HIKVISION®

NVR Quick Start Guide (QSG): DS-7604NI-E1/4P, DS-7608NI-E2/8P, DS-7616NI-E2/16P, v3.4.3

WHAT'S IN THE BOX

Make sure the following items are in your box:

- NVR
- Mouse
- Remote
- 7604: Power Supply 7608/7616: AC Cord
- HDD Screws
- HDD
- HDD Cables (7608/7616 only)
- Ear Mounts
- QSG
- DVD-ROM
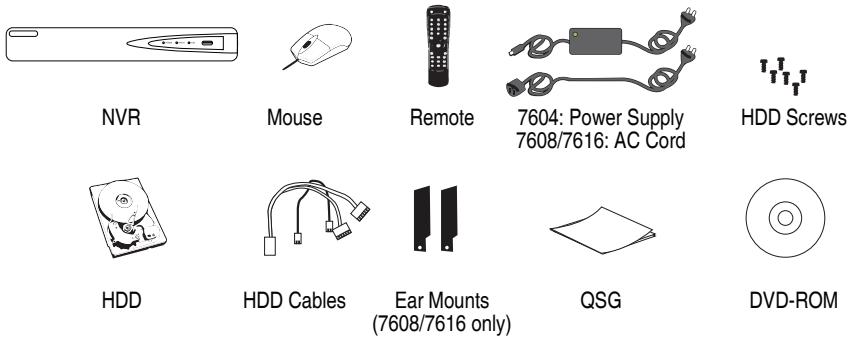
MENU TREE

Use this menu tree to navigate the embedded menus.

Menu

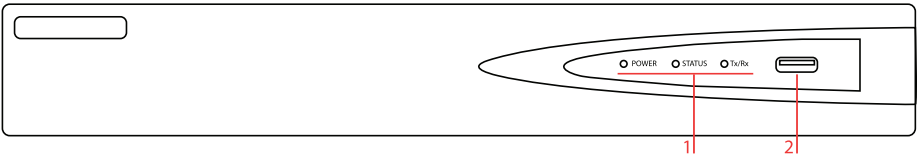| Playback	File Management	VCA Search	Recording Config.	Cameras Setup	System Config.	Maintenance	System Info.
Record	Record	Behavior Search	Schedule	Cameras	General	System Log	Device Info
Tag	Event	Face Search	Recording Quality	OSD	Network	Import/Export	Camera
		Counting	Motion Detect	Image	HDD	Upgrade	Record
		Heat Map	Trigger	PTZ	Live View	Default	Alarm
			Holiday	Privacy Mask	Exceptions	Network Detect	Network
				Video Tampering	User	HDD Detect	HDD
				Video Loss			
				VCA			

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

REAR PANELS
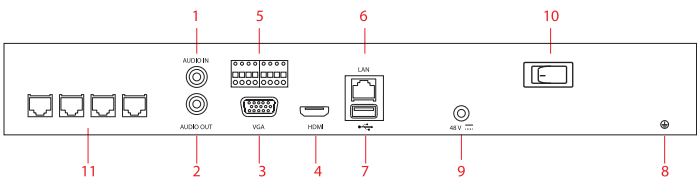
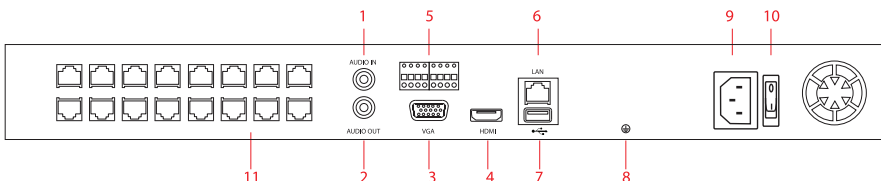Figure 2, DS-7604NI-E1/4P Rear Panel
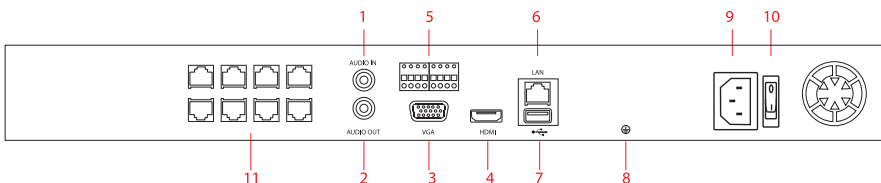
Figure 3, DS-7608NI-E2/8P Rear Panel

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

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

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.

