

Quick Operation Guide of DS-9600/8600/7700/7600NI-ST and DS-7700/7600NI-SP Series NVR

UD.6L0202B0007A01

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer. This manual is applicable to DS-7608NI-ST, DS-7616NI-ST, DS-7608NI-SP, DS-7616NI-SP, DS-7716NI-SP, DS-7716NI-SP, DS-7716NI-SP, DS-7716NI-SP, DS-7732NI-ST, DS-8608NI-ST, DS-8608NI-ST, DS-8608NI-ST, DS-9616NI-ST, DS-9616NI-ST, DS-9632NI-ST series NVR.

Verify Contents

Verify that the package contents are correct by checking the items against the packing list.

Note: Please contact your dealer for damaged or missing items.

NVR Pre-Installation

The DS-9600/8600/7700/7600NI-ST and DS-7700/7600NI-SP series NVR are highly advanced surveillance equipment that should be installed with care. Please take into consideration the following precautionary steps before installation of the NVR.

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

NVR Installation

During the installation of the NVR:

- 1. Use brackets for rack mounting.
- 2. Ensure there is ample room for audio and video cables.
- 3. When installing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
- 4. Connect both the alarm and RS-485 cable.
- 5. Allow at least 2cm (~0.75-inch) of space between racks mounted devices.
- 6. Ensure the NVR is grounded.
- 7. Environmental temperature should be within the range of -10 \degree ~ 55 \degree , 14 \degree ~ 131 \degree .
- 8. Environmental humidity should be within the range of $10\% \sim 90\%$.

Hard Disk Installation

Before you start:

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

Up to 8 SATA hard disks can be installed on your NVR.

Tools Required: Screwdriver.

Steps (for DS-9600NI-ST):

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



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



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



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



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



Steps (for DS-8600NI-ST):

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



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



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



4. Connect the power cable to the HDD.



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

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

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



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



3. Connect the power cable to the HDD.



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



Front Panel

DS-9600NI-ST



DS-8600NI-ST



- ① Status Indicator(Alarm, Ready, Status, HDD, MODEM, Tx/Rx, Guard)
- ② IR Receiver
- ③ Front Panel Lock
- ④ DVD-R/W
- 5 Alphanumeric Buttons
- 6 USB Interface
- ⑦ Compound Buttons
- 8 DIRECTION/ENTER Buttons
- 9 JOG SHUTTLE Control
- 10 Power Button

DS-7700NI-ST/SP



- ① Status Indicators (Alarm, Ready, Status, HDD, Power, Tx/Rx)
- 2 DVD-R/W
- ③ Control Buttons
- ④ Compound Buttons
- ⑤ Shuttle Button
- ⑥ Power Button
- ⑦ USB interface

DS-7600NI-ST/SP:

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тоны най тохи алан на так 	BHIFT MCKNU P1 F2 ESC Exit 1 2 ABC 3 67 4 69 5 AB 6 MMO 7 POSS 8 TUV 9 NEVZ 0 PLAY MEC PTZ PREV A	
1	4	

- ① USB Interface
- 2 Status Indicators (Alarm, Ready, Status, HDD, power, Tx/Rx)
- ③ SHIFT
- ④ Compound Buttons
- ⑤ Control Buttons

Rear Panel



DS-9600NI-ST



DS-8600NI-ST



DS-7700NI-ST

No.	Item	Description		
1	VIDEO OUT	BNC connector for video output.		
	CVBS AUDIO OUT	BNC connector for audio output. This connector is synchronized with		
2		CVBS video output.		
	VGA AUDIO OUT	BNC connector for audio output. This connector is synchronized with		
		VGA video output.		
3	LINE IN	BNC connector for audio input.		
4	RS-232 Interface	Connector for RS-232 devices.		
5	VGA	DB9 connector for VGA output. Display local video output and menu.		
6	HDMI	HDMI video output connector.		
7	eSATA (Optional)	Connects external SATA HDD, CD/DVD-RM.		
8	LAN Interface	Connector for LAN (Local Area Network).		
		1 LAN interface provided for DS-8600/7700NI-ST and 2 LAN		
		interfaces for DS-9600NI-ST.		
9	Termination Switch	RS-485 termination switch.		

No.	Item	Description			
		Up position is not terminated.			
		Down position is terminated with 120Ω resistance.			
	RS-485 Interface	Connector for RS-485 devices. T+ and T- pins connects to R+ and R-			
		pins of PTZ receiver respectively.			
		D+, D- pin connects to Ta, Tb pin of controller. For cascading devices,			
10	Controller Port	the first NVR's D+, D- pin should be connected with the D+, D- pin of			
		the next NVR.			
	ALARM IN	Connector for alarm input.			
	ALARM OUT	Connector for alarm output.			
11	GROUND	Ground(needs to be connected when NVR starts up).			
12	AC 100V ~ 240V	AC 100V ~ 240V power supply.			
13	POWER	Switch for turning on/off the device.			
14	USB interface	Universal Serial Bus (USB) ports for additional devices such as USB			
		mouse and USB Hard Disk Drive (HDD).			



