

## HDZ Series

### IP PTZ Dome

HDZ20HD	HDZ20HDX
HDZ20HDE	HDZ20HDEX
HDZ30HD	
HDZ30HDE	
HDZ30	HDZ30X
HDZ36E	HDZ36EX

## User Manual

#### Recommended

Find the latest version of this and other HDZ Series IP PTZ dome camera documents on the Honeywell Video website. Go to <http://www.honeywellvideo.com/products/cameras/ip/pt-onvif/index.html> to find your camera and view/download the latest documentation.



Refer to the Honeywell Open Technology Alliance to learn more about our open and integrated solutions (go to: <http://www.security.honeywell.com/hota/>).



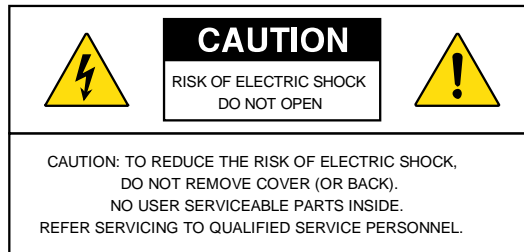
## Revisions


<b>Issue</b>	<b>Date</b>	<b>Revisions</b>
A	07/2012	New document.
V1 Rev A	09/2012	Revised for NA compatibility, and few corrections made to reflect product development.
V2 Rev A	07/2013	Revised for regulatory corrections based on product UL report.
V3 Rev A	11/2013	Added HDZ30HD, HDZ30HDE, HDZ30(X), and HDZ36E(X) models to the document. Also made changes to reflect latest software release.
V4 Rev A	07/2014	Added specs and dimensions drawings for HDZ30HD and HDZ30HDE models.


---

## Cautions and Warnings

---



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

 **WARNING** To ensure compliance with electrical safety standards, CSA Certified/UL Listed Class 2 power adapters are required. High Power over Ethernet (PoE+) shall be supplied by listed Information Technology Equipment meeting the IEEE 802.3at-2009 PoE+ standard. The PoE is not intended to be connected to exposed (outside plant) networks.

### IMPORTANT NOTE regarding PoE operation of models HDZ36E(X) and HDZ30HDE

A high power PoE injector capable of supplying at least 60 W is required for proper operation of outdoor camera models HDZ36E(X) and HDZ30HDE as PoE to IEEE802.3af or IEEE802.3at will not support these models.

---

## 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

The manufacturer declares that the equipment supplied with this guide is compliant with the European Parliament and Council Directive on the Restrictions of the use of certain Hazardous Substances in electrical and electronic equipment (2011/65/EU), General Product Safety Directive (2001/95/EC) and 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 60950-1 for electrical equipment safety.

**WARNING** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

**WARNING** To comply with EN50130-4 requirements, a UPS should be employed when powering the camera from 24 V AC.

## 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 installing or operating 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 indoor-rated models in outdoor locations.
  - 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.
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. **MOUNTING SYSTEM** - Use only with a mounting system recommended by the manufacturer, or sold with the product.
6. **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.
7. **ACCESSORIES** - Only use accessories specified by the manufacturer.
8. **CLEANING** - Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
9. **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.
10. **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. Using replacement parts or accessories other than the original manufacturers may invalidate the warranty.

**CAUTION** Risk of explosion if Battery is replaced by an incorrect type. Dispose of used batteries in accordance with local laws.

---

## 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.**

# Contents

<b>Contents</b> . . . . .	<b>7</b>
<b>Figures</b> . . . . .	<b>11</b>
<b>Tables</b> . . . . .	<b>15</b>
<b>About This Document</b> . . . . .	<b>17</b>
Overview of Contents . . . . .	17
Related Documents . . . . .	18
Typographical Conventions . . . . .	18
<b>1 Introduction</b> . . . . .	<b>19</b>
Overview . . . . .	19
Dimensions . . . . .	20
<b>2 Installing the Camera</b> . . . . .	<b>23</b>
Before You Begin . . . . .	23
Accessories You Can Order Separately . . . . .	24
Assembling the Camera . . . . .	24
Mounting the Camera . . . . .	24
Using Safety Cable During Installation . . . . .	25
Installing a Ceiling Mount (Indoor Only) . . . . .	26
Installing a Wall Mount . . . . .	26
Installing a Parapet/Flat Roof Mount . . . . .	28
Connecting the Cables . . . . .	29
MicroSDHC Card Details . . . . .	30
Connecting Audio . . . . .	30
Connecting Alarm Inputs/Outputs . . . . .	30
Connecting the Network Cable . . . . .	31
Connecting Power . . . . .	32
<b>3 Accessing the Camera</b> . . . . .	<b>35</b>
System Requirements . . . . .	35
Finding the Camera on a Network . . . . .	35
Assigning a Static IP Address to the Camera . . . . .	36
Accessing the Camera from a Browser . . . . .	38
Enabling Internet Explorer ActiveX Settings . . . . .	38
Accessing the Camera from a Browser . . . . .	38
Installing and Using Honeywell Viewer for the First Time . . . . .	39
Deleting the Honeywell Viewer Program from a PC . . . . .	40
Understanding the Web Client User Interface . . . . .	40
Main Tabs . . . . .	42
Quick Action Buttons . . . . .	42
PTZ Controls . . . . .	43
On-Screen Display . . . . .	44
<b>4 Configuring Video and Audio Streaming</b> . . . . .	<b>45</b>
Video Format Settings . . . . .	45

Setting the Video Resolution . . . . .	46
Setting the Text Overlay . . . . .	47
Setting the Video Rotate Type. . . . .	47
Setting the GOV Length . . . . .	48
Setting the H.264 Profile. . . . .	48
Setting Video Deinterlacing . . . . .	49
Video Compression Settings . . . . .	49
Setting the Video Compression . . . . .	50
Enabling Constant Bit Rate Mode . . . . .	51
Video OCX Protocol Settings. . . . .	52
Selecting an OCX Protocol . . . . .	53
Video Frame Rate Settings. . . . .	53
Setting the Video Frame Rate . . . . .	53
Audio Settings . . . . .	54
Setting the Audio Transmission Mode . . . . .	55
Setting the Server Gain . . . . .	56
Setting the Audio Bit Rate . . . . .	56
Enabling Audio Recording to Storage . . . . .	56
<b>5 Configuring PTZ Settings. . . . .</b>	<b>57</b>
Preset Settings . . . . .	57
Programming a Preset Point . . . . .	58
Deleting a Preset Point . . . . .	59
Go to a Preset Point . . . . .	59
Mimic Tour Settings . . . . .	59
Programming a Mimic Tour Path . . . . .	59
Running a Mimic Tour Path . . . . .	60
Stopping a Running Mimic Tour. . . . .	61
Deleting a Programmed Mimic Tour . . . . .	61
Auto Pan Settings . . . . .	61
Programming an Auto Pan Path. . . . .	61
Running an Auto Pan Path . . . . .	62
Stopping a Running Auto Pan Path . . . . .	62
Deleting an Auto Pan Path. . . . .	62
Preset Tour Settings . . . . .	63
Programming a Preset Tour. . . . .	63
Running a Preset Tour. . . . .	64
Stopping a Running Preset Tour . . . . .	65
Deleting a Programmed Preset Tour . . . . .	65
Sector Settings . . . . .	65
Programming a Sector . . . . .	65
Enabling or Disabling the Sector Function . . . . .	66
Home Function . . . . .	66
Programming the Home Function. . . . .	66
Enabling or Disabling the Home Function . . . . .	67
Tilt Range Settings . . . . .	68
Adjust the Tilt Angle . . . . .	68
Privacy Mask Settings . . . . .	69
Privacy Mask Settings on 1080p PTZ Cameras. . . . .	70
Privacy Mask Settings on Standard Definition PTZ Cameras. . . . .	71
Camera Settings . . . . .	73
Exposure. . . . .	74
Auto Focus. . . . .	76
White Balance . . . . .	77
Backlight Compensation . . . . .	78
Image Sharpness . . . . .	79
Exposure Compensation . . . . .	79
Freeze . . . . .	80

Image Flip . . . . .	80
Digital Zoom . . . . .	81
Speed by Zoom . . . . .	81
Day/Night Function . . . . .	82
Wide Dynamic Range . . . . .	82
Inverse . . . . .	83
Auto Calibration . . . . .	83
2D Noise Reduction . . . . .	84
3D Noise Reduction . . . . .	84
Stabilizer . . . . .	84
On Screen Display . . . . .	85
Set Pan Zero . . . . .	85
TV System . . . . .	85
Restore Defaults . . . . .	86
<b>6 Configuring Alarms . . . . .</b>	<b>87</b>
Alarm Server Settings . . . . .	87
Configuring Email SMTP Servers . . . . .	87
Configuring FTP Servers . . . . .	88
Configuring HTTP Servers . . . . .	89
Alarm Input Settings . . . . .	90
Selecting an Alarm Input to Configure . . . . .	90
Setting the Alarm Status and Type . . . . .	90
Setting the Alarm Actions . . . . .	92
Setting a File Name . . . . .	94
Saving Alarm Input Settings . . . . .	95
Motion Detection Settings . . . . .	95
Selecting a Motion Detection Profile to Configure . . . . .	95
Setting the Motion Detection Status . . . . .	95
Setting the Motion Detection Window . . . . .	96
Setting the Motion Detection Sensitivity . . . . .	97
Setting the Motion Detection Actions . . . . .	98
Setting a Motion Detection File Name . . . . .	101
Saving the Motion Detection Settings . . . . .	101
Network Failure Detection Settings . . . . .	101
Setting Up Network Failure Detection . . . . .	101
Periodical Event Settings . . . . .	103
Setting Up Periodical Event and the Interval . . . . .	103
Setting the Periodical Event Triggered Actions . . . . .	104
Setting a Periodical Event File Name . . . . .	105
Saving the Periodical Event Settings . . . . .	105
<b>7 Configuring System Settings . . . . .</b>	<b>107</b>
System Settings . . . . .	107
Setting a Host Name . . . . .	107
Selecting the Camera Time Zone . . . . .	107
Enabling Daylight Saving Time . . . . .	108
Setting the System Clock . . . . .	109
Security Settings . . . . .	109
User Settings . . . . .	110
Network Security Settings: HTTPS . . . . .	113
Network Security Settings: IEEE 802.1X . . . . .	115
Setting Up an IP Filter . . . . .	116
Network Settings . . . . .	118
Basic Network Settings . . . . .	118
QoS (Quality of Service) . . . . .	120
SNMP Settings . . . . .	121
UPnP Settings . . . . .	123
DDNS Settings . . . . .	125

Recording Settings . . . . .	126
Configuring Recording Settings . . . . .	126
Deleting a Recording Schedule Setting . . . . .	127
Schedule Settings . . . . .	128
Configuring a Schedule . . . . .	128
Deleting a Scheduled Time Frame . . . . .	129
Storage Settings . . . . .	129
SD Card Storage Management . . . . .	129
Network Attached Storage Management . . . . .	131
File Location Settings . . . . .	133
Maintenance Settings . . . . .	134
Restoring Factory Defaults . . . . .	134
Upgrading the Software . . . . .	135
Maintenance of Configuration Files . . . . .	136
Support Settings . . . . .	138
Viewing the System Parameters . . . . .	138
Viewing the Log File . . . . .	139
<b>Appendix A HDZ Camera Specifications . . . . .</b>	<b>141</b>
HDZ20HD(X)/HDZ20HDE(X) Camera Specifications . . . . .	141
HDZ30HD/HDZ30HDE Camera Specifications . . . . .	144
HDZ30(X) Camera Specifications . . . . .	147
HDZ36E(X) Camera Specifications . . . . .	149
<b>Appendix B In-Ceiling Bracket Installation . . . . .</b>	<b>153</b>
Package Contents . . . . .	154
Recommended . . . . .	154
Installing the In-Ceiling Bracket . . . . .	155
<b>Index . . . . .</b>	<b>159</b>

# Figures

Figure 1-1	HDZ20HD(X)/HDZ30(X) Indoor IP PTZ Dome Camera Dimensions . . . . .	20
Figure 1-2	HDZ30HD Indoor IP PTZ Dome Camera Dimensions. . . . .	21
Figure 1-3	HDZ20HDE(X)/HDZ36E(X) Outdoor IP PTZ Dome Camera Dimensions . . . . .	21
Figure 1-4	HDZ30HDE Outdoor IP PTZ Dome Camera Dimensions . . . . .	22
Figure 2-1	Eyelet on Camera to Secure by Lanyard During Setup. . . . .	25
Figure 2-2	HDCM1 Ceiling Mount Installation. . . . .	26
Figure 2-3	HDXWM2 Wall Mount Installation . . . . .	27
Figure 2-4	HDPRM2 Parapet/Flat Roof Mount Installation . . . . .	28
Figure 2-5	Camera Back Plate Layout . . . . .	29
Figure 2-6	Main Audio Adapter Input (Detail). . . . .	30
Figure 2-7	Main Alarm Adapter Input (Detail). . . . .	31
Figure 2-8	Main Power Adapter Input (Detail). . . . .	33
Figure 3-1	Honeywell Device Search Application. . . . .	36
Figure 3-2	Right-Click Menu on Device Search Application . . . . .	37
Figure 3-3	Device Network Setup Window . . . . .	37
Figure 3-4	Camera Browser Login . . . . .	39
Figure 3-5	Software Installation Security Warning . . . . .	39
Figure 3-6	HDZ Series Camera Browser Home User Interface. . . . .	41
Figure 3-7	PTZ Controls . . . . .	43
Figure 3-8	HDZ Series Camera Browser On-Screen Display. . . . .	44
Figure 4-1	Video Format Settings . . . . .	46
Figure 4-2	Video Compression Settings . . . . .	50
Figure 4-3	Video OCX Protocol Settings . . . . .	52
Figure 4-4	Frame Rate Control Settings . . . . .	54
Figure 4-5	Streaming Audio Settings . . . . .	55
Figure 5-1	PTZ Preset Programming . . . . .	58
Figure 5-2	Mimic Tour Programming . . . . .	60
Figure 5-3	Auto Pan Programming . . . . .	62
Figure 5-4	Preset Tour Programming . . . . .	63
Figure 5-5	Preset Tour Selecting Preset Points. . . . .	64
Figure 5-6	Sector Programming. . . . .	66
Figure 5-7	Home Function Programming . . . . .	67
Figure 5-8	Tilt Angle Programming . . . . .	69
Figure 5-9	Privacy Mask Programming (1080p PTZ Version) . . . . .	70
Figure 5-10	Privacy Mask Programming (Standard Definition PTZ Version) . . . . .	72

Figure 5-11	Exposure Mode Programming . . . . .	75
Figure 5-12	White Balance and Auto Focus Programming . . . . .	77
Figure 5-13	Camera Misc Options . . . . .	79
Figure 5-14	Camera Misc. Options, Part 2 . . . . .	83
Figure 6-1	Setup Mail Server . . . . .	88
Figure 6-2	Setup FTP Server . . . . .	89
Figure 6-3	Setup HTTP Server . . . . .	89
Figure 6-4	Alarm Application Settings. . . . .	90
Figure 6-5	Alarm Input Parameters . . . . .	91
Figure 6-6	Upload Image by FTP/E-Mail Options. . . . .	92
Figure 6-7	Alarm Input: Record Video Clip Options . . . . .	93
Figure 6-8	PTZ Function Options . . . . .	94
Figure 6-9	Send HTTP Notification Options. . . . .	94
Figure 6-10	Current Motion as Detected Window . . . . .	96
Figure 6-11	Motion Detection Screen . . . . .	97
Figure 6-12	Motion Detection Sampling Every Three Pixels . . . . .	98
Figure 6-13	Motion Detection: Record Video Clip Options . . . . .	99
Figure 6-14	Motion Detection: Upload Image by FTP/E-mail Options. . . . .	99
Figure 6-15	Send HTTP Notification on Motion Detection . . . . .	100
Figure 6-16	Network Failure Detection Options . . . . .	102
Figure 6-17	Periodical Event Options . . . . .	104
Figure 7-1	System Configuration Screen . . . . .	108
Figure 7-2	User Security Options Screen . . . . .	111
Figure 7-3	HTTPS Settings Screen . . . . .	114
Figure 7-4	Create Self-Signed Certificate Window . . . . .	114
Figure 7-5	Create Certificate Request Window . . . . .	115
Figure 7-6	IEEE 802.1X Settings Screen . . . . .	116
Figure 7-7	IP Filter Settings Screen . . . . .	117
Figure 7-8	Basic Network Settings Screen . . . . .	119
Figure 7-9	Quality of Service (QoS) Network Settings Screen . . . . .	121
Figure 7-10	SNMP Network Settings Screen. . . . .	122
Figure 7-11	Windows Components Wizard Dialog Box . . . . .	124
Figure 7-12	Networking Services Dialog Box . . . . .	124
Figure 7-13	UPnP Settings Screen . . . . .	125
Figure 7-14	DDNS Settings Screen. . . . .	126
Figure 7-15	Recording Schedule Screen. . . . .	127
Figure 7-16	Schedule Screen. . . . .	128
Figure 7-17	Storage Management - SD Card Settings Screen . . . . .	130
Figure 7-18	Storage Management - Network Share Settings Screen . . . . .	132
Figure 7-19	File Location Setting Screen. . . . .	133
Figure 7-20	Resetting to Factory Default Screen. . . . .	134
Figure 7-21	Software Upgrade Options Screen . . . . .	136
Figure 7-22	Maintenance of Configuration Files Screen . . . . .	137
Figure 7-23	Uploading Configuration File In Progress. . . . .	137
Figure 7-24	Viewing System Parameters List . . . . .	138



Figure 7-25	Viewing System Log . . . . .	139
Figure B-1	HDZ20HD(X)/HDZ30(X) In-Ceiling Bracket Dimensions . . . . .	153
Figure B-2	HDZ30HD In-Ceiling Bracket Dimensions. . . . .	154



## Tables

Table 2-1	Orderable Accessories . . . . .	24
Table 2-2	Honeywell Mounts and Adapters . . . . .	25
Table 2-3	Camera Back Plate Connectors, Switches, and Buttons . . . . .	29
Table 2-4	MicroSDHC Card Minimum Requirements . . . . .	30
Table 2-5	Audio Input Pin Definitions . . . . .	30
Table 2-6	Alarm Input Pin Definitions . . . . .	31
Table 2-7	PoE Requirements by HDZ Model . . . . .	32
Table 2-8	Power Input Pin Definitions . . . . .	33
Table 3-1	HDZ Series Minimum System Requirements . . . . .	35
Table 3-2	Camera Interface Main Tabs . . . . .	42
Table 3-3	User Interface Quick Action Buttons . . . . .	42
Table 3-4	PTZ Controls and Functions . . . . .	43
Table 4-1	HDZ Series IP Camera Stream Options . . . . .	45
Table 4-2	Video OCX Protocol Options . . . . .	52
Table 4-3	Audio Transmission Mode Settings . . . . .	55
Table 5-1	Exposure Modes . . . . .	74
Table 5-2	White Balance Modes . . . . .	77
Table 5-3	Image Flip Modes . . . . .	80
Table 5-4	Day/Night Modes . . . . .	82
Table 7-1	User Privileges . . . . .	112
Table 7-2	Ports that Can be Individually Configured . . . . .	120
Table A-1	HDZ20HD(X)/HDZ20HDE(X) Series Camera Specifications . . . . .	141
Table A-2	HDZ30HD/HDZ30HDE Series Camera Specifications . . . . .	144
Table A-3	HDZ30(X) Series Camera Specifications . . . . .	147
Table A-4	HDZ36E(X) Series Camera Specifications . . . . .	149



# About This Document

This document provides instructions for installing, configuring, and operating the HDZ Series IP PTZ dome camera. This document is intended for system installers, administrators, and operators.

---

## Overview of Contents

---

This document contains the following chapters and appendices:

- [Chapter 1, Introduction](#), provides an overview of the main features of the HDZ Series IP PTZ dome camera and lists the dimensions of the indoor and outdoor models.
- [Chapter 2, Installing the Camera](#), describes how to assemble, connect, and mount the camera.
- [Chapter 3, Accessing the Camera](#), describes how to access the camera remotely from a web browser.
- [Chapter 4, Configuring Video and Audio Streaming](#), describes how to set up video and audio streaming options, including video resolution, compression, and transmission settings.
- [Chapter 5, Configuring PTZ Settings](#), describes how to set up preset, mimic tour, preset tour, and auto pan PTZ functions, privacy masks, and various camera settings (such as exposure, zoom, white balance, backlight compensation, wide dynamic range, noise reduction, image flip, stabilization, and so on).
- [Chapter 6, Configuring Alarms](#), describes how to set up notifications for alarm inputs, motion detection, and network failure events.
- [Chapter 7, Configuring System Settings](#), describes how to administer user accounts and permissions, how to configure network and recording and storage settings, as well as how to view system parameters, upgrade software, and restore defaults.
- [Appendix A, HDZ Camera Specifications](#), lists the specifications of the HDZ Series IP PTZ dome cameras.
- [Appendix B, In-Ceiling Bracket Installation](#), provides installation instructions for the in-ceiling mounting bracket.
- [Index](#) provides a searchable list of key terms.

---

## Related Documents

---

For more information relating to topics covered in this guide, see the following documents:

Document Title	Part Number
<i>In-Ceiling Bracket Quick Installation Guide</i>	800-12513
<i>HDCM1 Ceiling Mount Installation Guide</i>	900.0869
<i>HDXWM2 Wall Mount Installation Guide</i>	800-04516
<i>HDPRM2 Parapet Mount Installation Guide</i>	900.0877

---

## Typographical Conventions

---

This document uses the following typographical conventions:

Font	What it represents	Example
Helvetica Narrow	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 <b>Time from</b> field can be set to Hours:Minute:Seconds.
	Text strings displayed on the screen	The message Unauthorized displays.
<b>Swiss721 BT Bold</b>	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 <b>password</b> .
	Menu titles and other items you select	Double-click <b>Open</b> from the <b>File</b> menu.
	Buttons you click to perform actions	Click <b>Exit</b> to close the program.
<i>Italic</i>	Placeholders: words that vary depending on the situation	Enter your <i>user name</i> .
	Cross-reference to external source	Refer to the <i>System Administrator Guide</i> .
	Cross-reference within document	See <i>Chapter 2, Installation</i> .

# 1

## Introduction

This chapter includes:

- [Overview, page 19](#)
- [Dimensions, page 20](#)

---

## Overview

---

The Honeywell HDZ Series True Day/Night IP PTZ dome camera is a high resolution network camera PTZ series designed for use in a wide range of video surveillance applications. The camera supports H.264 main profile compression and quad video streaming. Streaming options include:

- **HDZ30HD, HDZ20HD(X), HDZ30HDE and HDZ20HDE(X):** Up to 30 frames per second (NTSC) or 25 fps (PAL) in 1080p resolution (1920 x 1080). Up to 60 fps (NTSC) or 50 fps (PAL) in 720p resolution (1280 x 720) and lower resolutions.
- **HDZ30(X), and HDZ36E(X):** Up to 60 frames per second (NTSC) or 50 fps (PAL) at D1 resolution (720 x 486 NTSC; 720 x 576 PAL) and lower resolutions.

Other features of the HDZ Series IP PTZ dome camera include:

- Progressive image sensor:
  - HDZ20HD(X), HDZ20HDE(X), HDZ30HD, HDZ30HDE: 1/2.8" Sony Progressive CMOS
  - HDZ30(X), HDZ36E(X): 1/4" Sony CCD
- Varifocal auto iris lens:
  - HDZ20HD(X), HDZ20HDE(X): 4.7–94 mm lens
  - HDZ30HD, HDZ30HDE: 4.3–129 mm lens
  - HDZ30(X): 3.4–102 mm lens
  - HDZ36E(X): 3.4–122.4 mm lens
- Optical zoom:
  - HDZ20HD(X), HDZ20HDE(X): 20x optical zoom
  - HDZ36E(X): 36x optical zoom
  - HDZ30(X), HDZ30HD, HDZ30HDE: 30x optical zoom

- MicroSDHC memory card support (up to 32 GB)
- True Day/Night with removable IR cut filter (ICR)
- Integrated real-time wide dynamic range (WDR)
- 2D digital noise reduction (2DNR). 3DNR also available for HDZ30HD, HDZ30HDE, HDZ30(x) and HDZ36E(X).
- Image flip and rotate
- Backlight compensation
- Motion detection
- Up to 16 privacy masks
- Dual-direction audio support
- ONVIF™ compliance. Open IP integration, to support interoperability between Honeywell and other manufacturer's IP-enabled devices

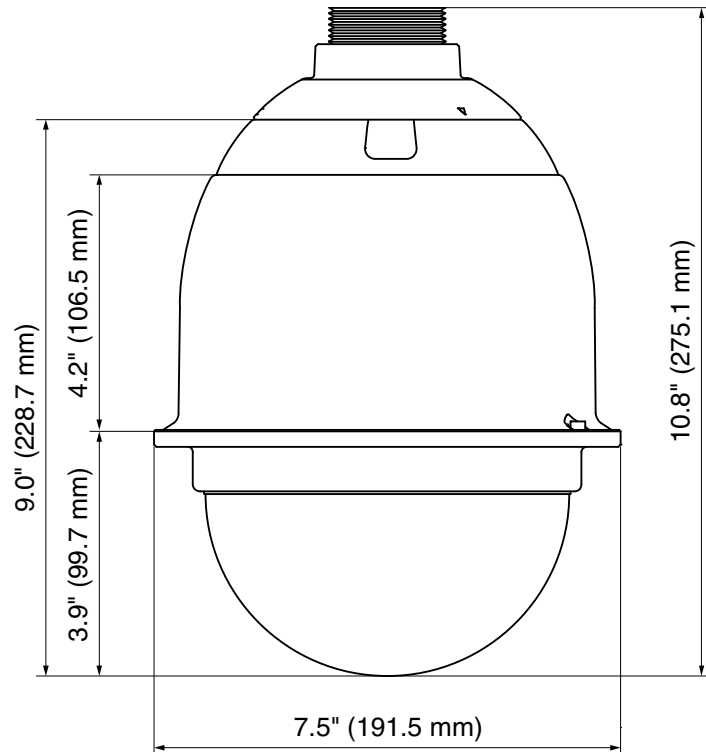
---

## Dimensions

---

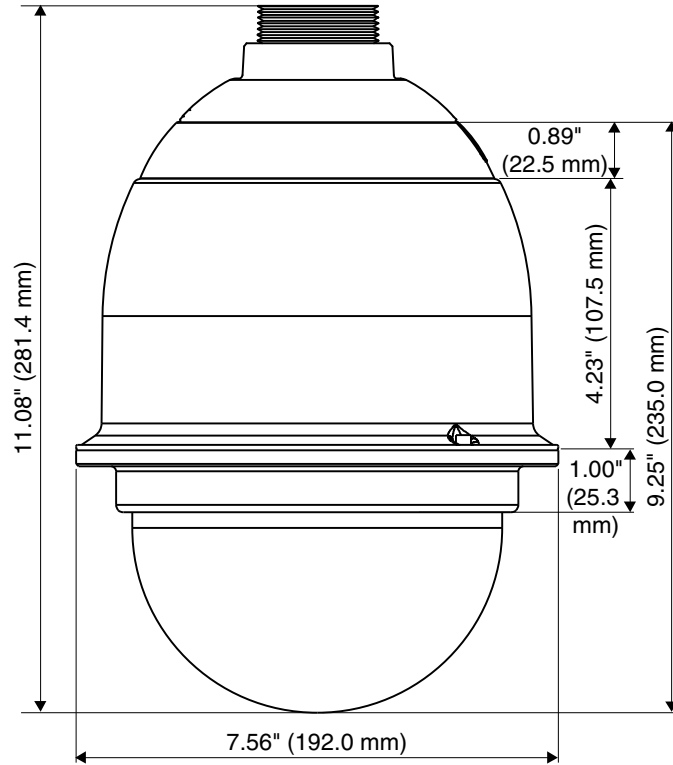
The indoor and outdoor HDZ Series cameras have the following dimensions:

**Figure 1-1 HDZ20HD(X)/HDZ30(X) Indoor IP PTZ Dome Camera Dimensions**

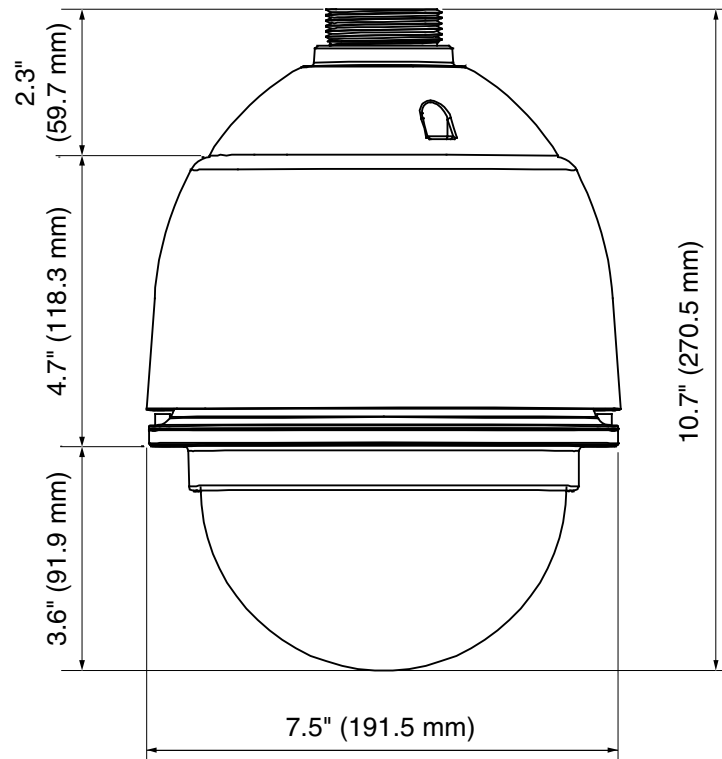




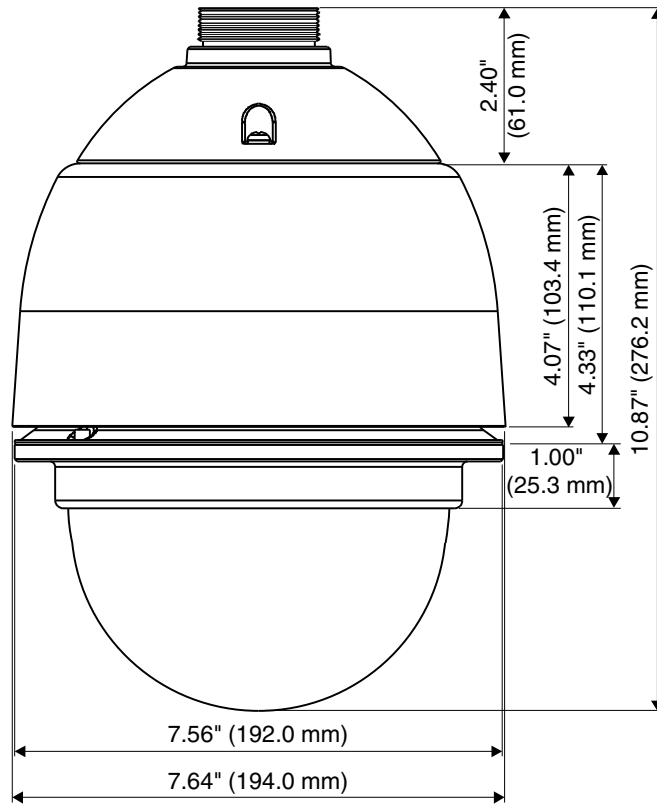
**Figure 1-2 HDZ30HD Indoor IP PTZ Dome Camera Dimensions**



**Figure 1-3 HDZ20HDE(X)/HDZ36E(X) Outdoor IP PTZ Dome Camera Dimensions**



**Figure 1-4 HDZ30HDE Outdoor IP PTZ Dome Camera Dimensions**



See [Appendix B, In-Ceiling Bracket Installation](#) for the image and dimensions of the In-ceiling mounting bracket.

# 2

## Installing the Camera

This chapter includes:

- *Before You Begin, page 23*
- *Assembling the Camera, page 24*
- *Mounting the Camera, page 24*
- *Connecting the Cables, page 29*

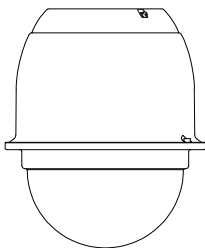
---

### Before You Begin

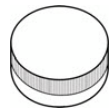
---

Before you begin, check that you have received all of the parts listed below. If any parts are missing or damaged, contact your dealer immediately.

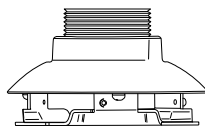
#### HDZ Series Indoor Dome



PTZ Indoor dome camera



Lubricant (optional)



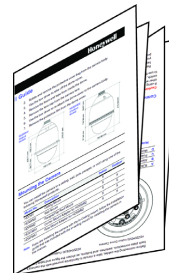
Indoor mounting kit (top cap)



Honeywell logo label



Torx screwdriver

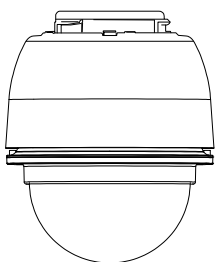


Quick Installation Guide

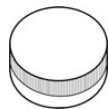


Installation CD

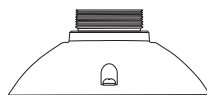
#### HDZ Series Outdoor Dome



PTZ Outdoor dome camera



Lubricant (optional)



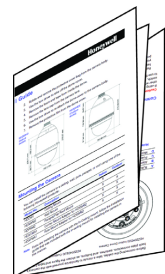
Outdoor mounting kit (top cap)



Honeywell logo label



Torx screwdriver



Quick Installation Guide



M5 standard and security screws (1 each)



Installation CD

## Accessories You Can Order Separately

There are a few accessories for your HDZ Series IP PTZ camera that can be ordered separately (see [Table 2-1](#)).

**Table 2-1** Orderable Accessories

Model Number	
HDZIK10AC <sup>a</sup>	Clear IK10 vandal proof acrylic dome cover for the HDZ series.
HDZVRSMKAC	Smoked PC vandal proof acrylic dome cover for the HDZ series.
HDZVRCLRAC	Clear PC vandal proof acrylic dome cover for the HDZ series.
<b>Note</b> This part is for repair purposes only.	
517082-7130	In-Ceiling PTZ support plate (for use with HDZINBKT in-ceiling mount).

<sup>a</sup> HDZIK10AC is the default acrylic dome cover for the HDZ30HD and HDZ30HDE PTZ domes.

---

## Assembling the Camera

---

Camera assembly is quick and easy. To assemble the camera:

1. Take the camera and all other components out of the packaging.
2. Rotate and remove the protective cover bag from the camera body.
3. Use the torx driver to take off the dome cover.
4. Remove the foam and tape from inside the dome.
5. Remove the lens cap from the camera lens.
6. Use the torx driver to re-attach the dome cover to the camera body.

---

**Note** Optional: Use the lubricant on the dome cover's rubber ring to make it easier to re-attach to the housing and seal the PTZ dome cover and housing without water coming in. Be careful to not get any lubricant on the dome as it may interfere with viewing PTZ images.

