25

Please refer to the following sheet for detailed information.

Port Name	Connection	Function
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.

Port Name	Connection	Function
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
	GND	Ground end
DC 12V / DC 48V	Power input port	Power socket. ● For NVR41 series, input DC 12V/2A. ● For NVR41-P series, input DC 48V/1.5A. ● For NVR41-8P series, input DC 48V/2A.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
PoE PORT	PoE port	Built-in switch. Support PoE function. For PoE series product, you can use this port to provide power to the network camera.
Wireless AP		Support wireless hotspot function. Use WIFI to connect to the network camera when there is a hotspot. For 41-W series only.

2.2.4 NVR21-S2/21-P-S2/21-8P-S2 Series

The NVR21-S2 is shown as in Figure 2-26.

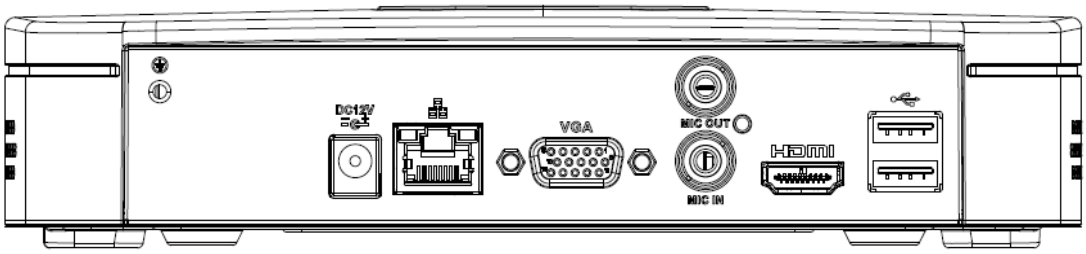


Figure 2-26

The NVR21-P-S2 is shown as in Figure 2-27.

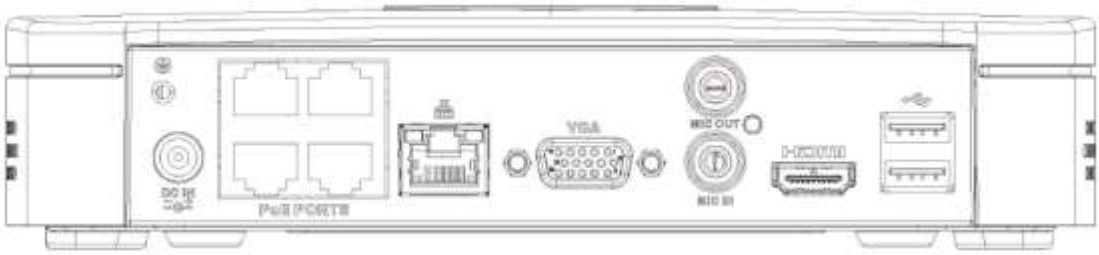


Figure 2-27

The NVR21-8P-S2 is shown as in Figure 2-28.

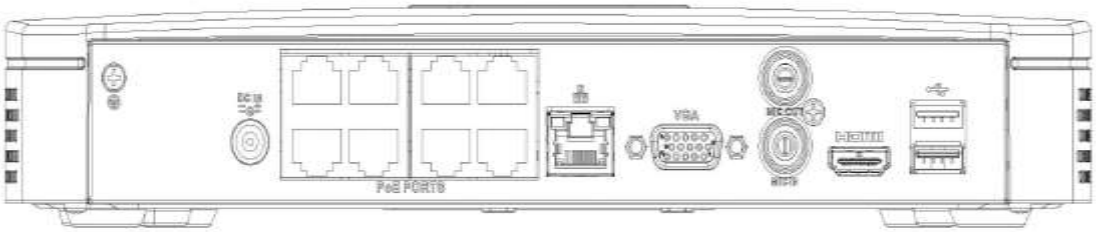


Figure 2-28

Please refer to the following sheet for detailed information.

Port Name	Connection	Function
DC 12V	Power input port	Power socket ● For NVR21-S2，input DC 12V/2A. ● For NVR21-P-S2，input DC 48V/1.25A. ● For NVR21-8P-S2，input DC 48V/2A.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
	USB port	USB port. Connect to mouse, USB storage device and etc.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
	GND	Ground end

Port Name	Connection	Function
PoE PORTS	PoE port	Built-in switch. Support PoE function. For PoE series product, you can use this port to provide power to the network camera.

2.2.5 NVR11H/11H-P/41H/41H-P/41H-8P Series

The NVR11H/41H rear panel is shown as in Figure 2-29.

Figure 2-29

The NVR11H-P/41H-P rear panel is shown as in Figure 2-30.

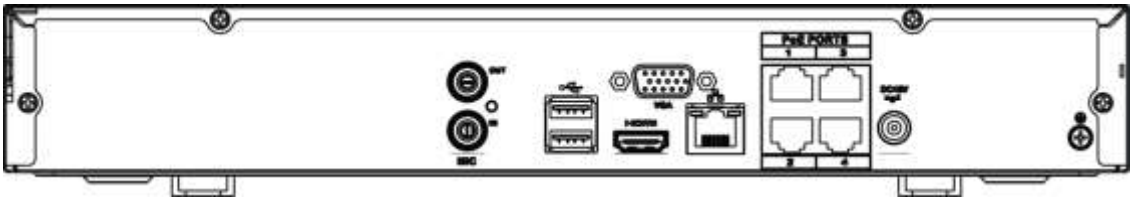


Figure 2-30

The NVR41H-8P rear panel is shown as in Figure 2-31.

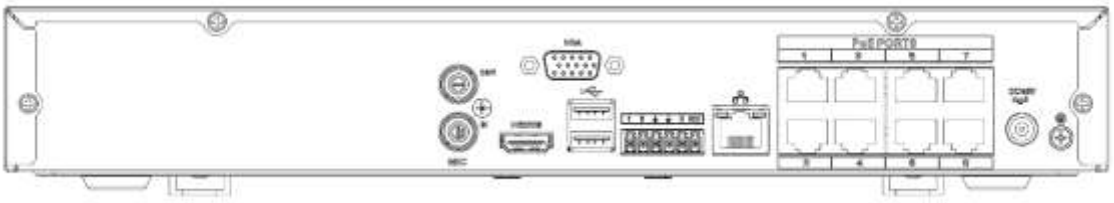


Figure 2-31

Please refer to the following sheet for detailed information.

Port Name	Connection	Function
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

Port Name	Connection	Function
⏚	GND	Ground end
DC 12V / DC 48V	Power input port	Power socket. ● For NVR41 series, input DC 12V/2A. ● For NVR41H-P series, input DC 48V/1.5A. ● For NVR11H-P series, input DC 48V/1.25A. ● For NVR41H-8P series, input DC 48V/2A.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
PoE PORT	PoE port	Built-in switch. Support PoE function. For PoE series product, you can use this port to provide power to the network camera.

2.2.6 NVR11HS Series

The series rear panel is shown as below. See Figure 2-32.

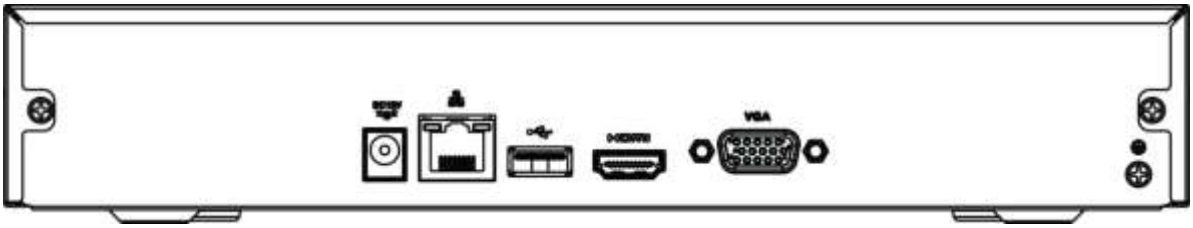


Figure 2-32

Please refer to the following sheet for detailed information.

Icon	Name	Function
DC 12V	Power input socket.	Power socket. Input DC12V/1.5A.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, and etc.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

Icon	Name	Function
⏚	GND	Ground end

2.2.7 NVR21HS-S2/21HS-P-S2/21HS-8P-S2 Series

The NVR21HS-S2 series rear panel is shown as below. See Figure 2-33.

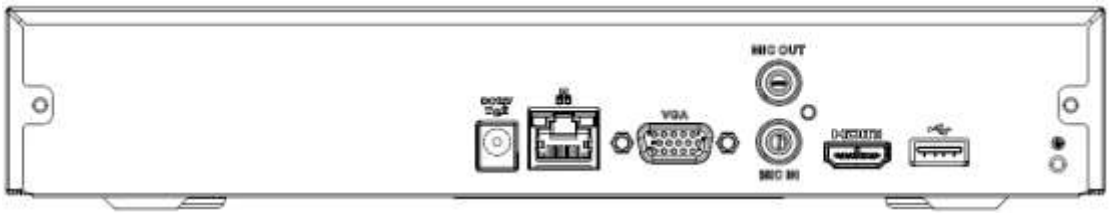


Figure 2-33

The NVR21HS-P-S2 series rear panel is shown as below. See Figure 2-34.

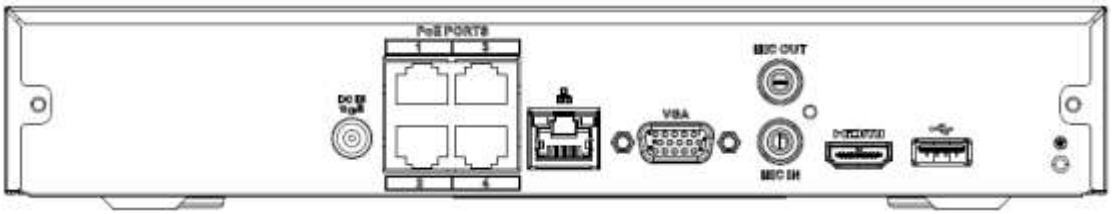


Figure 2-34

The NVR21HS-8P-S2 series rear panel is shown as below. See Figure 2-35.

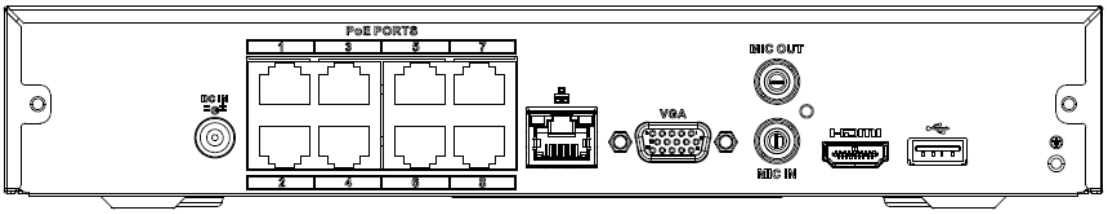


Figure 2-35

Please refer to the following sheet for detailed information.

Port Name	Connection	Function
DC 12V	Power input port	Power socket. ● For NVR21HS-S2, input DC 12V/2A. ● For NVR21HS-P-S2, input DC 48V/1.25A. ● For NVR21HS-8P-S2, input DC 48V/2A.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
	USB port	USB port. Connect to mouse, USB storage device and etc.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.

Port Name	Connection	Function
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
⏚	GND	Ground end
PoE PORTS	PoE port	Built-in switch. Support PoE function. For PoE series product, you can use this port to provide power to the network camera.

2.2.8 NVR41HS-W-S2 Series

The NVR41HS-W-S2 rear panel is shown as below. See Figure 2-36.

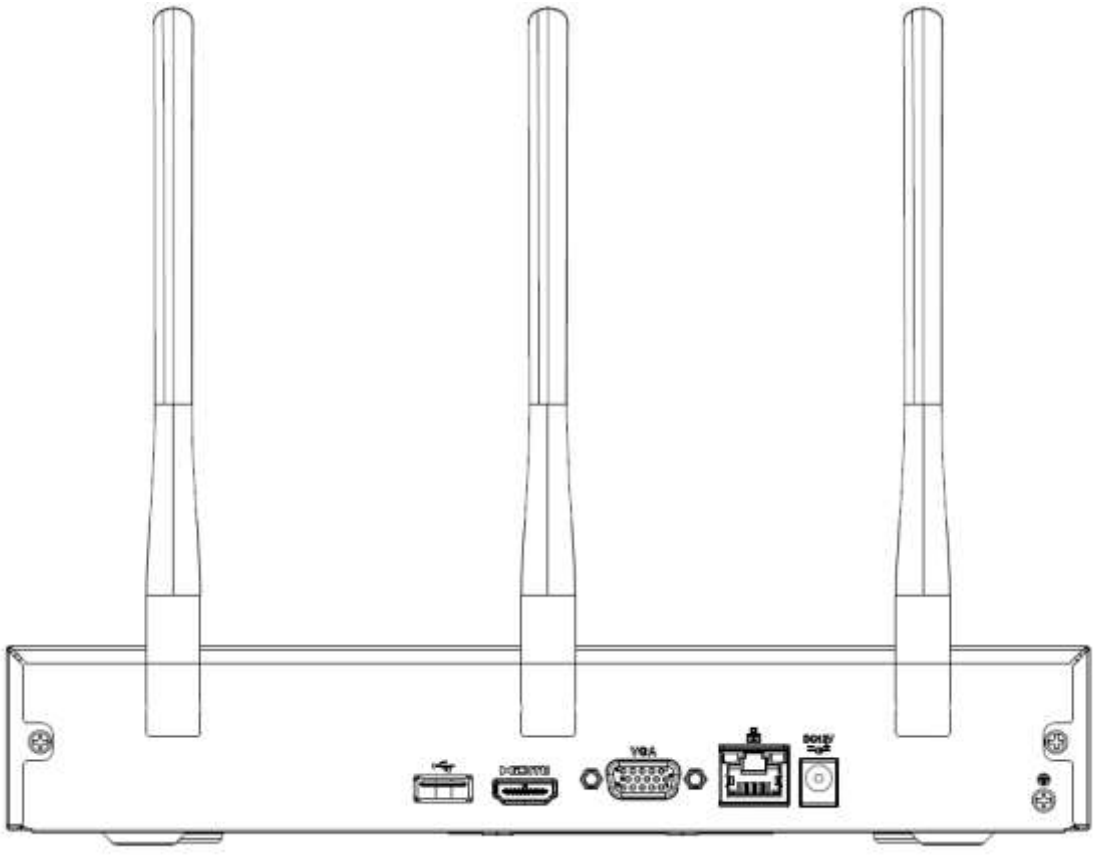


Figure 2-36

Please refer to the following sheet for detailed information.

Icon	Name	Function

Icon	Name	Function
DC 12V	Power input socket.	Power socket. Input DC12V/2A.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, and etc.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
	GND	Ground end
Wireless AP		Support wireless hotspot function. Use WIFI to connect to the network camera when there is a hotspot.

2.2.9 NVR22-S2/22-P-S2/22-8P-S2 Series

The NVR22-S2 series rear panel is shown as below. See Figure 2-37.

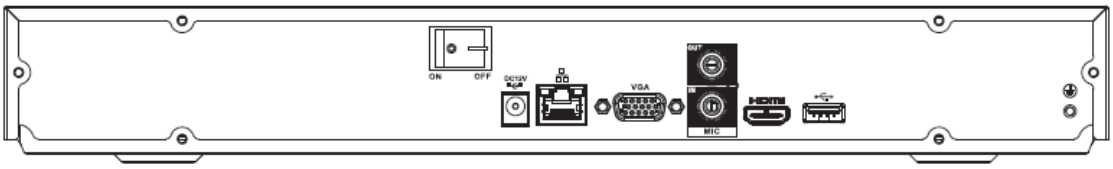


Figure 2-37

The NVR22-P-S2 series rear panel is shown as below. See Figure 2-38.

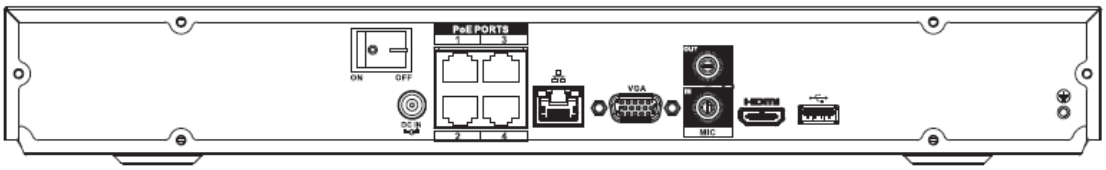


Figure 2-38

The NVR22-8P-S2 series rear panel is shown as below. See Figure 2-39.

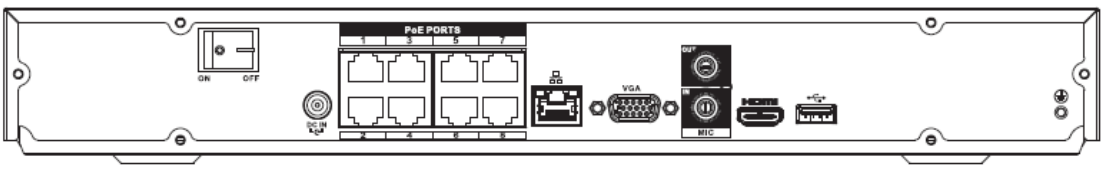


Figure 2-39

Please refer to the following sheet for detailed information.

Port Name	Connection	Function
DC 12V	Power input port	Power socket. ● For NVR22-S2, input DC 12V/4A. ● For NVR22-P-S2, input DC 48V/1.5A. ● For NVR22-8P-S2, input DC 53V 120W.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connect to the network cable.
	USB port	USB port. Connect to mouse, USB storage device and etc.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
	GND	Ground end
PoE PORTS	PoE port	Built-in switch. Support PoE function. For PoE series product, you can use this port to provide power to the network camera.

2.2.10 NVR42/42N/42-P/42-8P/42-16P Series

The NVR42 series rear panel is shown as below. See Figure 2-40.

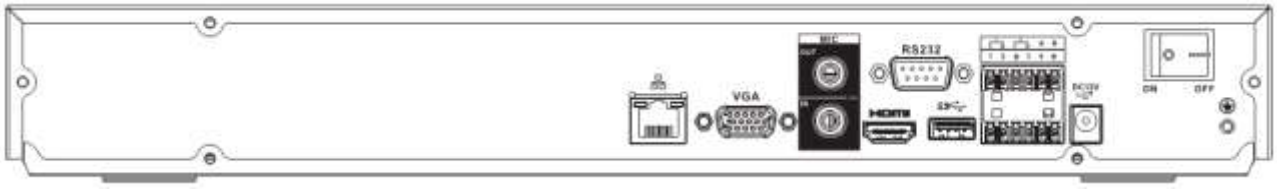


Figure 2-40

The NVR42N series rear panel is shown as below. See Figure 2-41.

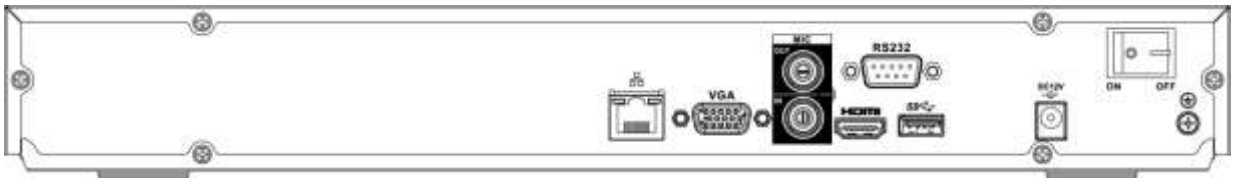


Figure 2-41

The NVR42-P series rear panel is shown as below. See Figure 2-42.

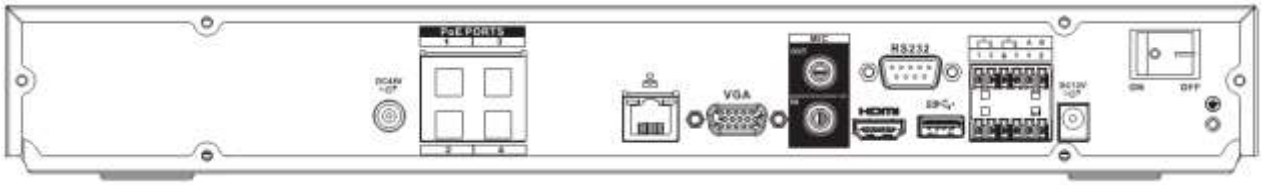


Figure 2-42

The NVR42-8P series rear panel is shown as below. See Figure 2-43.

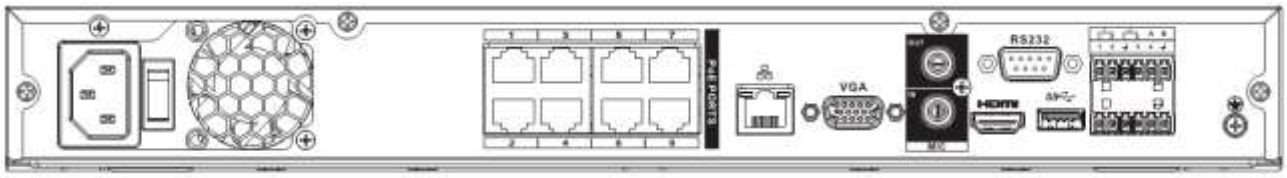


Figure 2-43

The NVR42-16P series rear panel is shown as below. See Figure 2-44.

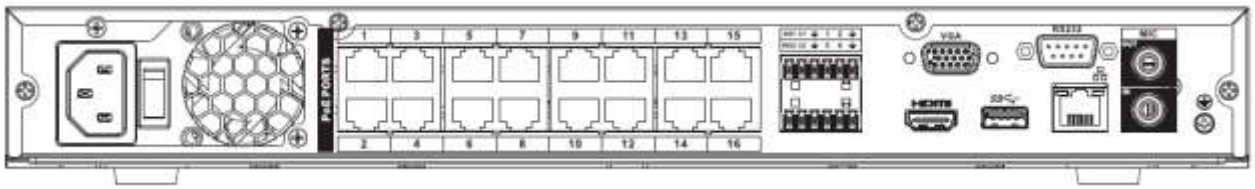
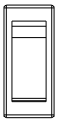


Figure 2-44

Please refer to the following sheet for detailed information.

Name		Function
 	Power switch	Power on/off button.
DC 12V	Power input port	Input DC 12V/5A. For NVR42 series product only.
DC 48V		Switch power port. Input DC 48//1.04A. For NVR42-P series product only.
		Input AC 100~240V. For NVR42-8P/42-16P series product only.

Name		Function
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
1～4	Alarm input port 1～4	● There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
N1, N2	Alarm output port 1～2	● 2 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO：Normal open alarm output port. ● C：Alarm output public end.
C1, C2		
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
🖧	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
⇆	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

Name		Function
PoE PORTS	/	Bult-in Switch. Support PoE. The 4 PoE series product supports total 48V 50W. The 8 PoE series product supports total 48V 120W. The 16 PoE series product supports total 120W. One PoE port max supports 15W.

2.2.11 NVR42-4K/52-4KS2/52-8P-4KS2/52-16P-4KS2 Series

The NVR42-4K/52-4KS2 series rear panel is shown as below. See Figure 2-45.

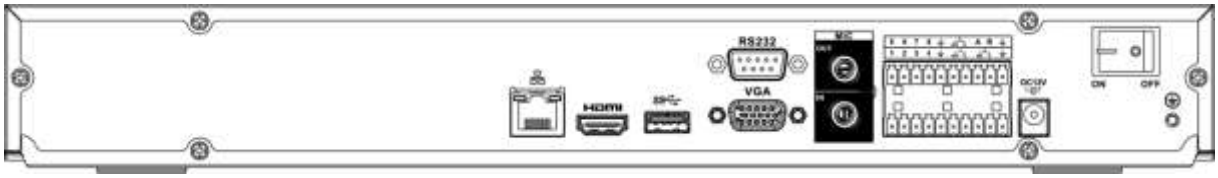


Figure 2-45

The NVR52-8P-4KS2 series rear panel is shown as below. See Figure 2-46.

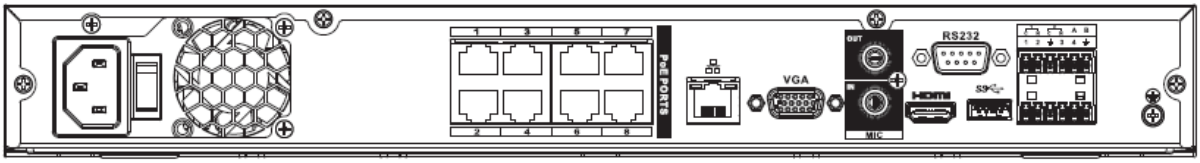


Figure 2-46

The NVR52-16P-4KS2 series rear panel is shown as below. See Figure 2-47.

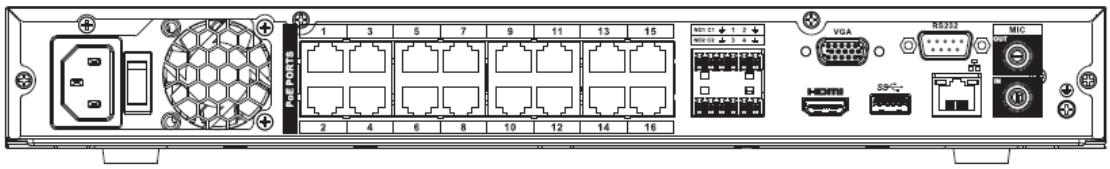


Figure 2-47

Please refer to the following sheet for detailed information.

Icon	Port Name	Function
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
SS	USB3.0 port	USB3.0 port. Connect to mouse, USB storage device, USB burner and etc.

Icon	Port Name	Function
RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
1～8	Alarm input port 1～8	● There are two groups. The first group is from port 1 to port 4; the second group is from port 5 to port 8. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO3	Alarm output port 1～3	● 3 groups of alarm output ports. (Group 1：port NO1 ～ C1,Group 2:port NO2 ～ C2,Group 3:port NO3～C3）).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO：Normal open alarm output port. ● C：Alarm output public end.
C1～C3		
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
DC 12V	Power input port	Input DC 12V/4A.
Power switch	/	Power on/off button.
PoE PORTS	/	Bult-in Switch. Support PoE.. The 8 PoE series product supports total 130W. The 16 PoE series product supports total 130W.

2.2.12 NVR42-8P-4K Series

The NVR42-8P-4K series rear panel is shown as below. See Figure 2-48.

