

# HIKVISION® DVR Quick Start Guide (QSG)

DS-7204HGHI-SH, DS-7208HGHI-SH, DS-7216HGHI-SH

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## Regulatory Information

### FCC Information

**FCC Compliance:** This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**FCC Conditions:** This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement



This product and, if applicable, the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.



2012/19/EU (WEEE Directive): Products marked with this symbol should not be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info)



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info).

**Industry Canada ICES-003 Compliance:** This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

**Safety Instruction:** These instructions are intended to ensure that the user can use the product correctly to avoid danger or property loss. The precaution measure is divided into "Warnings" and "Cautions."

- **Warnings:** Serious injury or death may occur if any of the warnings are neglected.
- **Cautions:** Injury or equipment damage may occur if any of the cautions are neglected.

 <b>Warnings</b> Follow these safeguards to prevent serious injury or death.	 <b>Cautions</b> Follow these precautions to prevent potential injury or material damage.
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### Warnings

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 24 VAC or 12 VDC according to the IEC60950-1 standard. Refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Make sure that the plug is firmly connected to the power socket. When the product is mounted on wall or ceiling, the device shall be firmly fixed.
- If smoke, odor, or noise rise from the device, turn off the power at once and unplug the power cable, and then contact the service center.



### Cautions

- Make sure the power supply voltage is correct before using the device.
- Do not drop the device or subject it to physical shock.
- If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently. If the device will not be used for an extended period, protect it from dirt.
- Do not place the device in extremely hot, cold, dusty, or damp locations, and do not expose it to high electromagnetic radiation. Do not operate product in outside of its stated environmental specs.
- To avoid heat accumulation, good ventilation is required for the operating environment.
- Keep the device away from liquids while in use.
- While in delivery, the device shall be packed in its original packing, or packing of the same durability.
- Regular part replacement: some equipment parts (e.g., electrolytic capacitor) shall be replaced regularly according to their average endurance time. The average time varies because of differences between operating environments and usage history, so regular checking is recommended for all users. Contact your dealer for more details.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.
- If the product does not work properly, contact your dealer or the nearest service center. Never attempt to disassemble the device yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

## WHAT'S IN THE BOX

Make sure the following items are in your box:



DVR



Mouse



Remote



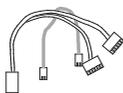
Power Supply



HDD Screws  
(Installed)



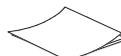
HDD  
(Installed)



HDD Cables  
(Installed)



Ear Mounts



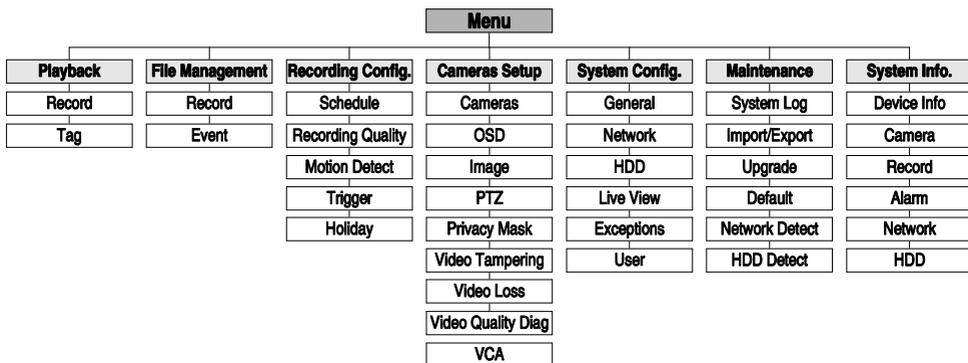
QSG



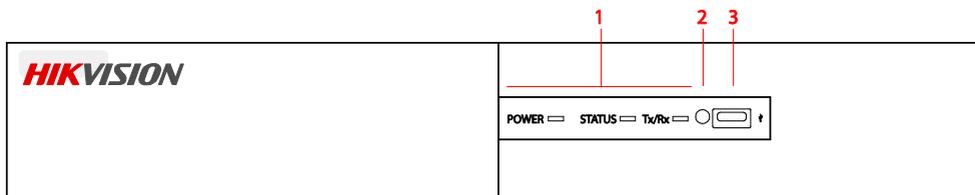
DVD-ROM

## MENU TREE

Use this menu tree to navigate the embedded menus.