---

7. Leave the protective film on the dome cover until installation is complete.

---

## Mounting the Camera

---

You can install the camera to a ceiling, wall, pole, parapet, or roof using one of the following Honeywell products:

**Table 2-2 Honeywell Mounts and Adapters**

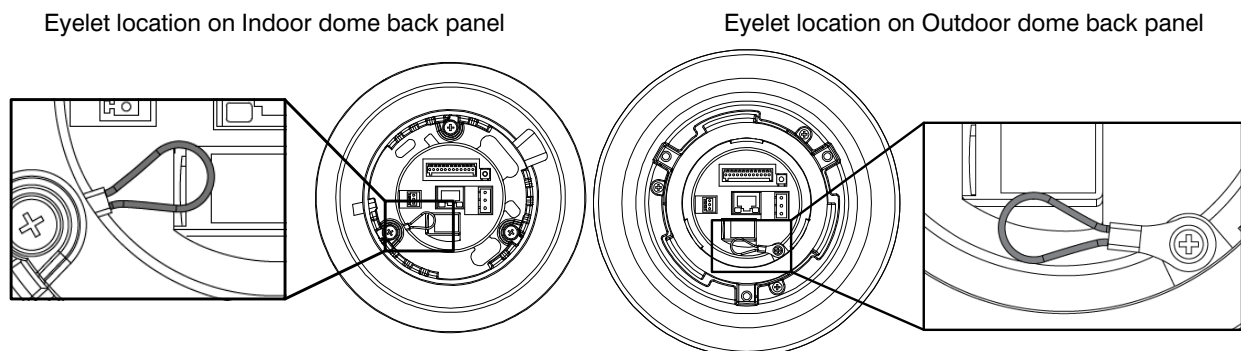
Model No.	Description	Indoor	Outdoor
HDCM1	Ceiling Mount	X	
HDXWM2	Wall Mount	X	X
HDPRM2	Parapet/Flat Roof Mount	X	X
HDZINBKT	In-Ceiling mounting bracket for the HDZ series.	X	
HDXCMA1	Corner Mount Adapter for HDXWM2	X	X
HDXPMA1	Pole Mount Adapter for HDXWM2	X	X

**Note** An In-ceiling mounting bracket (HDZINBKT) is available. Check with your Honeywell supplier regarding In-ceiling mounting. See [Appendix B, In-Ceiling Bracket Installation](#), for in-ceiling bracket mounting instructions.

For additional information, see [Related Documents on page 18](#).

## Using Safety Cable During Installation

The HDZ Series IP PTZ camera includes an eyelet for attaching a safety cable to securely fix the camera to the mounting structure (see [Figure 2-1](#)). It is recommended that you install a safety cable (such as a 3/32-in. [2.4 mm] plastic coated aircraft cable) to secure the camera to the building structure. This will prevent the camera from falling during installation. The cable must be strong enough to support the weight of the camera (indoor model: 4.9 lb. [2.2 kg], outdoor model: 5.7 lb. [2.6 kg]).

**Figure 2-1 Eyelet on Camera to Secure by Lanyard During Setup**

## Installing a Ceiling Mount (Indoor Only)

The HDCM1 ceiling mount weighs 4.0 lb. (1.8 kg) and can be installed directly to a load-bearing ceiling. The mount has a maximum load rating of 26.0 lb. (11.7 kg) and is for indoor use only. See the documentation included with the ceiling mount for more information on securing the mount to the mounting surface.

**Figure 2-2 HDCM1 Ceiling Mount Installation**

### To install a ceiling mount:

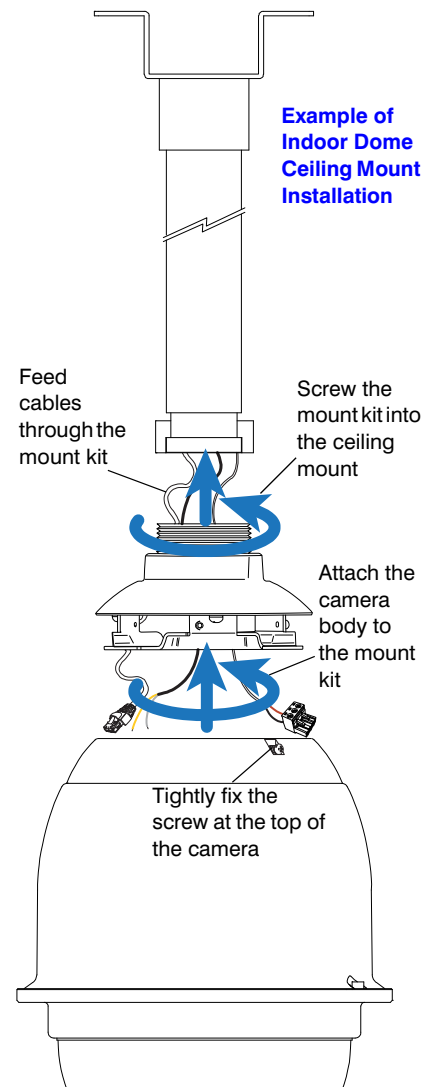
1. Ensure that the ceiling can support the combined weight of the camera and the mount (should support at least 8.8 lb. [4.0 kg]).
2. Make a cable entry hole in the ceiling.
3. Feed the cables through the mount, leaving approximately 1 ft (0.3 m) extending past the end of the mount (see [Figure 2-2](#)).

**Note** If you are using the recommended safety cable for additional security, feed it through the mount and attach one end to the camera eyelet and the other end to the building structure (see [Figure 2-1](#)).

4. Attach the mount to the ceiling using appropriate hardware.
5. Screw the indoor mount kit to the bracket.
6. Connect the cables to the camera (see [Connecting the Cables on page 29](#)). If you are using a Micro SD card, install it before connecting the cables.

**Note** Check that the eyelet safety cable connection is secure, and carrying all of the load of the camera after making all cable connections.

7. Attach the camera to the mount kit and then tightly fix the security screw on the top of the camera.



## Installing a Wall Mount

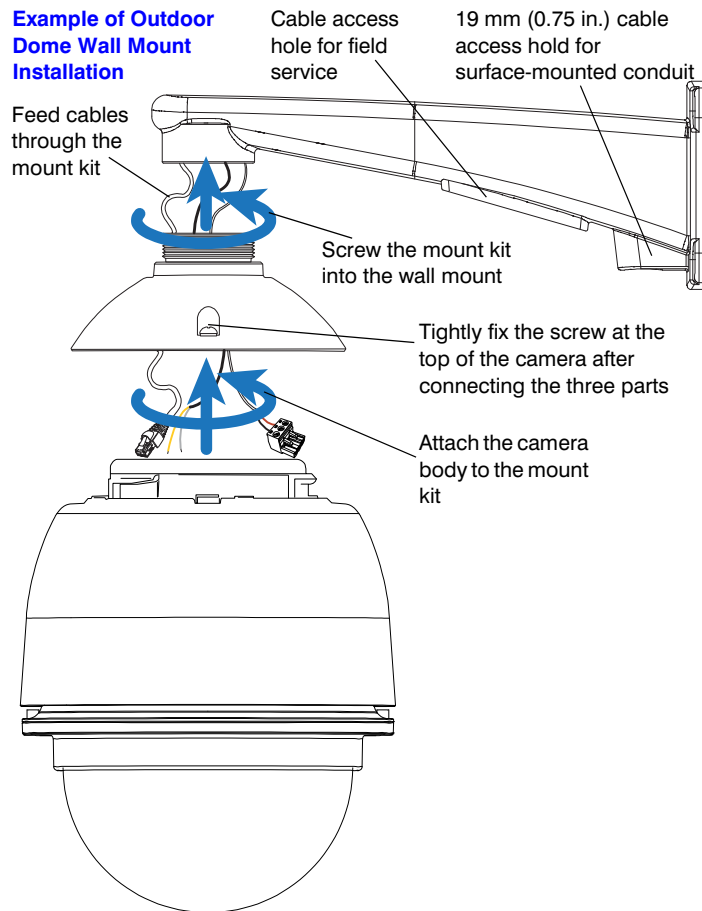
The HDXWM2 wall mount weighs 3.2 lb. (1.45 kg) and can be installed directly to a load-bearing wall, or to a corner or pole using an appropriate adapter. The mount has a maximum load rating of 25.8 lb. (11.7 kg) and can be installed indoors or outdoors. See the documentation included with the wall mount for more information on securing the mount to the mounting surface.

**Figure 2-3 HDXWM2 Wall Mount Installation****To install a wall mount:**

1. Ensure that the mounting surface can support the combined weight of the camera and the mount (should support at least 8.9 lb. [4.05 kg]).
2. If you are using a corner or pole adapter, feed the cables through the cable access hole of the adapter, and then attach the adapter to the mounting surface using appropriate mounting hardware.
3. Feed the cables through the mount, leaving approximately 1 ft (0.3 m) extending past the end of the mount.

Optionally, you can feed the cables through the 0.75 in. (19 mm) conduit hole at the base of the mount arm (see [Figure 2-3](#)).

- Note** If you are using the recommended safety cable for additional security, feed it through the mount and attach one end to the camera eyelet and the other end to the building structure (see [Figure 2-1](#)).
4. Attach the mount to the wall or, if applicable, to the adapter using appropriate mounting hardware.



5. For outdoor wall mount installations, apply sealant (not supplied) to any gaps between the mount and the mounting surface, and ensure that the conduit hole plug is in place when the conduit hole at the base of the mount arm is not in use.
6. Screw the mount kit into the wall mount.
7. Connect the cables to the camera (see [Connecting the Cables on page 29](#)). If you are using a Micro SD card, install it before connecting the cables.

---

**Note** Check that the eyelet safety cable connection is secure, and carrying all of the load of the camera after making all cable connections.

---

8. Attach the camera to the mount kit and then tightly fix the security screw on the top of the camera.

---

**Note** Optional: the installer can use the lubricant on the rubber ring on the top of the outdoor PTZ to make it easier to re-attach to the housing and seal the PTZ dome cover and housing without water coming in. Be careful to not get any lubricant on the dome as it may interfere with viewing PTZ images.

---

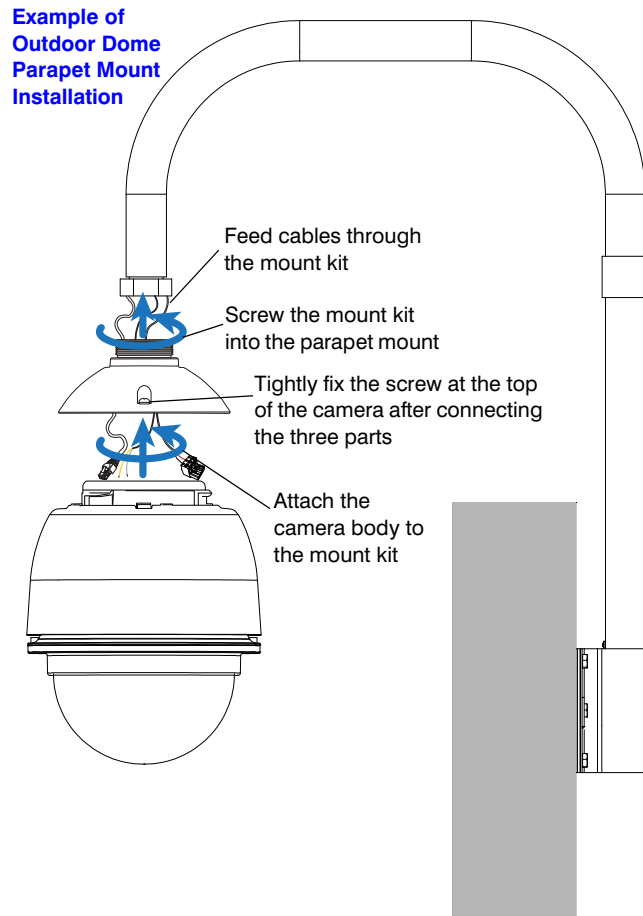
## Installing a Parapet/Flat Roof Mount

The HDPRM2 parapet/flat roof mount weighs 22.5 lb. (10.2 kg) and can be installed directly to a vertical (parapet) or horizontal (flat roof) load-bearing surface. The mount has a maximum load rating of 20.1 lb. (9.1 kg) and can be installed indoors or outdoors. The mount can withstand winds up to 75 mph (121 km/h) when properly fastened to a support structure. See the documentation included with the parapet mount for more information on securing the mount to the mounting surface.

**Figure 2-4 HDPRM2 Parapet/Flat Roof Mount Installation**

### To install a roof mount:

1. Ensure that the mounting surface can support the combined weight of the camera and the mount (should support at least 28.2 lb. [12.8 kg]).
  2. Feed the cables through the mount, leaving approximately 1 ft (0.3 m) extending past the end of the mount.
- Note** If you are using the recommended safety cable for additional security, feed it through the mount and attach one end to the camera eyelet and the other end to the building structure (see [Figure 2-1](#)).
3. Attach the mount to the mounting surface using as many of the mounting holes as possible (a minimum of five fasteners on each side of the mounting plate is recommended).
  4. Apply sealant (not supplied) to the bottom of the vertical pipe and around the bolt holes to prevent water or other contaminants from entering the mount.
  5. Screw the mount kit into the parapet/flat roof mount.
  6. Connect the cables to the camera (see [Connecting the Cables on page 29](#)). If you are using a Micro SD card, install it before connecting the cables.




---

**Note** Check that the eyelet safety cable connection is secure, and carrying all of the load of the camera after making all cable connections.

---

7. Attach the camera to the mount kit and then tightly fix the security screw on the top of the camera.

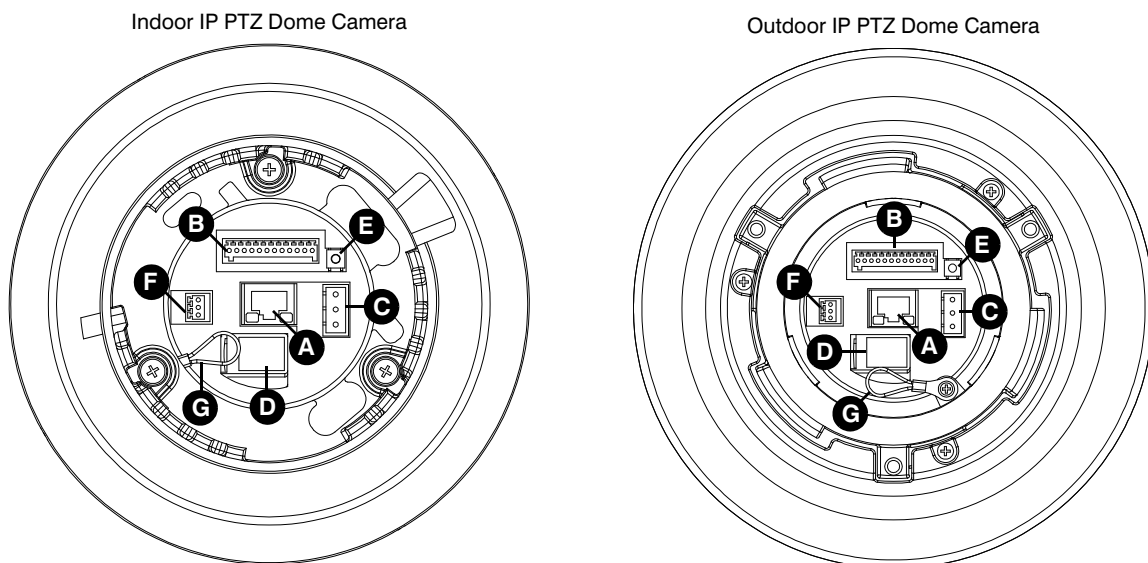


**Note** Optional: the installer can use the lubricant on the rubber ring on the top of the outdoor PTZ to make it easier to re-attach to the housing and seal the PTZ dome cover and housing without water coming in. Be careful to not get any lubricant on the dome as it may interfere with viewing PTZ images.

## Connecting the Cables

Before connecting the cables, take a minute to familiarize yourself with the camera's back plate connectors, switches, and buttons, as shown in [Figure 2-5](#) and [Table 2-3](#) below.

**Figure 2-5 Camera Back Plate Layout**



**Table 2-3 Camera Back Plate Connectors, Switches, and Buttons**

<b>A</b>	RJ45 connector (see <a href="#">Connecting the Network Cable on page 31</a> for more information)
<b>B</b>	Alarm Input/Output (see <a href="#">Connecting Alarm Inputs/Outputs on page 30</a> for more information) <sup>a</sup>
<b>C</b>	Power (see <a href="#">Connecting Power on page 32</a> for more information) <sup>a</sup>
<b>D</b>	MicroSDHC Memory Card Slot (install a microSDHC card from 8 to 32 GB, as needed). See <a href="#">MicroSDHC Card Details on page 30</a> for more information.
<b>E</b>	Factory Reset Button <sup>b</sup>
<b>F</b>	Audio Input/Output (see <a href="#">Connecting Audio on page 30</a> for more information) <sup>a</sup>
<b>G</b>	Eyelet to secure camera to building with lanyard during camera setup

<sup>a</sup> Alarm, Power and Audio connections are made with removable connectors.

<sup>b</sup> Press the factory reset button to restore all camera settings to the factory default settings.

## MicroSDHC Card Details

We recommend that you use a high quality microSDHC card, if required for your system. The high quality microSDHC card must have the following minimum specifications (see [Table 2-4](#)).

**Table 2-4 MicroSDHC Card Minimum Requirements**

Capacity	Description	Notes
8 GB	8 GB MicroSDHC Card (Class 10)	MLC
16 GB	16 GB MicroSDHC Card (Class 10)	MLC/TLC
32 GB	32 GB MicroSDHC Card (Class 10)	TLC
64 GB <sup>a</sup>	64 GB MicroSDXC Card (Class 10)	TLC

<sup>a</sup> 64 GB cards only applied on SanDisk SDXC 64 GB with HDZ30HD/HDZ30HDE units.

---

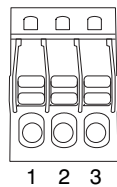
**Note** Once installed, all microSDHC cards must be formatted using the Honeywell Web GUI software prior to performing any recording.

---

## Connecting Audio

Refer to [Figure 2-6](#) and [Table 2-5](#) when making audio connections to your camera through the main audio adapter.

**Figure 2-6 Main Audio Adapter Input (Detail)**

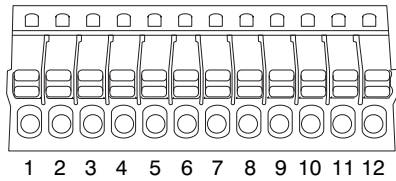


**Table 2-5 Audio Input Pin Definitions**

Pin	Definition
1	Line Out
2	GND
3	Line In

## Connecting Alarm Inputs/Outputs

Refer to [Figure 2-7](#) and [Table 2-6](#) when making alarm connections to your camera through the main alarm adapter.

**Figure 2-7 Main Alarm Adapter Input (Detail)**

**Inputs (x4)** 5V, 4700 Ohms, pull up

**Outputs (x2)** Relay output, 120 V AC/30 V DC, 3 A MAX

**Note** Use alarm outputs for SELV circuits only.

**Table 2-6 Alarm Input Pin Definitions**

Pin	Definition	Pin	Definition
1	Alarm Out NO 1	7	Alarm Out COM 2
2	Alarm Out NC 1	8	GND
3	Alarm Out COM 1	9	Alarm In 4
4	GND	10	Alarm In 3
5	Alarm Out NO 2	11	Alarm In 2
6	Alarm Out NC 2	12	Alarm In 1

## Connecting the Network Cable

Connect a Category 5 or higher Ethernet cable to the RJ45 connector on the back plate of the camera (see [Figure 2-5](#) on [page 29](#)). The Ethernet cable should not be longer than 328 feet (100 m). After you have connected the Ethernet cable, check the status of the LED indicators on the RJ45 connector. If the LEDs are not lit, re-check the connection.

- The green LED indicates a network connection.
- The orange LED indicates network activity.

---

**Note** You may need to use a crossover cable if you are connecting the camera directly to a PC.

---

To power the camera, either PoE or a 24 V AC power connection can be used. If using PoE, either a switch or PoE injector meeting the PoE+ standard (30 W) or High Power over PoE (60 W), depending on the model, must be employed (see [Table 2-7](#)). See [Connecting Power on page 32](#) for more information about powering the HDZ series camera.

**Table 2-7 PoE Requirements by HDZ Model**

HDZ Camera Model	PoE Requirement
HDZ20HD(X), HDZ30(X), HDZ30HD	PoE+ (30 W)
HDZ30HDE, HDZ36E(X)	PoE++ (60 W) supports camera and heater operation for outdoor installations
HDZ20HDE(X)	PoE+ (30 W) supports camera operation only. If installed outdoors and heater operation is required, the camera must be powered by 24 V AC.

---

**Note** When connecting HDZ20HDE(X) with a PoE power supply, it is recommended to use either an unshielded network cable or a shielded cable with an unshielded pigtail connector.

---

## Connecting Power



**CAUTION** To power up the camera, either PoE+ or 24 V AC power connections can be used. If using power over Ethernet (PoE+), please connect the Ethernet cable to the camera's Ethernet port and plug the other end of the cable into an IEEE 802.3at-2009 High Power over Ethernet (PoE Plus) switch. If there is a need to operate the Heater for the Outdoor model, you will be required to use the 24 V AC cable to plug into the camera's power connector and power the camera.

### IMPORTANT NOTE regarding PoE operation of models HDZ36E(X) and HDZ30HDE

A high power PoE injector capable of supplying at least 60 W is required for proper operation of outdoor camera model HDZ36E(X) and HDZ30HDE as PoE to IEEE802.3af or IEEE802.3at will not support these models.

Refer to [Figure 2-8](#) and [Table 2-8](#) when connecting power to your camera through the main power adapter.

---

**Note** Please use a power adapter corresponding to the requirements listed below:

HDZ30(X) Indoor Camera: 24 V AC, ~1.5 A MIN / PoE+, 25.0 W.

HDZ36E(X) Outdoor Camera: 24 V AC, ~4.0 A MIN / PoE+, 60.0 W.

HDZ20HD(X) Indoor Camera: 24 V AC, ~1.5 A MIN / PoE+, 25.0 W.

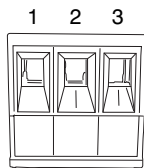
HDZ20HDE(X) Outdoor Camera: 24 V AC, ~3.0 A MIN.

HDZ30HD Indoor Camera: 24 V AC, ~2.0 A MIN / PoE+, 25.5 W.

HDZ30HDE Outdoor Camera: 24 V AC, ~4.0 A MIN / PoE+, 60.0 W.

---

**Figure 2-8 Main Power Adapter Input (Detail)**



**Table 2-8 Power Input Pin Definitions**

Pin	Definition
1	24 V AC
2	FG
3	24 V AC



# 3

## Accessing the Camera

Included in this chapter:

- *System Requirements, page 35*
- *Accessing the Camera from a Browser, page 38*
- *Finding the Camera on a Network, page 35*
- *Understanding the Web Client User Interface, page 40*

---

## System Requirements

---

To access the camera, your PC must support the following minimum system requirements:

**Table 3-1 HDZ Series Minimum System Requirements**


<b>Component</b>	<b>Minimum Requirement</b>
<b>Operating system</b>	Windows® 7
<b>Processor</b>	Intel® Pentium® 4 processor, 3 GHz or faster Intel® Core™ 2 Duo processor, 2 GHz or faster
<b>System memory (RAM)</b>	1 GB (32-bit)
<b>Graphics card</b>	AGP graphics card 64 MB RAM, DirectDraw
<b>Network card</b>	Minimum: 10Base-T (10 Mbps). Recommended: 100Base-TX (100 Mbps) operation.
<b>Web browser</b>	Microsoft Internet Explorer 8.0 or later
<b>Viewer</b>	ActiveX control plug-in for Internet Explorer

---

## Finding the Camera on a Network

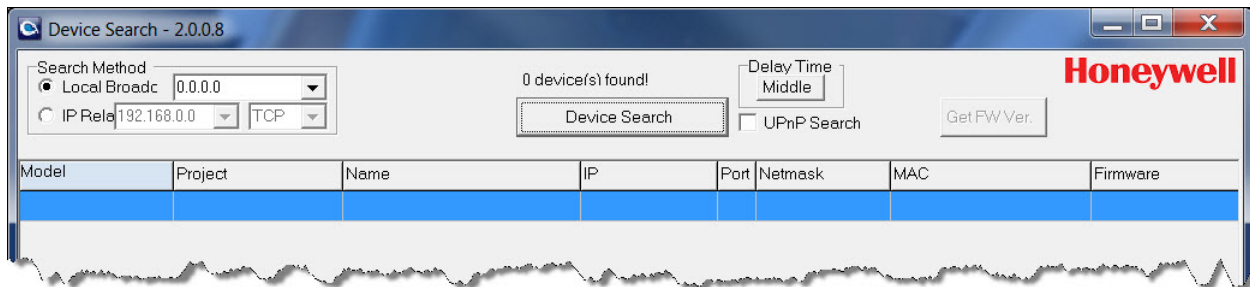
---

After you have installed and connected your camera, you can search for it on your local network (LAN) using the Honeywell Device Search application. This application is included on the installation CD that was shipped with your camera. To find a camera on the network:

1. Insert the installation disc into your disc drive and navigate to the Honeywell Device Search folder.
2. Double-click the Honeywell Device Search icon  to run the application on your computer.
3. Copy the Honeywell Device Search executable file to your computer desktop (or other location) to run the Honeywell Device Search without using the installation disc.
4. Launch the Honeywell Device Search application and click **Device Search** to search for cameras on the network (see [Figure 3-1](#)).

All IP cameras discovered on the network are displayed.

**Figure 3-1 Honeywell Device Search Application**



## Assigning a Static IP Address to the Camera

---

**Note** The camera comes with the IP address set as DHCP/APIPA by default. It is not required to switch to a static IP address. Users may choose to keep the default DHCP/APIPA assigned IP address.

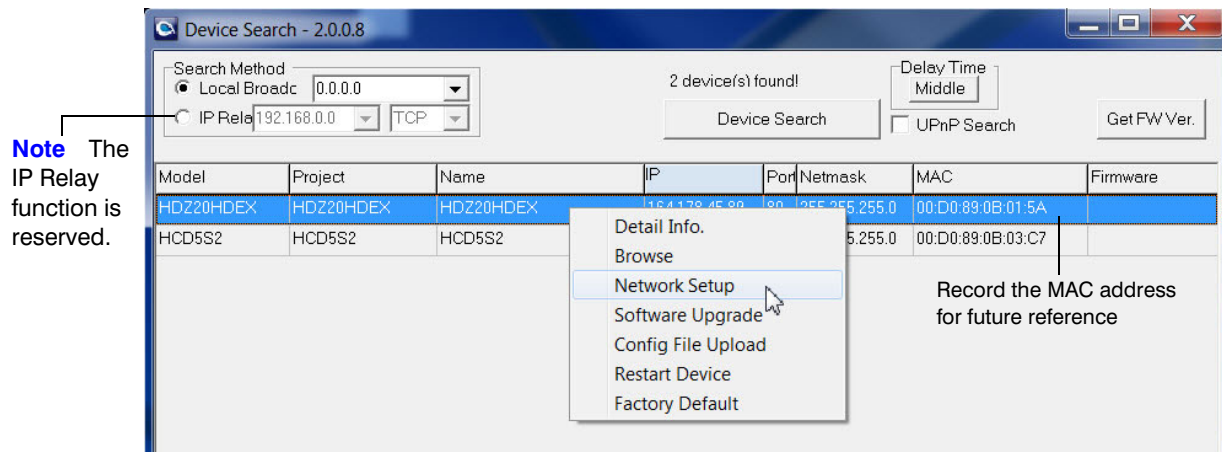
---

If required, you can assign a static (fixed) IP address to the camera. To assign a static IP address:

1. Launch the Honeywell Device Search application and click **Device Search** (see [Figure 3-1](#)).
2. Right-click the camera that you want to assign a static IP address, and click **Network Setup**. Make a note of the camera's MAC address for future reference (see [Figure 3-2](#)).



**Figure 3-2 Right-Click Menu on Device Search Application**



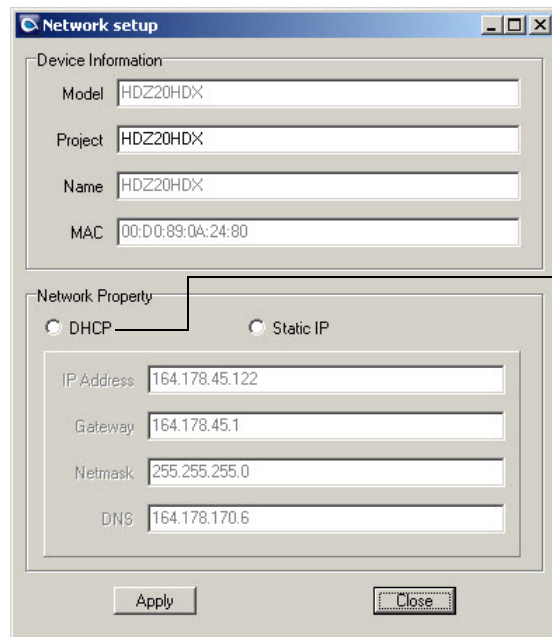
3. In the **Network setup** window (see [Figure 3-3](#)), select the **Static IP** Network Property option.
4. Fill in the **IP Address, Gateway, Netmask, and DNS** fields, and then click **Apply**.

---

**Note** Contact your network administrator for advice on filling in the IP Address, Gateway, Netmask and DNS fields.

---

**Figure 3-3 Device Network Setup Window**



If a static IP address is assigned, users can select the **DHCP** option to assign the PTZ camera a dynamic IP address.

5. Wait one minute for the new settings to take effect, and then click **Device Search** to refresh the list of network cameras (see [Figure 3-1](#)).

---

## Accessing the Camera from a Browser

---

Before accessing the camera, you may need to enable ActiveX settings.

### Enabling Internet Explorer ActiveX Settings

To enable Internet Explorer ActiveX settings:

1. Launch Internet Explorer.
2. Open the **Tools** menu, and click **Internet Options**.
3. Select the **Security** tab, and click **Custom level**.
4. Scroll down the **Security Settings** list until you see the **ActiveX controls and plug-ins** settings section.
5. Scroll down to **Automatic prompting for ActiveX controls**, and select **Enable**.
6. Scroll down to **Download signed ActiveX controls**, and select **Enable** or **Prompt**.
7. Scroll down to **Run ActiveX controls and plug-ins**, and select **Enable** or **Prompt**.
8. Scroll down to **Script ActiveX controls marked safe for scripting**, and select **Enable** or **Prompt**.
9. Click **OK**, and then click **OK** again on the Internet Options window.
10. Close and re-launch Internet Explorer for the new settings to take effect.

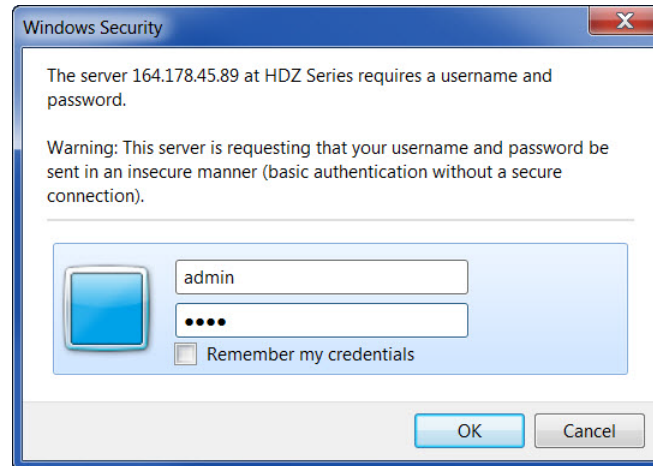
### Accessing the Camera from a Browser

1. Do one of the following to access the camera in a browser:
  - Find the camera that you want to access using Honeywell Device Search and double-click it, or right-click it and then click **Browse** (see [Figure 3-2](#)).
  - Type the IP address of the camera that you want to access in the address bar of your web browser.
2. At the prompt, type the default user name and password (case sensitive) to access the camera (see [Figure 3-4](#)).
  - The default user name is **admin**.
  - The default password is **1234**.
3. Click **OK**.

---

**Note** If users have been added or modified, be sure to use the user name and password that has been assigned.

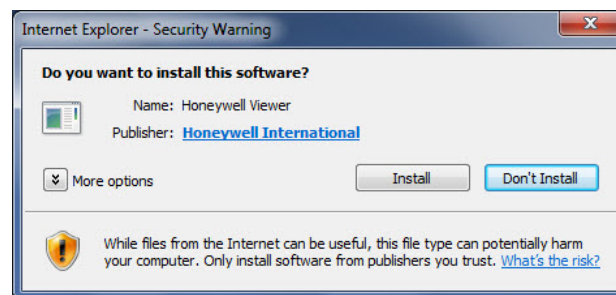
---

**Figure 3-4 Camera Browser Login**

## Installing and Using Honeywell Viewer for the First Time

The first time you access an HDZ Series IP PTZ camera, a client program, the Honeywell Viewer, will be automatically installed to your PC when connecting to the camera. If the web browser doesn't allow the Honeywell Viewer to install, please check the Internet security settings or ActiveX controls and plug-in settings to continue the process (see [Enabling Internet Explorer ActiveX Settings on page 38](#)).

1. After you have connected to the camera, a request to install an ActiveX control will appear on the browser's information bar. Right-click the information bar and then click **Allow ActiveX control** to install the ActiveX control.
2. The Security Warning window will appear (see [Figure 3-5](#)). Click **Install** to start the Honeywell Viewer software installation.

**Figure 3-5 Software Installation Security Warning**

3. Click **Finish** to close the installation window once the download and installation is complete.

---

**Note** If the live video pane on the Home Page of the Honeywell Viewer cannot be shown for users who have previously installed the viewer software, you may need to upgrade the Honeywell Viewer software. To upgrade the Viewer software, first remove the old software with the Control Panel and delete the temporary Internet Explorer files, then open the Honeywell website and re-download and install the Viewer program on your PC.

---

4. Once you login to the HDZ Series IP PTZ camera, a screen that looks like [Figure 3-6](#) should appear in your browser.  
If this screen does not appear, check your browser's security settings and make sure that ActiveX controls and plug-ins are enabled.

## Deleting the Honeywell Viewer Program from a PC

For users that have an older version of the Honeywell Viewer already installed on their PC, you should first remove the existing Viewer program before accessing the HDZ Series IP PTZ camera.

### Deleting the Honeywell Viewer

1. Open the **Control Panel** on your PC and double-click **Add or Remove Programs**.
2. In the **Currently Installed Programs** list, select the Honeywell Viewer and click **Remove** to uninstall the Viewer.

### Deleting Temporary Internet Files

To improve browser performance, we recommend that you clean up all of the Temporary Internet Files. To do so:

1. Click the **Tools** menu and select **Internet Options**.
2. Click **Delete** under the **Browsing History** section.
3. Click **Delete Files** under the **Temporary Internet Files** section.
4. A confirmation window will open. Click **Yes** to start deleting the files.