DS-7700NI-SP

No.	Item	Description		
1	VIDEO OUT	BNC connector for video output.		
	CVBS AUDIO OUT	BNC connector for audio output. This connector is synchronized with		
2		CVBS video output.		
	VGA AUDIO OUT	BNC connector for audio output. This connector is synchronized with		
		VGA video output.		
3	LINE IN	BNC connector for audio input.		
4	RS-232 Interface	Connector for RS-232 devices.		
5	VGA	DB9 connector for VGA output. Display local video output and menu.		
6	HDMI	HDMI video output connector.		
7	eSATA (Optional)	Connects external SATA HDD, CD/DVD-RM.		
8	LAN Interface	Connector for LAN (Local Area Network).		
		1 LAN interface provided for DS-8600NI-ST and 2 LAN interfaces for		
		DS-9600NI-ST.		
9	Termination Switch	RS-485 termination switch.		
		Up position shows the RS-485 is not terminated.		
		Down position shows the RS-485 is terminated with 120Ω resistance.		
	RS-485 Interface	Connector for RS-485 devices. T+ and T- pins connects to R+ and R-		
		pins of PTZ receiver respectively.		
		D+, D- pin connects to Ta, Tb pin of controller. For cascading devices,		
10	Controller Port	the first NVR's D+, D- pin should be connected with the D+, D- pin of		
		the next NVR.		
	ALARM IN	Connector for alarm input.		

	ALARM OUT	Connector for alarm output.
11	GROUND	Ground (needs to be connected when NVR starts up).
12	AC 100V ~ 240V	AC 100V ~ 240V power supply.
13	POWER	Switch for turning on/off the device.
14	14 USB interface Universal Serial Bus (USB) ports for additional devices su	
		mouse and USB Hard Disk Drive (HDD).
15	Network Interfaces with	Network interface for the cameras and to provide power over Ethernet.
	PoE function	



DS-7600NI-ST

No.	Item	Description
1	VIDEO OUT	BNC connector for video output.
2	AUDIO OUT	BNC connector for audio output.
3	AUDIO IN	BNC connector for audio input. (Also for voice talk)
4	RS-232 Interface	Connector for RS-232 devices.
5	VGA	DB9 connector for VGA output. Display local video output and menu.
6	HDMI	HDMI video output connector.
7	USB	Connects USB disks and devices.
8	LAN Interface	Connector for LAN (Local Area Network).
0	RS-485 Interface	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of
9		PTZ receiver respectively.
	ALARM IN	Connector for alarm input.
	ALARM OUT	Connector for alarm output.
10	Power Supply	12VDC power supply.
11	Power Switch	Switch for turning on/off the device.



DS-7600NI-SP

No.	Item	Description
1	Network Interfaces	Network interface for the cameras and to provide power over Ethernet.
	with PoE function	
2	VIDEO OUT	BNC connector for video output.
3	AUDIO OUT	BNC connector for audio output.
4	AUDIO IN	BNC connector for audio input. (Also for voice talk)

5	RS-232 Interface	Connector for RS-232 devices.	
6	VGA	DB9 connector for VGA output. Display local video output and menu.	
7	HDMI	HDMI video output connector.	
8	LAN Interface	Connector for LAN (Local Area Network).	
	RS-485 Interface	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of	
0		PTZ receiver respectively.	
9	ALARM IN	Connector for alarm input.	
	ALARM OUT	Connector for alarm output.	
10	Power Supply	12VDC power supply.	
11	Power Switch Switch for turning on/off the device.		
12	USB	Connects USB disks and devices.	

Peripheral Connections

Connecting to Alarm Input / Output Device

The alarm input/output interface of the NVR is shown as below:



The alarm input is an open/closed relay. If the input is not an open/closed relay, follow the connection diagram below:



To connect to an AC/DC load, use the following diagram:



For DC load, JP4 can be used within the limit of 12V/1A safely. If the interface is connected to an AC load, JP4 should be left open. Use an external relay for safety (as shown in the figure above).

There are 4 jumpers (JP4, JP5, JP6, and JP7) on the motherboard, each corresponding with one alarm output. By default, jumpers are connected. To connect an AC load, jumpers should be removed.

Note: An external relay is needed to prevent electric shock when connecting to an AC load.

Alarm Connection

To connect alarm devices to the NVR:

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

RS-485 Connection

In this manual we take the RS-485 connection of the DS-8600NI-ST as an example.



