Honeywell

HVE

Audio/Video Encoders

HVE1 **HVE1X**
HVE4 **HVE4X**
HVE8 **HVE8X**

User Guide

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User Guide

Revisions

Issue	Date	Revisions
A	09/2013	New document.
Va Rev A	10/2013	Added Index. Minor text updates throughout. Updated the data storage capacity and network protocols in the Specifications section. Added an index. Added a section in chapter 6 about setting the RS-232 port as a transparent channel.

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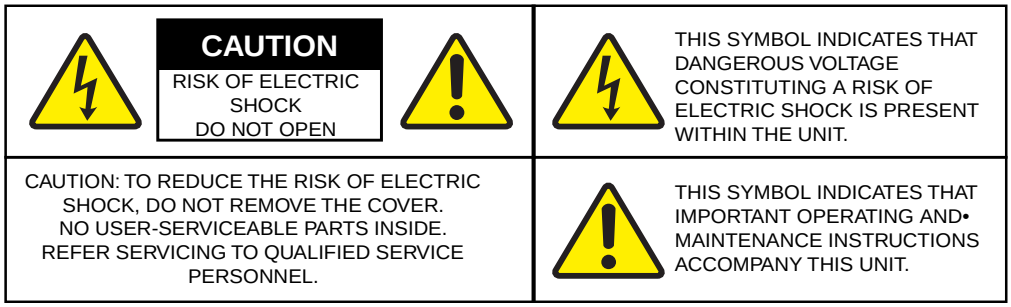
Cautions and Warnings



Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.

CAUTION **12 V DC models require the use of CSA Certified/UL Listed Class 2 power adapters to ensure compliance with electrical safety standards.**

Regulatory Statements

FCC Compliance Statement

Information to the User: This equipment has been tested and found to comply with the limits for a Class 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.

Note Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.

Manufacturer's Declaration of Conformance

North America

The equipment supplied with this guide conforms to UL 60950-1 and CSA C22.2 No. 60950-1.

Europe

The manufacturer declares that the equipment supplied is compliant with the essential requirements of the EMC directive 2004/108/EC, conforming to the requirements of standards EN 55022 for emissions, EN 50130-4 for immunity, and EN 60950 for electrical equipment safety.

Waste Electrical and Electronic Equipment (WEEE)

Correct Disposal of this Product (applicable in the European Union and other European countries with separate collection systems).

This product should be disposed of, at the end of its useful life, as per applicable local laws, regulations, and procedures.

Safety Instructions

BEFORE OPERATING OR INSTALLING THE UNIT, READ AND FOLLOW ALL INSTRUCTIONS.
AFTER INSTALLATION, retain the safety and operating instructions for future reference

1. **HEED WARNINGS** - Adhere to all warnings on the unit and in the operating instructions.

2. **INSTALLATION**
   - Install in accordance with the manufacturer's instructions.
   - Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.
   - Do not install the unit in an extremely hot or humid location, or in a place subject to dust or mechanical vibration. The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.
   - Any wall or ceiling mounting of the product should follow the manufacturer's instructions and use a mounting kit approved or recommended by the manufacturer.
3. **POWER SOURCES** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your facility, consult your product dealer or local power company.
4. **HEAT** - Situate away from items that produce heat or are heat sources such as radiators, heat registers, stoves, or other products (including amplifiers).
5. **WATER AND MOISTURE** - Do not use this unit near water or in an unprotected outdoor installation, or any area classified as a wet location.
6. **MOUNTING SYSTEM -** Use only with a mounting system recommended by the manufacturer, or sold with the product.
7. **ATTACHMENTS** - Do not use attachments not recommended by the product manufacturer as they may result in the risk of fire, electric shock, or injury to persons.
8. **ACCESSORIES** - Only use accessories specified by the manufacturer.
9. **CLEANING** - Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
10. **SERVICING** - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
11. **REPLACEMENT PARTS** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

Warranty and Service

Subject to the terms and conditions listed on the Product warranty, during the warranty period Honeywell will repair or replace, at its sole option, free of charge, any defective products returned prepaid.

In the event you have a problem with any Honeywell product, please call Customer Service at 1.800.323.4576 for assistance or to request a **Return Merchandise Authorization (RMA)** number.

Be sure to have the model number, serial number, and the nature of the problem available for the technical service representative.

Prior authorization must be obtained for all returns, exchanges, or credits. **Items shipped to Honeywell without a clearly identified Return Merchandise Authorization (RMA) number may be refused.**

About This Document

This document introduces the HVE series of Audio/Video encoders. It covers how to install and operate an HVE encoder.

This document is intended for installers and operators.

Overview of Contents

This document contains the following chapters and appendixes:

- *Chapter 1, Introduction*, introduces the HVE encoders.
- *Chapter 2, Installing an HVE Encoder*, describes the physical installation of an HVE encoder, including connections, installing a HDD, and descriptions of the front panel and the back panel.
- *Chapter 3, Connecting to an HVE Encoder via the Internet*, describes how to find and connect to the encoder via an internet search engine.
- *Chapter 4, Viewing Live Video*, describes how to view live video, how to capture a picture, and how to control a PTZ camera.
- *Chapter 5, Configuring the Encoder*, describes how to configure the encoder settings, including IP settings, email settings, UPnP settings, HTTPS settings, and Bonjour settings.
- *Chapter 6, Configuring Camera Settings*, describes how to use the encoder to remotely configure camera settings, including snapshot settings, alarm settings, video settings, and privacy zones.
- *Chapter 7, Configuring Recording and Capturing Settings*, describes how to configure recording and capturing settings, including schedules.
- *Chapter 8, Playing Back Recorded Video*, describes how to play back recorded video.
- *Chapter 9, Managing User Accounts*, describes how to manage user accounts.
- *Chapter 10, Searching Logs, Viewing Device Information, and Maintaining the Encoder*, describes how to search logs, view device information, restart or restore the encoder to factory default settings, import or export configuration files, and upgrade the encoder system.
- *Index*, provides a searchable list for easy access to the document.

Typographical Conventions

This document uses the following typographical conventions:

Font	What it represents	Example
Helvetica	Keys on the keyboard	Press Ctrl+C
Lucida	Values of editable fields that are mentioned in the body text of the document for reference purposes, but do not need to be entered as part of a procedure	The **Time from** field can be set to `Hours:Minute:Seconds`.
	Text strings displayed on the screen	The message `Unauthorized` displays.
	Syntax	`(object) entered`
Swiss721 BT Bold	Words or characters that you must type. The word “enter” is used if you must type text and then press the Enter or Return key.	Enter the **password**.
	Menu titles and other items you select	Double-click **Open** from the **File** menu.
	Buttons you click to perform actions	Click **Exit** to close the program.
Italic	Placeholders: words that vary depending on the situation	Enter your *user name*.
	Cross-reference to external source	Refer to the *System Administrator Guide*.
	Cross-reference within document	See *Chapter 2, Installation*.

1

Introduction

Incorporating the latest in encoding technology, the HVE(X) series of Audio/Video encoders digitizes analog video, and then can store that video on a Hard Disk Drive (HDD) or SATA drive, or transmit that video over the internet.

Using the latest embedded processor, the HVE(X) Series Audio/Video encoders provide:

- More powerful capabilities in audio/video encoding
- More data storage via microSD (HVE1, HVE1X, HVE4, HVE4X) or HDD (HVE8, HVE8X)
- More support for various network protocols
- More stability and reliability because the code is downloaded in FLASH

Table 1-1 HVE Encoders Model Numbers

Model number	Description
HVE1	1-channel, Audio/Video Encoder, microSD compatible, NTSC
HVE1X	1-channel, Audio/Video Encoder, microSD compatible, PAL
HVE4	4-channel, Audio/Video Encoder, microSD compatible, NTSC
HVE4X	4-channel, Audio/Video Encoder, microSD compatible, PAL
HVE8	8-channel, Audio/Video Encoder, SATA HDD compatible, NTSC
HVE8X	8-channel, Audio/Video Encoder, SATA HDD compatible, PAL

Features

Encoding Features

- H.264/MPEG4/MPEG2/MJPEG encoding
- Encoding up to 4CIF resolution
- Dual-stream encoding
- Either compound stream encoding or video stream encoding (with audio and video synchronization during compound stream encoding)

Network Features

- One 10M/100Mbps adaptive Ethernet interface (PoE) for HVE1(X)/HVE4(X) models
- One 10M/100M/1000Mbps adaptive Ethernet interface for HVE8(X) models
- Multiple browser support: IE, FireFox, Chrome, and Safari
- Remote web browser access by HTTPS ensures high security
- Netfilter builds internet firewalls based on packet filtering
- QoS protocol enhances data transmission performance
- Support for SNMPv1/v2c/v3 simple network management protocol
- mDNS-based Apple's Bonjour protocol enables automatic device discovery
- Supports email notifications, FTP uploading, and alarm uploading by SOCKS v4/v5 proxy server
- Zero configuration networking (Zeroconfig) enables the device to automatically obtain the IPv4 link-local IP addresses (range: 169.254.1.0 to 169.254.254.255)
- Auto/manual port mapping by UPnP™
- Supports PSIA and ONVIF protocols
- Supports Honeywell IP Utility ver 1.53 for automatically searching and discovering the online devices in the local network area
- Automatically acquires IP addresses through the DHCP protocol
- Supports RTSP/RTP standard stream media protocol, which allows users to view live video through unicast
- Supports multicast addresses for live viewing of multiple cameras through the network
- Supports two-way audio and single-direction broadcasting
- Supports transmission via RS-232 and RS-485 transparent channels (except HVE1/HVE1X)
- Supports access to the internet through PPPoE, and supports Peanut Hull, DynDNS, and HVEDDNS
- Supports NTP for setting the time
- Connectible with a network HDD in NAS and IPSAN mode

- Supports sending emails by SMTP protocol, and supports attaching captured JPEG images and SSL encryption
- Supports remote JPEG image capturing with user-defined image resolution and quality

PTZ

- Supports multiple PTZ protocols - Channels can be configured for:
  - Protocol type
  - RS-485 address
  - Baud rate
  - Data bit
  - Stop bit
  - Even and odd parity
  - Stream control method
  - Remote configuration for presets, patrols, and patterns
- Supports PTZ linkage configuration to link relay alarm inputs with the callup of predefined presets, patrols, and patterns

Alarm

- Supports Relay Alarm Input
  - Configurable to either Normally Open (NO) mode or Normally Closed (NC) mode
  - Select from up to four different alarm arming periods
  - Supports triggering the corresponding alarm handling methods, relay alarm output, buzzer alarm, upload to control center, PTZ linkage, presets/patrols/pattern callup.
- Supports Relay Alarm Output
  - Connect relay alarm output with alarm devices for alarm handling within an arming period.

Exceptions

- Supports Exception Alarm Handling
  - Exception alarms include network disconnect alarm, IP address conflict alarm, and illegal access alarm.
  - Supports multiple alarm handling methods, relay alarm output, buzzer alarm, and uploading to a center.
- Supports Exception Reboot
  - Software Watchdog –Inspects important device threads and system resources. Automatically reboots the device if an exception is detected.
  - Firmware Watchdog –Inspects the device firmware. Automatically reboots the device if an exception in system task scheduling is detected.

Logs

Supports log classification into operation logs, alarm logs, exception logs, and information logs. Users can search and view all recorded system logs by date or type, as well as export the logs to text format over the network.

Note A hard disk/network disk/microSD card must be connected before log operation.

2

Installing an HVE Encoder

This chapter explains:

- Encoder installation and connections
- HDD installation [HVE8(X) only]
- Encoder front and back panels
- Alarm connections

Installation

The HVE1(X)/HVE4(X)/HVE8(X) encoders are highly advanced surveillance equipment that should be installed with care. If your encoder supports a HDD, then please ensure that you install a manufacturer-recommended HDD. See *Table 2-1* for a list of recommended HDDs.

During encoder installation:

- Use brackets for rack mounting.
- Ensure that there is ample room for audio and video cables.
- When installing the cables, ensure that the bend radius of the cables is no less than five times its diameter.
- Connect both the alarm and the RS-485 cable.
- Allow at least 2cm (~0.75 inch) of space between rack-mounted devices.
- Ensure that the encoder is grounded.
- Ensure that the environmental temperature is within -10°C–55°C (14°F–131°F).
- Ensure that the environmental humidity is within 10%–90%.

Installing the Hard Disk Drive (HDD) [HVE8(X) only]

This section applies only to HVE8(X) models, which have room for a Hard Disk Drive (HDD) for recording.

Preparing for Installation

Your HVE8(X)encoder comes from the factory without a HDD. Follow these instructions to install a HDD that is appropriate for your situation according to the total capacity, which is calculated in terms of the Schedule Recording Settings (please see *Configuring Scheduled Recording and Capturing on page 99*). The installation and removal of the hard disk should be done by qualified professionals.

Before installing a HDD, please ensure the power is disconnected from the device. Only a factory-recommended HDD should be used for this installation.

Table 2-1 Tested Compatible HDDs

SEAGATE	
Capacity	**HDD Model**
3T	ST3000VX000-9YW1
2T	ST2000VX000-9YW1
	ST2000VX002-1AH1
	ST2000VM003-1CT1
1T	ST1000VM002-9ZL1
	ST31000322CS
	ST1000VX000-9YW1
	ST31000526SV
500G	ST3500410SV
	ST3500411SV
250G	ST3250312CS
	ST3250310SV
	ST3250820SV
WD	
Capacity	**HDD Model**
2T	WD20EURS-63S
1T	WDC WD10EVDS-63U

Required Tools: Screwdriver

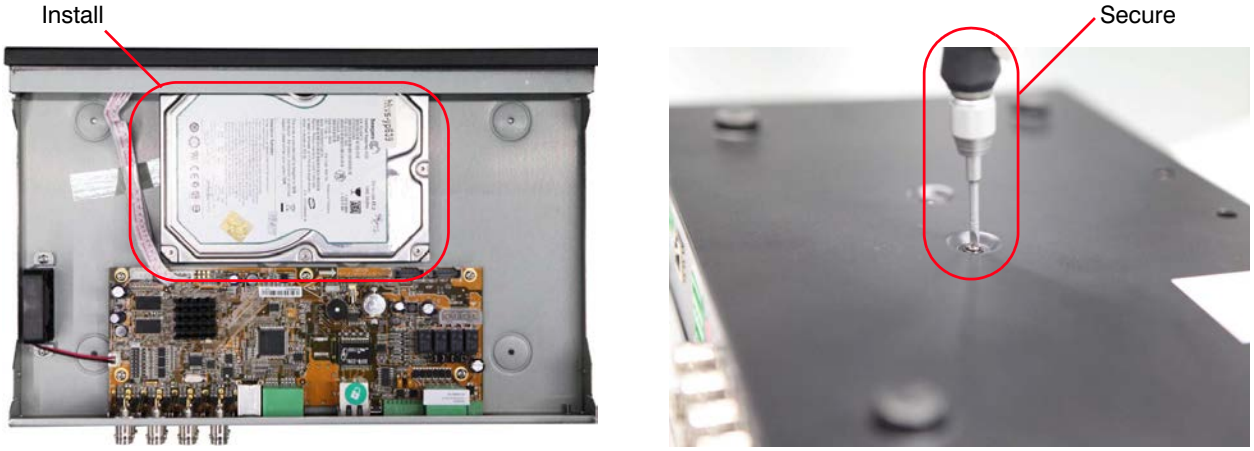
Installing the HDD

1. Use the screwdriver to unfasten the screws on both sides and the rear panel of the encoder, then remove the cover from the chassis and set aside.

Figure 2-1 Removing the Cover from an HVE8(X) Encoder

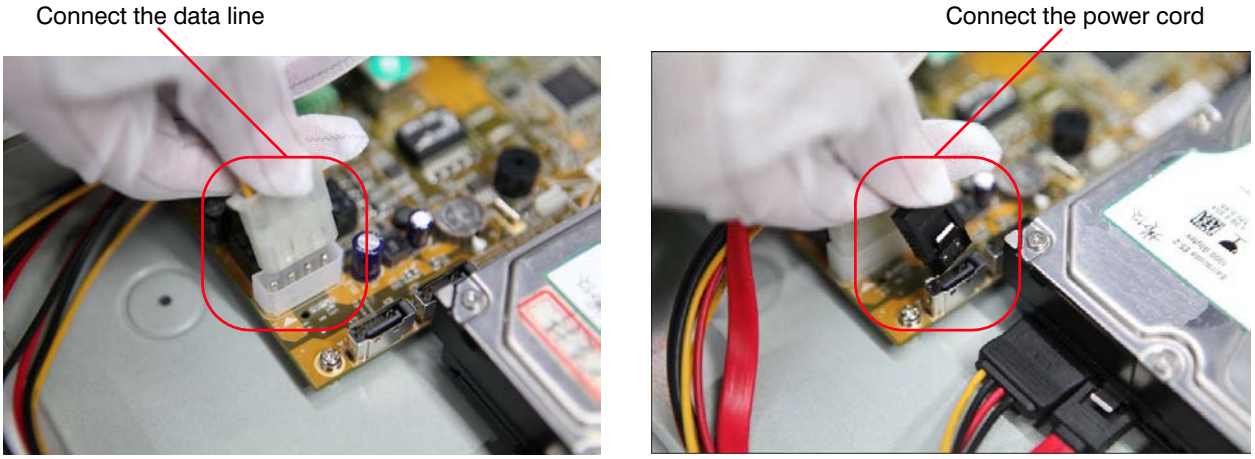
2. Place the HDD into the slot on the chassis, and then secure it in position by tightening the screws at the bottom of the chassis.

Figure 2-2 Installing and Securing the HDD in an HVE8(X) Encoder



3. Remove the HDD data line from the accessories box. Plug one end of the data line to the circuit board, and the other end to the data line port on the HDD. Connect the power cord to the HDD in the same way.

Figure 2-3 Connecting the Data Line and the Power Cord



4. Replace the chassis cover, and then tighten the screws on both sides and the rear panel of the encoder.

HVE1/HVE1X Encoder Front and Rear Panels

Figure 2-4 HVE1(X) Front Panel

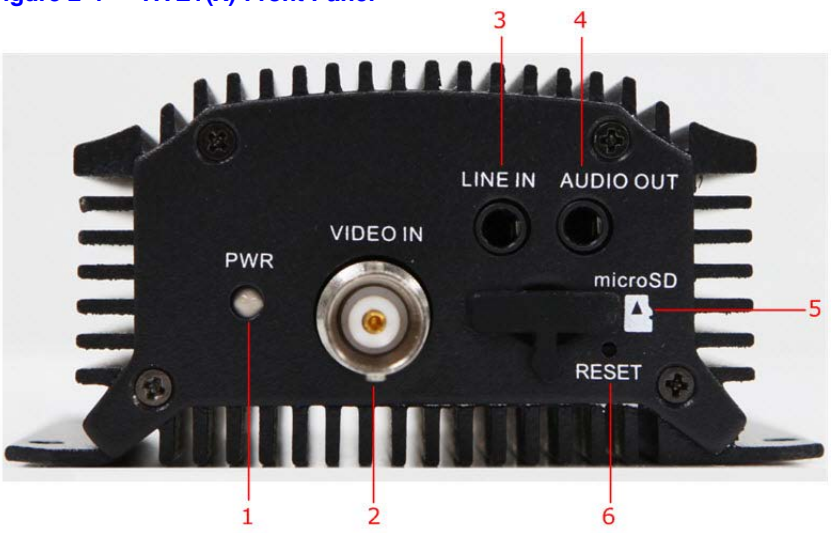


Table 2-1 HVE1 Front Panel Elements

	Interface Element	Function
1	PWR LED Indicator	Lights red when the device is powered on. Lights orange when a microSD card is inserted.
2	VIDEO IN	BNC connector for video input.
3	LINE IN	3.5mm connector for two-way audio input. Connect to an audio input device or an active pick-up, a microphone, etc.
4	AUDIO OUT	3.5mm connector for audio output. Connect to an audio output device, such as a loudspeaker.
5	microSD	microSD interface for data storage up to 32 GB, Class 6 and above.
6	RESET	Restore to the factory default settings by holding the **RESET** button for more than 15 seconds after the power is turned on.

Figure 2-5 HVE1(X) Rear Panel

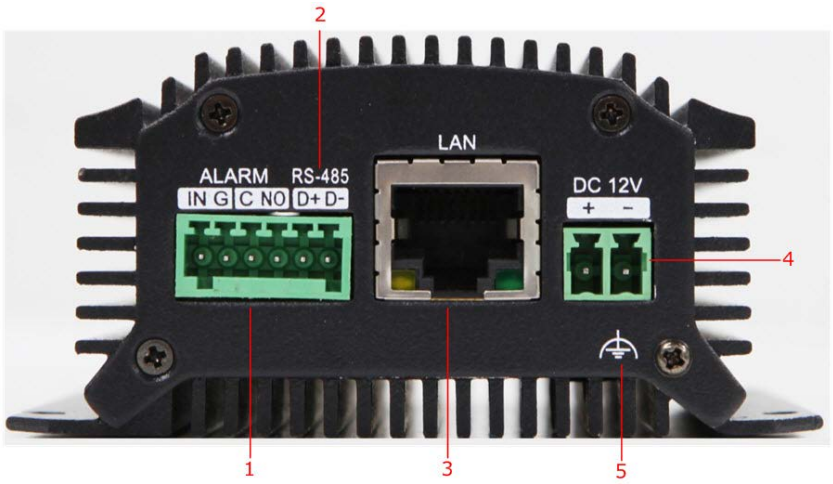


Table 2-2 HVE1 Rear Panel Elements

	Interface Element	Function
1	ALARM IN/OUT	Relay alarm input/output. The maximum voltage/current supported by the relay output is 12 V / 1 A. **Note** The alarm output terminal provides no JP2 pin.
2	RS-485	RS-485 connection for pan, tilt, zoom control.
3	LAN	10M/100Mbps adaptive Ethernet interface (PoE). The right LED indicator lights green when the network cable is connected. The left LED indicator blinks orange when receiving or transmitting data.
4	DC 12 V	12 V DC power supply
5	GND	Ground

Note The HVE1(X) model encoder does not support/supply a beeper/audio alert.