3 LOCAL ACTIVATION (continued)

Password Strength Levels

STRENGTH LEVEL	DESCRIPTION
Level 0 (Risky) DVRs *will not* 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.
Level 1 (Weak) DVRs *will* accept password	Password contains number + lowercase letter or number + uppercase letter and is at least 8 characters.
Level 2 (Medium/Fair) DVRs *will* accept password	Password contains 2 types of characters (*neither* number + lowercase letter *nor* number + uppercase letter) and is at least 8 characters.
Level 3 (Strong) DVRs *will* accept password	Password contains more than three types of characters and is at least 8 characters.

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
- Uppercase 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.

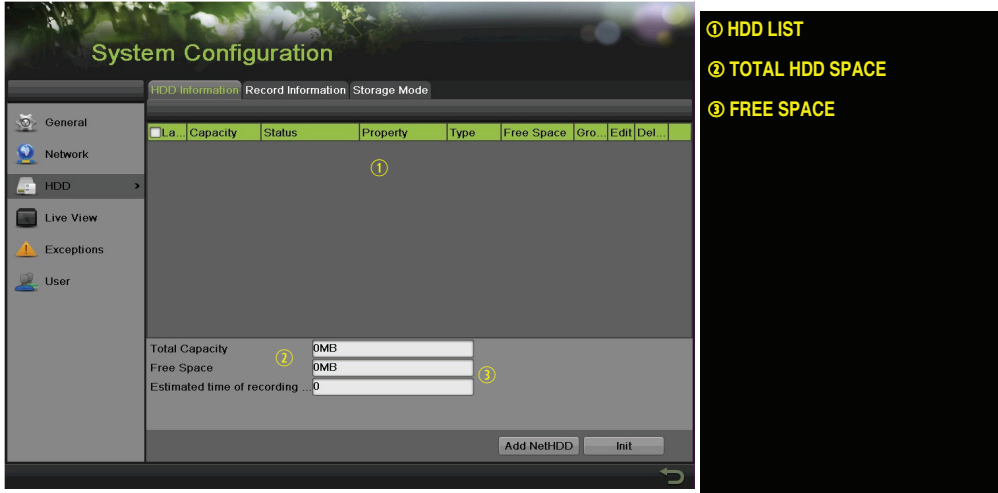## 3 LOCAL ACTIVATION (continued)

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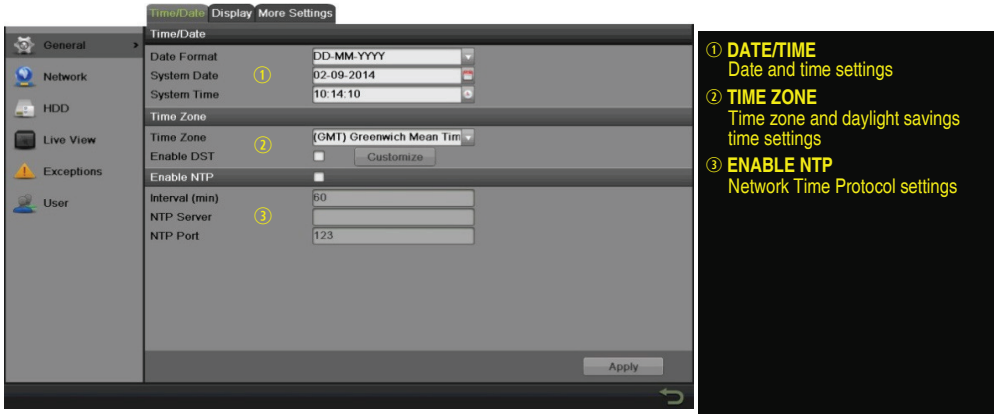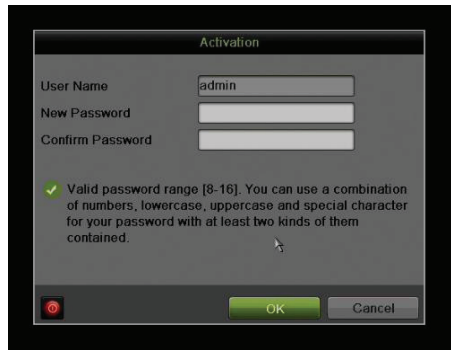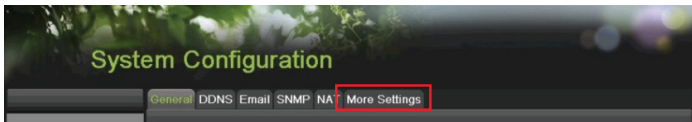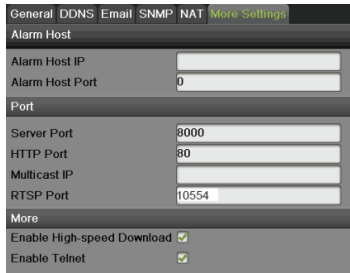
1. Go to MENU > SYSTEM CONFIGURATION > HDD.
2. Use the checkboxes to select the HDDs that need to be initialized.
3. Press INIT.