To connect RS-485 devices to the NVR:

- 1. Disconnect pluggable block from the RS-485 terminal block.
- 2. Unfasten stop screws from the *pluggable block*, insert signal cables into slots and fasten stop screws. Ensure signal cables are in tight.
- 3. Connect *pluggable block* back into terminal block.

Note: Make sure the pan/tilt receiver unit is connected to the T+ and T- of the NVR.

Controller Connection



To connect a controller to the NVR:

- 1. Disconnect pluggable block from the KB terminal block.
- 2. Unfasten stop screws from the KB D+, D- *pluggable block*, insert signal cables into slots and fasten stop screws. Ensure signal cables are in tight.
- 3. Connect Ta on controller to D+ on terminal block and Tb on controller to D- on terminal block. Fasten stop screws.
- 4. Connect *pluggable block* back into terminal block.

Note: Make sure both the controller and NVR are grounded.

Specifications

Specifications of DS-9600NI-ST

Model		DS-9608NI-ST	DS-9616NI-ST	DS-9632NI-ST	
Video/Audio	IP video input	8-ch	16-ch	32-ch	
input	Two-way audio	1-ch, BNC (2.0 Vp-p,	1kΩ)	·	
	Recording resolution	5MP /3MP /1080P /U /QCIF	UXGA /720P /VGA /	4CIF /DCIF /2CIF /CIF	
	CVBS output	1-ch, BNC (1.0 Vp-p, 7 Resolution: 704 × 576	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)		
	HDMI output	1-ch, resolution: 1920 × 1080P /60Hz, 1920×1080P /50Hz, 1600 × 1200/60Hz, 1280 × 1024 /60Hz, 1280 × 720 /60Hz, 1024 × 768 /60Hz			
Video/Audio output	VGA output	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	Audio output	2-ch, BNC (Linear, 60	0Ω)		
	Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF			
	Synchronous playback	8-ch	16-ch	16-ch	
	SATA	8 SATA interfaces for 4 HDDs + 1 DVD-R/W (default), or 8HDDs			
Hard disk	eSATA	1 eSATA interface			
	Capacity	Up to 4TB capacity for each HDD			
	Network interface	2 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interfaces			
External interface	Serial interface	1 RS-232 interface (for parameters configuration, maintenance, transparent channel); 1 RS-485 interface (reserved); 1 RS-485 keyboard interface (for special keyboard control)			
	USB interface	3 × USB 2.0			
	Alarm in	16			
	Alarm out	4			
	Power supply	100 ~ 240 VAC, 6.3 A,	50 ~ 60 Hz		
	Consumption (without hard disk or DVD-R/W)	\leq 35 W	\leq 40 W	\leq 45 W	
	Working temperature	-10 °C ~ +55 °C			
Others	Working humidity	10 % ~ 90 %			
	Chassis	19-inch rack-mounted	2U chassis		
	Dimensions (W ×D ×H)	445 × 470 ×90 mm (17.52" ×18.5"×3.54")			
	Weight	\leq 8 Kg (17.64 lb) (without hard disk or DVD-R/W)			

Specifications of DS-8600NI-ST

Model		DS-8608NI-ST	DS-8616NI-ST		DS-8632NI-ST	
Video/Audio	IP video input	8-ch	16-ch		32-ch	
input	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)				
	Recording resolution	5MP /3MP /1080P / /QCIF	UXGA /720P /VGA	A /4C	IF /DCIF /2CIF /CIF	
	CVBS output	1-ch, BNC (1.0 Vp-p, Resolution: 704×576	75 Ω) (PAL); 704 ×480 (N	NTSC)	
	HDMI output	1-ch, resolution: 1920 ×1080P /60Hz, 1920 ×1080P /50Hz, 1600 ×1200 /60Hz, 1280 × 1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz				
Video/Audio output	VGA output	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz				
	Audio output	2-ch, BNC (Linear, 60	0Ω)			
	Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF				
	Synchronous playback	8-ch	16-ch		16-ch	
	SATA	8 SATA interfaces for 4 HDDs + 1 DVD-R/W (default), or 8HDDs				
Hard disk	eSATA	1 eSATA interface				
	Capacity	Up to 4TB capacity for each HDD				
	Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface				
External interface	Serial interface	 1 RS-232 interface (for parameters configuration, maintenance, transparent channel); 1 RS-485 interface (reserved); 1 RS-485 keyboard interface (for special keyboard control) 				
	USB interface	3 × USB 2.0	· •			
	Alarm in	16				
	Alarm out	4				
	Power supply	100 ~ 240 VAC, 6.3 A	50 ~ 60 Hz			
	Consumption (without hard disk or DVD-R/W)	≤35 W	\leq 40 W	≤45 [°]	W	
Others	Working temperature	-10 °C ~ +55 °C				
Others	Working humidity	10 % ~ 90 %				
	Chassis	19-inch rack-mounted	2U chassis			
	Dimensions (W × D × H)	445 × 470 ×90 mm (17.52" ×18.5"×3.54")				
	Weight	\leq 8 Kg (17.64 lb) (without hard disk or DVD-R/W)				