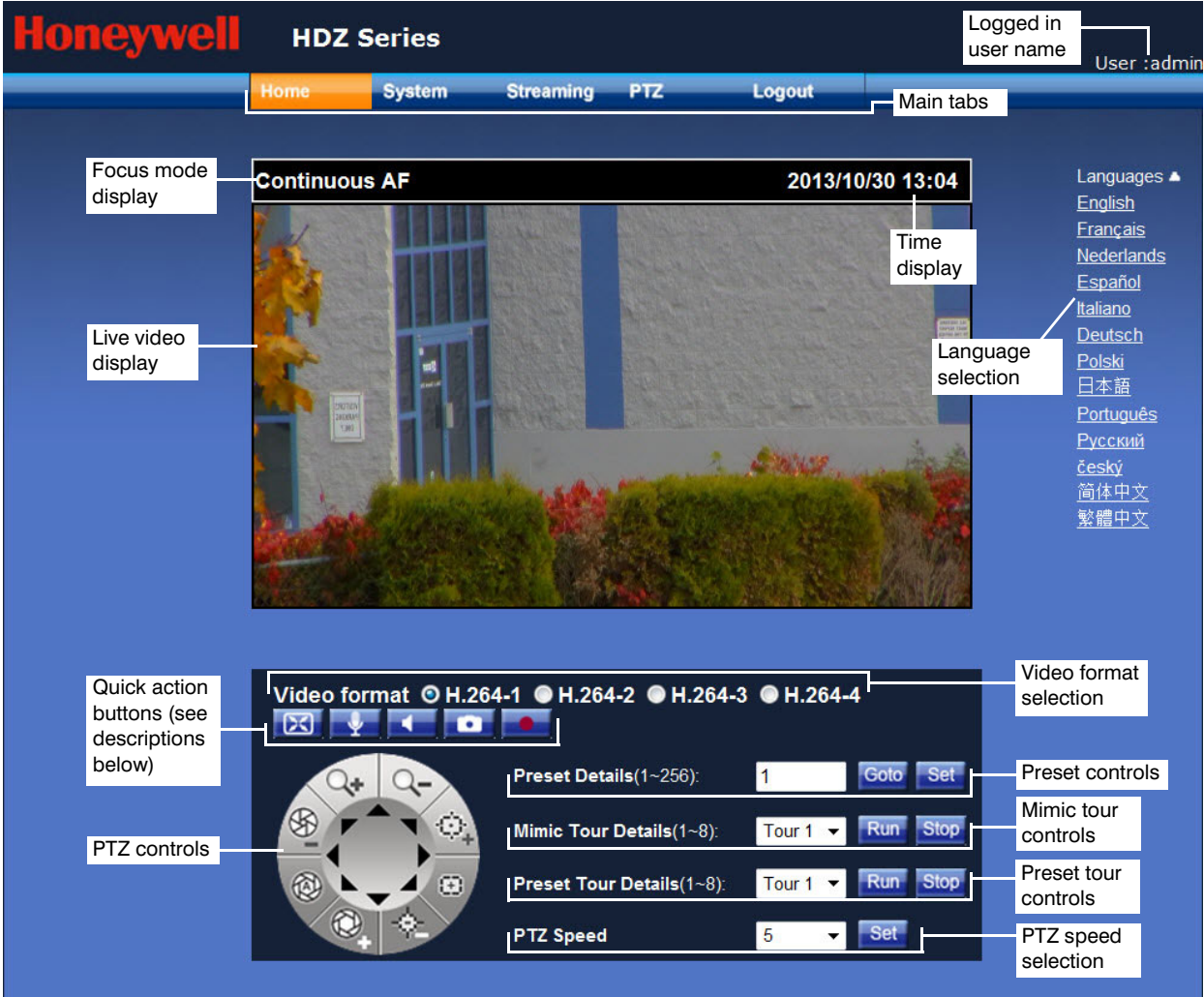
---

## Understanding the Web Client User Interface

---

[Figure 3-6](#) shows the layout of the web client user interface and the available controls and functions. See the following sections for descriptions of the user interface elements.

Figure 3-6 HDZ Series Camera Browser Home User Interface








## Main Tabs

**Table 3-2 Camera Interface Main Tabs**

Tab	Description
Home	The tab you see upon logging in. Use this tab to view live video, use the PTZ controls to pan, tilt or zoom the camera, perform tours, go to preset positions and use other controls included on the page. See <a href="#">Understanding the Web Client User Interface on page 40</a> for more information on the actions that can be performed on this tab.
System	Use this tab to configure the system, security, users, storage, network and other options available with the camera. See <a href="#">Configuring System Settings on page 107</a> for more information on these configuration options.
Streaming	Use this tab to configure the video and audio streaming options available with the camera. Use these settings to adjust the video quality and bandwidth used by the camera. See <a href="#">Configuring Video and Audio Streaming on page 45</a> for more information.
PTZ	Use this tab to setup preset points, program PTZ tours, assign privacy masks, and configure other PTZ-related settings. See <a href="#">Configuring PTZ Settings on page 57</a> for more information on the available PTZ settings. Camera settings, such as White Balance and Exposure can also be setup on this tab (see <a href="#">Camera Settings on page 73</a> ).
Logout	Click to logout of the current session.

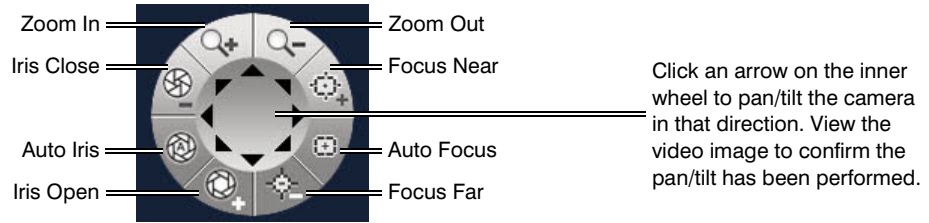
## Quick Action Buttons

**Table 3-3 User Interface Quick Action Buttons**


Button	Description
	Click this button to view the video image in full screen mode. Once in full screen mode, double-click or right-click then select Normal View to return to this view.
	The Talk function allows for the local site to talk to the remote site. Click this button to toggle the Talk feature on and off. This function is only available to users that have been granted talk privileges by the administrator. The Audio function must be enabled on the Streaming ► Audio tab to use this feature (see <a href="#">Audio Settings on page 54</a> ).
	The Listen function allows for the local site to hear audio at the remote site. Click this button to mute/enable the remote site audio. This function is only available to users that have been granted listen privileges by the administrator. The Audio function must be enabled on the Streaming ► Audio tab to use this feature (see <a href="#">Audio Settings on page 54</a> ).
	Click this button to capture a still image of the currently displayed video. The image will be saved in JPEG format to the local hard drive. The default storage location for still images is C:\. See <a href="#">File Location Settings, page 133</a> , for more information on changing the location. <b>Note</b> Users with a Windows 7 operating system are required to be logged in as an Administrator to use this function.
	Click this button to start recording a video clip of the currently displayed video. Click the button again to stop recording the clip. The image will be saved in AVI format to the local hard drive. The default storage location for video clips is C:\. See <a href="#">File Location Settings on page 133</a> for more information on changing the location. <b>Note</b> Users with a Windows 7 operating system are required to be logged in as an Administrator to use this function.

## PTZ Controls

**Figure 3-7 PTZ Controls**



**Table 3-4 PTZ Controls and Functions**

Control	Description
<b>Zoom In</b>	Zoom in on (enlarge) an area of interest in the video image. Zooming in and out can also be done by moving the cursor over the image and scrolling the mouse wheel forwards and back.
<b>Zoom Out</b>	Zoom out on (reduce size) an area in the video image. Zooming in and out can also be done by moving the cursor over the image and scrolling the mouse wheel forwards and back.
<b>Iris Close</b>	Close the camera iris to darken the video that is displayed.
<b>Auto Iris</b>	Enable/disable the camera Auto Iris mode. In Auto Iris mode, the iris opens/closes automatically according to the needs of the current lighting conditions.
<b>Iris Open</b>	Open the camera iris to brighten the video that is displayed.
<b>Focus Near</b>	Adjust focus to more clearly view nearby objects. Clicking this button will disable auto focusing and switch the camera to manual focusing. Click <b>Auto Focus</b> to reactivate the Auto Focus function.
<b>Auto Focus</b>	Activate the camera Auto Focus function. In Auto Focus, the lens adjusts the focus automatically after any pan, tilt or zoom command. To use manual focus, click one of the <b>Focus Near</b> or <b>Focus Far</b> buttons.
<b>Focus Far</b>	Adjust focus to more clearly view objects at a distance. Clicking this button will disable auto focusing and switch the camera to manual focusing. Click <b>Auto Focus</b> to reactivate the Auto Focus function.
<b>Pan/Tilt Controls</b>	Users can pan and tilt the camera to change the area covered by the camera by clicking the direction arrows in the center of the PTZ control wheel (see <a href="#">Figure 3-7</a> ). Another option for pan/tilt controls is to place the mouse cursor over the video image and left-click and drag in the direction you want to move the camera. The red arrow icon (  ) indicates the direction that the image will pan/tilt.
<b>Preset Controls</b>	<p><b>Preset Set:</b> Use this command to program a preset point for the camera. Use the pan/tilt controls to move the camera to the desired position. Then use the focus, iris and zoom options to finely tune the preset point and displayed image to be programmed as a preset. See the other commands in this table for more information on adjusting the camera position and view. Enter a number between 1 and 256 to assign to the preset in the field provided (see <a href="#">Figure 3-6</a>). Click <b>Set</b> to assign the camera’s current position and view options to the preset number.</p> <p><b>Preset Goto:</b> To quickly go to a preset point, enter the number of the preset in the field provided and click <b>Goto</b> (see <a href="#">Figure 3-6</a>). The camera will move to the preset position that was previously programmed.</p>

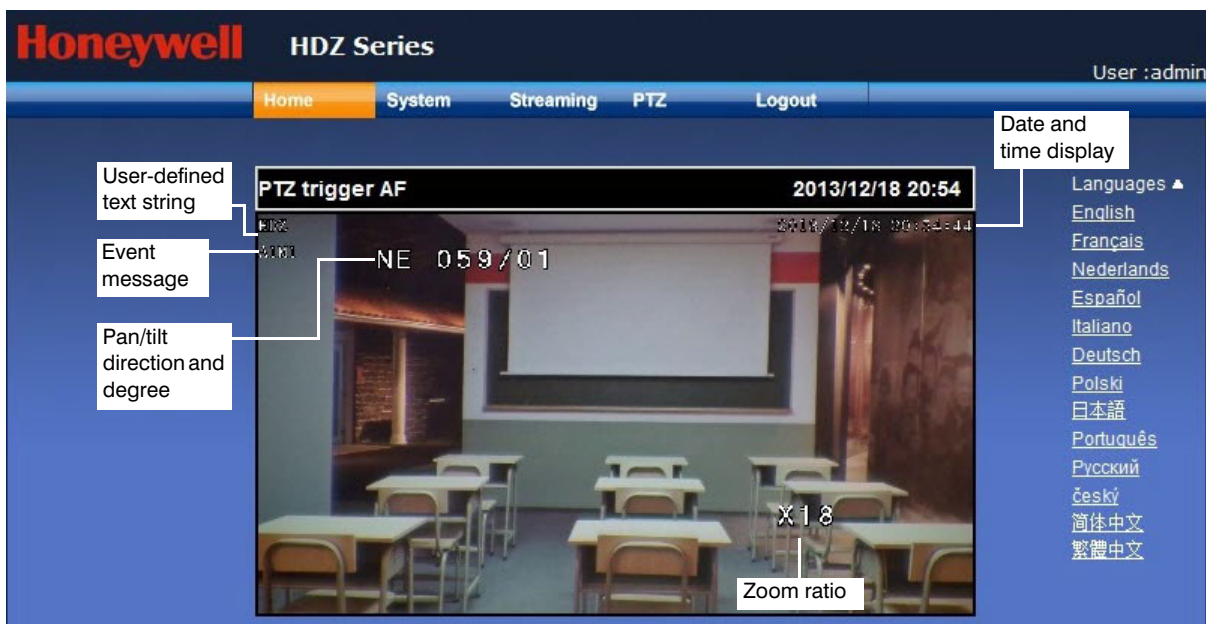


**Table 3-4 PTZ Controls and Functions (cont'd)**

Control	Description
<b>Mimic Tour Controls</b>	<p><b>Mimic Tour Run:</b> Select the Mimic Tour line that you want to run with the drop-down list provided (select from tour 1 to 8) and click <b>Run</b> to start the tour (see <a href="#">Figure 3-6</a>). The camera will start touring around, mimicking the line that was previously programmed (see <a href="#">Mimic Tour Settings on page 59</a> for information on setting up a Mimic Tour).</p> <p><b>Mimic Tour Stop:</b> To stop the Mimic Tour, you can either click <b>Stop</b> or move the camera in any direction with the pan/tilt/zoom controls provided.</p>
<b>Preset Tour Controls</b>	<p><b>Preset Tour Run:</b> Select the Preset Tour path that you want to run with the drop-down list provided (select from tour 1 to 8) and click <b>Run</b> to start the tour (see <a href="#">Figure 3-6</a>). The camera will start touring around on the path that was previously programmed (see <a href="#">Preset Tour Settings on page 63</a> for information on setting up a Preset Tour).</p> <p><b>Preset Tour Stop:</b> To stop the Preset Tour, you can either click <b>Stop</b> or move the camera in any direction with the pan/tilt/zoom controls provided.</p>
<b>PTZ Speed</b>	Select the speed at which the camera pans and tilts at when using the control wheel/panel. Select the speed value with the drop-down list provided and click <b>Set</b> . Select the PTZ Speed from between 1 and 10. The higher the selected number, the faster the camera will move when using the pan/tilt controls. The speed of the camera when clicking and dragging on an image area will remain unchanged.

## On-Screen Display

[Figure 3-8](#) shows the layout of the web client interface with the on-screen display active and displaying the relevant information. See [Setting the Text Overlay on page 47](#) for more information on the on-screen display options.

**Figure 3-8 HDZ Series Camera Browser On-Screen Display**



# 4

## Configuring Video and Audio Streaming

Included in this chapter:

- [Video Format Settings, page 45](#)
- [Video OCX Protocol Settings, page 52](#)
- [Audio Settings, page 54](#)
- [Video Compression Settings, page 49](#)
- [Video Frame Rate Settings, page 53](#)

---

### Video Format Settings

---

The HDZ Series IP PTZ dome camera supports both H.264 and Motion JPEG (MJPEG) video compression standards. It also uses quad, triple, dual or single streams (see [Table 4-1](#)). Choose the option that best fits your viewing requirements and network properties (see [Figure 4-1](#) and [Table 4-1](#)).

**Table 4-1 HDZ Series IP Camera Stream Options**

Number of Streams	Multiple Stream Options
Single (one stream)	H.264
	MJPEG
Dual (two streams)	H.264 + H.264
	H.264 + MJPEG
Triple (three streams)	H.264 + H.264 + H.264
	H.264 + H.264 + MJPEG
Quad (four streams)	H.264 + H.264 + H.264 + H.264
	H.264 + H.264 + H.264 + MJPEG

Figure 4-1 Video Format Settings

**Honeywell** HDZ Series User : admin

Home System **Streaming** PTZ Logout

**Video Format**

Video Compression  
Video OCX Protocol  
Video Frame Rate  
Audio

**Video Format**

**Video Resolution :**  
 H.264 + H.264 + H.264 + H.264  
 H.264-1 format : 1920 x 1080 (13 fps)  
 H.264-2 format : 1280 x 1024 (13 fps)  
 H.264-3 format : 1280 x 720 (13 fps)  
 H.264-4 format : 720 x 576 (13 fps)  
 Save

**Note :**  
Image attachment by FTP or E-mail will be available only while MJPEG streaming is selected.

**Text Overlay Settings :**  
 Include date  Include time  
 Include text string:   
 Event message  
 Save

**Video Rotate Type :**  
 Normal video  
 Save

**GOV Settings :**  
 H.264-1 GOV Length : 50 H.264-2 GOV Length : 50  
 H.264-3 GOV Length : 25 H.264-4 GOV Length : 25  
 Save

**H.264 Profile :**  
 H.264-1 : Main profile H.264-2 : Main profile  
 H.264-3 : Main profile H.264-4 : Main profile  
 Save

Example here has quad streams selected (and has four drop-down lists for selecting the resolution for each of the four streams). If a dual stream option is selected, for example, only two resolution drop-down lists will appear to allow resolution adjusting of dual streams.

## Setting the Video Resolution

In the Video Resolution section, the video resolution formats that are configurable with the connected camera are available to select (including MJPEG and H.264 formats).

**Note** The Video Resolution options that are available to select will change, depending on the number of streams selected (single, dual, triple or quad). The resolution options will also change according to the camera you are using. For example, an HDZ20HD camera has a maximum resolution of 1920 x 1080 (1080p), while a HDZ36E camera has a maximum resolution of 720 x 486 (D1).

1. Click the **Streaming** tab (**Video Format** is selected in lefthand column).

2. In the **Video Resolution** drop-down list, select one of the following quad/triple/dual/single stream options:
  - **H.264 Only**
  - **H.264 + H.264** (default)
  - **H.264 + H.264 + H.264**
  - **H.264 + H.264 + H.264 + H.264**
  - **MJPEG Only**
  - **MJPEG + H.264**
  - **MJPEG + H.264 + H.264**
  - **MJPEG + H.264 + H.264 + H.264**
3. Select a resolution option for each of the streams that you selected with the **Video Resolution** drop-down list (see [Figure 4-1](#)). The number of resolution and frame rate options that are available will depend on your camera model and which stream option you selected in [step 2](#), above. Keep in mind that if higher resolutions are selected, the amount of bandwidth used by the camera will also increase.
4. Click the **Save** button directly below the Video Resolution options.

---

**Note** Image attachment by FTP or E-mail is only available when MJPEG streaming is selected. Select one of the MJPEG stream options (see [Table 4-1](#)), if you want to use this feature.

---

## Setting the Text Overlay

You can superimpose text over the video image. The superimposed text can be the date, the time, an event message, or a text string of your choosing (up to 20 alphanumeric characters). See [Figure 3-8](#) on [page 44](#) to see an example of the browser with the text overlay displayed on the video image.

1. Click the **Streaming** tab (**Video Format** is selected in lefthand column).
2. Under **Text Overlay Settings**, select one or more of the following check boxes:
  - **Include date**
  - **Include time**
  - **Include text string**
  - **Event message**
3. If you selected the **Include text string** check box, type a text string in the corresponding text box (maximum 20-characters).
4. If you selected the **Event Message** check box, a message of **M** will appear overlaid on the video when a motion event occurs. A message of **A1–A4** will appear when an alarm 1–4 event occurs.
5. Click the **Save** button directly below the Text Overlay Settings options.

## Setting the Video Rotate Type

Depending on the installation environment of your HDZ Series IP PTZ dome camera, you may need to modify the way video is displayed on a monitor or web browser. The video rotate type options allow you to flip the video image vertically or horizontally, or rotate the video image, as needed. To set the video rotate type:

1. Click the **Streaming** tab (**Video Format** is selected in lefthand column).

2. Under **Video Rotate Type**, select one of the following options from the drop-down list:
  - **Normal**. Video is not rotated or reflected (default setting).
  - **Flip video**. Video is reflected horizontally.
  - **Mirror video**. Video is reflected vertically.
  - **90 degree clockwise**. Video is rotated one quarter turn clockwise.
  - **180 degree clockwise**. Video is rotated one half turn.
  - **90 degree counterclockwise**. Video is rotated one quarter turn counterclockwise.
3. Click the **Save** button directly below the Video Rotate Type drop-down list.

## Setting the GOV Length

The GOV length of an H.264 stream is the sum total of I-frames and P-frames in a GOV (Group of video images). An I-frame, or intra frame, is an image that is coded in its entirety. A P-frame, or predictive inter frame, refers to parts of earlier images (I-frames and/or P-frames) to code the frame and therefore uses less bits to transmit the image. Increasing the GOV length decreases the frequency of I-frames, and therefore reduces bandwidth consumption and image quality.

1. Click the **Streaming** tab (**Video Format** is selected in lefthand column).
2. Under **GOV Settings**, type a value in the **H.264-1 GOV Length** field and/or the **H.264-2 GOV Length** field and/or the **H.264-3 GOV Length** field and/or the **H.264-4 GOV Length** field.

---

**Note** Enter a GOV Length value in the range from 2 to 64. The default value is 60 (NTSC), or 50 (PAL) for H.264-1 and -2, and 30 fps (25 fps PAL) for H.264-3 and -4. The default value of 30 is a mid-level setting, which slightly reduces the bandwidth consumption and also maintains relatively high image quality. Decrease this value if you require higher quality images, and bandwidth consumption is not an important consideration. Increase this value if you need to reduce bandwidth consumption.

---

3. Click the **Save** button directly below the GOV Settings options.

## Setting the H.264 Profile

Use this setting to set each H.264 profile to one of either **Baseline profile**, **Main profile** or **High profile**, according to its compression needs. With the same bit rate, the higher the compression ratio, the better the image quality will be. To set the H.264 profile:

1. Click the **Streaming** tab (**Video Format** is selected by default in the lefthand column).

2. Use the four H.264 profile drop-down lists to select one of the following profiles for each H.264 stream:
  - **Baseline profile.** Lower compression ratio setting. This profile is primarily for applications that require additional data loss robustness.
  - **Main profile.** Mid-range compression ratio setting (default setting). This profile is primarily used for standard definition digital broadcasts that use the MJPEG-4 format.
  - **High profile.** Higher compression ratio setting. This profile is primarily used for high-definition digital applications.

---

**Note** Make sure the high compression ratio is supported by the system before selecting it for use.

---

3. Click the **Save** button directly below the H.264 profile options.

## Setting Video Deinterlacing

Use the video deinterlacing option to remove artifacts from the PTZ camera image that can come about from the combining (interlacing) of the even and odd lines of two consecutive frames. This option is only available for standard definition HDZ models as the high definition cameras do not interlace the images.

---

**Note** This feature is only supported by the HDZ PTZ models: HDZ30(X) and HDZ36E(X).

---

1. Click the **Streaming** tab (**Video Format** is selected by default in the lefthand column).
2. Use the **Video Deinterlacing** drop-down list to select the type of deinterlacing to use with the PTZ camera from the following options:
  - **3D Deinterlacing** (default setting). This setting enables 3D deinterlacing, which is the most effective deinterlacing algorithm available for the HDZ series cameras.
  - **Intra Field Deinterlacing.** This setting enables a simpler intra field deinterlacing algorithm.
  - **Intra Field Deinterlacing (Off).** This setting disables deinterlacing.
3. Click the **Save** button directly below the Video Deinterlace options.

---

## Video Compression Settings

---

This section describes how to set the video compression settings, how to display the compression information on the home page, and how to enable Constant Bit Rate (CBR) mode.

## Setting the Video Compression

You can set the compression level (or quality) for each type of video stream: Motion JPEG, H.264-1, H.264-2, H.264-3, and H.264-4. Higher bit rates produce higher quality images but require more bandwidth to transmit the images.

### Setting the MJPEG Compression

1. Navigate to **Streaming** > **Video Compression** (see [Figure 4-2](#)).
2. Under **MJPEG Compression setting**, in the **MJPEG Q factor** field, type a value from 1 to 70 (default = 35).

The higher the value, the bit rate and image quality increases, and the load on bandwidth also increases.

3. Click the **Save** button directly below the MJPEG Compression setting options.

Figure 4-2 Video Compression Settings

The screenshot shows the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System', 'Streaming' (highlighted), 'PTZ', and 'Logout'. The user is logged in as 'admin'. The left sidebar contains a menu with 'Video Compression' highlighted. The main content area is titled 'Video Compression' and contains the following settings:

- MJPEG Compression setting :** MJPEG Q factor : 35 [Save]
- H.264-1 Compression setting :** H264-1 bit rate : 4096 kbit/s [Save]
- H.264-2 Compression setting :** H264-2 bit rate : 1024 kbit/s [Save]
- H.264-3 Compression setting :** H264-3 bit rate : 1024 kbit/s [Save]
- H.264-4 Compression setting :** H264-4 bit rate : 1024 kbit/s [Save]
- CBR mode setting :**
  - enable H.264-1 CBR mode
  - enable H.264-2 CBR mode
  - enable H.264-3 CBR mode
  - enable H.264-4 CBR mode

### Setting the H.264-1 Compression

1. Navigate to **Streaming** > **Video Compression**.
2. Under **H.264-1 Compression setting**, in the **H.264-1 bit rate** field, type a value from 64 to 4096 kbit/s (default = 4096 kbit/s).

The higher the bit rate value, image quality increases, and the load on bandwidth also increases.

3. Click the **Save** button directly below the H.264-1 Compression setting options.

### Setting the H.264-2/3/4 Compression

1. Navigate to **Streaming > Video Compression**.
2. Under **H.264-2/3/4 Compression setting**, in the **H.264-2/3/4 bit rate** field, type a value from 64 to 4096 kbit/s (default = 1024 kbit/s).

The higher the bit rate value, image quality increases, and the load on bandwidth also increases.

3. Click the **Save** button directly below the H.264-2/3/4 Compression setting options.

## Enabling Constant Bit Rate Mode

If you have a limited amount of bandwidth available, you should not set the bit rate for the camera to be more than the bandwidth available on your network (see [Setting the Video Compression on page 50](#)).

When the Constant Bit Rate mode (CBR) is enabled, the H.264 stream will keep the bit rate constantly at the level you have set (see [Setting the H.264-1 Compression](#) above). When CBR is NOT enabled, the compression stream will use a variable bit rate (between 1 kbit/s and the bit rate you have set), depending on the amount of activity that is occurring in the image. If CBR is enabled and the compression bit rate is set low, the image quality will be reduced when a lot of activity occurs in the image.

---

**Note** Honeywell recommends that you set your bit rates below the available bandwidth levels of your network to avoid displaying/recording images at a reduced quality during moments of high activity.

---

1. Navigate to **Streaming > Video Compression**.
2. Under **CBR mode setting**, select one or more of the following:
  - **enable H.264-1 CBR mode** check box (enabled by default).
  - **enable H.264-2 CBR mode** check box (enabled by default).
  - **enable H.264-3 CBR mode** check box (enabled by default).
  - **enable H.264-4 CBR mode** check box (enabled by default).

---

**Note** The default setting is CBR mode (constant bit rate mode). Disable CBR mode, if needed, to enable VBR mode (variable bit rate mode).

---

3. Click the **Save** button directly below the CBR mode setting options.

## Video OCX Protocol Settings

The Video OCX Protocol setting is used to select the Video Streaming Protocol for the camera. There are various options to transmit streaming video over the network (see [Table 4-2](#) on [page 52](#)). Choose the Video Streaming Protocol that best fits your viewing requirements and network properties (see [Figure 4-3](#)).

**Note** OCX protocol settings will only apply to video streams using a Honeywell Viewer.

**Figure 4-3** Video OCX Protocol Settings

Choose the video OCX protocol that best fits your data delivery requirements (see [Table 4-2](#)).

**Table 4-2** Video OCX Protocol Options

OCX Option	Description
<b>RTP over UDP</b> (default setting)	Provides an up-to-date video stream although some images may be dropped. Suitable for both an intranet and the Internet where there is no NAT firewall.
<b>RTP over RTSP (TCP)</b>	Uses TCP for increased delivery reliability. Suitable for the Internet where firewalls are used and where an RTSP proxy is available.



**Table 4-2 Video OCX Protocol Options (cont'd)**

OCX Option	Description
<b>RTSP over HTTP</b>	Tunnels RTSP by means of HTTP. Able to pass through firewalls between the camera and the client.
<b>MJPEG over HTTP</b>	Streams a sequence of JPEG images by means of HTTP. Able to pass through firewalls between the camera and client.
<b>Multicast mode</b>	Provides the most efficient use of bandwidth when a large number of clients are viewing video simultaneously. Suitable for a subnet or intranet. Will not broadcast over the Internet.

## Selecting an OCX Protocol

1. Navigate to **Streaming > Video OCX Protocol**.
2. Under **Video OCX protocol setting**, select one of the following options:
  - **RTP over UDP** (default)
  - **RTP over RTSP(TCP)**
  - **RTSP over HTTP**
  - **MJPEG over HTTP**
  - **Multicast mode**
3. If you selected **Multicast mode**, enter the required information (video IP address, video ports, audio port, and TTL) in the fields given.
4. Click **Save**.

---

## Video Frame Rate Settings

---

If you have limited bandwidth available to transmit images, you can set up the number of image frames to be displayed per second with the Frame Rate options (see [Figure 4-4](#)).

---

**Note** Be aware that video smoothness will change depending on the frame rate setting. Higher frame rates (30/25) will produce smooth video. Video smoothness will reduce as the frame rate values decrease.

---

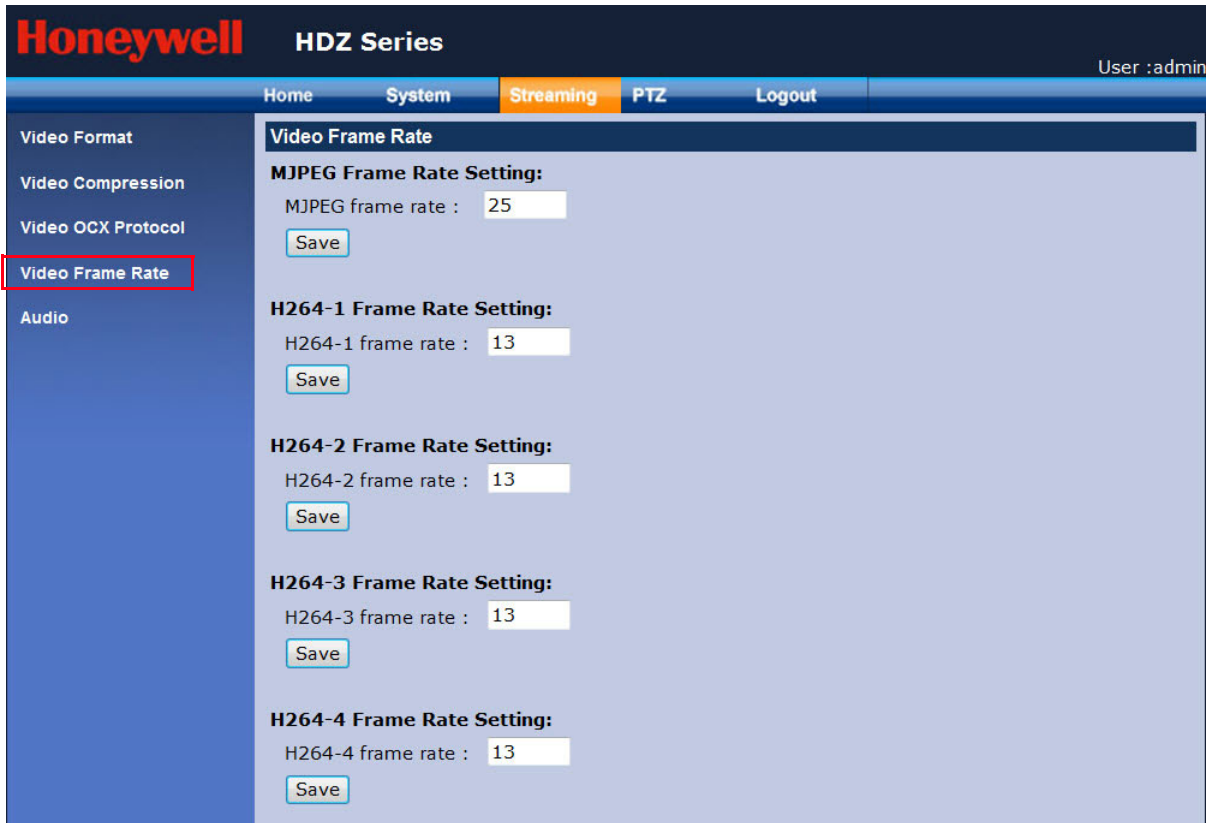
## Setting the Video Frame Rate

1. Navigate to **Streaming > Video Frame Rate** (see [Figure 4-4](#)).
2. Enter a frame rate setting for one or more of the following streams in the field given:
  - **MJPEG**
  - **H.264-1**
  - **H.264-2**
  - **H.264-3**
  - **H.264-4**

Enter a Frame Rate value from 1 to 30 (NTSC), or 1 to 25 (PAL). The lowest frame rate setting is 1.

3. Click the **Save** button directly below the Frame Rate setting field you have modified.

**Figure 4-4** Frame Rate Control Settings



The screenshot displays the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System', 'Streaming' (highlighted), 'PTZ', and 'Logout'. The user is logged in as 'admin'. The left sidebar contains a menu with 'Video Format', 'Video Compression', 'Video OCX Protocol', 'Video Frame Rate' (highlighted with a red box), and 'Audio'. The main content area is titled 'Video Frame Rate' and contains five sections, each with a 'Save' button:

- MJPEG Frame Rate Setting:** MJPEG frame rate : 25
- H264-1 Frame Rate Setting:** H264-1 frame rate : 13
- H264-2 Frame Rate Setting:** H264-2 frame rate : 13
- H264-3 Frame Rate Setting:** H264-3 frame rate : 13
- H264-4 Frame Rate Setting:** H264-4 frame rate : 13

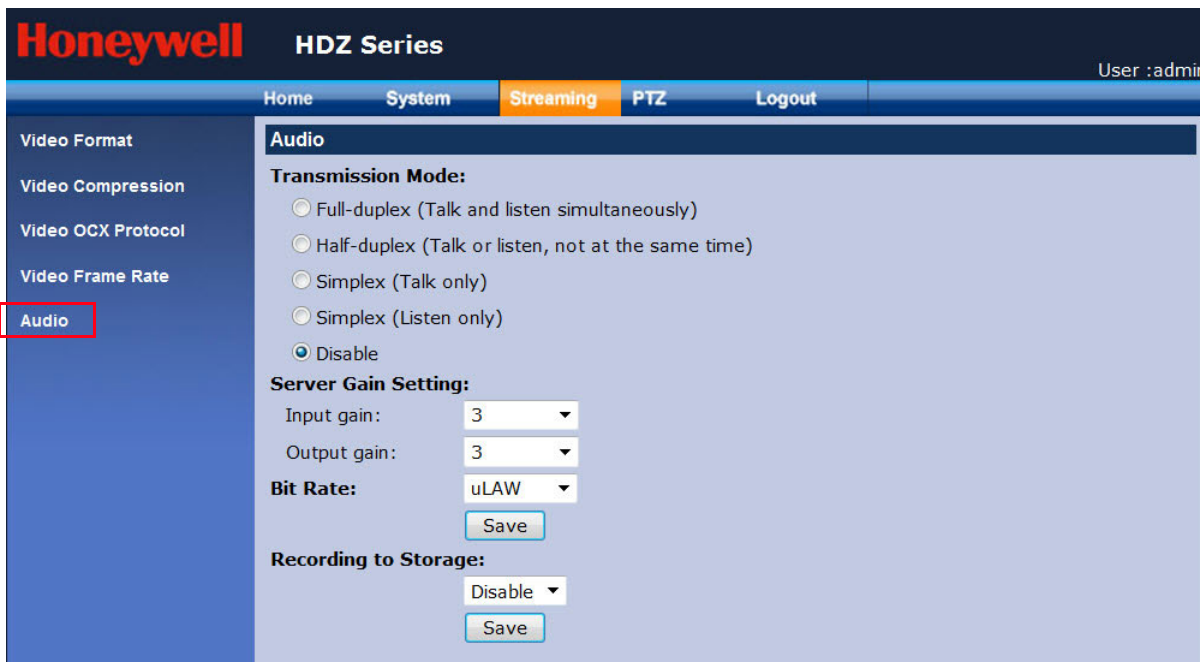
---

## Audio Settings

---

This section describes how to set the audio transmission mode, gain, and bit rate (see [Figure 4-5](#)). To use the audio settings, the audio connections at the camera must be connected (see [Connecting Audio on page 30](#) for more information on connecting audio).

