



**DS-9600NI-SH Series
Network Video Recorder
Technical Manual**

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Please send any comments regarding the documentation to:

overseabusiness@hikvision.com

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Overview

Developed by Hikvision on the basis of the latest technology, DS-9600NI-SH Series Network Video Recorder has combined a series of patents and new technologies of video encoding/decoding, embedded system, storage, network technology, etc.



DS-9600NI-SH Series NVR

Order Models

DS-9604NI-SH, DS-9608NI-SH, DS-9612NI-SH, DS-9616NI-SH

Note:

1. The default NVR provides no HDD or CD-R/W.
2. The manufacturer recommended HDD should be used for this device.

Main Features

- User-friendly GUI for easy operation
- Connection to IP camera, IP dome and video server
- Connection to Hikvision, Panasonic, Sony, AXIS, Bosch, SANYO IP cameras, etc.
- Support decoding at H.264, MPEG4 compression standard, etc.
- Stream storage at PS standard capsulation format
- Up to 1280×1024 VGA output resolution
- Up to 1920×1080 HDMI output resolution
- Support high-definition video preview, storage and playback.
- Digital zoom in preview and playback
- Up to 16-ch synchronous playback
- Different recording storage period configurable for each channel
- Redundant recording
- HDD management in groups
- NTP, SADP, SMTP and NFS protocols supported

Functions & Performances

Network

- Up to two 10/100/1000Mbps self-adaptive UTP Ethernet interfaces.
- Support TCP/IP, UDP, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, and NFS (access to NAS) protocol.
- Unicast and multicast transmission; TCP, UDP, and RTP protocols supported in unicast.
- Remote search, playback and download, lock/unlock of video files; support breakpoint resume.
- Remote access and configuration of parameters; remote import/export of device configuration parameters.
- Remote access of device running status, system log and alarm status.
- Remote button operation.
- Remote lock/unlock of front panel buttons and mouse.
- Remote formatting of hard disk, upgrade, reboot/shutdown and other system maintenance operations.
- RS -232/RS-485 transparent channel transmission.
- Event alarm and exceptions upload to remote management center.
- Remote manual recording.
- Remote video image capture in JPEG format.
- Remote PTZ control.
- Voice talk or voice broadcast.
- Built-in WEB Server.

Local Monitoring

- Local output via HDMI/VGA, Main or Spot video/audio output port.
- HDMI display, with up to 1920×1080 resolution.
- VGA display, with up to 1280×1024 resolution.
- 1/4/6/8/9/16-division video live view, with adjustable cameras order for display.
- Group switch, manual switch and automatic cycle modes selectable for video live view, with the auto cycle period configurable.
- Digital zooming in live view mode.
- Shield of assigned channel for live view.
- Motion detection, video loss detection and video tampering detection configurable.
- Privacy masking capability.
- Configuration and call up of presets, patrols and patterns.

Hard Disk Management

- Supports up to eight SATA HDD, eight network HDD(eight NAS disks or seven NAS disks+one iSCSI disk), each disk can support over 2TB

capacity.

- Support S.M.A.R.T technology.
- HDD standby function.
- HDD management in groups.
- HDD file system is compatible with Windows. Use pre-allocating hard disk management technology adopted to ensure no disk fragments.

Recording and Playback

- Cycle and non-cycle recording mode.
- Scheduled and event video recording parameters configurable separately.
- Multiple recording types, including manual, continuous, alarm, motion, motion | alarm and motion & alarm recording, etc.
- 8 recording time periods configurable with separate recording types.
- Pre-record and post-record for relay alarm and motion detection.
- Search of record files by event type.
- Lock and unlock of video files over client software.
- Local redundant recording.
- Configure specified record files in hard disk to read only.
- Video data search and playback by channel number, recording type, time etc.
- Digital zoom in playback mode.
- Support pause, play fast, play slow, skip forward, and skip backward when playback, locating in progress bar by dragging the mouse over client software.
- Up to 16-channel synchronous playback.

Backup

- Record files backed up via USB device or SATA CD-RW.
- Support backup the files via e-SATA(optional)
- Bunch backup by file or by time.
- Backup video clips in playback.
- Management and maintenance for backup devices.

Alarm & Exception

- Unified management of relay alarm in/out of the unit and IP cameras.
- Unified management of video tempering alarm, motion and video loss alarm of IP cameras.
- Configurable arming time of alarm in/out.
- Various alarm types supported: alarms for video loss, motion detection, video tempering, video signal abnormal, video in/out format unmatched, illegal access, network disconnection, IP conflict, hard disk error and hard disk full.
- Various alarm response actions supported: camera recording, relay out,

on-screen warning, audible warning and upload to center, etc.

- Auto recovery from exceptions.