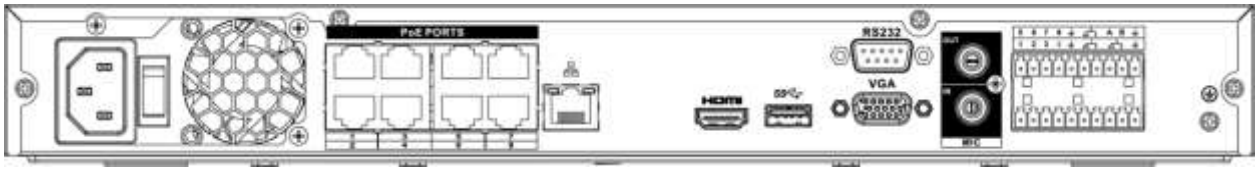


Figure 2-48

Please refer to the following sheet for detailed information.

Icon	Port Name	Function
Power socket	/	Input AC 220V.
Power switch	/	Power on/off button.
PoE PORTS	PoE port	Built-in Switch，support PoE. The PoE PORTS can provide power to the network camera. The 8 PoE ports series product can support 48V 120W.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
SS	USB3.0 port	USB3.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
1～4	Alarm input port 1～4	● They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.

Icon	Port Name	Function
⏚	GND	Alarm input ground port.
N1,N2	Alarm output port 1～2	● 2 groups of alarm output ports.（group 1：port NO1～C1, group 2：port NO2～C2）. Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO：Normal open alarm output port. ● C：Alarm output public end.
C1～C2		
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.

2.2.13 NVR44/44-8P/44-16P Series

The NVR44 series rear panel is shown as below. See Figure 2-49.

Figure 2-49

The NVR44-8P series rear panel is shown as below. See Figure 2-50.

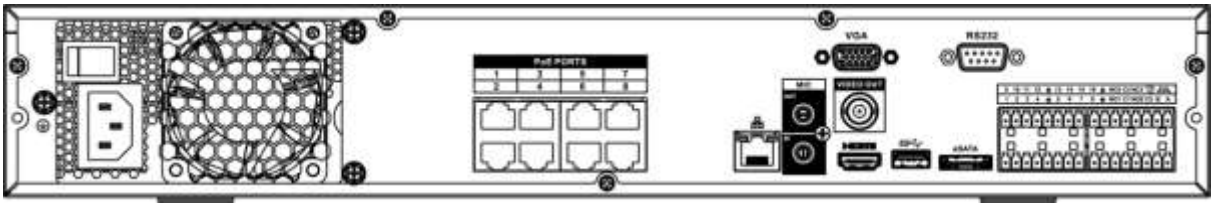


Figure 2-50

The NVR44-16P series rear panel is shown as below. See Figure 2-51.

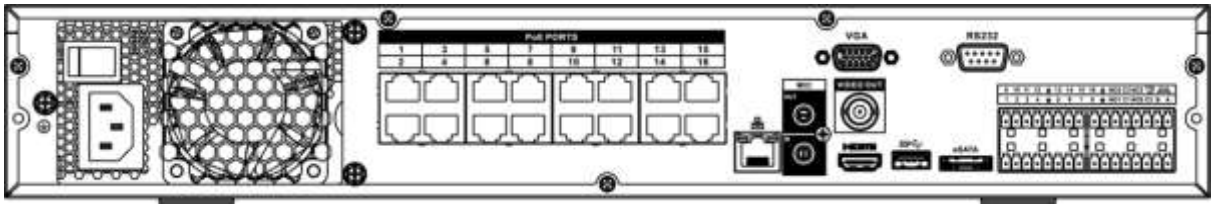


Figure 2-51

Please refer to the following sheet for detailed information.

Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.

Name		Function
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	Video output port	CVBS output
NO1～NO5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
C1～C5		
NC5		
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.

Name		Function
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
PoE PORTS	8 PoE ports	Built-in Switch. Support PoE. The 8 PoE ports series products supports total 48V 120W power. One PoE port max supports 15W.
PoE PORTS	16 PoE ports	Built-in Switch. Support PoE. The 16 PoE ports series products supports total 150W power. One PoE port max supports 15W.

2.2.14 NVR44-4K/48-4K/54-4KS2/58-4KS2/54-16P-4KS2/58-16P-4KS2 Series

The NVR44-4K/NVR48-4K/ NVR54-4KS2/NVR58-4KS2 series rear panel is shown as below. See Figure 2-52.

Figure 2-52

The NVR54-16P-4KS2/NVR58-16P-4KS2 series rear panel is shown as below. See Figure 2-53.

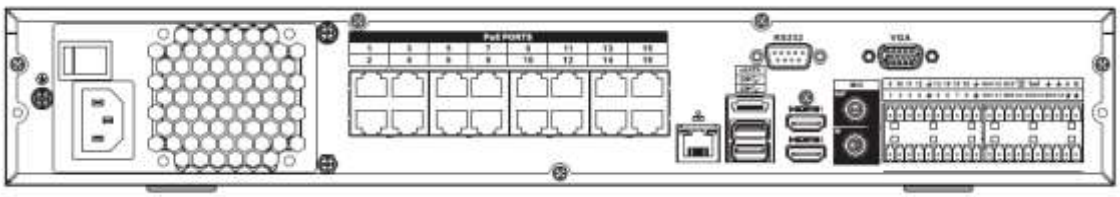
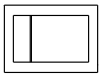


Figure 2-53

Please refer to the following sheet for detailed information.

Name	Function

Name		Function
	Power switch	Power on-off button
	Power input port	Input AC 100~240V.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB3.0 port	USB3.0 port. Connect to mouse, USB storage device, USB burner and etc.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4b.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
	Ground	Alarm input ground end.
NO1～NO5 C1～C5 NC5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.

Name		Function
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
RS-232	RS232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
PoE PORTS	/	Bult-in Switch. Support PoE. The 16 PoE series product supports total 150W.

2.2.15 NVR48/48-16P Series

The NVR48 series rear panel is shown as below. See Figure 2-54.

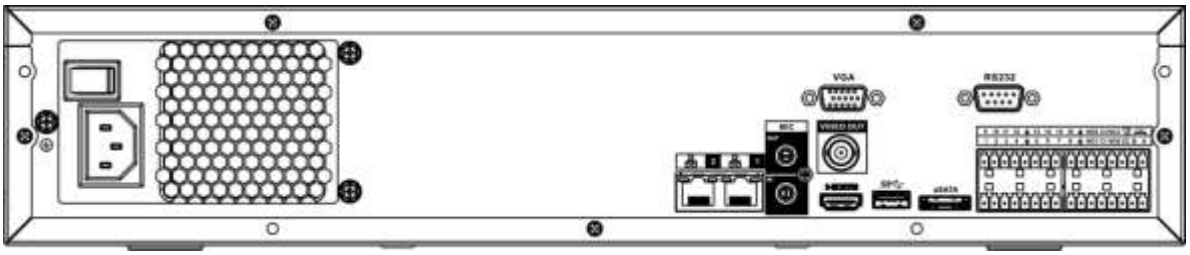


Figure 2-54

The NVR48-16P series rear panel is shown as below. See Figure 2-55.

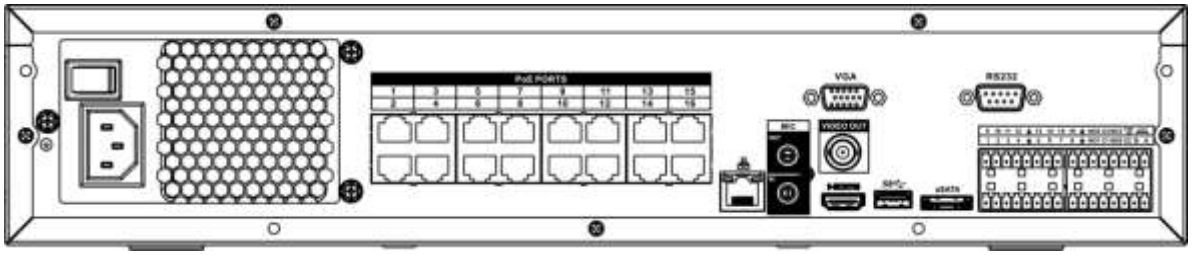


Figure 2-55

Please refer to the following sheet for detailed information.

Name	Function

Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output.
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
C1～C5		
NC5		
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.

Name		Function
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	One 10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
PoE PORTS	16 PoE ports	Built-in Switch. Support PoE. The 16 PoE ports series products supports total 150W power. One PoE port max supports 15W.

2.2.16 NVR72 Series

The NVR72 series rear panel is shown as below. See Figure 2-56.

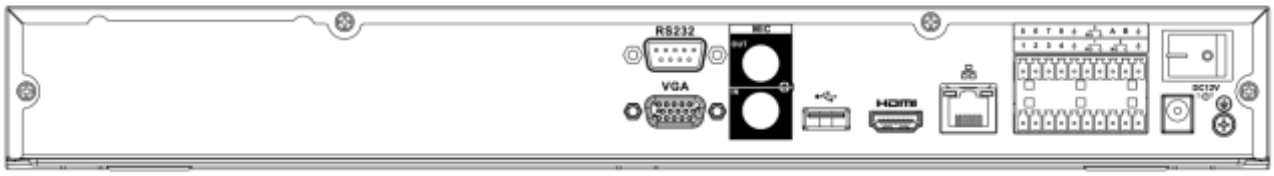


Figure 2-56

Please refer to the following sheet for detailed information.

Name		Function
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.

Name		Function
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
1～8	Alarm input port 1～8	● There are two groups. The first group is from port 1 to port 4; the second group is from port 5 to port 8. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO3	Alarm output port 1～3	● 3 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3）).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO：Normal open alarm output port. ● C：Alarm output public end.
C1～C3		
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
DC 12V	Power input port	Input DC 12V/5A.
Power switch	/	Power on/off button.

2.2.17 NVR72-8P Series

The NVR72-8P series rear panel is shown as below. See Figure 2-57.

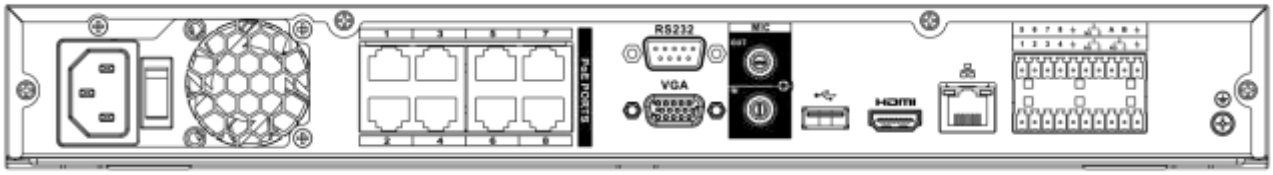


Figure 2-57

Please refer to the following sheet for detailed information.

Name		Function
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
1～8	Alarm input port 1～8	● There are two groups. The first group is from port 1 to port 4; the second group is from port 5 to port 8. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
	GND	Alarm input ground port.
NO1～NO3 C1～C3	Alarm output port 1～3	● 3 groups of alarm output ports. (Group 1：port NO1 ～ C1,Group 2:port NO2 ～ C2,Group 3:port NO3～C3）).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO：Normal open alarm output port. ● C：Alarm output public end.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.

Name		Function
	Power input port	Input AC 100~240V.
Power switch	/	Power on-off button.
PoE PORTS	/	Bult-in Switch. Support PoE. The 8 PoE series product supports total 48V 120W. One PoE port max supports 15W.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.

2.2.18 NVR74 Series

The NVR74 series rear panel is shown as below. See Figure 2-58.

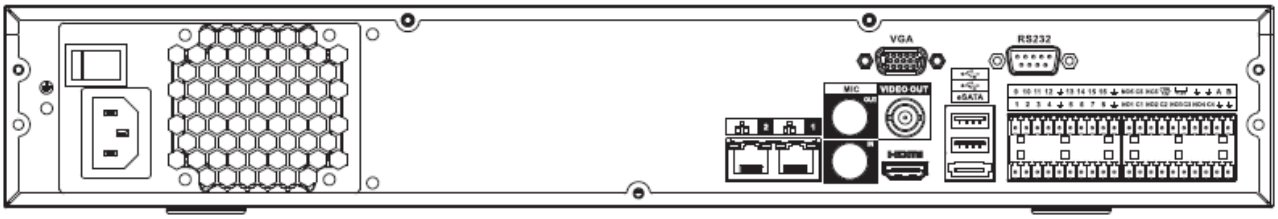


Figure 2-58

Please refer to the following sheet for detailed information.

Icon	Name	Function
	Power switch	Power on/off button.
	Power input port	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.

VIEDEO OUT	Video output port	CVBS output.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3.
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO5 C1～C5 NC5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	One 10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.

RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

2.2.19 NVR74-8P/74-16P Series

The NVR74-8P series rear panel is shown as below. See Figure 2-59.

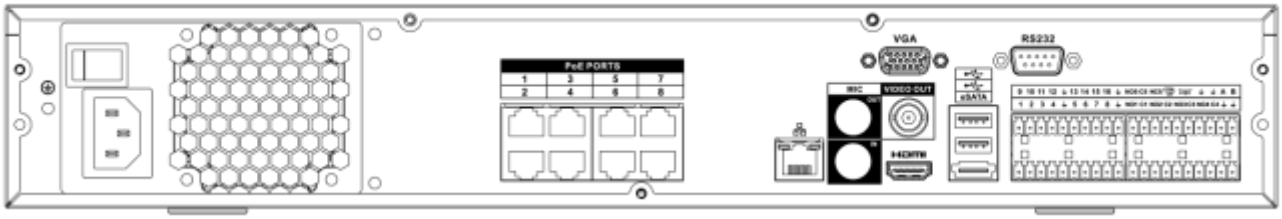


Figure 2-59

The NVR74-16P series rear panel is shown as below. See Figure 2-60.

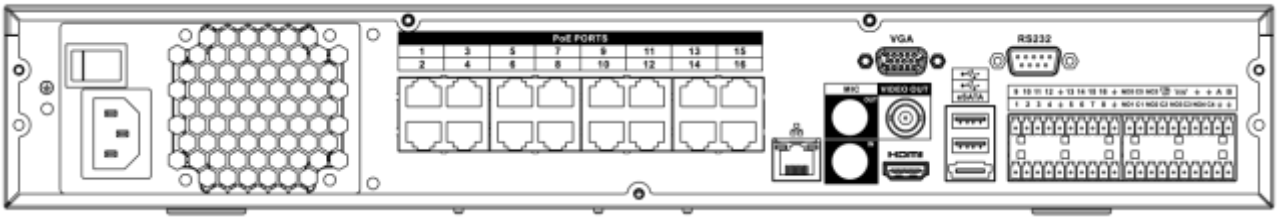


Figure 2-60

Please refer to the following sheet for detailed information.

Port Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output

Port Name		Function
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO5 C1～C5 NC5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.

Port Name		Function
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
PoE PORTS	8 PoE ports	Built-in Switch. Support PoE. The 8 PoE ports series products supports total 48V 120W power. One PoE port max supports 15W.
PoE PORTS	16 PoE ports	Built-in Switch. Support PoE. The 16 PoE ports series products supports total 150W power. One PoE port max supports 15W.

2.2.20 NVR78 Series

The NVR78 series rear panel is shown as below. See Figure 2-61.

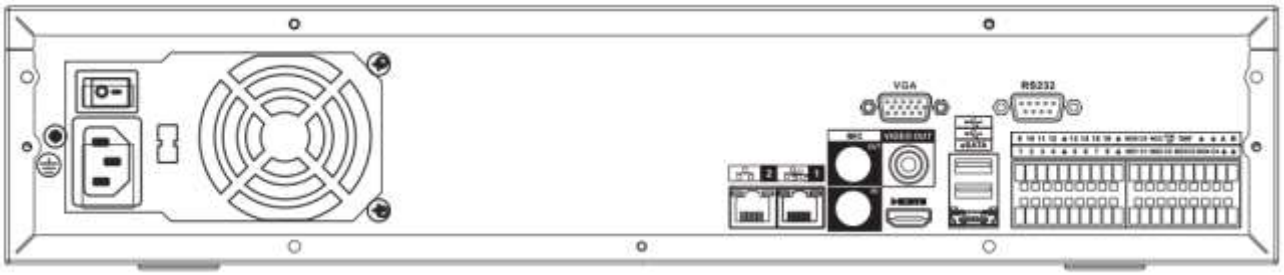


Figure 2-61

Please refer to the following sheet for detailed information.

Port Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output

Port Name		Function
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO5 C1～C5 NC5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
🖧	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
⇆	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.

Port Name		Function
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

2.2.21 NVR78-16P Series

The NVR78-16P series rear panel is shown as below. See Figure 2-62.

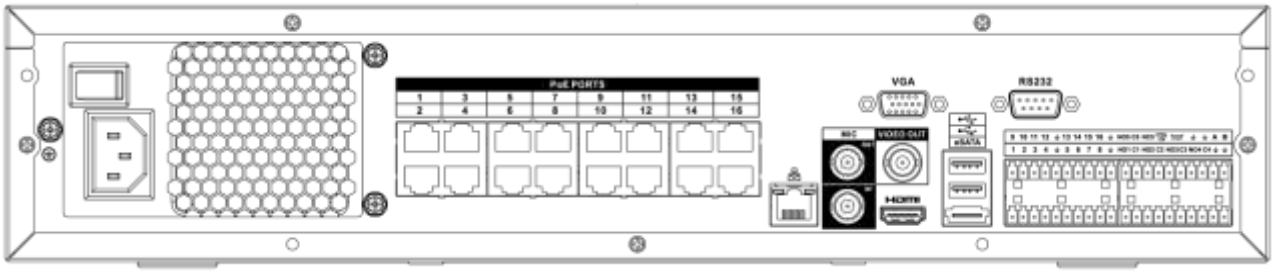


Figure 2-62

Please refer to the following sheet for detailed information.

Port Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.

Port Name		Function
⏚	GND	Alarm input ground port.
NO1～NO5 C1～C5 NC5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
PoE PORTS	16 PoE ports	Built-in Switch. Support PoE. The 16 PoE ports series products supports total 150W power. One PoE port max supports 15W.

2.2.22 NVR78-RH Series

The NVR78-RH series rear panel is shown as below. See Figure 2-63.

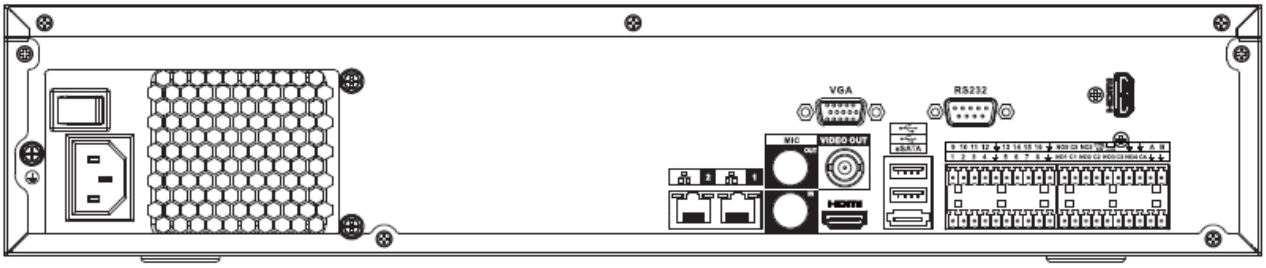


Figure 2-63

Please refer to the following sheet for detailed information.

Port Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port
C1～C5		

Port Name		Function
NC5		NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3. The two HDMI ports to output video from different video sources.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

2.2.23 NVR70 Series

The NVR70 series rear panel is shown as below. See Figure 2-64.

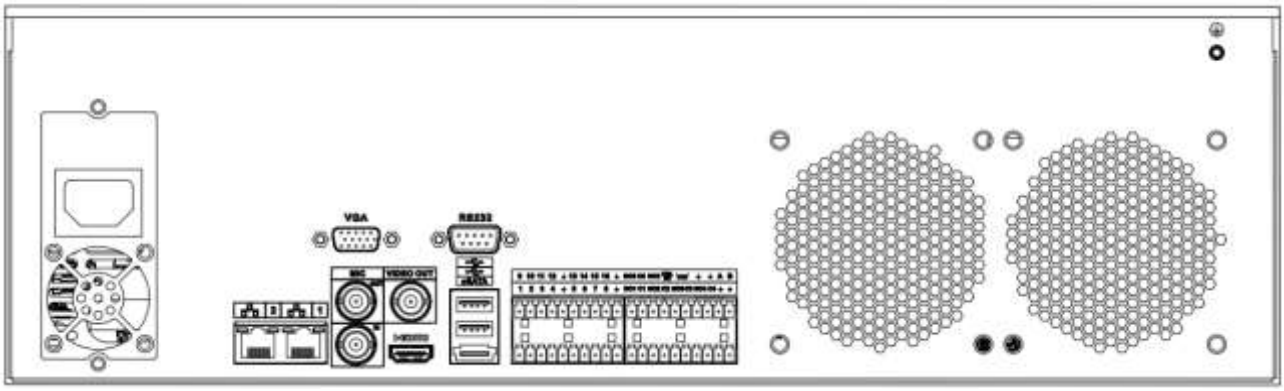


Figure 2-64

Please refer to the following sheet for detailed information.

Port Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port
C1～C5		

Port Name		Function
NC5		NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

2.2.24 NVR70-R Series

The NVR70-R series rear panel is shown as below. See Figure 2-65.

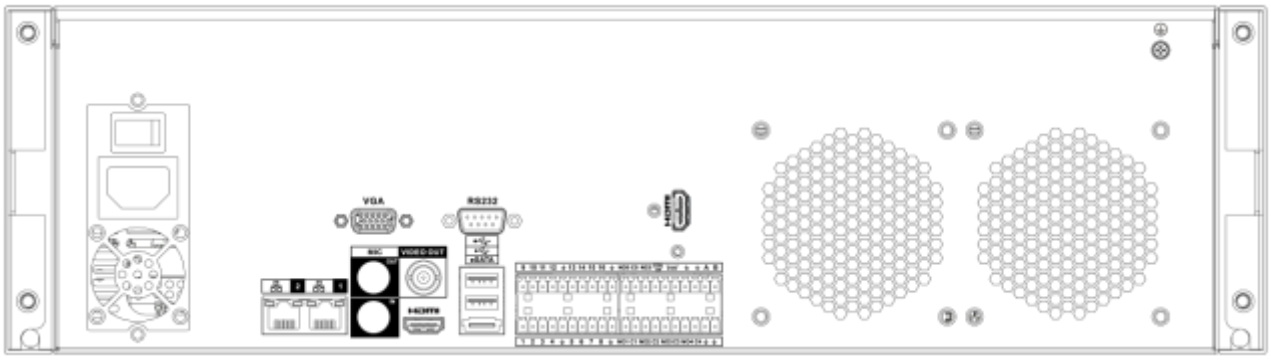


Figure 2-65

Please refer to the following sheet for detailed information.

Port Name		Function
Power switch	/	Power on-off button
Power input port	/	Input AC 100~240V.
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
VIEDEO OUT	Video output port	CVBS output
1～16	Alarm input port 1～16	● There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
NO1～NO5	Alarm output port 1～5	● 5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port
C1～C5		

Port Name		Function
NC5		NO3～C3, Group 4：port NO4～C4, Group 5: port NO5, C5, NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
A	RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V	/	Controller 12V power output. It is to control the on-off alarm relay output. It can be used to control the device alarm output. At the same time, it can also be used as the power input source of some devices such as the alarm detector.
+12V	/	+12V power output port. It can provide the power to some peripheral devices such as the camera or the alarm device. Please note the supplying power shall be below 1A.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port. Please jump the HDD when there is peripheral connected HDD.
	USB2.0 port	USB2.0 port. Connect to mouse, USB storage device, USB burner and etc.
RS-232	RS232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.3. The two HDMI ports to output video from different video sources.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

2.2.25 NVR42V-8P Series

The interface is shown as in Figure 2-66.

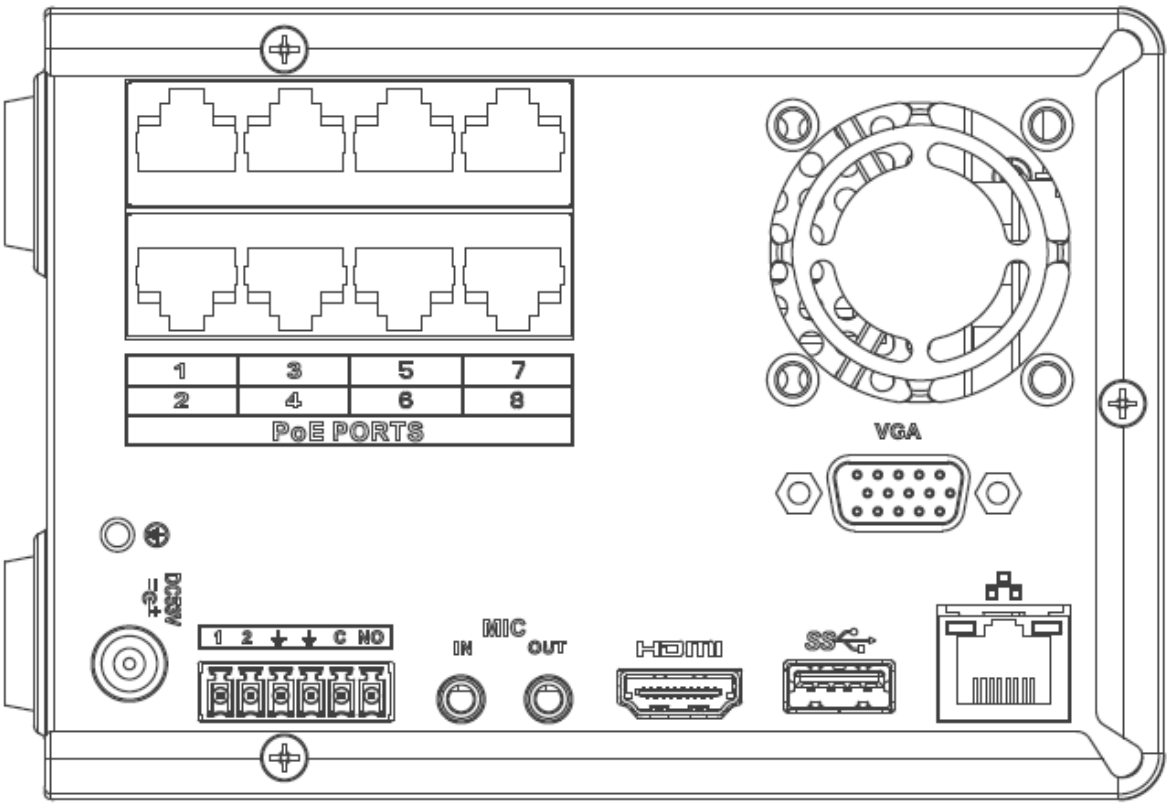


Figure 2-66

Please refer to the following sheet for detailed information.