Figure 4-5 Streaming Audio Settings



## Setting the Audio Transmission Mode

There are four audio transmission modes, plus the option for disabling audio (see [Table 4-3](#)).

**Table 4-3 Audio Transmission Mode Settings**

Transmission Mode	Description
<b>Full-duplex (Talk and listen simultaneously)</b>	The local and remote sites can transmit and receive audio (talk and listen) at the same time.
<b>Half-duplex (Talk or listen, not at the same time)</b>	The local and remote sites can transmit and receive audio (talk and listen), but not at the same time. A talk or listen transmission must end before another can be started.
<b>Simplex (Talk only)</b>	The local or remote site can only talk to the PTZ site.
<b>Simplex (Listen only)</b>	The local or remote site can only listen to the PTZ site.
<b>Disable (default)</b>	Audio transmission is disabled.

1. Navigate to **Streaming > Audio**.
2. Under **Transmission Mode**, select one of the following:
  - **Full-duplex (Talk and listen)**
  - **Half-duplex (Talk and listen, not at the same time)**
  - **Simplex (Talk only)**
  - **Simplex (Listen only)**
  - **Disable**
3. Click **Save** under the **Server Gain Settings** to save your setting.

## Setting the Server Gain

You can adjust the volume of the audio input and output. To set the audio gain:

1. Navigate to **Streaming > Audio** (see [Figure 4-5](#)).
2. Under **Server Gain Setting**, in the **Input gain** drop-down list, select a value from **1 to 10**, or **Mute** (default = **3**). Select a higher value to increase the volume.
3. Under **Server Gain Setting**, in the **Output gain** drop-down list, select a value from **1 to 6**, or **Mute** (default = **3**). Select a higher value to increase the volume.
4. Click **Save**.

## Setting the Audio Bit Rate

You can adjust the audio transmission bit rate. Higher bit rates produce better audio quality but require more bandwidth. The G.726 speech codec is used with 16, 24, 32, and 40 kbit/s transmissions. The G.711 speech codec is used with u-law and A-law algorithms (64 kbit/s).

1. Navigate to **Streaming > Audio** (see [Figure 4-5](#)).
2. In the **Bit Rate** drop-down list, select one of the following:
  - **40 Kbps**
  - **32 Kbps**
  - **24 Kbps**
  - **16 Kbps**
  - **uLAW** (64 Kbps),  
default setting
  - **ALAW** (64 Kbps)
3. Click **Save**.

## Enabling Audio Recording to Storage

Audio can be recorded with video to the storage device (SD card or network storage) that has been configured for the camera. Audio recording to storage is disabled by default.

To enable audio recording to storage, select **Enable** from the **Recording to Storage** drop-down list and click **Save** (see [Figure 4-5](#)).

---

**Note** If the selected audio bit rate is not compatible with the player used for playing back the recorded clips, there will be no audio, and noise will be heard during playback.

---

# 5

## Configuring PTZ Settings

This chapter includes:

- [Preset Settings, page 57](#)
- [Auto Pan Settings, page 61](#)
- [Sector Settings, page 65](#)
- [Tilt Range Settings, page 68](#)
- [Camera Settings, page 73](#)
- [Mimic Tour Settings, page 59](#)
- [Preset Tour Settings, page 63](#)
- [Home Function, page 66](#)
- [Privacy Mask Settings, page 69](#)

---

### Preset Settings


---

You can program up to 256 preset points for the pan/tilt/zoom camera. A preset point is a pre-programmed position that your PTZ camera can move to automatically when a user selects a preset to go to.

Figure 5-1 PTZ Preset Programming



## Programming a Preset Point

1. Navigate to **PTZ** > **Preset** (see [Figure 5-1](#)).
2. In the Live View screen, click and drag the pointer to the desired preset position. To re-position the camera, place the mouse cursor over the video image and left-click and drag in the direction you want to move the camera. The red arrow icon (  ) indicates the direction that the image will pan/tilt.
3. Adjust the zoom and focus using the **Wide**, **Tele**, **Auto**, **Manual**, **Near**, and **Far** buttons.
4. Under **Preset setting**, in the **Num** drop-down list, select a number from the drop-down list for the current preset.  
 The first drop-down list contains preset numbers 1 through 10. The next list contains numbers 11 through 20, and so on, up to 256. Click **NextPage** to go to the next list of preset numbers. Click **PrePage** to return to the previous list of numbers.
5. In the **Name** field, type a descriptive name for the current preset. The preset name can not contain any spaces.
6. Click **Set** to save the settings for the preset that you have programmed.

---

**Note** You can also program a preset on the home page of the PTZ web client interface (see [Figure 3-6](#) on [page 41](#)). Use the PTZ controls (see [Figure 3-7](#) on [page 43](#)) and zoom and focus controls to position the camera at the desired preset position. Enter a preset number in the Preset Details field and click **Set**.

---

## Deleting a Preset Point

1. Navigate to **PTZ > Preset** (see [Figure 5-1](#)).
2. Under **Preset setting**, in the **Num** drop-down list, select the number of the preset that you want to delete.

The first drop-down list contains preset numbers 1 through 10. The next list contains numbers 11 through 20, and so on, up to 256. Click **NextPage** to go to the next list of preset numbers. Click **PrePage** to return to the previous list of numbers.

3. Click **Delete** to delete the selected preset point.

## Go to a Preset Point

1. Navigate to **PTZ > Preset** (see [Figure 5-1](#)).
2. Select the preset point you want to go to in the **Preset go** drop-down list.

If the preset you want to go to does not appear in the drop-down list, click **NextPage** or **PrePage** in the **Preset setting** area until the correct preset list is selected.

---

**Note** You can also go to a preset on the home page of the PTZ web client interface (see [Figure 3-6](#) on [page 41](#)). Enter the preset number in the Preset Details field and click **Goto** to have the camera move to view the selected preset point.

---

---

## Mimic Tour Settings

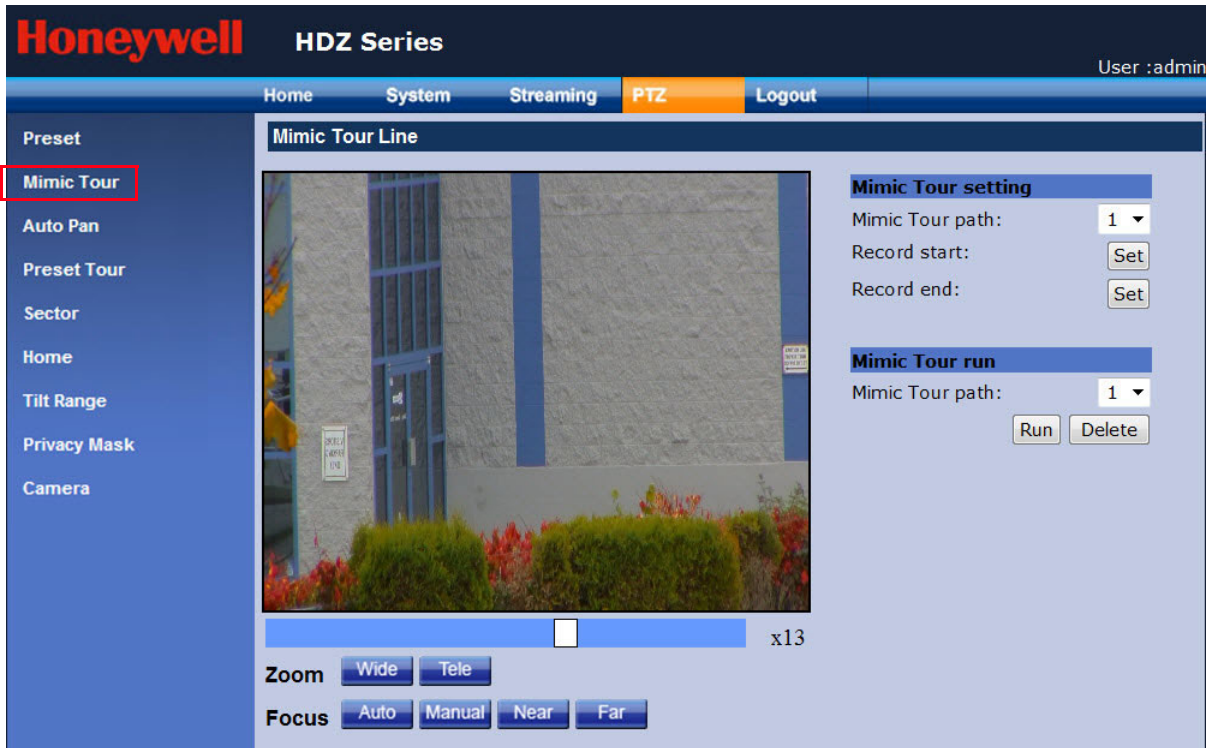
---


You can program up to eight mimic tours that can be recalled at a later time.

## Programming a Mimic Tour Path

1. Navigate to **PTZ > Mimic Tour** (see [Figure 5-2](#)).

Figure 5-2 Mimic Tour Programming



2. Under **Mimic Tour setting**, in the **Mimic Tour path** drop-down list, select the number of the Mimic Tour path that you want to program (select from **1** to **8**).
3. In the Live View screen, use the mouse to click and drag the video image to the start point of the mimic tour path. To re-position the camera, place the mouse cursor over the video image and left-click and drag in the direction you want to move the camera. The red arrow icon (  ) indicates the direction that the image will pan/tilt.
4. Click the **Set** button located next to **Record start** to assign the current camera position as the mimic tour starting position.
5. Program the mimic tour path using the PTZ controls. Use the mouse to click and drag the image in the path that you want the tour to follow (see [step 3](#), above). Use the zoom and focus controls to adjust the camera, as needed. When programming the tour, be sure to let the camera rest for a few seconds on the camera positions that should be monitored closely during the tour.
6. When you have finished programming the mimic tour path, click the **Set** button located next to **Record end** (see [Figure 5-2](#)).

## Running a Mimic Tour Path

1. Navigate to **PTZ** > **Mimic Tour**.
2. Under **Mimic Tour run**, in the **Mimic Tour path** drop-down list, type or select the number of the Mimic Tour path that you want to run, and then click **Run** (see [Figure 5-2](#)).



---

**Note** You can also run a mimic tour on the home page of the PTZ web client interface (see [Figure 3-6](#) on [page 41](#)). Select a mimic tour number from the Mimic Tour Details drop-down list and click **Run** to have the camera run the selected programmed mimic tour.

---

## Stopping a Running Mimic Tour

In the Live View screen, use the mouse to click and drag the pointer to move the camera in any direction, or click the Stop button located next to the mimic tour options on the Home screen (see [Figure 3-6](#) on [page 41](#)) to stop the tour.

## Deleting a Programmed Mimic Tour

1. Navigate to **PTZ > Mimic Tour**.
2. Under **Mimic Tour run**, in the **Mimic Tour path** drop-down list, select the number of the Mimic Tour path that you want to delete, and then click **Delete** (see [Figure 5-2](#)).

---

## Auto Pan Settings

---

You can program up to four auto pan paths. An auto pan path is a short tour that runs on a horizontal line, back and forth between two points that you program.

## Programming an Auto Pan Path


1. Navigate to **PTZ > Auto Pan** (see [Figure 5-3](#)).
2. Under **Auto pan setting**, in the **Auto pan path** drop-down list, select the number of the auto pan path that you want to program (from **1** to **4**).
3. Under **Auto pan setting**, in the **Speed** drop-down list, type or select a speed ratio for the auto pan path from **0** (low) to **3** (fast).
4. In the Live View screen, use the mouse to click and drag the video image to the start point of the auto pan path. To re-position the camera, place the mouse cursor over the video image and left-click and drag in the direction you want to move the camera. The red arrow icon (  ) indicates the direction that the image will pan/tilt. Use the zoom and focus controls, as needed, to adjust the zoom and focus of the image.
5. Click the **Set** button located next to **Start point** (see [Figure 5-3](#)).

Figure 5-3 Auto Pan Programming



6. In the **Direction** drop-down list, select a direction for the auto pan path to run (**Left** or **Right**).
7. In the Live View screen, use the mouse to click and drag the video image to the end point of the auto pan path, and then click the **Set** button located next to **End point**.

## Running an Auto Pan Path

1. Navigate to **PTZ > Auto Pan** (see *Figure 5-3*).
2. Under **Auto pan run**, in the **Auto pan path** drop-down list, select the number of the auto pan path that you want to run (from **1** to **4**), and then click **Run**.

## Stopping a Running Auto Pan Path

In the Live View screen, use the mouse to click and drag the pointer to move the camera in any direction to stop auto panning.

## Deleting an Auto Pan Path

1. Navigate to **PTZ > Auto Pan** (see *Figure 5-3*).
2. Under **Auto pan run**, in the **Auto pan path** drop-down list, select the number of the auto pan path that you want to delete (from **1** to **4**), and then click **Delete**.

## Preset Tour Settings

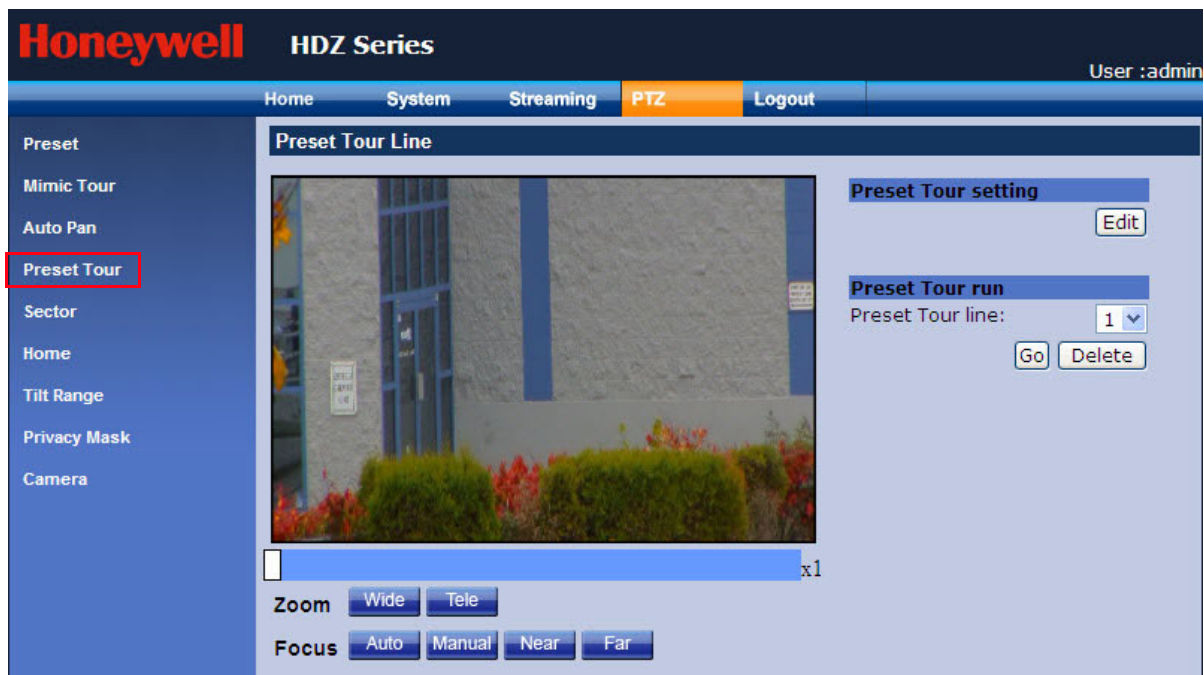
You can program up to eight preset tours that can consist of between 2 and 64 preset points in each tour.

**Note** You must define at least two presets before you can program a preset tour. See [Preset Settings on page 57](#) for more information on programming preset points.

## Programming a Preset Tour

1. Navigate to **PTZ** > **Preset Tour**.
2. Under **Preset Tour setting**, click **Edit** (see [Figure 5-4](#)). The Preset Tour Set window opens (see [Figure 5-5](#)).

Figure 5-4 Preset Tour Programming



3. On the **Preset Tour Set** page ([Figure 5-5](#)), in the **Preset Tour line** drop-down list, select the number of the preset tour that you want to program (from **1** to **8**).
4. For each preset that you want to assign to the preset tour, do the following:
  - a. In the **Name** drop-down list, select the name of the preset point to be part of the tour (see [Figure 5-5](#)).

- b. In the **Dwell time** box, type a value from **0** (fast dwell time) to **127** (slow dwell time).
- c. In the **Speed** box, type a value from **0** (low speed) to **14** (high speed).

To assign more preset points than the first 15 to the preset tour, click **Next page**. To return to the previous page, click **Pre page**.

**Figure 5-5 Preset Tour Selecting Preset Points**

The screenshot shows the 'Preset Tour Set' configuration page in the Honeywell HDZ Series PTZ web client. The page has a navigation menu on the left with options like 'Preset', 'Mimic Tour', 'Auto Pan', 'Preset Tour', 'Sector', 'Home', 'Tilt Range', 'Privacy Mask', and 'Camera'. The main content area is titled 'Preset Tour Set' and includes a 'Preset Tour line' dropdown menu set to '1' and a 'Save' button. Below this is a table with columns for 'Preset', 'Name', 'Dwell time [0..127]', and 'Speed [0..14]'. The table contains 15 rows, with the first three rows populated with preset points: 1. 3(ParkingLot) with dwell time 10 and speed 5; 2. 5(WalkwayEast) with dwell time 5 and speed 5; 3. 4(SouthDoor) with dwell time 10 and speed 5. The remaining rows (4-15) are empty with '--no setting--' in the Name column. At the bottom of the table are 'Pre page' and 'Next page' buttons.

Preset	Name	Dwell time [0..127]	Speed [0..14]
1.	3(ParkingLot)	10	5
2.	5(WalkwayEast)	5	5
3.	4(SouthDoor)	10	5
4.	--no setting--		
5.	--no setting--		
6.	--no setting--		
7.	--no setting--		
8.	--no setting--		
9.	--no setting--		
10.	--no setting--		
11.	--no setting--		
12.	--no setting--		
13.	--no setting--		
14.	--no setting--		
15.	--no setting--		

5. When you are finished programming the tour, click **Save** to save the preset tour settings that you have entered.

## Running a Preset Tour

1. Navigate to **PTZ** > **Preset Tour** (see [Figure 5-4](#)).
2. Under **Preset Tour run**, in the **Preset Tour line** drop-down list, select the number of the preset tour line that you want to run (from **1** to **8**), and then click **Go**.

**Note** You can also run a preset tour on the home page of the PTZ web client interface (see [Figure 3-6](#) on [page 41](#)). Select a preset tour number from the Preset Tour Details drop-down list and click **Run** to have the camera run the selected programmed preset tour.

## Stopping a Running Preset Tour

In the Live View screen, use the mouse to click and drag the pointer to move the camera in any direction, or click the Stop button located next to the preset tour options on the Home screen (see [Figure 3-6](#) on [page 41](#)) to stop the tour.

## Deleting a Programmed Preset Tour

1. Navigate to **PTZ** > **Preset Tour**.
2. Under **Preset Tour run**, in the **Preset Tour line** drop-down list, select the number of the Preset Tour that you want to delete, and then click **Delete** (see [Figure 5-4](#)).

---

## Sector Settings

---

The sector function provides a name and number for different fields of view (sector position) that have been programmed into the camera. When the sectors are enabled, the camera will display the name and number of the sector position that is currently visible on the web client user interface. Up to 16 sectors can be programmed.

## Programming a Sector


1. Navigate to **PTZ** > **Sector** (see [Figure 5-6](#)).
2. Under **Sector Setting**, in the **Switch** drop-down list, select **On** to enable the sector function (or select **Off** to disable the sector feature), and then click the **Set** button located directly below the **Switch** drop-down list.
3. In the Live View screen, click and drag the pointer to the desired sector position. To re-position the camera, place the mouse cursor over the video image and left-click and drag in the direction you want to move the camera. The red arrow icon (  ) indicates the direction that the image will pan/tilt.
4. Adjust the zoom and focus using the **Wide**, **Tele**, **Auto**, **Manual**, **Near**, and **Far** buttons.
5. Under **Sector setting**, in the **Num** field, enter a number for the current sector from 1 to 16.
6. In the **Name** field, type a descriptive name for the current sector. The sector name can not contain any spaces.
7. Click **Set** to save the settings for the sector that you have programmed.

Figure 5-6 Sector Programming



## Enabling or Disabling the Sector Function

1. Navigate to **PTZ** > **Sector** (see [Figure 5-6](#)).
2. Under **Sector setting**, in the **Switch** drop-down list, select one of the following:
  - **On** to enable the sector function.
  - **Off** to disable the sector function.
3. Click the **Set** button located below the **Switch** field to save the settings that you have entered for the Sector Function.

---

## Home Function

---

The home function ensures constant and consistent monitoring by preventing the camera from idling for more than a set period of time. When the home function is enabled, the camera automatically executes a user-defined PTZ function after a specific period of inactivity.

## Programming the Home Function

1. Navigate to **PTZ** > **Home** (see [Figure 5-7](#)).

---

**Note** Be aware that you must enable the home function for your programmed home function to be in effect (see [Enabling or Disabling the Home Function on page 67](#)).

---

2. Under **Home setting**, in the **Time** field, type a value from **1** to **128** minutes to set the camera idle time limit (period of inactivity before the home function executes).
3. In the **Type** drop-down list, select the PTZ function you want the camera to execute when the camera idle time expires. Choose one of the following options:
  - **Preset**
  - **Autopan**
  - **Preset Tour**
  - **Mimic Tour**
4. In the **Line** drop-down list, type or select the number of the PTZ function that you have chosen (for example, you can choose Preset Tour number 3). The functions available for selection change depending on what Function **Type** is selected (see [step 3](#)).
5. Click the **Set** button located below the **Line** field to save the settings that you have entered for the Home Function.

**Figure 5-7 Home Function Programming**



## Enabling or Disabling the Home Function

1. Navigate to **PTZ > Home** (see [Figure 5-7](#)).

2. Under **Home setting**, in the **Switch** drop-down list, select one of the following:
  - **On** to enable the home function.
  - **Off** to disable the home function.
3. Click the **Set** button located below the **Switch** field to save the settings that you have entered for the Home Function.

---

## Tilt Range Settings

---

The camera's tilt angle is adjustable from minimum  $-10^{\circ}$  to maximum  $100^{\circ}$ . For more information, see [Image Flip on page 80](#).

### Adjust the Tilt Angle

1. Navigate to **PTZ** > **Tilt Range** (see [Figure 5-8](#)).
2. Under **Angle Setting**, in the **Min** field, type a value from **-10** to **10**. The default value is 0.
3. In the **Max** field, type a value from **80** to **100**. The default value is 90.

---

**Note** When you select Image Flip from the PTZ > Camera > Flip, the Max field value range will be from 170 to 190. Default value is 180.

---

4. Click **Set** to save the settings that you have entered for the Tilt Angle.



Figure 5-8 Tilt Angle Programming



## Privacy Mask Settings

The privacy mask function prevents the camera from monitoring sensitive objects or areas in a scene.

**Note** The image flip function is automatically disabled when the privacy mask function is enabled. However, the M.E. image flip function (mechanical image flip function) can be used when the privacy masks function is enabled (see [Image Flip on page 80](#) for more information).

**Note** The privacy mask functions differently on 1080p PTZ cameras, HDZ20HD(X), HDZ20HDE(X), HDZ30HD, and HDZ30HDE, than it does on standard definition PTZ cameras, HDZ30(X) and HDZ36E(X). See [Privacy Mask Settings on 1080p PTZ Cameras on page 70](#) for more information on setting up a privacy mask on 1080p PTZ cameras. See [Privacy Mask Settings on Standard Definition PTZ Cameras on page 71](#) for more information on setting up a privacy mask on standard definition PTZ cameras.

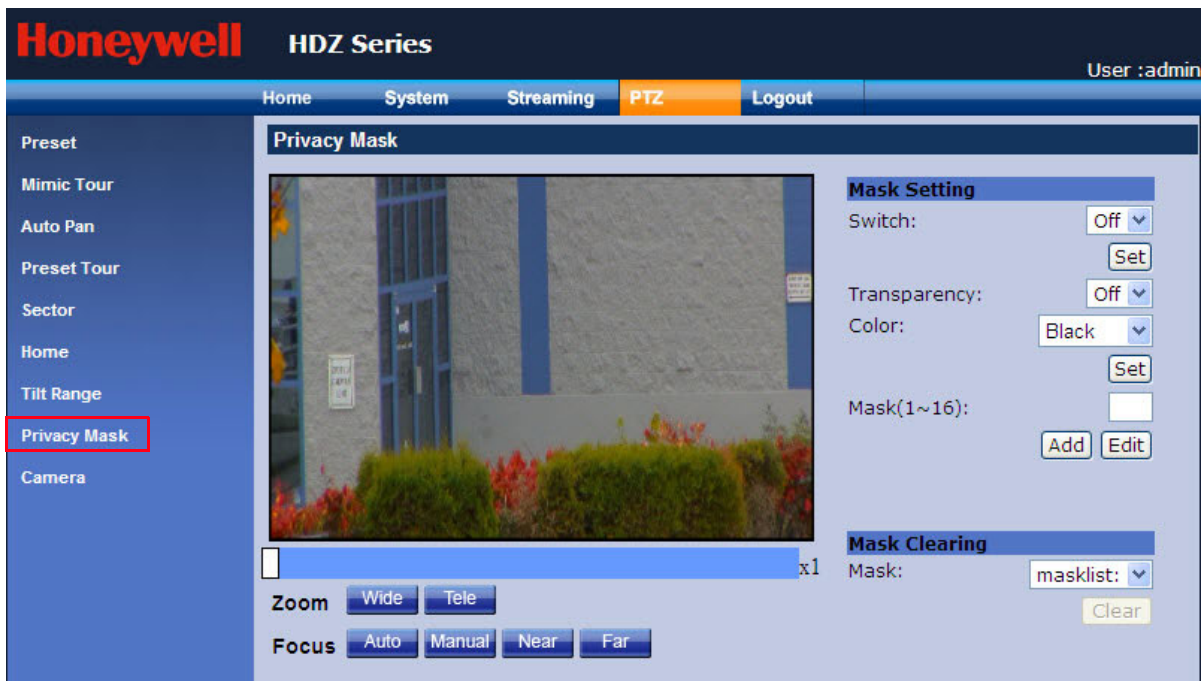
## Privacy Mask Settings on 1080p PTZ Cameras


The privacy mask functions in the following sections only apply to HDZ20HD(X), HDZ20HDE(X), HDZ30HD, and HDZ30HDE model cameras.

### Creating a Privacy Mask

1. Navigate to **PTZ** > **Privacy Mask** (see [Figure 5-9](#)).
2. Under **Mask Setting**, in the **Switch** drop-down list, select **On** to enable the privacy mask function (or select **Off** to disable the privacy mask feature), and then click the **Set** button located directly below the drop-down list.
3. In the **Transparency** drop-down list, select one of the following:
  - **On** to make the privacy mask transparent.
  - **Off** to make the privacy mask solid.
4. In the **Color** drop-down list, select a color for the privacy mask (**Black**, **White**, **Red**, **Green**, **Blue**, **Cyan**, **Yellow**, and **Magenta**), and then click the **Set** button located directly below the **Color** drop-down list.

Figure 5-9 Privacy Mask Programming (1080p PTZ Version)



5. In the Live View screen, use the mouse to click and drag the video image to the video position to be masked for privacy. To re-position the camera, place the mouse cursor over the video image and left-click and drag in the direction you want to move the camera. The red arrow icon (  ) indicates the direction that the image will pan/tilt. When you add the privacy mask (see [step 9](#)), the privacy mask will be added to the center of this image.
6. In the **Mask** field, type a number for the privacy mask you are programming (from **1** to **16**).
7. Use the mouse to click and drag from the middle of the mask to re-position it, as needed.

8. Use the mouse to click and drag one of the edges or corners of the mask to re-size it, as needed.
9. Click **Add** to apply the privacy mask settings that you have entered.

### Editing a Privacy Mask Position

1. Navigate to **PTZ > Privacy Mask** (see [Figure 5-9](#)).
2. Under **Mask Setting**, in the **Mask** field, type a number for the privacy mask you are editing (from **1** to **16**). Click **Edit** to begin editing the selected mask.
3. If needed, you can change the **Transparency**, and **Color** values. If you edit one or more of these values, be sure to click the appropriate Set button to save the changes (see [Creating a Privacy Mask on page 70](#) for more information).
4. Pan, tilt and zoom the camera, as needed, to change the video image viewed by the camera, if such a change in position is needed to edit the privacy mask.
5. To change the privacy mask position, use the mouse to click and drag the mask from the middle of the mask.
6. To change the privacy mask size and shape, use the mouse to click and drag a corner or side of the mask.
7. When the privacy mask is positioned and setup as required, click **Edit** at the bottom of the **Mask Setting** section.

---

**Note** Up to a 10 second delay may occur between completion of editing a privacy mask position and the **Edit** button becoming available.

---

### Deleting a Privacy Mask

1. Navigate to **PTZ > Privacy Mask** (see [Figure 5-9](#)).
2. Under **Mask Clearing**, in the **Mask** drop-down list, select the number of the privacy mask that you want to delete, and then click **Clear**.

---

**Note** If you are clearing all privacy masks, it is recommended that you also disable the privacy mask feature (see [step 2](#) in [Creating a Privacy Mask, page 70](#)).

---

## Privacy Mask Settings on Standard Definition PTZ Cameras

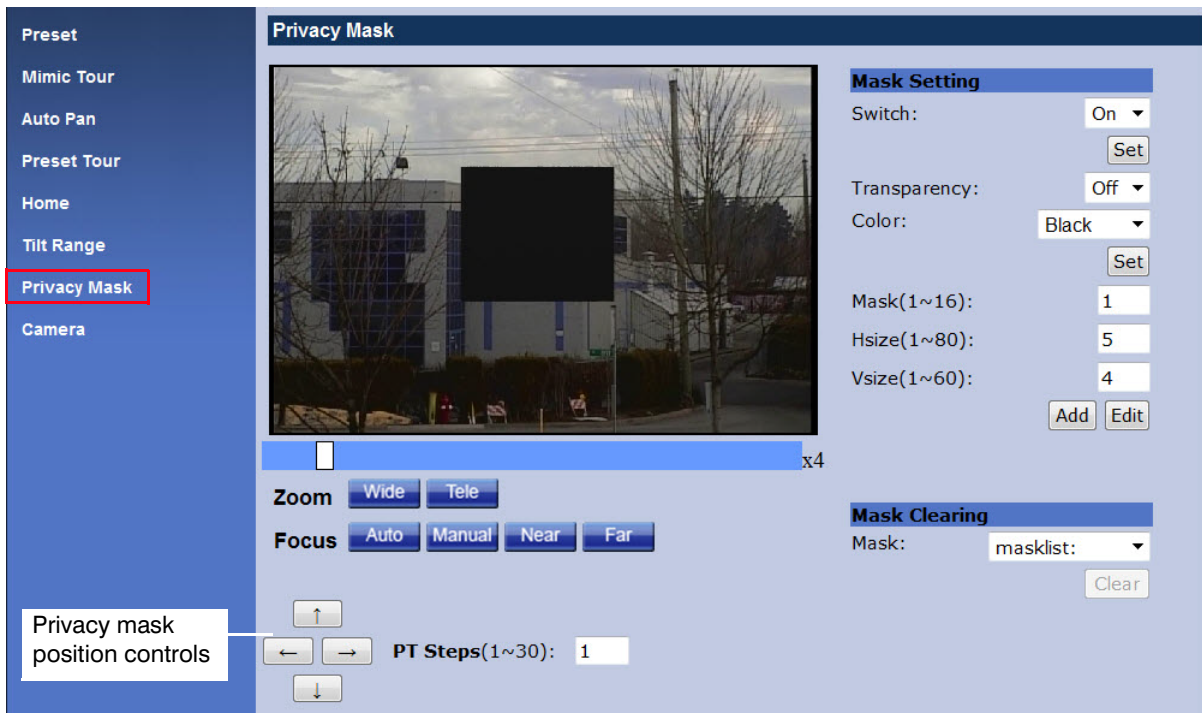
The privacy mask functions in the following sections only apply to HDZ30(X) and HDZ36E(X) model cameras.


### Creating a Privacy Mask

1. Navigate to **PTZ > Privacy Mask** (see [Figure 5-10](#)).

2. Under **Mask Setting**, in the **Switch** drop-down list, select **On** to enable the privacy mask function (or select **Off** to disable the privacy mask feature), and then click the **Set** button located directly below the drop-down list.
3. In the **Transparency** drop-down list, select one of the following:
  - **On** to make the privacy mask transparent.
  - **Off** to make the privacy mask solid.
4. In the **Color** drop-down list, select a color for the privacy mask (**Black, White, Red, Green, Blue, Cyan, Yellow, and Magenta**), and then click the **Set** button located directly below the **Color** drop-down list.

**Figure 5-10 Privacy Mask Programming (Standard Definition PTZ Version)**



5. In the Live View screen, use the mouse to click and drag the video image to the video position to be masked for privacy. To re-position the camera, place the mouse cursor over the video image and left-click and drag in the direction you want to move the camera. The red arrow icon (  ) indicates the direction that the image will pan/tilt. When you add the privacy mask (see [step 9](#)), the privacy mask will be added to the center of this image.
6. In the **Mask** field, type a number for the privacy mask you are programming (from **1** to **16**).
7. In the **Hsize** field, type a value for the horizontal size (width) of the privacy mask (from **1** to **80**). Select a large number to program a larger privacy mask. Note that the size of the privacy mask will also appear differently depending on the current zoom ratio.
8. In the **Vsize** field, type a value for the vertical size (height) of the privacy mask (from **1** to **60**). Select a large number to program a larger privacy mask. Note that the size of the privacy mask will also appear differently depending on the current zoom ratio.
9. Click **Add** to apply the privacy mask settings that you have entered.

## Editing a Privacy Mask Position

1. Navigate to **PTZ > Privacy Mask** (see [Figure 5-10](#)).
2. Under **Mask Setting**, in the **Mask** field, type a number for the privacy mask you are editing (from **1** to **16**). Click **Edit** to begin editing the selected mask.
3. If needed, you can change the **Transparency**, **Color**, **Hsize** and **Vsize** values to edit the privacy mask. If you edit one or more of these values, be sure to click the appropriate **Set** or **Add** button to save the changes (see [Creating a Privacy Mask on page 71](#) for more information).
4. To change the privacy mask position, click **Edit** at the bottom of the **Mask Setting** section. The PTZ camera will pan/tilt to the privacy mask position that you have previously set.
5. Use the privacy mask position controls (see [Figure 5-10](#)) to re-position the camera and privacy mask. Click one of either the left, right, up or down arrows to move the camera and the privacy mask in that direction.
6. You can change the amount that the camera pans/tilts upon each click of an arrow by typing a different value in the **PT Steps** field. Enter a value between **1** (short distance pan/tilt) and **30** (long distance pan/tilt).
7. When the privacy mask is positioned and setup as required, click **Edit** at the bottom of the **Mask Setting** section.

