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Real HD DS-7616NI-Q2/16P

User Manual for Real HD DS-7616NI-Q2/16P Network Video Recorder

Model: DS-7616NI-Q2/16P

1. Product Overview

The Real HD DS-7616NI-Q2/16P is a 16-channel Network Video Recorder (NVR) designed for professional surveillance systems. It supports H.265 video compression, 4K resolution output, and features 16 independent Power over Ethernet (PoE) network interfaces, simplifying camera installation. This NVR is compatible with various IP cameras, including Hikvision models, and offers robust recording and playback capabilities for comprehensive security monitoring.

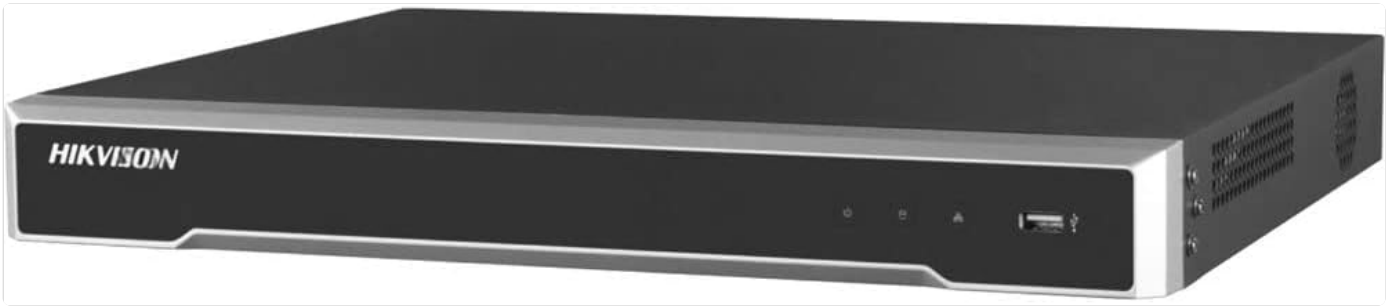


Figure 1: Front view of the DS-7616NI-Q2/16P NVR. This image shows the sleek black and silver design of the NVR unit with the "HIKVISION" logo on the front panel, indicating its compatibility and design lineage.

DS-7616NI-Q2/16P NVR



Key Feature

- Up to 16-ch IP camera inputs
- H.265+/H.265/H.264+/H.264 video formats
- Up to 1-ch@8 MP/5-ch@1080p decoding capacity
- Up to 160 Mbps incoming bandwidth



Professional and Reliability

- H.265+ compression effectively reduces the storage space by up to 75%

HD Video Output

- Provide simultaneous HDMI and VGA outputs
- HDMI video output at up to 4K resolution

Storage and Playback

- 2 SATA interfaces for HDD connection (up to 8 TB capacity per HDD)
- Smart search/smart playback to improve the playback efficiency

Smart Function

- Support multiple VCA (Video Content Analytics) events
- Configurable special camera smart functions, such as VCA detection (motion, line crossing, intrusion, etc.), heat map, ANPR, and people counting

Network & Ethernet Access

- 16 independent PoE network interfaces
- 1 self-adaptive 10/100/1000 Mbps Ethernet interface
- Hik-Connect & DDNS (Dynamic Domain Name System) for easy network management

Figure 2: Key Features of the DS-7616NI-Q2/16P NVR. This diagram highlights the NVR's capabilities, including support for up to 16 IP camera inputs, H.265+/H.265/H.264 video formats, 1-ch@8 MP/s-ch@1080p decoding capacity, and up to 160 Mbps incoming bandwidth. It also emphasizes professional reliability with H.265+ compression, HD video output up to 4K resolution, and smart functions like VCA events.

2. Setup and Installation

2.1 Package Contents

Before proceeding with installation, ensure all components are present:

- DS-7616NI-Q2/16P NVR Unit
- Power Adapter
- USB Mouse
- Screws for HDD Installation
- Quick Start Guide (if included)

Note: A hard drive is not included with this NVR and must be purchased separately for video recording. The NVR supports up to 6TB capacity for each HDD.

