
WHAT’S IN THE BOX

Make sure the following items are in your box:

NVR Mouse Remote 7604: Power Supply HDD Screws

HDD HDD Cables Ear Mounts (7608/7616 only) QSG DVD-ROM

MENU TREE

Use this menu tree to navigate the embedded menus.

FRONT PANEL

Figure 1, DS-76xxNI-Ex/xP Front Panel

1. Indicators
   - **Power**: Green when system is running
   - **Status**: Blinks red when data is being read from or written to HDD
   - **Tx/Rx**: Blinks green when network connection is functioning properly

2. USB Port
   Connects USB mouse or USB flash memory devices
Figure 2, DS-7604NI-E1/4P Rear Panel

Figure 3, DS-7608NI-E2/8P Rear Panel

Figure 4, DS-7616NI-E2/16P

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Audio In</td>
<td>RCA connector</td>
</tr>
<tr>
<td>2</td>
<td>Audio Out</td>
<td>RCA connector</td>
</tr>
<tr>
<td>3</td>
<td>VGA Out</td>
<td>DB-15 connector for VGA output to display local video output and menu</td>
</tr>
<tr>
<td>4</td>
<td>HDMI Out</td>
<td>HDMI video output connector</td>
</tr>
<tr>
<td>5</td>
<td>Alarm I/O</td>
<td>Alarm input/output connectors</td>
</tr>
<tr>
<td>6</td>
<td>LAN Interface</td>
<td>Connector for LAN (Local Area Network)</td>
</tr>
<tr>
<td>7</td>
<td>USB</td>
<td>USB port for additional devices</td>
</tr>
<tr>
<td>8</td>
<td>Grounding Screw</td>
<td>Ground (needs to be connected when NVR starts up)</td>
</tr>
<tr>
<td>9</td>
<td>Power Input</td>
<td>48 VDC power supply (DS-7604 NI-E1/4P)/100 to 240 VAC (DS-7608NI-E2/8P, DS-7616NI-E2/16P)</td>
</tr>
<tr>
<td>10</td>
<td>Power Switch</td>
<td>Switch for turning on/off the device</td>
</tr>
<tr>
<td>11</td>
<td>Network Interfaces w/PoE</td>
<td>IP camera inputs and PoE outputs</td>
</tr>
</tbody>
</table>
1 **CONNECT DEVICES**

1. Connect power supply plug (DS-7604NI-E1/4P) or AC cord (DS-7608NI-E2/8P) to the NVR.
2. Connect NVR to LAN using Cat 5e cable.
3. Connect video monitor(s) to NVR using HDMI and/or VGA cables, as appropriate.
4. Connect mouse to USB port (wireless mouse can be used in lieu of included mouse).
5. Connect to audio I/O using RCA connectors.

2 **START THE NVR**

1. Plug power cord into 110 VAC outlet (surge suppressor is recommended).
2. Turn power switch on. Power indicator LED will turn green to indicate unit is starting.
3. After startup, power indicator LED will remain green.

3 **LOCAL ACTIVATION**

System access requires a secure, user-assigned password.

- **Set Admin Password**
  1. First-time access requires user to create an admin password.
  2. Input the same password in the Create New Password and Confirm New Password text fields.

- **Strong Password REQUIRED**
  Password must contain 8 to 16 characters, combining numbers, lower and upper case letters, and special characters. At least two types of the above-mentioned characters are required. Also, reset password regularly.

  3. Click OK to save password and activate device.
### Password Strength Levels

<table>
<thead>
<tr>
<th>STRENGTH LEVEL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 0 (Risky)</td>
<td>DVRs &lt;u&gt;will not&lt;/u&gt; accept password. Password is fewer than 8 characters, contains only 1 type of character, is the same as the user name, or is the mirror writing of the user name.</td>
</tr>
<tr>
<td>Level 1 (Weak)</td>
<td>DVRs &lt;u&gt;will&lt;/u&gt; accept password. Password contains number + lowercase letter or number + uppercase letter and is at least 8 characters.</td>
</tr>
<tr>
<td>Level 2 (Medium/Fair)</td>
<td>DVRs &lt;u&gt;will&lt;/u&gt; accept password. Password contains 2 types of characters (neither number + lowercase letter nor number + uppercase letter) and is at least 8 characters.</td>
</tr>
<tr>
<td>Level 3 (Strong)</td>
<td>DVRs &lt;u&gt;will&lt;/u&gt; accept password. Password contains more than three types of characters and is at least 8 characters.</td>
</tr>
</tbody>
</table>