---

**Note** Up to a 10 second delay may occur between completion of editing a privacy mask position and the **Edit** button becoming available.

---

## Deleting a Privacy Mask

1. Navigate to **PTZ > Privacy Mask** (see [Figure 5-10](#)).
2. Under **Mask Clearing**, in the **Mask** drop-down list, select the number of the privacy mask that you want to delete, and then click **Clear**.

---

**Note** If you are clearing all privacy masks, it is recommended that you also disable the privacy mask feature (see [step 2 in Creating a Privacy Mask, page 71](#)).

---

---

## Camera Settings

---

This section describes how to set various camera parameters, such as exposure mode, white balance options, backlight compensation, image flip, auto calibration, speed by zoom, ICR function, wide dynamic range, and digital noise reduction.

## Exposure

The exposure is the amount of light received by the image sensor and is determined by the width of the lens iris opening, the amount of exposure by the sensor (shutter speed) and other exposure parameters. With these parameters, users can define how the auto exposure function works. Users can select the best exposure mode for their operating environment. You can select a specific Max Gain value, as needed. Select one of the following exposure modes to optimize the video output for your operating environment:

**Table 5-1 Exposure Modes**

Mode	Description
<b>Full Auto</b>	The camera's shutter speed, iris, and auto gain control (AGC) circuits work together automatically to produce a consistent video output.
<b>Shutter Priority</b>	The shutter speed has priority in setting the camera exposure.
<b>P-Iris</b>	The camera will automatically detect the best iris size for the environment, where the minimum iris size is limited to affect the exposure. This setting will provide a good depth of field, where objects at different distances from the camera are in focus simultaneously.  <b>Note</b> This feature is only supported by the HDZ PTZ models: HDZ20HD(X), HDZ20HDE(X), HDZ30HD, and HDZ30HDE.
<b>Iris Priority</b>	The iris has priority (instead of the shutter having priority) in setting the camera exposure. Mini shutter speed limitation setting.
<b>Manual Mode</b>	The shutter speed, iris, and gain are set manually by the user.

**Figure 5-11 Exposure Mode Programming**

**Exposure Mode**

Auto Mode

Max Gain 24dB ▾

Full Auto

Min Shutter Speed Off ▾

Shutter Priority

1/50 ▾

P-Iris

F6.8 ▾

Min Shutter Speed Off ▾

Iris Priority

F11 ▾

Min Shutter Speed Off ▾

Manual Mode

Manual

Shutter 1/50 ▾

Iris F11 ▾

Gain 6 ▾

Set

## Setting a Max Gain Value

---

**Note** This feature is only supported by the HDZ PTZ models: HDZ20HD(X), HDZ20HDE(X), HDZ30HD, and HDZ30HDE.

---



---

**Note** The gain limit can be set at the Full Auto, P-Iris Priority, Shutter Priority, and Iris Priority in the AE mode. Use this setting when image signal-to-noise ratio is particularly important.

---

1. Navigate to **PTZ** > **Camera** (see [Figure 5-11](#)).
2. Under **Exposure Mode**, use the **Max Gain** drop-down list to select a max gain value for the camera (from **3dB** to **57dB**, or **Off**).
3. Click **Set** to save the max gain value you have selected.

## Setting the Exposure Mode

1. Navigate to **PTZ > Camera** (see [Figure 5-11](#)).
2. Under **Exposure Mode**, select one of the following options:
  - **Full Auto** to enable full auto exposure mode, allowing the camera to automatically adjust the iris to suit current illumination. Select the Minimum Shutter Speed from the drop-down list below the Full Auto selection.
  - **Shutter Priority** to enable shutter priority exposure mode. Select a shutter speed from **1/10000** to **1/30** (NTSC), or **1/10000** to **1/25** (PAL) in the drop-down list provided.
  - **P-Iris** to enable the P-Iris priority exposure mode. Select the minimum iris opening from the drop-down list (**F4.8** to **F9.6**). The minimum shutter speed range is configurable from 1/15 to 1 second (NTSC) or 1/12 to 1 second (PAL).

---

**Note** The P-Iris setting is only supported by the HDZ PTZ models: HDZ20HD(X), HDZ20HDE(X), HDZ30HD, and HDZ30HDE.

---

- **Iris Priority** to enable iris priority exposure mode. Select an F-number from **F1.6** to **F28** in the drop-down list provided (hint: a smaller f-number will give you a brighter image). If Iris Priority is selected, you can select a **Min Shutter Speed** value from the drop-down list provided.
  - **Manual Mode** to enable manual exposure mode. Select shutter (**1/10000** to **1/30**, NTSC; **1/10000** to **1/25**, PAL), gain (**1** to **15**), and iris (**F1.6** to **F28**) values in the corresponding drop-down lists.
3. Click **Set** to save the exposure settings that you have entered.

## Auto Focus

The HDZ series PTZ camera offers three choices for the auto focus setting.

1. Navigate to **PTZ > Camera** (see [Figure 5-12](#)).
2. Under **Auto Focus**, select one of the following options:
  - **Continuous Focus** to enable continuous auto focusing. With this setting the camera will continuously auto focus the video image.
  - **Zoom trigger** to enable auto focusing triggered whenever the zoom is changed.
  - **PTZ trigger** to enable auto focusing triggered whenever a PTZ function is performed (pan, tilt, or zoom). This is the default setting.
3. Click **Set** to save the exposure settings that you have entered.



**Figure 5-12 White Balance and Auto Focus Programming**

The screenshot shows a configuration window with two main sections: 'Auto Focus' and 'White balance'. Under 'Auto Focus', there are three radio button options: 'Continue Focus' (selected), 'Zoom trigger', and 'PTZ trigger'. A 'Set' button is located below these options. The 'White balance' section has five radio button options: 'Auto' (selected), 'Indoor', 'Outdoor', 'ATW', and 'One Push'. A 'Trigger' button is positioned to the right of the 'One Push' option. Below these options, there are two input fields: 'Rgain: 57 [0..255]' and 'Bgain: 54 [0..255]'. A 'Set' button is located at the bottom right of the 'White balance' section.

## White Balance

Setting up white balance options can compensate for temperature differences with different light sources (such as sunlight, fluorescent light, and so on), and effecting the hue of the color white under different light sources. You can select one of the following white balance modes based on your operating environment:

**Table 5-2 White Balance Modes**

Mode	Description
<b>Auto</b>	Suitable for environments with a color temperature range from approximately 2,700K to 7,500K (wide range of light sources).
<b>Indoor</b>	Suitable for indoor environments with a color temperature range from approximately 2,500K to 3,000K (artificial light sources).
<b>Outdoor</b>	Suitable for outdoor environments with a color temperature range from approximately 6,000K to 8,000K (natural light sources).
<b>ATW</b>	Suitable for environments with a color temperature range from approximately 2,500K to 10,000K (wide range of light sources).
<b>One Push</b>	Press the Trigger button to fix the current white balance value (of the current video image). The white balance algorithm does not keep working after the Trigger button is pushed.  <b>Note</b> This option not supported by HDZ30(X) and HDZ36E(X) models.
<b>Manual</b>	R (red) and B (blue) gain values are set manually by the user.

## Setting the White Balance Mode

1. Navigate to **PTZ > Camera**.
2. Under **White balance** (see *Figure 5-12*), select one of the following:
  - **Auto** to enable auto white balance mode.
  - **Indoor** to enable indoor white balance mode.
  - **Outdoor** to enable outdoor white balance mode.
  - **ATW** to enable auto tracing white balance mode.
  - **One Push** to enable the One Push white balance mode. Choose **One Push** and click **Set** to save the selection. Then point the camera to a typical white balance scene for that camera and click **Trigger** to fix the current white balance value. The white balance algorithm does not keep working after the trigger button is clicked.
  - **Manual** to enable manual white balance mode, and enter gain values from **0** to **255** in the **Rgain** and **Bgain** fields.
3. Click **Set** to save the white balance settings that you have entered.

## Backlight Compensation

You can enable or disable backlight compensation. When enabled, the camera software will automatically compensate for high background lighting.

### Enabling/Disabling Backlight Compensation

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see *Figure 5-13*), in the **BLC** drop-down list, select one of the following options:
  - **On** to enable backlight compensation.
  - **Off** (default) to disable backlight compensation.
3. Click **Set** to save the setting.

**Figure 5-13 Camera Misc Options**

HDZ20HD(X) and HDZ20HDE(X)  
camera Misc options

Misc	
BLC	Off ▼ <input type="button" value="Set"/>
Sharpness (Default is 6)	6 ▼ <input type="button" value="Set"/>
ExpComp (Default is 8)	8 ▼ <input type="button" value="Set"/>
Flip	Off ▼ <input type="button" value="Set"/>
Digital zoom	Off ▼ <input type="button" value="Set"/>
Speed by zoom	On ▼ <input type="button" value="Set"/>
Day/Night Function	Auto ▼ <input type="button" value="Set"/>

HDZ30(X) and HDZ36E(X) camera Misc  
options, showing different options

Misc	
BLC	Off ▼ <input type="button" value="Set"/>
Sharpness (Default is 6)	6 ▼ <input type="button" value="Set"/>
ExpComp (Default is 8)	8 ▼ <input type="button" value="Set"/>
Freeze	Off ▼ <input type="button" value="Set"/>
Flip	Off ▼ <input type="button" value="Set"/>
Digital zoom	Off ▼ <input type="button" value="Set"/>
Speed by zoom	On ▼ <input type="button" value="Set"/>
Day/Night Function	Auto ▼ <input type="button" value="Set"/>

## Image Sharpness

You can adjust the sharpness level of the image:

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-13](#)), in the **Sharpness** drop-down list, type or select a value from **1** (least sharp) to **15** (sharpest) for the camera sharpness level (default is **3**).
3. Click **Set** to save the setting.

## Exposure Compensation

You can adjust the exposure compensation level:

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-13](#)), in the **ExpComp** drop-down list, type or select a value from **1** to **15** for the camera exposure compensation level (default is **8**).
3. Click **Set** to save the setting.

## Freeze

This feature is applicable to presets and preset tours. When the camera changes its position according to a preset or preset tour, the video image shown is blurred and not recognizable due to the speed that the camera pans and tilts. When the Freeze feature is enabled, the camera freezes the current image that is displayed while moving to a preset or preset tour position. When the camera reaches its destination, the video image will update to show the new field of view.

---

**Note** This feature is only supported by the HDZ PTZ models: HDZ30(X) and HDZ36E(X).

---

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-13](#)), in the **Freeze** drop-down list, select one of the following:
  - **On** to enable video freezing.
  - **Off** (default) to disable video freezing.
3. Click **Set** to save the setting.

## Image Flip

The image flip function lets you track an object continually as it passes directly beneath the camera. You can select one of the following image flip modes:

**Table 5-3 Image Flip Modes**

Mode	Description
<b>M.E.</b>	M.E. mode employs a mechanical image flip. As the camera tracks an object passing underneath it, it tilts down to the maximum tilt angle, quickly pans 180°, and then tilts upward to continue tracking the object.
<b>Image</b>	Image mode employs a digital image flip. As the camera tracks an object passing underneath it, it tilts down to the maximum tilt angle, reverses the image digitally, and then tilts upward to continue tracking the object.
<b>Off</b> (default)	Disable image flip mode.

### Setting the Image Flip Mode

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-13](#)), in the **Flip** drop-down list, select one of the following:
  - **M.E.** to enable the mechanical image flip mode.
  - **Image** to enable the digital image flip mode.
  - **Off** (default) to disable the image flip function.
3. Click **Set** to save the setting.

---

**Note** This image flip function is automatically disabled when the privacy mask function is enabled. However, the M.E. image flip function (mechanical image flip function) can be used when the privacy mask function is enabled (see [Privacy Mask Settings on page 69](#) for more information).

---

---

**Note** Flip setting is manually controlled ONLY. If a preset position or point for another function (such as mimic tour) is set in a position that can only be reached through Flip motion, that position can not be reached when the Flip function is disabled.

---

## Digital Zoom

You can enable the camera to perform digital zooming (zooms on an image past the optical zoom ability):

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-13](#)), in the **Digital zoom** drop-down list, select either **On** (to enable digital zooming) or **Off** (to disable digital zooming).
3. Click **Set** to save the setting.

## Speed by Zoom

The speed by zoom function lets you view objects clearly while zooming in. As the camera zooms in, the pan and tilt speed slow proportional to the amount of zoom, causing the scene to remain in focus throughout zooming.

Enable this function to adjust the pan/tilt speed automatically by internal algorithm when zooming. The larger zoom ratio leads to a lower rotating speed.

### Enabling/Disabling the Speed by Zoom Function

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-13](#)), in the **Speed by zoom** drop-down list, select one of the following options:
  - **On** (default) to enable the speed by zoom function.
  - **Off** to disable the speed by zoom function.
3. Click **Set** to save the setting.

## Day/Night Function

The Day/Night function produces clear, accurate images at night or in low-light conditions. During the day, the camera uses an IR cut filter to filter out infrared (IR) light to ensure an undistorted color picture. At night, or in low light, the IR cut filter is removed, allowing the camera to make use of IR light to deliver high-quality black-and-white images. You can select one of the following Day/Night modes:

**Table 5-4 Day/Night Modes**

Mode	Description
<b>Auto</b> (default)	The IR cut filter is removed automatically when the image brightness drops below a certain level.
<b>On</b>	Night mode. Removes the IR cut filter.
<b>Off</b>	Day mode. Leaves the IR cut filter in place.

### Setting the Day/Night Mode

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-13](#)), in the **Day/Night Function** drop-down list, select one of the following options:
  - **Auto** (default) to switch between day and night modes automatically.
  - **On** to switch to night mode manually.
  - **Off** to switch to day mode manually.
3. Click **Set** to save the setting.

## Wide Dynamic Range

The wide dynamic range (WDR) function produces balanced, evenly lit images when extremely bright or extremely dark areas are present in a scene.

### Setting the Wide Dynamic Range

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-14](#)), in the **WDR** drop-down list, select one of the following:
  - **On** to enable wide dynamic range.
  - **Off** (default) to disable wide dynamic range.
3. Click **Set** to save the setting.

**Figure 5-14 Camera Misc. Options, Part 2**

<p>HDZ20HD(X) and HDZ20HDE(X) camera Misc options</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #e6e6fa;"> <p><b>Misc</b></p> <p>WDR <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>Auto Calibration <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>2DNR <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>OSD <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>Set Pan Zero <span style="float: right;">Set</span></p> <p>TV System <span style="float: right;">1080p 25 fps( PAL) ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p><b>Default</b></p> <p>Restore camera settings and lose any changes?</p> <p style="text-align: right;">Set Default</p> </div>	<p>HDZ30(X) and HDZ36E(X) camera Misc options, showing different options</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #e6e6fa;"> <p><b>Misc</b></p> <p>WDR <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>Inverse <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>Auto Calibration <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>2DNR <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>3DNR <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p>Stabilizer <span style="float: right;">Off ▾</span> <span style="float: right; margin-right: 20px;">Set</span></p> <p><b>Default</b></p> <p>Restore camera settings and lose any changes?</p> <p style="text-align: right;">Set Default</p> </div>
--	--

## Inverse

The Inverse option will reflect the image on a horizontal and vertical axis when enabled (this is similar but not exactly the same as the 180 degree image rotate option; see [Setting the Video Rotate Type on page 47](#) for more information).

---

**Note** This feature is only supported by the HDZ PTZ models: HDZ30(X) and HDZ36E(X).

---

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-14](#)), in the **Inverse** drop-down list, select one of the following:
  - **On** to enable image inverting.
  - **Off** (default) to disable image inverting.
3. Click **Set** to save the setting.

## Auto Calibration

When the auto calibration function is enabled, the image is calibrated automatically whenever a deviation in the camera pivot is detected.

## Enabling/Disabling Auto Calibration

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see *Figure 5-14*), in the **Auto calibration** drop-down list, select one of the following:
  - **On** to enable auto calibration.
  - **Off** (default) to disable auto calibration.
3. Click **Set** to save the setting.

## 2D Noise Reduction

2-dimensional noise reduction (2DNR) reduces image noise produced in low-light conditions. 2D noise reduction technology reduces noise by maintaining smooth edges on moving objects.

### Enabling/Disabling 2D Noise Reduction

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see *Figure 5-14*), in the **2DNR** drop-down list, select one of the following:
  - **On** to enable noise reduction.
  - **Off** (default) to disable noise reduction.
3. Click **Set** to save the setting.

## 3D Noise Reduction

3-dimensional noise reduction (3DNR) reduces image noise produced in low-light conditions. 3D noise reduction technology reduces noise by maintaining smooth edges on moving objects.

---

**Note** 3D Noise Reduction is only available for HDZ30(X) and HDZ36E(X) PTZ models.

---

### Enabling/Disabling 3D Noise Reduction

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see *Figure 5-14*), in the **3DNR** drop-down list, select one of the following:
  - **On** to enable noise reduction.
  - **Off** (default) to disable noise reduction.
3. Click **Set** to save the setting.

## Stabilizer

The stabilizer option will use software adjustments to stabilize a vibrating image when the PTZ camera is installed in high wind, or other high-vibration environments.



---

**Note** This feature is only supported by the HDZ PTZ models: HDZ30(X) and HDZ36E(X).

---

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-14](#)), in the **Stabilizer** drop-down list, select one of the following:
  - **On** to enable image stabilizing.
  - **Off** (default) to disable image stabilizing.
3. Click **Set** to save the setting.

## On Screen Display

The on-screen display function (OSD) can be enabled to provide the user with directional information for the focal point that the PTZ camera is facing. OSD information will include the compass point that the camera is facing (North, South, East or West) and the zoom ratio that the camera is currently using. The OSD will also provide the degrees that the camera is facing, on both vertical and horizontal axes of rotation. See [Figure 3-8](#) on [page 44](#) to see an example of the browser with the on-screen display showing the PTZ information on the video image.

---

**Note** This feature is only supported by the HDZ PTZ models: HDZ20HD(X), HDZ20HDE(X), HDZ30HD, and HDZ30HDE.

---

### Enabling/Disabling On-Screen Display

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-14](#)), in the **OSD** drop-down list, select one of the following:
  - **On** to enable the on-screen display.
  - **Off** (default) to disable the on-screen display.
3. Click **Set** to save the setting.

## Set Pan Zero

Click **Set** to set the pan setting to zero at the current PTZ camera position. Setting pan to zero will set the current PTZ camera position as North. This setting will affect the direction information that is displayed on the OSD (see [On Screen Display on page 85](#) for more information).

## TV System

Depending on the location that you are using the HDZ Series IP PTZ camera, you may need to switch the TV System settings between PAL/NTCS. Generally, systems in North America use NTSC and systems in Europe use PAL. If this unit was purchased in a PAL region, the camera

should be set to PAL by default. If this unit was purchased in an NTSC region, the camera should be set to NTSC by default. Check with the system administrator if you are unsure what setting to use at your location.

---

**Note** This feature is only supported by the HDZ PTZ models: HDZ20HD(X), HDZ20HDE(X), HDZ30HD, and HDZ30HDE.

---

## Switching the TV System Setting

1. Navigate to **PTZ > Camera**.
2. Under **Misc** (see [Figure 5-14](#)), in the **TV System** drop-down list, select one of the following:
  - **30 fps(NTSC) 1080p** to use the North American TV system setting. This is the default setting if the camera is the NTSC model.
  - **25 fps(PAL) 1080p** to use the European TV system setting. This is the default setting if the camera is the PAL model.
  - **60 fps(NTSC) 720p** to use the North American TV system setting.
  - **50 fps(PAL) 720p** to use the European TV system setting.
3. Click **Set** to save the setting.

## Restore Defaults

You can undo any changes that you have made to the camera settings and restore the camera to its factory default settings. See also [Restoring Factory Defaults on page 134](#).

## Restoring the Camera Default Settings

1. Navigate to **PTZ > Camera**.
2. Under **Default**, click **Set default** (see [Figure 5-14](#)).

# 6

## Configuring Alarms

The HDZ Series IP PTZ dome camera supports four alarm inputs and two alarm outputs, as well as network failure, motion detection, and periodical events. Ensure that the alarm input/output connections are properly wired before configuring alarm-related settings on the camera (see [Connecting Alarm Inputs/Outputs on page 30](#) for more information).

This chapter includes:

- [Alarm Server Settings, page 87](#)
- [Motion Detection Settings, page 95](#)
- [Periodical Event Settings, page 103](#)
- [Alarm Input Settings, page 90](#)
- [Network Failure Detection Settings, page 101](#)

---

## Alarm Server Settings

---

You can set up the camera to send a message to an FTP, email (SMTP), or HTTP server, or to upload images to an FTP server or email server when an alarm is triggered. FTP, SMTP and HTTP servers must be configured before alarm messages and/or images can be sent. You can configure up to two servers of each type.

## Configuring Email SMTP Servers

1. Navigate to **System** ► **Mail** (see [Figure 6-1](#)).
2. Under **SMTP**, enter the server name, port, account name, password, and recipient email address for one or both servers.

---

**Note** Contact your network administrator for the needed SMTP values if you do not have them at hand.

---

3. You can select the check box for either the **1st SMTP SSL** or **2nd SMTP SSL** options to enable more secure email transmission for the alarm messages.
4. Enter an email address to be appointed as sender in the **Sender email address** field.
5. Click **Save** to save your mail server settings.

Figure 6-1 Setup Mail Server

The screenshot displays the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'PTZ', and 'Logout'. The 'System' menu is expanded, and the 'Mail' option is highlighted with a red box. The main content area is titled 'Mail' and contains the following settings:

SMTP	
1st SMTP (mail) server	<input type="text"/>
1st SMTP (mail) server port	25
1st SMTP account name	<input type="text"/>
1st SMTP password	<input type="text"/>
1st recipient email address	<input type="text"/>
<input type="checkbox"/> 1st SMTP SSL	
2nd SMTP (mail) server	<input type="text"/>
2nd SMTP (mail) server port	25
2nd SMTP account name	<input type="text"/>
2nd SMTP password	<input type="text"/>
2nd recipient email address	<input type="text"/>
<input type="checkbox"/> 2nd SMTP SSL	
Sender email address	<input type="text"/>

A 'Save' button is located at the bottom right of the form.

## Configuring FTP Servers

1. Navigate to **System** > **FTP**.
2. Under **FTP**, enter the server name, port number, user name, password, and remote folder for one or both servers (see [Figure 6-2](#)).
3. To enable passive mode, select the **1st FTP passive mode** check box and/or the **2nd FTP passive mode** check box.
4. Click **Save** to save your FTP server settings.

Figure 6-2 Setup FTP Server

**Honeywell HDZ Series** User : admin

Home **System** Streaming PTZ Logout

System  
Security  
Network  
DDNS  
Mail  
**FTP**  
HTTP  
Events  
Storage management  
Recording  
Schedule  
File location  
Log file  
Factory default  
Software upgrade

**FTP**

1st FTP server

1st FTP server port 21

1st FTP user name

1st FTP password

1st FTP remote folder

1st FTP passive mode

2nd FTP server

2nd FTP server port 21

2nd FTP user name

2nd FTP password

2nd FTP remote folder

2nd FTP passive mode

Save

## Configuring HTTP Servers

1. Navigate to **System** > **HTTP** (see [Figure 6-3](#)).
2. Under **HTTP**, enter the server name, user name, and password for one or both servers, and then click **Save**.

Figure 6-3 Setup HTTP Server

**Honeywell HDZ Series** User : admin

Home **System** Streaming PTZ Logout

System  
Security  
Network  
DDNS  
Mail  
FTP  
**HTTP**  
Events  
Storage management  
Recording

**HTTP**

1st HTTP server

1st HTTP user name

1st HTTP password

2nd HTTP server

2nd HTTP user name

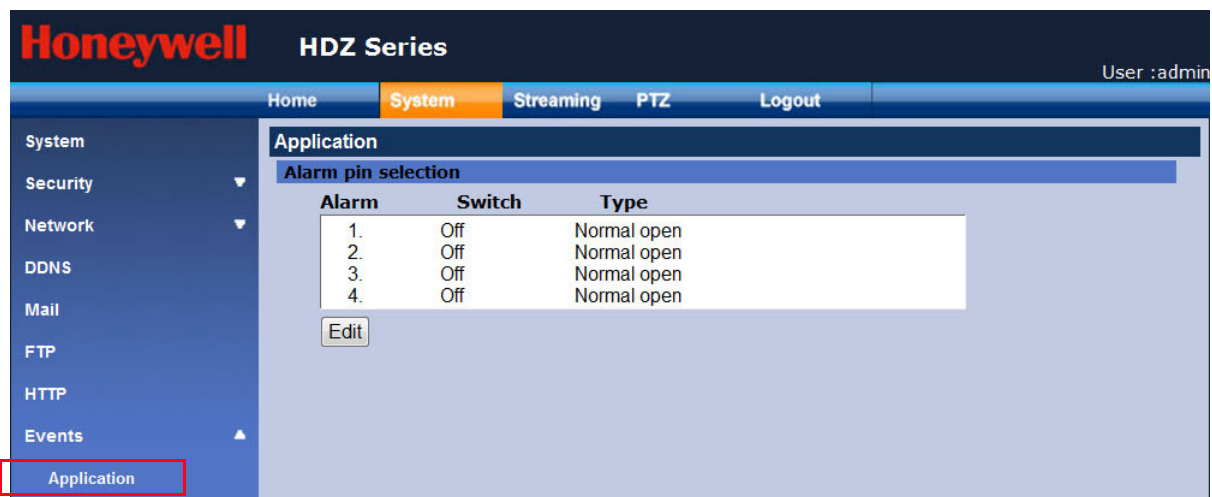
2nd HTTP password

Save

## Alarm Input Settings

The alarm input settings are configured in the **Events** > **Application** section of the **System** tab. Each alarm input must be configured separately. Select the alarm input you want to configure, set the switch to on or off, specify the type (normally open or normally closed), and specify what actions you want the camera to perform when the selected alarm is triggered (see the following sections for more information).

Figure 6-4 Alarm Application Settings



### Selecting an Alarm Input to Configure

Select an alarm input to begin configuring the alarm settings.

1. Navigate to **System** > **Events** > **Application** (see [Figure 6-4](#)).
2. Under **Alarm pin selection**, select the alarm input you want to configure, and then click **Edit**. The Alarm input options opens for the selected input (see [Figure 6-5](#)).

### Setting the Alarm Status and Type

You can set the alarm switch to on, off, or by schedule (schedules must be set up to be used with alarms; see [Schedule Settings on page 128](#)). You can specify the alarm type based on whether the switch is "normally open" or "normally closed".

1. Under **Alarm setting** (see [Figure 6-5](#)), in the **Alarm switch** drop-down list, select one of the following options:
  - **On** to enable the alarm.
  - **Off** to disable the alarm (default setting).
  - **By schedule** to enable the alarm based on a defined schedule (see [Schedule Settings on page 128](#) for information on setting up a schedule).

---

**Note** If you select **By schedule**, you will also need to select the schedule(s) to be used for this selection. Click on the **Please select** field and select the check box for each schedule to be used.

---

2. In the **Alarm type** drop-down list, select one of the following options:
- **Normal open**; for the alarm to trigger when the contact is closed (default setting).
  - **Normal close**; for the alarm to trigger when the contact is opened.
- 

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

**Figure 6-5 Alarm Input Parameters**

The screenshot shows the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System' (selected), 'Streaming', 'PTZ', and 'Logout'. The user is logged in as 'admin'. The left sidebar contains a menu with categories like System, Security, Network, DDNS, Mail, FTP, HTTP, Events, Storage management, Recording, Schedule, File location, Log file, Factory default, and Software upgrade. The main content area is titled 'Application' and contains the following sections:

- Alarm pin selection:** A table with columns 'Alarm', 'Switch', and 'Type'.
 

Alarm	Switch	Type
1.	Off	Normal open
2.	Off	Normal open
3.	Off	Normal open
4.	Off	Normal open

 An 'Edit' button is located below the table.
- Alarm pin1 status:**
  - Alarm setting:** Alarm switch is set to 'Off' and Alarm type is set to 'Normal open'.
  - Triggered action:**
    - Enable alarm output 1
    - Enable alarm output 2
    - Send message by FTP
    - Send message by E-Mail
    - Upload image by FTP
    - Upload image by E-Mail
    - PTZ Function
    - Send HTTP notification
    - Record video clip
  - File name:** File name is 'image.jpg'.
    - Add date/time suffix
    - Add sequence number suffix (no maximum value)
    - Add sequence number suffix up to 0 and then start over
    - Overwrite

A 'Save' button is located at the bottom of the configuration area.

## Setting the Alarm Actions

You can specify what actions you want the camera to perform when the selected alarm is triggered. You can select more than one action from the following options.

### Enabling the Alarm Relay Output

Under **Triggered action** (see [Figure 6-5](#)), select one or both of the **Enable alarm output 1** and **Enable alarm output 2** check boxes.

### Sending a Message to the Configured FTP/Email Server

Under **Triggered action**, select one or both of the following:

- The **Send message by FTP** check box to send the message to the FTP server (see [Configuring FTP Servers on page 88](#) for information on setting up an FTP server).
- The **Send message by E-Mail** check box to send the message to the mail server (see [Configuring Email SMTP Servers on page 87](#) for information on setting up an email server).

### Uploading Images to a Configured FTP/Email Server

1. Under **Triggered action**, select the **Upload image by FTP/E-Mail** check box. The uploading images options will appear below the check box (see [Figure 6-6](#)).

**Figure 6-6 Upload Image by FTP/E-Mail Options**

FTP Options	E-Mail Options
<input checked="" type="checkbox"/> Upload image by FTP	<input checked="" type="checkbox"/> Upload image by E-Mail
FTP address: FTP1	E-Mail address: E-Mail 1
Pre-trigger buffer: 5 frames	Pre-trigger buffer: 5 frames
Post-trigger buffer: 5 frames	Post-trigger buffer: 5 frames
<input type="checkbox"/> Continue image upload	<input type="checkbox"/> Continue image upload
<input checked="" type="radio"/> Upload for 1 sec	<input checked="" type="radio"/> Upload for 1 sec
<input type="radio"/> Upload during trigger active	<input type="radio"/> Upload during trigger active
Image frequency: Max. fps	Image frequency: Max. fps

2. In the **FTP/E-Mail address** drop-down list, select either **FTP1/E-Mail1** or **FTP2/E-Mail2** (see [Configuring FTP Servers, page 88](#), and [Configuring Email SMTP Servers on page 87](#), for information on setting up an Email and/or FTP address).
3. In the **Pre-trigger buffer** drop-down list, select the number of pre-trigger frames/images (1 to 20) to send to the server. This option sets the amount of images from before an alarm is triggered that will be uploaded by FTP/Email. The default setting is 5.
4. In the **Post-trigger buffer** drop-down list, select the number of post-trigger frames/images (1 to 20) to send to the server. The default setting is 5.
5. To continue to upload images to the server for a specified time, or until the alarm ends, select the **Continue image upload** check box, and choose one of the following options:
  - **Upload for [number] sec** and enter a value from **1** to **9999** seconds.
  - **Upload during trigger active**.



Whichever option you select, you can also select how frequent the images should be uploaded to the FTP/E-Mail server in the **Image frequency [number] fps** drop-down list. Select an fps (frames per second) value from **1** to **15** fps, or select **Max fps** (default setting).

---

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

## Recording Video Clip to a Configured Storage Device

---

**Note** A microSDHC card must be connected to the back panel of the camera to be able to record a video clip to the SD card. See [Figure 2-5](#) and [Table 2-3](#) on [page 29](#) for the location to install the microSDHC card.

A Network attached storage device (NAS) must be connected and configured to be able to record a video clip to the network storage. See [Network Attached Storage Management on page 131](#) for more information.

---

1. Under **Triggered action**, select the **Record video clip** check box. The record video clip options will appear below the check box (see [Figure 6-7](#)).

**Figure 6-7 Alarm Input: Record Video Clip Options**

Record video clip  
 Record to SD card  
 Pre-trigger buffer 1 sec  
 Upload for 1 sec  
 Upload during the trigger active

2. Select the storage device to record the clip to with the **Record to** drop-down list. Options are **SD card** (default) or **NAS**. Whichever storage device is selected, that storage device needs to be configured and connected before video clips can be recorded (see [Storage Settings on page 129](#) for more information).
3. In the **Pre-trigger buffer** field, enter the number of seconds of video to record before the trigger occurs (from 1 to 9999).
4. To continue to upload images for a specified period of time or until the alarm ends, choose the option that fits your requirements from the following selections:
  - **Upload for [number] sec** and enter a time from **1** to **9999** seconds.
  - **Upload during trigger active**.

---

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

## Assigning a PTZ Camera Function to Perform after Alarm Trigger

1. Under **Triggered action**, select the **PTZ Function** check box. The PTZ Function options will appear below the check box (see [Figure 6-8](#)).

**Figure 6-8 PTZ Function Options**

2. Select the PTZ function to perform on this alarm from the drop-down list: **Preset**, **Preset Tour**, **Autopan**, **Mimic Tour**. See [Configuring PTZ Settings on page 57](#) for more information on programming these PTZ functions.
3. Enter a value in the **Function line** field to identify the specific function to perform (for example, in [Figure 6-8](#), **Preset 2** is selected).
4. If applicable (only available if **Preset** is selected), enter a value in the **Dwell time** field.

## Sending an HTTP Notification to a Configured HTTP Server

1. Under **Triggered action**, select the **Send HTTP notification** check box. The Send HTTP notification options will appear below the check box (see [Figure 6-9](#)).

**Figure 6-9 Send HTTP Notification Options**

2. In the **HTTP address** drop-down list, select either **HTTP1** or **HTTP2**.
3. In the **Custom parameters** field, enter the parameters to send to the HTTP server when the alarm is triggered.

For example, if the HTTP server name is *http://192.168.0.1/admin.php* and the custom parameter is *action=1&group=2*, the notification will be sent to the HTTP server as *http://192.168.0.1/admin.php?action=1&group=2* when the alarm is triggered.

---

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

## Setting a File Name

You can specify a file name format for images uploaded when the alarm is triggered. Choose the format that best meets your requirements.

1. In the **File Name** field (see [Figure 6-5](#)), type a file name (*image.jpg* is the default file name).

2. Select one of the following options for the file name format:
  - **Add date/time suffix** to add the date and time in YYYYMMDD\_HHMMSS format (for example, image120428\_034724.jpg).
  - **Add sequence number suffix (no maximum value)**.
  - **Add sequence number suffix up to [number] and then start over**, and enter a value in the number field.
  - **Overwrite** to overwrite an older file with a new file with a static filename.

## Saving Alarm Input Settings

Click **Save** after you have configured the alarm input settings for an alarm in the **Events** ► **Application** section of the **System** tab. See [Setting the Alarm Status and Type, page 90](#), [Setting the Alarm Actions, page 92](#), and [Setting a File Name on page 94](#) for more information.