Specification of DS-7700NI-ST

Model		DS-7708NI-ST	DS-7716NI-ST	DS-7732NI-ST	
Video/Audio	IP video input	8-ch	16-ch	32-ch	
input	Two-way audio	1-ch, BNC (2.0 Vp-p, 1	kΩ)		
	Recording resolution	5MP /3MP /1080P /U /QCIF	XGA /720P /VGA /4	CIF /DCIF /2CIF /CIF	
	CVBS output	1-ch, BNC (1.0 Vp-p, 7 Resolution: 704 × 576 (75 Ω) (PAL); 704 ×480 (NTS	C)	
	HDMI output	1-ch, resolution: 1920 × 1080P /60Hz, 1920 × 1080P /50Hz, 1600 × 1200 /60Hz, 1280 ×1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
Video/Audio output	VGA output	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 ×720 /60Hz, 1024 ×768 /60Hz			
	Audio output	2-ch, BNC (Linear, 600	0Ω)		
	Playback resolution	5MP /3MP /1080P /U /QCIF	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /CIF /QCIF		
	Synchronous playback	8-ch	16-ch	16-ch	
	SATA	4 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs			
Hard disk	eSATA	1 eSATA interface			
	Capacity	Up to 4TB capacity for each HDD			
	Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface			
External interface	Serial interface	 1 RS-232 interface (for parameters configuration, maintenance, transparent channel); 1 RS-485 interface (reserved); 1 RS-485 keyboard interface (for special keyboard control) 			
	USB interface	3 × USB 2.0			
	Alarm in	16			
	Alarm out	4			
	Power supply	100 ~ 240 VAC, 6.3 A,	50 ~ 60 Hz	1	
	Consumption (without hard disk or DVD-R/W)	≤ 35 W	≤ 40W	≤ 45 W	
Others	Working temperature	-10 °C ~ +55 °C			
	Working humidity	10 % ~ 90 %			
	Chassis	19-inch rack-mounted 2	2U chassis		
	Dimensions (W × D × H)	445 × 390 ×90 mm			
	Weight	\leq 4 Kg (8.82 lb) (without hard disk or DVD-R/W)			

Specification of DS-7700NI-SP

Model		DS-7708NI-SP	DS-7716NI-SP	DS-7732NI-SP		
Video/Audio IP video input		8-ch	16-ch	32-ch		
input	Two-way audio	1-ch, BNC (2.0 Vp-p, 1kΩ)				
	Recording resolution	5MP /3MP /1080P /U /QCIF	XGA /720P /VGA /4	CIF /DCIF /2CIF /CIF		
	CVBS output	1-ch, BNC (1.0 Vp-p, 7 Resolution: 704 ×576 (5 Ω) PAL); 704 ×480 (NTS	C)		
	HDMI output	1-ch, resolution: 1920 \times 1080P /60Hz, 1920 \times 1080P /50Hz, 1600 \times 1200 /60Hz, 1280 \times 1024 /60Hz, 1280 \times 720 /60Hz, 1024 \times 768 /60Hz				
Video/Audio output	VGA output	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 × 720 /60Hz, 1024 × 768 /60Hz				
	Audio output	2-ch, BNC (Linear, 600	Ω)			
	Playback resolution	5MP /3MP /1080P /U /QCIF	XGA /720P /VGA /4	CIF /DCIF /2CIF /CIF		
	Synchronous playback	8-ch	16-ch	16-ch		
	SATA	4 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs				
Hard disk	eSATA	1 eSATA interface				
	Capacity	Up to 4TB capacity for each HDD				
		1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface				
	Network interface	8 independent 100 Mbps PoE network interfaces				
External interface	Serial interface	 1 RS-232 interface (for parameters configuration, maintenance, transparent channel); 1 RS-485 interface (reserved); 1 RS-485 keyboard interface (for special keyboard control) 				
	USB interface	3 × USB 2.0				
	Alarm in	16				
	Alarm out	4				
	Power supply	100 ~ 240 VAC, 6.3 A,	50 ~ 60 Hz	-		
	Consumption (without hard disk or DVD-R/W)	≤ 35 W	≤ 40W	≤ 45 W		
Others	Working temperature	-10 °C ~ +55 °C		•		
	Working humidity	10 % ~ 90 %				
	Chassis	19-inch rack-mounted 2	2U chassis			
	Dimensions (W × D × H)	445 × 390 × 90 mm				
	Weight	\leq 8 Kg (17.64 lb) (without hard disk or DVD-R/W)				