2.2 Physical Connections

Refer to the rear panel diagram for proper connection of cables.



Figure 3: Rear Panel Connections. This image displays the rear of the NVR, detailing the DC 48V power input, audio output (RCA), USB ports, HDMI and VGA video outputs, LAN port, eSATA port, and 16 independent PoE Ethernet interfaces for camera connections.

1. **Hard Drive Installation:**
   Unscrew the cover of the NVR. Connect the SATA data and power cables from the NVR to your purchased hard drive. Secure the hard drive inside the NVR using the provided screws. Replace the cover.
2. **Power Connection:**
   Connect the power adapter to the NVR's DC 48V input and then plug it into a power outlet.
3. **Video Output:**
   Connect a monitor to the NVR using either an HDMI or VGA cable. HDMI supports resolutions up to 4K.
4. **Network Connection:**
   Connect the NVR's LAN port to your network router or switch using an Ethernet cable. For IP cameras, connect them directly to the NVR's 16 independent PoE Ethernet interfaces. These ports provide both power and data to compatible PoE cameras.
5. **USB Devices:**
   Connect the included USB mouse to one of the USB ports for local control. Additional USB devices like external storage for backup can also be connected.
6. **Audio Connection:**
   If using a two-way audio system, connect an external microphone to the audio input (RCA) and speakers to the audio output (RCA).

2.3 Initial Setup

Upon first power-on, the NVR will guide you through a setup wizard. Follow the on-screen prompts to configure basic settings such as language, date/time, network settings, and hard drive initialization.

3. Operating the NVR

3.1 Live View and Playback

Once cameras are connected and configured, you can view live feeds and playback recorded footage.



Figure 4: Live View Interface. This image shows the NVR's graphical user interface with multiple camera feeds displayed simultaneously, allowing for real-time monitoring of different areas.



Figure 5: Playback Interface. This image illustrates the video playback screen, featuring a timeline that allows users to navigate through recorded events and view specific timeframes.

- **Live View:** Access the main interface to see all connected camera feeds in real-time. You can switch between single-camera view and multi-camera grid layouts.
- **Playback:** Navigate to the playback menu. Select the desired camera and date. Use the timeline to find specific events. The NVR supports synchronous playback of multiple channels.

3.2 Remote Access (Hik-Connect App)

The NVR supports remote viewing via the Hik-Connect mobile application, allowing you to monitor your security system

from anywhere with an internet connection.



Figure 6: Easy 3-Step Remote Access. This diagram visually explains how to set up remote access: 1) Connect the NVR to the internet, 2) Download the Hik-Connect app, and 3) Add the device to start viewing.