---

## Motion Detection Settings

---

You can set up the camera to send an alarm notification when suspicious motion is detected. An alarm is triggered when motion volume in the detected area reaches and/or exceeds a predefined sensitivity threshold value. You can send a message to an FTP, email, or HTTP server, or you can upload images to an FTP server, email server, or record a video clip to a storage device when the suspicious motion is detected.

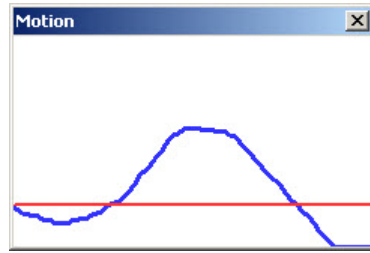
### Selecting a Motion Detection Profile to Configure

Up to four motion detection profiles can be configured, each with their own sensitivity settings, triggered actions, and so on.

1. Navigate to **System** ► **Events** ► **Motion Detection** (see [Figure 6-11](#)).
2. In the **Motion Detection** drop-down list, select the motion detection profile (from 1-4) that you want to configure.

### Setting the Motion Detection Status

The motion detection function is disabled by default. Enable motion detection by selecting a profile (see [Selecting a Motion Detection Profile to Configure on page 95](#)), then select on, or by schedule (schedules must be set up to be used with motion detection; see [Schedule Settings on page 128](#)). When the motion detection function is activated, a pop-up window appears indicating the detected motion (as shown in [Figure 6-10](#)).

**Figure 6-10 Current Motion as Detected Window**

The red line indicates the threshold level of the motion sensitivity, as it is currently set. The blue line indicates the level of motion that is currently being detected by the camera.

1. Navigate to **System** > **Events** > **Motion detection** (see [Figure 6-11](#)).
2. Select a motion detection profile to configure (see [Selecting a Motion Detection Profile to Configure on page 95](#)).
3. Under **Motion Detection**, select one of the following options:
  - **On** to enable the motion detection profile.
  - **Off** to disable the motion detection profile (default setting).
  - **By schedule** to enable the motion detection profile based on a defined schedule (refer to [Schedule Settings on page 128](#) for information on setting up a schedule).

---

**Note** If you select **By schedule**, you will also need to select the schedule(s) to be used for this selection. Click on the **Please select** field and select the check box for each schedule to be used.

---

4. Click **Save**.

## Setting the Motion Detection Window

A motion detection "window" or frame appears in the Live View screen to specify the area to detect motion within (see [Figure 6-11](#)). You can add up to 10 motion detection windows. You can move and resize the window to be wherever you want in the Live View screen.

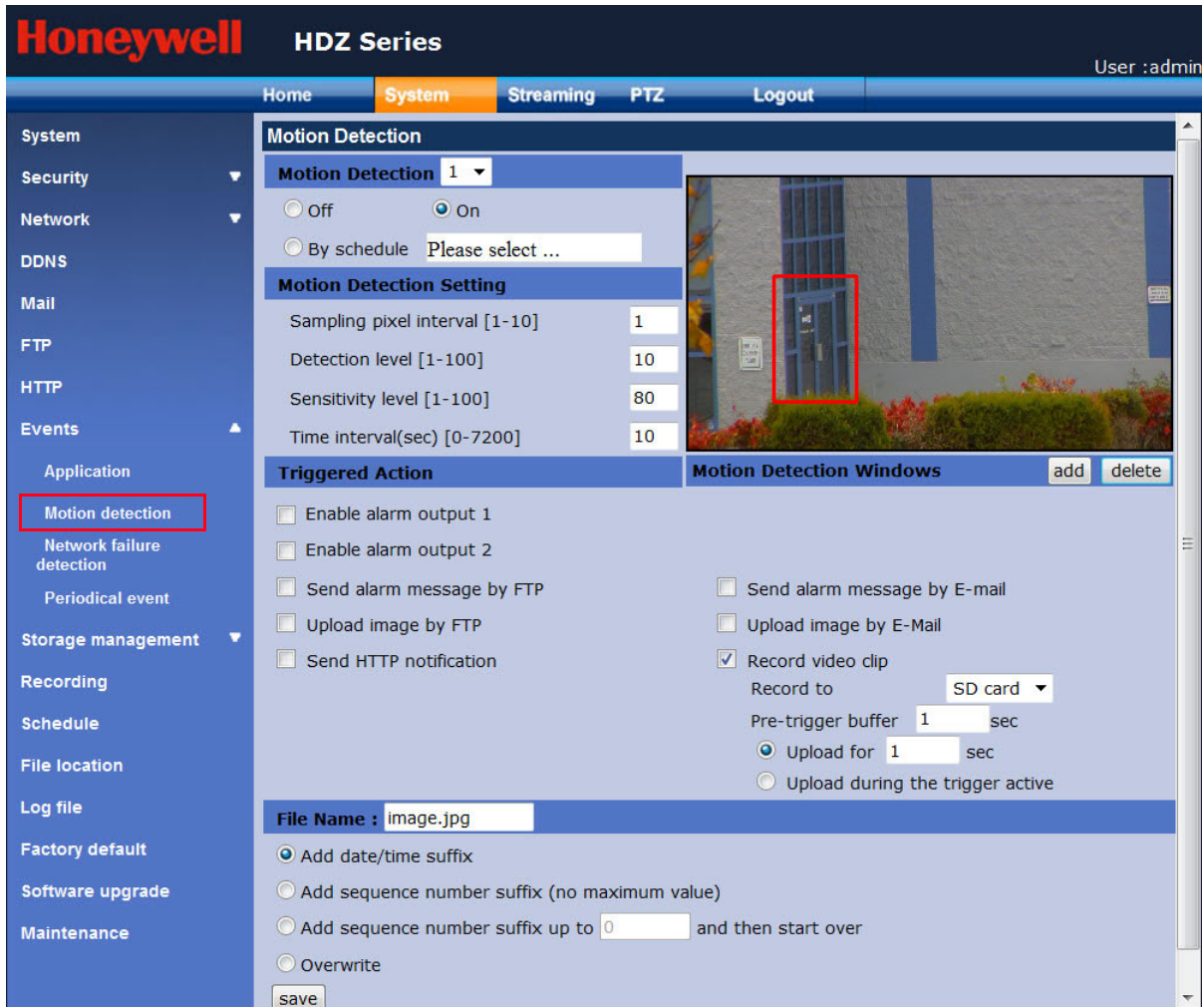
### Adding a Motion Detection Window

Click **add** to add a new motion detection window to the Live View screen (see [Figure 6-11](#)). You can add up to 10 windows. The active window has a red border.

### Deleting a Motion Detection Window

In the Live View screen, select the window that you want to delete (to make it the active window, it will have a red border when active), and then click **delete** (see [Figure 6-11](#)).

Figure 6-11 Motion Detection Screen



## Moving the Motion Detection Window

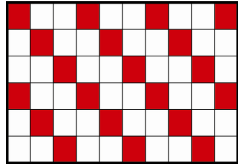
In the Live View screen, click and drag from the center of the motion detection window to the new location.

## Resizing a Motion Detection Window

In the Live View screen, click and drag a corner or drag one of the sides of the motion detection window to adjust its size and shape.

## Setting the Motion Detection Sensitivity

You can set the motion detection sensitivity by adjusting the pixel sampling parameters. The default pixel interval for sampling is 1 (every pixel in the motion detection area is sampled for motion). If the sampling interval is set to 3, the system samples every third pixel (vertically and horizontally) within the motion detection area (see [Figure 6-12](#)).

**Figure 6-12 Motion Detection Sampling Every Three Pixels**

You can set the detection level for each sampled pixel. The smaller the value, the greater the sensitivity. To avoid triggering motion detection on small objects in the image, enter a higher value.

After you have defined the detection (sensitivity) level of each pixel, you can set the sensitivity level of the entire motion detection area. A setting of 80, for example, means that motion detection is triggered when 20 percent or more of the sampled pixels change (are in motion). The larger the sensitivity value, the greater the sensitivity of motion detection.

You can also set the time interval between each detected motion.

1. Under **Motion Detection Setting**, type a value between 1 and 10 in the **Sampling pixel interval** field (see [Figure 6-11](#)).
2. Type a value between 1 and 100 in the **Detection level** field (default = 10).
3. Type a value between 1 and 100 in the **Sensitivity level** field (default = 80).
4. Type a value between 0 and 7200 in the **Time interval(sec)** field (default = 10 seconds).

## Setting the Motion Detection Actions

You can specify what actions you want the camera to perform when suspicious motion is detected in the active motion detection window. You can select more than one action. See the following sections for more information.

### Enabling the Alarm Relay Outputs

Under **Triggered Action** (see [Figure 6-11](#)), select one or both of the **Enable alarm output 1** and **Enable alarm output 2** check boxes.

### Recording Video Clips to a Configured Storage Device

---

**Note** A microSDHC card must be connected to the back panel of the camera to be able to record a video clip to the SD card. See [Figure 2-5](#) and [Table 2-3](#) on [page 29](#) for the location to install the microSDHC card.

A Network attached storage device (NAS) must be connected and configured to be able to record a video clip to the network storage. See [Network Attached Storage Management on page 131](#) for more information.

---

1. Under **Triggered Action**, select the **Record video clip** check box. The **Record video clip** options will appear below the check box (see [Figure 6-7](#)).

**Figure 6-13 Motion Detection: Record Video Clip Options**

2. Select the storage device to record the clip(s) to with the **Record to** drop-down list. Options are **SD card** (default) or **NAS**. Whichever storage device is selected, that storage device needs to be configured and connected before video clips can be recorded (see [Storage Settings on page 129](#) for more information).
3. In the **Pre-trigger buffer** field, enter the number of seconds of video to record before the trigger occurs (from 1 to 9999).
4. To continue to record the video clip for a specified period of time or until the alarm ends, choose the option that fits your requirements from the following selections:
  - **Upload for [number] sec** and enter a time from **1** to **9999** seconds.
  - **Upload during trigger active**.

---

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

## Sending a Message to the Configured FTP/Email Server

Under **Triggered Action**, select one or both of the following:

- The **Send message by FTP** check box to send the message to the FTP server (see [Configuring Email SMTP Servers on page 87](#) for information on setting up an FTP server).
- The **Send message by E-Mail** check box to send the message to the mail server (see [Configuring Email SMTP Servers on page 87](#) for information on setting up an email server).

## Uploading Images to a Configured FTP/Email Server

1. Under **Triggered Action**, select the **Upload image by FTP/E-mail** check box. The uploading images options will appear below the check box (see [Figure 6-14](#)).

**Figure 6-14 Motion Detection: Upload Image by FTP/E-mail Options**

2. In the **FTP/E-mail address** drop-down list, select either **FTP1/E-mail1** or **FTP2/E-mail2** (see [Configuring FTP Servers, page 88](#), and [Configuring Email SMTP Servers, page 87](#), for information on setting up an Email and/or FTP address).
3. In the **Pre-trigger buffer** drop-down list, select the number of pre-trigger frames/images (1 to 20) to send to the server. This option sets the amount of images from before an alarm is triggered that will be uploaded by FTP/Email. The default setting is 5.
4. In the **Post-trigger buffer** drop-down list, select the number of post-trigger frames/images (1 to 20) to send to the server. The default setting is 5.
5. To continue to upload images to the server for a specified time, or until the motion alarm ends, select the **Continue image upload** check box, and choose one of the following options:
  - **Upload for [number] sec** and enter a value from **1** to **9999** seconds.
  - **Upload during trigger active.**

Whichever option you select, you can also select how frequent the images should be uploaded to the FTP/Email server in the **Image frequency [number] fps** drop-down list. Select an fps (frames per second) value from **1** to **15** fps, or select **Max** fps (default setting).

---

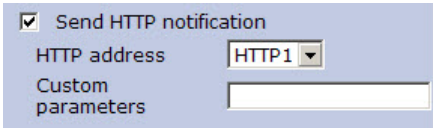
**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

## Sending an HTTP Notification to a Configured HTTP Server

1. Under **Triggered Action**, select the **Send HTTP notification** check box. The Send HTTP notification options will appear below the check box (see [Figure 6-15](#)).
2. In the **HTTP address** drop-down list, select either **HTTP1** or **HTTP2**.

**Figure 6-15 Send HTTP Notification on Motion Detection**



The screenshot shows a configuration panel with a blue header. At the top, there is a checked checkbox labeled "Send HTTP notification". Below this, there are three fields: "HTTP address" with a dropdown menu showing "HTTP1", "Custom parameters" with a text input field, and "parameters" with another text input field.

3. In the **Custom parameters** field, enter the parameters to send to the HTTP server when the alarm is triggered.

For example, if the HTTP server name is *http://192.168.0.1/admin.php* and the custom parameter is *action=1&group=2*, the notification will be sent to the HTTP server as *http://192.168.0.1/admin.php?action=1&group=2* when the motion alarm is triggered.

---

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---



## Setting a Motion Detection File Name

You can specify a file name format for images uploaded when the motion alarm is triggered. Choose the format that best meets your requirements.

1. In the **File Name** field (see [Figure 6-11](#)), type a file name (image.jpg is the default file name).
2. Select one of the following options for the file name format:
  - **Add date/time suffix** to add the date and time in YYYYMMDD\_HHMMSS format (for example, image120428\_034724.jpg).
  - **Add sequence number suffix (no maximum value)**.
  - **Add sequence number suffix up to [number] and then start over**, and enter a value in the number field.
  - **Overwrite** to overwrite an older file with a new file with a static filename.

## Saving the Motion Detection Settings

After you have configured the motion detection settings for one of the four motion detection profiles, click **Save**. Make sure to click **Save** before setting up another profile.

**Save** after you have configured all the motion detection settings for a motion detection profile. See [Selecting a Motion Detection Profile to Configure, page 95](#), [Setting the Motion Detection Status, page 95](#), [Setting the Motion Detection Window, page 96](#), [Setting the Motion Detection Sensitivity, page 97](#), [Setting the Motion Detection Actions, page 98](#), and [Setting a Motion Detection File Name on page 101](#) for more information.

---

## Network Failure Detection Settings

---

You can set up the camera to send an alarm notification when a network failure is detected. You can send a message to an FTP or email server, or you can record a video clip to a storage device.

## Setting Up Network Failure Detection

1. Navigate to **System** > **Events** > **Network failure detection** (see [Figure 6-16](#)).

---

**Note** The network failure detection Detection Switch is set to **Off** by default.

---

Figure 6-16 Network Failure Detection Options

The screenshot shows the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'PTZ', and 'Logout'. The left sidebar lists various system functions, with 'Network failure detection' highlighted in a red box. The main content area is titled 'Network failure detection' and contains the following settings:

- Detection Switch:** Radio buttons for 'Off', 'On' (selected), and 'By schedule'. A dropdown menu next to 'By schedule' shows 'Please select ...'.
- Detection Type:** 'Ping the IP address' field with '0.0.0.0' entered, followed by 'every 30 sec'.
- Triggered Action:**
  - Enable alarm output 1
  - Enable alarm output 2
  - Record video clip
  - Record to: SD card (dropdown)
  - Pre-trigger buffer: 1 sec
  - Send message by FTP
  - Upload for 1 sec
  - Upload during the trigger active
  - Send message by E-Mail

A 'Save' button is located at the bottom of the configuration area.

- Under **Detection Switch**, select **On** to enable the network failure detection function, or select **By schedule** to enable the network failure detection based on a defined schedule (see [Schedule Settings on page 128](#) for information on setting up a schedule).

---

**Note** If you select **By schedule**, you will also need to select the schedule(s) to be used for this selection. Click on the **Please select** field and select the check box for each schedule to be used.

---

- Under **Detection Type**, enter the IP address you want to ping in the **Ping the IP address** field. Enter how often to ping the IP address in the **every [number] seconds** field. The **every [number] seconds** field should be set from 5 to 120 seconds. The default setting is 30 seconds. If you set a low number, the network failure detection will be more sensitive to network failures as it is checking much more often. A higher number of seconds (120 seconds) will not be as sensitive at detecting network failures as a low number would be.

---

**Note** Honeywell recommends that you enter the IP address of the local recording device (DVR, NVR, and/or VMS system) which is used for local hard disk recording. This way, if the Network Failure Detection function detects a network failure with the local recording device, the camera can take an action such as recording to the microSDHC card to compensate.

---

4. Under **Triggered Action**, do one or more of the following actions to perform when a network failure is detected:
  - Select one or both of the **Enable alarm output 1** and **Enable alarm output 2** check boxes to enable that alarm relay output.
  - Select the **Send message by FTP** check box to send a network failure message to an FTP server that you have configured (see [Configuring FTP Servers on page 88](#) for information on setting up an FTP server).
  - Select the **Send message by E-Mail** check box to send a network failure message to an email server that you have configured (see [Configuring Email SMTP Servers on page 87](#) for information on setting up an email server).
  - Select **Record video clip** to send images to either a microSDHC card or Network storage device that you have configured.
    - a. Select the storage device to record the clip to with the **Record to** drop-down list. Options are **SD card** (default) or **NAS**. Whichever storage device is selected, that storage device needs to be configured and connected before video clips can be recorded (see [Storage Settings on page 129](#) for more information).
    - b. In the **Pre-trigger buffer** field, enter the number of seconds of video to record before the trigger occurs (from 1 to 9999).
    - c. To continue to upload images for a specified period of time or until the alarm ends, choose the option that fits your requirements from the following selections:
      - Select **Upload for [number] sec** and enter a time from **1** to **9999** seconds.
      - Select **Upload during trigger active**.
5. Click **Save** to save your network failure detection settings.

---

## Periodical Event Settings

---

You can set up the camera to upload images to an FTP or email server as part of a periodical event, when images are consistently uploaded at a certain interval.

### Setting Up Periodical Event and the Interval

1. Navigate to **System** > **Events** > **Periodical event** (see [Figure 6-17](#)).

---

**Note** The Periodical event detection switch is set to **Off** by default.

---

Figure 6-17 Periodical Event Options

2. Under **Periodical event**, select **On** to enable the periodical event function.
3. Under **Time interval**, enter a **Minimum interval** value in the field (in seconds). The minimum interval time is the amount of time that will pass before a new image is uploaded to the selected server (see [Setting the Periodical Event Triggered Actions on page 104](#)). Set a minimum duration between 60 and 3600 seconds (default value is 60 seconds).

---

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

## Setting the Periodical Event Triggered Actions

You can set up the periodical event to upload images to one or both of an FTP server or email server.

1. Under **Triggered Action**, select the **Upload image by FTP/E-mail** check box (see [Figure 6-17](#)).
2. In the **FTP/E-Mail address** drop-down list, select either **FTP1/E-mail1** or **FTP2/E-mail2** (see [Configuring FTP Servers, page 88](#), and [Configuring Email SMTP Servers, page 87](#), for information on setting up an Email and/or FTP address).
3. In the **Pre-trigger buffer** drop-down list, select the number of pre-trigger frames/images (1 to 20) to send to the server. This option sets the amount of images from before the periodical event that will be uploaded by FTP/Email. The default setting is 5.
4. In the **Post-trigger buffer** drop-down list, select the number of post-trigger frames/images (1 to 20) to send to the server. The default setting is 5.

---

**Note** After making changes to your settings, it is advised to click **Save** and save your settings. This can be done at any time, or multiple times during setup.

---

## Setting a Periodical Event File Name

You can specify a file name format for images uploaded for the periodical event. Choose the format that best meets your requirements.

1. In the **File Name** field (see [Figure 6-17](#)), type a file name (image.jpg is the default file name).
2. Select one of the following options for the file name format:
  - **Add date/time suffix** to add the date and time in YYYYMMDD\_HHMMSS format (for example, image130428\_034724.jpg).
  - **Add sequence number suffix (no maximum value)**.
  - **Add sequence number suffix up to [number] and then start over**, and enter a value in the number field.
  - **Overwrite** to overwrite an older file with a new file with a static filename.

## Saving the Periodical Event Settings

After you have configured the periodical event settings, click **Save**. Make sure to click **Save** before navigating to a different tab or option.

**Save** after you have configured all the periodical event settings. See [Setting Up Periodical Event and the Interval, page 103](#), [Setting the Periodical Event Triggered Actions, page 104](#), and [Setting a Periodical Event File Name on page 105](#) for more information.



# 7

## Configuring System Settings

This chapter includes:

- [System Settings, page 107](#)
- [Network Settings, page 118](#)
- [Recording Settings, page 126](#)
- [Storage Settings, page 129](#)
- [Maintenance Settings, page 134](#)
- [Security Settings, page 109](#)
- [DDNS Settings, page 125](#)
- [Schedule Settings, page 128](#)
- [File Location Settings, page 133](#)
- [Support Settings, page 138](#)

---

**Note** The System tab can only be accessed by the Administrator.

---

---

## System Settings

---

The System screen is open by default when the System tab is selected. Here you can give the HDZ Series IP PTZ camera a new host name and configure the camera's time-related settings. See [Viewing the System Parameters on page 138](#) for more information on the Parameters List section of the System screen.

### Setting a Host Name

By default, the HDZ Series IP PTZ dome camera is named with the model number of the camera. If needed, the Administrator can rename the camera for their system:

1. Navigate to the **System** tab ► **System** (see [Figure 7-1](#)).
2. Type a new name for the camera in the **Host Name** field. The host name can be up to 30 characters in length. Any of the following characters may be used: A–Z, a–z, 0–9, !@#\$%^&'~. Click **Save** when finished.

### Selecting the Camera Time Zone

1. Navigate to the **System** tab ► **System** (see [Figure 7-1](#)).

2. Use the **Time zone** drop-down list to select the time zone that the camera is installed in from the list.
3. Click **Save** to confirm the setting.

**Figure 7-1 System Configuration Screen**

## Enabling Daylight Saving Time

You have the option of enabling daylight saving time (DST) for the camera, allowing the camera to automatically adjust the internal clock with the daylight saving time changes.

1. Navigate to the **System** tab ► **System** (see [Figure 7-1](#)).
2. Select the **Enable daylight saving time** check box to enable DST and the DST options.
3. Enter the DST time offset in the **time offset** field. The format for time offset is [hh:mm:ss]. For instance, if the amount of time offset is one hour, enter 01:00:00 in the field.
4. Setup dates for daylight saving time changes to take effect in the **Start date** and **End date** fields. The start date is the date daylight saving begins. The end date is the date that daylight saving ends for the year.



- a. Use the first drop-down list to select the start/end month.
- b. Use the second drop-down list to either select the exact day of the month to start/end daylight saving time or select the **1st**, **2nd**, **3rd**, **4th** or **last week** of the month option to have daylight saving start/end on the same day of the month every year (for example, the 2nd Sunday in March).
- c. If you use the **1st**, **2nd**, **3rd**, **4th** or **last week** of the month option in *step b*, select the day of the week DST starts/ends with the last drop-down list for the **Start/End date**.
5. Set the time that daylight saving time changes will take effect in the **Start time** and **End time** fields. The format for the time fields is [hh:mm:ss], and uses the 24-hour clock. For instance, if the DST should start at 11:30pm, enter 23:30:00 in the **Start time** field.
6. Click **Save** to save your DST settings.

## Setting the System Clock

There are three options for setting the camera's internal clock: manually setting the time, syncing with the computer time, or syncing with an NTP server time.

### Synchronizing the Camera Time with the Computer

1. Navigate to the **System** tab ► **System** (see *Figure 7-1*).
2. Select the **Sync with computer time** option to set the camera's time to sync with the computer's and click **Save**.

### Manually Setting the Camera Time

1. Navigate to the **System** tab ► **System** (see *Figure 7-1*).
2. Select the **Manual** option and enter the date and time you want to set in the corresponding **Date** and **Time** fields.
3. Click **Save** to set the time.

### Synchronizing the Camera Time with an NTP Server

1. Navigate to the **System** tab ► **System** (see *Figure 7-1*).
2. Select the **Sync with NTP server** option to set the time to sync with the NTP server. Type the NTP server host name or IP address in the **NTP server** field.
3. Select to update the time/date every hour, day or week with the **Update interval** drop-down list and click **Save**. For additional information, visit [www.ntp.org](http://www.ntp.org).

---

## Security Settings

---

This section contains instructions for configuring user settings, network security settings (HTTPS and IEEE 802.1X), and the IP address filter settings.

## User Settings

### Changing the Administrator Password

The administrator password should be changed regularly to ensure high camera security. The password cannot contain more than 14 characters and is case sensitive. Any of the following characters may be used: A–Z, a–z, 0–9, !@#\$%^&\_~.

1. Navigate to the **System** tab ► **Security** ► **User** (see [Figure 7-2](#)).
2. In the **Admin password** field, type the new password for the administrator (the default password is 1234).
3. In the **Confirm password** field, re-type the new password, and then click **Save**.

---

**Note** The Login window appears. You are asked to login with the new password.

---

Figure 7-2 User Security Options Screen

**Honeywell HDZ Series** User : admin

Home System Streaming PTZ Logout

**System**

**Security**

- User
- HTTPS
- IP filter
- IEEE 802.1X

**Network**

- DDNS
- Mail
- FTP
- HTTP

**Events**

- Storage management
- Recording
- Schedule
- File location
- Log file
- Factory default
- Software upgrade
- Maintenance

**User**

**Admin Password**

Admin password [password field]

Confirm password [password field] Save

**Add User**

User name [text field]

User password [password field]

I/O access  Camera control

Talk  Listen Add

**Manage User**

User name -- no user -- Delete Edit

**Streaming Authentication Setting**

Type digest Save

**Onvif Authentication Setting**

Type enable Save

**User information**

admin:1234

get user information

get user privacy

## Managing Users

An administrator can add and delete users, as well as view and edit user privileges.

An administrator can create up to 20 user accounts. Each user can be assigned one or more of the following privileges (see [Table 7-1](#)).

**Table 7-1 User Privileges**

Privilege	Description
<b>I/O access</b>	User can view video, and input/output information when accessing the camera.
<b>Camera control</b>	User can change certain camera parameters.
<b>Talk</b>	User can talk (transmit audio) to other sites.
<b>Listen</b>	User can listen (receive audio) from other sites.

## Adding a New User

1. Navigate to **System > Security > User** (see [Figure 7-2](#)).
2. Under **Add User**, type the **User name** and **User password** in the corresponding fields.

---

**Note** Do not use spaces in user names or passwords. Any of the following characters may be used: A–Z, a–z, 0–9, !@#\$%^&\_~.

---

3. Select the check boxes for each of the privileges to give the new user (see [Table 7-1](#) for more information on user privileges).
4. Click **Add** to save the settings for the new user. The new user information will display in the **User information** window below after clicking **get user information** (see [Figure 7-2](#)).

## Editing a User

1. Navigate to **System > Security > User** (see [Figure 7-2](#)).
2. Under **Manage User**, in the **User name** drop-down list, select the user you want to edit the password or privileges for, and then click **Edit**.
3. A window opens in which you can change the privileges and/or password for the selected user. Change the parameters, as needed.
4. Click **Save** to save the updated settings for that user.

## Deleting a User

1. Navigate to **System > Security > User** (see [Figure 7-2](#)).
2. Under **Manage User**, in the **User name** drop-down list, select the user you want to delete, and then click **Delete**.

## View a User's Login Information

Navigate to **System > Security > User**. Scroll down the page to view the User information window (see [Figure 7-2](#)). You may need to click **get user information** to view the most up-to-date information after adding, editing, or deleting users.

All the users in the network are listed in the **User information** field as [user name:password]. For example, User : 4321 indicates that the user name is *User* and the password is *4321*.

---

**Note** If user privilege information is currently displayed (see [Viewing a User's Privileges](#) below), click **get user information** to display the login information.

---

## Viewing a User's Privileges

1. Navigate to **System > Security > User**. Scroll down the page to view the User information window (see [Figure 7-2](#)).

All the users are listed in the **User information** field as [user name:password].

2. Click **get user privacy**.

The user information in the **User information** field changes from [user name:password] to [user name:I/O access:camera control:talk:listen]. For example, User : 1 : 1 : 0 : 1 indicates that *User* has I/O access, camera control, and listen privileges, but not talk privileges.

## Streaming Authentication Setting

If streaming authentication is set to **Enable**, you will be asked for the User Name and Password when accessing a video stream.

## ONVIF Authentication Setting

If ONVIF authentication is set to **Enable**, you will be asked for the User Name and Password when attempting to control through any ONVIF command.

## Network Security Settings: HTTPS

You can use HTTPS (Hypertext Transfer Protocol over SSL [Secure Socket Layer]) to establish a secure connection between the camera and the web browser. To use HTTPS, you must create a certificate. You can create a self-signed certificate or you can create a request for an official certificate issued by a CA (Certificate Authority).

---

**Note** A self-signed certificate does not provide the same level of security as an official certificate.

---

Figure 7-3 HTTPS Settings Screen

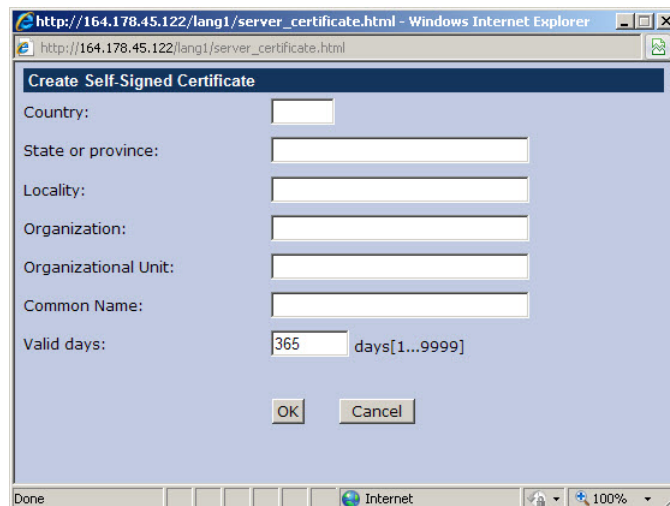


## Creating and Installing a Self-Signed Certificate

1. Navigate to **System** > **Security** > **HTTPS** (see *Figure 7-3*).
2. Under **Create self-signed certificate**, click **Create**.
3. Enter the required information in the **Create Self-Signed Certificate** fields (see *Figure 7-4*), and then click **OK**.

A self-signed certificate is created and installed. The certificate appears under **Installed Certificate** (see *Figure 7-3*).

Figure 7-4 Create Self-Signed Certificate Window



## Creating a Request for a CA-Issued Certificate

1. Navigate to **System** > **Security** > **HTTPS** (see [Figure 7-3](#)).
2. Under **Install signed certificate**, click **Create Certificate Request**.
3. Enter the required information in the **Create Certificate Request** fields (see [Figure 7-5](#)), and then click **OK**.

**Figure 7-5 Create Certificate Request Window**

A certificate request is created. The request appears under **Created Request** (see [Figure 7-3](#)).

4. Click **Properties** in the **Created Request** area.
5. Copy the PEM-formatted request and send to a CA for signing.  
After the signed certificate is returned, you can install it.

## Installing a CA-Issued Certificate

1. Navigate to **System** > **Security** > **HTTPS** (see [Figure 7-3](#)).
2. Click **Browse** in the **Upload signed certificate** area. Locate and select the certificate on your hard drive, and then click **Open**.
3. Click **Upload**.

## Network Security Settings: IEEE 802.1X

IEEE 802.1X is an IEEE standard for port-based Network Access Control. When IEEE 802.1X is enabled, the camera can access network ports protected by 802.1X/EAPOL (Extensible Authentication Protocol over LAN).

Figure 7-6 IEEE 802.1X Settings Screen

The screenshot displays the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System' (selected), 'Streaming', 'PTZ', and 'Logout'. The user is logged in as 'admin'. The left sidebar menu has 'IEEE 802.1X' highlighted. The main content area is titled 'IEEE 802.1X/EAP-TLS' and contains the following sections:

- CA certificate:** A text input field, a 'Browse...' button, and an 'Upload' button. Below it, the text 'Upload CA certificate.' is displayed.
- Client certificate:** A text input field, a 'Browse...' button, and an 'Upload' button. Below it, the text 'Upload Client certificate.' is displayed.
- Private key:** A text input field, a 'Browse...' button, and an 'Upload' button. Below it, the text 'Upload Private key.' is displayed.
- Settings:**
  - Identity:** A text input field containing 'admin'.
  - Private key password:** A text input field with masked characters (dots).
  - Enable IEEE 802.1X:** An unchecked checkbox.

A 'Save' button is located at the bottom right of the settings area.

## Enabling IEEE 802.1X

1. Navigate to **System** > **Security** > **IEEE 802.1X** (see [Figure 7-6](#)).
2. Contact your network administrator to obtain the following items:
  - **CA certificate:** Required to authenticate the server
  - **Client certificate:** Required to authenticate the IP camera
  - **Private key:** Required to authenticate the IP camera
3. Upload the CA certificate, client certificate, and private key. Click **Browse** to locate the certificate or key, then click **Upload**.
4. Under **Settings**, in the **Identity** field, type the user identity associated with the client certificate. In the **Private key password** field, enter the password for the user identity.
5. Select the **Enable IEEE 802.1X** check box and click **Save**.

## Setting Up an IP Filter

You can allow or deny specific IP addresses access to the camera. When the IP filter is enabled, the IP addresses in the list will be allowed or denied access to the camera based on the filter setting. To enable the IP filter:

1. Navigate to **System** > **Security** > **IP Filter** (see [Figure 7-7](#)).



Figure 7-7 IP Filter Settings Screen



2. Select the **Enable IP filter** check box.
3. Select **Allow** or **Deny** from the drop-down list, and then click **Apply**. The selection made here will determine how the IP Filter treats the addresses in the **Filtered IP Addresses** list (either allowing or denying access by those addresses).

---

**Note** Selecting to allow or deny will depend on how the system is set up. If you want to limit so only a couple of IP addresses can access the camera, set to allow those IP addresses only. If there are a few IP addresses you need to block, set up those IP addresses as denied.

---

4. In the field below the **Filtered IP Addresses** list box, enter an IP address you want to filter, and then click **Add**.  
To remove an IP address from the list, select the address in the list, and then click **Delete**.
5. Continue adding IP addresses to the **Filtered IP Addresses** list box, as needed.

---

**Note** Please do not delete all of the IP addresses listed in the Filtered IP Addresses list when you are using the **Allow** option. At least one IP address is required to be available in this field or you will not be able to login to the camera.

---

---

## Network Settings

---

This section contains instructions for assigning the camera a fixed IP address, setting the camera to automatically obtain a DHCP assigned IP address, enabling PPPoE, configuring ports, enabling IPv6 address configuration, prioritizing services, and enabling SNMP, UPnP, and DDNS.

### Basic Network Settings

The camera is assigned a dynamic (DHCP) IP address by default. Use the Honeywell Device Search tool to find the automatically assigned dynamic IP address (refer to [Finding the Camera on a Network on page 35](#) for more information).

If required, you can assign the camera a fixed (static) IP address. You can also assign a fixed IP address in the Honeywell Device Search application (see [Assigning a Static IP Address to the Camera on page 36](#) for more information).

### Assigning a Fixed IP Address

If required, you can assign the camera a static (fixed) IP address (or a different fixed IP address). You can also assign a fixed IP address in the Honeywell Device Search application (see [Assigning a Static IP Address to the Camera on page 36](#) for more information).

1. Navigate to **System** > **Network** > **Basic** (see [Figure 7-8](#)).
2. Select the **Use fixed IP address** option in the **General** section of the screen.
3. Fill in the **IP address**, **Subnet mask**, **Default gateway**, **Primary DNS**, and **Secondary DNS** fields.
4. Click **Save** under the PPPoE Password field.