NOTE: Factory installed HDDs come initialized. Initializing again will erase any record video (this does not affect settings).

① HDD LIST
② TOTAL HDD SPACE
③ FREE SPACE

5 SET DATE AND TIME

1. Go to MENU > SYSTEM CONFIGURATION > GENERAL.

① **DATE/TIME**
Date and time settings
② **TIME ZONE**
Time zone and daylight savings time settings
③ **ENABLE NTP**
Network Time Protocol settings

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).

① **GENERAL TAB**
Select this tab
② **NIC TYPE**
Set LAN type
③ **ENABLE DHCP**
Check box so that router will assign IP address
④ **REFRESH**
Press to update values
⑤ **IP V4 ADDRESS**
Default 192.0.0.64
⑥ **PREFERRED DNS SERVER**
Default is 8.8.8.8
⑦ **ALTERNATE DNS SERVER**
Leave 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)
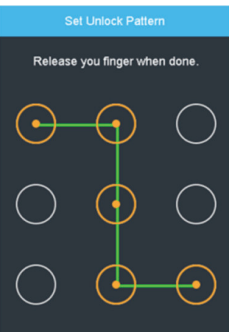
DDNS allows users with dynamic (changing) IP address to remotely access their unit.

1. Click on the **DDNS** tab.
2. Check the **DDNS** checkbox.
3. **DDNS Type**: HiDDNS (default)
4. **Continent/Country**: Auto Detection (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.
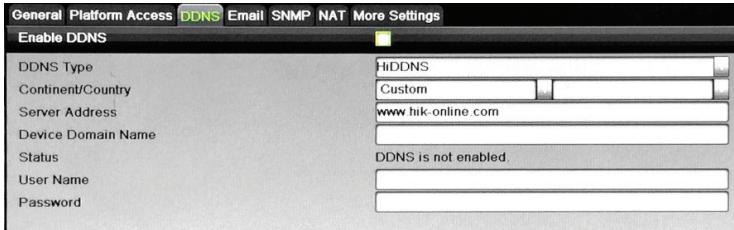
9. After the changes have been made, press **Apply** to display the **Succeeded** message. (If the Domain Name does not meet acceptable criteria, or is already registered, an error message will appear.)

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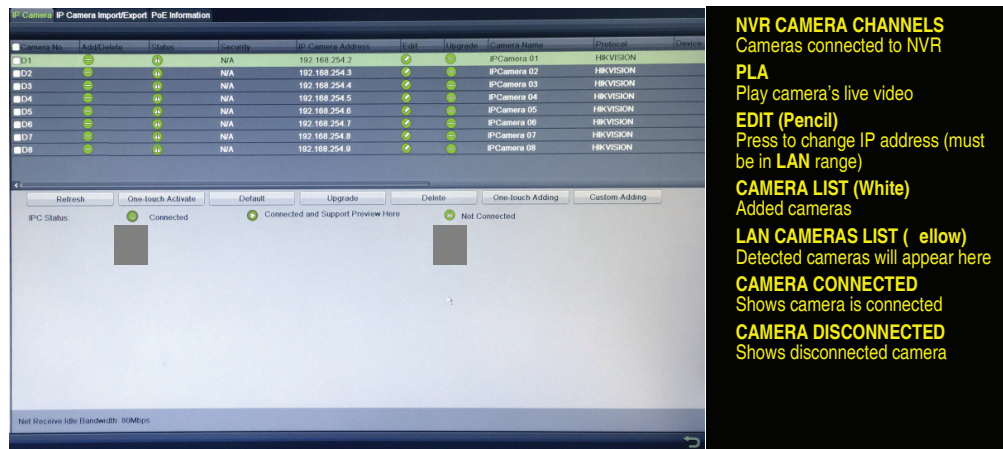 5) Press the **OK** button to add the camera.
- **Third-Party Cameras** — Must be added manually:
  1) Click an unused camera channel's **D.r** checkbox.
  2) Click the **EDIT** (Pencil) button to display the **Edit IP Camera** window.
  3) Use pull-down menu to change **Adding Method** from "Plug and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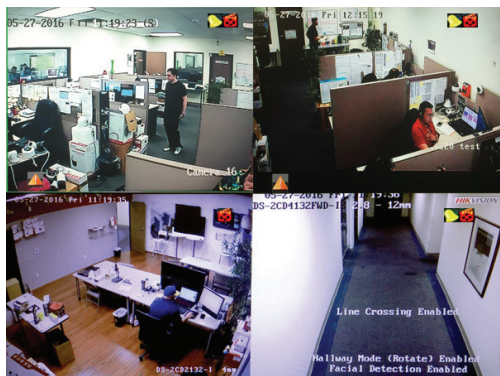 5) Press the **OK** button to add the camera.