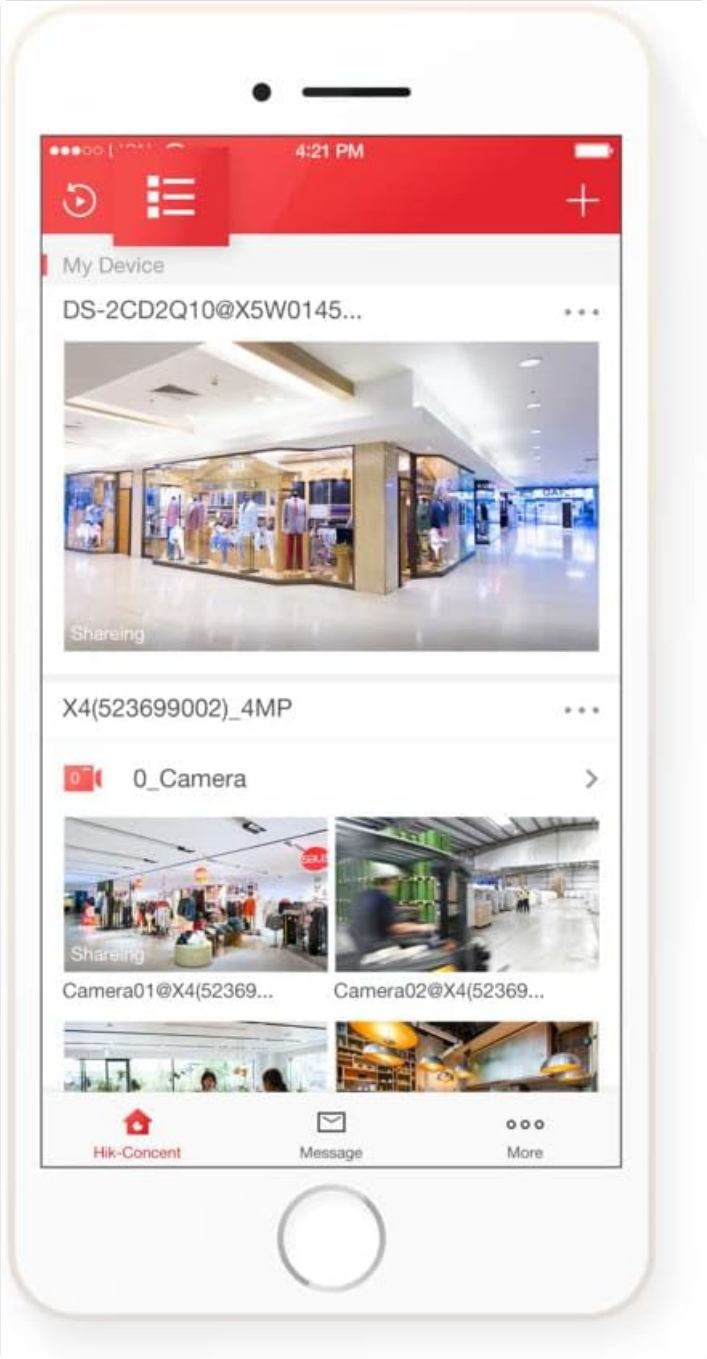


Figure 7: Hik-Connect Mobile App Interface. This image displays the user interface of the Hik-Connect app on a smartphone, showing live camera feeds and options for device management.

1. **Connect NVR to Internet:** Ensure your NVR is connected to your router via the LAN port and has internet access.
2. **Download Hik-Connect App:** Download the official Hik-Connect app from your smartphone's app store (available for Android and iOS).
3. **Add Device:** Open the app, create an account if you don't have one, and follow the in-app instructions to add your NVR by scanning its QR code or manually entering its serial number.

4. Maintenance

4.1 General Care

- Keep the NVR in a well-ventilated area to prevent overheating.
- Avoid exposing the NVR to direct sunlight, high humidity, or extreme temperatures.
- Clean the exterior of the NVR with a soft, dry cloth. Do not use liquid cleaners or aerosols.

4.2 Hard Drive Management

The NVR supports a single SATA hard drive with a capacity of up to 6TB. Regularly check the hard drive status through the NVR's system settings to ensure optimal recording performance. If the hard drive becomes full, the NVR will typically overwrite the oldest footage (circular recording) unless configured otherwise.

5. Troubleshooting

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
No video output on monitor.	Loose video cable, incorrect input selected on monitor, NVR not powered on.	Check HDMI/VGA cable connections. Ensure monitor is set to the correct input source. Verify NVR power status.
Cameras not displaying.	Camera not powered, network issue, incorrect camera IP settings.	Ensure cameras are powered (PoE). Check network cables. Verify camera IP addresses and NVR settings.
Cannot access NVR remotely.	NVR not connected to internet, app not configured correctly, network firewall.	Verify NVR internet connection. Reconfigure Hik-Connect app. Check router settings for port forwarding or UPnP.
No recording.	No hard drive installed, hard drive not initialized, recording schedule not set.	Install and initialize a hard drive. Configure recording schedules in NVR settings.

If you encounter issues not covered here, please refer to the support section for assistance.