HVE4/HVE4X Encoder Front and Rear Panels

Figure 2-6 HVE4(X) Front Panel

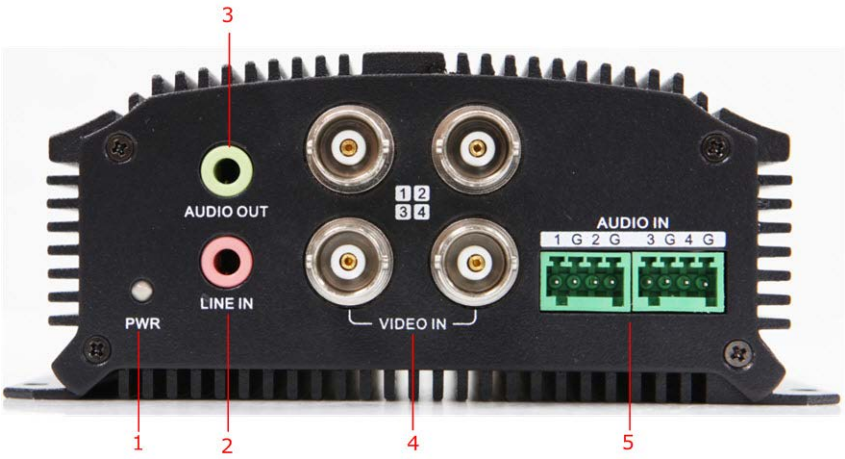


Table 2-3 HVE4 Front Panel Elements

	Interface Element	Function
1	PWR LED Indicator	Lights red when the device is powered on. Lights orange when a microSD card is inserted.
2	LINE IN	3.5mm connector for a two-way audio input. Connect to an audio input device or an active pick-up, a microphone, etc.
3	AUDIO OUT	3.5mm connector for audio output. Connect to an audio output device, such as a loudspeaker.
4	VIDEO IN	BNC connectors for video input.
5	AUDIO IN	Inputs for audio.

Figure 2-7 HVE4(X) Rear Panel

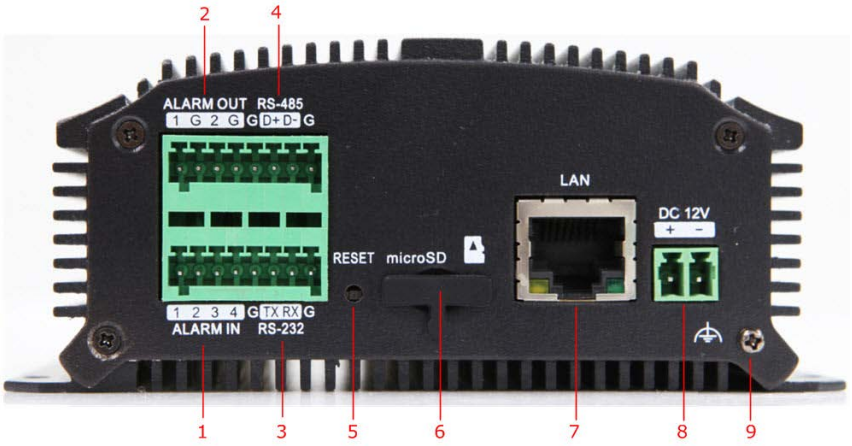


Table 2-4 HVE4 Rear Panel Elements

	Interface Element	Function
1	ALARM IN	Relay alarm input.
2	ALARM OUT	Relay alarm output. The maximum voltage/current supported by the relay output is 12 V / 1 A.
3	RS-232	Serial interface for configuring the encoder's parameters, or for using as a transparent channel. See *Configuring the RS-232 Port as a Transparent Channel on page 93*.
4	RS-485	RS-485 connection for pan, tilt, zoom control.
5	RESET	Restore to the factory default settings by holding the RESET button for more than 15 seconds after the power is turned on.
6	microSD	microSD interface for data storage up to 32 GB, Class 6 and above.
7	LAN	10M/100Mbps adaptive Ethernet interface (PoE). The right LED indicator lights green when the network cable is connected. The left LED indicator blinks orange when receiving or transmitting data.
8	DC 12 V	12 V DC power supply
9	GND	Ground

Note The HVE4(X) model encoder does not support/supply a beeper/audio alert.

HVE8/HVE8X Encoder Front and Rear Panels

Figure 2-8 HVE8(X) Front Panel

Table 2-5 HVE8 Front Panel Elements

	Interface Element	Function
1	POWER	Lights red when the device is powered on.
2	STATUS	Lights red when reading data from or writing data to the HDD.
3	Tx/Rx	Does not light when the encoder is not connected to the network. Blinks green when receiving or transmitting data. Blinks at a higher frequency when receiving or transmitting large amounts of data.

Figure 2-9 HVE8(X) Rear Panel

Table 2-6 HVE8 Rear Panel Elements

	Interface Element	Function
1	VIDEO IN	BNC connectors for video input.
2	LINE IN	3.5mm connector for two-way audio input. Connect to an audio input device or an active pick-up, a microphone, etc.
3	AUDIO OUT	3.5mm connector for audio output. Connect an audio output device, such as a loudspeaker.
4	AUDIO IN	Inputs for audio.

Table 2-6 HVE8 Rear Panel Elements

	Interface Element	Function
5	LAN	10/100/1000 Mbps adaptive Ethernet interface. The right LED indicator lights green when the network cable is connected. The left LED indicator blinks orange when data is transmitting/receiving.
6	RESET	Restore to the factory default settings by holding the RESET button for more than 15 seconds after the power is turned on.
7	RS-232, RS-485	Serial interface for configuring the encoder's parameters, or for using as a transparent channel. See *Configuring the RS-232 Port as a Transparent Channel on page 93*. RS-485 connection for pan, tilt, zoom control.
8	ALARM IN	Relay alarm inputs.
9	ALARM OUT	Relay alarm outputs.
10	DC 12 V	12 V DC power supply
11	GND	Ground

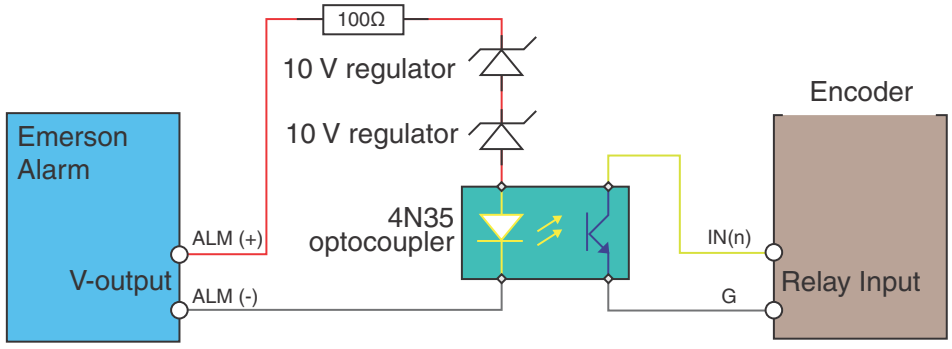
Connecting Alarms

Connecting Alarm Inputs

HVE encoders support open/close relay inputs for alarms. For the alarm input signal not in open/close relay signal mode, please connect as shown in the following diagrams.

Alarm Input Connections for an Emerson Alarm

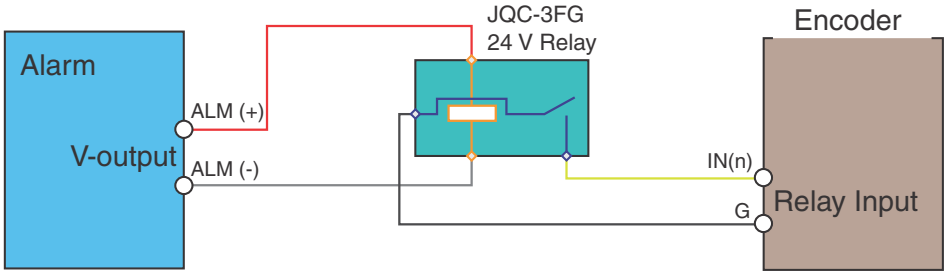
Figure 2-10 Alarm Input Connections for an Emerson Alarm



Note The relay input port on the encoder should be set to **NC** mode.

Alarm Input Connections for a Normal Alarm

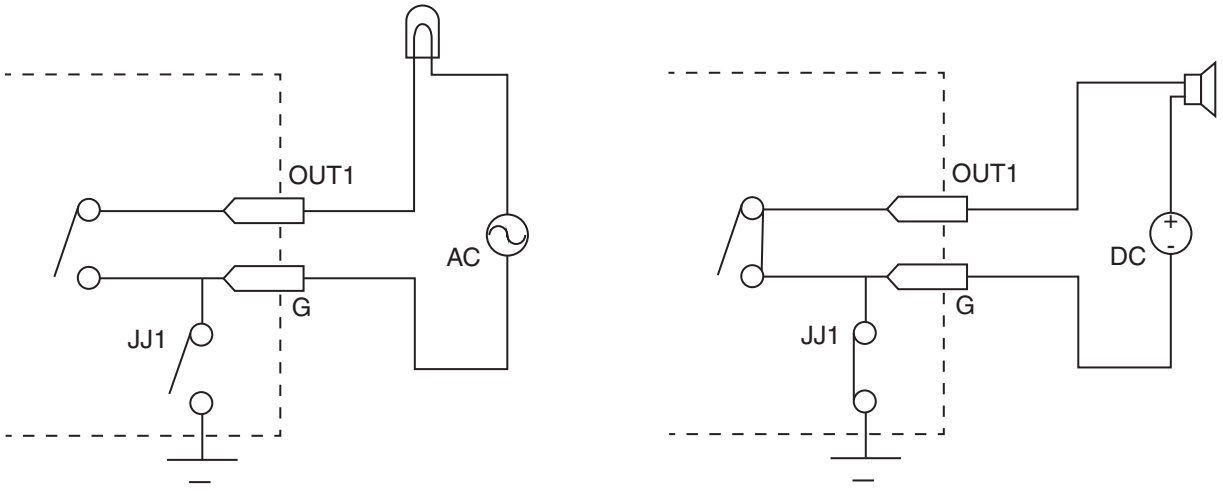
Figure 2-11 Alarm Input Connections for a Normal Alarm



Connecting Alarm Outputs

HVE encoders support open/close relay inputs for the alarm output mode. Alarm inputs can be configured as NO or NC. AC and DC loads are different, so different alarm output connection methods are used for each. For alarm output connections, please connect as shown in the following diagram.

Figure 2-12 Alarm Output Connections



Note The HVE1(X) has no JJ1 relay.

Please note the different connections for JJ1 show in *Figure 2-12*.

For the DC load, JJ1 can be safely used both in NC or NO modes. It is recommended that you use within the limit of 12 V / 1 A. For external AC input, the JJ1 relay must be open. The motherboard provides two jumpers, which each correspond to an alarm output. These jumpers are factory set to be connected.

3

Connecting to an HVE Encoder via the Internet

The encoder can also be accessed through a Web browser for configuration and operation. You can use:

- Microsoft Internet Explorer 6/7/8/9
- Mozilla Firefox 3.5 and above
- Google Chrome 8 and above
- Apple Safari 5.0.2 and above

Windows XPSP1 and above (32-bit) is required.

Before you can access the encoder through the internet, you must configure the encoder's network settings. See *Configuring Network Parameters on page 39*.

Before you start:

- Connect the device to the LAN, and prepare a PC that is connected to the same LAN with the device.
- Know the following:
  - Factory default device user name: **admin**
  - Factory default device password: **1234**
  - Factory default device IP address: **192.168.0.250**

Installing the IP Utility

Note Before installing the Honeywell IP Utility, ensure that your encoder is connected to your network through a CAT5 Ethernet cable.

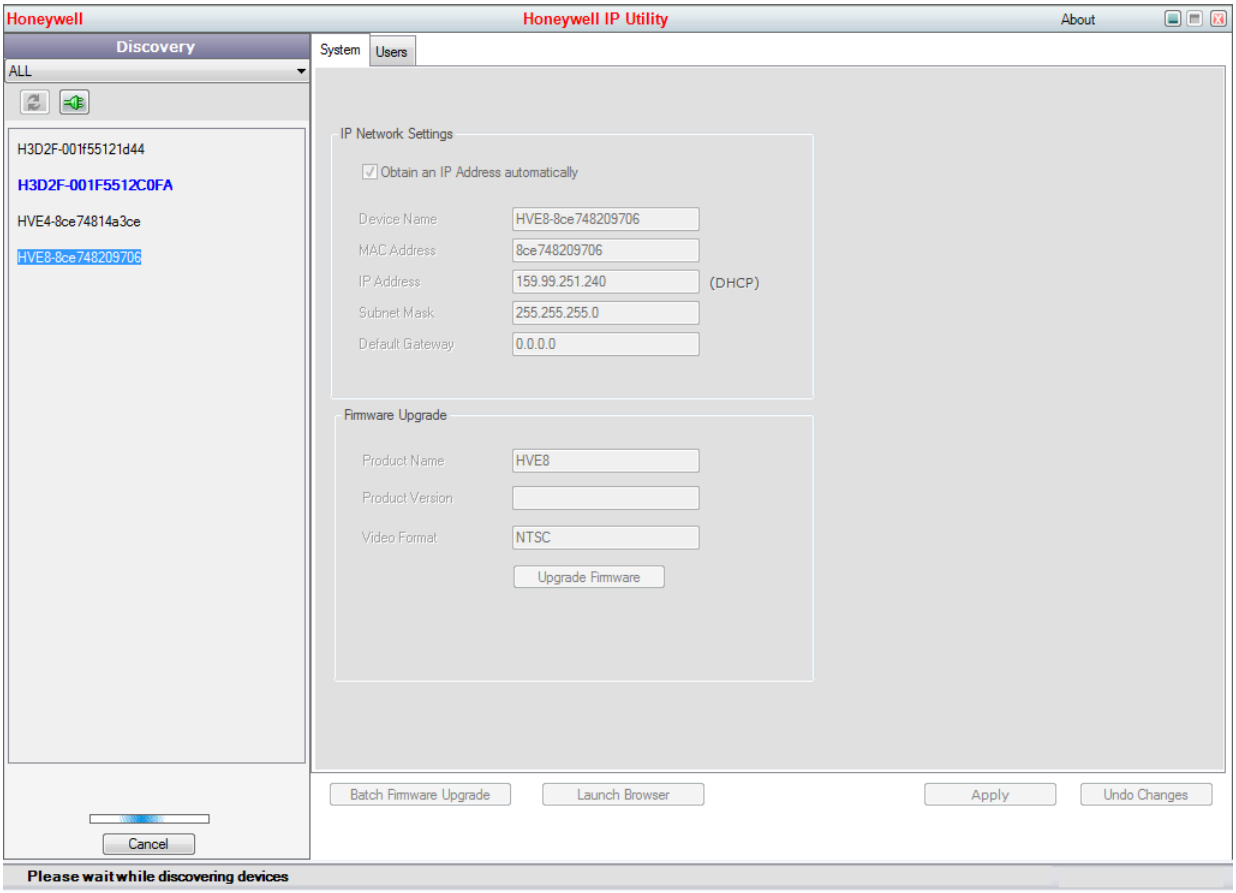
Note We recommend that you disable any Norton's AntiVirus software that might be running on your workstation.

To discover the IP device and configure the network settings, you must first install the IP Utility. For more information, see the user guide on the software CD that came with your encoder, or go to *www.honeywell.com/security*.

Note You must have Windows administrator privileges for the workstation onto which the Honeywell IP Utility is being installed.

1. Insert the software CD. Autorun will start the installation. If autorun does not start, browse to the CD drive, and run **Honeywell IP Utility Setup.exe**.
2. Follow the steps in the InstallShield wizard.
3. Log on to the IP Utility by double-clicking the IP Utility icon ( ) on the desktop. The main IP Utility page appears.

Figure 3-1 IP Utility



Configuring Network Parameters

If you do not know the IP address of the encoder, and this is not the first time you are using the encoder, then you can use SADP (IP finder) software or the Serial port tools to find the encoder's IP address, and to configure the IP address or other network parameters. We recommend that you change the default IP address for the first use.

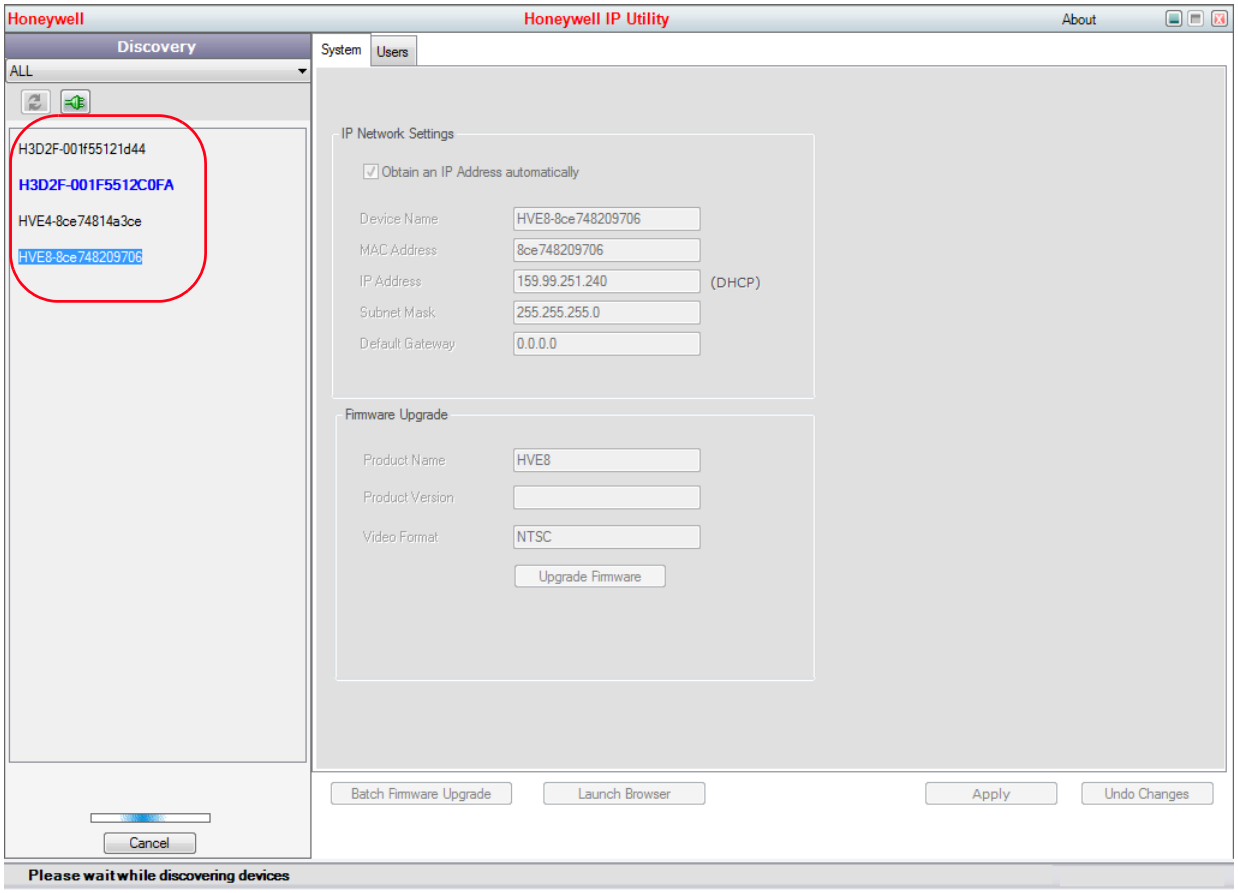
Note For the first-time user, the default user name is **admin**, and the default password is **1234**. The default IP address is **192.168.0.250**.

Searching for Online Devices

Automatically Searching for Online Devices

After you log on to the IP Utility, the devices on the network are automatically discovered and listed in the Discovery pane. After the initial discovery, auto-refresh continues to discover newly added network devices.

Figure 3-2 Found Devices



Note Found devices will automatically appear 15 seconds after they go online. They will disappear from the list 45 seconds after they go offline.

Manually Searching for Online Devices

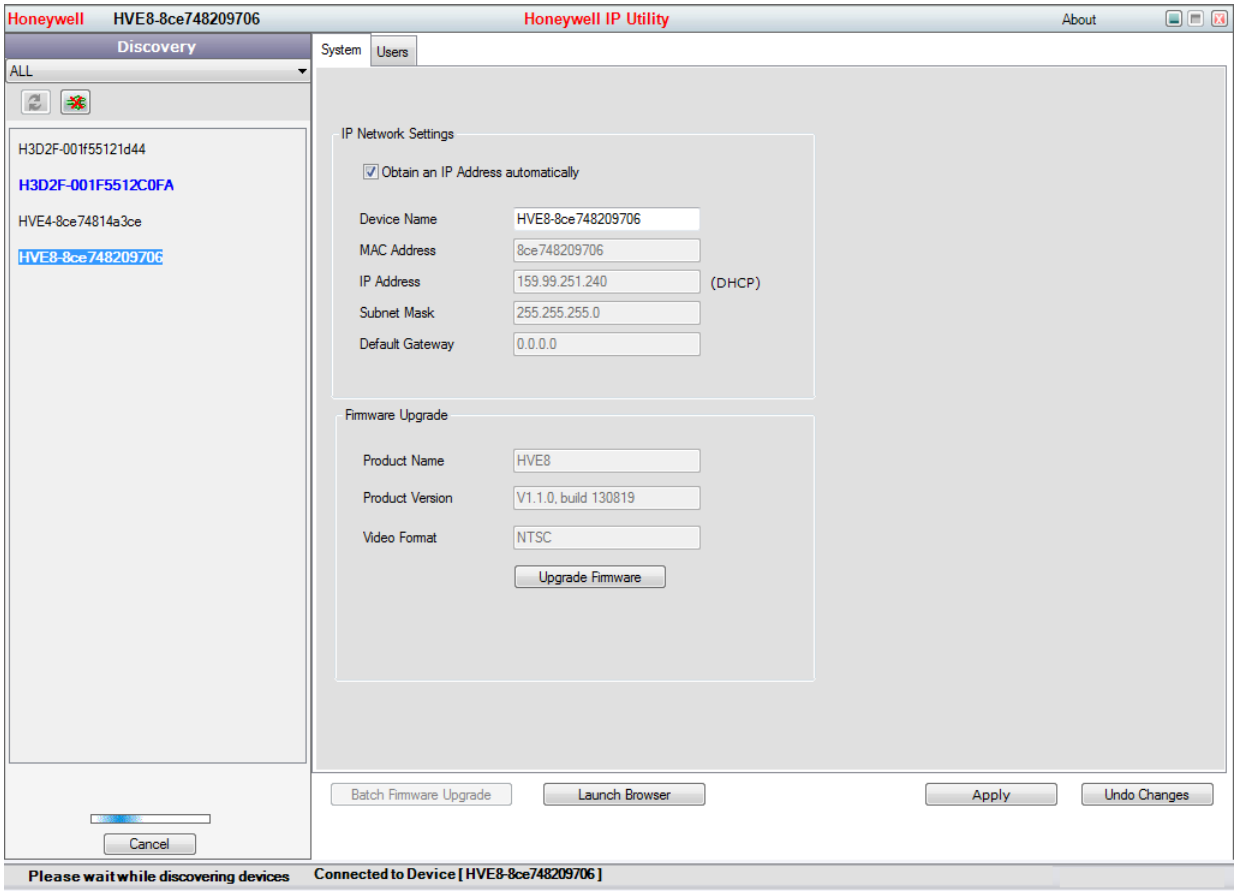
Click the **Refresh** button  to manually refresh the Online Device list. The newly discovered devices will be added to the list.