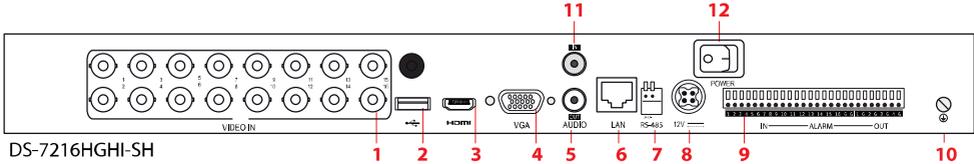
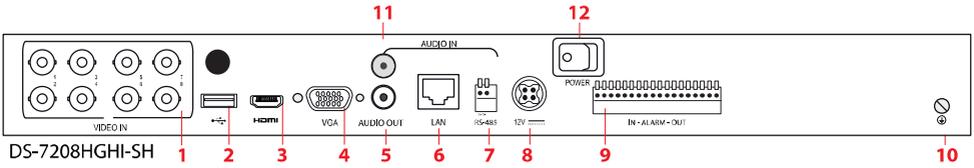
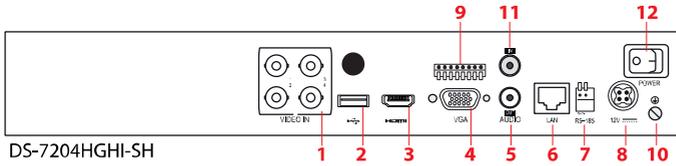


## FRONT PANEL



1.	Status Indicators	<ul style="list-style-type: none"> <li>• <b>Power:</b> Illuminates when rear panel power switch is turned on.</li> <li>• <b>Status:</b> Blinks when data is being read from or written to HDD.</li> <li>• <b>TX/RX:</b> Blinks when network connection is functioning properly.</li> </ul>
2.	IR Receiver	Receiver for IR remote
3.	USB Port	Connects USB mouse or USB flash memory devices

# REAR PANELS



No.	Item	Description
1	Video In	BNC interface for TVI and analog video input
2	USB Port	USB port for additional devices
3	HDMI	HDMI video output connector
4	VGA	DB-15 connector for VGA output. Display local video output and menu.
5	Audio Out	RCA connector
6	Network Interface	Connector for network
7	RS-485 Interface	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of PTZ receiver respectively. D+, D- pin connects to Ta, Tb pin of controller. For cascading devices, the first DVR's D+, D- pin should be connected with the D+, D- pin of the next DVR.
8	Power Input	12 VDC power supply
9	Alarm I/O	Connector for alarm input
10	Gnd	Connector for alarm output
11	Audio In	12 VDC power supply
12	Power Switch	Switch for turning the device on/off

# 1

## CONNECT DEVICES

1. Connect power supply cord to the DVR and plug into 110 VAC outlet (surge suppressor is recommended).
2. Connect DVR to LAN using Cat 5e (or better) cable.
3. Connect video monitor(s) to DVR using HDMI and/or VGA cables, as appropriate.
4. Connect mouse to USB port.
5. Connect to audio I/O using RCA connectors.

## 2 START THE DVR

Plug power cord into A.C. outlet. Power indicator LED will illuminate to indicate unit is starting.

1. After startup, power indicator LED remains illuminated.

## 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. Risky passwords, as determined by the system, are not allowed. Also, reset password regularly.

3. Click **OK** to save password and activate device.



### ▼ Log In

1. **User Name** field will be prefilled with "admin."
2. Input **Password** (default = wrong password 7 x locks account for 30 minutes; can be changed in setup).
3. Click **OK**.

## 4 FORMAT THE HARD DRIVE (IF NEEDED)

Hard drives must be formatted before use. If they are not formatted, the DVR will beep until they are.

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

**NOTES:** Units purchased with HDDs come with HDDs preformatted. Formatting erases any recorded video (this does not affect settings).