6. Specifications

Detailed technical specifications for the DS-7616NI-Q2/16P NVR are provided below:

Specification

Model	DS-7616NI-Q2/16P
Video and Audio	
IP video input	16-ch
	Up to 8 MP resolution
Incoming bandwidth	160 Mbps
Outgoing bandwidth	80 Mbps
HDMI output	1-ch, 4K (4096 x 2160)/30 Hz, 4K (3840 x 2160)/30 Hz, 2K (2560 x 1440)/60 Hz, 1920 x 1080/60 Hz, 1600 x 1200/60 Hz, 1280 x 1024/60 Hz, 1280 x 720/60 Hz
VGA output	1-ch, 1920 × 1080/60 Hz, 1280 × 1024/60 Hz, 1280 × 720/60 Hz
Video output mode	HDMI/VGA simultaneous output
CVBS output	N/A
Audio output	1-ch, RCA (Linear, 1 KΩ)
Two-way audio input	1-ch, RCA (2.0 Vp-p, 1 KΩ, using the audio input)
Decoding	
Decoding format	H.265+/H.265/H.264+/H.264
Recording resolution	8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA /4CIF/DCIF/2CIF/CIF/QCIF
Synchronous playback	16-ch
Capability	1-ch@8 MP (30 fps)/5-ch@1080p (30 fps)
Stream type	Video, Video & Audio
Audio compression	G.711ulaw/G.711alaw/G.722/G.726
Network	
Remote connection	64
Network protocol	TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS
Network interface	1, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface
PoE	
Interface	16, RJ-45 10/100 Mbps self-adaptive Ethernet interface
Power	≤ 150 W
Supported standard	IEEE 802.3 af/at
Auxiliary Interface	
SATA	2 SATA interfaces
Capacity	Up to 8 TB capacity for each disk
USB interface	Front panel: 1 × USB 2.0; Rear panel: 1 × USB 2.0
General	
Power supply	100 to 240 VAC, 50 to 60 Hz
Consumption (without HDD and PoE off)	≤ 15 W
Working temperature	-10 °C to 55 °C (14 °F to 131 °F)
Working humidity	10% to 90%
Dimension (W × D × H)	385 × 315 × 52 mm (15.2"× 12.4" × 2.0")
Weight (without HDD)	≤ 2.6 kg (5.7 lb)
Certification	
FCC	Part 15 Subpart B, ANSI C63.4-2014

Figure 8: Full Technical Specifications. This image presents a comprehensive table of the NVR's specifications, including video/audio input/output, network capabilities, decoding, hard disk support, external interfaces, PoE details, and general operating conditions.

Category	Specification
Model	DS-7616NI-Q2/16P
IP Video Input	16-ch
Incoming Bandwidth	160 Mbps
Outgoing Bandwidth	80 Mbps
HDMI Output	1-ch, up to 4K (3840x2160)/60Hz
VGA Output	1-ch, up to 1920x1080P/60Hz
Recording Resolution	8MP/6MP/5MP/4MP/3MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF
Decoding Capability	16-ch@1080P
SATA Interfaces	1 SATA interface for 1 HDD
HDD Capacity	Up to 6TB per HDD
USB Interface	2, USB2.0
PoE Interface	16 independent 10/100 Mbps PoE Ethernet interfaces
Power Supply	100 to 200 VAC
Consumption (without HDD and PoE)	≤ 15 W
Working Temperature	-10 °C to +55 °C (+14 °F to +131 °F)
Dimensions (W × D × H)	385 mm × 315 mm × 52 mm (15.2" × 12.4" × 2.0")
Weight (without HDD)	≤ 3 kg (6.6 lb)

7. Warranty and Support

This Real HD NVR comes with a **One Year Warranty** and **Lifetime Technical Support** provided by the seller. Please note that this warranty and support are covered by the seller and not directly by Hikvision USA, as this is an International Original English Version of the product.
For technical assistance or warranty claims, please contact the seller directly through your purchase platform or the contact information provided with your product.

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