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Regulatory Information

FCC Information

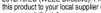
FCC Compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment 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:

- This device may not cause harmful interference.
- 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 cannot 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

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.

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. Warnings Follow these safeguards to prevent serious injury or death.

Cautions Follow these precautions to prevent potential injury or material damage.



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

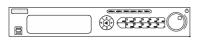
- Make sure the power supply voltage is correct before using the device.
- Do not drop the device or subject it to physical shock.
- If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently. If the device will not be used for an extended period, protect it from dirt.
- Do not 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.
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 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 Cord





HDD (Installed)



HDD Cables (Installed)



Ear Mounts



QSG



DVD-ROM

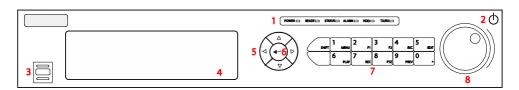
MENU TREE

Use this menu tree to navigate the embedded menus.

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

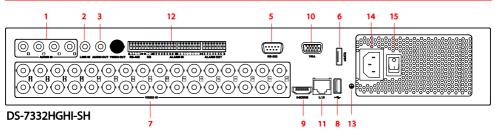
VCA

FRONT PANEL



1	Status Indicators	Power Indicator: Green when power switch on real panel is on, red when power switch is off Ready Indicator: Green when DVR is functioning properly Status Indicator: N/A Alarm Indicator: Red when a sensor alarm is detected HDD Indicator: Blinks red when data is being read from or written to HDD TX/RX Indictor: Blinks green when network connection is functioning properly
2	On/Off Switch	Starts up or shuts down the DVR processes
3	USB Port	Connects USB mouse or USB flash memory devices
4	Drive Bay	Location for DVD-RW drive
5	Direction Buttons	Navigation keys
6	Enter Key	Confirms selection
7	Numeric/Controls	Switches channel in Preview or PTZ Control mode, Inputs numbers in Edit mode, switches channels in Playback mode
8	Jog Shuttle	Moves menu selection. In Playback, outer ring speeds up/slows down video. Inner ring jumps 30 seconds forward/backward in a video. In Preview mode, cycles through channels.

REAR PANELS



No.	Item	Description		
1	AUDIO IN	RCA connector		
2	Line In	RCA connector		
3	AUDIO OUT	RCA connector		
5	RS-232	Connector for RS-232 devices		
6	eSATA	Connects external SATA HDD, CD/DVD-RW		
7	VIDEO IN	BNC interface for TVI and analog video input		
8	USB Ports	USB ports for additional devices		
9	HDMI	HDMI video output connector		
10	VGA	DB-15 connector for VGA output. Display local video output and menu.		
11	LAN	Connector for network		
		RS-485 Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of PTZ receiver respectively.		
12	l/O	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.		
		Keyboard Keyboard connector		
		Alarm In Connector for alarm input		
		Alarm Out Connector for alarm output		
13	GND	Ground		
14	Power	100 to 240 VAC power		
15	Power Switch	Switch for applying power to the device (do not power <i>off</i> device until you first <i>shut down</i> the device's processes by using the On/Off Switch on the front panel)		

1

CONNECT DEVICES

- Connect AC cord to the DVR and plug into 110 VAC outlet (surge suppressor is recommended).
- 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.
- 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. Turn **Power Switch** located on back panel on.
- Press On/Off Switch located on front panel on. After startup, power indicator LED will remain illuminated.

3

LOCAL ACTIVATION

System access requires a secure, user-assigned password.





▼ Set Admin Password

- First-time access requires user to create an admin password.
- 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

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



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.
- Press INIT.

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



5

SET DATE AND TIME

1. Go to MENU > SYSTEM CONFIGURATION > GENERAL.



SET UP NETWORK ACCESS

A network connection is required to access the cameras remotely.

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

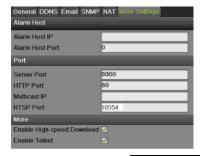


SET CAMERA PORTS

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 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.

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. Refrain from downloading any software from the above mentioned website.

2. Proceed to the **Routers** section on the website for step-by-step instructions.

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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. See your NVR user manual.

- 1. Enable Hik-Connect P2P on the NVR.
 - 1) Go to Main Menu > System Configuration > Network > Platform Access.
 - 2) Check the **Enable** checkbox.
 - 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 NVR 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.

10 ADD IP CAMERAS

- 1. Click an idle window in Live View mode.
- 2. Click the icon in the center of the window to display the **Add IP Camera** window.
- Highlight an IP camera and click the Add button to add it directly (you can click the Search button to refresh the online IP cameras manually, or custom add the IP camera by editing the parameters in the corresponding text file and clicking the Add button).

IP Camera Management Icons

Icon	Explanation	Icon	Explanation
1	Edit basic camera parameters	①	Add the detected IP camera
	Camera is disconnected; click icon for camera's exception information	m	Delete the IP camera
	Play camera's live video	100	Advanced camera settings
	Upgrade the connected camera	Security	Show active/inactive camera security status or the password strength



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ADD ANALOG CAMERAS

- Adding Analog Cameras
 - Connect analog camera(s) to the "Video In" BNC connectors.
- **▼** Enabling Analog Cameras
 - 1. Analog cameras are enabled by default; no further action is required.
- Disabling Analog Cameras
 - 1. Go to MENU > CAMERAS > ANALOG (TAB).
 - 2. Analog Camera List will display all enabled cameras.
 - 3. Disable analog cameras in the Analog Cameras Enable Status section:
 - Uncheck the camera checkbox of any camera(s) you wish to disable.
 - Check the Analog checkbox to disable/enable all analog cameras.
 - 4. Press APPLY to save settings.



12 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)

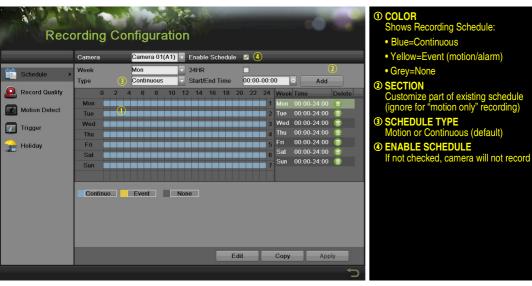
13 SET UP RECORDING

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.
- Press APPLY.

13 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.



- 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.
- 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.



- 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)			207	
352 x 240 (CIF)			384	
640 x 480 (VGA)			768	
704 x 480 (4CIF)			1024	
1280 x 720 (720p)	Medium (3 squares)	12-15	2048	
1280 x 960 (960p)	ivieulum (3 squares)		2048	
1600 x 1200 (2 MP)			2560	
1920 x 1080 (1080p)			3072	
2048 x 1536 (3 MP)			3072	
2560 x 1920 (5 MP)		8	4096	

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.



14 PLAY BACK RECORDED VIDEO

Video playback plays back recorded video.

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



▼ Play Back Record Files

 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.

▼ Playback Controls

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

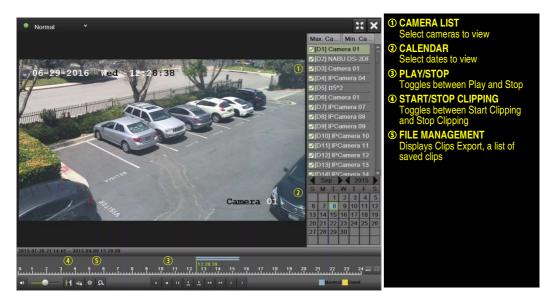
15 BACK UP VIDEO RECORDINGS AND CLIPS

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.

- Go to MFNU > 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.



▼ 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 **b** button).





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