Note You can click **Up** or **Down** buttons on each column heading to reorder the information. Click >> to expand the device table, and to hide the network parameter panel on the right side. Click << to show the network parameter panel.

Modifying Network Parameters

1. Click to select a connected device in the device list. The network parameters for the selected device appear in the **IP Network Settings** panel on the right side.
2. Configure the network settings.
   - **Automatically** – Click to select **Obtain an IP Address automatically**, enter the **Device Name**, then click **Apply**. The network settings are automatically assigned from the network server.
   - **Manually** – Click to deselect **Obtain an IP Address automatically**, then enter the **Device Name**, **IP Address**, **Subnet Mask**, and **Gateway**. Then click **Apply**.

Figure 3-3 Editing Network Parameters in the Modify Network Parameters Window



Note Check the IP network settings before clicking **Apply**. Incorrect values might cause a failure when connecting the tool to the encoder.

Note Contact your network administrator if you have any network-related issues or questions about your network.

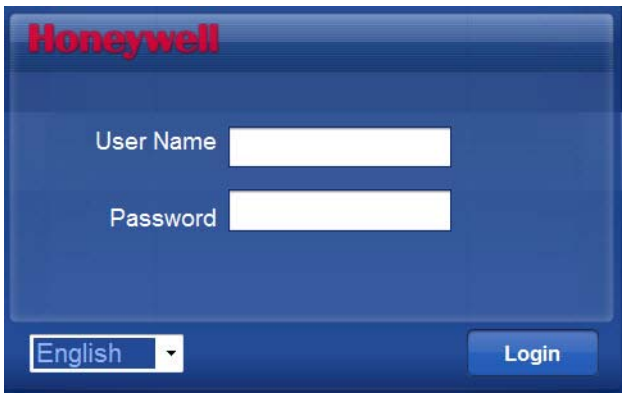
Connecting to an Online IP Device

1. Connect to your IP device by double-clicking it in the **Discovery** pane, or by selecting it and clicking  .

   The name for the connected device turns bold and blue, and the **Launch Browser** button becomes active.

2. Click **Launch Browser**. The Honeywell IP Utility login window opens.

Figure 3-4 Honeywell IP Utility Window



Accessing an HVE Encoder Through a Web Browser

HVE encoders can be accessed through a Web browser for configuration and operation.

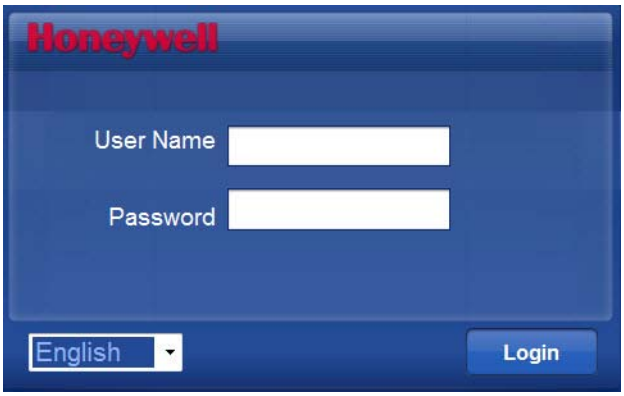
Table 3-1 Supported Web Browsers

Microsoft Internet Explorer 6, 7, 8, 9
Mozilla Firefox 3.5 and above
Google Chrome 8 and above
Apple Safari 5.0.2 and above
Windows XP SP1 and above (32-bit)

1. Open the web browser.
2. Enter the encoder's IP address (default: **192.168.0.250**), and then press **Enter** on your keyboard.

   The login window appears.

Figure 3-5 Login Window



Note When the HTTPS feature is enabled, the system uses the HTTPS login mode (**https://192.168.0.250**) by default when you enter the IP address. You can also enter **http://IP address/index.asp** (for example, http://192.168.0.250/index.asp) if you want to use the HTTP mode to log into the device.

3. Enter the user name (default: **admin**) and password (default: **1234**) to log into the system. The main page appears.
4. Download and install the plug-in from the main page. Follow the prompts.

Note After initial log in and plug-in installation, you will automatically enter the main page after logging in. **[?]**

When you have successfully downloaded and installed the plug-in, the encoder main page appears.

Figure 3-6 Encoder Main Page

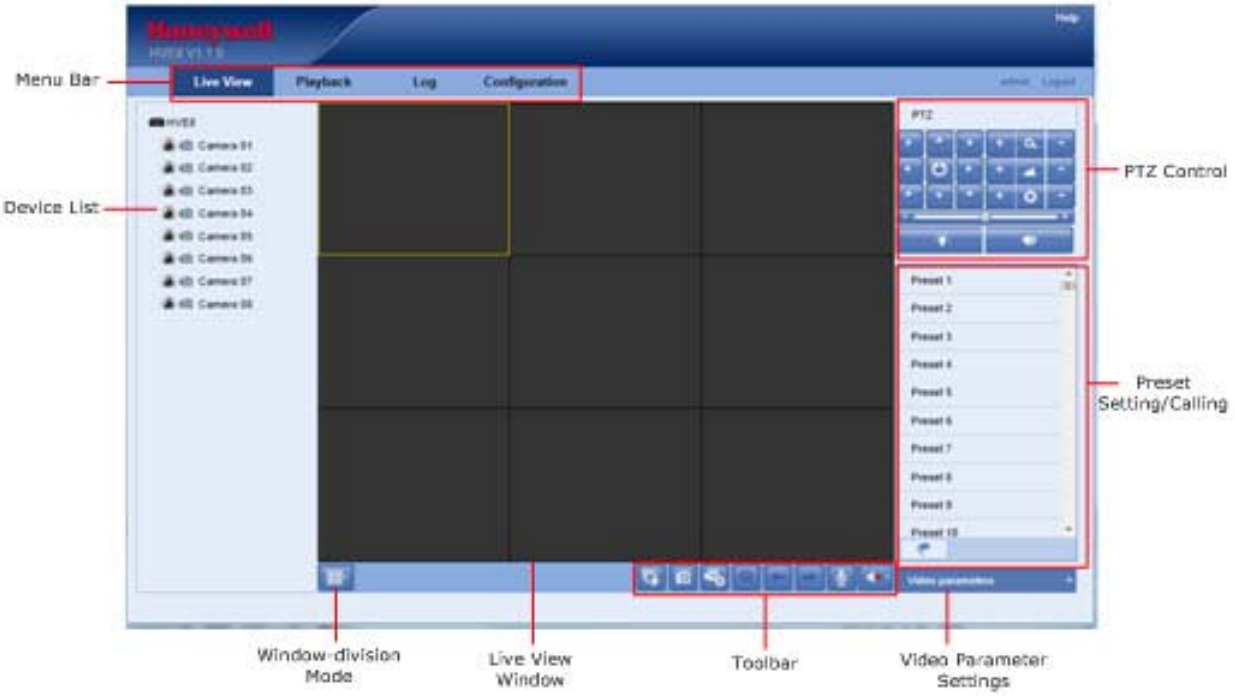


Table 3-2 Main Page Elements

Element	Description
Menu Bar	Click to choose **Live View**, **Playback**, **Log**, **Configuration**.
Device List	Displays the connected encoder and its channels.
Window division	Select from 1-, 4-, and 8-channel view.
Live Video Window	Displays live video from the chosen camera.
Toolbar	Select actions while live viewing, such as live view, image capture, recording, turn audio on/off, etc.
PTZ Control	Control PTZ cameras, including camera lights and camera wiper.
Preset Setting/Calling	Set and recall presets for PTZ cameras.
Video Parameters Settings	Configure live video brightness, contrast, hue, and saturation.

4

Viewing Live Video

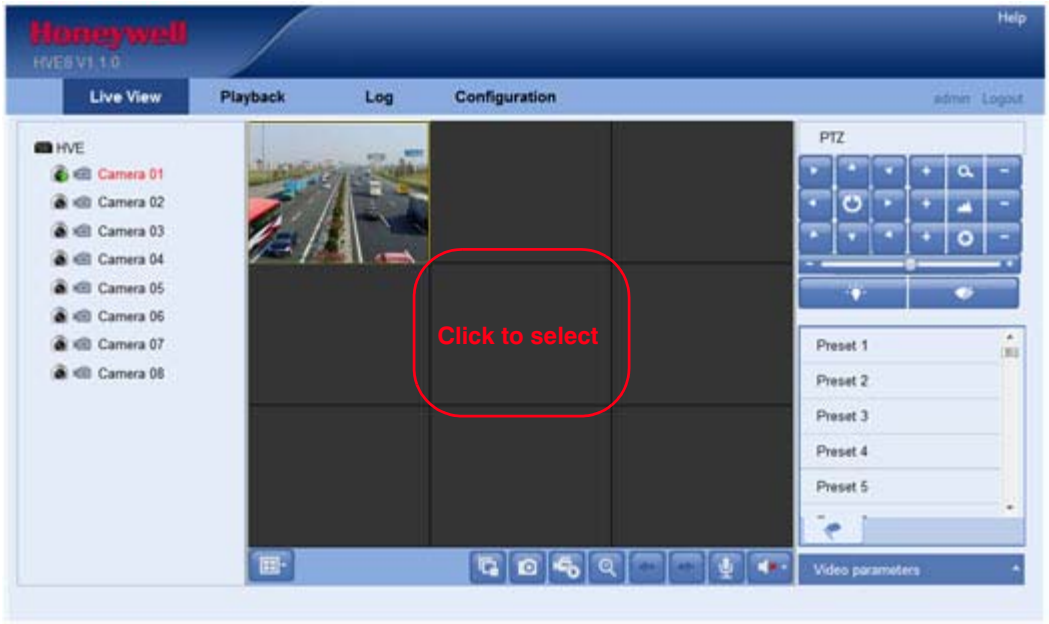
When connected, Live View shows real-time video for the connected camera.

Note After your first successful login, the system will automatically enter the Live View page.

Starting Live View

1. Click to select a window for viewing live video.

Figure 4-1 Live View Window



2. Double-click a camera  in the device list to start live view.

Starting Live View for All Cameras

Click  on the lower toolbar to start live view of all cameras on the device list.

Live View Toolbar

Table 4-1 Live View Toolbar

Icon	Function
	Select the window division mode for display.
	Start Live View.
	Stop Live View.
	Capture an image in Live View.
	Manually start recording video.
	Manually stop recording video.
	Start PTZ control (must be supported by a PTZ camera).
	Previous Page.
	Next Page.
	Turn audio On.
	Turn audio Off.
	Start two-way audio.
	Stop two-way audio.

Note Before you can use two-way audio or can record with audio, you must select **Video & Audio** for the **Stream Type**. See **Video Type** in *Table 6-1* on *page 78*.

Full Screen Mode

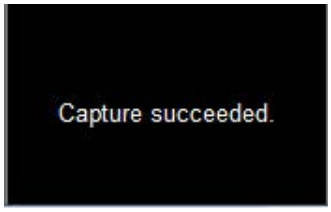
Double-click on a live video window to view that video in the full-screen mode. Double-click again to return to normal mode.

Capturing an Image

In Live View, click  in the toolbar to capture a live image.

When you have successfully captured an image, a message appears.

Figure 4-2 Message Confirming Successful Image Capture



Configuring the Save Path for Captured Images

To configure the saving path for captured images, go to **Configuration ➤ Local Configuration**. See *Figure 5-1*, *Local Configuration Window*, on *page 53*.

Note The captured image is saved as a JPEG.

Controlling a PTZ Camera

In Live View mode, you can use your encoder to control a PTZ camera. Using your mouse, you can click any of the 8 directional buttons in the display window to control a PTZ camera.

Before you begin controlling a PTZ camera, ensure that the following conditions are met:

- The connected camera supports PTZ control.
- The baud rate, PTZ control, and address on the encoder are configured the same as on the connected PTZ camera.

Connecting to a PTZ Camera

Connect the R+ and R- terminals of the pan/tilt/zoom unit to the RS-485 D+ and the RS-485 D- terminals of the encoder.

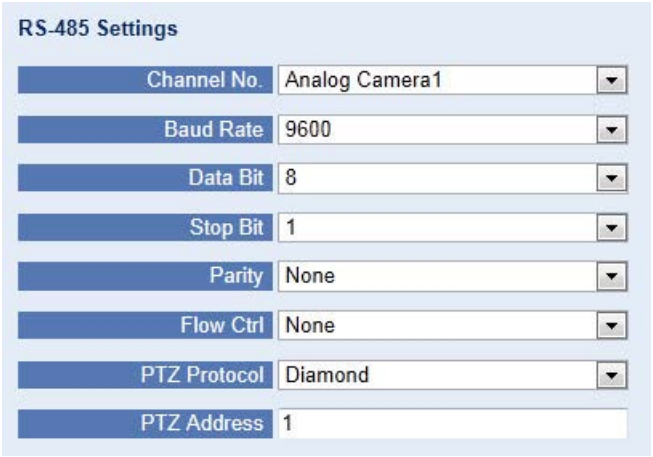
Table 4-2 Connections for PTZ Cameras

On the camera, connect the	To the ...on the encoder
R+ terminal	RS-485 D+ terminal
R- terminal	RS-485 D- terminal

Configuring for a PTZ Camera

1. Go to **Remote Configuration ➤ Serial Port Settings ➤485 Serial Port**.
2. Ensure that the baud rate, PTZ control, and address on the encoder are configured the same as on the connected PTZ camera. See *Figure 4-3*.

Figure 4-3 RS-485 Port Settings



Note The default for **Diamond** PTZ protocol is **Even** parity.

Controlling a PTZ Camera

In Live View mode, you can use the PTZ control buttons to control a PTZ camera.

Figure 4-4 PTZ Controls

Table 4-3 PTZ Controls

Button	Function
	Zoom in (+) and out (-).
	Focus near (+) and far (-).
	Iris open (+) and close (-).
	Click to turn on/off a light (available if the connected PTZ camera supports a light/has an external light).
	Click to turn on/off the wiper (available when the connected PTZ camera supports a wiper function).
	Slide the bar to set the PTZ speed from level 1 to 7.

Setting and Calling Presets

1. Select a preset number from the Preset list.

Figure 4-5 Preset List

2. Use the PTZ controls to move the PTZ camera's field of view to the desired position. You can:
   - Pan the camera to the left or right.
   - Tilt the camera up or down.
   - Zoom in or out.
   - Refocus the lens.
3. Click  to save the current camera position.

Note Up to 256 presets can be configured, depending on the applied PTZ protocol.

Calling a Preset

This feature allows you to instantly position the camera to a preset scene (camera lens orientation, focus, and zoom) when an event occurs.

You can recall pre-defined presets at any time.

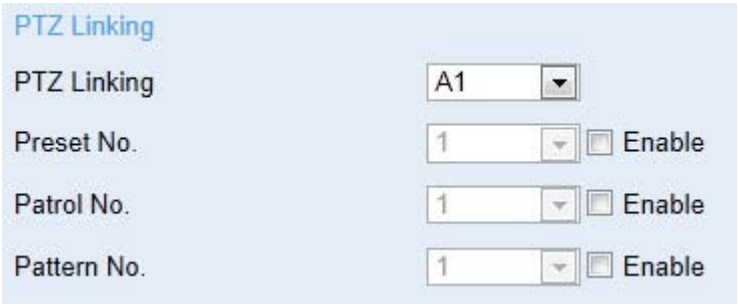
In Live View mode, select a predefined preset from the list, then click  .

Linking a Preset to an Alarm

The preset can also be used to link to the alarm input when an alarm event occurs.

To link a preset to an alarm, configure as shown in *Figure 4-6*.

Figure 4-6 PTZ Linking Configuration



For more information about configuring PTZ linkage settings, please see *Configuring RS-485 Settings on page 93*.

Configuring Video Parameters

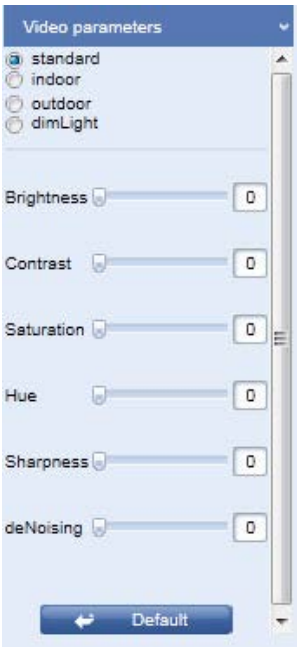
You can configure the video parameters, including the brightness, contrast, saturation, and hue.

1. Click Video parameters in the bottom right corner of the Live View window.

Figure 4-7 Video Parameters Button in the Live View Window

The Video parameters menu expands.

Figure 4-8 Expanded Video Parameters Menu



2. Select the video mode appropriate for the lighting condition.

Table 4-4 Video Modes

Mode	Description
Standard	Suitable for general lighting conditions. (default setting)
Indoor	The image is relatively smoother.
Outdoor	The image is relatively clearer and sharper. Contrast and saturation are high.
Dim Light	The image is smoother than the other three modes.

3. Move the slider to set the brightness, contrast, saturation and hue from 0—255. The default value is **128** for the brightness, contrast, and hue, and is **136** for saturation.
4. Move the slider to set the sharpness from 0—15, and the denoising level to 0—3. The default value is **3** for the sharpness and **1** for the denoising level.

Note Click 

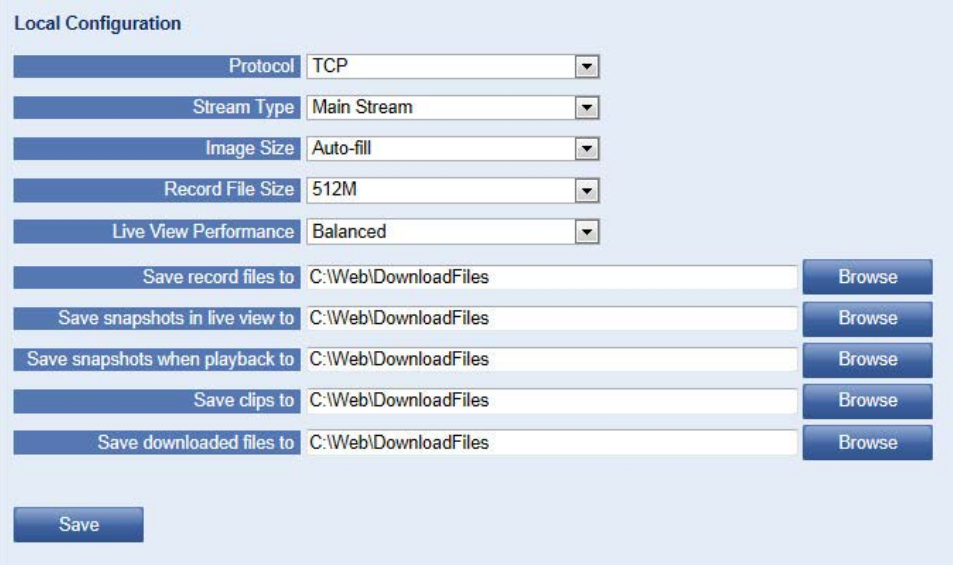
to restore to the default settings.

5

Configuring the Encoder

1. Click **Configuration** ➤ **Local Configuration** to enter the Local Configuration window.

Figure 5-1 Local Configuration Window



2. Configure the settings. Click **Browse** to change the directories for saving video files and pictures.

Table 5-1 Configurable Encoder Settings

Setting	Description
Protocol Type	Select the protocol type for stream transmission. **UDP:** Provides more real-time audio and video streams. **TCP:** Ensures complete delivery of streaming data and better video quality. However, real-time video quality is reduced.
Stream Type	Select **Main** or **Sub** stream type for Live View for the Web browser. See *Configuring Video Settings on page 77* for the parameter settings for the Main and Sub streams.
Image Size	Select the window division.
Record File Size	Select the size of packed video files during manual recording. Select from **256MB**, **512MB**, or **1GB**.

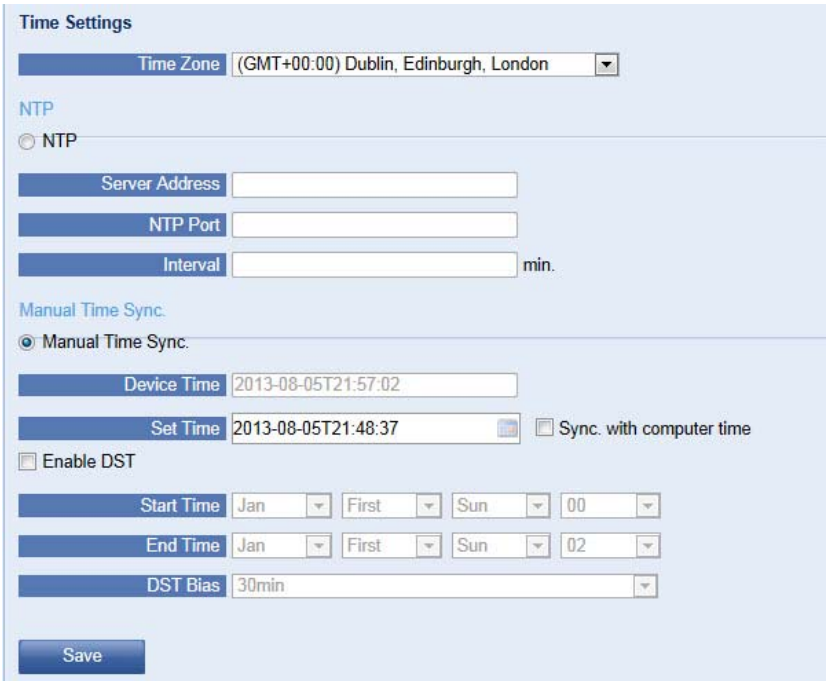
Table 5-1 Configurable Encoder Settings

Setting	Description
Live View Performance	Choose the way that live video is displayed. Select from **Least Delay**, **Balanced** (delay and fluency), or **Best Fluency**.
Save recorded files to	Set the saving path for the manually recorded video files.
Save snapshots in live view to	Set the saving path for the manually captured pictures in live view mode.
Save snapshots when in playback to	Set the saving path for the pictures captured in playback mode.
Save clips to	Set the saving path for the video files clipped in playback mode.
Save downloaded files to	Set the saving path for the downloaded video files or pictures.