Figure 7-8 Basic Network Settings Screen

**Honeywell HDZ Series** User : admin

Home System Streaming PTZ Logout

System

Security

Network

Basic

QoS

SNMP

UPnP

DDNS

Mail

FTP

HTTP

Events

Storage management

Recording

Schedule

File location

Log file

Factory default

Software upgrade

Maintenance

**Network**

**General**

Get IP address automatically

Use fixed IP address

IP address 164.178.45.89

Subnet mask 255.255.255.0

Default gateway 164.178.45.1

Primary DNS 164.178.170.6

Secondary DNS 10.216.2.51

Use PPPoE

User name

Password

Save

**Advanced**

Web Server port 80

RTSP port 554

MJPEG over HTTP port 8008

HTTPS port 443

Save

**IPv6 Address Configuration**

Enable IPv6 Address :

Save

## Setting a Dynamically Assigned IP Address

The camera is assigned a dynamic (DHCP) IP address by default. Use the Honeywell Device Search tool to find the automatically assigned dynamic IP address (refer to [Finding the Camera on a Network on page 35](#) for more information).

If a fixed IP address has been assigned (see [Assigning a Fixed IP Address on page 118](#)), you can set the camera to use a dynamically assigned (DHCP) IP address by selecting the **Get IP address automatically** option and clicking **Save** (see [Figure 7-8](#)).

---

**Note** You can also assign a dynamic IP address to the PTZ camera by using the Honeywell Device Search tool (see [Figure 3-3 on page 37](#)).

---

## Enabling PPPoE

If you connect to the network using PPPoE (Point-to-Point Protocol over Ethernet), you can enable PPPoE support. To enable PPPoE support:

1. Navigate to **System** > **Network** > **Basic** (see *Figure 7-8*).
2. Select the **Use PPPoE** option in the **General** section of the screen.
3. Enter your PPPoE **User name** and **Password**, and then click **Save**.

## Configuring Ports

You can change the settings of the ports listed in *Table 7-2*.

**Table 7-2** Ports that Can be Individually Configured

Port	Description
<b>Web Server (HTTP)</b>	The default setting of the web server port is 80. Make sure to notify users of any change to this setting. For example, if you change the port of a camera whose IP address is 192.168.0.100 from 80 to 8080, users will need to type <code>http://192.168.0.100:8080</code> into the address bar of their web browser for the connection to be successful.
<b>RTSP</b>	The default setting of the RTSP port is 554. The setting range is from 1024 to 65535.
<b>MJPEG over HTTP</b>	The default setting of the MJPEG over HTTP port is 8008. The setting range is from 1024 to 65535.
<b>HTTPS</b>	The default setting of the HTTPS port is 443. The setting range is from 1024 to 65535.  <b>Note</b> This setting cannot be the same as the web server port.

1. Navigate to **System** > **Network** > **Basic** (see *Figure 7-8*).
2. Under **Advanced**, enter a new port value in the field corresponding to the port you want to change, and then click **Save**.

## Enabling IPv6 Address Configuration

If you are using a routed IPv6 (Internet Protocol version 6) network, you can enable IPv6 address configuration. To enable IPv6 address configuration:

1. Navigate to **System** > **Network** > **Basic** (see *Figure 7-8*).
2. Under **IPv6 Address Configuration**, select the **Enable IPv6** check box and click **Save**.

## QoS (Quality of Service)

---

**Note** Your network routers and switches must support QoS for these settings to apply.

---

Quality of Service (QoS) lets you prioritize traffic when network congestion occurs by assigning different service levels to different traffic types.

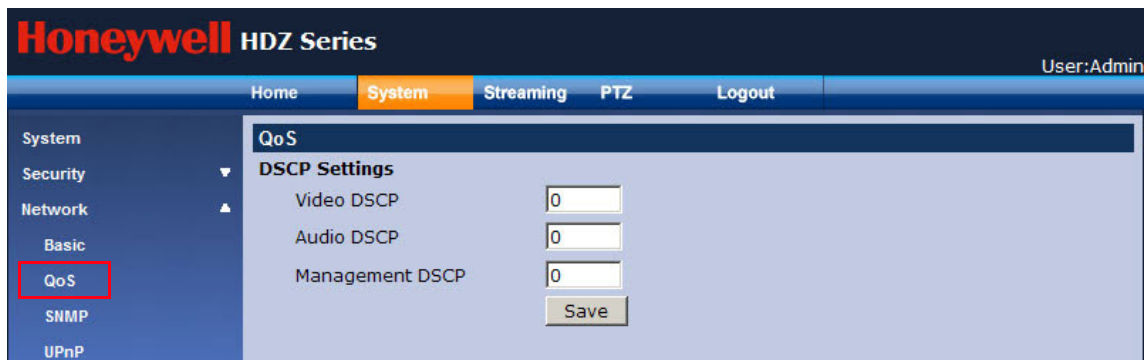
The following three types of traffic are used by the camera:

- Video (MJPEG over HTTP, RTP/RTSP, RTSP/HTTP)
- Audio
- Management (HTTP traffic, web browsing)

A DSCP (Differentiated Services Code Point) value must be assigned to each traffic type. The value appears in the traffic's IP header. When the traffic reaches a DSCP-capable network router or switch, the DSCP value in the header determines how it is processed (for example, how much bandwidth is reserved for it).

You can assign each traffic type a DSCP value from 0 to 63. The default setting is 0, which means that QoS is disabled.

**Figure 7-9 Quality of Service (QoS) Network Settings Screen**



## Configuring the DSCP Settings of the Camera

1. Navigate to **System** > **Network** > **QoS** (see [Figure 7-9](#)).
2. Under **DSCP Settings**, enter a DSCP value from 0 to 63 for **Video DSCP**, **Audio DSCP**, and **Management DSCP**, and then click **Save**.

## SNMP Settings

The Simple Network Management Protocol (SNMP) lets you monitor and manage the camera remotely. You can select the version of SNMP that you want to use (SNMPv1, SNMPv2, or SNMPv3).

SNMPv3 supports an enhanced security system that provides protection against unauthorized users and ensures the privacy of the messages. Users will be requested to enter the security name, authentication password and encryption password while setting the camera connections in the network management system. With SNMPv3, the messages sent between the cameras and the network management system will be encrypted to ensure privacy.

Figure 7-10 SNMP Network Settings Screen

The screenshot displays the Honeywell HDZ Series web interface for configuring SNMP settings. The left-hand navigation menu includes categories like System, Security, Network, DDNS, Mail, FTP, HTTP, Events, Storage management, Recording, Schedule, File location, Log file, Factory default, Software upgrade, and Maintenance. The 'SNMP' option under the Network category is highlighted with a red box. The main content area, titled 'SNMP Settings', is organized into three sections:

- SNMP v1/v2:** Contains checkboxes for 'Enable SNMP v1' and 'Enable SNMP v2'. Below these are text input fields for 'Read Community' (default: public) and 'Write Community' (default: private).
- SNMP v3:** Contains a checkbox for 'Enable SNMP v3'. Below it are fields for 'Security Name', 'Authentication Type' (set to MD5), 'Authentication Password', 'Encryption Type' (set to DES), and 'Encryption Password'.
- Traps for SNMP v1/v2/v3:** Contains a checkbox for 'Enable traps'. Below it are fields for 'Trap address' and 'Trap community' (default: public).

At the bottom of the settings area, there is a 'Trap Option' section with a checkbox for 'Warm start' and a 'Save' button.

### Enabling SNMP (Version 1 or 2)

1. Navigate to **System** > **Network** > **SNMP** (see [Figure 7-10](#)).
2. Choose one of the following:
  - To use SNMP version 1, select the **Enable SNMP v1** check box.
  - To use SNMP version 2, select the **Enable SNMP v2** check box.
3. In the **Read Community** field, specify the community name (password) for read-only access to all supported SNMP objects. The default value is *<public>*.
4. In the **Write Community** field, specify the community name (password) for read/write access to all supported SNMP objects (except read-only objects). The default value is *<private>*.
5. Click **Save**.

### Enabling SNMP (Version 3)

1. Navigate to **System** > **Network** > **SNMP** (see [Figure 7-10](#)).
2. Select the **Enable SNMP v3** check box.

3. In the **Security Name** field, enter the security name for the SNMP v3 protocol (up to 32 characters).
4. In the **Authentication Type** drop-down list, select the authentication type to use, either MD5 or SHA (MD5 is the default selection; SHA is for a more secure authentication method).
5. In the **Authentication Password** field, enter a password for the authentication system that is used (password must be at least 8 characters in length).
6. In the **Encryption Type** drop-down list, select the encryption type to use, either DES or AES (DES is the default selection; AES is for a more secure encryption method).
7. In the **Encryption Password** field, enter the password for the encryption system that is used (password must be between 8 and 512 characters in length). The **Encryption Password** can also be left blank, but in this case, the messages will not be encrypted.
8. Click **Save**.

## Activating Trap Reporting

Traps are used by the camera to notify the management server of important events or status changes by means of an unsolicited SNMP message. To activate trap reporting:

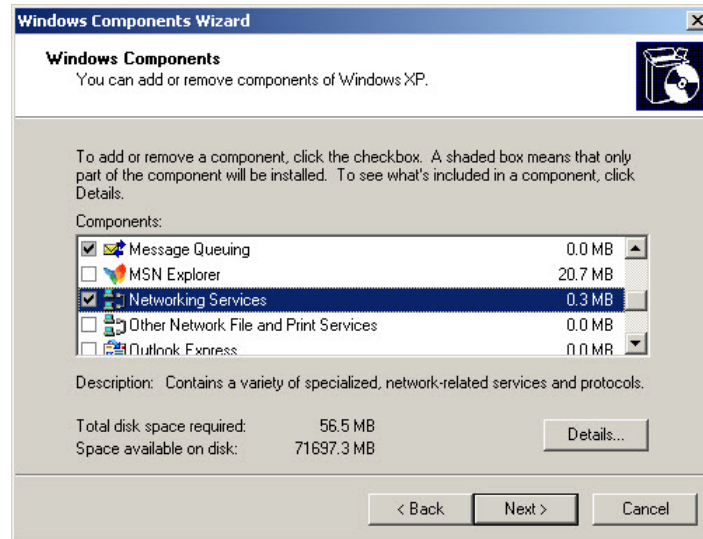
1. Navigate to **System > Network > SNMP** (see [Figure 7-10](#)).
2. Under **Traps for SNMP v1/v2/v3**, select the **Enable traps** check box.
3. In the **Trap address** field, type the IP address of the management server.
4. In the **Trap community** field, specify the community name to use when sending a trap message to the management server. The default value is *<public>*.
5. Optionally, select the **Warm start** check box to have the camera perform a software reload when a trap message is sent.
6. Click **Save**.

## UPnP Settings

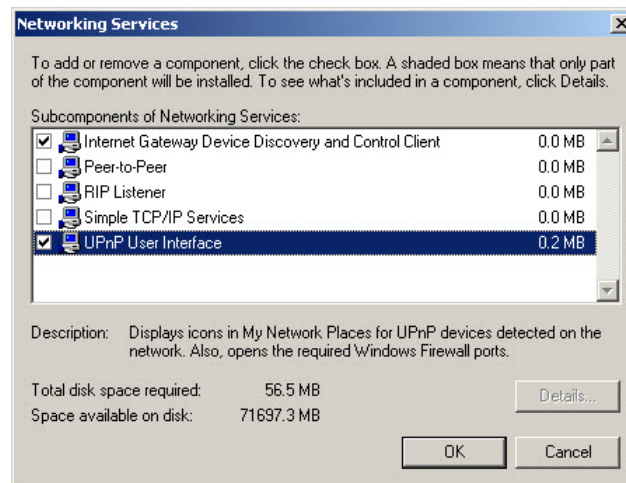
Universal Plug and Play (UPnP) is an architecture that supports peer-to-peer Plug and Play functionality for network devices. UPnP is enabled on the camera by default. To use this function, UPnP must be also be installed on your computer.

### Installing UPnP in Windows XP

1. Open the **Start** menu and click **Run**. Type **appwiz.cpl**, and then click **OK**.
2. Click **Add/Remove Windows Components**.
3. In the **Windows Components Wizard** dialog box (see [Figure 7-11](#)), in the **Components** window, click **Networking Services**, and then click **Details**.

**Figure 7-11 Windows Components Wizard Dialog Box**

4. In the **Networking Services** dialog box (see [Figure 7-12](#)), in the **Subcomponents of Networking Services** window, select the **UPnP User Interface** check box, and click **OK**.

**Figure 7-12 Networking Services Dialog Box**

5. Click **Next** to install the UPnP User Interface, and then click **Finish**.

---

**Note** When UPnP port forwarding is enabled, the camera can open the web server port on a UPnP-enabled router automatically.

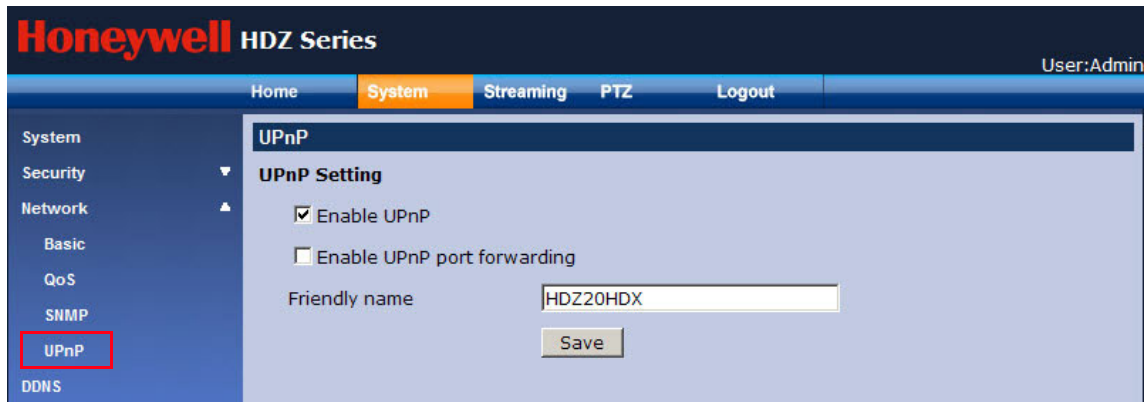
---

## Enabling UPnP Port Forwarding

1. Navigate to **System > Network > UPnP** (see [Figure 7-13](#)).



Figure 7-13 UPnP Settings Screen



2. Under **UPnP Setting**, select the **Enable UPnP port forwarding** check box and click **Save**.

---

**Note** To enable the UPnP function, make sure that your router supports UPnP and that it is activated on your PC.

---



---

## DDNS Settings

---

Dynamic DNS (DDNS) service allows dynamic IP addresses to be synchronized to a static host name (domain name). To enable Dynamic DNS:

1. Navigate to **System** > **DDNS** (see [Figure 7-14](#)).
2. Select the **Enable DDNS** check box.
3. Select a DDNS provider from the **Provider** drop-down list (choices include: DynDNS.org(Dynamic), No IP, or Change IP).
4. In the **Host name** field, type the static domain name obtained from the DDNS provider.
5. In the **Username/E-mail** field, type the user name or email required by the DDNS provider for authentication.
6. In the **Password/Key** field, type the password or key required by the DDNS provider for authentication.
7. Click **Save** to save the settings.

Figure 7-14 DDNS Settings Screen

The screenshot displays the Honeywell HDZ Series web interface. At the top, the Honeywell logo and 'HDZ Series' are visible. The user is logged in as 'admin'. The navigation menu on the left includes System, Security, Network, **DDNS**, Mail, FTP, HTTP, Events, Storage management, Recording, and Schedule. The 'System' tab is active, and the 'DDNS' sub-tab is selected. The main content area shows the 'Dynamic DNS' settings. The 'Enable DDNS' checkbox is unchecked. The 'Provider' dropdown is set to 'DynDNS.org(Dynamic)'. There are three empty text input fields for 'Host name', 'Username/E-mail', and 'Password/Key'. A 'Save' button is positioned at the bottom of the form.

## Recording Settings

This section describes how to set up a recording to a microSDHC card or NAS device.

You can set the camera to record continually, disable recording or you can specify a particular timeframe (schedule) to record in.

---

**Note** This section is only applicable for microSDHC card and NAS recording.

---

## Configuring Recording Settings

1. Navigate to **System** ► **Recording** (see [Figure 7-15](#)).
2. Decide what storage device you want to record to and select it in the **Recording Storage** section. Options are SD Card and NAS (see [Storage Settings on page 129](#) for more information on storage devices).
3. Under **Recording Schedule**, select one of the following:
  - **Disable** to turn off the scheduled recording function (default selection).
  - **Always** to record continually.
  - **Only during time frame** to record during a particular time frame.

---

**Note** Motion recording, alarm recording and network failure recording are separate from scheduled recording and must be enabled/disabled in their respective tabs.

---

- If **Only during time frame** is selected in [step 3](#), select the check boxes for the days of the week that you want recording to occur, and enter the **Start time** [hh:mm] and **Duration** [hh:mm] in the fields provided. You can configure up to 10 recording schedules (select the schedule to configure, 1–10, in the schedule window and then enter your settings).
- Click **Save** to save your settings. If you are setting up multiple recording schedules, click **Save** after setting each one.

## Deleting a Recording Schedule Setting

- Navigate to **System** > **Recording** (see [Figure 7-15](#)).
- Select one of the recording schedules in the schedule window and click **Delete**.

**Figure 7-15** Recording Schedule Screen

The screenshot displays the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System' (selected), 'Streaming', 'PTZ', and 'Logout'. The left sidebar lists various system settings, with 'Recording' highlighted. The main content area is titled 'Recording' and contains two sections: 'Storage recording' and 'Schedule recording'. Under 'Storage recording', 'SD Card' is selected. Under 'Schedule recording', 'Only during time frame' is selected. Below these sections is a table for scheduling with columns for 'Weekday', 'Start time', and 'Duration'. The table has 10 rows, numbered 1 to 10. Below the table are checkboxes for days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat). The 'Start time' field is set to '00:00' and the 'Duration' field is set to '00:00'. A message below the fields says 'Please complete the duration time.' At the bottom, there are 'Save' and 'Delete' buttons.

## Schedule Settings

The Schedule function allows users to set up schedules that can be used with different camera features such as alarm inputs, motion detection, network failure detection, and periodical events. The schedules function supports up to 10 schedule time frames in the time frame list.

### Configuring a Schedule

To configure a schedule to be used with other IP camera features:

1. Navigate to **System** > **Schedule** (see [Figure 7-16](#)).

Figure 7-16 Schedule Screen

The screenshot shows the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System' (selected), 'Streaming', 'PTZ', and 'Logout'. The left sidebar lists various system functions, with 'Schedule' highlighted in a red box. The main content area is titled 'Schedule' and contains a table with 10 rows for time frames. The first row is selected, showing a weekday pattern of '- 0 0 0 0 0 -', a start time of 6:00, and a duration of 12:00. Below the table, there are checkboxes for days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) and input fields for 'Start time' (6:00) and 'Duration' (12:00). 'Save' and 'Delete' buttons are at the bottom.

	Weekday	Start time	Duration
1	- 0 0 0 0 0 -	6:00	12:00
2	- - - - -	----	----
3	- - - - -	----	----
4	- - - - -	----	----
5	- - - - -	----	----
6	- - - - -	----	----
7	- - - - -	----	----
8	- - - - -	----	----
9	- - - - -	----	----
10	- - - - -	----	----

Sun
  Mon
  Tue
  Wed
  Thu
  Fri
  Sat

Start time : 6:00      Duration : 12:00

Save    Delete

2. Select a time frame to configure from the list of 10 time frames in the time frame list (time frame 1 is selected in [Figure 7-16](#)).
3. Select the check boxes for the days of the week that you want recording to occur.
4. Enter the **Start time** [hh:mm] and **Duration** [hh:mm] in the fields provided.

**Note** When configuring the schedule, the **Duration** time is the number of hours and minutes that recording will continue from the **Start time**.

5. Click **Save** to save your settings. If you are setting up multiple schedule time frames, click **Save** after setting each one.

---

**Note** To use these schedules with camera features such as network failure and/or motion detection, **By schedule** must be selected for each of those features when you are configuring them.

---

## Deleting a Scheduled Time Frame

1. Navigate to **System** > **Schedule** (see [Figure 7-16](#)).
2. Select one of the schedule time frames in the schedule window and click **Delete**.

---

## Storage Settings

---

Storage management settings are split between SD card and Network attached storage device settings. Go to the section corresponding to your selected storage type for more information.

## SD Card Storage Management

You can record up to 32 GB of data on a microSDHC card. A microSDHC card of any size between 8 and 32 GB can be installed into the microSDHC card slot on the back plate of the camera (see [Figure 2-5](#) and [Table 2-3](#) on [page 29](#) for the location of the microSDHC card slot).

It is a good practice to format your microSDHC card before using it for the first time.

### Checking the Free Space Remaining on the microSDHC Card

1. A microSDHC card must be installed into the slot on the back of the camera (see [Figure 2-5](#) and [Table 2-3](#) on [page 29](#)).
2. Navigate to **System** > **Storage Management** > **SD Card** (see [Figure 7-17](#)).  
The amount of free space on the card is listed under **Device information**.

### Formatting the microSDHC Card

1. Navigate to **System** > **Storage Management** > **SD Card** (see [Figure 7-17](#)).

---

**Note** Before formatting your microSDHC card, be sure to stop all current recordings that your camera may be performing (check and stop scheduled recording, and alarm, motion and network failure recordings that are set).

---

2. Click **Format** in the **Device setting** area of the SD Card screen.

Figure 7-17 Storage Management - SD Card Settings Screen

The screenshot displays the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'PTZ', and 'Logout'. The left sidebar menu lists various system settings, with 'Storage management' expanded to show 'SD Card' (highlighted with a red box) and 'Network Share'. The main content area is titled 'Storage Management' and contains the following sections:

- Device information:**
  - Device type: SD card
  - Free space: 0KB
  - Status: No
  - Total size: 0KB
  - Full: No
- Device setting:**
  - Format device:  Stop all current recordings prior to format.
- Disk cleanup setting:**
  - Enable automatic disk cleanup
  - Remove recordings older than:
  - Remove oldest recordings when disk is:  % full
  -
- Recording list:**
  - Table with columns: FileName, Size
  - Empty table body
  - Buttons: , ,

## Managing Disk Cleanup Settings

1. Navigate to **System** > **Storage Management** > **SD Card** (see [Figure 7-17](#)).
2. Select the **Enable automatic disk cleanup** check box in the **Disk cleanup setting** area of the screen (Off is the default disk cleanup setting).
3. In the **Remove recordings older than** fields, enter how long you want the recordings to remain on the microSDHC card (the default setting is 1 day).
4. In the **Remove oldest recordings when disk is [percentage] % full** field, enter a percentage value between 1 and 99 for how full the microSDHC card will get before recordings are removed (the default setting is 85%).
5. Click **Save**.

## Managing the List of Recorded Video Files

1. Navigate to **System** > **Storage Management** > **SD Card** (see [Figure 7-17](#)).
2. In the **Recording list** area of the screen, perform one or more of the following procedures:
  - Select a recording file, and then click **Remove** to remove the file from the list.
  - Click **Sort** to list the files in descending order by name and date.
  - Select a recording file, and then click **download** to open/download the file. A pop-up window opens, giving the option to open the file or save it to a specific location on your computer.

---

**Note** During continuous recordings onto the SD card, there will be an omitted 1-2 seconds of video between recorded files. This omission is due to file creation.

---

## Network Attached Storage Management

You can record video and audio data on a network attached storage device. It is a good practice to format the network attached storage device before using it for the first time.

### Checking the Free Space Remaining on the Network Storage

Navigate to **System** > **Storage Management** > **Network Share** (see *Figure 7-18*). The amount of free space on the device is listed under **Device information**.

### Setting Up a Network Attached Storage Device

1. Navigate to **System** > **Storage Management** > **Network Share** (see *Figure 7-18*).
2. Under **Storage Settings**, use the **Protocol** drop-down list to select the Network storage device protocol. **SAMBA** is the only selection currently available (SAMBA is the Linux name for Window file sharing).
3. Enter the required Network attached storage parameters in the following fields:
  - **Host**. Enter the Host name of the Network storage device.
  - **Share**. Enter the Share path of the Network storage device (the folder must already exist before entering this information).
  - **User name**. Enter the User name for the Network storage device.
  - **Password**. Enter the User Password for the Network storage device.
4. Click **Save** in the **Storage Settings** area of the Network Share screen.

### Formatting the Network Attached Storage Device

1. Navigate to **System** > **Storage Management** > **Network Share** (see *Figure 7-18*).

---

**Note** Before formatting your network storage device, be sure to stop all current recordings that your camera may be performing (check and stop scheduled recording, and alarm, motion and network failure recordings that are set).

---

2. Click **Format** in the **Storage Tools** area of the Network Share screen to format the network share folder.

Figure 7-18 Storage Management - Network Share Settings Screen

**Honeywell HDZ Series** User : admin

Home System Streaming PTZ Logout

System  
Security  
Network  
DDNS  
Mail  
FTP  
HTTP  
Events  
Storage management  
SD Card  
**Network Share**  
Recording  
Schedule  
File location  
Log file  
Factory default  
Software upgrade  
Maintenance

**Network Share**

**Device information**

Device type: Network Share  
Free space: 0GB Total size: 0GB  
Status: offline Full: No

**Storage Settings**

Protocol: SAMBA  
Host:  
Share:  
User name:  
Password:  
Save

**Storage Tools**

Format device Format Stop all current recordings prior to format.

**Disk cleanup setting**

Enable automatic disk cleanup  
Remove recordings older than: 1 day(s)  
Remove oldest recordings when disk is: 85 % full  
Save

**Recording list**

FileName	Size

Remove Sort download

## Managing Disk Cleanup Settings

1. Navigate to **System** > **Storage Management** > **Network Share** (see [Figure 7-18](#)).
2. Select the **Enable automatic disk cleanup** check box in the **Disk cleanup setting** area of the screen (Off is the default disk cleanup setting).
3. In the **Remove recordings older than** fields, enter how long you want the recordings to remain on the Network attached storage device (the default setting is 1 day).
4. In the **Remove oldest recordings when disk is [percentage] % full** field, enter a percentage value between 1 and 99 for how full the Network attached storage device will get before recordings are removed (the default setting is 85%).
5. Click **Save**.



## Managing the List of Recorded Video Files

1. Navigate to **System** > **Storage Management** > **Network Share** (see [Figure 7-18](#)).
2. In the **Recording list** area of the screen, perform one or more of the following procedures:
  - Select a recording file, and then click **Remove** to remove the file from the list.
  - Click **Sort** to list the files in descending order by name and date.
  - Select a recording file, and then click **download** to open/download the file. A pop-up window opens, giving the option to open the file or save it to a specific location on your computer.

---

**Note** During continuous recordings onto the NAS, there will be an omitted 1-2 seconds of video between recorded files. This omission is due to file creation.

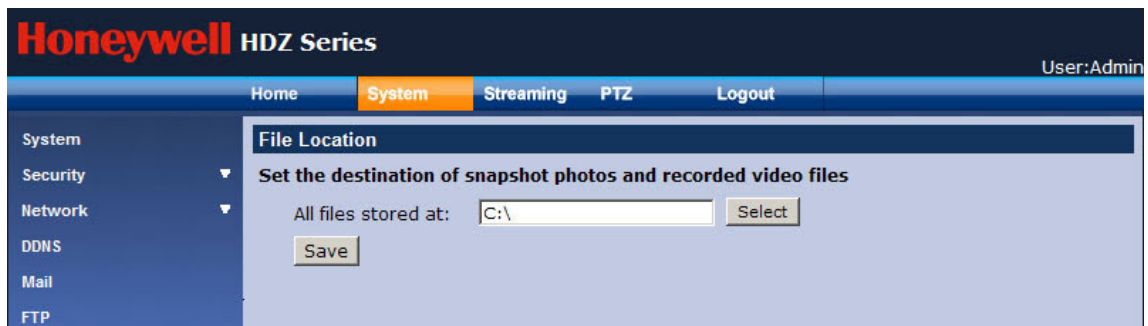
---

## File Location Settings

Users can record still images and video clips by clicking the record action buttons in the Home viewing window (see [Understanding the Web Client User Interface on page 40](#) for more information). Use the File Location screen to choose the local folder where still images and video clips will be saved. To choose a file location:

1. Navigate to **System** > **File Location** (see [Figure 7-19](#)).

**Figure 7-19 File Location Setting Screen**



2. In the **All files stored at** field, either type the folder pathway into the field or click **Select** to browse for, select and save the file location.
3. Click **Save** to save the file location displayed in the **All files stored at** field.

## Maintenance Settings

This section describes how to restore the camera to its factory default settings, how to manage your configuration files, and how to upgrade the camera firmware.

### Restoring Factory Defaults

You can either restore all the factory default settings, or all the factory default settings except for the network settings. You can also reboot the system without restoring default settings.

**Note** There is also a Factory Default button on the bottom panel of the PTZ. Press this button to restore factory default settings. See [Table 2-3](#) on [page 29](#) for more information.

### Restoring All Default Settings, Including the Network Settings

1. Navigate to **System** ► **Factory Default** (see [Figure 7-20](#)).
2. Click **Set Default**.

All changes are lost and the system restarts after 100 seconds. The camera's IP address is reset to the default setting.

**Figure 7-20** Resetting to Factory Default Screen



## Restoring All Default Settings, Except for the Network Settings

1. Navigate to **System** > **Factory Default** (see [Figure 7-20](#)).
2. Click **Set Soft Default**.  
All changes except the network settings are lost and the system restarts after 100 seconds.

## Rebooting the Camera Without Changing the Current Settings

1. Navigate to **System** > **Factory Default** (see [Figure 7-20](#)).
2. Click **Reboot**.  
The system restarts without changing the current settings.

## Upgrading the Software

To upgrade the firmware:

1. Download the software upgrade file to your hard drive. Make a note of the file location.
2. Navigate to **System** > **Software Upgrade** (see [Figure 7-21](#)).
3. Click **Browse** to locate the upgrade file on your hard drive, and then click **Open**.
4. Select the file (*ulmage+userland.img*) to upgrade from the drop-down list.

---

**Note** If a switch/main/module upgrade is needed, choose the appropriate upgrade file from the drop-down list (switch.bin/main.bin/module.bin).

---

5. Click **Upgrade**.
6. After the upgrade is complete, close your browser.
7. Open the **Start** menu, click **Control Panel**, and then double-click **Add or Remove Programs**.
8. Select **Honeywell Viewer** from the list of programs and then click **Remove**.
9. Open your web browser and access the camera (see [Accessing the Camera from a Browser on page 38](#)). Then allow the automatic download of the Honeywell Viewer.

Figure 7-21 Software Upgrade Options Screen

The screenshot shows the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System' (selected), 'Streaming', 'PTZ', and 'Logout'. The user is logged in as 'admin'. The left sidebar menu includes 'System', 'Security', 'Network', 'DDNS', 'Mail', 'FTP', 'HTTP', 'Events', 'Storage management', 'Recording', 'Schedule', 'File location', 'Log file', 'Factory default', 'Software upgrade' (highlighted with a red box), and 'Maintenance'. The main content area is titled 'Software version' and lists the following information:

The software version is	HS20131007NSA
The switch version is	SW2D-AF5A
The main version is	MW2D-02B1
The module version is	CD81A

Below this, the 'Upgrade' section is titled 'Follow These Steps To Do The Software Upgrade' and contains three steps:

- Step1:** Upload the binary file. A text input field and a 'Browse...' button are provided.
- Step2:** Select binary file you want to upgrade. A dropdown menu shows 'uImage+userland.img'.
- Step3:** Click the upgrade button to start the upgrade process. An 'Upgrade' button is located at the bottom.

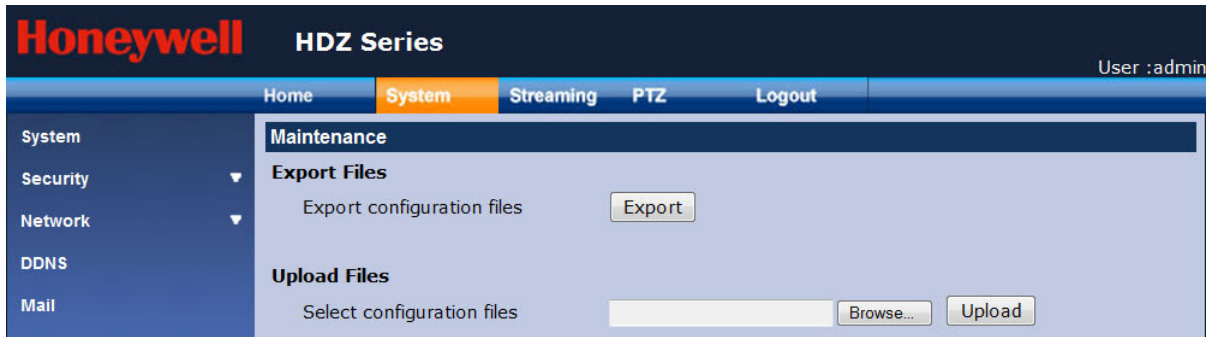
## Maintenance of Configuration Files

You can export and upload the configuration files for the system to enable restoring configuration at a later date. The configuration file includes the settings made on the System and Streaming tabs of the camera (see [Configuring System Settings on page 107](#) and [Configuring Video and Audio Streaming on page 45](#) for more information on these settings).

### Exporting Configuration Files

1. Navigate to **System** ► **Maintenance** (see [Figure 7-22](#)).
2. Click **Export**.
3. Select a location to save the configuration file and click **Save**.

Figure 7-22 Maintenance of Configuration Files Screen




---

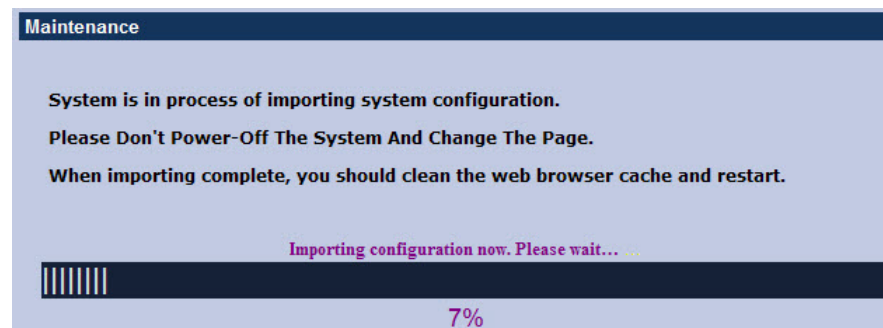
**Note** Please do not change the configuration file name once downloaded. Renamed files will not be recognized when you try to upload it as a configuration file.

---

## Uploading Configuration Files

1. Navigate to **System** ► **Maintenance** (see [Figure 7-22](#)).
2. Click **Browse** to find the configuration file you want to upload. Locate and open the configuration file. The file name appears in the field beside the **Browse** button.
3. Click **Upload**. The system will start to upload the configuration file (see [Figure 7-23](#)).

Figure 7-23 Uploading Configuration File In Progress



4. Once the uploading is complete, it is recommended that you clean out the web browser cache and then restart the web browser.