Name		Function
Power switch	/	Power on/off button.
DC53V	Power input port	Input DC 53V--2.3A
MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as microphone, pickup.
MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
1～2	Alarm input port 1～2	● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	GND	Alarm input ground port.
C	Alarm output public port	Alarm output public end.

Name		Function
NO	Normal open	Normal open alarm output port.
	Network port	10M/100M/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
	USB3.0 port	USB3.0 port. Connect to mouse, USB storage device, USB burner and etc.
HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
PoE PORT	/	Bult-in Switch. Support PoE. The 8 PoE series product supports total 48V 120W. One PoE port max supports 15W.

2.3 Alarm Connection

2.3.1 Alarm Port

The alarm port is shown as below. See Figure 2-67. The following figure is based on the 78 series.

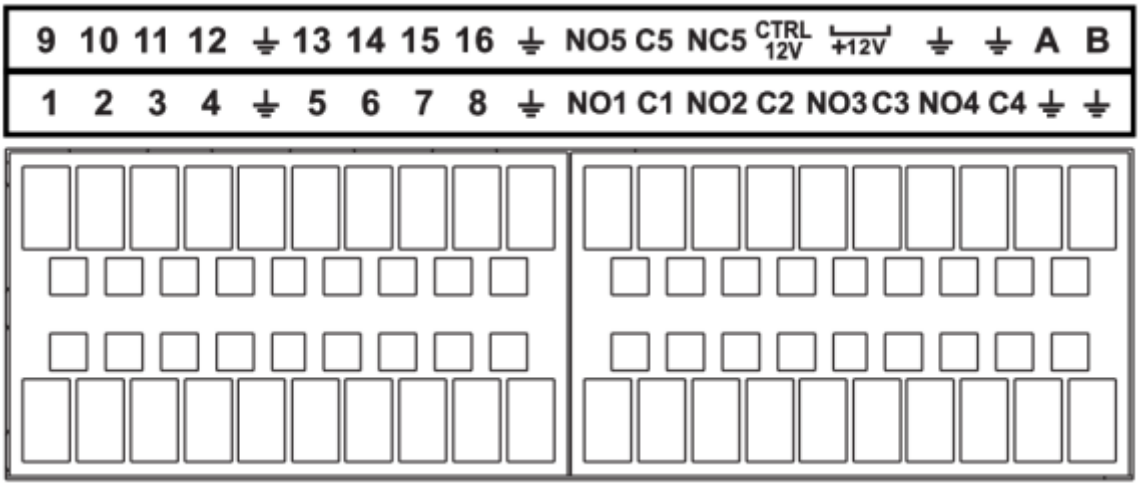


Figure 2-67

Icon	Function
1～16	ALARM1～ALARM16. The alarm becomes activated in the low level.
NO1 C1，NO2 C2，NO3 C3，NO4 C4	Four NO activation output groups. (On-off button).
NO5 C5 NC5	One NO/NC activation output group. (On-off button).
CTRL 12V	Control power output. Disable power output when alarm is canceled. Current is 500mA.
＋12V	Rated current output. Current is 500mA.

⏚	GND
A/B	485 communication port. They are used to control devices such as PTZ. Please parallel connect 120TΩ between A/B cables if there are too many PTZ decoders.

Note

- Different models support different alarm input ports. Please refer to the specifications sheet for detailed information.
- Slight difference may be found on the alarm port layout.

2.3.2 Alarm input port

Connect the positive end (+) of the alarm input device to the alarm input port (ALARM IN 1～16) of the NVR. Connect the negative end (-) of the alarm input device to the ground end (⏚) of the NVR.

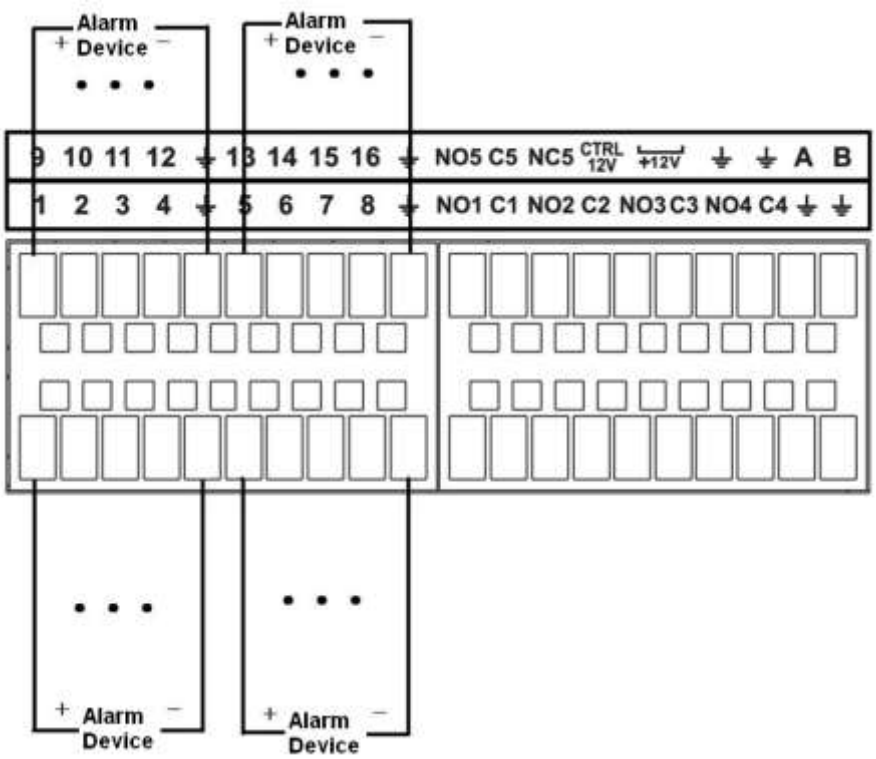


Figure 2-68

Note

- There are two alarm input types: NO/NC.
- When connect the ground port of the alarm device to the NVR, you can use any of the GND ports (⏚).
- Connect the NC port of the alarm device to the alarm input port (ALARM) of the NVR.
- When there is peripheral power supplying for the alarm device, please make sure it is earthed with the NVR.

2.3.3 Alarm input and output port

- There is peripheral power supplying for the external alarm device.
- In case overload may result in NVR damage, please refer to the following relay specifications for detailed information.

- A/B cable of the RS485 is for the A/B cable connection of the speed PTZ.

2.3.4 Alarm relay specifications

Model:	**JRC-27F**	
Material of the touch	Silver	
Rating （Resistance Load）	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch currency	1A
Insulation	Between touches with same polarity	1000VAC 1minute
	Between touches with different polarity	1000VAC 1minute
	Between touch and winding	1000VAC 1minute
Surge voltage	Between touches with same polarity	1500V (10×160us)
Length of open time	3ms max	
Length of close time	3ms max	
Longevity	Mechanical	50×106 MIN (3Hz)
	Electrical	200×103 MIN (0.5Hz)
Temperature	-40℃ ~+70℃	

2.4 Bidirectional talk

2.4.1 Device-end to PC-end

Device Connection

Please connect the speaker or the pickup to the first audio input port in the device rear panel. Then connect the earphone or the sound box to the audio output port in the PC.

Login the Web and then enable the corresponding channel real-time monitor.

Please refer to the following interface to enable bidirectional talk. See Figure 2-69.

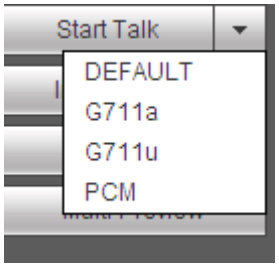


Figure 2-69

Listening Operation

At the device end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the pc-end. See Figure 2-70.

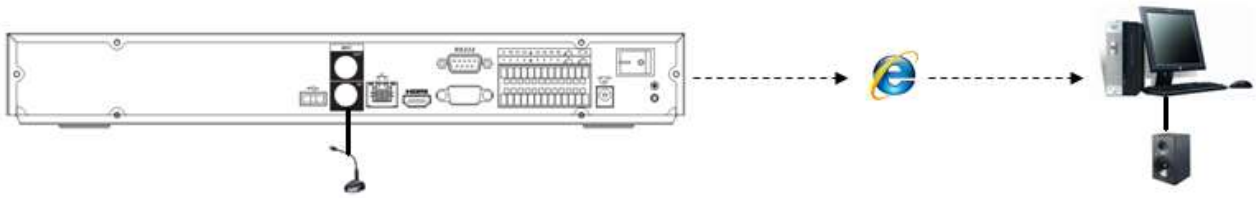


Figure 2-70

2.4.2 PC-end to the device-end

Device Connection

Connect the speaker or the pickup to the audio output port in the PC and then connect the earphone or the sound box to the first audio input port in the device rear panel.

Login the Web and then enable the corresponding channel real-time monitor.

Please refer to the above interface (Figure 2-69) to enable bidirectional talk.

Listening Operation

At the PC-end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the device-end. See Figure 2-71.

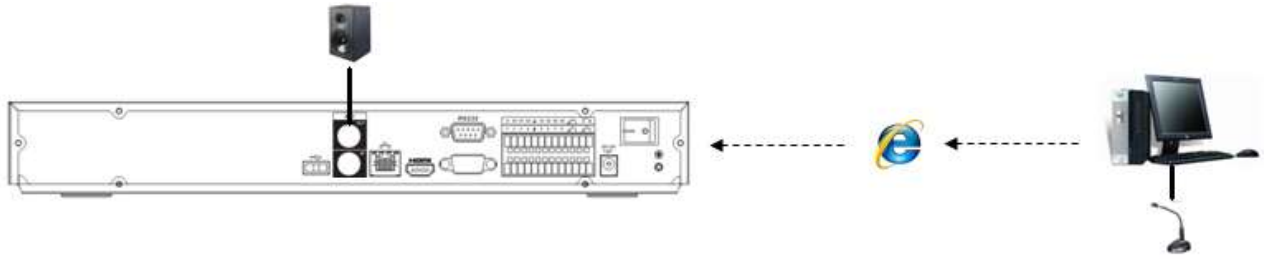


Figure 2-71

2.5 Mouse Operation

Please refer to the following sheet for mouse operation instruction.

Left click mouse	When you have selected one menu item, left click mouse to view menu content.
	Modify checkbox or motion detection status.
	Click combo box to pop up dropdown list

	In input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalized). Here ← stands for backspace button. __ stands for space button. In English input mode: _stands for input a backspace icon and ← stands for deleting the previous character.   In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral.
Double left click mouse	Implement special control operation such as double click one item in the file list to playback the video.
	In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.
Right click mouse	In real-time monitor mode, pops up shortcut menu.
	Exit current menu without saving the modification.
Press middle button	In numeral input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

2.6 Remote Control

The remote control interface is shown as in Figure 2-72.
Please note remote control is not our standard accessory and it is not included in the accessory bag.

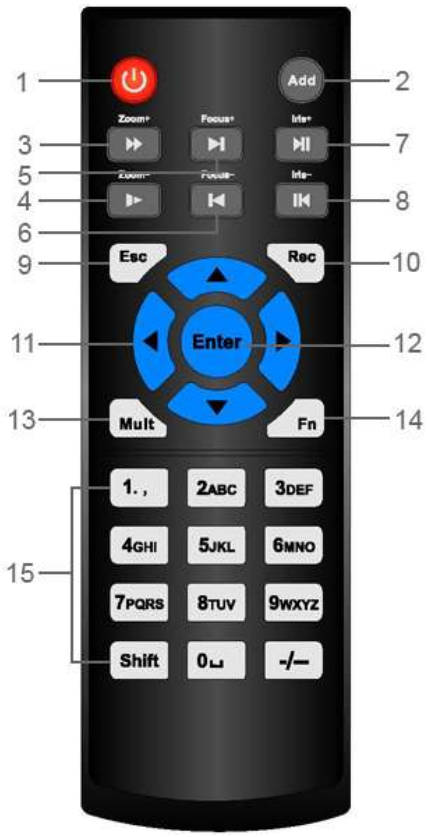


Figure 2-72

Serial Number	Name	Function
1	Power button	Click it to boot up or shut down the device.
2	Address	Click it to input device number, so that you can control it.
3	Forward	Various forward speeds and normal speed playback.
4	Slow play	Multiple slow play speeds or normal playback.
5	Next record	In playback mode, playback the next video.
6	Previous record	In playback mode, playback the previous video.
7	Play/Pause	In pause mode, click this button to realize normal playback.
		In normal playback click this button to pause playback.
		In real-time monitor mode, click this button to enter video search menu.
8	Reverse/pause	Reverse playback pause mode, click this button to realize normal playback.

		In reverse playback click this button to pause playback.
9	Esc.	Go back to previous menu or cancel current operation (close upper interface or control)
10	Record	Start or stop record manually In record interface, working with the direction buttons to select the record channel. Click this button for at least 1.5 seconds, system can go to the Manual Record interface.
11	Direction keys	Switch current activated control, go to left or right. In playback mode, it is to control the playback process bar. Aux function(such as switch the PTZ menu)
12	Enter /menu key	go to default button go to the menu
13	Multiple-window switch	Switch between multiple-window and one-window.
14	Fn	In 1-ch monitor mode: pop up assistant function：PTZ control and Video color.
		Switch the PTZ control menu in PTZ control interface.
		In motion detection interface, working with direction keys to complete setup.
		In text mode, click it to delete character.
15	0-9 number key	Input password, channel or switch channel.
		Shift is the button to switch the input method.

3 Device Installation

Note: All the installation and operations here should conform to your local electric safety rules.

3.1 Check Unpacked NVR

When you receive the NVR from the forwarding agent, please check whether there is any visible damage. The protective materials used for the package of the NVR can protect most accidental clashes during transportation. Then you can open the box to check the accessories.
Please check the items in accordance with the list. Finally you can remove the protective film of the NVR.

3.2 About Front Panel and Rear Panel

The model number in the stick on the bottom of NVR is very important; please check according to your purchase order.
The label in the rear panel is very important too. Usually we need you to represent the serial number when we provide the service after sales.

3.3 HDD Installation

Important：

Please turn off the power before you replace the HDD.

The pictures listed below for reference only.

For the first time install, please be aware that whether the HDDs have been installed.
You can refer to the Appendix for HDD space information and recommended HDD brand. Please use HDD of 7200rpm or higher. **Usually we do not recommend the PC HDD.**
Please follow the instructions below to install hard disk.

3.3.1 NVR100/100-P Series

Please make sure the metal surface of the HDD is facing up when you are installing!
This series NVR has only one 2.5-inch SATA HDD.
Please follow the instructions below to install HDD.

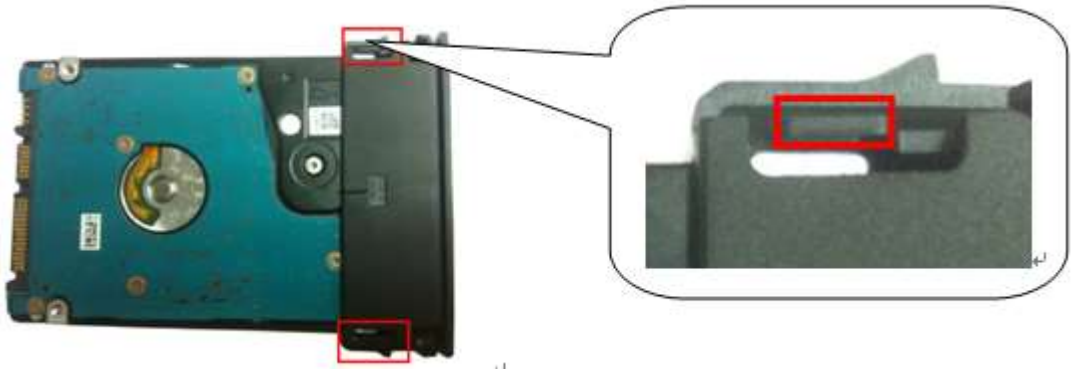
① Draw out the HDD bracket

② Make sure the HDD metal surface is facing up and then put the HDD into the bracket

③ Put the HDD into the device

horizontally. After the HDD is in the proper position, the columns on the two sides can lock the screw holes of the HDD to secure it.

When you remove the HDD, please refer to the following figure to pull the spring up and then remove the HDD.



3.3.2 NVR11/11-P/41/41-P/41-8P/41-W/21-S2/21-P-S2/21-8P-S2 Series

① . Loosen the screws of the upper cover and side panel.

② Fix four screws in the HDD (Turn just three rounds).

③ Place the HDD in accordance with the four holes in the bottom.

④ Turn the device upside down and then turn the screws in firmly.

⑤ Fix the HDD firmly.

⑥ Connect the HDD cable and power cable.

⑦ Put the cover in accordance with the clip and then place the upper cover back.

⑧ Secure the screws in the rear panel and the side panel.

3.3.3 NVR11H/11H-P/41H/41H-P/41H-8P/11HS/21HS-S2/21HS-P-S2/21HS-8P-S2/41HS-W-S2 Series

①. Loosen the screws of the upper cover and side panel.

② Fix four screws in the HDD (Turn just three rounds).

③ Place the HDD in accordance with the four holes in the bottom.

④ Turn the device upside down and then turn the screws in firmly.

⑤ Fix the HDD firmly.

⑥ Connect the HDD cable and power cable.

⑦ Put the cover in accordance with the clip and then place the upper cover back.

⑧ Secure the screws in the rear panel and the side panel.

3.3.4 NVR42/42N/42-P/42-8P/42-16P/72/72-8P/42-4K/42-8P-4K/52-4KS2/52-8P-4KS2/52-16P-4KS2/22-S2/22-P-S2/22-8P-S2 Series

The following figures are based on the NVR 72-8P series.

①Loosen the screws of the upper cover and side panel.

②Fix four screws in the HDD (Turn just three rounds).

③Place the HDD in accordance with the four holes in the bottom.

④Turn the device upside down and then turn the screws in firmly.

⑤Fix the HDD firmly.

⑥Connect the HDD cable and power cable.

⑦Put the cover in accordance with the clip and then place the upper cover back.

⑧Secure the screws in the rear panel and the side panel.

3.3.5 NVR44/44-8P/44-16P/74/74-8P/74-16P/44-4K/54-4KS2/54-16P-4KS2 Series

① Use the screwdriver to loose the screws of the rear panel and then remove the front cover.

② Put the HDD to the HDD bracket in the chassis and then line up the four screws to the four holes in the HDD. Use the screwdriver to fix the screws firmly to secure HDD on the HDD bracket

③ Connect to the HDD data cable to the main board and the HDD port respectively. Loosen the power cable of the chassis and connect another end of the power cable to the HDD port.

④ After connect the cable, put the front cover back to the device and then fix screws of the rear panel.

3.3.6 NVR48/48-16P/NVR78/78-16P/48-4K/58-4KS2/58-16P-4KS2 Series

The following figures are based on the NVR78 series.

① ①Use the screwdriver to loose the screws of the rear panel and then remove the front cover.

② ②Put the HDD to the HDD bracket in the chassis and then line up the four screws to the four holes in the HDD. Use the screwdriver to fix the screws firmly to secure HDD on the HDD bracket

③Connect to the HDD data cable to the main board and the HDD port respectively. Loosen the power cable of the chassis and connect another end of the power cable to the HDD port.

④After connect the cable, put the front cover back to the device and then fix screws of the rear panel.

3.3.7 NVR78-RH Series

①Turn the key into the hole in the front panel.

②Open the front panel.

③ Put the HDD to the slot and adjust the handle to secure it.

④Put the front panel back and use the key to fix firmly.

HDD Handle Installation

①Line up the handle to the HDD side (without the interface)

②Use the screwdriver to fix the handle on the HDD.

3.3.8 NVR70/70-R Series

①Use four screws to secure the HDD.

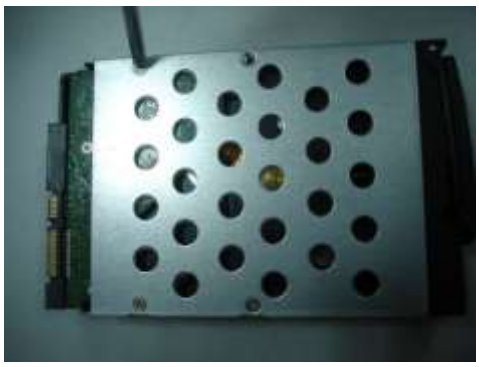
②Put the HDD to the HDD box at the front panel of the device. .

③Please pull the handle up when you are inputing the HDD box in case the the handle

④Put the HDD to the HDD box at the front panel of the device. .

collides with the front panel

3.3.9 NVR42V-8P Series



①Use 4 screws to secure the HDD

②Put the HDD to the HDD box at the front.

③Pull the HDD knob up when you put the HDD into the box in case the knob buckle may strike the front panel.

④Put the knob back after you insert the HDD to the SATA board.

.

3.4 CD-ROM Installation

Please follow the steps listed below.

① Open top cover and then remove the HDD bracket

② Take off the bottom of the HDD bracket and CD-ROM bracket.

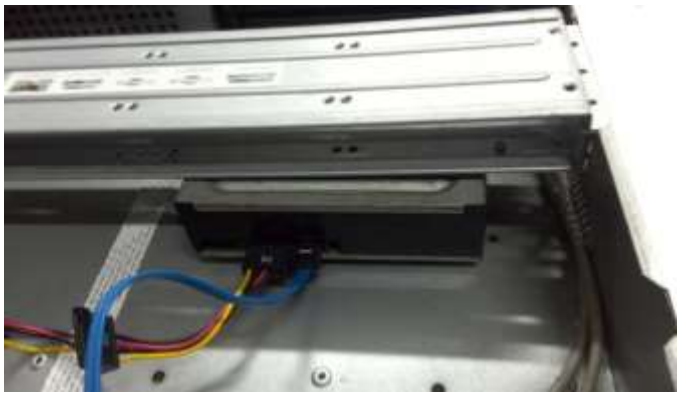
③ Fix the CD-ROM bracket at the HDD bracket.

④ Install a pair of the CD-ROM bracket. Please make sure the reverse side is secure too.

⑤ Install SATA burner. Line up the SATA burner to the hole positions.

⑥ User screwdriver to fix the screws.

⑦ Put the bracket back. Please adjust the CD-ROM to the proper position so that the button of the front panel is directly facing the pop-up button of the CD-ROM.



⑧ Connect the SATA cable and power wire.

⑨ Secure the HDD bracket and put the top cover back.

3.5 Connection Sample

3.5.1 NVR100/NVR100-P Series

Please refer to Figure 3-1 for connection sample.

Here we take NVR100-P as an example.

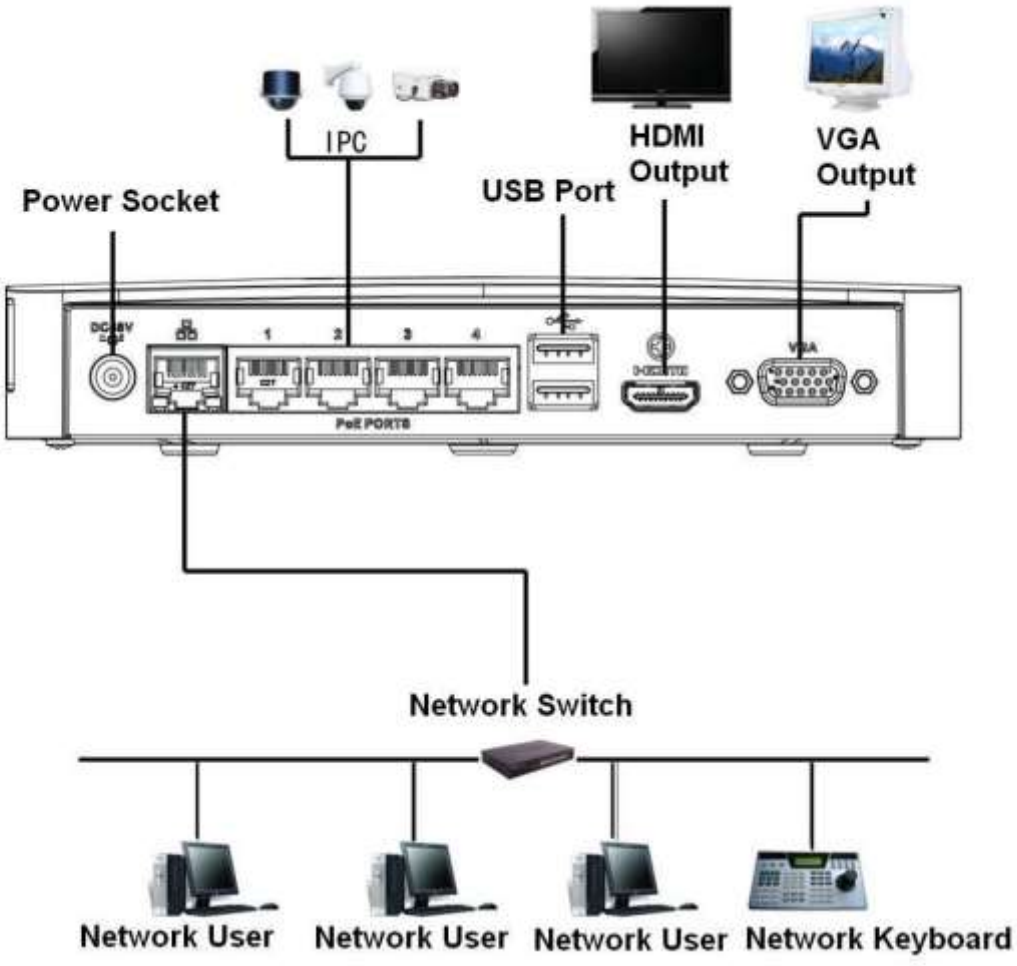


Figure 3-1

3.5.2 NVR11/11-P/41/41-P/41-8P/41-W/21-S2/21-P-S2/21-8P-S2 Series

Please refer to Figure 3-2 for connection sample.

Here we take NVR41 as an example.

