



DS-7604NI-S(/M) Series NVR
Technical Manual

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Overview

The DS-7604NI-S(/M) series NVR is a new generation product developed by HIKVISION. Built on an embedded platform and combining the latest advanced H.264 video encoding and decoding technologies, the DS-7604 series NVR contains the perfect combination of rock-solid reliability and high performance.



DS-7604 NI-S (/M) Series NVR

Order Models

DS-7604NI-S, DS-7604NI-S/M

Note: 1. The NVR is configured without HDD or CD-R/W by default.
2. A manufacturer recommended HDD should be used for this device.

Main Features

Connection to IP camera and IP speed dome
Connection to IP camera from third-party manufacturers
Up to 720P / 1080P / UXGA / 2560×1290 resolution
DS-7604NI-S supports up to 1024×768 VGA resolution
Resolution, frame rate, bit rate and image quality settings programmable per individual camera
1/4-division video live view
Digital zoom when live view and playback
Up to 4-ch synchronous playback
Support digital zoom by using mouse when in PTZ control mode
Different channels can be set different recording expired time
Normal and event video encoding parameters
Redundant recording
Hard disk group management
Support NTP and SADP protocols

Functions & Performances

- Connection to IP camera and IP speed dome.
- Connection to IP camera from third-party manufacturers.
- Dual stream compression and up to 720P / 1080P / UXGA / 2560×1290 resolution supported by each IP camera.
- Resolution, frame rate, bit rate and image quality settings programmable per individual camera.
- Scheduled and event recording parameters configurable per individual camera.
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.

Local Functions

Monitoring

- 1/4-division video live view.
- DS-7604NI-S supports up to 1024×768 VGA resolution.
- 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, video tampering detection and video input exception detection configurable.
- Privacy masking capability.
- Multiple PTZ protocols supported.
- Configuration and call presets, patrols and patterns.
- Zoom in by clicking the mouse and tracing by dragging mouse in PTZ control.

Hard Disk Management

- Connection to 2 SATA hard disks supported, with up to 2TB storage capacity for each disk.
- Support connection to network HDD (NAS, IP SAN).
- 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, and no disk fragments.

Recording and Playback

- Cycle and non-cycle recording mode.

- Support normal and event video encoding parameters.
- Multiple recording types, including manual, continuous, alarm, motion, motion | alarm and motion & alarm recording, etc.
- Eight recording time periods with separate recording types.
- Pre-record and Post-record time for alarm and motion detection, and pre-record time for schedule and manual recording.
- Lock and unlock of video files.
- Local redundant recording.
- Hard disk property can be set to read-only.
- Video data search and playback by channel number, recording type, time, and event.
- Supports video data search by events such as alarm input, motion detection and intelligent alarm.
- Digital zoom function in playback.
- Supports pause, play fast, play slow, skip forward, and skip backward when playback, locating in progress bar by dragging the mouse.
- Up to 4-channel synchronous playback.

Backup

- Recorded files backed up via USB device or SATA CD-RW.
- Bunch backup by file or by time.
- Record files edited for backup in playback.
- Management and maintenance for backup devices.

Alarm & Exception

- Unified management of alarm in/out of DVR and IP cameras.
- Unified management of video tempering alarm, motion and video loss alarm of DVR and 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 of DVR via front panel keys, mouse, IR control and special keyboard.
- Three-level user management, each user with individual operating permission for DVR and IP camera.
- Powerful record and search for log of operation, alarm and exceptions.
- Import/export of device configuration files.

Network

- 10/100M adaptive network interface.
- TCP/IP protocol suites, PPPoE, DHCP, DNS, DDNS, NTP, SADP protocols, etc.
- Unicast and multicast supported; TCP, UDP, and RTP protocols applicable 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 control of DVR via button operation.
- Remote lock/unlock of panel buttons and mouse.
- Remote formatting of hard disk, upgrade, reboot/shutdown and other system maintenance operations.
- RS -485 transparent channel transmission.
- Event alarm and exceptions upload to remote management host.
- Remote manual recording.
- Remote video image capture in JPEG format.
- Remote PTZ control.
- Voice talk and broadcast.
- Built-in WEB Server.