**NOTE 1:** The strength level indicator colors can vary by activation process, model number, and device type. Typical: Risky (no color), Weak (pink), Fair (yellow), Strong (green).

**NOTE 2:** PASSWORD CHARACTERS ALLOWED (ASCII Only):
- Lowercase ASCII Letters: a b c d e f g h i j k l m n o p q r s t u v w x y z
- Numerals: 0 1 2 3 4 5 6 7 8 9
- Special Characters: . , : / @ , ? ! ' ( ) $ & ” [ ] { } # % ^ * + = \ | < >

#### Set Unlock Pattern
Admin user will be prompted to configure an unlock pattern for login in place of a password.

1. Hold down left mouse button and draw a pattern by connecting at least four dots on the screen, with each dot connected only once). Release mouse button when done.
2. Draw the same pattern again to confirm it.

**NOTE:** If you forget your pattern, click on “Forgot Password” to display the normal admin login dialog box.

#### Log In (Unlock Pattern)
1. Draw the unlock pattern to unlock system.
3 LOCAL ACTIVATION (continued)

\[\text{Log In (Dialog Box)}\]
1. **User Name** field will be prefilled with “admin.”
2. Input **Password** (account locks for 30 minutes after 7 incorrect attempts).
3. Click **OK**.

4 INITIALIZE THE HARD DRIVE (IF NEEDED)

The system is set up to record upon power up and will beep if the hard drives are not initialized.

1. Go to **MENU > SYSTEM CONFIGURATION > HDD**.
2. Use the checkboxes to select the HDDs that need to be initialized.
3. Press **INIT**.

**NOTE:** Factory installed HDDs come initialized. Initializing again will erase any record video (this does not affect settings).
5 Set Date and Time

1. Go to MENU > SYSTEM CONFIGURATION > GENERAL.

6 Set Up Network Access

1. Set up access to cameras remotely: MENU > SYSTEM CONFIGURATION > NETWORK.
2. Enable DHCP (check the checkbox).
3. Press Refresh button to update the IPv4 address, subnet mask, and IPv4 default gateway.
4. Disable DHCP (uncheck the checkbox).
5. Change “Preferred DNS Server” value to 8.8.8.8 (leave Alternate DNS Server blank).
7 SET CAMERA PORTS

After assigning the IP information, click the More Settings tab.

The More Settings tab contains the ports that need to be forwarded for remote access.

- **SERVER PORT** is responsible for the mobile app and client software log-in.
- **HTTP PORT** is responsible for Web browser log-in.
- **RTSP PORT** is responsible for video/audio streaming.

**NOTE:** The HTTP port, server port, and RTSP can be changed, if desired, to avoid conflicts with the ISP or if multiple devices are installed at a single location.

8 SET UP PORT FORWARDING

Port forwarding redirects communication from one address/port number to another to make services on a protected network available to hosts on an external network.

1. Log into the router, and proceed with **port forwarding**. **Port forwarding** steps differ by router. For **port forwarding** assistance, contact your Internet Service Provider (ISP) or router manufacturer. Also refer to www.portforward.com for step-by-step instructions.

   **NOTE:** Hikvision USA is not associated with www.portforward.com and is not responsible for any activity between the user and www.portforward.com. Please avoid accidentally downloading any software from www.portforward.com.

2. Proceed to the **Routers** section on the website for step-by-step instructions.
9 SET UP DDNS (Dynamic Domain Name System)

DDNS allows users with dynamic (changing) IP address to remotely access their unit.