IP Camera Management Icons

Icon	Explanation	Icon	Explanation
	Edit basic camera parameters		Upgrade the connected camera
	Camera disconnected; click icon to get camera's exception information		Delete the IP camera
	Play connected camera's live video		Camera connected

NVR CAMERA CHANNELS
Cameras connected to NVR
PLA
Play camera's live video
EDIT (Pencil)
Press to change IP address (must be in **LAN** range)
CAMERA LIST (White)
Added cameras
LAN CAMERAS LIST (Yellow)
Detected cameras will appear here
CAMERA CONNECTED
Shows camera is connected
CAMERA DISCONNECTED
Shows disconnected camera

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)

▼ **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 **APPL** .

T PE
Motion or Continuous (default)
COLOR
Shows Recording Schedule days:
 Blue=Continuous
 Yellow=Event (motion/alarm)
 Grey=None
TIMES
Customize schedule times (ignore for "motion only" recording)
ADD
Press to add time settings to schedule
ENABLE SCHEDULE
If not checked, camera will not record

▼ **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).

CAMERA
Select camera
ENABLE MOTION DETECTION
Click to enable/disable
MOTION GRID
Draw grid area that will detect motion
SENSITIVIT
Select number of green squares to set sensitivity (in example, sensitivity is set to 3)
**SETTINGSSET**
Configure arming schedule and linkage actions
APPL
Click to apply settings

▼ **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.**
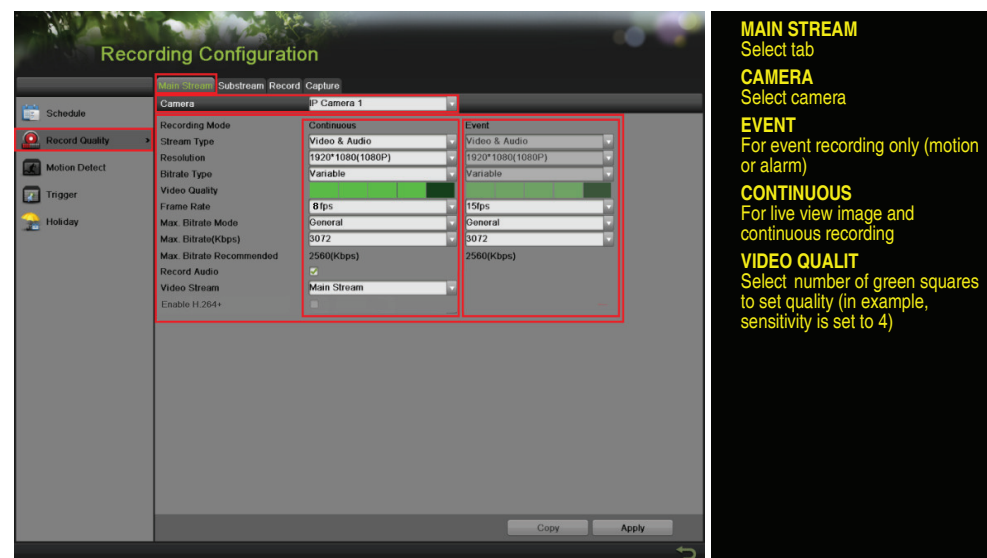
MAIN STREAM
Select tab
CAMERA
Select camera
EVENT
For event recording only (motion or alarm)
**CONTINUOUS**
For live view image and continuous recording
VIDEO QUALIT
Select number of green squares to set quality (in example, sensitivity is set to 4)