Specifications of DS-7600NI-ST

Model		DS-7608NI-ST	DS-7616NI-ST				
Video/Audio	IP video input	8-ch	16-ch				
input	Audio in	1-ch, BNC (2.0 Vp-p, 1kΩ) (Tr	vo-way audio)				
	Recording resolution	5MP /3MP /1080P /UXGA / /QCIF	720P /VGA /4CIF /DCIF /2CIF /CIF				
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704 ×480 (NTSC)					
	HDMI output	1-ch, resolution: 1920 × 1080P /60Hz, 1920 × 1080P /50Hz, 1600 × 1200 /60Hz, × 1024 /60Hz, 1280 × 720 /60Hz, 1024 × 768 /60Hz					
Video/Audio output	VGA output	1-ch, resolution: 1920 ×1080P /60Hz, 1600 × 1 ×720 /60Hz, 1024 ×768 /60H	200 /60Hz, 1280 × 1024 /60Hz, 1280 z				
	Audio output	1-ch, BNC (Linear, 600Ω)					
	Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CII /QCIF					
	Synchronous playback	8-ch	6-ch				
Hord dick	SATA	2 SATA interfaces					
Haru ulsk	Capacity	Each interface supports up to 4	TB capacity for recording				
	Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface					
External	Serial interface	1 RS-232 interface (for parameters configuration, maintena transparent channel); 1 RS-485 interface (reserved);					
interface	USB interface	2 × USB 2.0					
	Alarm in	4					
	Alarm out	2					
	Power supply	12 VDC					
	Consumption	\leq 13 W (without hard disk or E	VD-R/W)				
	Working temperature	-10 °C ~ +55 °C					
Others	Working humidity	10 % ~ 90 %					
	Chassis	19-inch rack-mounted 1U chas	sis				
	Dimensions (W × D × H)	445 × 261 ×44.5 mm					
	Weight	\leq 4 Kg (8.82 lb) (without hard	disk or DVD-R/W)				

Specifications of DS-7600NI-SP

Model		DS-7608NI-SP	DS-7616NI-SP				
Video/Audio	IP video input	8-ch 16-ch					
input	IP video inputDS-7608NI-SPIP video input8-chAudio in1-ch, BNC (2.0 Vp-p, 1kΩ) (Recording resolution5MP /3MP /1080P /UXGA /QCIFCVBS output1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 × 576 (PAL)HDMI output1-ch, resolution: 1920 × 1080P /60Hz, 1920 × × 1024 /60Hz, 1280 × 720 /60VGA output1-ch, resolution: 1920 × 1080P /60Hz, 1600 × × 720 /60Hz, 1024 × 768 /60Audio output1-ch, BNC (Linear, 600Ω)Playback resolution5MP /3MP /1080P /UXGA /QCIFSynchronous playback8-chSATA2 SATA interfacesCapacityEach interface supports up to 8 independent 100 Mbps PoESerial interface1 RS-232 interface (for par transparent channel); 1 RS-485 interface (reserved)USB interface2 × USB 2.0Alarm out2Power supply12 VDCConsumption≤ 13 W (without hard disk or -10 °C ~ +55 °CWorking temperature-10 °C ~ +55 °C	1-ch, BNC (2.0 Vp-p, 1kΩ) (Two-v	vay audio)				
	Recording resolution	5MP /3MP /1080P /UXGA /720 /QCIF	P /VGA /4CIF /DCIF /2CIF /CIF				
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω) Resolution: 704 ×576 (PAL); 704	×480 (NTSC)				
	HDMI output	1-ch, resolution: 1920 × 1080P /60Hz, 1920 × 1080P /50Hz, 1600 × 1200 /60Hz, ×1024 /60Hz, 1280 × 720 /60Hz, 1024 × 768 /60Hz					
Video/Audio output	VGA output	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 128 ×720 /60Hz, 1024 × 768 /60Hz					
	Audio output	1-ch, BNC (Linear, 600Ω)					
	Playback resolution	5MP /3MP /1080P /UXGA /720P /VGA /4CIF /DCIF /2CIF /QCIF					
	Synchronous playback	8-ch	16-ch				
Hond disk	SATA	2 SATA interfaces					
Haru ulsk	Capacity	Each interface supports up to 4TB of	capacity for recording				
		1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface					
	Network interface	8 independent 100 Mbps PoE network interfaces					
External interface	Serial interface	1 RS-232 interface (for parameters configuration, maintenance, a transparent channel); 1 RS-485 interface (reserved);					
	USB interface	2 × USB 2.0					
	Alarm in	4					
	Alarm out	2					
	Power supply	12 VDC					
	Consumption	\leq 13 W (without hard disk or DVD)	-R/W)				
	Working temperature	-10 °C ~ +55 °C					
Others	Working humidity	10 % ~ 90 %					
	Chassis	19-inch rack-mounted 1U chassis					
	Dimensions (W × D × H)	445 × 261 ×44.5 mm					
	Weight	\leq 4 Kg (8.82 lb) (without hard disk or DVD-R/W)					

