



**DS-9664NI-RH Series**  
**Network Video Recorder**  
**Technical Manual**

## Notices

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## Overview

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Developed by Hikvision on the basis of the latest technology, DS-9664NI-RH Series Network Video Recorder has combined a series of patents and new technologies of video encoding/decoding, embedded system, storage, network technology, etc.



DS-9664NI-RH Series NVR

## **Order Models**

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**DS-9664NI-RH**

**Note: 1. The default NVR provides no HDD or CD-R/W.**

**2. A manufacturer recommended HDD should be used for this device.**

## **Main Features**

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**Connectable to network camera/dome and network video server**  
**H.264 / MPEG4 compression standard**  
**Stream storage at PS standard capsulation format**  
**Up to 1920×1080P HDMI/VGA output resolution**  
**Support high-definition video live view, storage and playback.**  
**Digital zoom in live view and playback**  
**Up to 4-ch synchronous playback at 4CIF resolution**  
**Different recording storage period configurable for each channel**  
**Redundant recording**  
**HDD management in groups**  
**NTP, SADP, SMTP, EMAIL, DHCP, FTP, DDNS, PPPoE and NFS, ISCSI protocols supported**  
**RAID 0/1/5/10 supported**  
**2 self-adaptive 10M/100M/1000M network interfaces**  
**Dual power supplies redundancy configurable**  
**Up to 16 hard disks can be connected**  
**Network monitoring for traffic, packet capturing and connection.**

## Functions & Performances

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- Connectable to network camera/dome and network video server.
- Each channel supports dual stream.
- Video encoding parameters of each channel can be set separately, including resolution, frame rate, bit rate, image quality.
- Each channel supports normal continuous and event compression parameters.
- Support both composite (audio & video) stream and video stream. Audio and video streams are strictly simultaneous.
- Email notification.

### Local Monitoring

- HDMI/VGA output at up to 1920×1080P 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 sixteen SATA HDDs, eight network HDDs(eight NAS disks or seven NAS disks+one iSCSI disk), and 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.
- Support RAID 0/1/5/10, with the following capabilities: disk array and virtual disk configurable, manual disk array rebuilding, hot swap/spare rebuilding, RAID level migration and one-button configuration.

### 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 4-channel synchronous playback at 4CIF resolution.

## Backup

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

## 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.

## 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) iSCSI 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 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.

## **Others**

- Control via 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.
- Display of device running information on front panel LCD.

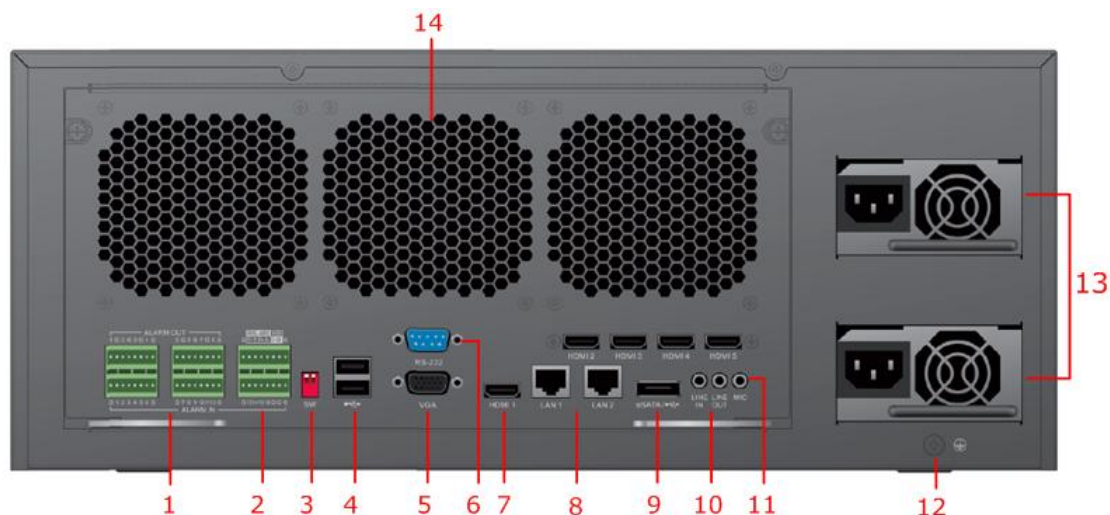
## **Development**

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



## Rear Panel & Interfaces

### Rear Panel of DS-9600NI-RH



- ① ALARM IN, ALARM OUT
- ② RS-485 Interface, Keyboard Interface
- ③ Termination Switch
- ④ USB Interface
- ⑤ VGA Interface
- ⑥ RS-232 Interface
- ⑦ HDMI Interface
- ⑧ LAN1 / LAN2 Network Interface
- ⑨ eSATA Interface
- ⑩ LINE IN/LINE OUT
- ⑪ MIC IN
- ⑫ GND
- ⑬ Dual Power Supply Modules, 100 ~ 240V AC Input
- ⑭ Fan Modules

## Specifications

<b>Model</b>		<b>DS-9664NI-RH</b>
<b>Video/Audio input</b>	<b>IP video input</b>	64-ch
	<b>Two-way audio</b>	Mic / Line In, 3.5 mm connector
<b>Video/Audio output</b>	<b>HDMI/VGA output</b>	1-ch, resolution: 1920 x 1080P / 60Hz, 1600 x 1200 / 60Hz, 1280 x 1024 / 60Hz, 1280 x 720 / 60Hz, 1024 x 768 / 60Hz
	<b>Encoding resolution</b>	5MP / 3MP / 1080P / UXGA / 720P / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF
	<b>Audio output</b>	1-ch, 3.5 mm connector
	<b>Dual-stream</b>	Support
	<b>Stream type</b>	Video, Video & Audio
	<b>Synchronous playback</b>	4-ch 4CIF / 1-ch 5MP / 3MP / 1080P / UXGA / 720P
<b>Hard disk</b>	<b>SATA</b>	16 SATA interfaces
	<b>eSATA</b>	1 eSATA interface
	<b>Capacity</b>	Each interface supports up to 3TB capacity
<b>Disk array</b>	<b>Array type</b>	RAID0, RAID1, RAID5, RAID10
<b>Network Bandwidth</b>	<b>Input</b>	160 Mbps
	<b>Output</b>	160 Mbps
<b>External interface</b>	<b>Network interface</b>	2 RJ-45, 10/100/1000Mbps self-adaptive Ethernet interface
	<b>Serial interface</b>	RS-232, RS-485, Keyboard
	<b>USB interface</b>	4, USB 2.0
	<b>Alarm in</b>	16
	<b>Alarm out</b>	8
<b>General</b>	<b>Power supply</b>	Dual power supplies, 100 ~ 240 VAC, 6.3 A, 50~60 Hz
	<b>Consumption (without HDD or DVD-R/W)</b>	Single Power Supply ≤ 85 W Dual Power Supplies ≤ 115 W
	<b>Working temperature</b>	-10℃ ~ +55℃
	<b>Working humidity</b>	10% ~ 90%
	<b>Dimensions (W x D x H)</b>	442 x 513 x 155 mm
	<b>Weight</b>	≤ 18 Kg ( without hard disk or DVD-R/W )