1. Click on the DDNS tab.
2. Check the DDNS checkbox.
3. DDNS Type: HiDDNS (default)
5. Server Address: www.hik-online.com (U.S. default)
6. Create a Device Domain Name (cannot begin with a number, contain spaces, special characters, or upper case letters).
7. Create a User Name.
8. Password: System uses device serial number; cannot be changed.

9. After the changes have been made, press Apply to display the Succeeded message. (If the Domain Name does not meet acceptable criteria, or is already registered, an error message will appear.)

10 ADD IP CAMERAS

1. Right click a window in Live View mode to display the menu.
2. Click Menu to display Menu choices.
3. Click Cameras Setup to display the Add Cameras window.
4. Add camera(s) as follows:
   • Hikvision Camera Connected to Unit’s PoE Port — Will automatically be added to an NVR camera channel (Dx) and will be visible on the camera list in white within two minutes.
   • Hikvision Camera Connected to the Network but Not Unit’s PoE Ports — Will automatically be detected and displayed at bottom of the camera list in yellow. Must be added to an NVR camera channel manually:
     1) Click an unused camera channel’s Dx checkbox.
     2) Click the EDIT (Pencil) button to display the Edit IP Camera window.
     3) Use pull-down menu to change Adding Method from “Plug and Play” to “Manual.”
     4) Enter the camera’s IP address and other information as required.
     5) Press the OK button to add the camera.
- **Hikvision Cameras Not Detected** — Must be added manually:
  1. Click an unused camera channel’s **Dx** checkbox.
  2. Click the **EDIT** (Pencil) button to display the **Edit IP Camera** window.
  3. Use pull-down menu to change **Adding Method** from “Plug and Play” to “Manual.”
  4. Enter the camera’s IP address and other information as required.
  5. Press the **OK** button to add the camera.

- **Third-Party Cameras** — Must be added manually:
  1. Click an unused camera channel's **Dx** checkbox.
  2. Click the **EDIT** (Pencil) button to display the **Edit IP Camera** window.
  3. Use pull-down menu to change **Adding Method** from “Plug and Play” to “Manual.”
  4. Enter the camera’s IP address and other information as required.
  5. Press the **OK** button to add the camera.

### IP Camera Management Icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Explanation</th>
<th>Icon</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="edit_icon.png" alt="Edit" /></td>
<td>Edit basic camera parameters</td>
<td><img src="upgrade_icon.png" alt="Upgrade" /></td>
<td>Upgrade the connected camera</td>
</tr>
<tr>
<td><img src="warning_icon.png" alt="Warning" /></td>
<td>Camera disconnected; click icon to get camera’s exception information</td>
<td><img src="delete_icon.png" alt="Delete" /></td>
<td>Delete the IP camera</td>
</tr>
<tr>
<td><img src="play_icon.png" alt="Play" /></td>
<td>Play connected camera’s live video</td>
<td><img src="camera_icon.png" alt="Camera" /></td>
<td>Camera connected</td>
</tr>
</tbody>
</table>

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**NOTE:**
To change camera name, go to **OSD**.
**View Live Video**

Live View displays real-time video.

Icons in the upper-right of screen show each camera’s record and alarm status.

- **Alarm** (video loss, tampering, motion detection, sensor alarm, or VCA alarm)
- **Record** (manual record, continuous record, motion detection, alarm, or VCA triggered record)
- **Event/Exception** (event and exception information appears at lower-left corner of screen)

**Set up Recording**

**Recording Schedule**

Default is to continuously record video at 8 fps, or 15 fps when motion is detected, everyday. Do the following to change the recording schedule:

1. Go to **MENU > RECORDING CONFIGURATION > SCHEDULE**.
2. Choose **CONTINUOUS** or **EVENT/(MOTION DETECTION)** under the **Type** pull-down menu.
3. Use cursor to select (days will turn blue [continuous] or yellow [event/motion detect]) or deselect (days will turn gray [off]) the calendar days you wish to record.
4. Apply time settings as desired.
5. Press **APPLY**.
Motion Detection Areas
To define the image areas that Motion Detection will monitor for each camera, do the following:
1. Go to MENU > RECORDING CONFIGURATION > MOTION DETECT.
2. Use Camera pull-down menu to select camera to configure.
3. Check the Enable Motion Detection checkbox to enable motion detection.
4. Use the Sensitivity boxes to select how responsive the detection should be (the more green boxes lit, the greater the sensitivity).
5. Drag a grid(s) over the area(s) on the image that will be sensitive to motion.
6. Click the Settings Set button to configure Arming Schedule (when detection is enabled) and Linkage Actions (what action(s) to take when motion is detected).