HDD Storage Calculation Chart

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

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

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

Menu Operation

Menu Structure

The menu structure of the DS-9600/8600/7700/7600 NI-ST and DS-7700/7600NI-SP Series NVR is shown as below:



Startup and Shutdown

Proper startup and shutdown procedures are crucial to expanding the life of the NVR. To start your NVR:

- Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power indicator LED on the front panel should be red, indicating the device gets the power supply.
- **2.** Press the POWER button on the front panel. The Power indicator LED should turn green. The unit will begin to start.

To shut down the NVR:

1. Enter the Shutdown menu.

Menu > Shutdown



Shutdown Menu

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

Using the Start Wizard

By default, the Setup Wizard starts once the NVR has loaded, as shown in Figure below.

	Wi	zard		
Start wizard when d	evice starts?			
			Next	Cancel

Start Wizard Interface

Operating the Setup Wizard:

- The Setup Wizard can walk you through some important settings of the NVR. If you don't want to use the Setup Wizard at that moment, click the Cancel button. You can also choose to use the Setup Wizard next time by leaving the "Start wizard when NVR starts?" checkbox checked.
- 2. Click Next button on the Wizard window to enter the Login window.

Wizard								
Admin Password								
New Admin Password	Z							
New Password								
Confirm	•••••							
		Previous	Next	Cancel				

Login Window

- 3. Enter the admin password. By default, the password is 12345.
- **4.** To change the admin password, check the **New Admin Password** checkbox. Enter the new password and confirm the password in the given fields.
- 5. Click the **Next** button to enter the date and time settings window.

	Wizard	
Time Zone	(GMT+08:00) Beijing, Urumqi, Singapore	
Date Format	MM-DD-YYYY	
System Date	06-24-2011	**
System Time	16:18:12	٩
	Previous Next Ca	incel

Date and Time Settings

6. After the time settings, click Next button which takes you back to the Network Setup Wizard window.

Wizard								
Working Mode	Multi-ac	Idress						
Select NIC	LAN1	LAN1						
NIC Type	10M/10	0 M/ 100	0M Self	-adaptive				
Enable DHCP								
IPv4 Address	172.6	.21	. 110					
IPv4 Subnet Mask	255 .25	5.255	.0					
IPv4 Default Gateway	172 .6	.21	.1					
Preferred DNS Server								
Alternate DNS Server								
Default Route	LAN1							
		Prev	ious	Next		Cancel		

DS-9600NI-ST

Wizard									
NIC Type	10M	/100N	//1 000)M Self	-adaptive	•			
Enable DHCP									
IPv4 Address	172	.9	.4	.65					
IPv4 Subnet Mask	255	.255	.255	.0					
IPv4 Default Gateway	172	.9	.4	.1					
Preferred DNS Server									
Alternate DNS Server									
					ſ				
			Previ	ous	Ne	xt	Cancel		

DS-8600/7600/7700NI-ST

Wizard							
NIC Type	10M/100M/1000M Self-adaptive						
Enable DHCP							
IPv4 Address	172 .9 .11 .212						
IPv4 Subnet Mask	255 .255 .255 .0						
IPv4 Default Gateway	172 .9 .11 .1						
Preferred DNS Server							
Alternate DNS Server							
Internal NIC IPv4 Ad	192 .168 .1 .1						
	Previous Next Cancel						

DS-7600/7700NI-SP

Network Configuration

Note: Dual-NIC is only supported by DS9600NI-ST series device. And for DS-7600/7700NI-SP series NVR, the internal NIC IPv4 address should be configured for the cameras connecting to the PoE network interface of the NVR.

7. Click **Next** button after you configured the network parameters, which takes you to the **HDD Management** window.

Wizard									
	Capacity	Status	Property	Type	Free Space				
	70,5131416	Normal	1011	Local					
					Init				
		Drovi	iouo	Nort	Concol				
		Prev	lous	IVEXT	Cancel				

HDD Management

8. To initialize the HDD, click the Init button. Initialization removes all the data saved in the HDD.

9. Click Next button. You enter the Adding IP Camera interface.

10. Click Search to find online IP Camera. Select the IP camera to be added, and click the Add button.



Search for IP Cameras

11. Click Next button. Configure the recording for the searched IP Cameras.

	Wizard		
Camera	IP Camera 1		
Start Recording			
 Normal 			
Motion Detection			
			Сору
	Previous	ОК	Cancel
	Deneral Catting		

Record Settings

12.Click **Cop**y to copy the settings to other channels.