## 4 FORMAT THE HARD DRIVE (IF NEEDED) (continued)



- 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

A network connection is required to access the cameras remotely.

1. Go to 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.

## 6 SET UP NETWORK ACCESS (continued)

4. Disable DHCP (uncheck the checkbox).
5. Change "Preferred DNS Server" value to 8.8.8.8 (leave Alternate DNS Server blank).



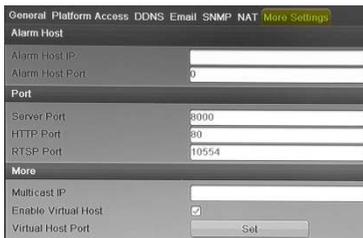
- ① **GENERAL TAB**  
Select this tab
- ② **NIC TYPE**  
Not changeable
- ③ **ENABLE DHCP**  
Check box so that router will assign IP address
- ④ **IP V4 ADDRESS**  
Default 192.0.0.64
- ⑤ **PREFERRED DNS SERVER**  
Default is 8.8.8.8
- ⑥ **ALTERNATE DNS SERVER**  
Leave blank or use 75.75.75.75 or other known DNS address

## 7 SET COMMUNICATION 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 to avoid conflicts with the ISP or if multiple devices are installed at a single location.

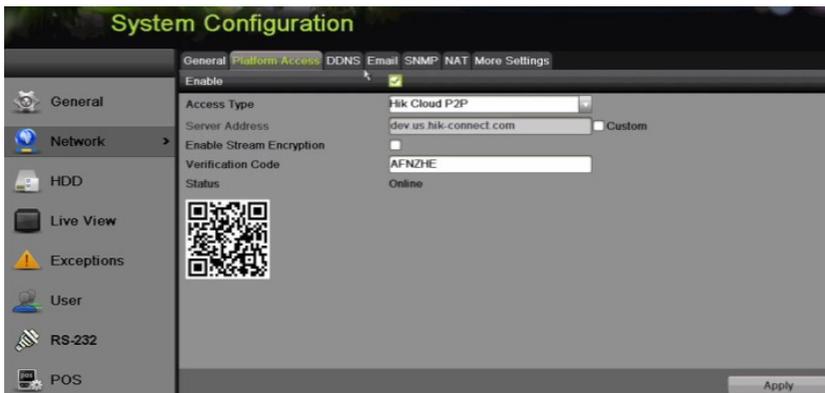
# 8

## SET UP HIK-CONNECT P2P CLOUD SERVICE

**NOTE:** Ports 9010 and 9020 must not be blocked for the Hik-Connect Cloud service to work.

Use the Hik-Connect mobile app (from iOS App Store or Google Play) to create a Hik-Connect P2P Cloud account to connect Hikvision devices over the Internet. You must create a Hik-Connect account so you can associate your devices with your account. Please download 'How To' documentation about setting up your Hik-Connect account from <http://tech.hikvisionusa.com/>. Remote access to the DVR from more than one account can be enabled by setting up the sharing function which does require ports to be forwarded and additional setup on the Hik-Connect app.

1. Enable Hik-Connect P2P on the DVR.
  - 1) Go to Main Menu > System Configuration > Network > Platform Access.
  - 2) Check the **Enable** checkbox.
  - 3) Server Address must be "dev.hik-connect.com." If not, check the **Custom** checkbox, and type "dev.hik-connect.com."
  - 4) Click the **Apply** button. Status will change to "Online" (if all settings are correct).
  - 5) Note the Serial Number and Verification Code shown here (for use when registering the DVR in your Hik-Connect account) or use the QR code displayed.



2. To see a device's video stream on the Hik-Connect or iVMS-4500 mobile app, add the device.
  - 1) Login to Hik-Connect mobile app with your user name, e-mail, or mobile number and password.
  - 2) On the Home screen, click the "+" button (upper right corner).
  - 3) Enter the device's information.
    - If you have the device's **QR Code**: Use the QR Code Scanner to scan the device's **QR Code**
    - If you do not have the device's **QR Code**: Enter the device information manually:
      - a. Click the Edit (pencil) icon on top right corner.
      - b. Enter device serial number (device must be online), then click the **OK** button.
      - c. When the device appears on the "Results" screen, click the **Add** button.
      - d. Enter device's 6-character Verification Code (all upper case), then click the **OK** button.
      - e. Click the Finish button.