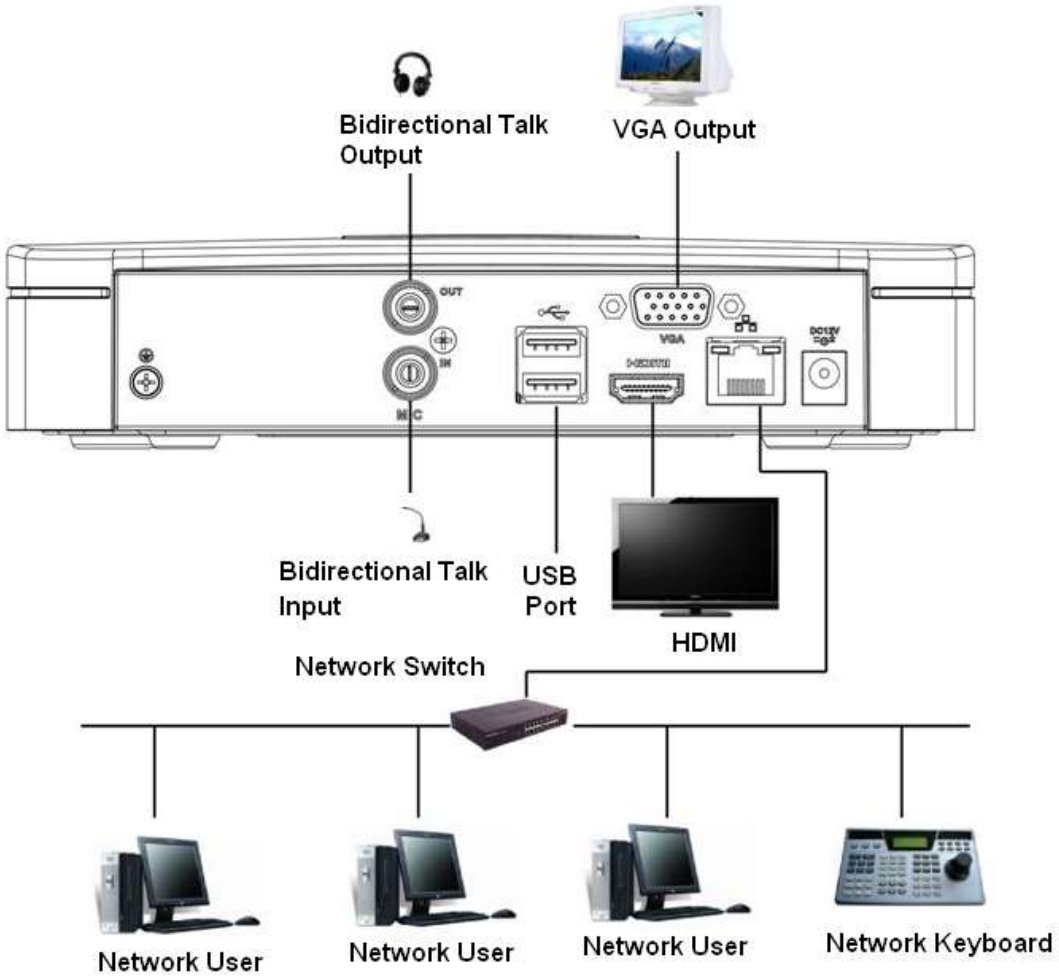


Figure 3-2

3.5.3 NVR11H/11H-P/41H/41H-P/41H-8P Series

Please refer to Figure 3-3 for connection sample.

Here we take NVR41H as an example.

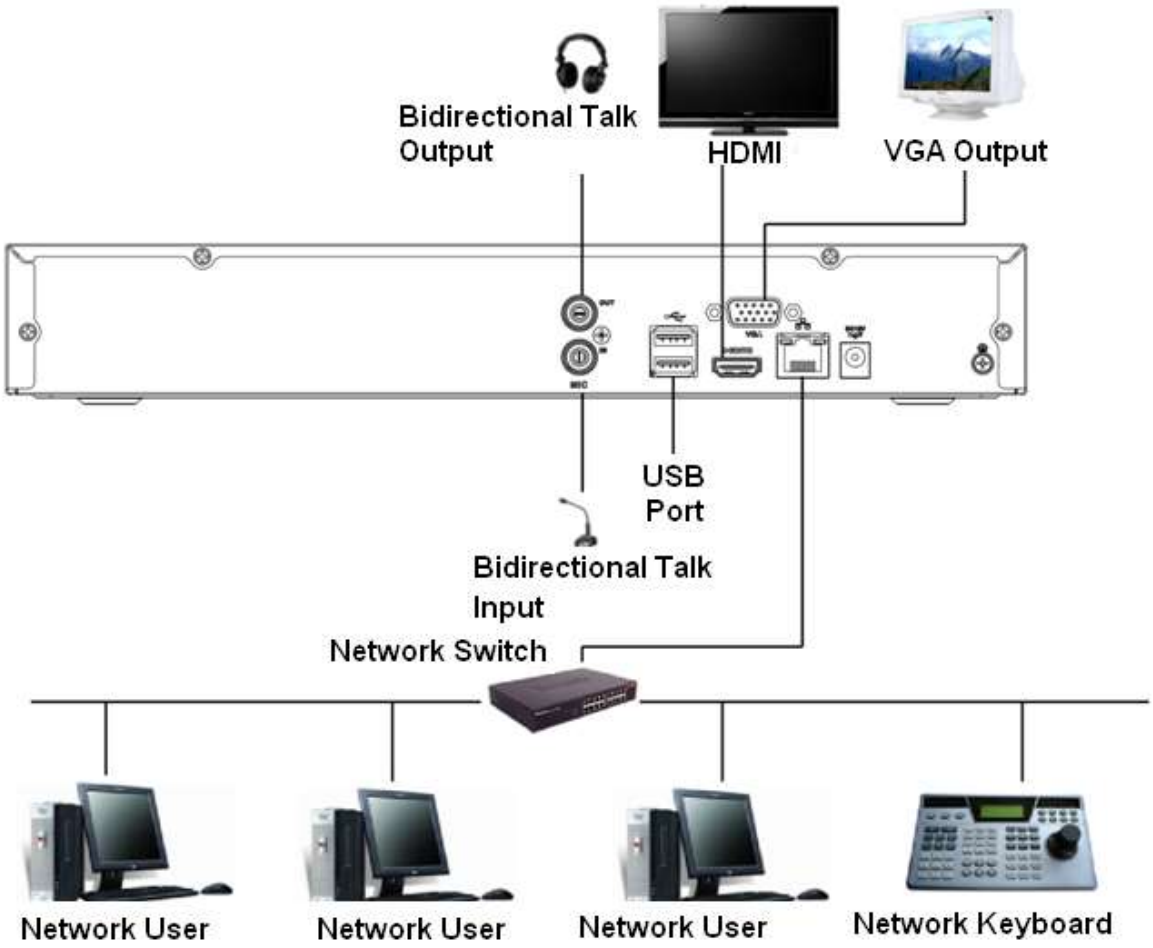


Figure 3-3

3.5.4 NVR11HS//41HS-W-S2 Series

Please refer to Figure 3-4 for connection sample.

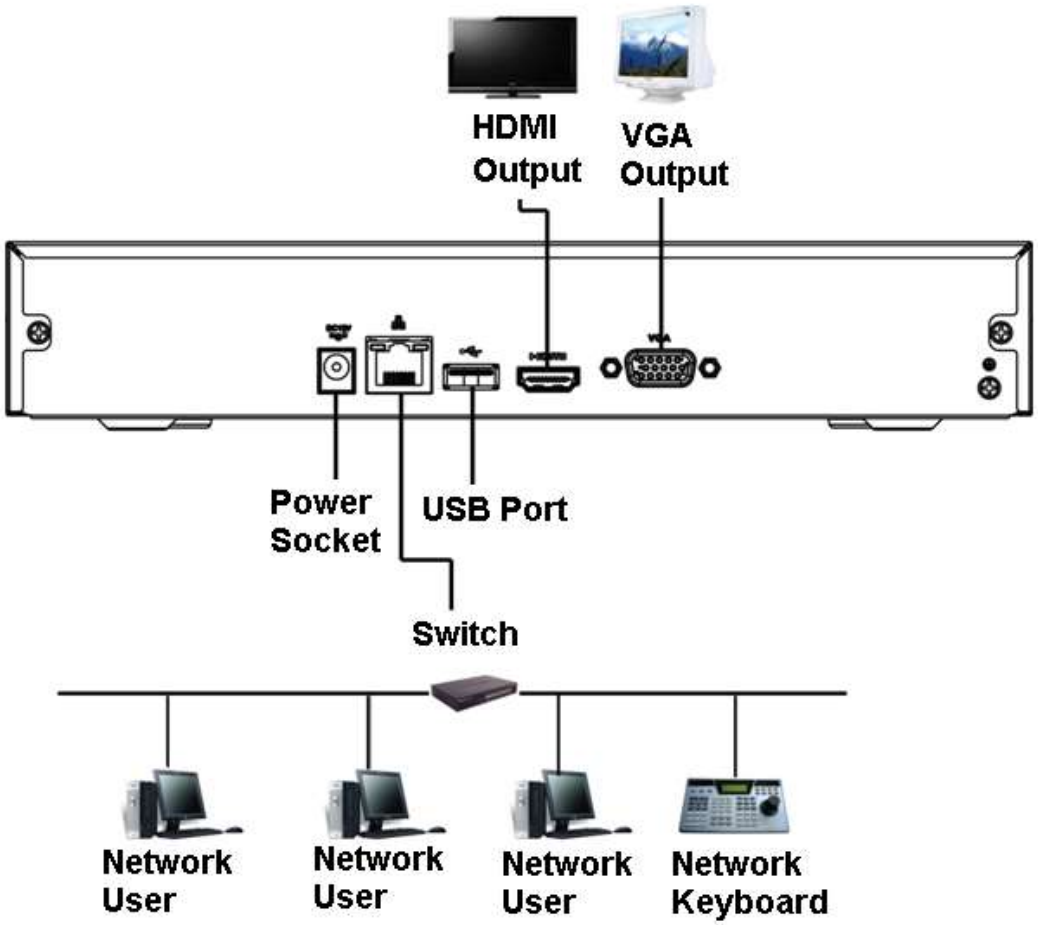


Figure 3-4

3.5.5 NVR41HS-W-S2 Series

Please refer to Figure 3-5 for connection sample.

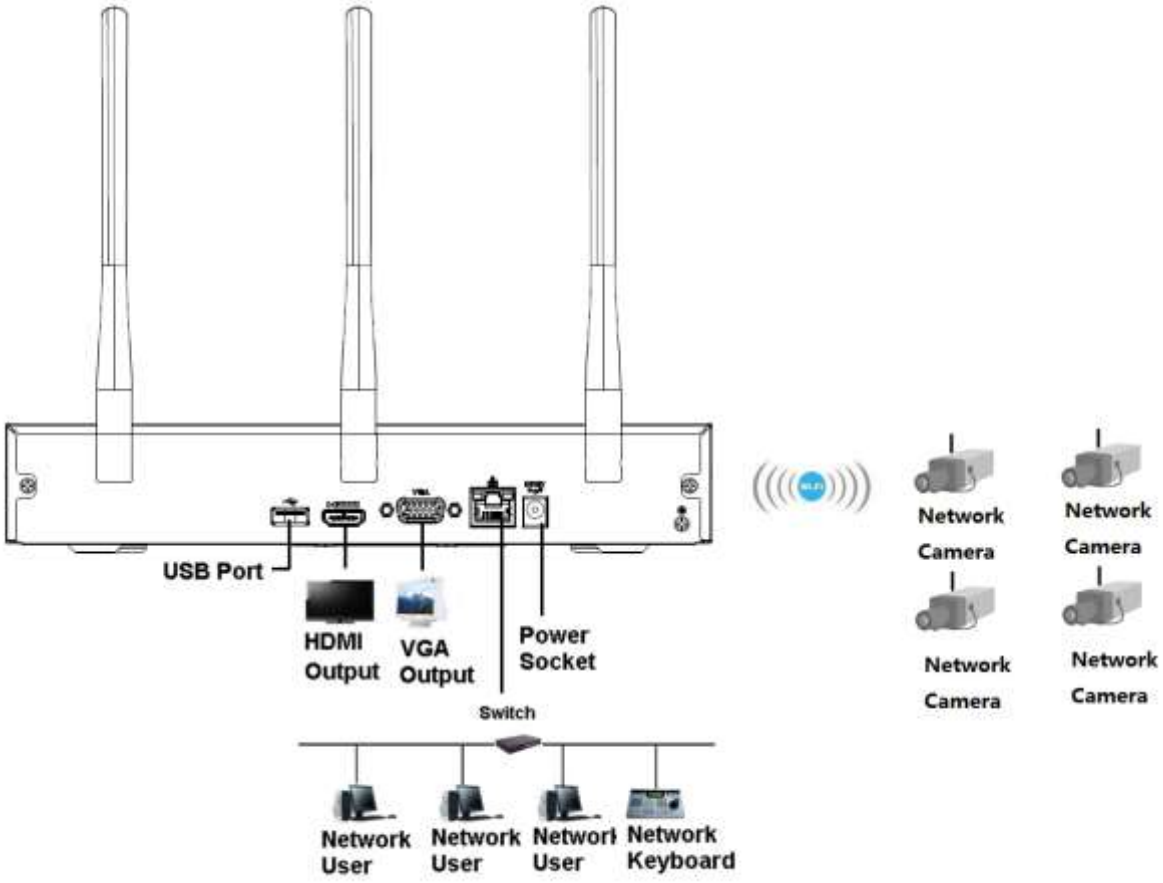


Figure 3-5

3.5.6 NVR21HS-S2/21HS-P-S2/21HS-8P-S2 Series

Please refer to Figure 3-6 for connection sample.

Please note the following figure is based on the NVR21HS-8P-S2.

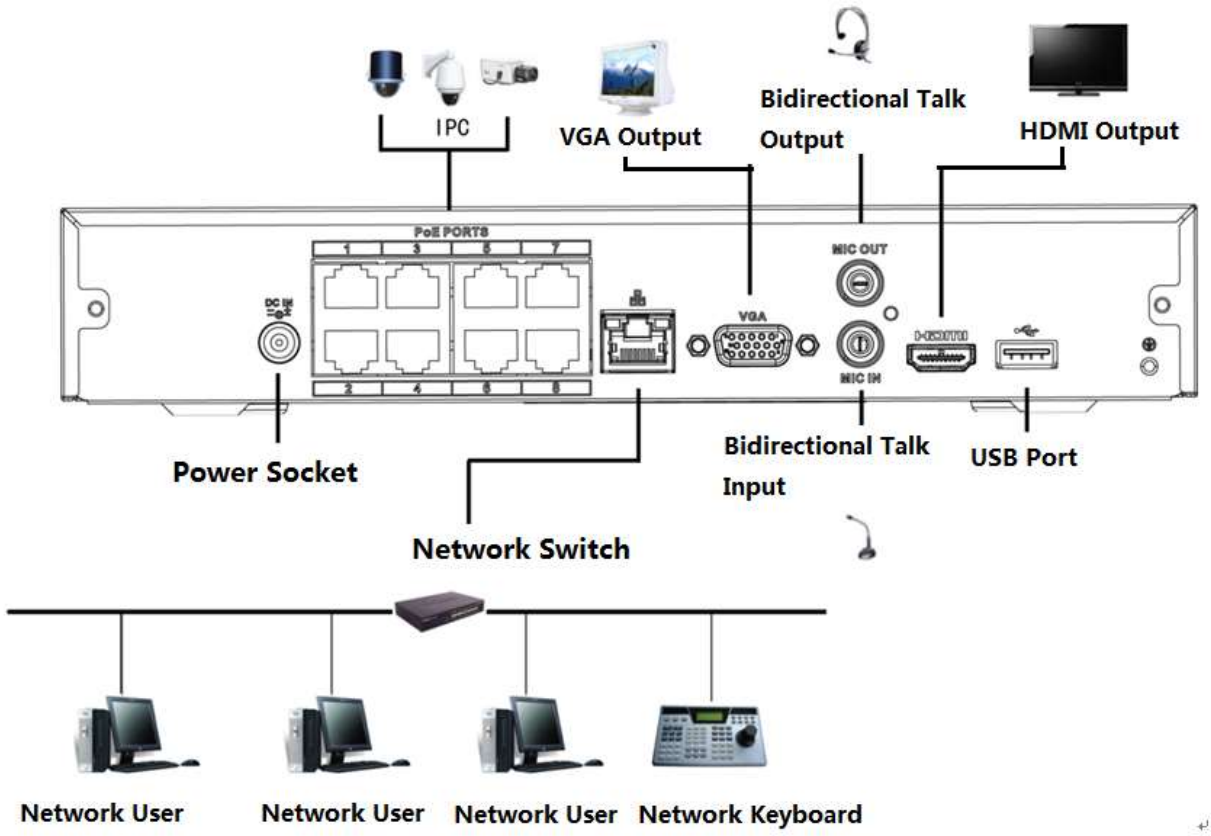


Figure 3-6

3.5.7 NVR22-S2/22-P-S2/22-8P-S2 Series

Please refer to Figure 3-7 for connection sample.

Please note the following figure is based on the NVR22-8P-S2.

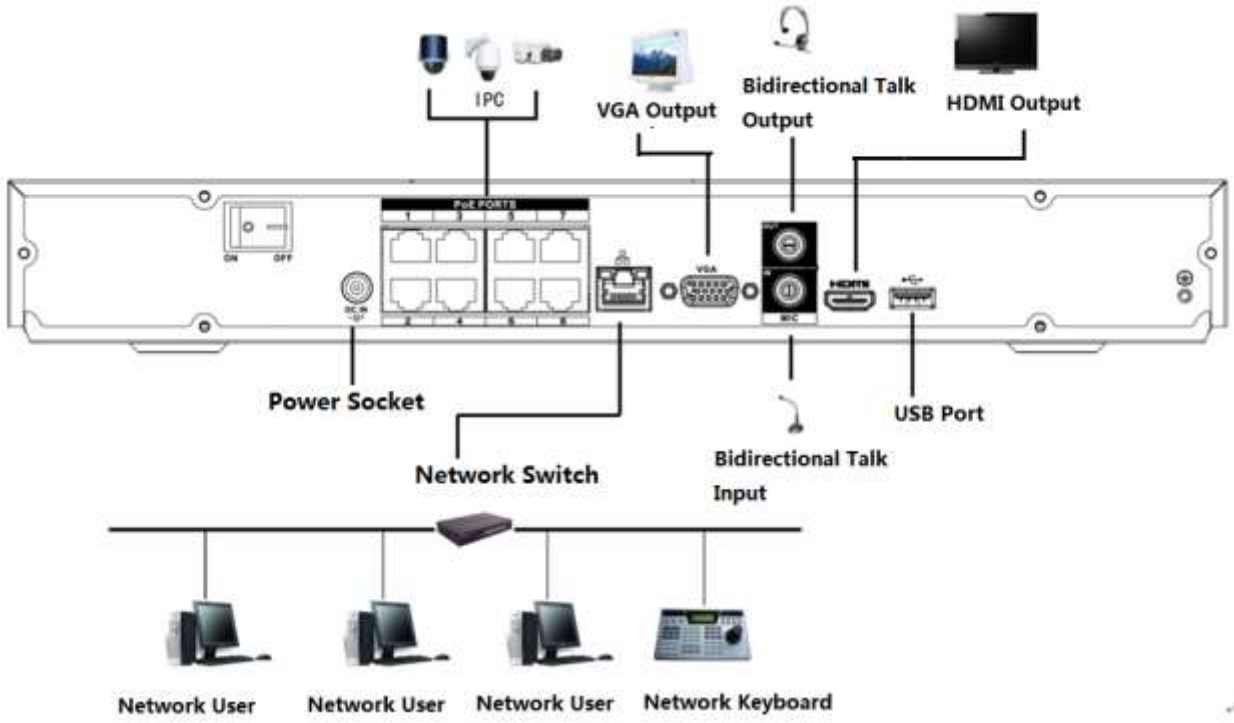


Figure 3-7

3.5.8 NVR42N Series

Please refer to Figure 3-8 for connection sample.

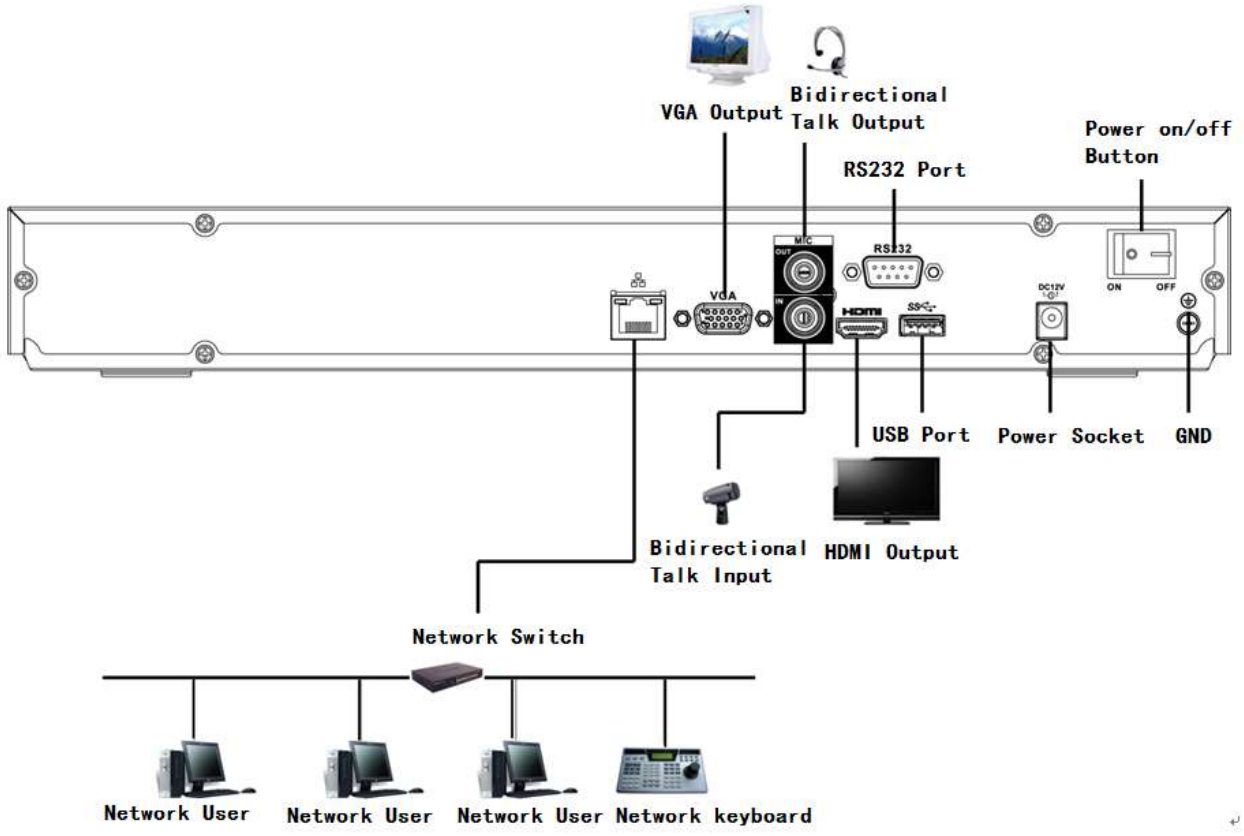


Figure 3-8

3.5.9 NVR42/42-P/42-8P/42-16P/52-4KS2/52-8P-4KS2/52-16P-4KS2 Series

Please refer to Figure 3-9 for connection sample.

The following figure is based on our 42-8P series product.

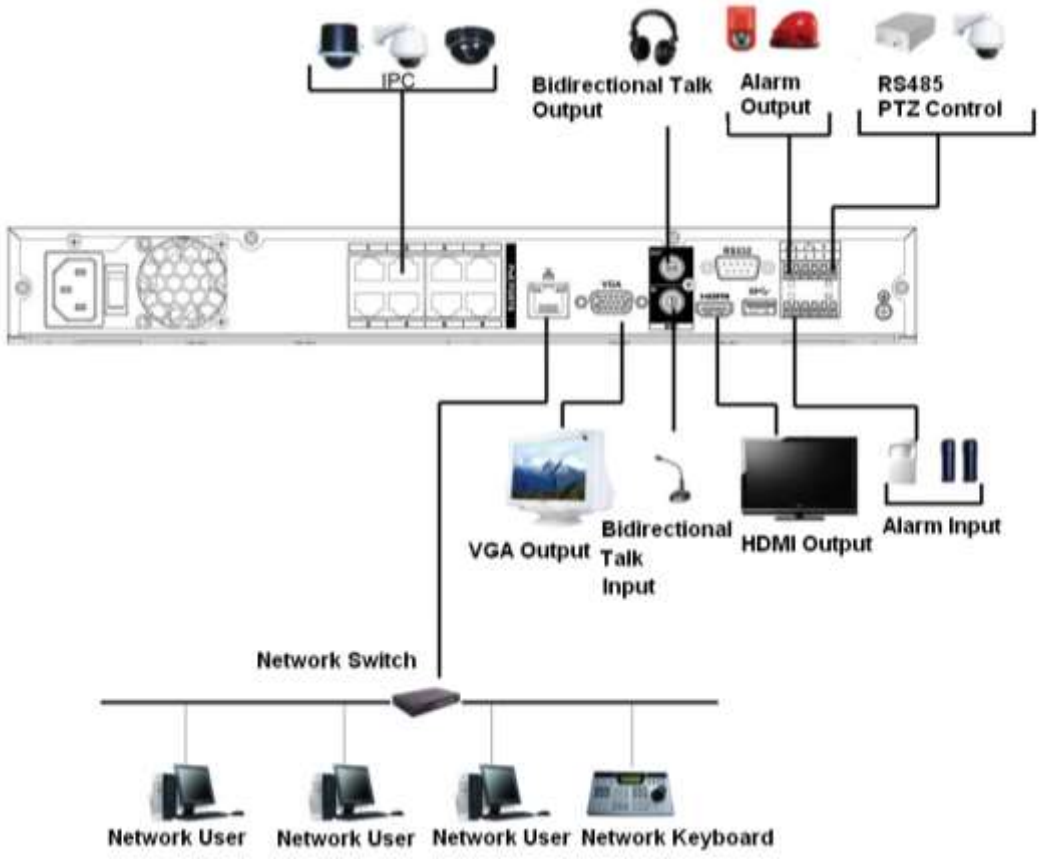


Figure 3-9

3.5.10 NVR42-4K Series

Please refer to Figure 3-10 for connection sample.