Copy Record Settings

13. Click OK to complete the startup Setup Wizard.

Live View

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

Live View Icons

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



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



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

Alarm & Record

Adding and Configuring IP Cameras

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

Adding IP Cameras

You can search and add the online IP cameras by following the startup wizard, or according to the following steps.

Steps:

 Enter the Camera Management interface. Menu> Camera> Camera





2. To add the online cameras with same network segment:

) Check Seuren a	o seare.			, our	ierus.							
🗉 Camera 🔹 🔹	IP Camer	a										
💕 OSD	Sync	hronize l	P Came	'a			No	Edit	IR Add	rocc	Amount of Ch	Dovico
😌 Image	IP Cam	ora No	IP Car	nera 6					192.0	0.64	1	IP Dom
U PTZ	IP Cam	era Ad	192.0	0.64			2		172.6.	21.124	1	IPC
* Motion	Protoco	ora ria	HIKVIS	SION								
X mouoli	Manage	ernent	8000									
Privacy Mask	Channe	I No.	1									
Tamper-proof	User Na	ame	admin									
Video Loss	Admin I						K 1	11				>
				Proto	col A	dd				Quick Add	Sea	arch
	Camer	Edit	Delete	Live	Camera Name	IP Cam	era Addr	Mana	iqe Port	Protocol	Device M.	Status
	D1	2	Ť	۲	IPCamera 01	172.6.1	6.115	8000		HIKVISION		Discon
	D2		Ť	۲	IPCamera 02	172.6.2	21.118	8000		HIKVISION	DS-2DF1-	Discon
	D3	1	Ť	۲	IPCamera 03	172.6.2	21.116	8000		HIKVISION	DS-2CD8.	. Conne.
	D4		İ	۲	IPCamera 04	192.0.0	0.64	8000		HIKVISION		Discon
	D5		Î	۲	IPCamera 05	172.6.2	21.124	8000		HIKVISION	DS-6401	Discon
	٢			1								>
	Net Rec	eive Idle	Bandwie	jth: 77M	/bps					Advance Se	t Ref	resh
	Nët Rec	eive idle	Bandwi	nn: 771	ибря —				_	Advance Se	t Ref	resh

1) Click Search to search the online cameras



- 2) Check the checkbox of certain cameras to be added.
- 3) Click **Quick Add** to add the camera.
- 3. To add other IP cameras:
 - 1) On the left side of the interface, you can enter the IP address, protocol, management port, and other information of the IP camera to be added.
 - 2) Click **Add** to add the camera.

Note: If you check the Synchronize IP Camera checkbox, the default settings of the NVR for the IP camera is applied to the added camera.

Configuring Basic Parameters of IP Cameras

After the adding of the IP cameras, the basic information of the camera lists in the page, and you can configure the

basic setting of the IP cameras.

Steps:

1. Click the 📝 icon to edit the parameters; you can edit the IP address, protocol and other parameters.

Edit IP Camera IP Camera No. D1 IP Camera Address 172.6.16.115 Protocol Custom 1 Manage Port 0 Channel No. 1 User Name user Admin Password Image Port O Admin Password O Image Port O Image Port O Image Port O User Name user Admin Password O Image Port OK Cancel Image Port				
IP Camera No.	D1			
IP Camera Address	172.6.1	6.115		
Protocol	Custor	ı 1		
Manage Port				
Channel No.				
User Name	user			
Admin Password				
		Apply	ОК	Cancel
	Edit	the Parame	ters	

2. Click apply to save the settings and click OK to exit the editing interface.

To edit more parameters:

1.

Click the	Advance Set icon.	
		Advance Set
	Network Password	
	IP Camera No.	D3
	IP Camera Address	172.6.21.116
	Manage Port	8000
		Apply OK Cancel

Network Configuration of the Camera

- 2. You can edit the network information and the password of the camera.
- 3. Click **Apply** to save the settings and click **OK** to exit the interface.

Explanation of the icons:

	1	0
Edit basic parameters of the camera	Delete the IP camera	Get the live view of the camera

PTZ Control

Follow the procedure to set the parameters for PTZ. The configuring of the PTZ parameters should be done before you set the PTZ camera.

Before you start, please check that the PTZ and the NVR are connected properly through RS-485 interface.

PTZ Settings

Steps:

1. Enter the PTZ Settings interface.

Menu >Camera> PTZ

General More Settings		
Camera	Analog 1	
Baud Rate	9600	
Data Bit	8	
Stop Bit	1	
Parity	None	
Flow Ctrl	None	
PTZ Protocol		
Address	0	
Address range: 0~255		

Camera Settings Interface

- 2. Choose the camera for PTZ setting next to Camera label.
- 3. Enter the parameters of the PTZ camera.