Configuring Time Settings

1. Click **Remote Configuration** ➤ **Device Parameters** ➤ **Time Settings** to enter the Time Settings interface.

Figure 5-2 Time Settings Interface



2. Select the **Time Zone**. From the drop-down menu, select the Time Zone that is closest to the device's location.

Figure 5-3 Time Zone Selection

3. Select the time synchronization. Select from either **NTP** or **Manual Time Sync**.

   NTP: Selecting NTP means that a Network Time Protocol (NTP) Server, which you have configured, will be used to ensure the accuracy of your encoder's date and time.

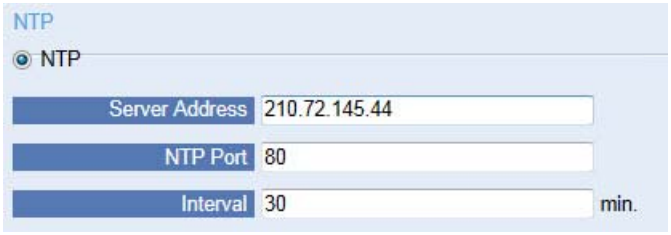
   If the encoder is connected to a Dynamic Host Configuration Protocol (DHCP) network that has time properties that are configured, then the encoder automatically synchronizes with the time server.

   Manual Time Sync: Selecting **Manual Time Sync** means that you configure the date and time in the Set Time field. You have the option of clicking **Sync. with computer time** to synchronize the encoder time with the time of the local PC.

Configuring NTP Time Sync by NTP Server

a. Click to enable **NTP**.

Figure 5-4 NTP Server Time Synchronization



b. Enter the NTP server IP address.

c. Enter the NTP port.

d. Select an interval for the time between the two NTP server synchronizing actions. Select from **1** to **10080** minutes.

Configuring the Time and Date Manually

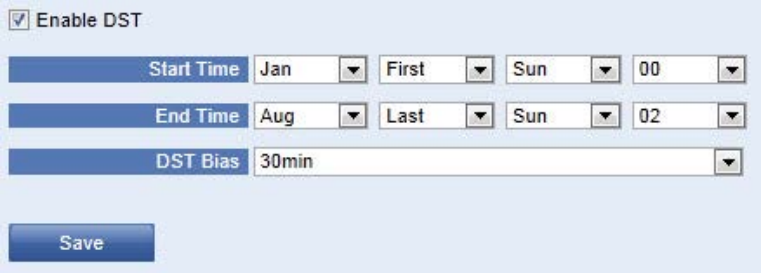
a. Click to enable **Manual Time Sync**.

b. Click  to open the pop-up calendar used for setting the date and time.

c. Select the date and time from the popup calendar. Click  to quickly set the time.

4. Configure the Daylight Saving Time (DST) settings.
   a. Click to enable **DST**.

Figure 5-5 Daylight Saving Time Settings



   b. Select the **Start Time** and **End Time** for the DST period, then select a **DST Bias** period.
5. Click **Save** to save the new settings.

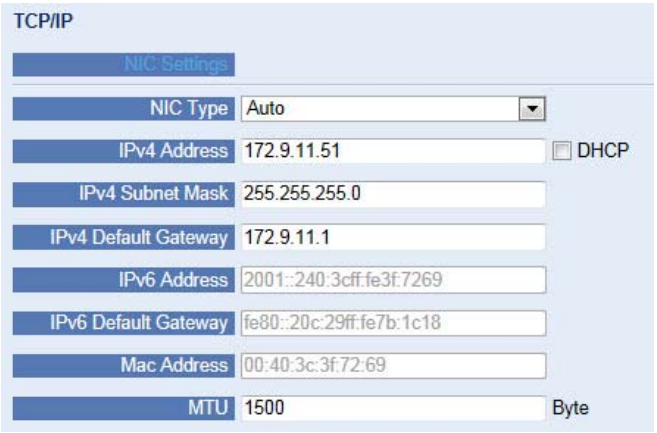
Configuring Network Settings

Configuring TCP/IP Settings

Network settings must be properly configured before you can operate the encoder over a network.

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **TCP/IP** to enter the TCP/IP settings interface.

Figure 5-6 TCP/IP Interface for Network Settings



2. Configure the NIC settings, including the NIC Type, IPv4 Address, IPv4 Subnet Mask, IPv4 Default Gateway, and MTU settings.

Note The MTU range is only from 500 to 1500.

3. If the DHCP server is available, then click the DHCP checkbox to automatically obtain an IP address and other network settings from that server.
4. If the DNS server settings are required for some applications (for example, for sending email), then carefully configure the Preferred DNS Server and Alternate DNS Sever.

Figure 5-7 DNS Server Configuration

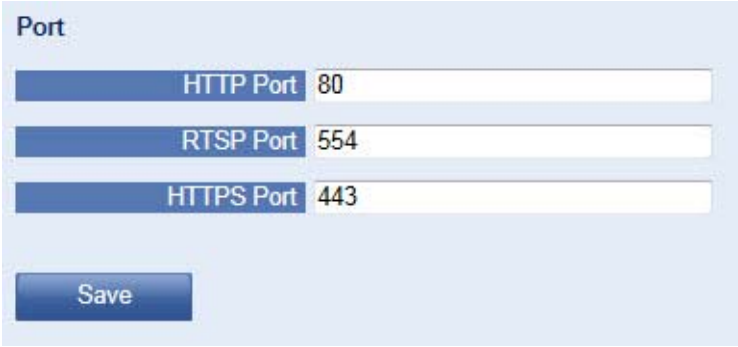
5. Click **Save** to save the new settings.

Configuring Port Settings

You can set the encoder's ports, including the HTTP port, RTSP port, and HTTPS port.

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **Port** to enter the Port settings interface.

Figure 5-8 Port Settings Interface



2. Enter the values for each port.

Table 5-2 Port Defaults

Port	Default
HTTP	80
RTSP	554
HTTPS	443

3. Click **Save** to save these new settings.

Note You will be asked to reboot the encoder to activate these new settings.

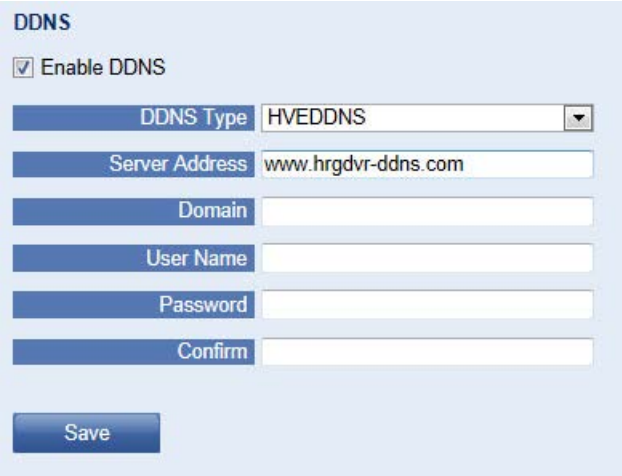
Configuring DDNS Settings

If your encoder is set to use PPPoE as its default network connection, then you might set Dynamic DNS (DDNS) to be used for network access.

Note Prior registration with your DDNS provider is required before configuring the system to use DDNS.

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **DDNS Settings** to enter the DDNS settings interface.

Figure 5-9 DDNS Interface



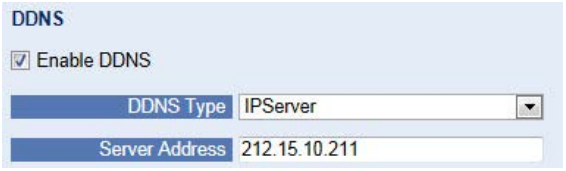
2. Click the **Enable DDNS** checkbox.
3. Select the **DDNS Type** from the drop-down menu. Select from **IPServer**, **DynDNS**, **PeanutHull**, and **HVEDDNS**.

IPServer

a. Select **IPSever** from the DDNS Type drop-down menu.

b. Enter a **Server Address**.

Figure 5-10 DDNS Settings - IP Server Settings



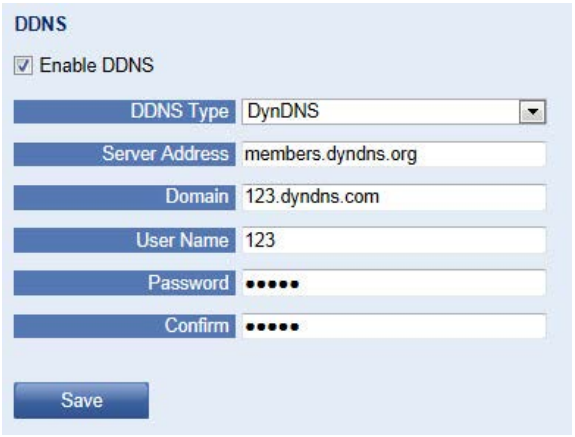
c. Click **Save** to save the new settings.

Note For the IP Server, you have to apply a static IP, subnet mask, gateway, and primary DNS from the ISP. The Server IP should be entered with the static IP address of the PC that runs the IPServer software.

DynDNS

a. Select **DynDNS** from the DDNS Type drop-down menu.

Figure 5-11 DDNS Settings - DynDNS Settings



b. Enter a **Server Address** for DynDNS (for example, *members.dyndns.org*).

c. Enter the domain that is obtained from the DynDNS website in the **Device Domain Name** text field.

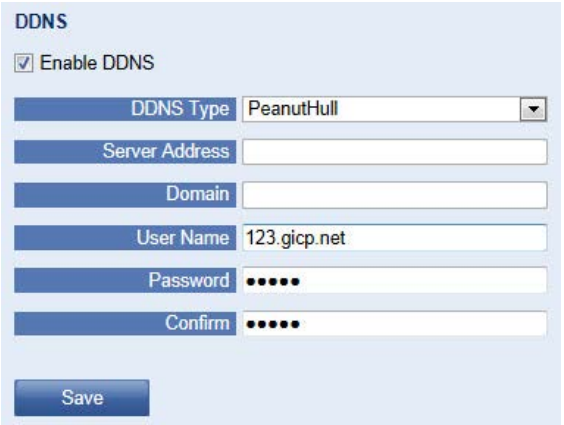
d. Enter the **User Name** and **Password** that is registered on the DynDNS website. Confirm the password.

e. Click **Save** to save the new settings.

PeanutHull

a. Select **PeanutHull** from the DDNS Type drop-down menu.

Figure 5-12 DDNS Settings - PeanutHull Settings



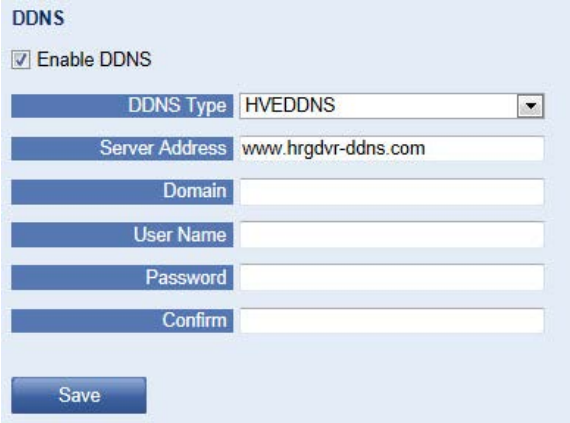
b. Enter the **User Name** and **Password** that is given by the PeanutHull website.

c. Click **Save** to save the new settings.

HVEDDNS

a. Select **HVEDDNS** from the DDNS Type drop-down menu.

Figure 5-13 DDNS Settings - HVEDDNS Settings



b. Enter the encoder's **Domain** name.

- You can register the alias for the encoder's device name in the HVEDDNS server first, and then enter the domain name's alias in the encoder.

OR

- Enter the domain name directly in the encoder to create a new one.

Note If a new alias for the device's domain name is defined in the encoder, it will replace the old one that is registered on the server.

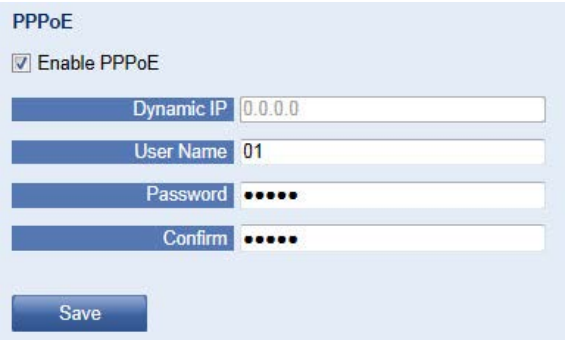
c. Click **Save** to save the new settings.

Configuring PPPoE Settings

Your encoder also allows access by Point-to-Point Protocol over Ethernet (PPPoE).

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **PPPoE Settings** to enter the PPPoE settings interface.

Figure 5-14 PPPoE Settings Interface



2. Check the **PPPoE** checkbox.
3. Enter a **User Name**, **Password**, and **Confirm Password** for PPPoE access.

Note The User Name and Password should be assigned by your ISP.

4. Click **Save** to save these new settings and exit the PPPoE Settings interface.

Configuring Email Settings

The encoder can be configured to send alarm event-triggered email notifications to all designated receivers. The types of triggering events can include motion detection, video loss, and tampering.

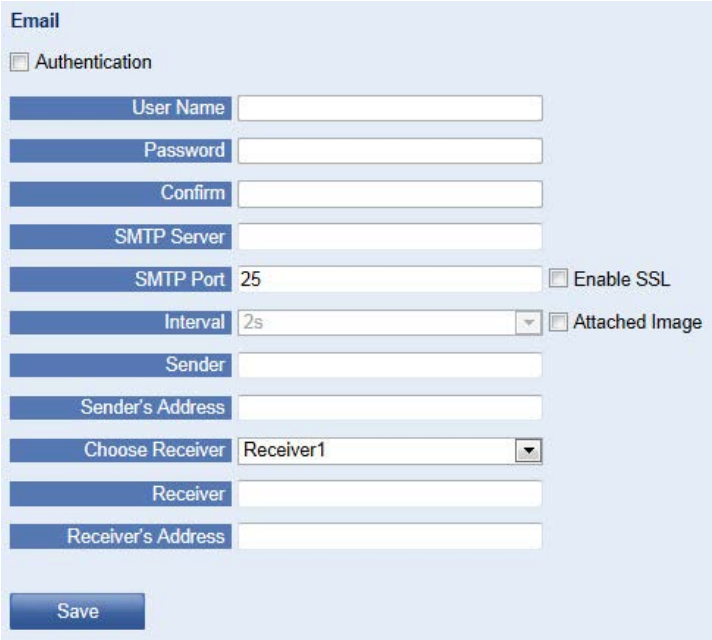
Before configuring email settings, ensure that the following conditions are met:

- The encoder is connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or to the Internet, depending on the location of the email accounts to which you want to send notifications.
- You have configured the DNS server settings under **Remote Configuration ➤ Network Settings ➤ TCP/IP** before using the email function. See *Configuring TCP/IP Settings on page 56*.

To configure email settings:

1. Enter the basic network settings (**Remote Configuration ➤ Network Settings ➤ TCP/IP)** to set the IPv4 address, IPv4 Subnet Mask, IPv4 Default Gateway, and the preferred DNS Server.
2. Click **Remote Configuration ➤ Network Settings ➤ Email** to enter the Email settings interface.

Figure 5-15 Email Settings Interface



3. Configure the following:

Configurable Field	Description
Authentication	Optional. If your email server requires authentication, check this checkbox to use authentication to log in to this server, and enter the login **User Name** and **Password**.
SMTP Server	The SMTP server IP address of the host name (for example, *smtp.263xmail.com*)
SMTP Port	The SMTP port. The default TCP/IP port used for SMTP is **25**.
Enable SSL	Click the checkbox to enable SSL if required by the SMTP server. When the SSL is enabled, the default TCP/IP port used for SMTP is **465**.
Interval	The interval refers to the time between two actions of sending attached pictures.
Attach Image	Check if you want to send email with attached alarm images.
Sender	The sender's name.
Sender's Address	The sender's address.
Choose Receiver	Select the receiver to which the Email is sent. Up to 3 receivers can be configured.
Receiver	The name of the user to be notified.
Receiver's Address	The address of the user to be notified.

4. Click **Save** to save these new settings.

For more information about email notifications, please see the following sections:

- *Configuring Motion Detection on page 81*
- *Configuring External Alarm Input on page 86*
- *Configuring a Video Loss Alarm on page 88*
- *Configuring the Tamper-proof Alarm on page 89*
- *Configuring Exception Handling on page 90*

Adding the Network Disk

You should add the network disk before recording, playing back video, or searching the log.

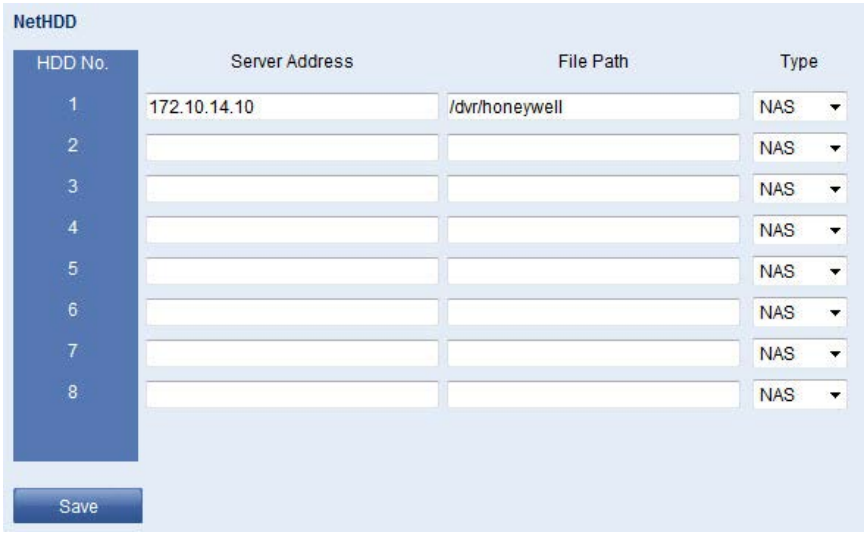
Before adding the network disk, ensure that the following conditions are met:

- The network storage device is available within the network and is properly connected.
- The network storage device is configured with NAS or IP SAN mode (please refer to the User Manual for the IP SAN/NAS).

To add a network disk:

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **NetHDD** to enter the NetHDD settings interface.

Figure 5-16 NetHDD Settings Interface

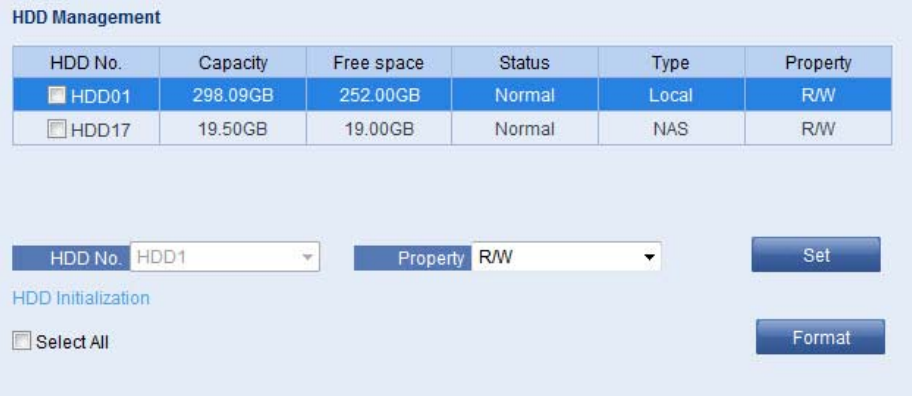


2. Enter the **Network Storage System IP address** and the **File Path** in the correct fields.
3. Select the type of Network Storage System, either **IP SAN** or **NAS**.

   NAS Mode: Enter the storage device's IP address. The default file path is */dvr/share*, in which the share name is user-defined when creating the DVR of the network storage.

   IP SAN Mode: Enter the storage device's IP address. The default file path is *iqn.2004-05.storos.t-service ID*, in which the service ID is user-defined when creating the iSCSI volume of the network storage.
4. Click **Save** to add the configured network disk.
5. Initialize the added network disk.
   a. Click **Remote Configuration** ➤ **HDD Management** to enter the HDD settings interface.

Figure 5-17 HDD Settings Interface



You can see the capacity, free space, status, type, and property of the added network disk.

b. If the status of the network disk is **Uninitialized**, select the disk from the list by checking the checkbox, and then click the **Init** button to start initializing the disk.

When the initialization is complete, the disk **Status** will become **Normal**.

6. Select the **HDD No.**, and select the **Property** for the added network disk. For the Property, choose from **R/W** or **Read-only**.

Note Please refer to the user manual for IP SAN/NAS for the creation of the File Path in Network Management.

Note Up to 8 NAS disks or IP SAN disks can be connected.

Configuring SNMP Settings

Simple Network Management Protocol (SNMP) is an Internet-standard protocol for managing devices on IP networks. You can use SNMP to get camera status, parameters, and alarm-related information.

Before setting the SNMP, please ensure the following conditions are met:

- The SNMP software is downloaded.
- The encoder is configured to receive the device information via the SNMP port.

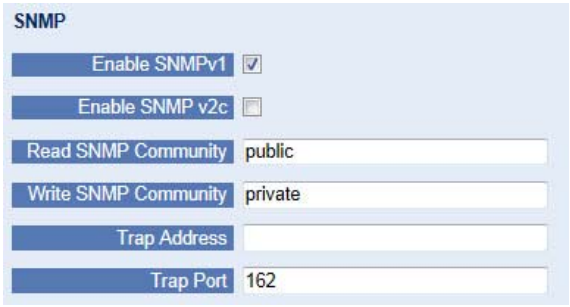
By setting the Trap Address, the device can send the alarm event and exception messages to the surveillance center.

Note The SNMP version you select should be the same as that of the SMNP software.

To configure the SNMP settings:

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **SNMP** to enter the SNMP settings interface.

Figure 5-18 SNMP Settings Interface

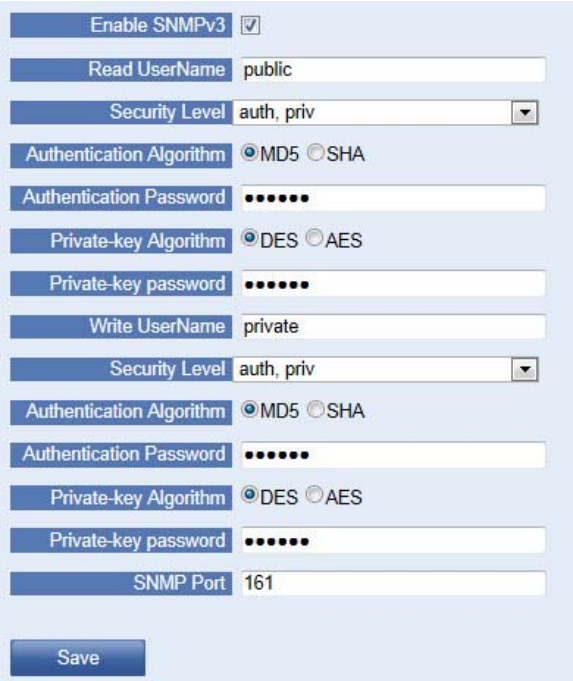


2. Configure the following:
   a. Check the checkbox to enable **SNMPv1** or **SNMPv2c**.
   b. Configure the **Read SNMP Community** (default: **public**) and the **Write SNMP Community** (default: **private**).
   c. Configure the **Trap Address** (default: **empty**) and **Trap Port** (default: **162**).