- **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.
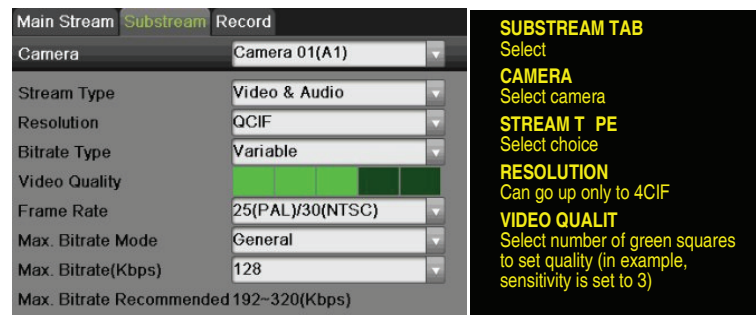
SUBSTREAM TAB
Select
CAMERA
Select camera
STREAM T PE
Select choice
RESOLUTION
Can go up only to 4CIF
VIDEO QUALIT
Select number of green squares to set quality (in example, sensitivity is set to 3)

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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 **PLA** .
5. Click within the timeline to jump to desired time.

SMART SEARCH/PLA BACK
Search for specific defined activities
FULL SCREEN
Goes to full screen for multiple channel playback
PLA /STOP
Begin playback (toggles between Play and Stop)
CAMERA LIST
Select camera(s) to play back
CALENDAR
Select date to play back
TIMELINE
Click on timeline to jump to desired playback time

▼ **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 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.
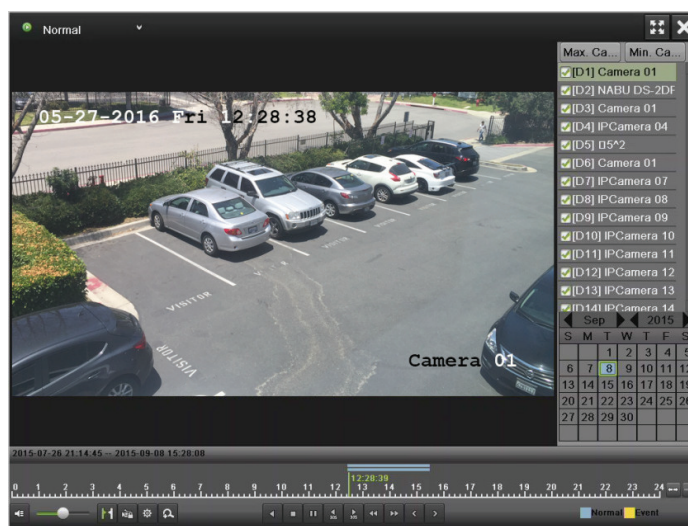
CAMERA LIST
Select cameras to view
CALENDAR
Select dates to view
PLA /STOP
Toggles between Play and Stop
START/STOP CLIPPING
Toggles between Start Clipping and Stop Clipping
LOCK
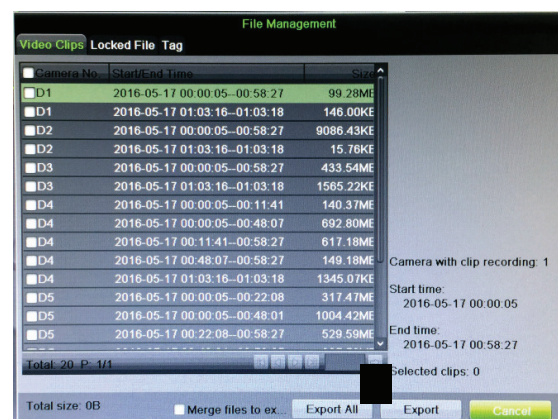Locks selected video clips to prevent them from being deleted
FILE MANAGEMENT
Displays list of saved clips, export clips from this window

▼ **Lock Video Clips**

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).

VIDEO CLIPS LIST
Select desired clips to export
EXPORT BUTTON
Save clips to USB device

First Choice for Security Professionals