Note: All the parameters should be exactly the same as the PTZ camera parameters.

- 4. Click **Copy** if you want to configure same settings to other PTZ cameras.
- 5. Click the **Apply** button to save and exit the interface.

PTZ Control

In the Live View mode, you can press the PTZ Control button on the front panel or on the remote, or choose the

PTZ Control icon icon to enter the PTZ toolbar.



PTZ Control Bar

Icon	Description	Icon	Description	Icon	Description
· · · · · · · · · · · · · · · · · · ·	Direction button and the auto-cycle button	+	Zoom+, Focus+, Iris+	-	Zoom-, Focus-, Iris-
· · · · · · · · · · · · · · · · · · ·	The speed of the PTZ movement	÷.	Light on/off	4 / <i>r</i>	Wiper on/off
Q	3D-Zoom	Ä	Image Centralization	Preset	Preset
Patrol	Patrol	Pattern	Pattern		Menu
	Previous item		Next item	0	Start pattern/patrol
٥	Stop the patrol or pattern movement		Minimize windows	×	Exit

Description of the PTZ toolbar icons

Playback

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

Instant playback by channel

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

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



Instant Playback Interface

All-day Playback by channel

Steps:

1. Enter the All-day Playback menu.

Mouse: right click a channel in live view mode and select All-day Playback from the menu.



Right-click Menu under Live View

Front Panel: press PLAY button to play back record files of the channel under single-screen live view. Under multi-screen live view, record files of the top left channel (not masked) will be played back. *Note:* pressing numerical buttons will switch playback to related channels during playback process.

2. Playback management.

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



All-day Playback Interface

The channel and time selection menu will display by moving the mouse to the right of the playback interface. Just tick the channel or channels if you want to switch playback to another channel or execute simultaneous playback of multiple channels.



All-day Playback Interface with Channel List

Backup

1.

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

Enter Video Export interface	2.									
Choose the channel(s) you v	want to back up	and o	click o	on the	G	uick E	Export	bu	tton.	
			Export							
 Normal 	Normal									
₽ Event		201	2 02	202	2 04	PIDE	Pipe	2 107	2 D9	
Picturo		D9 D17 D25	D10 D18 D26	✓ D11 ✓ D19 ✓ D27	✓ D12 ✓ D20 ✓ D28	✓ D13 ✓ D21 ✓ D29	☑ D14 ☑ D22 ☑ D30	✓ D15 ✓ D23 ✓ D31	✓ D16 ✓ D24 ✓ D32	
	Start/End time of record	0	5-22-2012 1	5:48:20	05-23-20	12 16:42:0	5			
		AI								
		AI								
	Start Time	0	5-23-2012			00:0	0:00			•
+ Live View										

- **Quick Export Interface**
- 2. Enter Export interface, choose backup device and press **Export** button to start exporting.

	Expor	t	
Device Name	USB1-1		Refresh
Name	Size Type	Edit Date	Delete Play
Free Space	2,004MB		
	New Folder	Format Export	Cancel
		· UOD4 4	

Quick Export using USB1-1

3. Check backup result.

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

			Ехр	ort						
Device Name	USB1-1								Refree	h
Name		Size	Туре	Ed	lit Date				Delete	Pla
🧃 11			Folder	06	-23-201	20:07:2	2		Ť	-
📹 Backup			Folder	06	-23-201	1 20:07:2	8		1	~ — >
Export record files to) me	0KB	File	06	-23-201	1 20:07:5	8		Ť	۲
Welcome to use bacl	kup	0KB	File	06	-23-201	20:07:3	6		iii)	۲
🖬 ch03_201106230000	000 :	267MB	File	06	-23-201	1 20:15:0	2		Ť	۲
ch03_20110623042	932 :	280MB	File	06	-23-201	1 20:11:1	4		1 1	۲
ch03_201106230914	403 4,	423KB	File	06	-23-201	1 20:11:2	0		Ť	۲
ch03_201106230923	323	127MB	File	06	-23-201	20:12:1	2		<u>ش</u>	۲
🔤 ch03_201106231133	325	110MB	File	06	-23-201	1 20:12:5	4	2	Ť	۲
ch03_201106231328	300 18,	367KB	File	06	-23-201	20:13:0	2		1	۲
ch03_20110623134	743 37.	305KB	File	06	-23-201	1 20:13:1	2		Ť	۲
🖬 player.exe		608KB	File	06	-23-201	20:09:4	0		1	۲
💼 🖻 han dari dha an timad 🕻	ian I		Fil a	1 05	34 004	44-20-4	•		-	٦
Free Space	150N	1B								
		New Fo	lder	Form	nat	Ехро	rt		Cance	əl

Checkup of Quick Export Result Using USB1-1

0202001020528