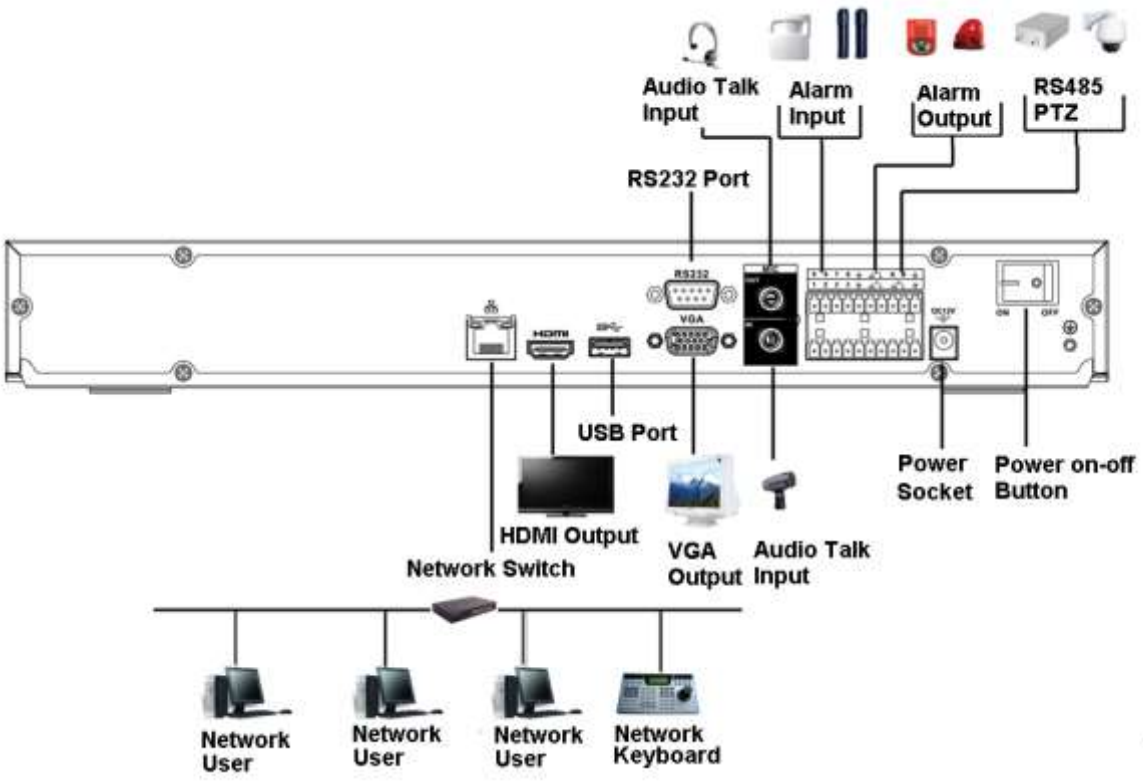


Figure 3-10

3.5.11 NVR42-8P-4K Series

Please refer to Figure 3-11 for connection sample.

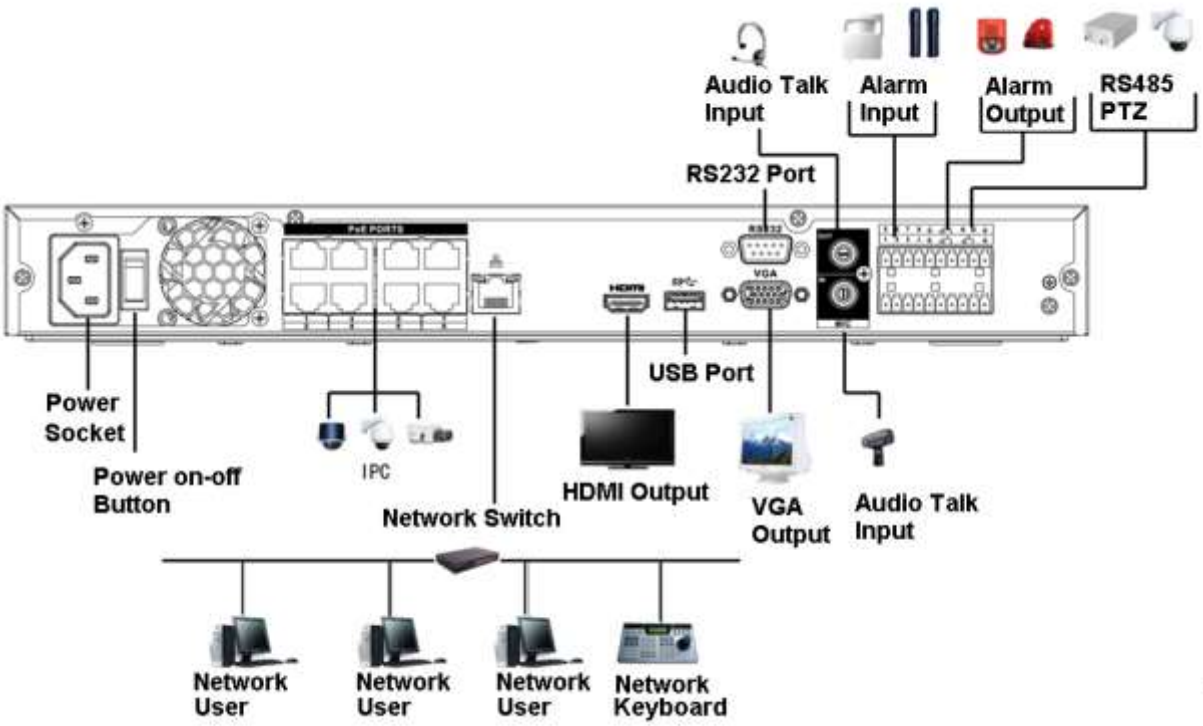


Figure 3-11

3.5.12 NVR44-4K/48-4K/54-4KS2/54-16P-4KS2/58-4KS2/58-16P-4KS2 Series

Please refer to Figure 3-11 for connection sample.

The following interface is based on the 44-4K series product.

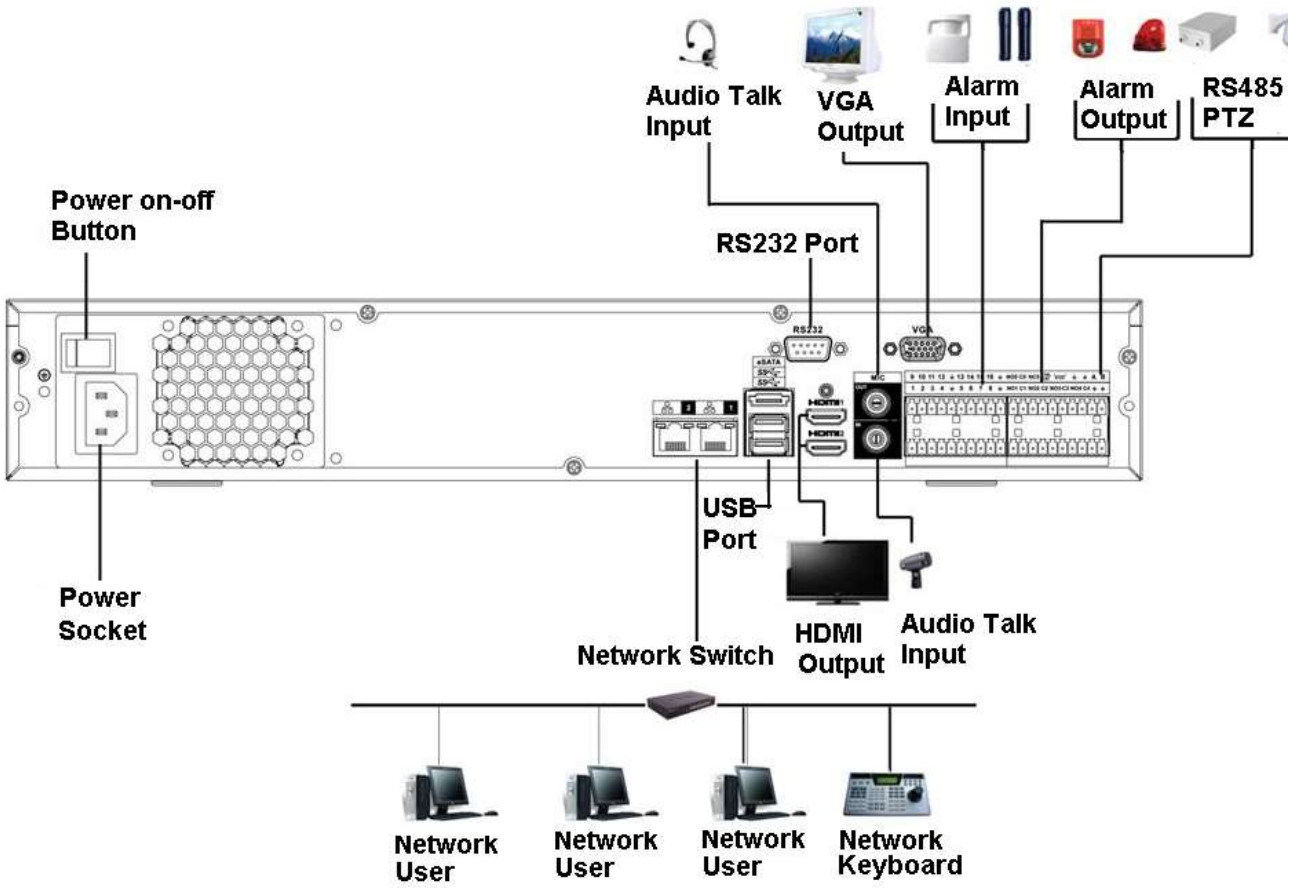


Figure 3-12

3.5.13 NVR44/44-8P/44-16P Series

Please refer to Figure 3-13 for connection sample.

The following interface is based on the 44-8P series product.

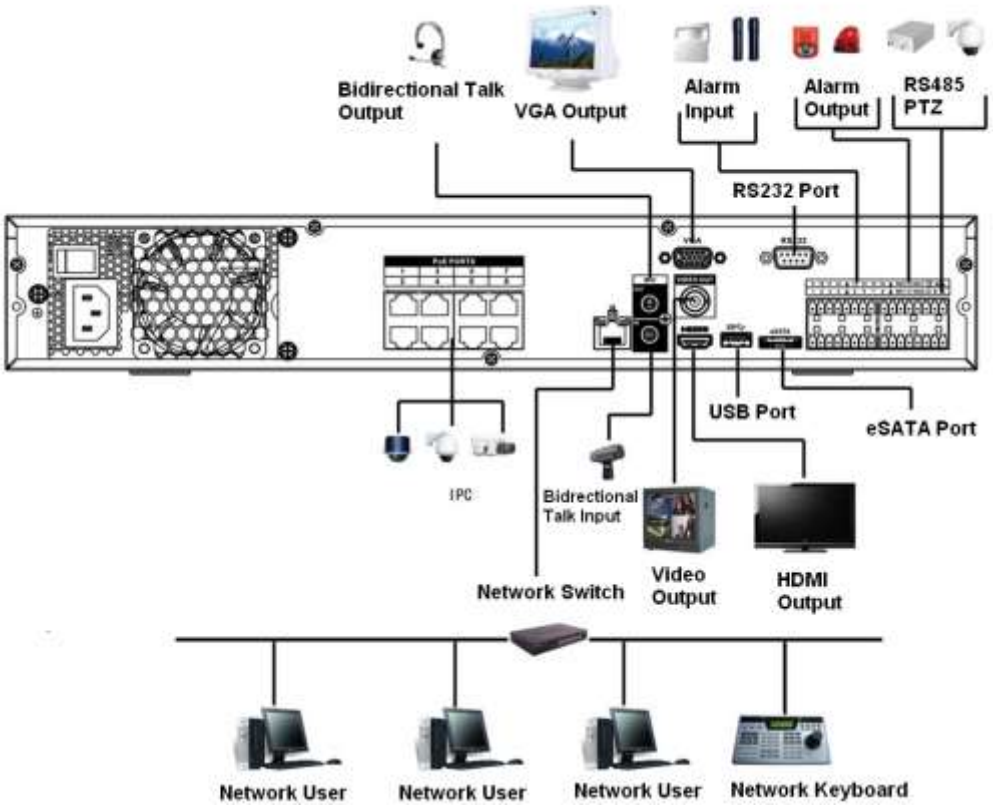


Figure 3-13

3.5.14 NVR48/48-16P Series

Please refer to Figure 3-14 for connection sample.

The following interface is based on the 48-16P series product.

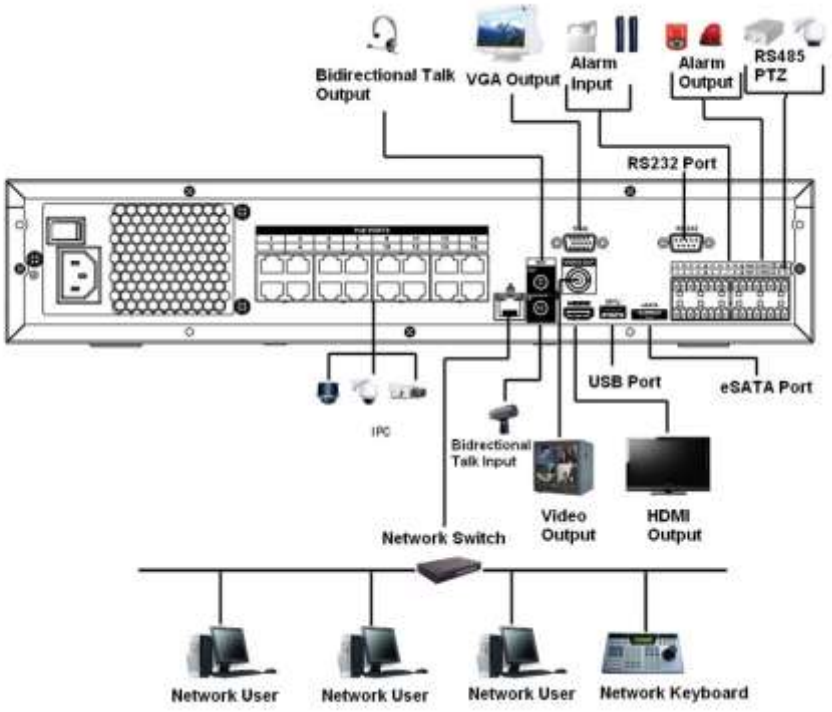


Figure 3-14

3.5.15 NVR72 Series

Please refer to Figure 3-15 for connection sample.

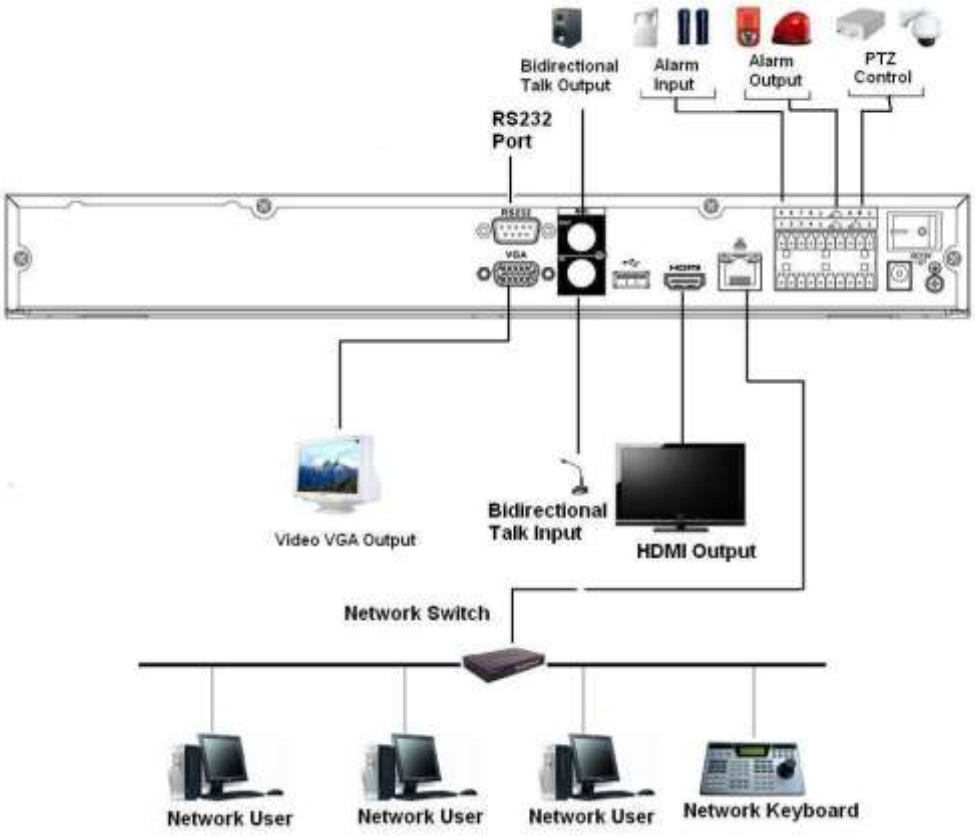


Figure 3-15

3.5.16 NVR72-8P Series

Please refer to Figure 3-16 for connection sample.

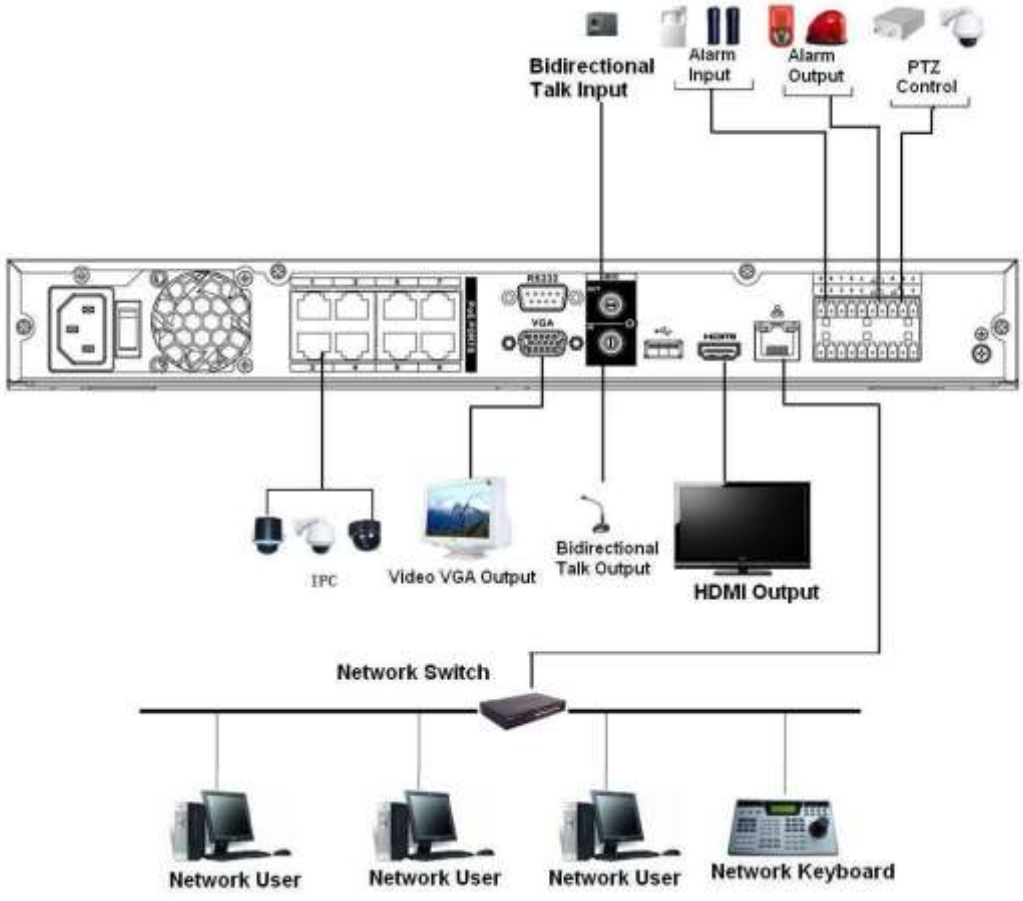


Figure 3-16

3.5.17 NVR74 Series

Please refer to Figure 3-17 for connection sample.

The following figure is based on the 74 series product.

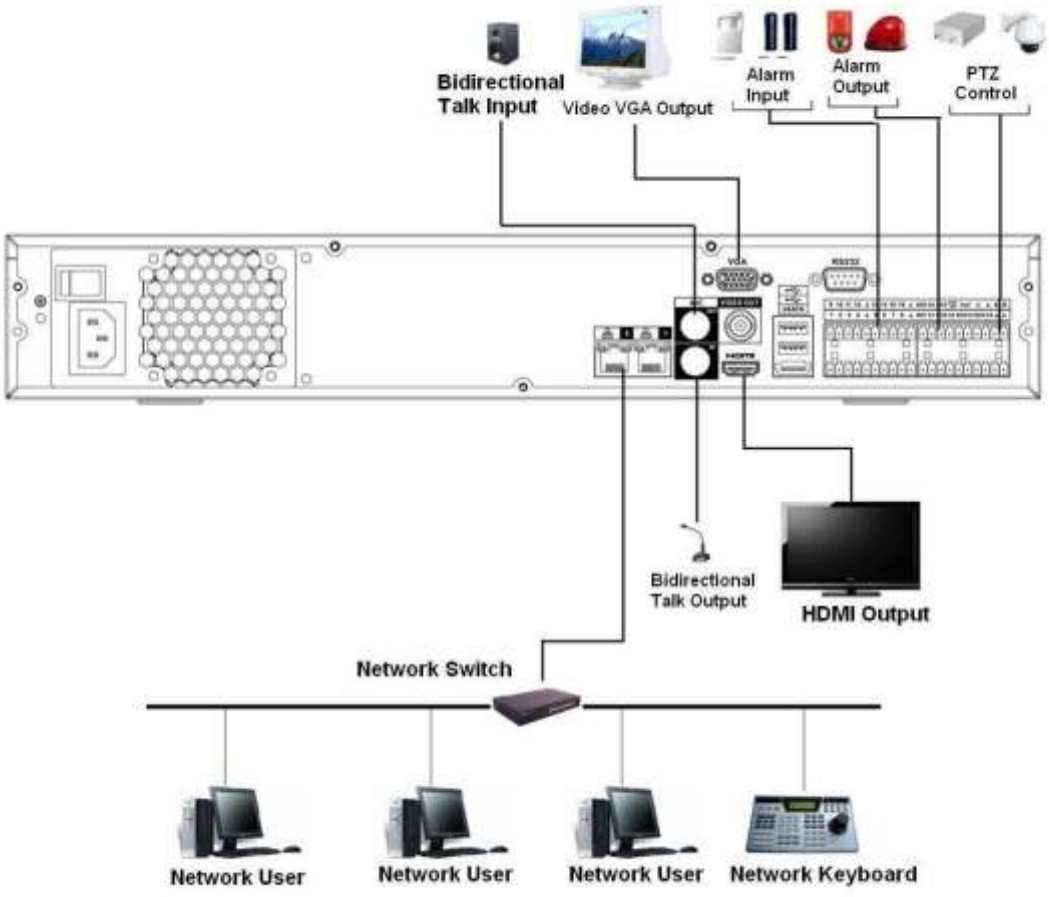


Figure 3-17

3.5.18 NVR74-8P/74-16P Series

Please refer to Figure 3-18 for connection sample.

The following figure is based on the NVR74-8P series product.

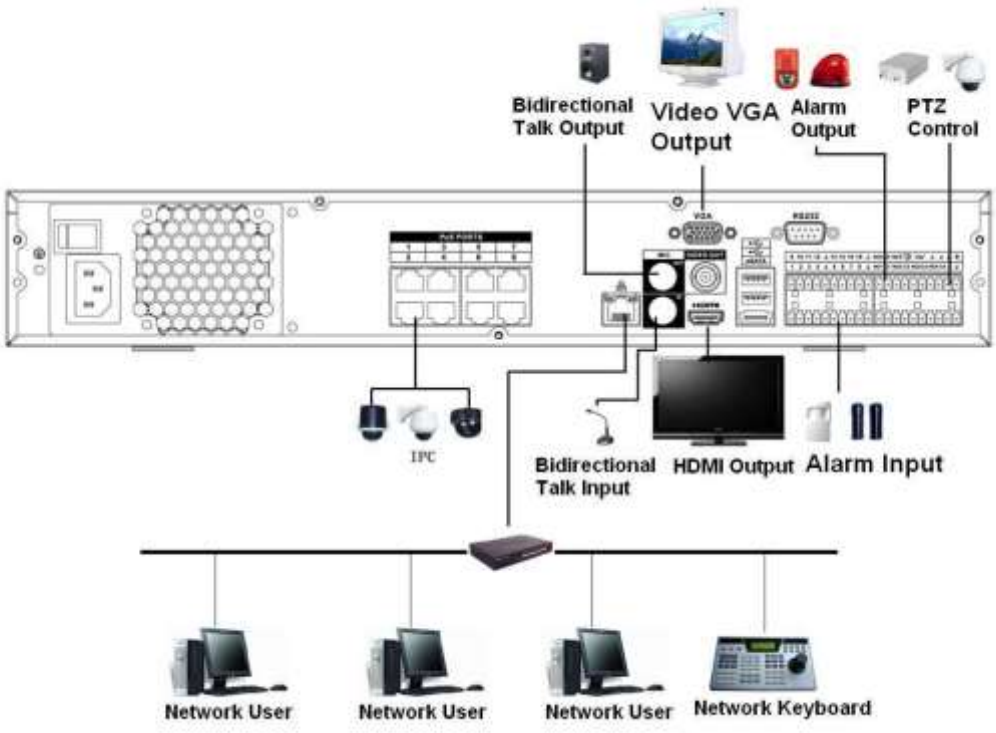


Figure 3-18

3.5.19 NVR78 Series

Please refer to Figure 3-19 for connection sample.