Note You can enable both SNMPv1 and SNMPv2c.

3. After the SNMPv3 is enabled, you can configure the read username (default: **public**). **[Where does that window come from?]**

Figure 5-19 SNMPv3 Settings Interface



Note By default, SNMPv1, SNMPv2c, and SNMPv3 are disabled.

4. Select a security level. Choose from:
   - **no auth, no priv**
   - **auth, no priv**
   - **no auth, priv**
   - **auth, priv**
5. Configure the Authentication Algorithm and Private-key Algorithm parameters.
   - You can configure the Authentication Algorithm and Private-key Algorithm parameters if the security level is set to **auth, priv**.
   - You cannot configure the Authentication Algorithm and Private-key Algorithm parameters if the security level is set to **no auth, no priv**.
6. Set the **SNMP Port** (default: **161**).
7. Click **Save** to save these new settings.

Configuring QoS Settings

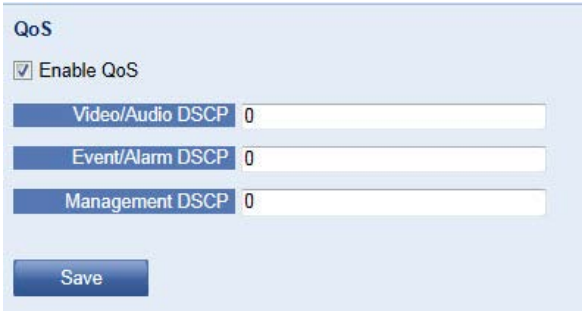
QoS (Quality of Service) can help with network delay and network congestion by configuring the priority in which data is sent. The use of a QoS-aware network can prioritize traffic and therefore allow critical flows to be served before lower priority flows.

The encoder can mark the data packets for video/audio, event/alarm, and management network traffic with different DSCP values which identify different priority levels for sending data.

To configure QoS settings:

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **QoS** to enter the QoS settings interface.

Figure 5-20 QoS Settings Interface



2. Check the checkbox to enable the QoS function.
3. Enter **DSCP (Differentiated Services Codepoint)** value for the following:
   - Video/Audio
   - Event/Alarm
   - Management traffic

   The DSCP value is used to mark the traffic's IP header. It defines the priority level for the specified type of traffic, for example, how much bandwidth to reserve for it.

   The valid range for DSCP is 0 to 63.

   Higher DSCP values indicate higher priority levels.
4. Click **Save** to save these new settings.

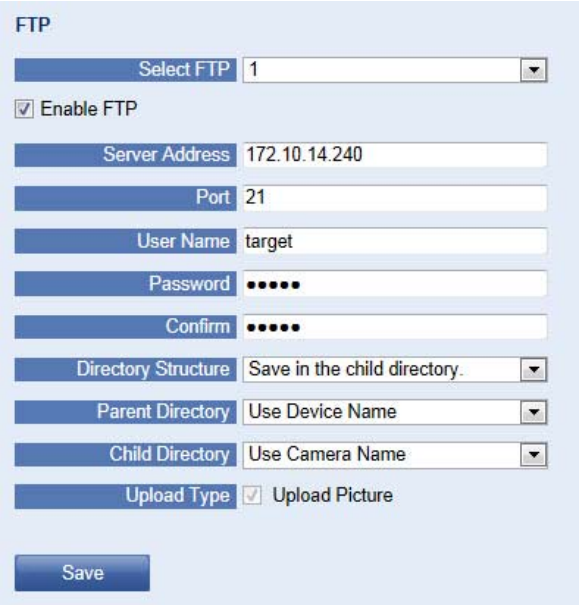
Note You will have to reboot the encoder to activate the settings.

Configuring FTP Settings

Images captured by the encoder can be uploaded to an FTP server.

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **FTP** to enter the FTP settings interface.

Figure 5-21 FTP Settings Interface



2. Check the checkbox to enable FTP.
3. Configure the following settings:
   - Server Address
   - Port
   - User Name
   - Password
   - Directory
   - Upload Type

   a. **Directory**: In the Directory Structure field, you can select the root directory, parent directory, and child directory.

      If you select **Parent Directory**, then you have the option to use the Device Name, Device Number, or Device IP for the name of the directory

      If you select **Child Directory**, then you can use the Camera Name or Camera No. as the name of the directory.

   b. **Upload Type**: Check to enable uploading the captured picture to the FTP server.
4. Click **Save** to save these new settings.

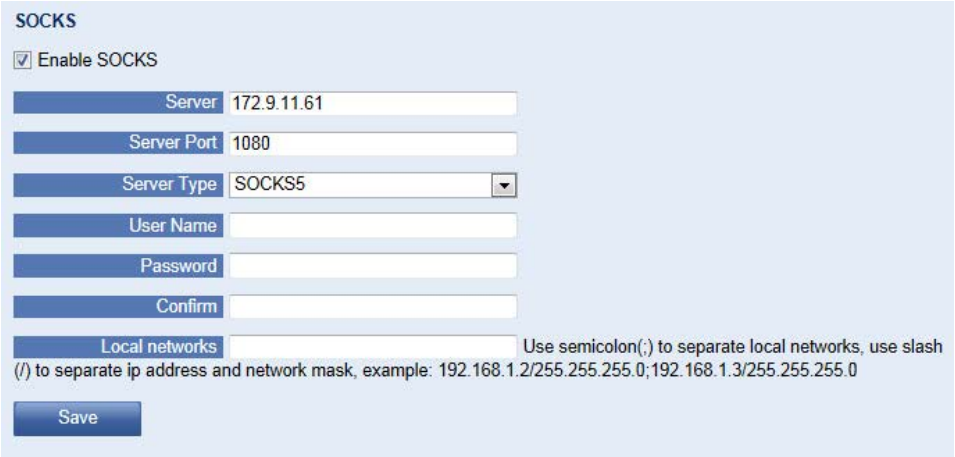
Configuring SOCKS Settings

SOCKet Secure (SOCKS) is an Internet protocol that routes network packets between a client and a server through a proxy server. This feature is useful if the encoder is located on a local network behind a firewall, and Email notifications, FTP uploads, alarms, and such need to be sent to a destination outside the local network (such as the Internet). SOCKS4 and SOCKS5 are supported. SOCKS5 provides authentication so only authorized users may access a server.

To configure SOCKS settings:

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **SOCKS** to enter the SOCKS settings interface.

Figure 5-22 SOCKS Settings Interface



2. Configure the following settings:
   - **Server**: Enter the address for the SOCKS server.
   - **Server Port**: Enter the port for the SOCKS server (default: **1080**).
   - **Server Type**: Select the server type, either **SOCKS4** or **SOCKS5**. When you select SOCKS5, you can enable the user authentication on the server, and then enter the login user name and password.
   - **Local Networks**: Define the local network segment which does not need to use the SOCKS proxy server. You can enter multiple network addresses and use the semicolon (;) to separate them. For example, *10.0.0.0/255.0.0.0*; *172.16.0.0/255.240.0.0*.
3. Click **Save** to save these new settings.

Configuring UPnP™ Settings

UPnP (Universal Plug and Play) permits the device seamlessly discover the presence of other network devices on the network and establish functional network services for data sharing, communications, etc. If you want to use the UPnP function to quickly connect the device to the WAN via a router, then you should configure the UPnP parameters of the device.

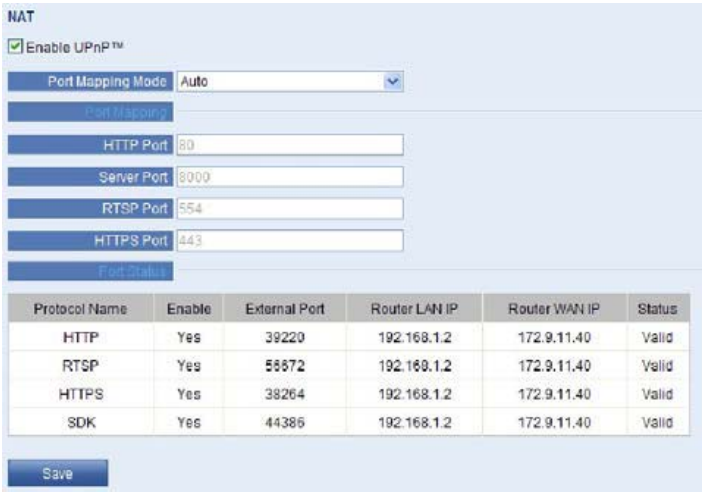
Before configuring UPnP settings, please ensure the following conditions are met:

- Enable the UPnP for the router to which your device is connected.
- If the network working mode of the device is set to **Multi-address**, then the Default Route of the device should be in the same network segment as that of the LAN IP address of the router.

To configure UPnP settings:

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **NAT** to enter the NAT settings interface.

Figure 5-23 NAT Interface



2. Check to **Enable UPnP**.
3. Select the **Port Mapping Mode** to either **Auto** or **Manual**.

   When you select **Auto**, then the mapping ports can be automatically assigned by the router. Go to *step 5*. **[?]**

   When you select **Manual**, then you should continue to *step 4* to edit the mapping ports.
4. Configure the HTTP Port (for access by WEB browser), SDK Port Mapping (for access by client software), RTSP Port, and HTTPS Ports.

Note You can use the default port number, or change it according to your requirements.

The **Ports** field indicate the port number for mapping in the router.

---

5. Click **Save** to save these new settings.

   After successfully configuring port mapping, you can view the port mapping status on the Port Mapping area of the NAT interface.

Configuring HTTPS Settings

HTTPS (Hyper Text Transfer Protocol Secure) ensures the transferred data is encrypted using Secure Socket Layer (SSL) or Transport Layer Security (TLS). HTTPS provides authentication of the web site and the associated web server that the encoder is communicating with, and creates a secure channel over an insecure network. HTTPS URLs begin with **`https://`** and use port **443** by default.

To configure HTTPS settings:

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **HTTPS** to enter the HTTPS settings interface.

Figure 5-24 HTTPS Interface

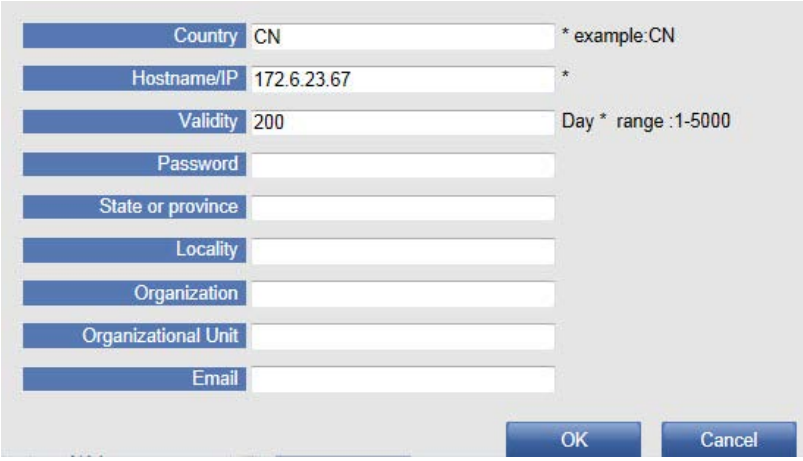
2. Create the self-signed certificate or the authorized certificate.

   Creating a self-signed certificate:

   a. Click **Create** next to **Create Self-signed Certificate**.

      A dialog box opens.

Figure 5-25 Creating a Self-signed Certificate



   b. Enter the country, host name/IP, validity, and other information.

   c. Click **OK** to save these new settings.

   Creating an authorized certificate:

   a. Click **Create** next to **Create Certificate Request**.

   b. Download the certificate request and submit it to the trusted certificate authority for signature.

   c. After receiving the signed valid certificate, import the certificate to the device.

3. When you have successfully created and installed the certificate, check the checkbox to enable the HTTPS function.

Note After the HTTPS feature is enabled, the system will use the HTTPS login mode by default when you input the IP address (for example, *https://192.168.0.250*). You can also input **http://IP address/index.asp** (for example, *http://192.168.0.250/index.asp*) if you want to use HTTP mode to log into the device.

Configuring Bonjour Settings

Bonjour is enabled by default, and the video encoder can be automatically detected by operating systems and clients that support this protocol. Bonjour is required for discovery using the Honeywell IP Utility.

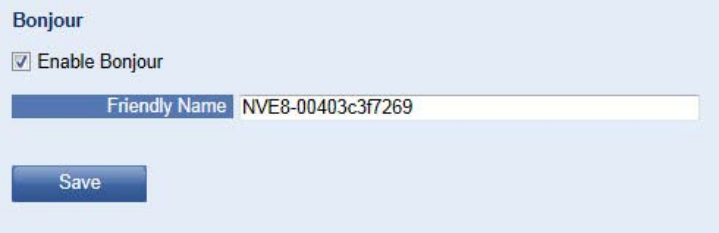
Before you configure Bonjour settings, please ensure that the following condition is met:

- The Bonjour plugin is installed on your PC before enabling the Bonjour function.

To configure Bonjour settings:

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **Bonjour** to enter the Bonjour settings interface.

Figure 5-26 Bonjour Settings Interface



2. Click the checkbox to **Enable Bonjour**.
3. Edit the device's name. The name is shown when the device is detected by the system.

Note You can use only letters, numbers, and "-" for the device's name.

4. Click **Save** to save these new settings.

Configuring the IP Address Filter

By enabling the IP Address Filter, you can allow or forbid certain IP addresses access to the encoder.

Up to 256 IP addresses can be added to the list (allowed/forbidden) by Web Browser.

1. Click **Remote Configuration** ➤ **Network Settings** ➤ **IP Address Filter** to enter the IP address filter settings interface.

Figure 5-27 IP Address Filter Configuration Interface

2. Check the checkbox to **Enable IP Address Filter**.
3. Select the filter type for the IP address. Choose from **Allowed** or **Forbidden**.
4. Click **Add** to add the IP address to the IP address filter.

Figure 5-28 Adding an IP Address to the IP Address Filter

Note Up to 256 IP addresses can be added to the allowed/forbidden list, by Web browser.

5. Click **Save** to save these new settings.

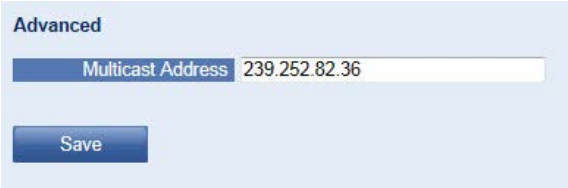
Configuring the Multicast Address

The multicast address can be configured to allow live viewing of more than the maximum number of cameras through the network.

A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. We recommend that you use an IP address ranging from 239.252.0.0 to 239.255.255.255.

1. Click **Remote Configuration ➤ Network Settings ➤ Advanced** to enter the Advanced Settings interface.

Figure 5-29 Advanced Settings Interface



2. Enter the multicast address in the text field.
3. Click **Save** to save these new settings.

6

Configuring Camera Settings

Configuring OSD Settings

Configuring Display Settings

You can customize the camera name and configure and format the time display as it appears on the screen.

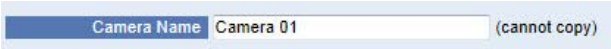
1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Display Settings** to enter the Display Settings interface.

Figure 6-1 Display Settings Interface

2. Select a camera from the drop-down menu.

3. Enter a camera name in the **Camera Name** text field.

Figure 6-2 Camera Name Text Field



4. Click the boxes next to **Display Name**, **Display Date**, and **Display Week** to enable/disable the display of those elements.
5. Select the **Time Format**, **Date Format**, and **OSD Display** modes from their drop-down menus.
6. Adjust the location of the OSD by moving the text frame on the preview image.

Figure 6-3 Adjusting the OSD Display Position

7. (Optional) If you want to copy the display settings for the current camera to other cameras, expand the **Copy to Camera** panel, and select the camera(s) to which to copy the settings, or click **Select All** to select all cameras.

Figure 6-4 Copying Settings to Other Cameras

8. Click **Save** to save these new settings.

Configuring Text Overlay

1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Text Overlay Settings** to enter the Text Overlay Settings interface.

Figure 6-5 Text Overlay Configuration Interface

2. Select a camera from the drop-down list.
3. Click the checkbox to enable editable text for that camera. In the editable text field next to the camera, enter the desired text for the overlay.
4. Click **Save** to save these new settings.
5. Adjust the position of the overlayed text by moving the text frame on the preview image.
6. (Optional) If you want to copy the text overlay settings for the current camera to other cameras, expand the **Copy to Camera** panel, and select the camera(s) to which to copy the settings, or click **Select All** to select all cameras.

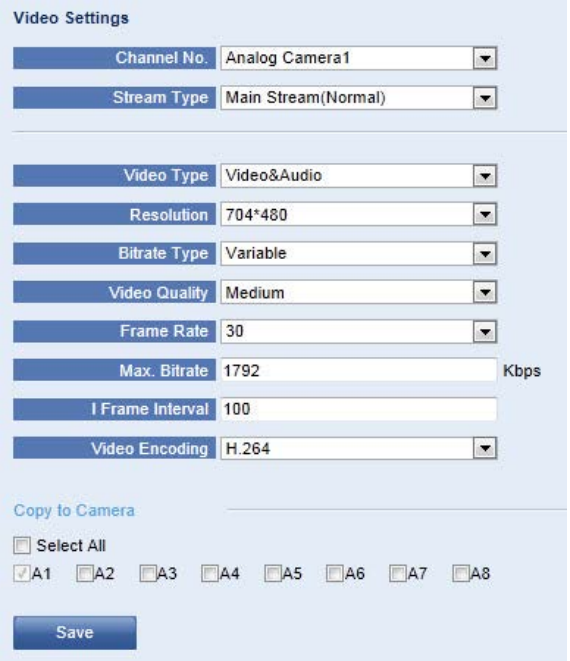
Figure 6-6 Copying Settings to Other Cameras

7. Click **Save** to save these new settings.

Configuring Video Settings

1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Video Settings** to enter the Video Settings interface.

Figure 6-7 Video Settings Interface



2. Select a camera from the drop-down list.
3. Select the **Stream Type** for the camera. Choose from **Main Stream (Normal)**, **Main Stream (Event)**, or **Sub Stream**.

   Main Stream - Used for recording and live viewing with good bandwidth.

   Sub Stream - Used for live viewing when the bandwidth is low.

   For more information about changing the main stream to sub stream for live viewing, please see *Local Configuration Window on page 53*.
4. Customize the following settings for the selected Main or Sub stream:

Table 6-1 Customizeable Options for Video Main or Sub Streams

Option	Description
Video Type	Select the video type for streaming, including a video plus audio composite stream. The audio signal will be recorded only when the Video Type is selected as Video&Audio.
Resolution	Select the resolution for the video input.
Bitrate Type	Select the bitrate type as **Constant** or **Variable**.
Video Quality	When Variable is selected for the Bitrate type, you can choose from up to 6 levels of video quality.
Frame Rate	Set the frame rate from **1** to **30** fps. The Frame Rate is used to describe the frequency at which a video stream is updated. This rate is measured in frames per second (fps). Choose a higher frame rate when there is movement in the video stream, as the higher frame rate maintains image quality.

Table 6-1 Customizeable Options for Video Main or Sub Streams

Option	Description
Max. Bitrate	Set the maximum bit rate from **32** to **8192** Kbps.
I Frame Interval	Set the I frame interval from **1** to **400** (frames). The higher value results in lower video quality.
Video Encoding	Select the video encoding standard. Choose from **H.264**, **MPEG2**, **MPEG4**, or **MJPEG**.

Note When the MJPEG video encoding standard is selected, the frame rate can be set from **1** to **15** fps, and the maximum bitrate is not configurable.

5. (Optional) If you want to copy the video settings for the current camera to other cameras, expand the **Copy to Camera** panel, and select the camera(s) to which to copy the settings, or click **Select All** to select all cameras.

Figure 6-8 Copying Settings to Other Cameras

6. Click **Save** to save these new settings.

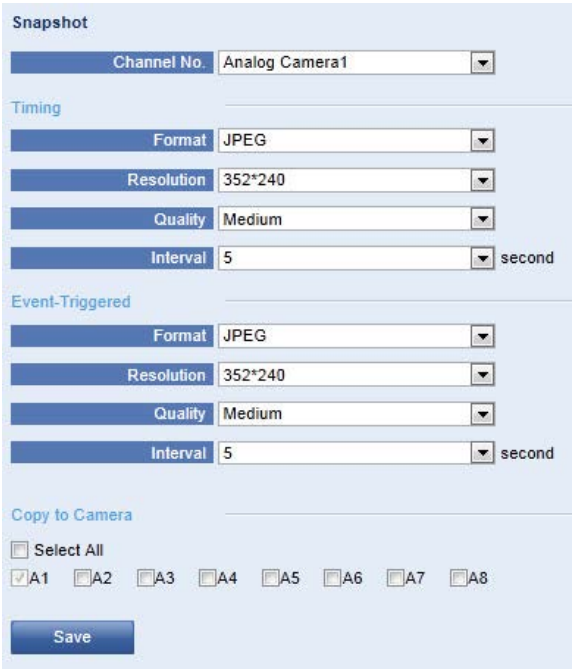
Configuring Snapshot Settings

You can configure scheduled snapshots and event-triggered snapshots. The captured pictures can be stored on a HDD, on an SD card (if supported) or on the netHDD. You can also upload the event-triggered snapshots to an FTP server.

To configure snapshot settings:

1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Snapshot** to enter the Snapshot settings interface.

Figure 6-9 Snapshot Settings Interface



2. Select a channel for capturing pictures.
3. Configure the timed snapshot and event-triggered snapshot parameters, including the format, resolution, quality, and the time that passes between two snapshots (interval). For the interval, select from **1 sec**, **2 sec**, **3 sec**, **4 sec**, and **5 sec**.
4. (Optional) If you want to copy the snapshot settings for the current camera to other cameras, expand the **Copy to Camera** panel, and select the camera(s) to which to copy the settings, or click **Select All** to select all cameras.