# 9

## ADD IP CAMERAS

1. Right click a window in **Live View** mode to display the **Quick Menu**.
2. Highlight **Add IP Camera** and select **Auto** or **Manual**.
  - **Auto:** System will add the first two pre-activated Hikvision cameras automatically
  - **Manual:** Use if there are more than two Hikvision cameras on the network or if the cameras have not yet been activated
    - Add the desired camera(s) by clicking the + sign in front of the camera listing(s)
    - Non-activated cameras will automatically be activated when added

### IP Camera Management Icons

Icon	Explanation	Icon	Explanation
	Edit basic camera parameters		Add the detected IP camera
	Camera is disconnected; click icon for camera's exception information		Delete the IP camera
	Play camera's live video		Advanced camera settings
	Upgrade the connected camera	Security	Show active/inactive camera security status or the password strength



- ① **TRASH CAN**  
Press to delete camera
- ② **+**  
Press to add camera
- ③ **EDIT**  
Press to change IP address
- ④ **CAMERA LIST (WHITE)**  
Added cameras
- ⑤ **CAMERA LIST (YELLOW)**  
Detected cameras
- ⑥ **REFRESH**  
Press to find network cameras

# 10

## ADD ANALOG CAMERAS

### ▼ Adding Analog Cameras

1. Connect analog camera(s) to the "Video In" BNC connectors.

### ▼ Enabling Analog Cameras

Analog cameras are enabled by default; no further action is required.

# 11

## 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)

# 12

## SET UP RECORDING

Set up recording to capture camera video.

### ▼ Continuous Recording (Default)

1. Go to MENU > RECORDING CONFIGURATION.
2. Click **CONTINUOUS** under the calendar (blue) and the cursor will change to a wand.
3. Select the calendar days you wish to record continuously and the days will turn blue.
4. Press **APPLY**.



### ① COLOR

Shows Recording Schedule:

- Blue=Continuous
- Yellow=Event (motion/alarm)
- Grey=None

### ② SECTION

Customize part of existing schedule (ignore for "motion only" recording)

### ③ SCHEDULE TYPE

Motion or Continuous (default)

### ④ ENABLE SCHEDULE

If not checked, camera will not record

## 12 SET UP RECORDING (continued)

### ▼ Motion Detection Recording

Motion Recording will capture video only when motion in the scene is detected.

1. To set **MOTION RECORDING**, go to MENU > RECORDING CONFIGURATION
2. Click on **EVENT** under the calendar (yellow) and the mouse cursor will change to a wand.
3. Select the days you wish to set motion recording and they will turn yellow.
4. Press **APPLY**.
5. Press **COPY** button to copy the new schedule to the remaining cameras.
6. After recording has been set to **Event Recording**, go to **Motion Detect** to set the motion detection for each camera. In this step, the **Copy** option is only for analog cameras; IP cameras need to be configured individually.



**① CAMERA**  
Select camera

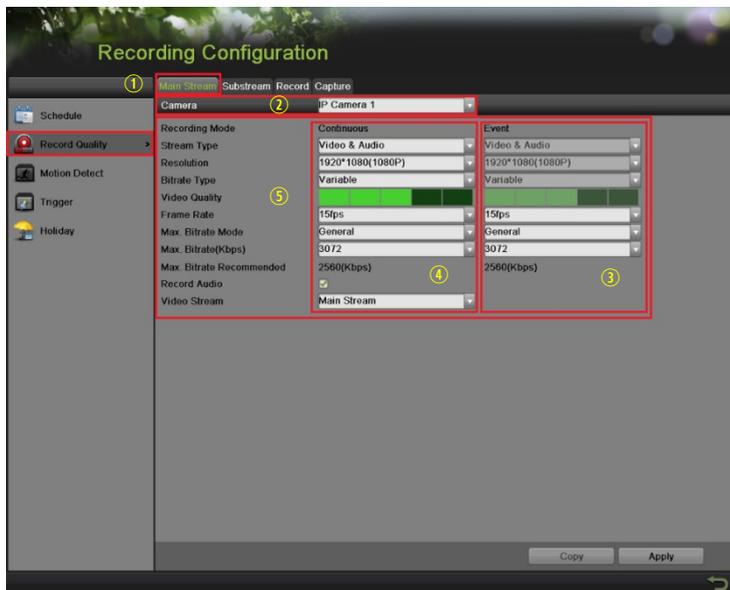
**② ENABLE MOTION DETECTION**  
Click to enable/disable