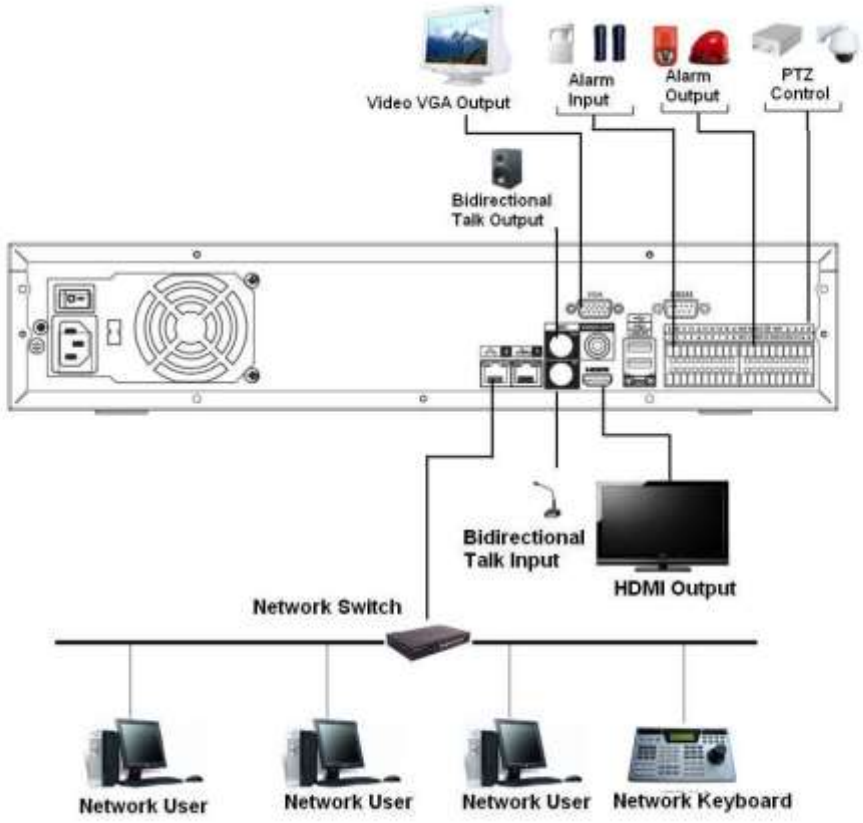


Figure 3-19

3.5.20 NVR78-16P Series

Please refer to Figure 3-20 for connection sample.

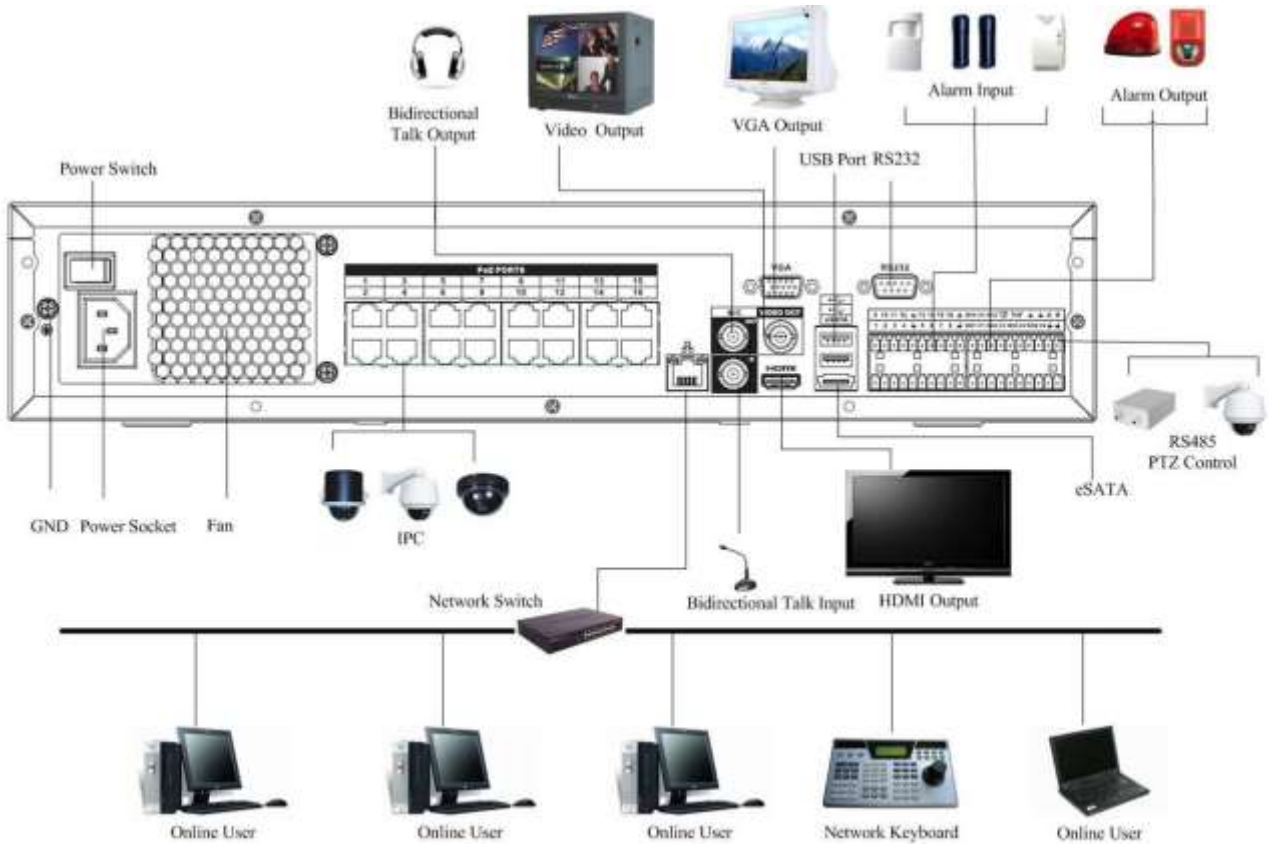


Figure 3-20

3.5.21 NVR78-RH Series

Please refer to Figure 3-21 for connection sample.

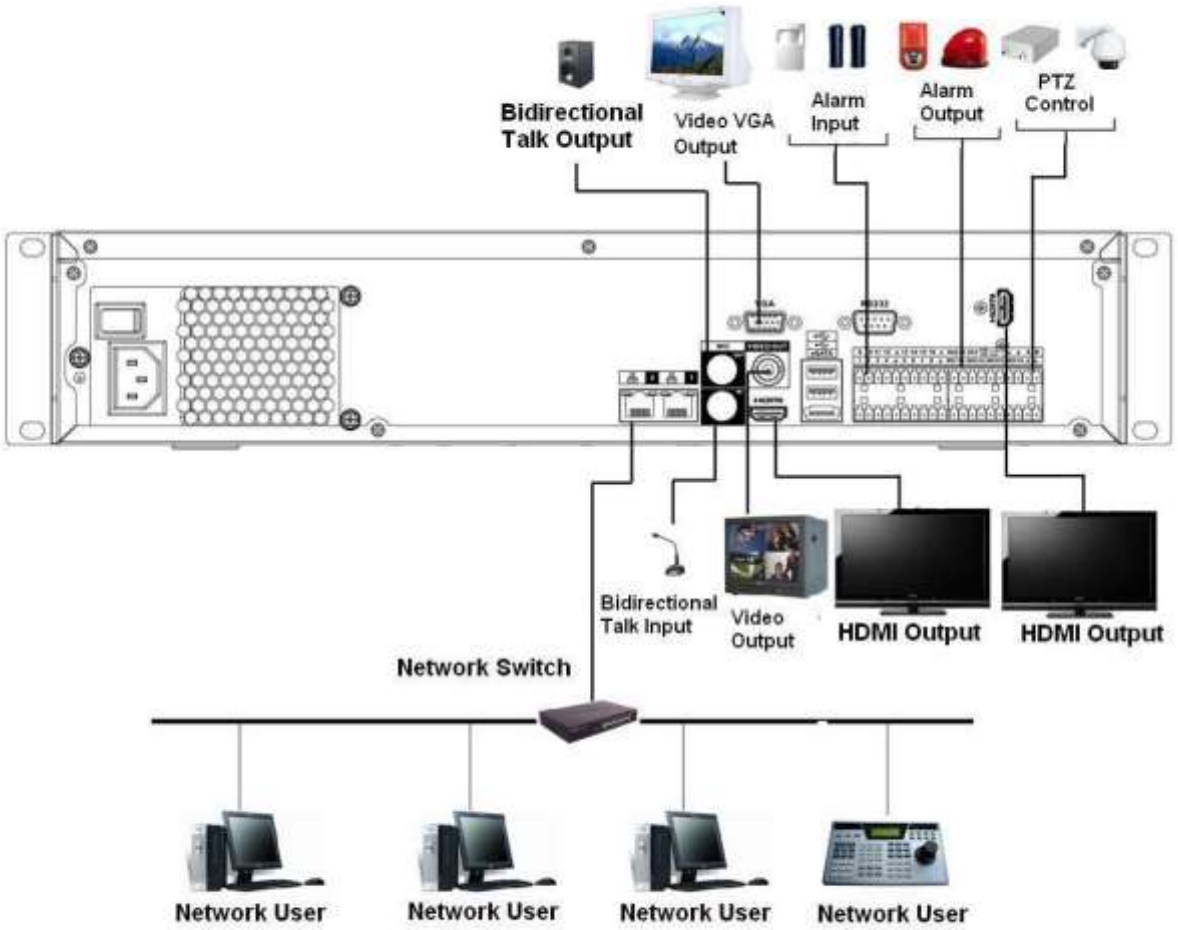


Figure 3-21

3.5.22 NVR70 Series

Please refer to Figure 3-22 for connection sample.

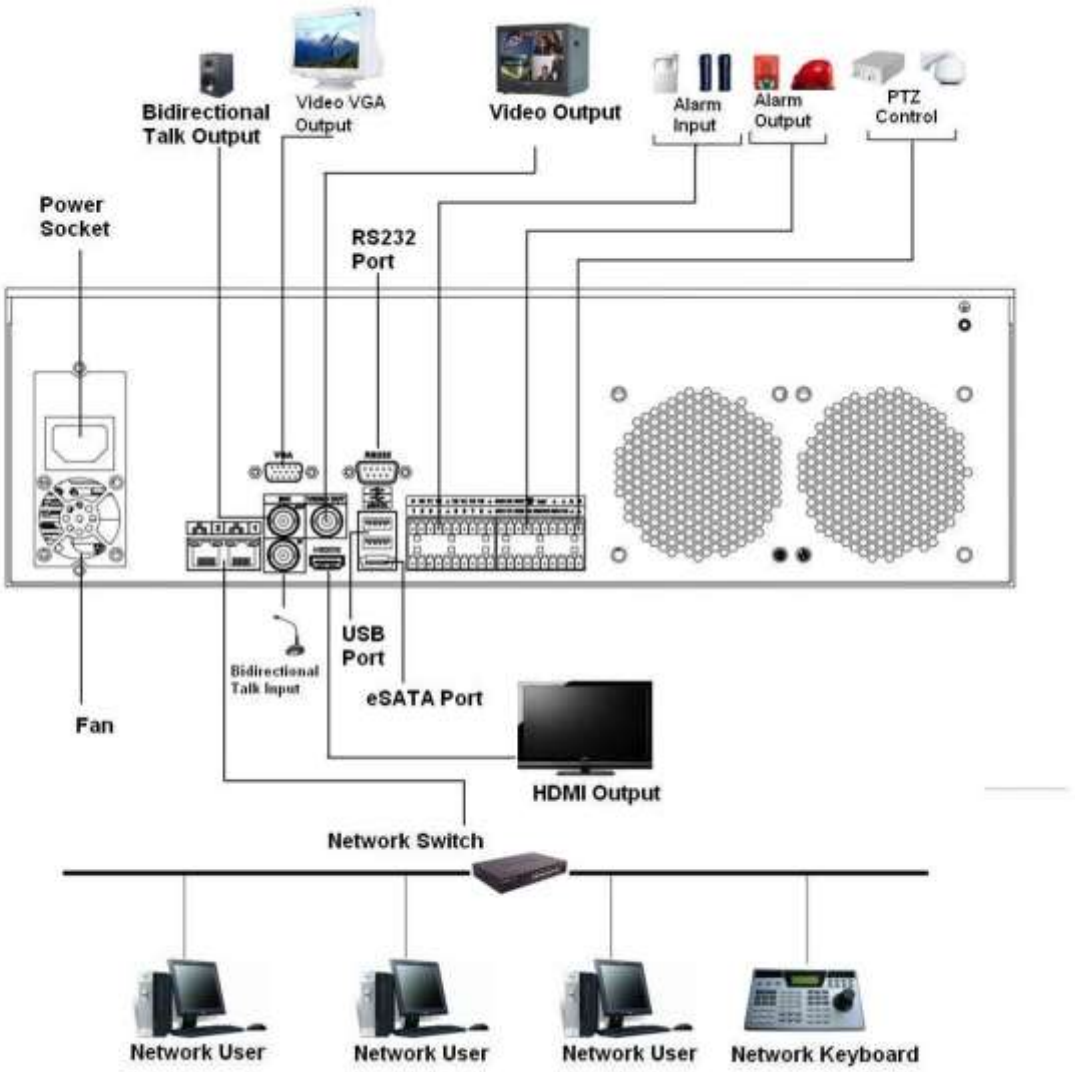


Figure 3-22

3.5.23 NVR70-R Series

Please refer to Figure 3-23 for connection sample.

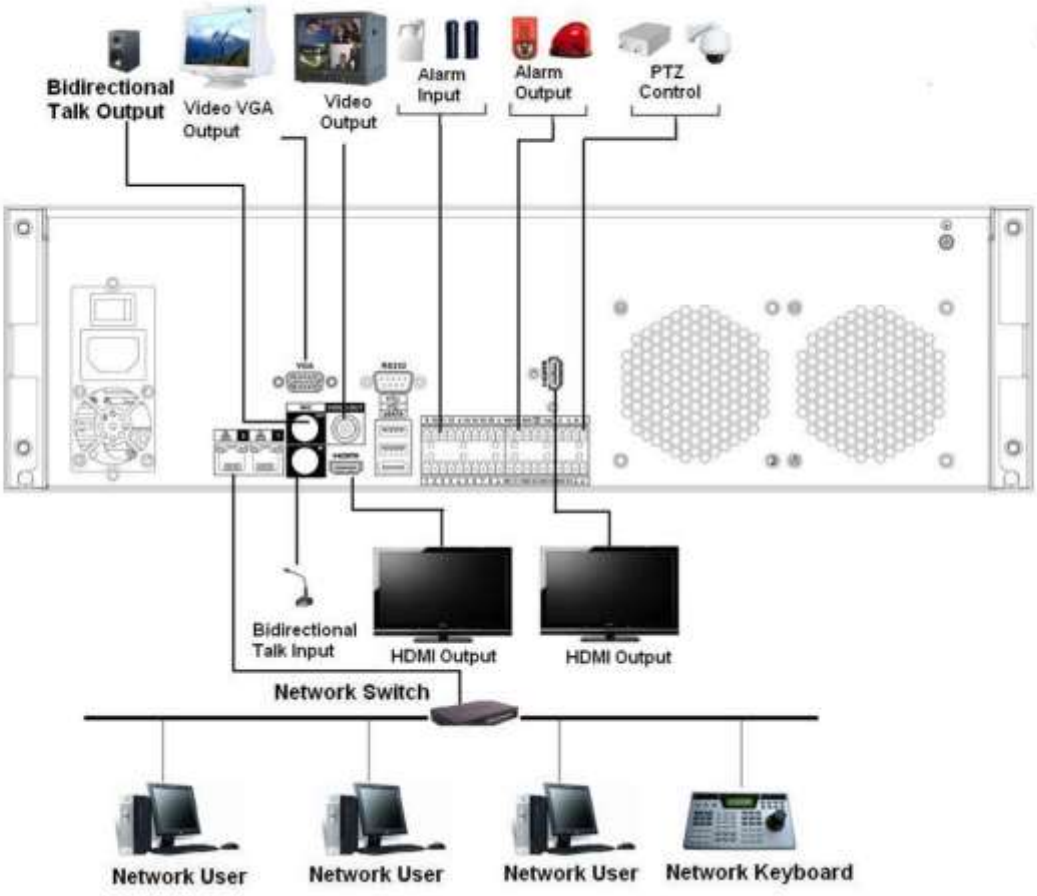


Figure 3-23

3.5.24 NVR42V-8P Series

Please refer to Figure 3-24 for connection sample.

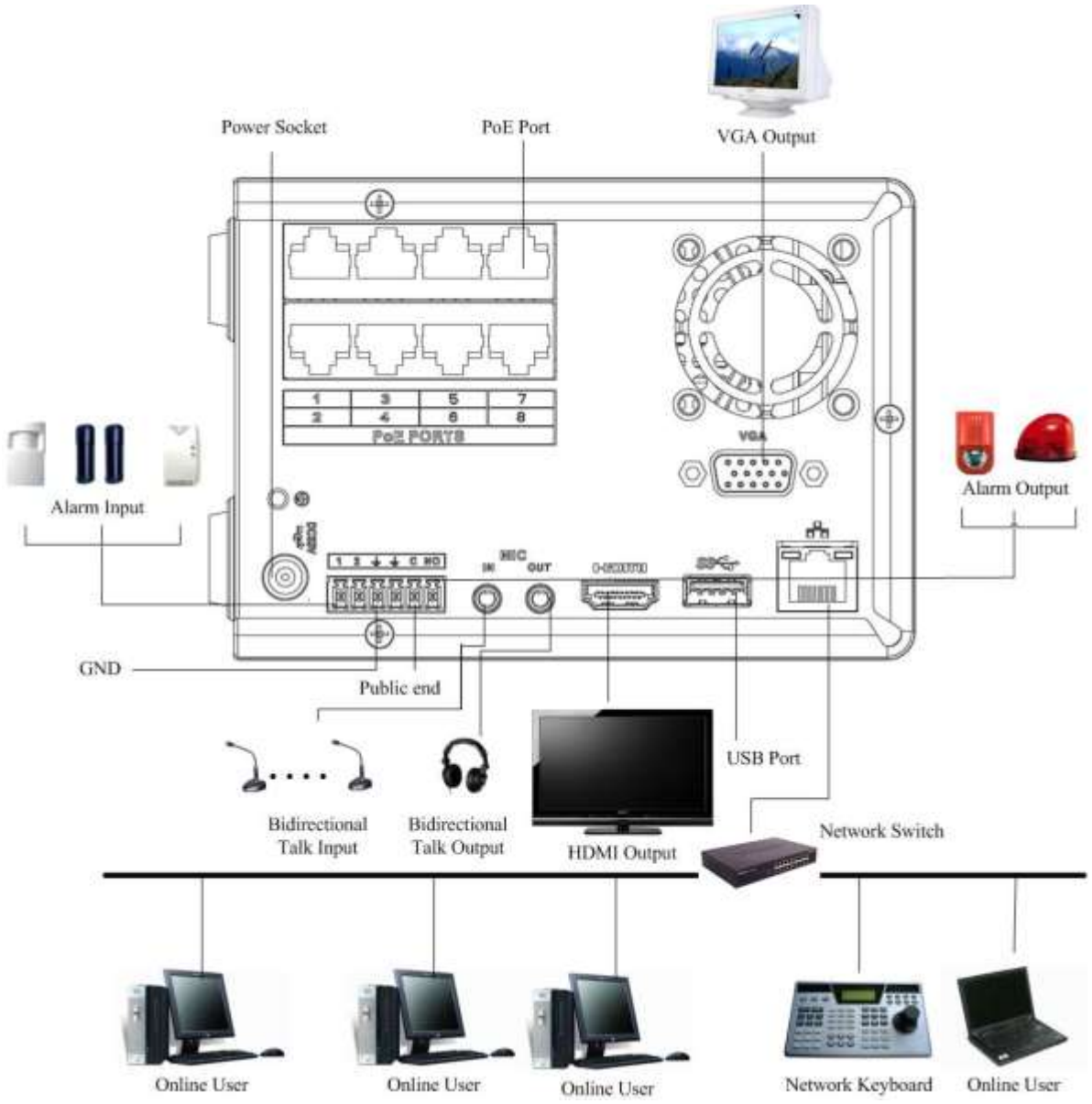

Power Socket
PoE Port
VGA Output
Alarm Input
Alarm Output
GND
Public end
Bidirectional Talk Input
Bidirectional Talk Output
HDMI Output
USB Port
Network Switch
Online User
Online User
Online User
Network Keyboard
Online User

Figure 3-24

4 Local Basic Operation

4.1 Boot up and Shutdown

4.1.1 Boot up

Caution

Before the boot up, please make sure:

- **For device security, please connect the NVR to the power adapter first and then connect the device to the power socket.**
- **The rated input voltage matches the device power on-off button. Please make sure the power wire connection is OK. Then click the power on-off button.**
- **Always use the stable current, if necessary UPS is a best alternative measure.**

Please follow the steps listed below to boot up the device.

- Connect the device to the monitor and then connect a mouse.
- Connect power cable.
- Click the power button at the front or rear panel and then boot up the device. After device booted up, the system is in multiple-channel display mode by default.

4.1.2 Shutdown

Note

- When you see corresponding dialogue box “System is shutting down…” Do not click power on-off button directly.
- Do not unplug the power cable or click power on-off button to shutdown device directly when device is running (especially when it is recording.)

There are three ways for you to log out.

a) Main menu (**RECOMMENDED**)

From Main Menu->Shutdown, select shutdown from dropdown list.

Click OK button, you can see device shuts down.

b) From power on-off button on the front panel or remote control.

Press the power on-off button on the NVR front panel or remote control for more than 3 seconds to shutdown the device.

c) From power on-off button on the rear panel.

4.2 Change/Reset Password

4.2.1 Change Password

For your own safety, please change your administrator default password after your first login.

After system booted up, you can see the following interface if it is your first login or you have restored default setup. See Figure 4-1. Please input old password and then input new password twice to confirm the change.

- The default administrator user name is **admin** and the password is **admin**.
- You can set security questions here to reset the password in case you forgot. System supports customized setup. Please note you need to set two security questions at the same time. When you reset the password, you need to answer these two security questions too.

- For reset information, please refer to chapter 4.2.2.

Figure 4-1

Click Cancel button, system pops up the following interface for you to confirm. See Figure 4-2. Check the box here, system will not pop up the change password interface the next time.

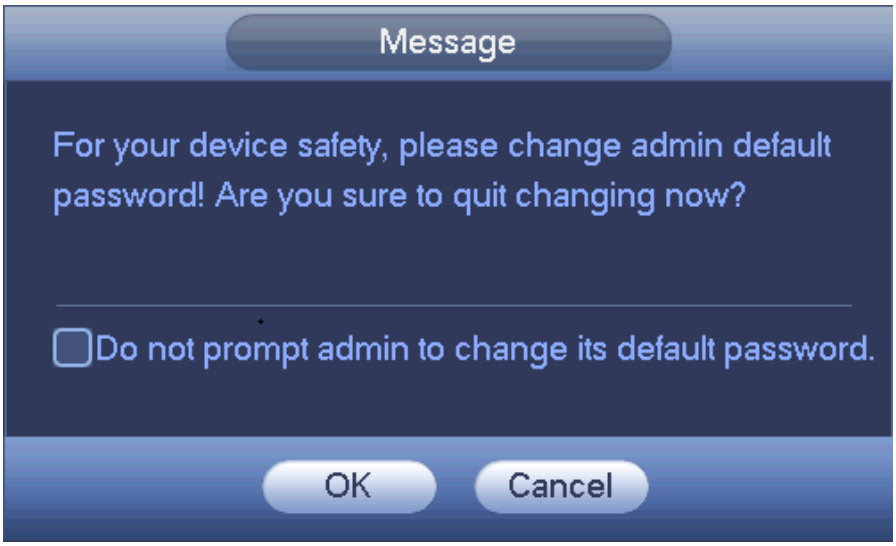


Figure 4-2

4.2.2 Reset Password

Once you forgot password, you can answer the security questions you set in chapter 4.2.1 to reset the password.

In login interface, click  . See Figure 4-3.

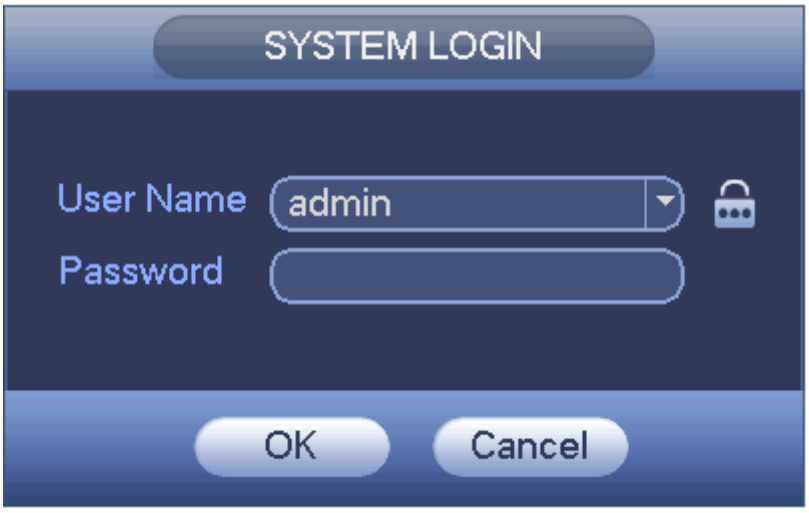


Figure 4-3

System pops up the following dialogue box, please answer the security questions and then input the new password twice. See Figure 4-4.

.

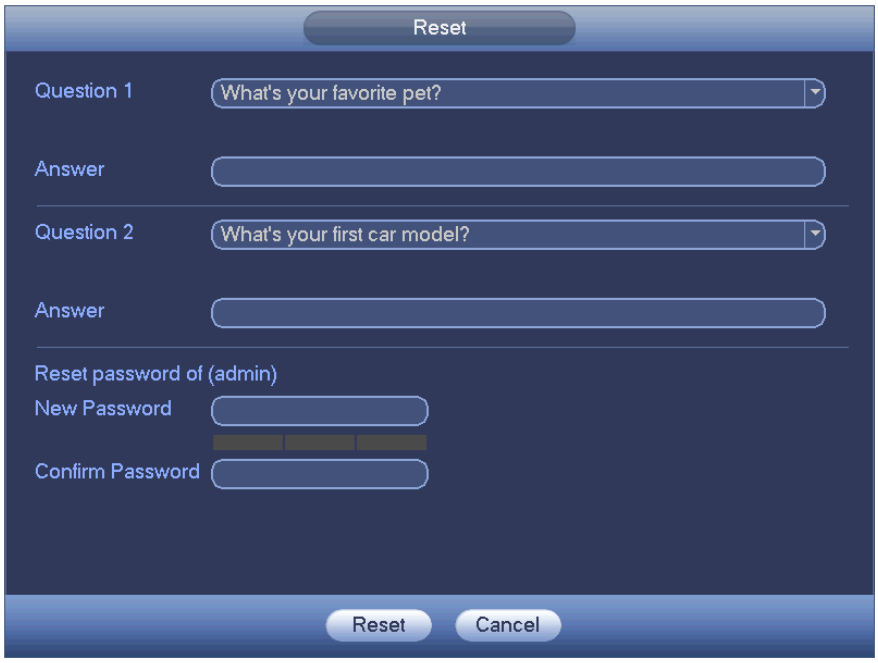


Figure 4-4

4.3 Startup Wizard

After device successfully booted up, it goes to startup wizard.