Development

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

Panels & Interfaces

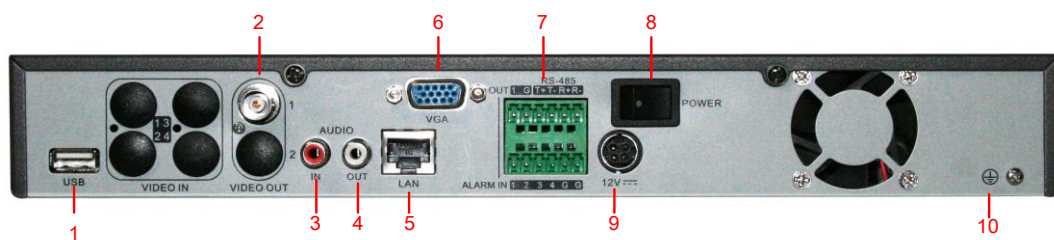
Front Panel



- ① Status Indicators (POWER, STATUS, Tx/Rx)
- ② IR receiver
- ③ Alphanumeric/Functional Buttons
- ④ SHIFT
- ⑤ Control Buttons
- ⑥ USB Interface

Rear Panel

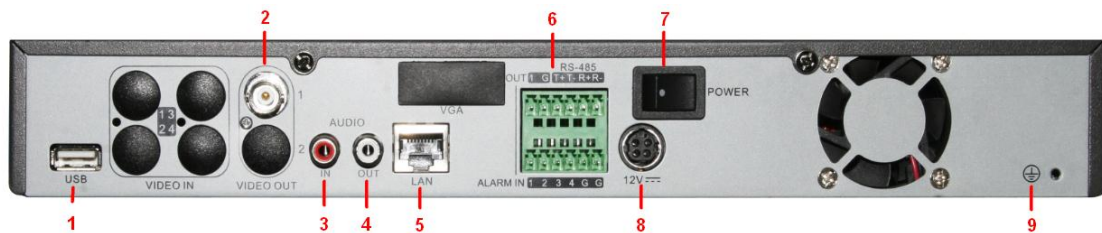
Rear Panel of DS-7604NI-S



- ① USB Interface
- ② VIDEO OUT
- ③ AUDIO IN
- ④ AUDIO OUT
- ⑤ LAN
- ⑥ VGA Interface
- ⑦ RS-485 Interface, ALARM IN, ALARM OUT

- ⑧ POWER
- ⑨ 12VDC Power Supply
- ⑩ GND

Rear Panel of DS-7604NI-S/M



- ① USB Interface
- ② VIDEO OUT
- ③ AUDIO IN
- ④ ADUIO OUT
- ⑤ LAN
- ⑥ RS-485 Interface, ALARM IN, ALARM OUT
- ⑦ POWER
- ⑧ 12VDC Power Supply
- ⑨ GND

Specifications

Model		DS-7604NI-S	DS-7604NI-S/M
Video/Audio input	IP Video input	4-ch 4CIF real time or 2-ch 720P / UXGA / 1080P real time or 1-ch 2560×1920 not real time	
	Audio input	1-ch, RCA(2Vp-p, 1kΩ), for voice talk input	
Video/Audio output	Live view resolution	PAL:704×576, NTSC:704×480	
	VGA output	1- ch, resolution:1024×768/60Hz	—
	Playback resolution	2560×1920/UXGA/1080P/720P/4CIF/VGA/DCIF/2CIF/CIF/QCIF	
	Video output	1-ch, BNC (PAL: 704×576, NTSC: 704×480)	
	Frame rate	1/16~25 fps (P) / 30fps (N)	
	Video bit rate	32 Kbps~2048 Kbps, or user-defined (Max. 16384 Kbps)	
	Audio output	1-ch, RCA(2Vp-p, 1kΩ), for voice talk output	
	Audio bit rate	16kbps	
Hard disk	Synchronous playback	4-ch	
	Type	1 SATA interface	
External interface	Capacity	Each interface supports more than 2TB capacity	
	Network interface	1, RJ45 10M/100M adaptive Ethernet interface	
	Serial interface	1 RS-485 interface	
	USB interface	2, USB2.0	
	Alarm in	4	
Others	Alarm out	1	
	Power supply	12VDC	
	Consumption	≤12W (without hard disk or DVD-R/W)	
	Working temperature	-10℃~+55℃	
	Working humidity	10%~90%	
	Chassis	19-inch rack mounted 1U chassis	
	Dimensions (W × D × H)	315 × 230 × 45 mm	
Weight	≤ 2.5Kg (without HDD or DVD-R/W)		