**③ MOTION GRID**  
Draw grid area that will detect motion

**④ MOTION SENSITIVITY**  
Select number of green squares to set sensitivity (in example, sensitivity is set to 3)

**⑤ APPLY**  
Click to apply settings

7. Go to RECORDING CONFIGURATION > RECORD QUALITY 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**.



- ① **MAIN STREAM**  
Select tab
- ② **CAMERA**  
Select camera
- ③ **EVENT**  
For event recording only (motion or alarm)
- ④ **CONTINUOUS**  
For live view image and continuous recording
- ⑤ **VIDEO QUALITY**  
Select number of green squares to set quality (in example, sensitivity is set to 3)

- **Video Quality** adjusts picture clarity (medium setting = three green squares is recommended). Medium setting is a balance between good picture and saving HDD space.
- **Frame Rate** sets recording frame rate (12-15 fps is recommended to save HDD space and prevent “choppy” video).
- **Max Bitrate Mode** chooses between pre-set bitrate values and customized values (**General** setting is recommended).
- **Max Bitrate (KBPS)** is the chosen bitrate for streaming the video.
- **Max Bitrate Recommended** is the recommended bitrate according to the parameters set.
- **Record Audio** turns audio recording on/off (available only if camera has a connected microphone or only analog channels 1-4).
- **Video Stream** changes recording between **Main Stream** and **Sub Stream** (requires restart).

Recommended Recording Parameters			
Resolution	Video Quality	Frame Rate (fps)	Bitrate (Kbps)
320 x 240 (QVGA)	Medium (3 squares)	12-15	207
352 x 240 (CIF)			384
640 x 480 (VGA)			768
704 x 480 (4CIF)			1024
1280 x 720 (720p)			2048
1280 x 960 (960p)			2048
1600 x 1200 (2 MP)			2560
1920 x 1080 (1080p)			3072
2048 x 1536 (3 MP)			3072
2560 x 1920 (5 MP)		4096	8

8. Set up the **Sub Stream** to stream to mobile devices and display multiple cameras locally.

**NOTE:** If upload speed is insufficient, lower frame rate, bitrate, and/or resolution.

## 12 SET UP RECORDING (continued)



### ① SUBSTREAM TAB

Select

### ② CAMERA

Select camera

### ③ STREAM TYPE

Select choice

### ④ RESOLUTION

Can go up only to 4CIF

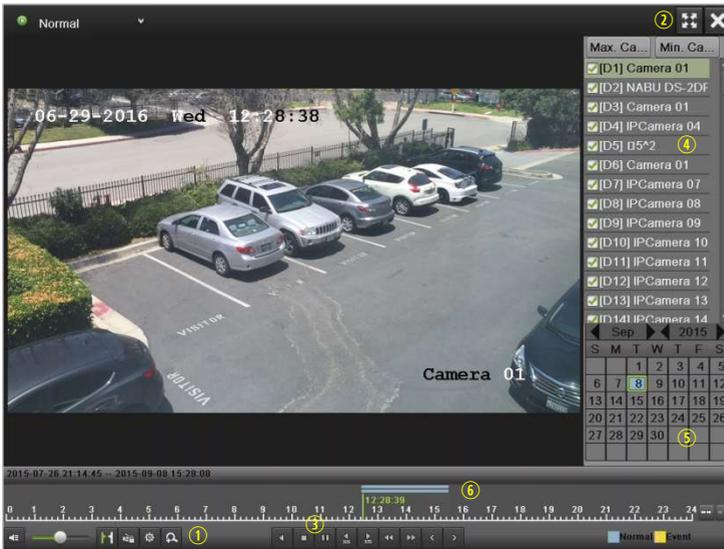
### ⑤ VIDEO QUALITY

Select number of green squares to set quality (in example, sensitivity is set to 3)

## 13 PLAY BACK RECORDED VIDEO

Video playback plays back recorded video.