Click Cancel/Next button, you can see system goes to login interface.

Tips

Check the box Startup button here, system goes to startup wizard again when it boots up the next time.

Cancel the Startup button, system goes to the login interface directly when it boots up the next time.

Figure 4-5

Click Smart add, Cancel button or Next button, system goes to login interface. See Figure 4-6.
System consists of three accounts:

- **Username**: admin. **Password**: admin. (administrator, local and network)
- **Username**: 888888. **Password**: 888888. (administrator, local only)
- **Username**: default. **Password**: default (hidden user). Hidden user “default” is for system interior use only and can not be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

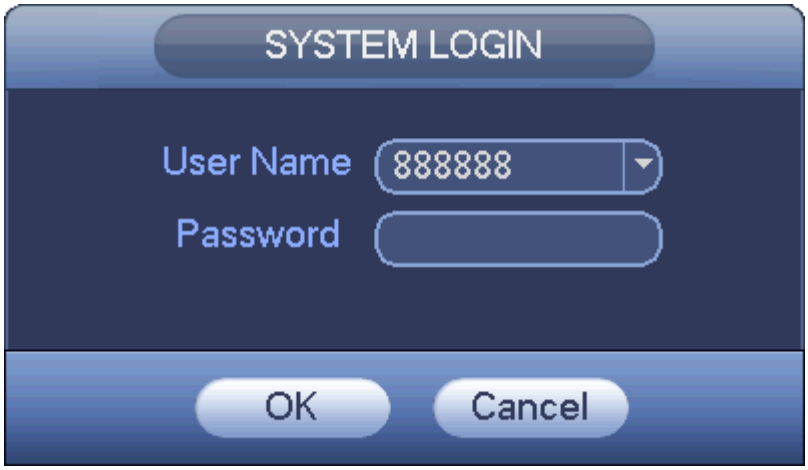


Figure 4-6

Note:
For security reason, please modify password after you first login.
Within 30 minutes, three times login failure will result in system alarm and five times login failure will result in account lock!

For detailed smart add information, please refer to chapter 4.5.
Click OK button, you can go to General interface. See Figure 4-7.
For detailed information, please refer to chapter 4.16.1.

Figure 4-7

Click Next button, you can go to network interface. See Figure 4-8.
For detailed information, please refer to chapter 4.14.

Figure 4-8

Click Next button, you can set P2P function. Scan the QR code, download the App to the cellphone, you can use the smart phone to add the device. See Figure 4-9.
For detailed information, please refer to chapter 4.14.1.16.

Figure 4-9

Click Next button, you can go to remote device interface. See Figure 4-10.

For detailed information, please refer to chapter 4.5.

Figure 4-10

Click Next button, you can go to Schedule interface. See Figure 4-11.
For detailed information, please refer to chapter 4.10.2.

Figure 4-11

Click Finish button, system pops up a dialogue box. Click the OK button, the startup wizard is complete. See Figure 4-12.

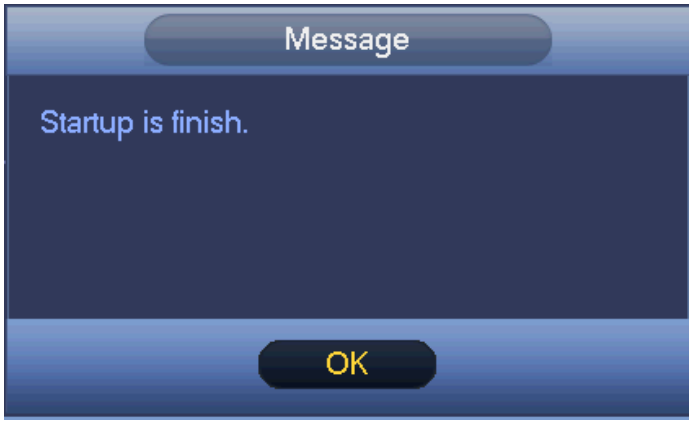


Figure 4-12

4.4 Navigation Bar

You need to go to the Main menu->Setting->System->General to enable navigation bar function; otherwise you can not see the following interface.
The navigation bar is shown as below. See Figure 4-13.

Figure 4-13

4.4.1 Main Menu

Click button  to go to the main menu interface.

4.4.2 Dual-screen operation

Important

This function is for some series only.

Click  to select screen 2, you can view an interface shown as below. See Figure 4-14. It is a navigation bar for screen 2.

Figure 4-14

Click any screen split mode; HDMI2 screen can display corresponding screens. Now you can control two screens. See Figure 4-15.

Figure 4-15

Note

- Screen 2 function is null if tour is in process. Please disable tour function first,
- Right now, the screen 2 operation can only be realized on the navigation bard. The operations on the right-click menu are for screen 1 only.

4.4.3 Output Screen

Select corresponding window-split mode and output channels.

4.4.4 Tour

Click button  to enable tour, the icon becomes  , you can see the tour is in process.

4.4.5 PTZ

Click  , system goes to the PTZ control interface. Please refer to chapter 4.9.2.

4.4.6 Color

Click button  , system goes to the color interface. Please refer to chapter 4.7.4.1.

Please make sure system is in one-channel mode.

4.4.7 Search

Click button  , system goes to search interface. Please refer to chapter 4.11.2

4.4.8 Alarm Status

Click button, system goes to alarm status interface. It is to view device status and channel status. Please refer to chapter 4.17.1.4.

4.4.9 Channel Info

Click button, system goes to the channel information setup interface. It is to view information of the corresponding channel. See Figure 4-16.

Figure 4-16

4.4.10 Registration

Click, system goes to the registration interface. Please refer to chapter 4.5.

4.4.11 Network

Click, system goes to the network interface. It is to set network IP address, default gateway and etc. Please refer to chapter 4.14.

4.4.12 HDD Manager

Click , system goes to the HDD manager interface. It is to view and manage HDD information. Please refer to chapter 4.15.1.

4.4.13 USB Manager

Click , system goes to the USB Manager interface. It is to view USB information, backup and update. Please refer to chapter 4.12.1 file backup, chapter 4.12.3 backup log, chapter4.12.2 import/export, and chapter 4.17.5 upgrade for detailed information.

4.5 Smart Add

When the network camera(s) and the NVR are in the same router or switch, you can use smart add function to add all network cameras to the NVR at the same time.

There are two ways for you to go to the smart add interface.

- From the startup wizard, click Smart add button. See Figure 4-17.

Figure 4-17

- On the preview interface, right click mouse and then select Smart add. See Figure 4-18.

Figure 4-18

Now you can go to the smart add interface. See Figure 4-19.

Figure 4-19

Click smart add button, you can see device enables DHCP function. See Figure 4-20.

Figure 4-20

System pops up the following interface for you to confirm IP information if there are several IP segments. See Figure 4-21.

Figure 4-21

Now you can see system is auto adding IPC to the corresponding channels. See Figure 4-22.

Figure 4-22

You can see the following dialog box after system successfully added network cameras. See Figure 4-23.

Figure 4-23

4.6 Camera

4.6.1 Registration

From Main menu->Setting->Camera->Registration, you can see the following interface. See Figure 4-24.

- Device search: Click the button; you can search all network cameras in the same network segment.
- Channel: It is the device channel number. If you have not added the network camera, the channel number is shown as .
- Status: Red circle ( ) means current channel has no video, green circle ( ) means current channel has video.
- IP address: It is to display network camera IP address.
- Type: There are two connection types. You can use the network to connect to the camera or use the WIFI. The means current network camera connection mode is general; the means current network camera mode is hotspot.
- Add/Delete: Click to delete the device, click to add the device to the NVR.
- Manual Add: Click Manual Add button, you can set the corresponding network camera information and then select the channel you want to add. The interface is similar to Figure 4-25.

Figure 4-24

- Modify: Click Modify button, you can see the following interface. See Figure 4-25.
  - ✧ Name: Change current channel name.
  - ✧ Protocol: Select protocol from the dropdown list.
  - ✧ IP Address: Input IP address here.
  - ✧ TCP port: Input TCP port value.
  - ✧ User name/Password: Input user name and password. The default user name is **admin** and the default password is **admin**.
  - ✧ Decoder butter: There are three options: realtime/fluent/default. Please select from the dropdown list.
  - ✧ Channel: Current channel number.

Figure 4-25

4.6.2 Short-Cut Menu

In the preview interface, for the channel of no IPC connection, you can click the icon “+” in the centre of the interface to quickly go to the registration interface (Figure 4-24.). See Figure 4-26.

Figure 4-26

4.6.3 Image

From main menu->setting->camera->image, you can see the image interface is shown as below. See Figure 4-27.

- Channel: Select a channel from the dropdown list.
- Saturation: It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.

- Brightness: It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number is, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
- Contrast: It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.
- Auto Iris: It is for the device of the auto lens. You can check the box before ON to enable this function. The auto iris may change if the light becomes different. When you disable this function, the iris is at the max. System does not add the auto iris function in the exposure control. This function is on by default.
- Mirror: It is to switch video up and bottom limit. This function is disabled by default.
- Flip: It is to switch video left and right limit. This function is disabled by default.
- BLC: It includes several options: BLC/WDR/HLC/OFF.
  - ✧ BLC: The device auto exposures according to the environments situation so that the darkest area of the video is cleared
  - ✧ WDR: For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time. The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.
  - ✧ HLC: After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video.
  - ✧ OFF: It is to disable the BLC function. Please note this function is disabled by default.
- Profile: It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default. You can select the different scene mode such as auto, sunny, cloudy, home, office, night, disable and etc to adjust the video to the best quality.
  - ✧ Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the vide color is proper.
  - ✧ Sunny: The threshold of the white balance is in the sunny mode.
  - ✧ Night: The threshold of the white balance is in the night mode.
  - ✧ Customized: You can set the gain of the red/blue channel. The value reneges from 0 to 100.
- Day/night. It is to set device color and the B/W mode switch. The default setup is auto.
  - ✧ Color: Device outputs the color video.
  - ✧ Auto: Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.)
  - ✧ B/W: The device outputs the black and white video.
  - ✧ Sensor: It is to set when there is peripheral connected IR light.

Please note some non-IR series product support sensor input function.

Figure 4-27

4.6.4 Channel Name

From main menu->Setting->Camera-Channel name, you can see an interface shown as in Figure 4-28. It is to modify channel name. It max supports 31-character.

Please note you can only modify the channel name of the connected network camera.

Figure 4-28

4.6.5 Upgrade

Note

Right now, the NVR can upgrade the IPC via the USB device or WEB. You can upgrade 8 network cameras of the same model (or the NVR supported) at the same time.

It is to update the network camera.

From main menu->setting->camera->remote, the interface is shown as below. See Figure 4-29.

Click Browse button and then select the upgrade file. Then select a channel (or you can select device type filter to select several devices at the same time.)

Click Begin button to upgrade. You can see the corresponding dialogue once the upgrade is finish.

Figure 4-29

4.6.6 UPNP

Important

Do not connect the switch to the PoE port, otherwise the connection may fail!

Please connect the IPC to the PoE port of the device rear panel (Figure 4-30), system can auto connect to the network camera. Please note the following figure is for reference only.

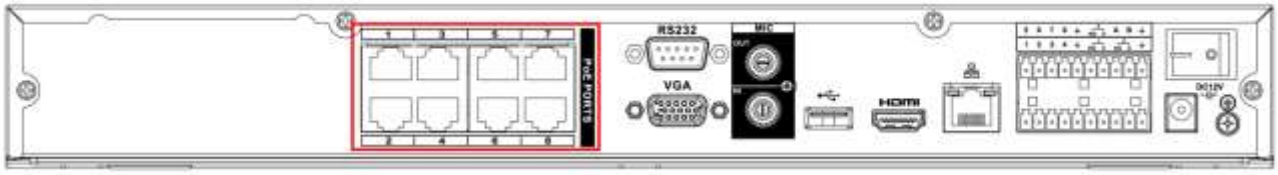


Figure 4-30

4.6.7 Built-in Switch Setup

The built-in switch function is for product of PoE port.

From Main menu->Setting->Network->Switch, you can set switch IP address, subnet mask, gateway and etc. See Figure 4-31.

Figure 4-31

4.7 Preview

After device booted up, the system is in multiple-channel display mode. See Figure 4-32.Please note the displayed window amount may vary. The following figure is for reference only. Please refer to chapter 1.3 Specifications for the window-amount your product supported.

Figure 4-32

4.7.1 Preview

If you want to change system date and time, you can refer to general settings (Main Menu->Setting->System->General). If you want to modify the channel name, please refer to the display settings (Main Menu->Camera->CAM name)
Please refer to the following sheet for detailed information.

1		Recording status	**3**		Video loss
2		Motion detection	**4**		Camera lock

Tips

- Preview drag: If you want to change position of channel 1 and channel 2 when you are previewing, you can left click mouse in the channel 1 and then drag to channel 2, release mouse you can switch channel 1 and channel 2 positions.
- Use mouse middle button to control window split: You can use mouse middle button to switch window split amount.

4.7.2 Preview control interface

Move you mouse to the top centre of the video of current channel, you can see system pops up the preview control interface. See Figure 4-33. If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.

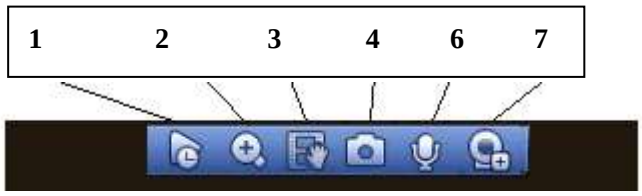


Figure 4-33 Digital Channel

1) Realtime playback

It is to playback the previous 5-60 minutes record of current channel.
Please go to the Main menu->Setting->->System->General to set real-time playback time.
System may pop up a dialogue box if there is no such record in current channel.

2) Digital zoom

It is to zoom in specified zone of current channel. It supports zoom in function of multiple-channel.

Click button, the button is shown as.

There are two ways for you to zoom in.

- Drag the mouse to select a zone, you can view an interface show as Figure 4-34.

Figure 4-34

- Put the middle button at the centre of the zone you want to zoom in, and move the mouse, you can view an interface shown as in Figure 4-35.

Figure 4-35

Right click mouse to cancel zoom and go back to the original interface.

3) Manual record function

It is to backup the video of current channel to the USB device. System can not backup the video of multiple-channel at the same time.

Click button  , system begins recording. Click it again, system stops recoridng. You can find the record file on the flash disk.

4) Manual Snapshot

Click  to snapshot 1-5 times. The snapshot file is saved on the USB device or HDD. You can go to the Search interface (chapter 4.11) to view.

5) Bidirectional talk

If the connected front-end device supports bidirectional talk function, you can click this button. Click button  to start bidirectional talk function the icon now is shown as  . Now the rest bidirectional talk buttons of digital channel becomes null too.

Click  again, you can cancel bidirectional talk and the bidirectional talk buttons of other digital channels become as  .

6) Registration

Shortcut menu. Click it to go to the registration interface to add/delete remote device or view its corresponding information. Please refer to chapter4.6.2 for detailed information.

4.7.3 Right Click Menu

After you logged in the device, right click mouse, you can see the short cut menu. Please see Figure 4-36.

- Window split mode: You can select window amount and then select channels.
- PTZ: Click it to go to PTZ interface.
- Fish eye(optional): It is to realize fish eye operation.
- Auto focus: It is to set auto focus function. Please make sure the connected network camera supports this function.
- Color setting: Set video corresponding information.

- Search: Click it to go to Search interface to search and playback a record file.
- Record control: Enable/disable record channel.
- Alarm output: It is to set alarm output mode.
- Camera registration: Search and add a remote device.
- Alarm output: Generate alarm output signal manually.
- Main menu: Go to system main menu interface.

Tips:

Right click mouse to go back to the previous interface.

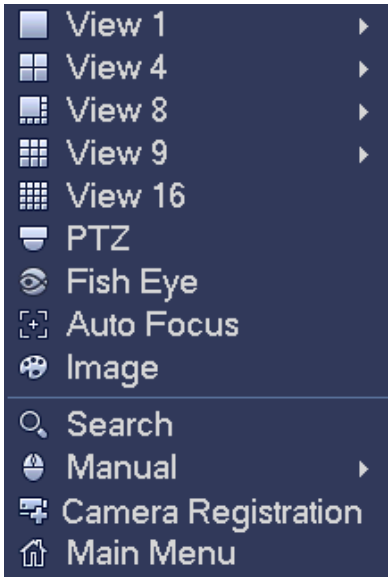


Figure 4-36

4.7.4 Preview Display Effect Setup

4.7.4.1 Video Color

Here you can set hue, brightness, contrast, saturation, gain, white level, color mode and etc. See Figure 4-37.

Figure 4-37

Please refer to the following sheet for detailed information.

Item	Note
Period	There are two periods in one day. You can set different sharpness, brightness, and contrast setup for different periods.
Effective Time	Check the box here to enable this function and then set period time.
Sharpness	The value here is to adjust the edge of the video. The value ranges from 0 to 100. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60.
Brightness	It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
Contrast	It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.
Saturation	It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
Gain	The gain adjust is to set the gain value. The default value may vary due to different device models. The smaller the value, the low the noise. But the brightness is also too low in the dark environments. It can enhance the video brightness if the value is high. But the video noise may become too clear.
Color mode	It includes several modes such as standard, color, bright, gentle. Select a color mode, the sharpness, brightness, contrast and etc can automatically switch to corresponding setup.

4.7.4.2 Display

From Main Menu->Setting->System->Display, you can go to the following interface. See Figure 4-38. Here you can set menu and video preview effect. All you operation here does not affect the record file and playback effect.

Figure 4-38

Now you can set corresponding information.

- Display the intelligent rule(s): Check the box to enable IVS function, system can display IVS rule on the preview interface. **Please note this function is for some series only.**
- Resolution: There are five options: 1280×1024 (Default), 1280×720, 1920×1080, 1024×768 and 3840×2160. Please note the system needs to reboot to activate current setup. **Please note 3840×2160 is for some series only.**

- VGA+HDMI2: It is for dual-screen operation. Please select from the dropdown list according to your actual situation. Click Apply button, system needs to restart to activate new setup. For example, 32+4 means for VGA, system max supports 32-window split and for HDMI2, system max supports 4-window split. **Please note this function is for some series only.**
- Color mode: Please select from the dropdown list. It is to set video color mode.
- Transparency: Here is for you to adjust menu transparency. The higher the value is, the better transparent the menu is.
- Channel name: Here is for you to modify channel name. System max support 25-digit (The value may vary due to different series). Please note all your modification here only applies to NVR local end. You need to open web or client end to refresh channel name.
- Time display: You can select to display time or not when system is playback.
- Channel display: You can select to channel name or not when system is playback.
- Image enhance: Check the box; you can optimize the margin of the preview video.
- Original scale: Check the box here to select a corresponding channel; it can restore video original scale.

Click OK button to save current setup.

4.7.4.3 TV adjust

Note

Some series product supports TV adjust function. This function is disabled by default.

From Main Menu->Setting->System->Display->TV adjust; you can go to the following interface. See Figure 4-38. Here you can set margins and brightness.

Figure 4-39

4.7.5 Preview Tour Parameters

Set preview display mode, channel display sequence and tour setup.

- Set preview display mode: On the preview interface, right click mouse, you can view right-click menu. Now you can select preview window amount and channel.
- Set channel display mode: On the preview interface, if you want to change channel 1 and channel 16 position, please right click channel 1 video window and then drag to the channel 16 video window, release button, you can change channel 1 and channel 16 position.
- Tour setup: Here you can set preview window channel display mode and interval. Please follow the steps listed below.

From Main menu->Setting->System->Display->Tour, you can see an interface shown as in Figure 4-40. Here you can set tour parameter.

- Enable tour: Check the box here to enable tour function. The general tour supports all types of window split mode.
- Interval: Input proper interval value here. The value ranges from 1-120 seconds.
- Motion tour type: System support 1/8-window tour. Please note you need to go to the main menu->Setting->Event->Video detect->Motion detect to enable tour function.
- Alarm tour type: System support 1/8-window tour. Please note you need to go to the main menu->Setting->Event->Alarm to enable tour function.
- Window split: It is to set window split mode.

Figure 4-40

Tips

On the navigation bar, click / to enable/disable tour.

Click Save button to save current setup.

4.8 Fish eye (Optional)

Please note this function is for some series only.

4.8.1 Fish eye de-warp during preview interface

On the preview interface, select fish eye channel and then right click mouse, you can select fish eye. See

Figure 4-41.

Figure 4-41

Now you can see an interface shown as in Figure 4-42. You can set fish eye installation mode and display mode.

Note:

- For the non-fish eye channel, system pops up dialogue box to remind you it is not a fish eye channel and does not support de-warp function.
- If system resources are insufficient, system pops up the corresponding dialogue box too.

Figure 4-42

There are three installation modes: ceiling mount/wall mount/ground mount. The different installations modes have different de-warp modes.

Please refer to the following sheet for detailed information.

Installation modes	Icon	Note
 （Ceiling mount）  （Ground mount）		360°panorama original view
		1 de-warp window+1 panorama stretching
		2 panorama stretching view
		1 360° panorama view+3 de-warp windows
		1 360°panorama view+4 de-warp windows
		4 de-warp windows+1 panorama stretching
		1 360° panorama view+8 de-warp windows
 （Wall mount）		360°panorama original view
		Panorama stretching
		1 panorama unfolding view+3 de-warp windows
		1 panorama unfolding view +4 de warp windows
		1 panorama unfolding view +8 de warp windows

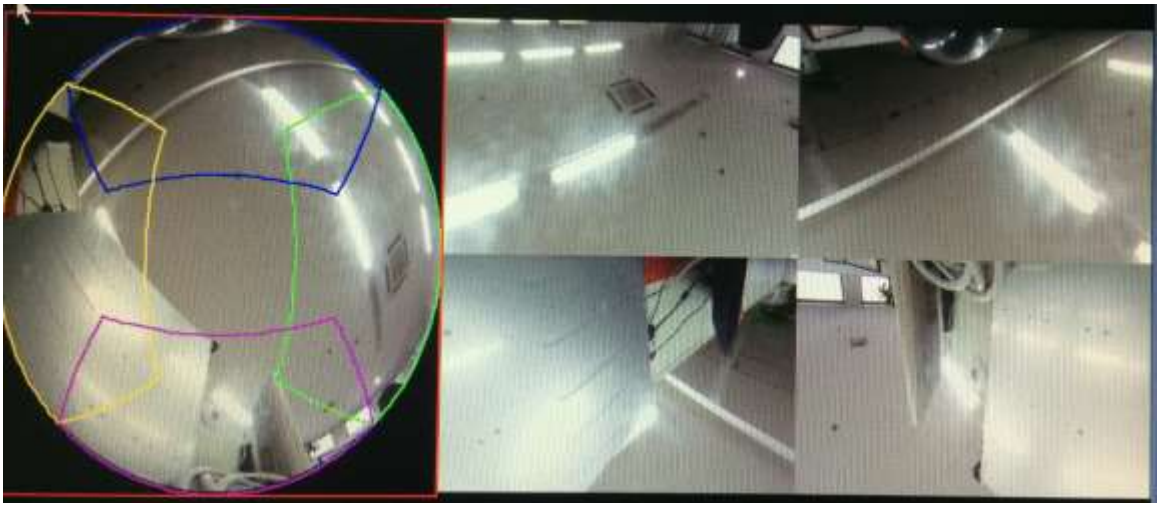


Figure 4-43

In Figure 4-43, you can adjust the color pane on the left pane or use your mouse to change the position of the small images on the right pane to realize fish eye de-warp.

4.8.2 Fish eye de-warp during playback

On the main menu, click search button.

Select 1-window playback mode and corresponding fish eye channel, click  to play.

Right click the  , you can go to the de-warp playback interface. For detailed information, please refer to chapter 4.8.1.

4.9 PTZ

Note:

Before you control the PTZ, please make sure the PTZ decoder and the NVR network connection is OK and the corresponding settings are right.

4.9.1 PTZ Settings

Cable Connection

Please follow the procedures below to go on cable connection

- Connect the dome RS485 port to NVR RS485 port.
- Connect dome video output cable to NVR video input port.
- Connect power adapter to the dome.

In the main menu, from Setting->System->PTZ, you can see an interface is shown as in Figure 4-44. Here you can set the following items:

- Channel: Select the current camera channel.
- PTZ type: There are two types: local/remote. Please select local mode if you are connect RS485 cable to connect to the Speed dome (PTZ). Please select remote mode if you are connecting to the network PTZ camera.
- Protocol: Select corresponding PTZ protocol(such as PELCOD)
- Address: Default address is 1.
- Baud rate: Select corresponding baud rate. Default value is 9600.
- Data bit: Select corresponding data bits. Default value is 8.
- Stop bit: Select corresponding stop bits. Default value is 1.
- Parity: There are three options: odd/even/none. Default setup is none.

Figure 4-44

If you are connecting to network PTZ, the PTZ type shall be remote. See Figure 4-45.