Figure 6-10 Copying Settings to Other Cameras

5. Click **Save** to save these new settings.

Note Timed snapshots are stored on the HDD, the SD card (if supported), or the netHDD. Event-triggered snapshots can be uploaded to FTP. Check the **Upload to FTP** checkbox Upload to FTP in either the Motion Detection Settings or the Alarm Input interface.

For more information, please see *Configuring Motion Detection on page 81* or *Configuring an External Alarm Input on page 86*.

For more information about FTP, please see *Configuring FTP Settings on page 67*.

Configuring and Handling Alarms

This section explains how to configure the encoder to respond to alarm events. You can configure the following settings:

- Motion Detection
- External Alarm Input
- Video Loss Alarms
- Tamper-proof Alarms
- Handling Exceptions

Alarm events can trigger alarm actions, such as:

- Notifying the Surveillance Center
- Sending Emails
- Triggering Alarm Output

Configuring Motion Detection

Motion Detection is a feature which can detect a motion event in the surveillance scene, then alert personnel and record the video for the motion event.

Steps for Configuring for Motion Detection:

1. Configure the Motion Detection Area. See *Configuring the Motion Detection Area on page 81*.
2. Configure the Arming Schedule for Motion Detection. See *Configuring the Arming Schedule on page 82*.
3. Configure the Alarm Actions that are taken when a motion event is detected. See *Configuring the Alarm Actions for Motion Detection on page 83*.

Configuring the Motion Detection Area

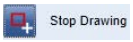
1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Motion Detection** to enter the Motion Detection settings interface.

Figure 6-11 Motion Detection Settings Interface

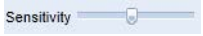
2. Select a camera to configure for motion detection.
3. Check the checkbox to **Enable Motion Detection**.
4. Click the **Draw Area** button 

. Draw a motion detection area by clicking and dragging the mouse in the live video image.

Note You can draw up to 8 motion detection areas within the same image.

5. Click **Stop Drawing** 

to finish drawing the motion detection area.
Click **Clear All** 

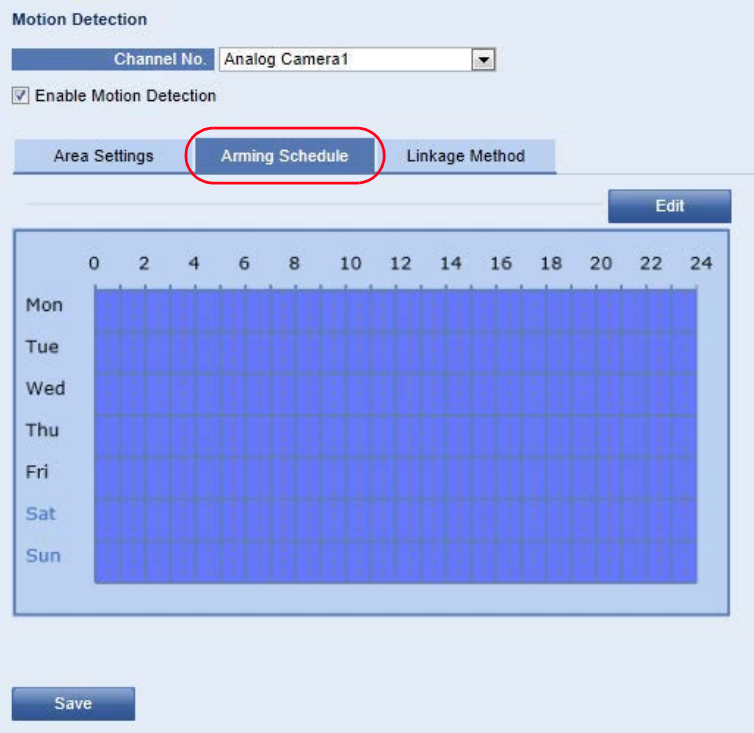
to clear all drawn areas.
6. Move the slide bar 

to set the sensitivity for the camera.
7. Click **Save** to save these new settings.

Configuring the Arming Schedule

1. Click the **Arming Schedule** tab.

Figure 6-12 Arming Schedule Tab



2. Click **Edit** to edit the arming schedule.

Note The timing segments cannot overlap. Up to 8 segments can be configured for each day.
The **Holiday** option is available in the Schedule drop-down list only after you have enabled a holiday schedule in **Holiday Settings**.

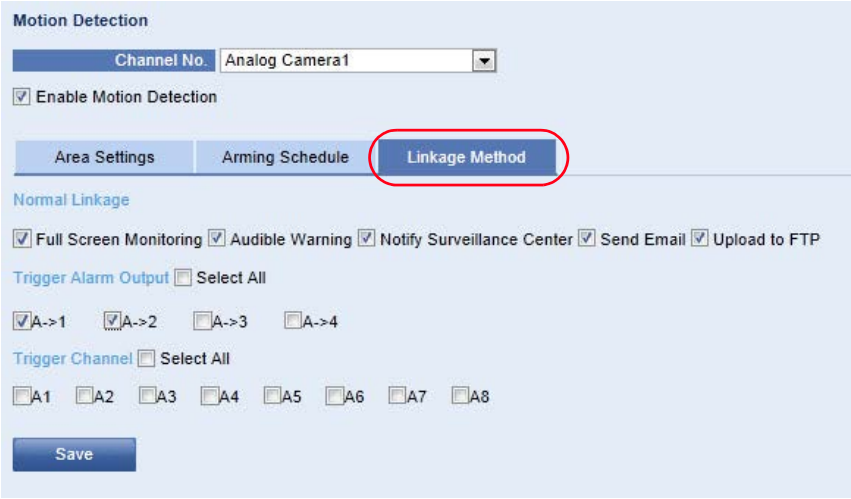
3. Choose the day for which you want to set the arming schedule.
4. Click  to set the time period for the arming schedule.
5. (Optional) After setting the arming schedule, you can copy the schedule to other days.
6. Click **OK** to save these new settings.

Configuring the Alarm Actions for Motion Detection

You can specify the what happens (alarm type) when an event is triggered.

1. Click the **Linkage Method** tab to enter the setting interface.

Figure 6-13 Linkage Method Tab for Motion Detection



2. Select the alarm linkage method(s), including **Audible Warning**, **Notify Surveillance Center**, **Send Email**, and **Upload to FTP**.

   Audible Warning: Triggers an audible beep from the encoder when an alarm is detected. (HVE8/HVE8X models only)

   Notify Surveillance Center: Sends an exception or alarm signal to a remote alarm host when an event occurs. The alarm host is the PC that has the Remote Client installed.

   Send Email: Sends an email with alarm information to a specified user or users when an event occurs.

Note To send an email when an event occurs, you first must go to the network setting interface to set the related parameters. See *Configuring Email Settings on page 61*.

   Upload to FTP: Captures an image when an alarm is triggered, and uploads the picture to an FTP server.

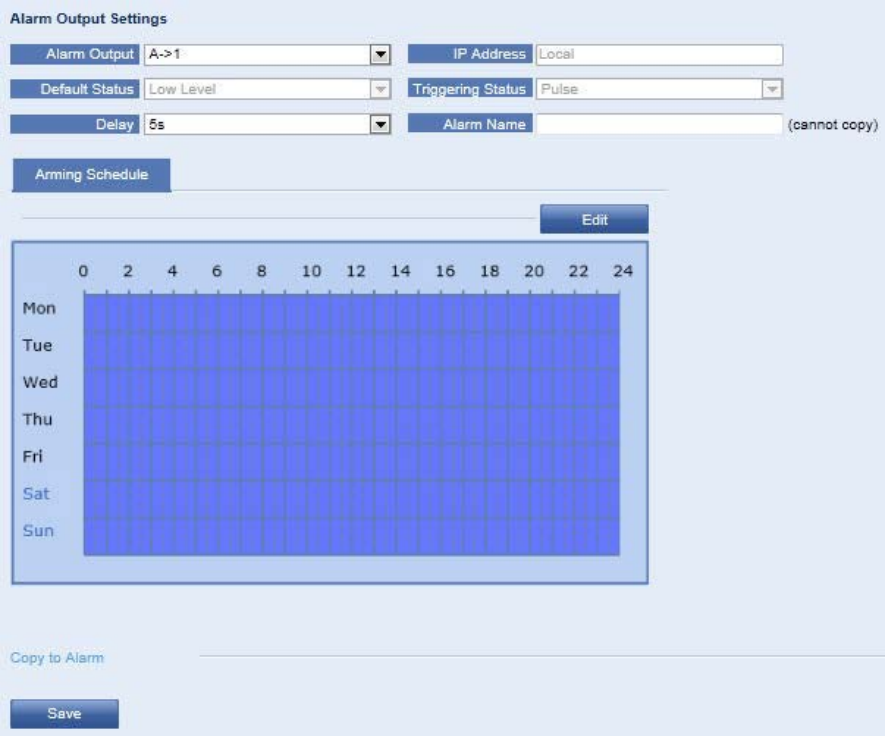
3. Select the channel for which you want to trigger an external alarm output when a motion detection event occurs.

Figure 6-14 Selecting an Alarm Output Channel

4. Configure Alarm Output settings.

   a. Click **Remote Configuration** ➤ **Alarm Settings** ➤ **Alarm Output** to enter the Alarm Output settings interface.

Figure 6-15 Alarm Output Settings Interface



b. Select one alarm output channel in the **Alarm Output** drop-down list.

c. The Delay time can be set to **5sec**, **10sec**, **30sec**, **1min**, **2min**, **5min**, **10min**, or **Manual**. The Delay refers to the time duration that the alarm output remains in effect after an alarm occurs.

Note If you choose **Manual**, then you need to manually disable the alarm output.

d. Click **Edit** to enter the **Edit Schedule Time** interface.

Figure 6-16 Edit Schedule Time Interface

The time schedule configuration is the same as the setting of the Arming Schedule for Motion Detection.

See *Configuring the Arming Schedule on page 82* for more about the Arming Schedule.

e. Return to the **Alarm Output Settings** interface, then click **Save** to save these new settings.

5. Select the channel on which you want to trigger recording when a motion detection event occurs.

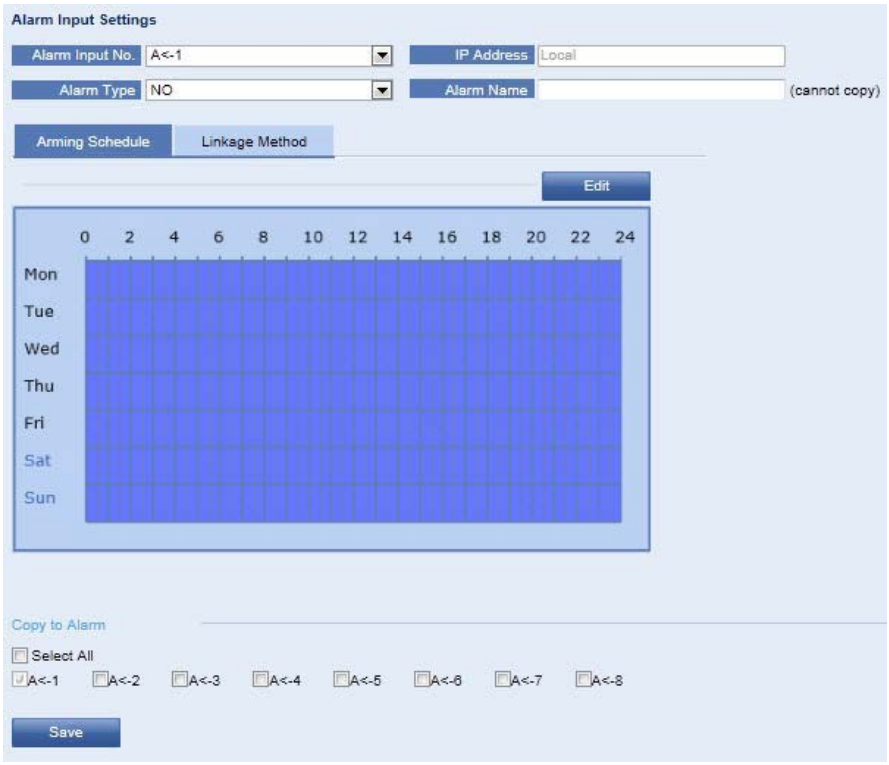
Figure 6-17 Selecting a Channel for Motion Event Detection

6. Click **Save** to save these new settings.

Configuring an External Alarm Input

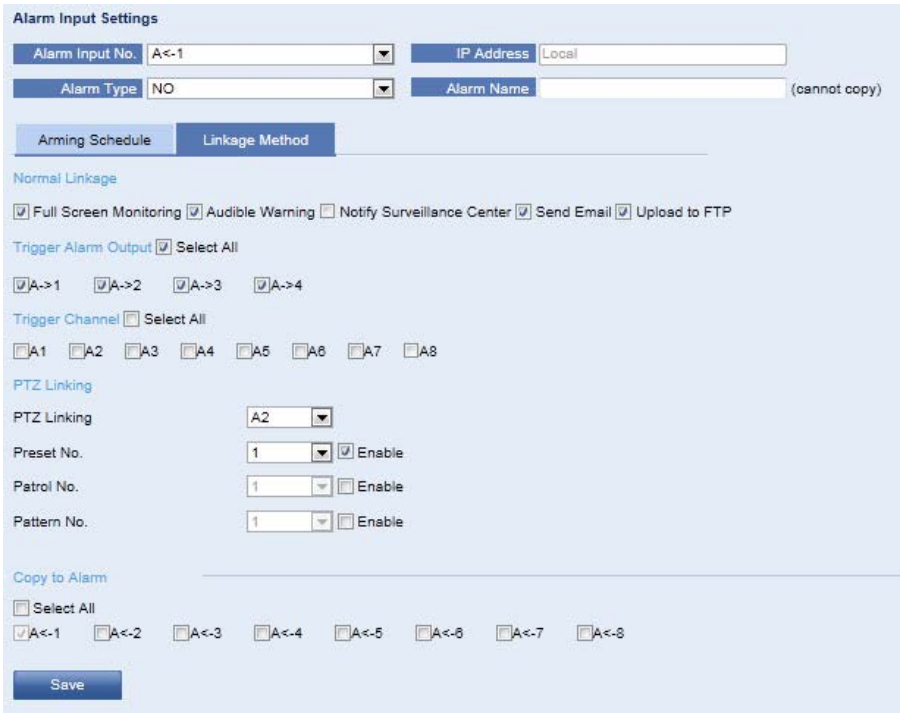
1. Click **Remote Configuration** ➤ **Alarm Settings** ➤ **Alarm Input** to enter the Alarm Input settings interface.

Figure 6-18 Alarm Input Settings Interface



2. Select an **Alarm Input number** and **Alarm Type** from their drop-down menus. Select from **NO** (Normally Open) or **NC** (Normally Closed) for the Alarm Type.
3. Set the arming schedule for the alarm input. See *Configuring the Arming Schedule on page 82* for more about the Arming Schedule.
4. Click the **Linkage Method** tab to set the actions taken for the alarm input.

Figure 6-19 Linkage Method Tab for Alarm Input Settings



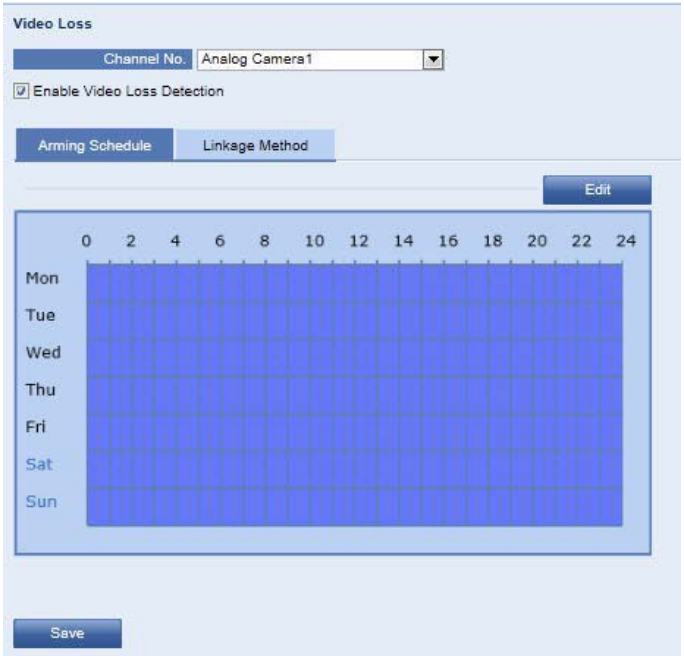
For more information, please see *Configuring the Alarm Actions for Motion Detection on page 83*.

5. (Optional) You can also choose the PTZ linking for the alarm input if your camera is installed with a PTZ camera.
   a. Choose the PTZ linking channel.
   b. Check the related checkbox to enable **Preset Calling**, **Patrol Calling**, or **Pattern Calling**, then enter the preset/patrol/pattern number to be linked.
6. (Optional) Copy these settings to other alarm inputs.
7. Click **Save** to save these new settings.

Configuring a Video Loss Alarm

1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Video Loss** to enter the Video Loss settings interface.

Figure 6-20 Video Loss Settings Interface



2. Select a camera for which to configure the video loss alarm.
3. Check the checkbox for **Enable Video Loss**.
4. Click **Edit** to edit the arming schedule for video loss detection.

   The arming schedule configuration is the same as the setting of the arming schedule for motion detection.

   Please see *Configuring the Arming Schedule on page 82* for more information.
5. Click the **Linkage Method** tab to set the actions taken when a video loss alarm is triggered.

   Please see *Configuring the Alarm Actions for Motion Detection on page 83* for more information.

Configuring the Tamper-proof Alarm

When you enable this function, an alarm will trigger whenever there's tampering with the camera's image.

1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Tamper-proof** to enter the Tamper-proof Alarm settings interface.

Figure 6-21 Tamper-proof Settings Interface

2. Select a camera for which to configure the tamper-proof detection alarm.
3. Click the **Enable Tamper-proof** checkbox.
4. Set the tamper-proof area.

   See *Configuring the Motion Detection Area on page 81* for how to define an area.
5. Click **Edit** to edit the arming schedule for the tamper-proof alarm.

   Please see *Configuring the Arming Schedule on page 82* for more information.
6. Click the **Linkage Method** tab to set the actions taken when a video loss alarm is triggered.

   Please see *Configuring the Alarm Actions for Motion Detection on page 83* for more information.

Configuring Exception Handling

Choose what happens when an exception occurs. An exception is an event such as the following:

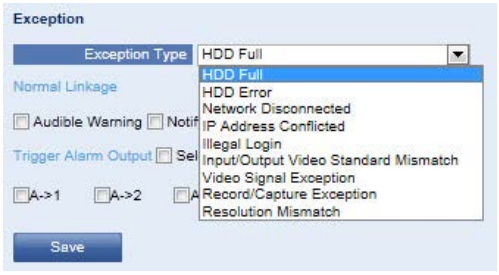
- HDD full
- HDD error
- Network disconnected
- IP address conflict
- Illegal access
- Video standard mismatch
- Video signal exception
- Record/capture exception
- Video resolution mismatch

Note When the resolution selected under **Remote Configuration ➤ Camera Settings ➤ Video Settings** and the actual video input resolution do not match, you will get an exception alarm. Please see *Configuring Video Settings on page 77*.

To configure exception handling:

1. Click **Remote Configuration ➤ Exception** to enter the Exceptions Settings interface.

Figure 6-22 Exception Settings Interface



2. Check the appropriate checkboxes for the actions you wish to take place when an Exception alarm is triggered. For more information, please see *Configuring the Alarm Actions for Motion Detection on page 83*.
3. Click **Save** to save these new settings.

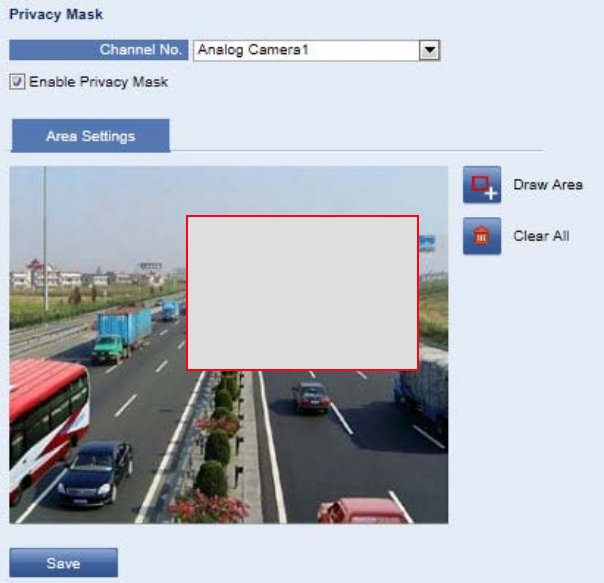
Configuring a Privacy Mask

The Privacy Mask enables you to cover certain areas on the video channel to prevent sensitive areas from being viewed or recorded.

To configure a privacy mask:

1. Click **Configuration ➤ Remote Configuration ➤ Camera Settings ➤ Privacy Mask** to enter the Privacy Mask settings interface.

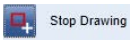
Figure 6-23 Privacy Mask Settings Interface



2. Select a camera for which you want to configure a privacy mask.
3. Check the **Enable Privacy Mask** checkbox to enable this function.
4. Click the **Draw Area** button 

.
5. Draw a motion privacy mask area by clicking and dragging the mouse in the live video image.

Note You can draw up to 4 privacy mask areas.

6. Click **Stop Drawing** 

to finish drawing the motion detection area.
Click **Clear All** 

to clear all drawn areas.
7. Click **Save** to save these new settings.

Configuring RS-232/RS-485 Port Settings

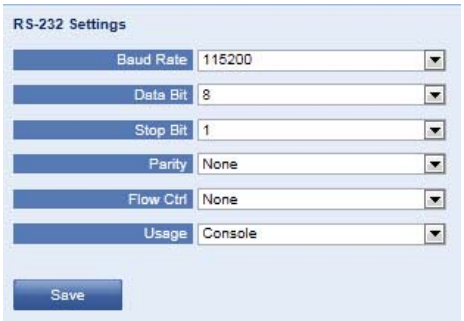
Configuring RS-232 Port Settings

Note HVE1/HVE1X encoders do not have an RS-232 serial port.

Through the serial port management tools, the RS-232 serial port can be used for configuration.

1. Click **Remote Configuration ➤ Serial Port Settings➤ 232 Serial Port** to enter the 232 Serial Port settings interface.

Figure 6-24 RS-232 Serial Port Settings Interface



Note If you want to connect the encoder by the RS-232 port, the parameters of the RS-232 port should be exactly the same as the parameters you configured here.