1. Go to MENU>PLAYBACK.
2. Select the desired camera from the drop-down menu.
3. Select the desired date (days that contain recordings will be highlighted).
4. Select the desired time using the Timeline or "Jump to Time" feature.
5. Press **PLAY**.



### ① SMART SEARCH/PLAYBACK

Search for specific defined activities

### ② FULL SCREEN

Goes to full screen for multiple channel playback

### ③ PLAY/STOP

Begin playback (toggles between Play and Stop)

### ④ CAMERA LIST

Select camera to play back

### ⑤ CALENDAR

Select date to play back

### ⑥ TIMELINE

Click on timeline to select desired playback time

### ▼ Play Back Record Files

1. Choose a camera in Live View and click the  button in the shortcut operation menu. Only files recorded in the past five minutes will be played.

# 13 PLAY BACK RECORDED VIDEO (continued)

## ▼ Playback Controls

1. Use toolbar at bottom of Playback interface to control playing process.
2. Check camera(s) to play back.

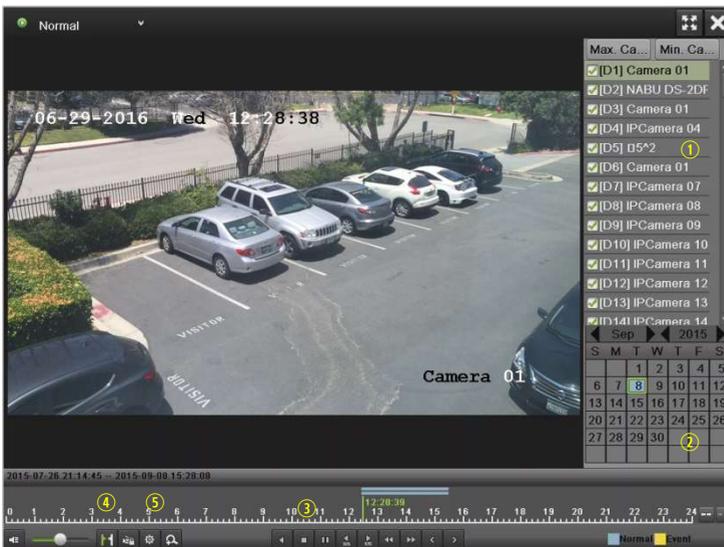
# 14 BACK UP VIDEO RECORDINGS AND CLIPS

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

## ▼ Choose Recorded Video Clips To Back Up

Connect a USB flash drive, HDD, or DVD writer to an available USB port.

1. Go to MENU > PLAYBACK.
2. Select the date and beginning time of the incident.
3. Click **START CLIPPING** button.
4. Select the ending time of the incident.
5. Click **END CLIPPING** (same button as **START CLIPPING**). Clip will be marked.
6. Repeat steps 1-6 as many times as required.
7. Click **FILE MANAGEMENT** to display a new window containing all marked clips.
8. Select the desired clips.
9. Click **EXPORT**.



### ① CAMERA LIST

Select cameras to view

### ② CALENDAR

Select dates to view

### ③ PLAY/STOP

Toggles between Play and Stop

### ④ START/STOP CLIPPING

Toggles between Start Clipping and Stop Clipping

### ⑤ FILE MANAGEMENT

Displays Clips Export, a list of saved clips

# 14 BACK UP VIDEO RECORDINGS AND CLIPS (continued)

## ▼ Back Up Video Clips

1. Connect a USB flash drive, HDD, or DVD writer to an available USB port.
2. In the Video Export interface, choose camera(s) to back up and click **Quick Export** button.
3. Choose backup device (USB flash drive, USB HDD, or DVD writer).
4. Click **Export** (to check backup, choose recorded file in **Export** interface and click  button).



### 🔍 CLIP LIST

Select desired clips (multiple clips selected from same camera will be stitched together)

### 🔍 EXPORT

Save clips to USB device



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