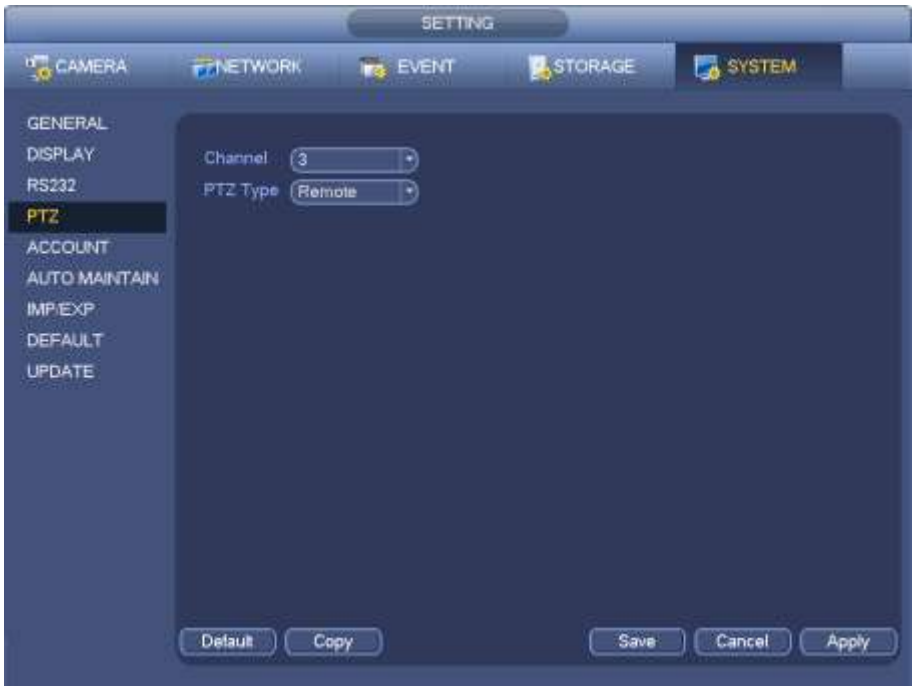


Figure 4-45

4.9.2 PTZ Control

After completing all the setting please click save button. Right click mouse (click “Fn” Button in the front panel or click “Fn” key in the remote control). The interface is shown as in Figure 4-46. Please note you can only go to the PTZ control interface when you are in 1-window display mode.

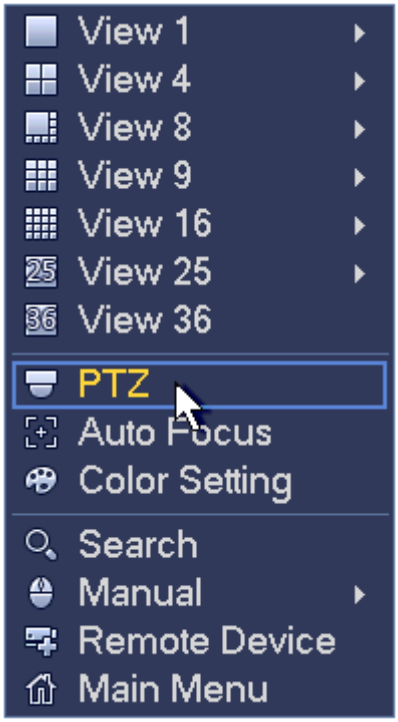


Figure 4-46

The PTZ setup is shown as in See Figure 4-47.
Please note the commend name is grey once device does not support this function.
The PTZ operation is only valid in one-window mode.

Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern aux function, light and wiper, rotation and etc.
Speed is to control PTZ movement speed. The value ranges from 1 to 8.The speed 8 is faster than speed 1. You can use the remote control to click the small keyboard to set.

You can click  and  of the zoom, focus and iris to zoom in/out, definition and brightness.

The PTZ rotation supports 8 directions. If you are using direction buttons on the front panel, there are only four directions: up/down/left/right.

Figure 4-47

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-48. Please make sure your protocol supports this function and you need to use mouse to control.
Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. The dragged zone supports 4X to 16X speeds. It can realize PTZ automatically. The smaller

zone you dragged, the higher the speed.

Figure 4-48

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom		Near			Far	
Focus		Near	| ◄		Far	► |
Iris		close	II ◄		Open	► II

In Figure 4-47, click  to open the menu, you can set preset, tour, pattern, scan and etc. See Figure 4-49.

Figure 4-49

Please refer to the following sheet for detailed information.

Please note the above interface may vary due to different protocols. The button is grey and can not be selected once the current function is null.

Right click mouse or click the ESC button at the front panel to go back to the Figure 4-47.

Icon	Function	Icon	Function
	Preset		Flip
	Tour		Reset
	Pattern		Aux
	Scan		Aux on-off button
	Rotate		Go to menu

4.9.2.1 PTZ Function Setup

Click , you can go to the following interface to set preset, tour, pattern, and scan. See Figure 4-50.

Figure 4-50

Preset Setup

In Figure 4-50, click preset button and use eight direction arrows to adjust camera to the proper position. The interface is shown as in Figure 4-51.

Click Set button and then input preset number.

Click Set button to save current preset.

Figure 4-51

Tour Setup

In Figure 4-50, click tour button.

Input tour value and preset No. Click Add preset button to add current preset to the tour. See Figure 4-52.

Tips

Repeat the above steps to add more presets to the tour. Click Del preset button to remove it from the tour. Please note some protocols do not support delete preset function.

Figure 4-52

Pattern Setup

In Figure 4-50, click Pattern button and input pattern number.

Click Begin button to start direction operation. Or you can go back to Figure 4-47 to operate zoom/focus/iris/direction operation.

In Figure 4-50, click End button.

Figure 4-53

Scan Setup

In Figure 4-50, click Scan button.

Use direction buttons to set camera left limit and then click Left button.

Use direction buttons to set camera right limit and then click Right button. Now the scan setup process is complete.

Figure 4-54

4.9.2.2 Call PTZ Function

Call Preset

In Figure 4-49, input preset value and then click to call a preset. Click again to stop call.

Call Pattern

In Figure 4-49, input pattern value and then click to call a pattern. Click again to stop call.

Call Tour

In Figure 4-49, input tour value and then click to call a tour. Click again to stop call.

Call Scan

In Figure 4-49, input Scan value and then click to call a tour. Click again to stop call.

Rotate

In Figure 4-49, click to enable the camera to rotate.

System supports preset, tour, pattern, scan, rotate, light and etc function.

Note:

- Preset, tour and pattern all need the value to be the control parameters. You can define it as you require.
- You need to refer to your camera user's manual for Aux definition. In some cases, it can be used for special process.

Aux

Click, system goes to the following interface. The options here are defined by the protocol. The aux number is corresponding to the aux on-off button of the decoder. See Figure 4-55.

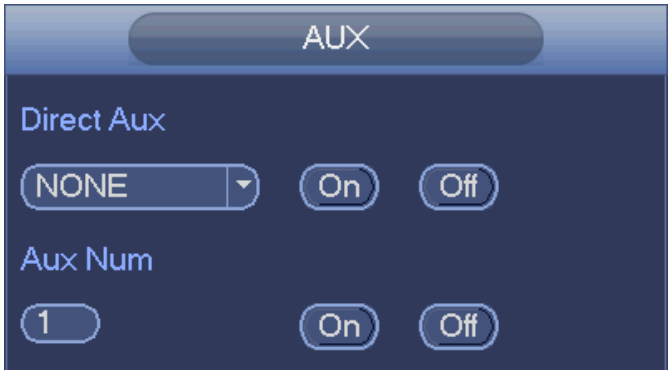


Figure 4-55

4.10 Record and Snapshot

The record/snapshot priority is: Alarm->Motion detect->Schedule.

4.10.1 Encode

4.10.1.1 Encode

Encode setting is to set IPC encode mode, resolution, bit stream type and etc

From Main menu->Setting->System->Encode, you can see the following interface. See Figure 4-56.

- Channel: Select the channel you want.
- Type: Please select from the dropdown list. There are three options: regular/motion detect/alarm. You can set the various encode parameters for different record types.
- Compression: System supports H.264, MPEG4, MJPEG and etc.
- Resolution: The mainstream resolution type is IPC's encoding config. Generally there is D1/720P/1080P. For NVR42-4K, NVR42-8P-4K series product, the main stream supports 2048×1536（3M）,1920×1080（1080P）, 1280×1024（S×GA）, 1280×960（1.3M）,1280×720（720P）,704×576（D1）and the sub stream supports 704×576（D1）,352×288（CIF）.
- Frame rate: It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- Bit rate type: System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Video/audio: You can enable or disable the video/audio. Please note, once you enable audio function for one channel, system may enable audio function of the rest channels by default.
- Copy：After you complete the setup, you can click Copy button to copy current setup to other channel(s). You can see an interface is shown as in Figure 4-59. You can see current channel number is grey. Please check the number to select the channel or you can check the box ALL. Please click the OK button in Figure 4-59 and Figure 4-57 respectively to complete the setup. Please note, once you check the All box, you set same encode setup for all channels. Audio/video enable box, overlay button and the copy button is shield.

Please highlight icon  to select the corresponding function.

Figure 4-56

4.10.1.2 Overlay

Click overlay button, you can see an interface is shown in Figure 4-57.

- Cover area: Here is for you to cover area section. You can drag you mouse to set proper section size. In one channel video, system max supports 4 zones in one channel. You can set with Fn button or direction buttons.
- Preview/monitor: The cover area has two types. Preview and Monitor. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be view by the user when system is in monitor status.
- Time display: You can select system displays time or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
- Channel display: You can select system displays channel number or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.

Figure 4-57

4.10.1.3 Snapshot

Here you can set snapshot mode, picture size, quality and frequency. See Figure 4-58.

- Snapshot mode: There are two modes: regular and trigger. If you set regular mode, you need to set snapshot frequency. If you set trigger snapshot, you need to set snapshot activation operation.
- Image size: Here you can set snapshot picture size.
- Image quality: Here you can set snapshot quality. The value ranges from 1 to 6.
- Interval: It is for you to set timing (schedule) snapshot interval.

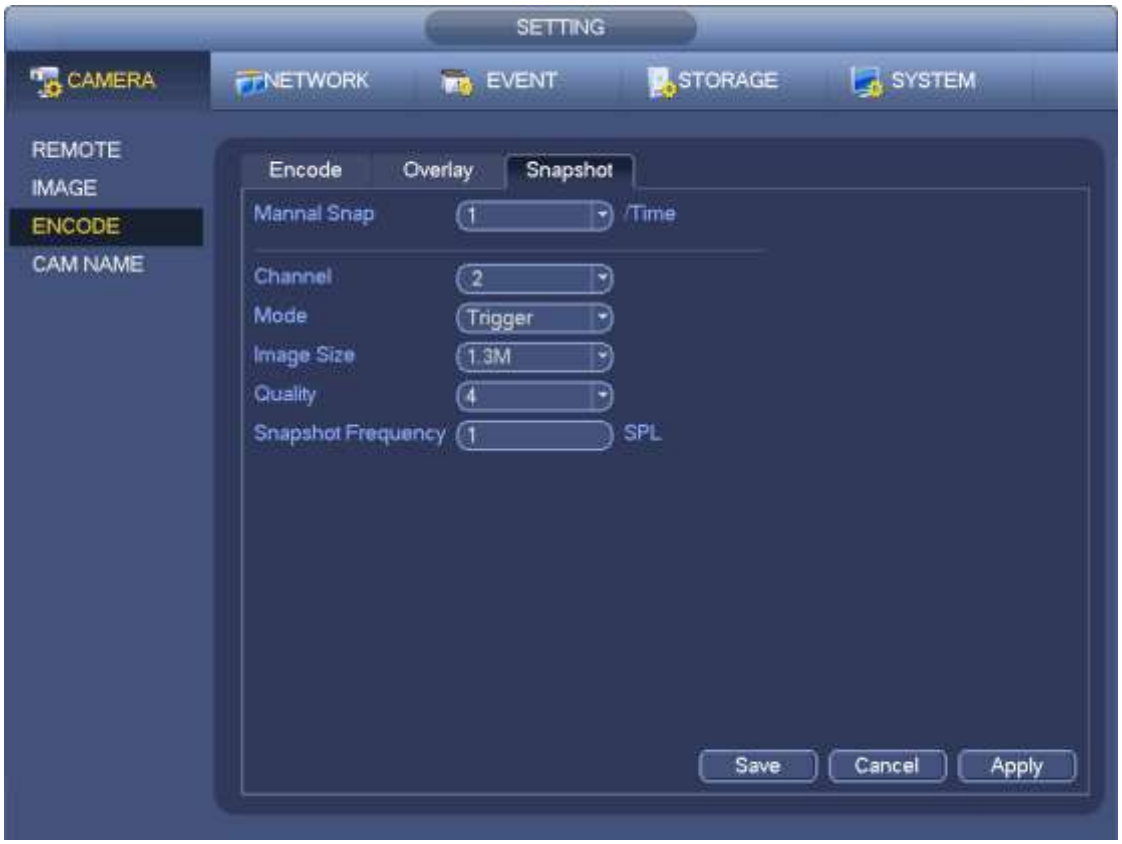


Figure 4-58

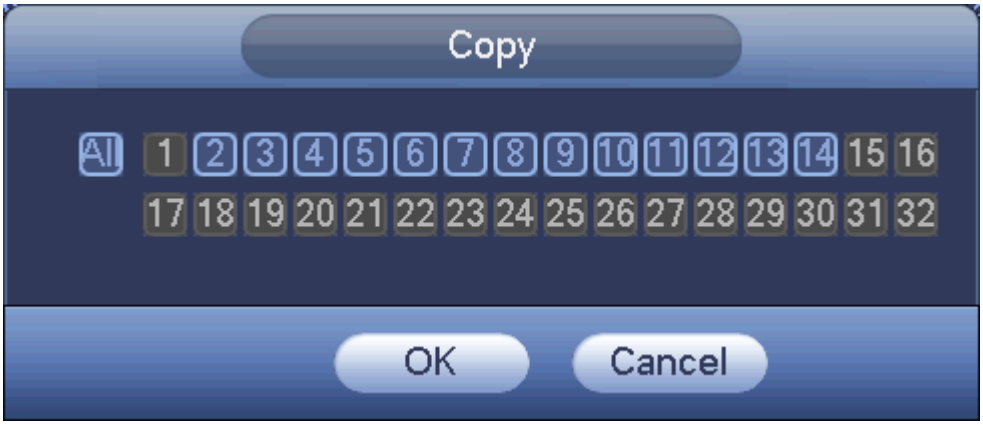


Figure 4-59

4.10.2 Schedule

The record type priority is: Alarm>Motion detect>Regular.

4.10.2.1 Schedule Record

Set record time, record plan and etc. Please note system is in 24-hour record by default after its first boot up.

In the main menu, from Main menu->Setting->Storage->Schedule, you can go to schedule menu. See Figure 4-63. There are total six periods.

- Channel: Please select the channel number first. You can select “all” if you want to set for the whole channels.

✧  : Sync connection icon. Select icon  of several dates, all checked items can be edited or together. Now the icon is shown as  .

✧  : Click it to delete a record type from one period.

- Record Type: Please check the box to select corresponding record type. There are four types: Regular/MD (motion detect)/Alarm/MD&Alarm.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Holiday: It is to set holiday setup. Please note you need to go to the General interface (Main Menu->Setting->System->General) to add holiday first. Otherwise you can not see this item.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- Redundancy: System supports redundancy backup function. It allows you backup recorded file in two disks. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (Main menu->Setting->Storage->HDD Manager). **Please note this function is null if there is only one HDD.**
- ANR: It is to save video to the SD card of the network camera in case the network connection fails. The value ranges from 0s～43200s. After the network connection resumed, the system can get the video from the SD card and there is no risk of record loss.
- Period setup: Click button  after one date or a holiday, you can see an interface shown as in Figure 4-64.There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

Please following the steps listed below to draw the period manually.

a) Select a channel you want to set. See Figure 4-60.

Figure 4-60

b) Set record type. See Figure 4-61.

Figure 4-61

c) Please draw manually to set record period. There are six periods in one day. See Figure 4-62.

Figure 4-62

Please check the box to select the corresponding function. After completing all the setups please click save button, system goes back to the previous menu.

There are color bars for your reference. Green color stands for regular recording, yellow color stands for motion detection and red color stands for alarm recording. The white means the MD and alarm record is valid. Once you have set to record when the MD and alarm occurs, system will not record neither motion detect occurs nor the alarm occurs.

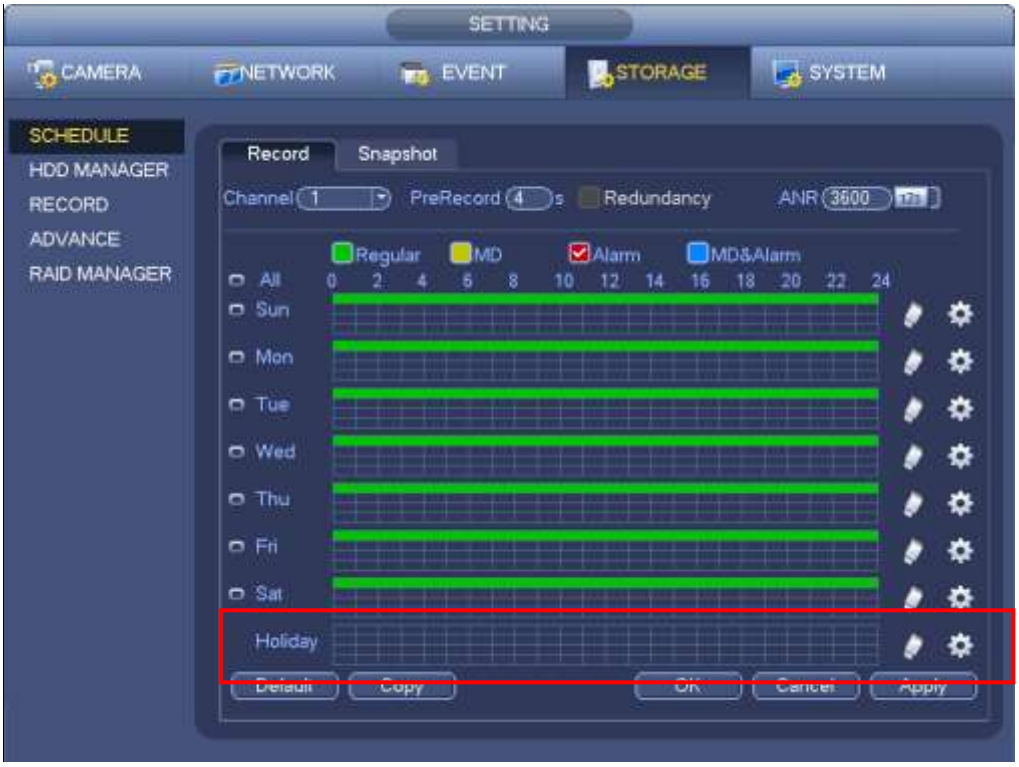


Figure 4-63

Figure 4-64

Quick Setup

Copy function allows you to copy one channel setup to another. After setting in channel 1, click Copy button, you can go to interface Figure 4-65. You can see current channel name is grey such as channel 1. Now you can select the channel you want to paste such as channel 5/6/7. If you want to save current setup of channel 1 to all channels, you can click the first box “ALL”. Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded.

Please note, if you select ALL in Figure 4-65, the record setup of all channels are the same and the Copy button becomes hidden.

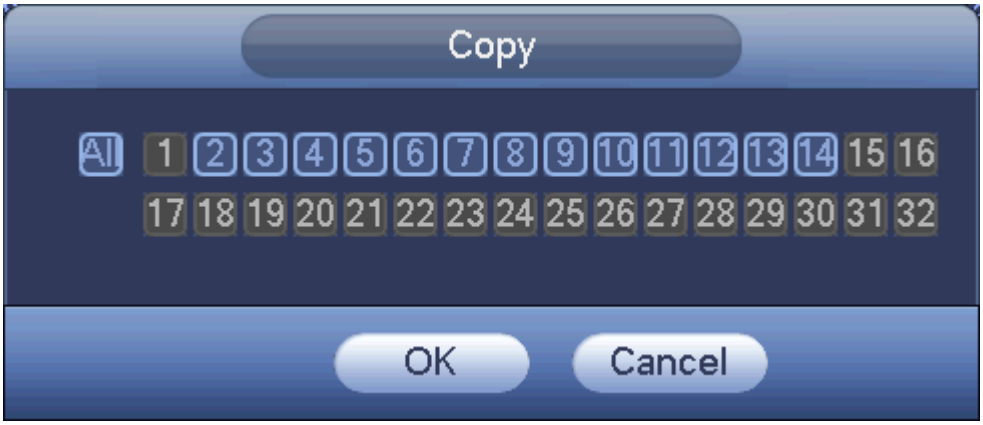


Figure 4-65

Click OK button to save current setup.

4.10.2.2 Schedule Snapshot

From Main menu->Setting->Storage->Record or on the preview interface, right click mouse and then select record item, you can see Figure 4-66.

Select snapshot channel and enable snapshot function. Click Save button.

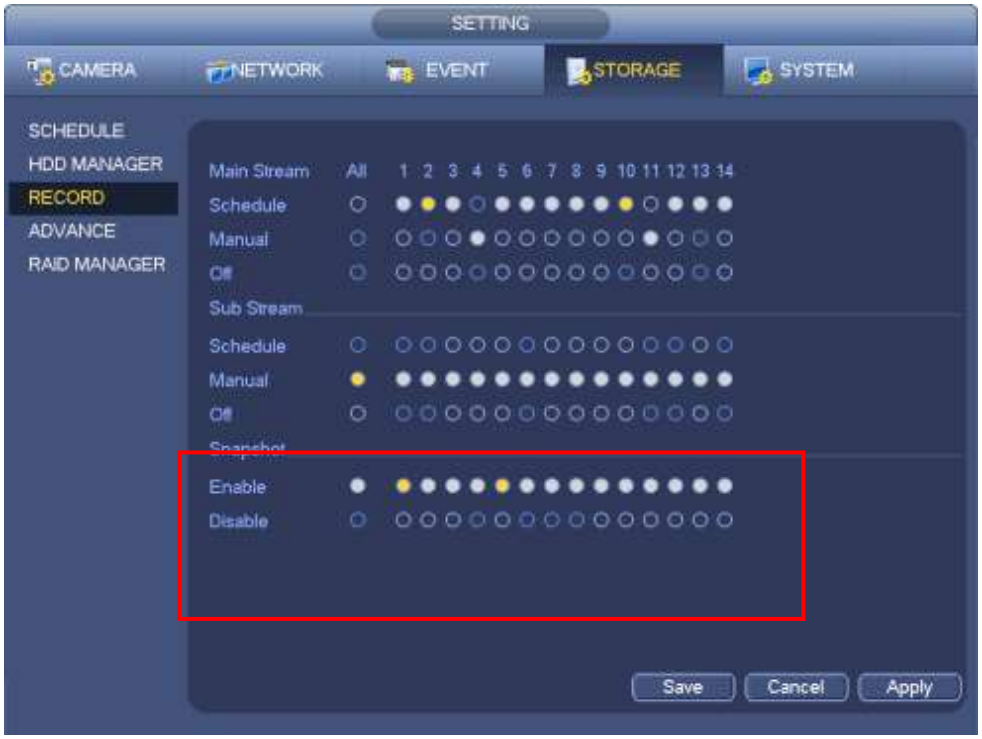


Figure 4-66

From Main menu->Setting->Camera->Encode->Snapshot, you can go to snapshot interface. See Figure 4-67.

Select the snapshot channel from the dropdown list and then select snapshot mode as Timing (Schedule) from the dropdown list and then set picture size, quality and snapshot frequency.

Figure 4-67

In the main menu, from Main menu->Setting->Storage->Schedule, you can go to schedule menu. See Figure 4-63. Here you can set snapshot period. There are total six periods in one day. Please refer to chapter 4.10.2.1 for detailed setup information. The setup steps are general the same.

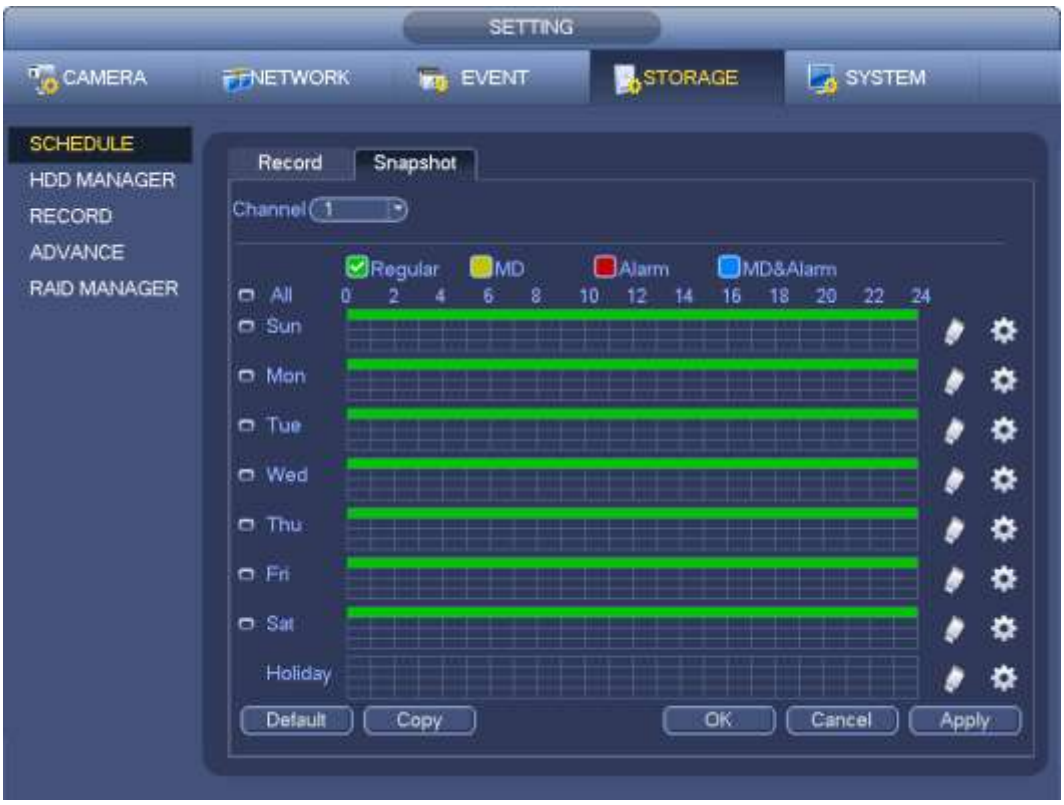


Figure 4-68

Note

- Please note the trigger snapshot has the higher priority than regular snapshot. If you have enabled these two types at the same time, system can activate the trigger snapshot when an alarm occurs, and otherwise system just operates the regular snapshot.
- Only the trigger snapshot supports this function. The regular snapshot function can not send out picture via the email. But you can upload the picture to a FTP.

4.10.3 Motion detect record/snapshot

4.10.3.1 Motion detect record

a) From Main menu->Setting->Event->Detect, you can go to the following interface. See Figure 4-69.