Record Quality
• Main Stream
   1. Go to RECORDING CONFIGURATION > RECORD QUALITY > MAIN STREAM and set the following items:
      - Stream Type enables/disables audio streaming from the cameras (if the camera does not have audio capabilities, Stream Type will have only Video option).
      - Resolution sets recording resolution.
      - Bitrate Type saves HDD space when set to Variable. Choices: Variable and Constant.
SET UP RECORDING (continued)

- **Video Quality** adjusts picture clarity (high setting = four green squares is default). Consider highest if hard drive space allows.

- **Frame Rate** sets recording frame rate (8 fps on continuous and 15 fps on motion by default). Higher frame rates require more storage, but allows better slow motion playback.

- **Max Bitrate Mode** chooses between pre-set bitrate values and customized values (General setting is default).

- **Max Bitrate (KBPS)** is the chosen bitrate for streaming the video. Max Bitrate should be adjusted to meet or exceed the rate recommended by the system for the chosen parameters.

- **Max Bitrate Recommended** is impacted by resolution, quality, and framerate.

- **Record Audio** turns on audio recording. Requires connection of external microphone or camera with built in mic.

- **Video Stream** determines which stream is recorded. Leave at default (Main Stream).

**Substream**

1. Go to RECORDING CONFIGURATION > RECORD QUALITY > SUBSTREAM to set up the Sub Stream to stream to mobile devices and display multiple cameras locally.

**NOTE:** If the upload speed is not sufficient, lower the frame rate, bitrate, and or resolution for more fluent mobile viewing.
12 SET UP RECORDING (continued)

13 PLAY BACK RECORDED VIDEO

1. Go to MENU > PLAYBACK.
2. Select the desired camera(s) from the menu on the right of the screen.
3. Select the desired date (days that contain recordings will be blue if recording was continuous only or yellow if all or part of the day was event recording).
4. Press PLAY.
5. Click within the timeline to jump to desired time.
PLAY BACK RECORDED VIDEO (continued)

▼ Play Back Record Files
1. Go to MENU > LIVE VIEW.
2. Left click a Live View window to bring up a shortcut toolbar and click on the icon for instant playback.

▼ Playback Controls
1. Right click a Live Image to display a Quick menu and click on icon for instant playback.

BACK UP VIDEO RECORDINGS AND CLIPS

Back up recorded video clips to ensure important video is not lost or destroyed.

▼ Choose Recorded Video Clips To Back Up
1. Connect a USB flash drive, HDD, or DVD writer to an available USB port (this step is mandatory).
2. Go to MENU > PLAYBACK.
3. Select cameras for playback.
4. Select the date and beginning time of the incident.
5. Click START CLIPPING button.
6. Select the ending time of the incident.
7. Click END CLIPPING button (same button as START CLIPPING). Clip will be marked.
8. Repeat steps 1-6 as many times as required.
9. Click FILE MANAGEMENT button to display a new window containing all marked clips.
10. Select the desired clips.
11. Click EXPORT to save files to the inserted USB device.
Back Up Video Recordings and Clips (continued)

1. Click on the images of the clips you want to lock.
2. Press the LOCK button to prevent the file from being erased.

Back Up Video Clips
3. Connect a USB flash drive, HDD, or DVD writer to an available USB port.
4. Click on the File Management button to display the File Management window.
5. In the File Management window, choose video clip(s) to back up and click Export button.
6. Choose backup device (USB flash drive, USB HDD, or DVD writer).
7. Click Export (to check backup, choose recorded file in Export interface and click button).