2. Click **Save** to save these new settings.

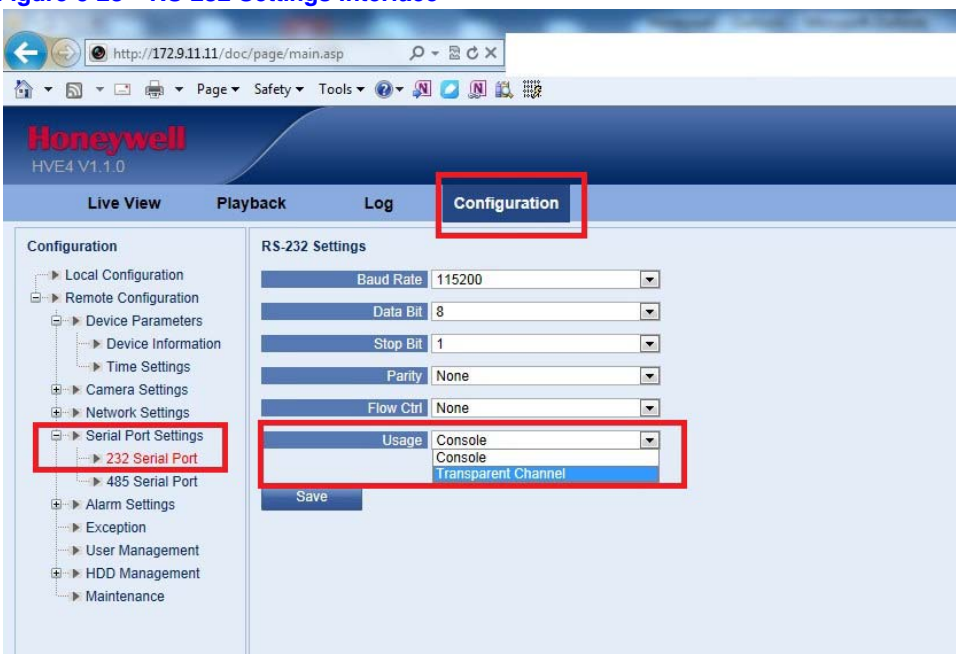
Configuring the RS-232 Port as a Transparent Channel

In order to receive data, you must set the RS-232 port as a transparent channel.

Setting the RS-232 port as a transparent channel:

1. Click **Remote Configuration ➤ Serial Port Settings➤ 232 Serial Port** to enter the RS-232 Settings interface.

Figure 6-25 RS-232 Settings Interface



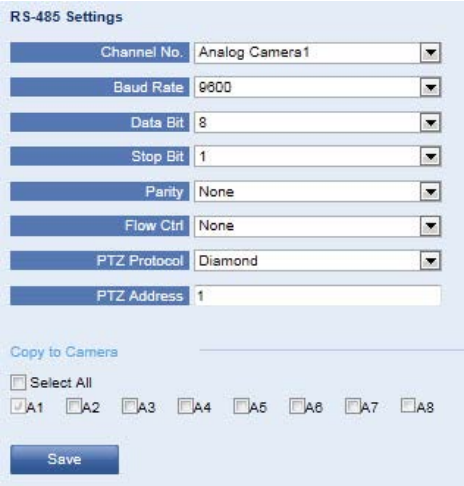
2. Select **Transparent Channel** from the Usage drop-down menu.
3. Click **Save** to save this new setting.

Configuring RS-485 Port Settings

The RS-485 serial port is used to control PTZ cameras. You must configure the PTZ parameters before you can control the PTZ unit.

1. Click **Remote Configuration ➤ Serial Port Settings ➤ 485 Serial Port** to enter the RS-485 Serial Port Settings interface.

Figure 6-26 RS-485 Serial Port Settings Interface



2. Set the RS-485 parameters.

Table 6-2 Default RS-485 Port Settings

Setting	Default
Baud Rate	9600
Data Bit	8
Stop Bit	1
Parity	None
Flow Control	None

Note The Baud Rate, Address, and PTZ Protocol parameters should be exactly the same as the parameters of the connected PTZ camera.

3. Click **Save** to save these new settings.

7

Configuring Recording and Capturing Settings

Before configuring the settings for recording and capturing, ensure that the following conditions are met:

- Ensure that the encoder is connected to an HDD (if supported), network disk, or microSD card (if supported).
- Ensure that the HDD or network disk has been initialized for first-time use.

For more information about storage, please see *Adding the Network Disk on page 63*.

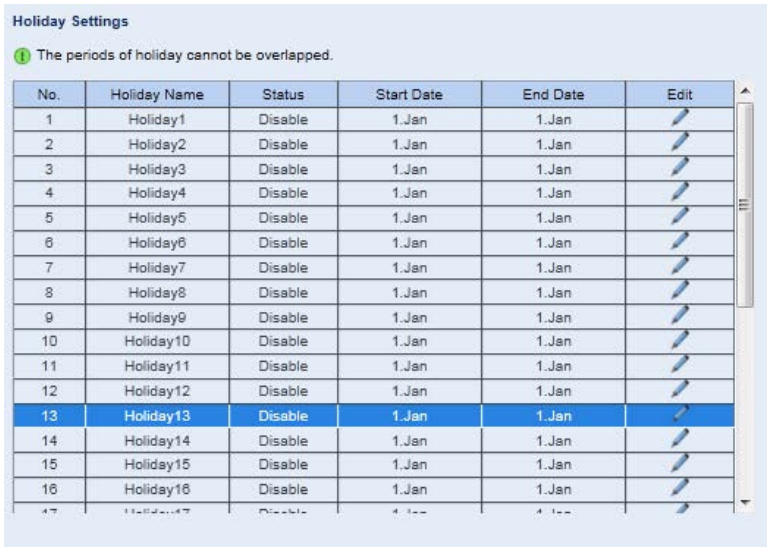
You can choose from two recording/capturing types: **Manual** or **Scheduled**.

Configuring Holiday Settings

It's a good idea to have a different plan for recording during holidays.

1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Holiday Settings** to enter the holiday settings interface.

Figure 7-1 Holiday Settings Interface



2. Select a holiday from the Holiday Settings list, then click  to edit the holiday. The Edit Holiday interface opens.

Figure 7-2 Edit Holiday Interface

a. Enter the holiday name.

b. Check the checkbox to enable the holiday.

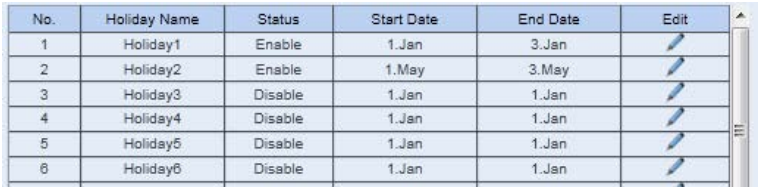
c. Select the holiday type from the drop-down list. Choose from **By Month**, **By Week**, or **By Date**.

d. Set the **Start** and **End Dates**.

e. Click **OK** to save these new settings, and to go back to the **Holiday Settings** interface.

3. Check the Holiday Settings list to ensure that the correct settings have been entered.

Figure 7-3 Checking the Holiday Settings List



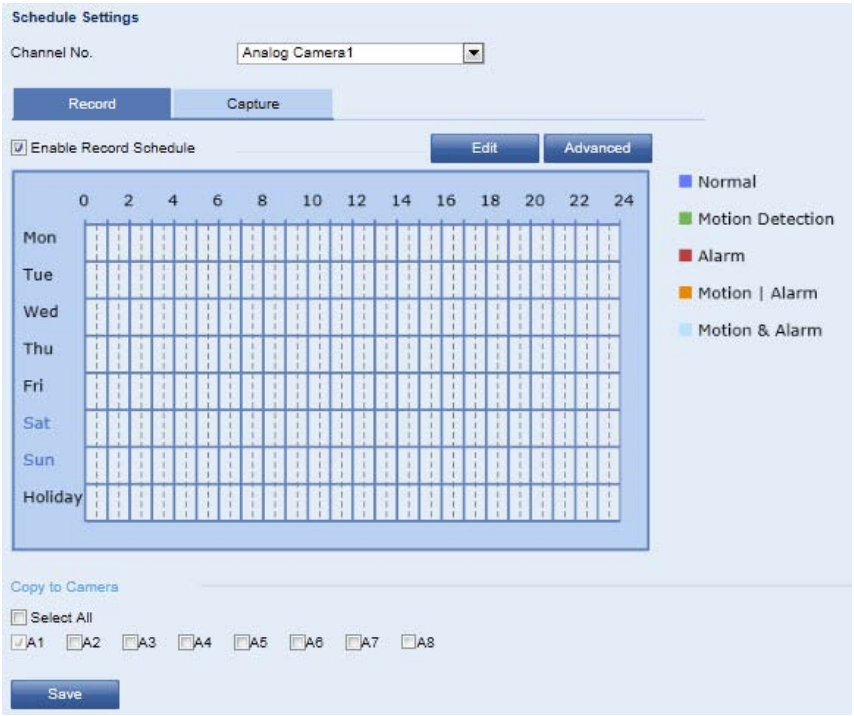
Repeat these steps for each holiday. Up to 32 holidays can be configured.

Note The Holiday option is available in the Schedule drop-down list after you have enabled Holiday Schedule in Holiday Settings.

Configuring Scheduled Recording and Capturing

1. Click **Remote Configuration** ➤ **Camera Settings** ➤ **Schedule Settings** to enter the Schedule Settings interface.

Figure 7-4 Schedule Settings Interface



2. From the drop-down menu, select the camera for which you want to configure the recording or capturing schedule.
3. Click the **Record** or **Capture** tab.
4. Check the checkbox for either **Enable Record Schedule** or **Enable Capture Schedule** to enable that function.
5. Click **Edit** to enter the Edit Schedule interface.

Figure 7-5 Edit Schedule Interface

6. Choose the day of the week for which you want to configure scheduled recording or capturing.

   a. Select **All Day** or configure a **Customized** time period.

   - If you want to configure an all-day recording/capturing period, then please check the **All Day** checkbox.
   - If you want to configure a specific time period for recording/capturing, then please check the **Customize** checkbox. Then enter a **Start Time** and an **End Time** period.

Note The time of each holiday period cannot overlap. Up to 8 periods can be configured.

b. Select either a **Record Type** or a **Capture Type**. Choose from **Normal**, **Motion**, **Alarm**, **Motion&Alarm**, and **Motion/Alarm**.

Table 7-1 Recording and Capturing Types

Type	Description
Normal	If you select **Normal**, then the video will be recorded/captured automatically according to the schedule.
Motion Detection	If you select **Motion**, then the video will be recorded/captured when motion is detected. Besides configuring the record/capture schedule, you have to set the motion detection area and check the **Trigger Channel** checkbox for the **Linkage Method** in the **Motion Detection** settings interface. See *Configuring Motion Detection on page 81*.
Alarm	If you select **Alarm**, then the video will be recorded/captured when the alarm is triggered. Besides configuring the record/capture schedule, you have to set the **Alarm Type** and check the **Trigger Channel** checkbox for the **Linkage Method** in the **Motion Detection** settings interface. See *Configuring Motion Detection on page 81*.
Motion & Alarm	If you select **Motion & Alarm**, then the video will be recorded/captured when motion is detected and the alarm are triggered at the same time. Besides configuring the record/capture schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces. See *Configuring Motion Detection on page 81*. See *Configuring External Alarm Input on page 86*.
Motion or Alarm	If you select **Motion | Alarm**, the video will be recorded/captured when the alarm is triggered or motion is detected. Besides configuring the record/capture schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces. See *Configuring Motion Detection on page 81*. See *Configuring External Alarm Input on page 86*.

c. (Optional)

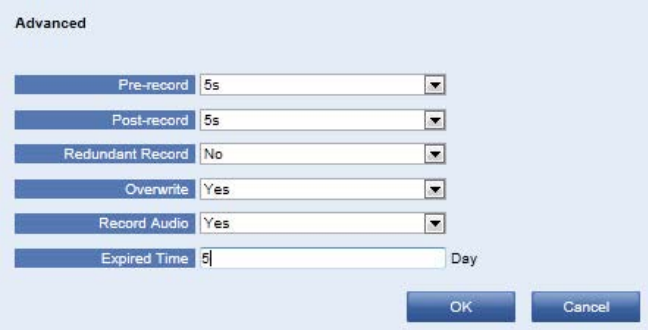
Check the **Select All** checkbox, then click **Copy** to copy these settings to the whole week.

Select individual days to which to copy these settings by clicking the appropriate checkbox.

d. Click **OK** to save these new settings and to then exit the **Edit Schedule** interface.

7. Click **Advanced** to configure advanced recording parameters such as Pre- and Post-Event recording intervals, and when to overwrite recordings and to record audio.

Figure 7-6 Advanced Recording Parameters



Pre-Record: Choose from **No Pre-Record**, **5 sec**, **10 sec**, **15 sec**, **20 sec**, **25 sec**, or **30 sec**.

Post Record: Choose from **5 sec**, **10 sec**, **30 sec**, **1 min**, **2 min**, **5 min**, or **10 min**.

8. To copy the recording settings of the current camera to other cameras, expand the **Copy to Camera** panel, then either select specific cameras to which you want to copy the settings, or click **Select All** to select all cameras.

Figure 7-7 Copying the Settings to Other Cameras

9. Click **Save** to validate these new settings.

8

Playing Back Recorded Video

Recorded video files can be remotely played back through a Web browser.

Before playing back recorded video, ensure that the following conditions are met:

- Ensure that the encoder is connected to an HDD (if supported), network disk, or microSD card (if supported).
- Ensure that the HDD or network disk has been initialized for first-time use.

Playing back recorded video:

1. Click **Playback** on the menu bar to enter the playback interface.

Figure 8-1 Playback Interface

2. Select a camera from the device list for playback.
3. Select a day from the calendar, and then click **Search**.

Figure 8-2 Calendar

4. Click **Play** to play the video found for that date.

Figure 8-3 Playing Back Video

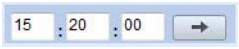
Table 8-1 Playback Controls

Button	Function	Button	Function
	Select window division mode		Play/Pause
	Stop playback		Reverse playback?
	Fast forward		Play by single frames
	Stop all channels from playing		Capture pictures in playback mode
	Download video files		Start/Stop clipping video files
	Audio on/off		

Playing Back a Specific Time

You can use the mouse to drag the progress bar to locate an exact playback point.

Figure 8-4 Playback Slidebar

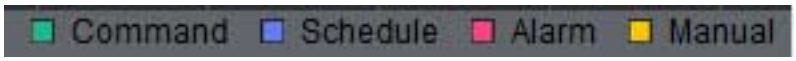
Or you can enter the specific time in the time field 

, then click  .

Determining the Type of Recorded Video

The recorded video is assigned a specific color which indicates the type of video.

Figure 8-5 Recorded Video Color Key



9

Managing User Accounts

Click **Remote Configuration** ➤ **Remote Configuration** ➤ **User Management** to enter the User Management settings interface.

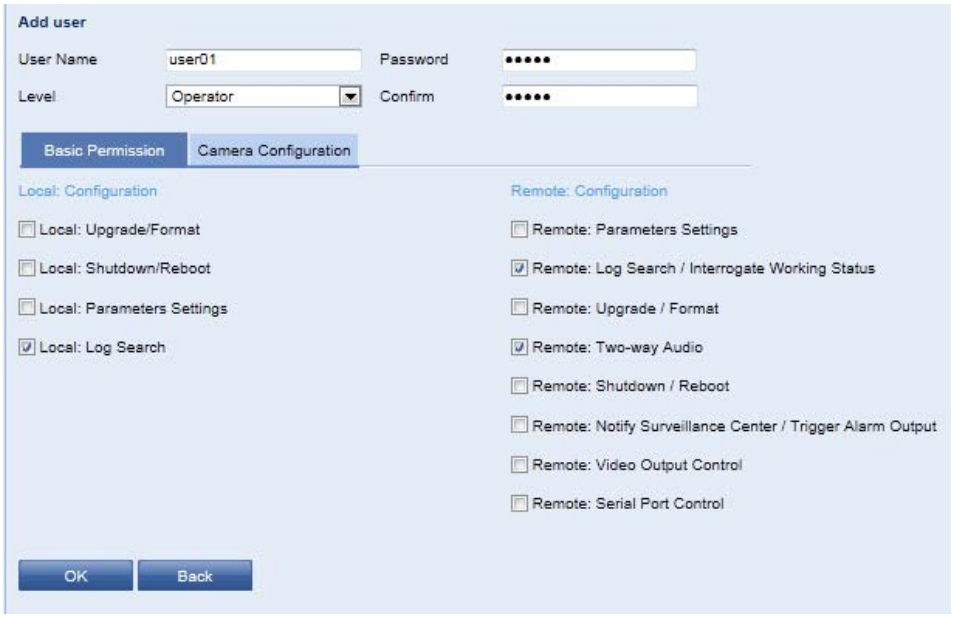
Figure 9-1 User Management Settings Interface

Only an **admin** user has the ability to create normal users. Up to 31 users can be created.

Adding a User

1. Click **Add** to enter the Add User interface.

Figure 9-2 Add User Interface



2. Enter a **User Name** and **Password**, and then confirm the password.
3. Select a user **Level**. Choose from **Operator** or **User**.

   The user levels have different permissions.

   Operator: Operators have access to the following: Local Log Search in the Local Configuration, Remote Log Search and Two-way Audio in Remote Configuration, and all operating permissions in Camera Configuration.

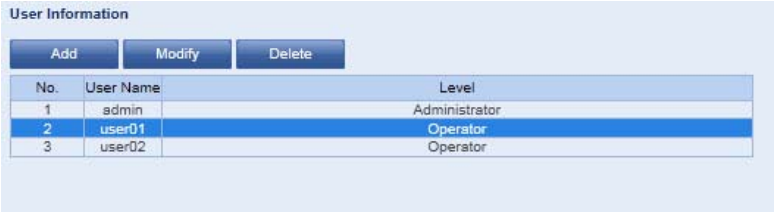
   User: Guest users have access to the following: Local Log Search in the Local Configuration, Remote Log Search in Remote Configuration, and only local/remote playback in Camera Configuration.
4. Configure the user permissions for the selected user account, including **Basic Permissions** and **Camera Operation**.
5. Click **OK** to save these new changes.

Modifying a User

Note You need the admin password to modify the admin user.

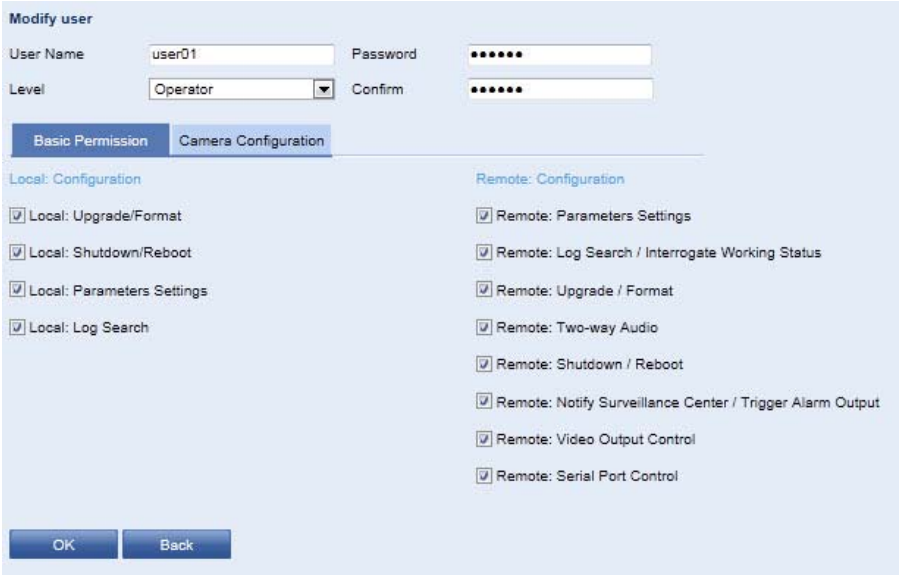
1. Select a user account from the list on the User Information interface.

Figure 9-3 User Account - Modifying a User



2. Click **Modify** to enter the **Modify User** interface.

Figure 9-4 Modify User Interface

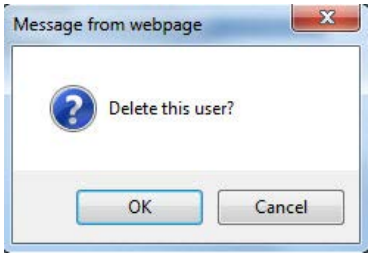


3. Make the necessary changes, and then click **OK** to save these new settings.

Deleting a User

1. Select a user account from the list on the User Information interface.
2. Click **Delete**, and a confirmation message pops up.

Figure 9-5 Confirmation Message for Deleting a User



3. Click **OK** to confirm the deletion of the selected user account.

10

Searching Logs, Viewing Device Information, and Maintaining the Encoder

Searching Logs

Log files store operation, alarm, and exception information for the device. These log files can be viewed and exported at any time.

Before you begin, ensure that the following conditions are met:

- Ensure that the encoder is connected to an HDD (if supported), network disk, or microSD card (if supported).
- Ensure that the HDD or network disk has been initialized for first-time use.

For more information about storage, please see *Adding the Network Disk on page 63*.

1. Click **Log** on the menu bar to enter the Log interface.

Figure 10-1 Log Interface

2. Enter log search conditions to refine the search, including **Major Type**, **Minor Type**, **Start Time,** and **End Time**.
3. Click **Search**.

The log files that match the search criteria display in the log list. See *Figure 10-1*.

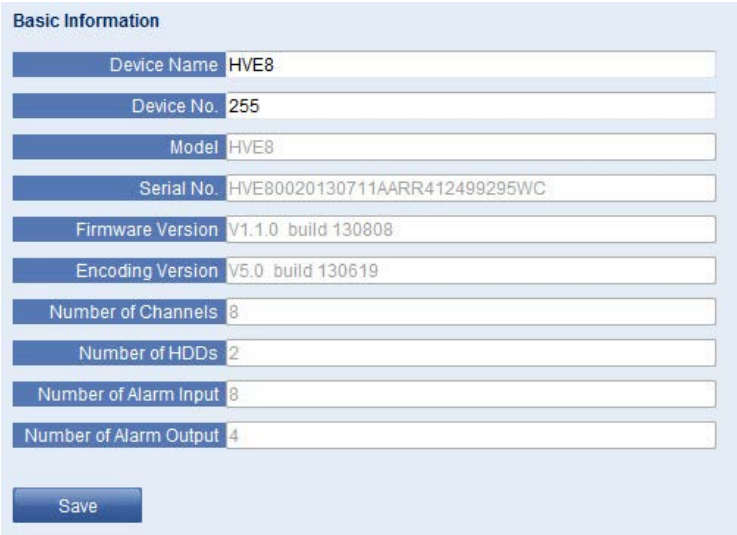
Note Up to 100 log files can be displayed at a time.