Others

- Control via front panel keys, shuttle, mouse, remote control and special keyboard.
- Three-level user management, each user with individual operating permission for the unit.
- Powerful recording and search for logs of operation, alarm and exceptions.
- Manual alarm triggering/clearance.
- Import/export of device configuration files.

Development

- Provision of SDK in Windows and Linux operating systems.
- Application software source code of Demo.
- Support and training service for application system development.

Typical Applications

Local or remote surveillance of banks, self-help banks and exchequers

Remote surveillance of unmanned transformer substations and telecom basic stations

Video surveillance of police industry, such as city public safety, transportation, prisons management, supervision of the police fairs

Distributed video accessing businesses, including the global eyes, wide field of vision

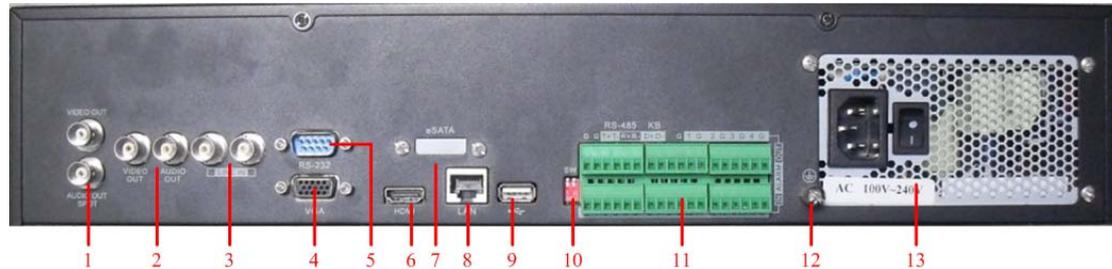
Networking video surveillance of examination hall

Video surveillance of the intelligent buildings and residential communities

Video surveillance of pipelining, workshops and warehouses

Rear Panel & Interfaces

Rear Panel of DS-9600NI-SH



- ① VIDEO OUT (SPOT), AUDIO OUT (SPOT)
- ② VIDEO OUT, AUDIO OUT
- ③ LINE IN
- ④ VGA Output
- ⑤ RS-232 Serial Interface
- ⑥ HDMI Output
- ⑦ eSATA Backup/Extended Storage Interface (optional)
- ⑧ LAN (10/100/1000Mbps Self-adaptive UTP Ethernet interface)
- ⑨ USB Interface
- ⑩ RS-485 Matched Resistance Switch
- ⑪ RS-485 Serial Interface, RS485 keyboard port, ALARM IN, ALARM OUT
- ⑫ GND, when cascading multiple devices, it is required that grounding through GND first, and then connecting to the protection ground of control keyboard and power input
- ⑬ 100~240VAC Power Input

Specifications

Model		DS-9604NI-SH	DS-9608NI-SH	DS-9612NI-SH	DS-9616NI-SH
Video/Audio input	IP video input	4-ch at 4CIF resolution/2-ch at 720P resolution/1-ch at UXGA resolution (or 2-ch in non-real time)	8-ch at 4CIF resolution/4-ch at 720P resolution/2-ch at UXGA resolution (or 4-ch in non-real time)	12-ch at 4CIF resolution/6-ch at 720P resolution/3-ch at UXGA resolution (or 6-ch in non-real time)	16-ch at 4CIF resolution/8-ch at 720P resolution/4-ch at UXGA resolution(or 8-ch in real time)
Video/Audio output	CVBS output	2-ch, BNC(1.0Vp-p, 75Ω) Resolution: 704×576(PAL); 704×480(NTSC)			
	HDMI output	1-ch, resolution: 1024×768/60Hz, 1280×1024/60Hz, 1920×1080/60Hz			
	VGA output	1-ch, resolution: 1024×768/60Hz, 1024×768/70Hz, 1280×1024/60Hz			
	Audio output	2-ch, BNC(Linear Electrical Level, 600Ω)			
	Synchronous playback	4-ch	8-ch	12-ch	16-ch
Hard disk	Type	8 SATA interfaces			
	Capacity	More than 2TB			
External interface	Voice talk	2-ch, BNC(2.0Vp-p, 1kΩ)			
	Network interface	1RJ-45, 10/100/1000Mbps self-adaptive Ethernet interface			
	USB interface	3, USB2.0			
	Serial interface	1 RS485 serial interface			
		1 RS232 serial interface			
		1 RS-485 keyboard serial interface			
	Alarm in	16			
Alarm out	4				
Others	Chassis	19" standard 2U chassis			
	Power supply	100~240VAC, 6.3A, 50~60Hz			
	Consumption	≤70W (without HDD)			
	Working temperature	-10℃~+55℃			
	Working humidity	10%~90%			
	Size(mm)	450(W)×450(D)×95(H)			
	Weight	≤8kg (without HDD)			