4. Click Save Log to save the searched log files to a local directory.

Viewing Device Information

Click **Remote Configuration ➤ Device Parameters ➤ Device Information** to enter the device Basic Information interface.

Figure 10-2 Basic Device Information Configuration Interface



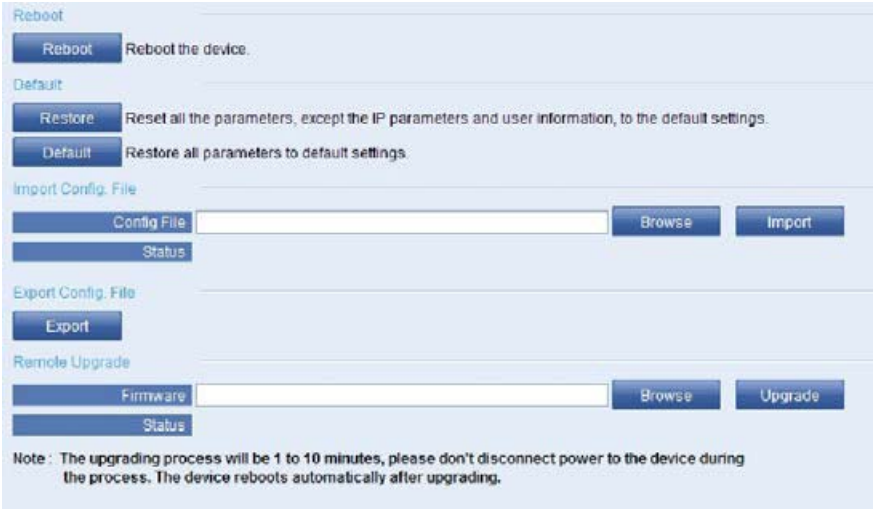
You can edit the **Device Name** and the **Device No.**. You can view the device information, including **Model, Serial No.**, **Firmware/Encode Version**, **Number of Channels**, **Number of HDDs**, and **Number of Alarm Input** / **Output**.

Maintenance

In the Maintenance interface, you can reboot the encoder, restore it to default settings, import and export configuration files, and upgrade the system.

Click **Remote Configuration** ➤ **Maintenance** to enter the Maintenance interface.

Figure 10-3 Maintenance Interface

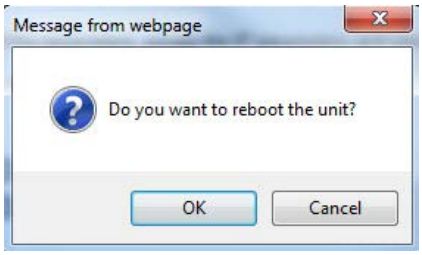


Restarting the Encoder

1. Click **Reboot** on the Maintenance interface.

   A confirmation message appears.

Figure 10-4 Confirmation Message for Rebooting the Encoder



2. Click **OK** to reboot the encoder. Click **Cancel** to cancel rebooting the recorder.

Restoring Default Settings

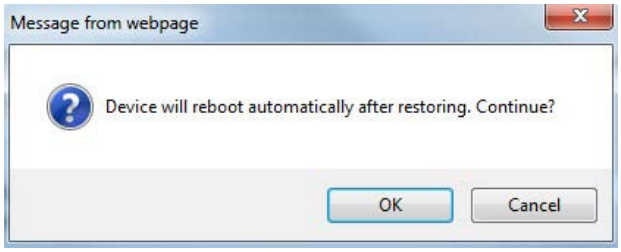
1. Click **Restore** or **Default** on the Maintenance interface.

Figure 10-5 Restore or Default Interface

- Select **Restore** to restore the encoder to the default settings for all parameters except the IP address, the subnet mask, the gateway, and the port.
- Select **Default** to restore the encoder to the default settings for all parameters.

A confirmation message appears.

Figure 10-6 Confirmation Message for Restoring or Returning the Encoder to Defaults



2. Click **OK** to restore the encoder to default settings and then reboot the device to validate the settings.

Importing or Exporting Configuration Files

The encoder's configuration files can be exported to a local device for backup. The configuration files of one encoder can be imported to multiple encoders if they are to be configured with the same parameters.

Importing Configuration Files

1. Click **Maintenance** ➤ **Import Config File** to open the **Import Config. File** interface.

Figure 10-7 Import Configuration File Interface

2. Click **Browse** to select the file from the selected backup device.
3. Click the **Import** button to import a configuration file.

Note After importing configuration files, the encoder reboots automatically.

Exporting Configuration Files

1. Click **Maintenance** ➤ **Export Config File** to open the **Export Config. File** interface.
2. Click the **Export** button to export configuration files to the selected local backup device.

Upgrading the System

1. Click **Maintenance** ➤ **Remote Upgrade** to open the Remote Upgrade interface.

Figure 10-8 Remote Upgrade Interface

2. Click **Browse** to select the local update file.
3. Click **Upgrade** to start remote upgrade.

A

Troubleshooting

The encoder cannot be pinged

Possible solutions:

- Check the cable connections between the encoder and the switch.
- Please see *Configuring Network Parameters on page 39*, and ensure that the device's IP matches your computer's IP.

The transparent channel has been set, but the encoder still does not receive data

Possible solutions

- Ensure that the RS-232 port has been set as a transparent channel. See *Configuring the RS-232 Port as a Transparent Channel on page 93*.
- Ensure that the encoder is properly connected.

The encoder cannot be added with the software

Possible solution:

- Check the encoder IP.
- Ensure that the encoder is properly connected.
- Ensure that the user name and password for the encoder are correct.

The encoder cannot control a PTZ camera

Possible solution:

- Check the RS-485 connections between the encoder and PTZ camera.
- Ensure that the PTZ address, protocol, and baud rate settings for the encoder match the same settings on the connect PTZ camera.

Video cannot be viewed through the Web browser

Possible solution:

- Check the network connection.
- Ensure that the encoder username and password are entered correctly.
- Ensure that the encoder port is entered correctly.

B

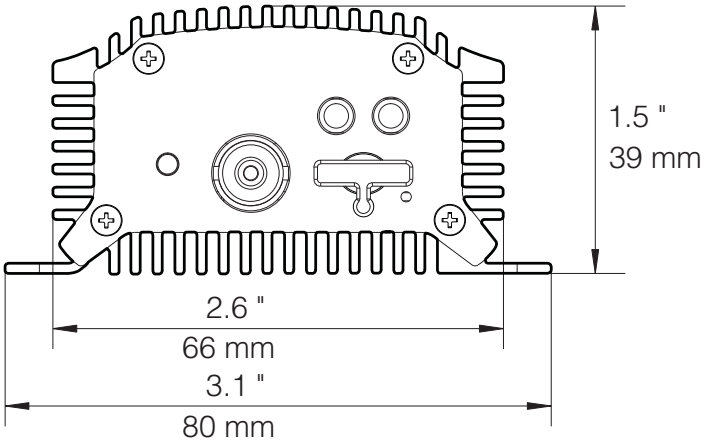
HVE1(X) Specifications

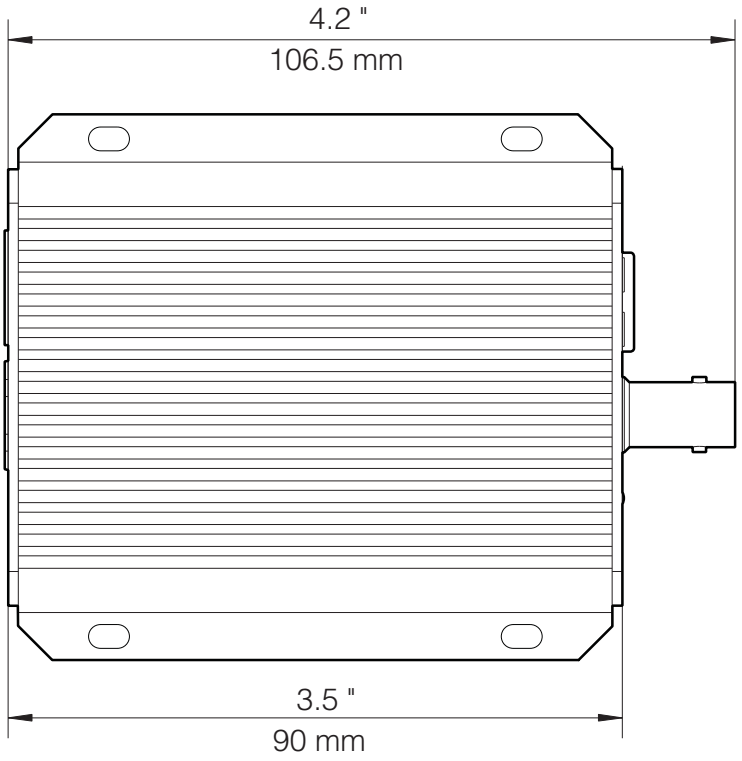
This section lists the technical specifications for the HVE1 1-channel encoder.

Operational	
Video Compression	H.264/MPEG4/MPEG2/MJPEG
Video Input	1 channel
Audio Compression	G.71u
Audio Input	1 channel
Two-way Audio Input	1 channel
Audio Output	1 channel
Recording Resolution	4CIF/2CIF/CIF/QCIF
Frame Rate	H.264/MPEG4/MPEG2 encoding: 25 fps (P) / 30 fps (N); MJPEG encoding: 15 fps
Video Bit Rate	32 Kbps ~ 3072 Kbps, or user defined (Max. 8192 Mbps)
Audio Bit Rate	64 kbps
Dual Stream	Supported
Stream Type	Video / Video + Audio
Data Storage Type	NAS, microSD
Data Storage Capacity	4 GB up to 32 GB and above, Class 6 and above for microSD storage
Network Protocols	IPv4/v6, HTTP, HTTPS, QoS layer3 DiffServ, FTP, SMTP, Bonjour, UPnPTM, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, hkDDNS, NTP, RTSP, RTP/RTCP,TCP, UDP, IGMP, ICMP, DHCP, ARP, SOCKSv4/v5, PSIA, ONVIF, HIKCGI, netFilter
Electrical	
Power Supply	12 V DC
Power Consumption	≤ 8 W
Mechanical	
Dimensions (W x H x D)	3.1 x 1.5 x 3.5 inches (80 × 39 × 90 mm)
Weight	≤ 1.1 lbs (≤ 0.5 kg)
Construction	Housing: Die-cast aluminum

Connections	
Video Input	BNC 1 Vp-p @ 75 ohms
Video Output	1 - Composite main monitor, BNC 1 Vp-p @ 75 ohms 1 - VGA Main Monitor 1 - Spot BNC 1 Vp-p @ 75 ohms
Audio Input	3.5 mm interface (2.0 Vp-p, 1 ohm) (LINE IN)
Audio Output	3.5 mm interface (Linear, 600 ohms)
Two-way Audio Input	3.5 mm interface (2.0 Vp-p, 1 ohm) (LINE IN)
Network Interface	1 RJ-45 10 M / 100 Mbps adaptive Ethernet interface (PoE)
Serial Interface	1 half-duplex RS-485 interface
Alarm In	1
Alarm Out	1
Data Storage	1 microSD interface
Environmental	
Temperature	Operating: 14°F to 131°F (-10°C to 55°C) Storage: -4°F to 149°F (-20°C to 65°C)
Relative Humidity	10% to 90%, non-condensing
Regulatory	
Emissions	EN 55022 FCC Part 15B, Class A
Immunity	EN 50130-4
Safety	EN 60950-1 North America ETL listed to UL/CSA 60950-1

Dimensions





C

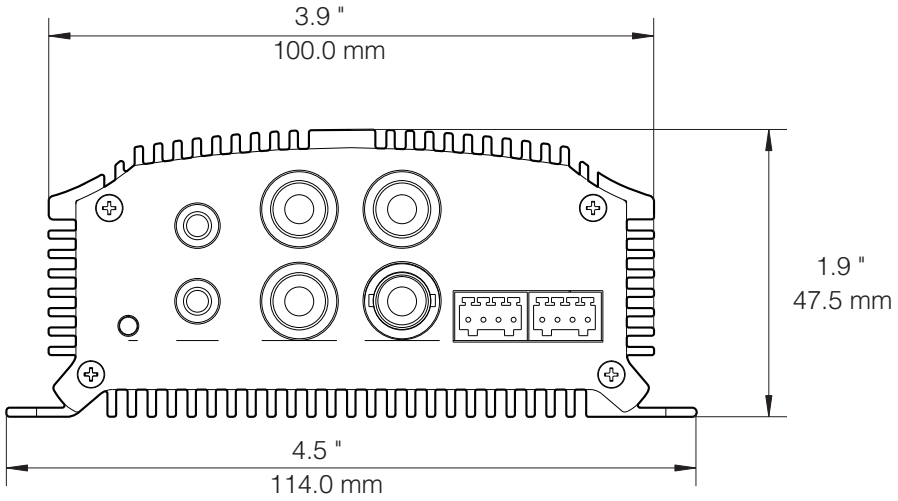
HVE4(X) Specifications

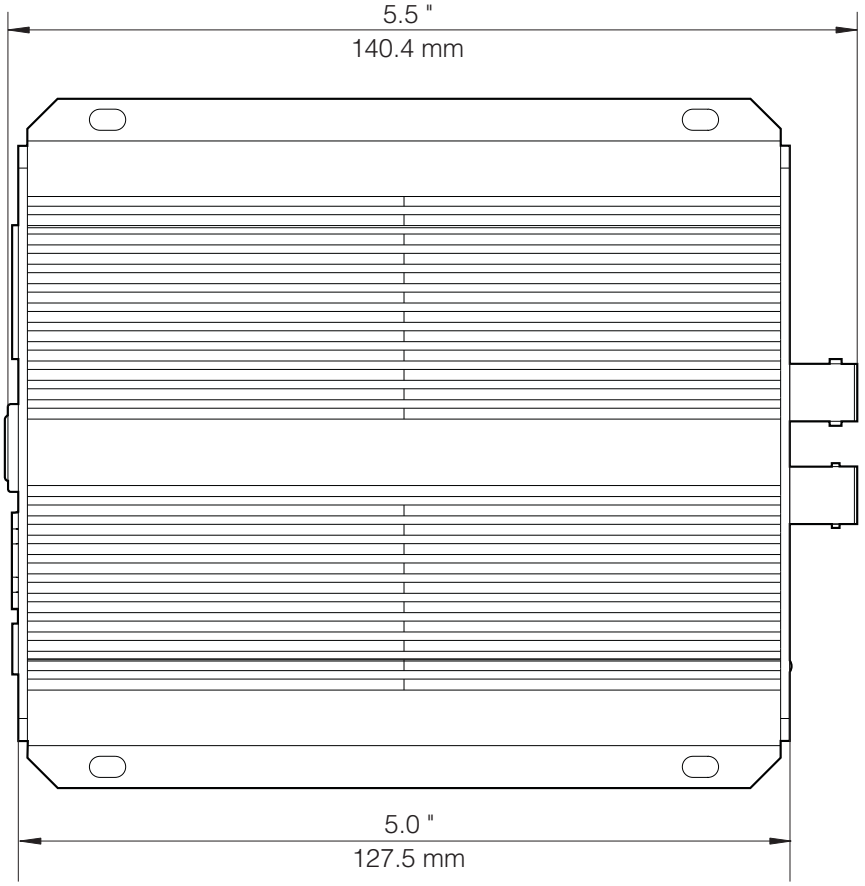
This section lists the technical specifications for the HVE4 4-channel encoder.

Operational	
Video Compression	H.264/MPEG4/MPEG2/MJPEG
Video Input	4 channels
Audio Compression	G.71u
Audio Input	4 channels
Two-way Audio Input	1 channel
Audio Output	1 channel
Recording Resolution	4CIF/2CIF/CIF/QCIF
Frame Rate	H.264/MPEG4/MPEG2 encoding: 25 fps (P) / 30 fps (N); MJPEG encoding: 15 fps
Video Bit Rate	32 Kbps ~ 3072 Kbps, or user defined (Max. 8192 Mbps)
Audio Bit Rate	64 kbps
Dual Stream	Supported
Stream Type	Video / Video + Audio
Data Storage Type	NAS, microSD
Data Storage Capacity	16 GB up to 32 GB and above, Class 6 and above for microSD storage
Network Protocols	IPv4/v6, HTTP, HTTPS, QoS layer3 DiffServ, FTP, SMTP, Bonjour, UPnPTM, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, hkDDNS, NTP, RTSP, RTP/RTCP,TCP, UDP, IGMP, ICMP, DHCP, ARP, SOCKSv4/v5, PSIA, ONVIF, HIKCGI, netFilter
Electrical	
Power Supply	12 V DC
Power Consumption	≤ 8 W
Mechanical	
Dimensions (W x H x D)	4.5 x 1.9 x 128 inches (114 × 48 × 5.0 mm)
Weight	≤ 2.2 lbs (≤ 1.0 Kg)
Construction	Housing: Die-cast aluminum

Connections	
Video Input	BNC 1 Vp-p @ 75 ohms
Video Output	1 - Composite main monitor, BNC 1 Vp-p @ 75 ohms 1 - VGA Main Monitor 1 - Spot BNC 1 Vp-p @ 75 ohms
Audio Input	3.5 mm interface (2.0 Vp-p, 1 ohm) (LINE IN)
Audio Output	3.5 mm interface (Linear, 600 ohms)
Two-way Audio Input	3.5 mm interface (2.0 Vp-p, 1 ohm) (LINE IN)
Network Interface	1 RJ-45 10 M / 100 Mbps adaptive Ethernet interface (PoE)
Serial Interface	1 half-duplex RS-485 interface 1 RS-232 interface
Alarm In	4
Alarm Out	2
Data Storage	1 microSD interface
Environmental	
Temperature	Operating: 14°F to 131°F (-10°C to 55°C) Storage: -4°F to 149°F (-20°C to 65°C)
Relative Humidity	10% to 90%, non-condensing
Regulatory	
Emissions	EN 55022 FCC Part 15B, Class A
Immunity	EN 50130-4
Safety	EN 60950-1 North America ETL listed to UL/CSA 60950-1

Dimensions





D

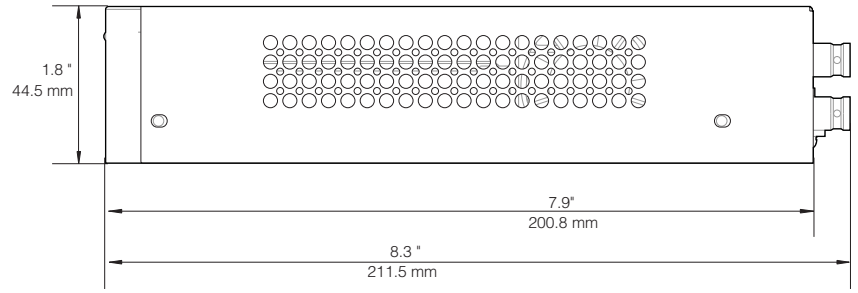
HVE8(X) Specifications

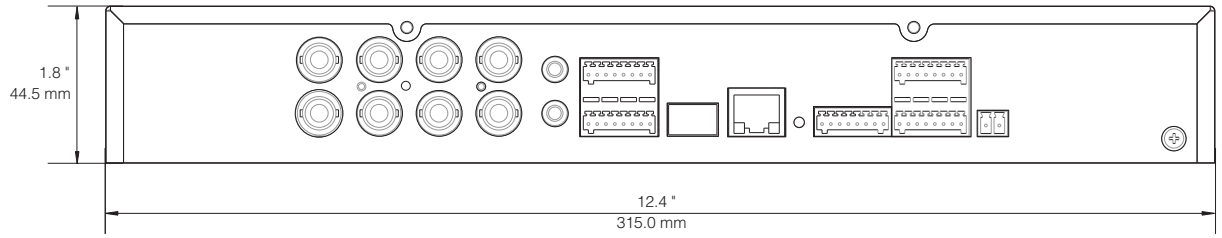
This section lists the technical specifications for the HVE8 8-channel encoder.

Operational	
Video Compression	H.264/MPEG4/MPEG2/MJPEG
Video Input	8 channels
Audio Compression	G.71u
Audio Input	8 channels
Two-way Audio Input	1 channel
Audio Output	1 channel
Recording Resolution	4CIF/2CIF/CIF/QCIF
Frame Rate	H.264/MPEG4/MPEG2 encoding: 25 fps (P) / 30 fps (N); MJPEG encoding: 15 fps
Video Bit Rate	32 Kbps ~ 3072 Kbps, or user defined (Max. 8192 Mbps)
Audio Bit Rate	64 kbps
Dual Stream	Supported
Stream Type	Video / Video + Audio
Data Storage Type	NAS, SATA
Data Storage Capacity	Up to 4 TB capacity for each disk
Network Protocols	IPv4/v6, HTTP, HTTPS, QoS layer3 DiffServ, FTP, SMTP, Bonjour, UPnPTM, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, hkDDNS, NTP, RTSP, RTP/RTCP,TCP, UDP, IGMP, ICMP, DHCP, ARP, SOCKSv4/v5, PSIA, ONVIF, HIKCGI, netFilter
Electrical	
Power Supply	12 V DC
Power Consumption	≤ 30 W
Mechanical	
Dimensions (W x H x D)	12.4 x 1.8 x 7.9 inches (315 × 45 × 200 mm)
Weight	≤ 4.4 lbs (≤ 2.0 Kg)
Construction	Housing: Steel chassis

Connections	
Video Input	BNC 1 Vp-p @ 75 ohms
Video Output	1 - Composite main monitor, BNC 1 Vp-p @ 75 ohms 1 - VGA Main Monitor 1 - Spot BNC 1 Vp-p @ 75 ohms
Audio Input	3.5 mm interface (2.0 Vp-p, 1 ohm) (LINE IN)
Audio Output	3.5 mm interface (Linear, 600 ohms)
Two-way Audio Input	3.5 mm interface (2.0 Vp-p, 1 ohm) (LINE IN)
Network Interface	1 RJ-45 10 M / 100 Mbps / 1000 Mbps adaptive Ethernet interface
Serial Interface	1 half-duplex RS-485 interface 1 RS-232 interface
Alarm In	8
Alarm Out	4
Environmental	
Temperature	Operating: 14°F to 131°F (-10°C to 55°C) Storage: -4°F to 149°F (-20°C to 65°C)
Relative Humidity	10% to 90%, non-condensing
Regulatory	
Emissions	EN 55022 FCC Part 15B, Class A
Immunity	EN 50130-4
Safety	EN 60950-1 North America ETL listed to UL/CSA 60950-1

Dimensions





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