---

**Note** The configuration file should be uploaded into the PTZ with the same version firmware as the camera used to save the configuration file.

---

---

## Support Settings

---

This sections describes how to view lists of system parameters and system log files.

### Viewing the System Parameters

To view the system parameters list, which lists the configuration settings that have been applied to the system:

1. Navigate to the **System** tab ► **System**.
2. Scroll down to the bottom of the window to view the **Parameter List** (see [Figure 7-24](#)).

You can view the current system configuration settings in the **Parameter List**.

**Figure 7-24 Viewing System Parameters List**

The screenshot displays the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System' (highlighted), 'Streaming', 'PTZ', and 'Logout'. The user is logged in as 'admin'. The left sidebar menu is expanded to show the 'System' tab, which is highlighted with a red box. The main content area shows the 'System' configuration page. At the top, there is a 'Time' field set to '00:00:00' with a '[hh:mm:ss]' label. Below this, there is a radio button for 'Sync with NTP server'. The 'NTP server' field is set to '0.0.0.0' with a '[host name or IP address]' label. The 'Update interval' is set to 'Every hour' with a dropdown arrow. A 'Save' button is located below these fields. The 'Parameter list' section is visible at the bottom, showing a scrollable list of configuration parameters for a 'Mega Pixel Camera Initial Configuration File'. The parameters listed are: '[Camera setting]', 'exposure mode = <piris9>', 'max shutter gain = <8>', 'manual shutter speed = <6>', 'manual AGC gain = <6>', 'manual iris value = <6>', 'white balance mode = <auto>', 'white balance rgain = <57>', 'white balance bgain = <54>', 'backlight = <off>', and 'sharpness value = <6>'.

## Viewing the Log File

The system log file provides information to the user about the camera activities. Camera activity information includes: login/logout, alarm in, motion detection, and network failures. To view the system log:

Navigate to **System** > **Log file** (see [Figure 7-25](#) for a system log example).

**Figure 7-25 Viewing System Log**

The screenshot shows the Honeywell HDZ Series web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'PTZ', and 'Logout'. The left sidebar contains a menu with the following items: System, Security, Network, DDNS, Mail, FTP, HTTP, Events, Storage management, Recording, Schedule, File location, Log file (highlighted with a red box), Factory default, and Software upgrade. The main content area is titled 'System log' and displays the following log entries:

```
[Thu Apr 1 00:00:01 2010] --Network interface initialized start
[Thu Apr 1 00:00:13 2010] --Network interface initialized end
[Thu Apr 1 00:00:13 2010] --Host IP = 164.178.45.89
[Thu Apr 1 00:00:13 2010] --Subnet Mask = 255.255.255.0
[Thu Apr 1 00:00:13 2010] --Gateway = 164.178.45.1
[Thu Apr 1 00:00:13 2010] --MAC address = 00:D0:89:0B:01:5A
[Thu Apr 1 00:01:20 2010] --admin@::ffff:164.178.45.157 GET / HTTP/1.1
[Wed Oct 30 12:50:01 2013] --admin@::ffff:164.178.45.157 GET /index.html HTTP/1.1
[Wed Oct 30 13:25:43 2013] --admin@::ffff:164.178.45.157 GET / HTTP/1.1
[Wed Oct 30 13:41:23 2013] --admin@::ffff:164.178.45.157 GET / HTTP/1.1
[Wed Oct 30 13:47:56 2013] --admin@::ffff:164.178.45.157 GET /index.html HTTP/1.1
[Wed Oct 30 13:52:47 2013] --admin@::ffff:164.178.45.157 GET / HTTP/1.1
[Thu Oct 31 09:41:00 2013] --admin@::ffff:164.178.45.157 GET / HTTP/1.1
```







## HDZ Camera Specifications

### HDZ20HD(X)/HDZ20HDE(X) Camera Specifications

Table A-1 HDZ20HD(X)/HDZ20HDE(X) Series Camera Specifications

Specification	Description
<b>Camera Specifications</b>	
Scanning System	NTSC / PAL
Image Sensor	1/2.8" Sony Progressive CMOS
Optical Zoom	20x
Number of Pixels (H x V)	1920 x 1080 (1080p)
S/N Ratio	>50 dB (AGC Off)
Minimum Illumination	0.05 lux (color) / 0.01 lux (Black/White) @ F1.6, 30 IRE
Focal Length	0.2 in. to 3.7 in. (4.7 mm to 94.0 mm)
Focus Mode	Auto / Manual
White Balance	Auto / Indoor / Outdoor / ATW / Manual
Iris Control	Auto / Manual
Electronic Shutter	1/1 ~ 1/10,000 sec
ACG Control	Auto / Manual (Max Gain limit settings for Full Auto, Shutter Priority, and Iris Priority modes)
Backlight Compensation	On / Off
Privacy Masks	16
Wide Dynamic Range	On / Off
Day / Night: IR Cut Filter	Auto / On / Off
Image Rotation	Flip / Mirror / Inverse / Portrait
Digital Noise Reduction (2D)	On / Off

**Table A-1 HDZ20HD(X)/HDZ20HDE(X) Series Camera Specifications (cont'd)**

<b>Specification</b>	<b>Description</b>
<b>Operation Specifications</b>	
Multi-Language GUI	English, French, German, Italian, Russian, Spanish, Portuguese, Dutch, Czech, Polish, Japanese, Traditional Chinese, Simple Chinese
Pan Travel	360° endless
Tilt Travel	-10° to 190°
Manual Pan Speed	0.5° to 200°/s
Manual Tilt Speed	0.5° to 84°/s
Presets	256
Preset Accuracy	0.225°
Preset Speed	Up to 400°/s
Preset Tour	8
Auto Pan	4
Mimic Tour	8
Proportional Pan & Tilt	On / Off (Pan and tilt speed proportional to zoom ratio)
Auto-Resume after Power Loss	Yes
Home Function	Preset, Preset Tour, Auto Pan, Mimic Tour
Auto Flip <sup>a</sup>	Image / Mechanical / Off
Digital Slow Shutter	On / Off
Motion Detection	On / Off
Alarm In	4
Alarm Reaction	Preset, Preset Tour, Auto Pan, Mimic Tour
Alarm Out	2
Event Notification	HTTP, FTP, SMTP
<b>Network Specifications</b>	
Video Compression	H.264 High Profile / MJPEG
Video Streaming	Quad streaming: H.264 and MJPEG Controllable frame rate and bandwidth. Constant or variable bit rate.
Video Resolution	Up to 1920 x 1080p
Frame Rate	Up to 30/25 fps
Interface	10/100 MB Ethernet (RJ-45)
Supported Protocols <sup>b</sup>	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, IEEE 802.1x, QoS, ONVIF
Simultaneous Users	3 at 1080p / 5 at D1
Supported Web Browser	Internet Explorer (8.0+)

Table A-1 HDZ20HD(X)/HDZ20HDE(X) Series Camera Specifications (cont'd)

Specification	Description
<b>Network Specifications (cont'd)</b>	
Supported Operating System	Windows 7 (32-bit / 64-bit)
Security	User account and password protection HTTPS, IP Filter, IEEE 802.1x
Audio Streaming	Full-duplex, Simplex
Audio Compression	G.711 / G.726 ADPCM / AAC
<b>General Specifications</b>	
Environment	Indoor / Outdoor
Casing	IP66 Standard (Outdoor)
Dimension	Indoor: $\varnothing$ 7.5" x 10.8" ( $\varnothing$ 191.5 mm x 275.1 mm) Outdoor (with sunshield): $\varnothing$ 7.5" x 10.7" ( $\varnothing$ 191.5 mm x 270.5 mm)
Weight	Indoor: 4.85 lb (2.2 kg) Indoor (with in-ceiling bracket): 6.83 lb (3.1 kg) Outdoor (with sunshield): 5.73 lb (2.6 kg)
Operating Temperature	Indoor: 32°F to 122°F (0°C to 50°C) Outdoor: -40°F to 122°F (-40°C to 50°C) <sup>c</sup>
Relative Humidity	Indoor / Outdoor: 10% to 90%, non-condensing
Waterproof Standard	IP66 standard (HDZ Outdoor)
Power Source	Indoor: 24 V AC $\pm$ 10% and PoE+ (21 W) Outdoor: 24 V AC $\pm$ 10% and PoE+ (without heater)
Power Consumption	Indoor: 20 W Outdoor: 50 W (with heater)
Local Storage	MicroSDHC 32 GB support (card is not included) (see <a href="#">MicroSDHC Card Details on page 30</a> for microSDHC card support details)
MicroSDHC Card Function	Event trigger recording Continuous and Schedule recording Automatic recording when network goes down
<b>Regulatory</b>	
Emissions	North America: FCC Part 15B, ICES-003 EU: EN55022
Immunity	EN50130-4
Safety	North America: UL/CSA 60950-1, UL/CSA 60950-22 (outdoor models) EU: EN60950-1, EN60950-22 (outdoor models)
RoHS	EN50581

<sup>a</sup> Note there may be some image loss during the digital image flipping point.

<sup>b</sup> Some development may be required in specific user cases to support some of these protocols in the field, as they mature over time.

<sup>c</sup> Protecting the dome from direct sunlight in high temperature environments is advised.

## HDZ30HD/HDZ30HDE Camera Specifications

Table A-2 HDZ30HD/HDZ30HDE Series Camera Specifications

Specification	Description
<b>Camera Specifications</b>	
Scanning System	NTSC / PAL
Image Sensor	1/2.8" Sony Progressive CMOS
Optical Zoom	30x
Digital Zoom	12x
Number of Pixels (H x V)	1920 x 1080 (1080p)
S/N Ratio	>50 dB (AGC Off)
Minimum Illumination	0.5 lux (color) / 0.1 lux (Black/White) @ F1.6, 30 IRE
Focal Length	0.2 in. to 5.1 in. (4.3 mm to 129.0 mm)
Focus Mode	Manual / Auto (Continuous / PTZ Trigger / Zoom Trigger)
White Balance	Auto / Indoor / Outdoor / ATW / Manual
Iris Control	Auto / Manual / P-Iris
Electronic Shutter	1/1 ~ 1/10,000 sec
ACG Control	Auto / Manual (Max Gain limit settings for Full Auto, Shutter Priority, and Iris Priority modes)
Backlight Compensation	On / Off
Privacy Masks	16
Wide Dynamic Range	On / Off Shutter WDR (>96 dB)
Day / Night: IR Cut Filter	Auto / On / Off
Image Rotation	Flip / Mirror / Inverse / Portrait
Digital Noise Reduction (2D/3D)	On / Off
<b>Operation Specifications</b>	
Multi-Language GUI	English, French, German, Italian, Russian, Spanish, Portuguese, Dutch, Czech, Polish, Japanese, Traditional Chinese, Simple Chinese
Pan Travel	360° endless
Tilt Travel	-10° to 190°
Manual Speed	0.5° to 90°/s
Presets	256
Preset Accuracy	0.225°

**Table A-2 HDZ30HD/HDZ30HDE Series Camera Specifications (cont'd)**

<b>Specification</b>	<b>Description</b>
<b>Operation Specifications (cont'd)</b>	
Preset Speed	5° to 400°/s
Preset Tour	8
Auto Pan	4
Mimic Tour	8
Proportional Pan & Tilt	On / Off (Pan and tilt speed proportional to zoom ratio)
Auto-Resume after Power Loss	Yes
Home Function	Preset, Preset Tour, Auto Pan, Mimic Tour
Auto Flip <sup>a</sup>	Digital / Mechanical / Off
Digital Slow Shutter	On / Off
Motion Detection	On / Off
P-Iris	F9.6 - F16
Alarm In	4
Alarm Reaction	Preset, Preset Tour, Auto Pan, Mimic Tour
Alarm Out	2
Event Notification	HTTP, FTP, SMTP
<b>Network Specifications</b>	
Video Compression	H.264 High Profile / MJPEG
Video Streaming	Quad streaming: H.264 x 3 and MJPEG, or H.264 x 4 Controllable frame rate and bandwidth. Constant or variable bit rate.
Video Resolution	Up to 1920 x 1080p
Frame Rate	Up to 60/50 fps
Interface	10/100 MB Ethernet (RJ-45)
Supported Protocols <sup>b</sup>	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, IEEE 802.1x, QoS, ONVIF
Simultaneous Users	3 at 1080p / 5 at D1
Supported Web Browser	Internet Explorer (8.0+)
Supported Operating System	Windows 7 (32-bit / 64-bit) / Chrome / Firefox / Safari
Security	User account and password protection HTTPS, IP Filter, IEEE 802.1x
Audio Streaming	Full-duplex, Simplex
Audio Compression	G.711 / G.726

**Table A-2 HDZ30HD/HDZ30HDE Series Camera Specifications (cont'd)**

Specification	Description
<b>General Specifications</b>	
Environment	Indoor / Outdoor
Casing	IP66 Standard (Outdoor)
Dimensions	Indoor: $\varnothing$ 7.6" x 11.1" ( $\varnothing$ 192.0 mm x 281.4 mm) Outdoor (with sunshield): $\varnothing$ 7.6" x 10.9" ( $\varnothing$ 194.0 mm x 276.2 mm)
Weight	Indoor: 4.85 lb (2.2 kg) Indoor (with in-ceiling bracket): 6.83 lb (3.1 kg) Outdoor (with sunshield): 5.73 lb (2.6 kg)
Operating Temperature	Indoor: 32°F to 122°F (0°C to 50°C) Outdoor: -40°F to 122°F (-40°C to 50°C) <sup>c</sup>
Relative Humidity	Indoor / Outdoor: 10% to 90%, non-condensing
Waterproof Standard	IP66 standard (HDZ Outdoor)
Impact Rating	IK10 (Outdoor)
Power Source	Indoor: 24 V AC $\pm$ 10% and PoE+ Outdoor: 24 V AC $\pm$ 10% and PoE++ (with heater)
Power Consumption	Indoor: 25.5 W Outdoor: 59 W (with heater)
Local Storage	MicroSDHC 64 GB support (card is not included) <sup>d</sup> (see <a href="#">MicroSDHC Card Details on page 30</a> for microSDHC card support details)
MicroSDHC Card Function	Event trigger recording Continuous and Schedule recording Automatic recording when network goes down
<b>Regulatory</b>	
Emissions	North America: FCC Part 15B, ICES-003 EU: EN55022
Immunity	EN50130-4
Safety	North America: UL/CSA 60950-1, UL/CSA 60950-22 (outdoor models) EU: EN60950-1, EN60950-22 (outdoor models)
RoHS	EN50581

<sup>a</sup> Note there may be some image loss during the digital image flipping point.

<sup>b</sup> Some development may be required in specific user cases to support some of these protocols in the field, as they mature over time.

<sup>c</sup> Protecting the dome from direct sunlight in high temperature environments is advised.

<sup>d</sup> 64 GB cards only applied on SanDisk SDXC 64 GB with HDZ30HD/HDZ30HDE units.

## HDZ30(X) Camera Specifications

Table A-3 HDZ30(X) Series Camera Specifications

Specification	Description
<b>Camera Specifications</b>	
Scanning System	NTSC / PAL
Image Sensor	1/4" Sony CCD
Optical Zoom	30x
Effective Pixels	NTSC: 480K; PAL: 570K
Horizontal Resolution	550 TVL
S/N Ratio	>50 dB (AGC Off)
Minimum Illumination	0.08 lux (color) / 0.005 lux (Black/White) @ F1.6, 30 IRE Max Aperture Ratio: F1.6 (Wide), F4.5 (Tele)
Focal Length	0.13 in. to 4.0 in. (3.4 mm to 102.0 mm)
Focus Mode	Auto / Manual
White Balance	Auto / Indoor / Outdoor / ATW / Manual
Iris Control	Auto / Manual
Electronic Shutter	1/1 ~ 1/10,000 sec
ACG Control	Auto / Manual (Max Gain limit settings for Full Auto, Shutter Priority, and Iris Priority modes)
Backlight Compensation	On / Off
Privacy Masks	16
Wide Dynamic Range	On / Off
Day / Night: IR Cut Filter	On / Off
Image Rotation	Flip / Mirror / Inverse / Portrait
Digital Noise Reduction (2D/3D)	On / Off
<b>Operation Specifications</b>	
Multi-Language GUI	English, French, German, Italian, Russian, Spanish, Portuguese, Dutch, Czech, Polish, Japanese, Traditional Chinese, Simple Chinese
Pan Travel	360° endless
Tilt Travel	-10° to 190°
Manual Pan Speed	0.5° to 200°/s
Manual Tilt Speed	0.5° to 84°/s
Presets	256

**Table A-3 HDZ30(X) Series Camera Specifications (cont'd)**

<b>Specification</b>	<b>Description</b>
<b>Operation Specifications (cont'd)</b>	
Preset Accuracy	0.225°
Preset Speed	Up to 400°/s
Preset Tour	8
Auto Pan	4
Mimic Tour	8
Proportional Pan & Tilt	On / Off (Pan and tilt speed proportional to zoom ratio)
Auto-Resume after Power Loss	Yes
Home Function	Preset, Preset Tour, Auto Pan, Mimic Tour
Auto Flip	Digital / Mechanical / Off
Digital Slow Shutter	On / Off
Motion Detection	On / Off
Alarm In	4
Alarm Reaction	Preset, Preset Tour, Auto Pan, Mimic Tour
Alarm Out	1
Event Notification	HTTP, FTP, SMTP
<b>Network Specifications</b>	
Video Compression	H.264 High Profile / MJPEG
Video Streaming	Quad streaming: H.264 and MJPEG Controllable frame rate and bandwidth. Constant or variable bit rate.
Video Resolution	D1: 720 x 480 (NTSC)/720 x 576 (PAL) CIF: 352 x 240 (NTSC)/352 x 288 (PAL)
Frame Rate	Up to 30/25 fps @ D1 resolution
Interface	10/100 MB Ethernet (RJ-45)
Supported Protocols <sup>a</sup>	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, IEEE 802.1x, QoS, ONVIF
Simultaneous Users	5 at D1 (NTSC: 720 x 480, PAL: 720 x 576)
Supported Web Browser	Internet Explorer (8.0+)
Supported Operating System	Windows 7 (32-bit / 64-bit)
Security	User account and password protection HTTPS, IP Filter, IEEE 802.1x
Audio Streaming	Full-duplex, Simplex
Audio Compression	G.711 / G.726 ADPCM / AAC



**Table A-3 HDZ30(X) Series Camera Specifications (cont'd)**

Specification	Description
<b>General Specifications</b>	
Environment	Indoor
Dimensions	Indoor: ø 7.5" x 10.8" (ø 191.5 mm x 275.1 mm)
Weight	4.85 lb (2.2 kg) With in-ceiling bracket: 6.83 lb (3.1 kg)
Operating Temperature	32°F to 122°F (0°C to 50°C) <sup>b</sup>
Relative Humidity	10% to 90%, non-condensing
Power Source	24 V AC ±10% and PoE+ (21 W)
Power Consumption	24 V AC: 20 W; PoE+: 21 W
Local Storage	MicroSDHC 32 GB support (card is not included) (see <a href="#">MicroSDHC Card Details on page 30</a> for microSDHC card support details)
MicroSDHC Card Function	Event trigger recording Continuous and Schedule recording Automatic recording when network goes down
<b>Regulatory</b>	
Emissions	North America: FCC Part 15B, ICES-003 EU: EN55022
Immunity	EN50130-4
Safety	North America: UL/CSA 60950-1, UL/CSA 60950-22 (outdoor models) EU: EN60950-1, EN60950-22 (outdoor models)
RoHS	EN50581
Emissions	North America: FCC Part 15B, ICES-003 EU: EN55022

<sup>a</sup> Some development may be required in specific user cases to support some of these protocols in the field, as they mature over time.

<sup>b</sup> Protecting the dome from direct sunlight in high temperature environments is advised.

## HDZ36E(X) Camera Specifications

**Table A-4 HDZ36E(X) Series Camera Specifications**

Specification	Description
<b>Camera Specifications</b>	
Scanning System	NTSC / PAL
Image Sensor	1/4" Sony CCD
Optical Zoom	36x

**Table A-4 HDZ36E(X) Series Camera Specifications (cont'd)**

<b>Specification</b>	<b>Description</b>
<b>Camera Specifications (cont'd)</b>	
Effective Pixels	NTSC: 480K; PAL: 570K
Horizontal Resolution	550 TVL
S/N Ratio	>50 dB (AGC Off)
Minimum Illumination	0.08 lux (color) / 0.005 lux (Black/White) @ F1.6, 30 IRE Max Aperture Ratio: F1.6 (Wide), F4.5 (Tele)
Focal Length	0.13 in. to 4.8 in. (3.4 mm to 122.4 mm)
Focus Mode	Auto / Manual
White Balance	Auto / Indoor / Outdoor / ATW / Manual
Iris Control	Auto / Manual
Electronic Shutter	1/1 ~ 1/10,000 sec
ACG Control	Auto / Manual (Max Gain limit settings for Full Auto, Shutter Priority, and Iris Priority modes)
Backlight Compensation	On / Off
Privacy Masks	16
Wide Dynamic Range	On / Off
Day / Night: IR Cut Filter	On / Off
Image Rotation	Flip / Mirror / Inverse / Portrait
Digital Noise Reduction (2D/3D)	On / Off
<b>Operation Specifications</b>	
Multi-Language GUI	English, French, German, Italian, Russian, Spanish, Portuguese, Dutch, Czech, Polish, Japanese, Traditional Chinese, Simple Chinese
Pan Travel	360° endless
Tilt Travel	-10° to 190°
Manual Pan Speed	0.5° to 200°/s
Manual Tilt Speed	0.5° to 84°/s
Presets	256
Preset Accuracy	0.225°
Preset Speed	Up to 400°/s
Preset Tour	8
Auto Pan	4
Mimic Tour	8
Proportional Pan & Tilt	On / Off (Pan and tilt speed proportional to zoom ratio)

**Table A-4 HDZ36E(X) Series Camera Specifications (cont'd)**

<b>Specification</b>	<b>Description</b>
<b>Operation Specifications (cont'd)</b>	
Auto-Resume after Power Loss	Yes
Home Function	Preset, Preset Tour, Auto Pan, Mimic Tour
Auto Flip	Digital / Mechanical / Off
Digital Slow Shutter	On / Off
Motion Detection	On / Off
Alarm In	4
Alarm Reaction	Preset, Preset Tour, Auto Pan, Mimic Tour
Alarm Out	1
Event Notification	HTTP, FTP, SMTP
<b>Network Specifications</b>	
Video Compression	H.264 High Profile / MJPEG
Video Streaming	Quad streaming: H.264 and MJPEG Controllable frame rate and bandwidth. Constant or variable bit rate.
Video Resolution	D1: 720 x 480 (NTSC)/720 x 576 (PAL) CIF: 352 x 240 (NTSC)/ 352 x 288 (PAL)
Frame Rate	Up to 30/25 fps @ D1 resolution
Interface	10/100 MB Ethernet (RJ-45)
Supported Protocols <sup>a</sup>	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, IEEE 802.1x, QoS, ONVIF
Simultaneous Users	5 at D1 (NTSC: 720 x 480, PAL: 720 x 576)
Supported Web Browser	Internet Explorer (8.0+)
Supported Operating System	Windows 7 (32-bit / 64-bit)
Security	User account and password protection HTTPS, IP Filter, IEEE 802.1x
Audio Streaming	Full-duplex, Simplex
Audio Compression	G.711 / G.726 ADPCM / AAC
<b>General Specifications</b>	
Environment	Outdoor
Dimensions	Outdoor (with sunshield): $\varnothing$ 7.5" x 10.7" ( $\varnothing$ 191.5 mm x 270.5 mm)
Weight	5.73 lb (2.6 kg), with sunshield
Operating Temperature	-40°F to 122°F (-40°C to 50°C) <sup>b</sup>
Relative Humidity	10% to 90%, non-condensing

**Table A-4 HDZ36E(X) Series Camera Specifications (cont'd)**

<b>Specification</b>	<b>Description</b>
<b>General Specifications (cont'd)</b>	
Waterproof Standard	IP66 standard (HDZ Outdoor)
Power Source	24 VAC $\pm$ 10% and PoE++ (57 W)
Power Consumption	24 V AC: 50 W (with heater); PoE++: 57 W (with heater)
Local Storage	MicroSDHC 32 GB support (card is not included) (see <a href="#">MicroSDHC Card Details on page 30</a> for microSDHC card support details)
Micro SD Card Function	Event trigger recording Continuous and Schedule recording Automatic recording when network goes down
<b>Regulatory</b>	
Emissions	North America: FCC Part 15B, ICES-003 EU: EN55022
Immunity	EN50130-4
Safety	North America: UL/CSA 60950-1, UL/CSA 60950-22 (outdoor models) EU: EN60950-1, EN60950-22 (outdoor models)
RoHS	EN50581
Emissions	North America: FCC Part 15B, ICES-003 EU: EN55022

<sup>a</sup> Some development may be required in specific user cases to support some of these protocols in the field, as they mature over time.

<sup>b</sup> Protecting the dome from direct sunlight in high temperature environments is advised.

# B

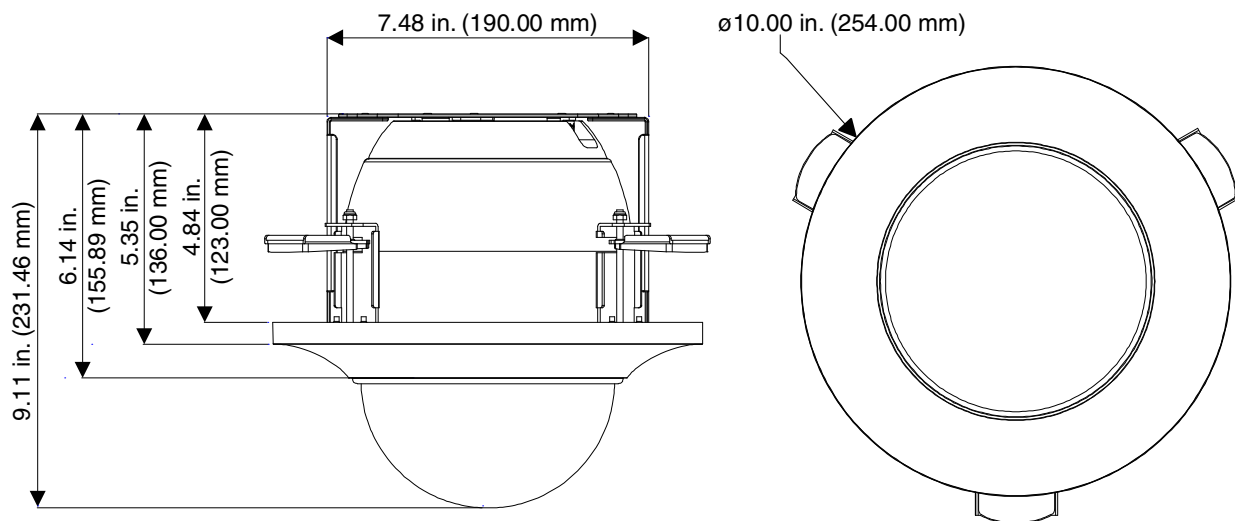
## In-Ceiling Bracket Installation

This document describes how to install an HDZ Series camera in a suspended ceiling using the HDZINBKT in-ceiling bracket.

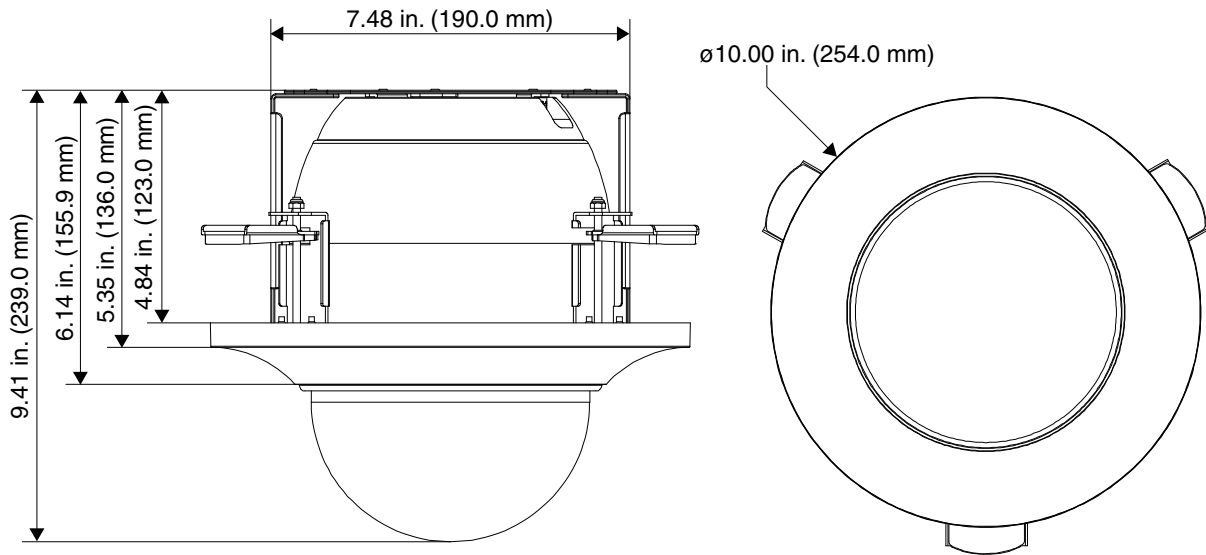
**CAUTION** Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.

**CAUTION** Ensure that the installation area can safely support the weight of the camera.

Figure B-1 HDZ20HD(X)/HDZ30(X) In-Ceiling Bracket Dimensions



**Figure B-2 HDZ30HD In-Ceiling Bracket Dimensions**



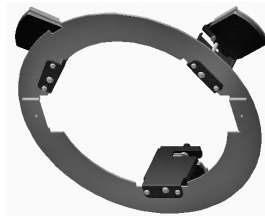
---

## Package Contents

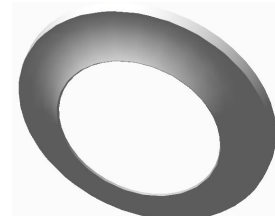
---



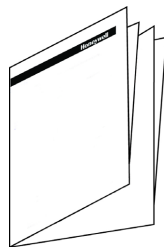
Bracket Frame



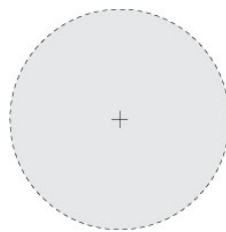
Ceiling Support Ring



Trim Ring



Quick Installation Guide



Ceiling Template

## Recommended

Ceiling Support Plate, Honeywell Part Number **517082-7130** (not supplied)

## Installing the In-Ceiling Bracket

It is recommended that you use a ceiling support plate (Honeywell part number 517082-7130) when installing the HDZINBKT in-ceiling bracket in a suspended ceiling.

### Step 1: Cut a hole in the ceiling

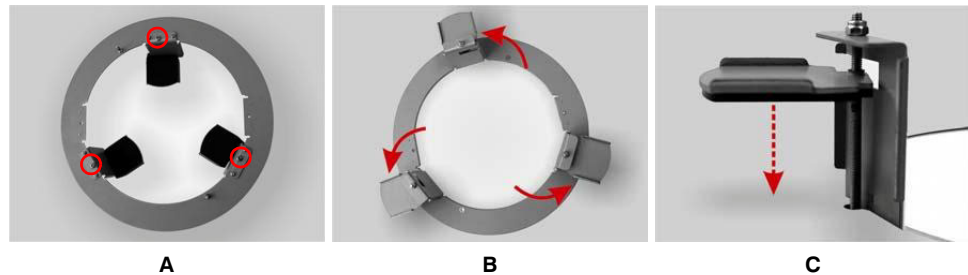
1. Select the location where you want to install the camera. The installation area must be able to safely support the weight of the camera.
2. Do one of the following:

Installation with Ceiling Support Plate	Installation without Ceiling Support Plate
<ol style="list-style-type: none"> <li>a. Remove the ceiling tile at the selected location and fit the ceiling tile inside the ceiling support plate. If necessary, trim the edges of the tile so that it fits snugly inside the support plate.</li> <li>b. Cut a hole in the ceiling tile 197 mm (7.75 in.) in diameter matching the opening in the ceiling support plate.</li> <li>c. Replace the ceiling tile (with ceiling support plate attached) in the ceiling.</li> </ol>	<p>Place the supplied ceiling template on the ceiling at the selected location and cut around the template.</p>

3. Attach a safety cable (not supplied) to a grid support or other structural support in the ceiling.

### Step 2: Install the ceiling support ring

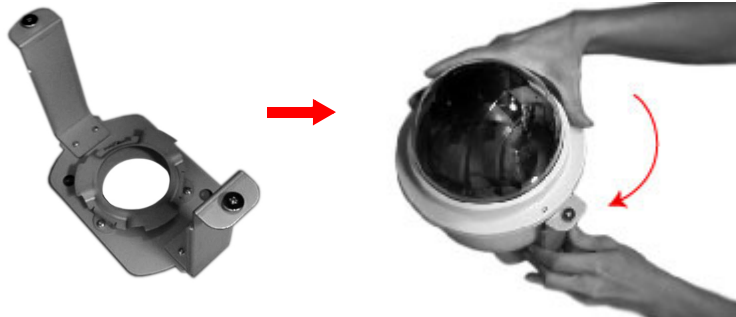
1. Insert the ceiling support ring (with wing tabs turned inward) into the opening in the ceiling.
2. Turn the wing tabs outward, and then tighten the three M4×70 screws located on the underside of the ceiling support ring to lower the wing tabs against the ceiling tile.



3. Continue tightening the screws until the ceiling support ring is tight against the ceiling.

### Step 3: Attach the camera to bracket frame

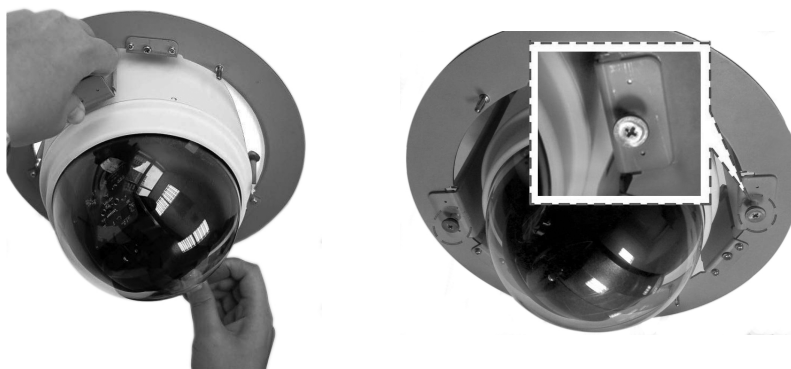
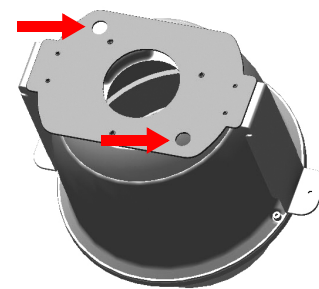
1. Place the camera against the base of the bracket frame and twist it clockwise until it locks in place.



2. Tighten the pre-installed Torx screw on the camera housing to secure the camera to the bracket frame.

### Step 4: Install the camera and bracket assembly

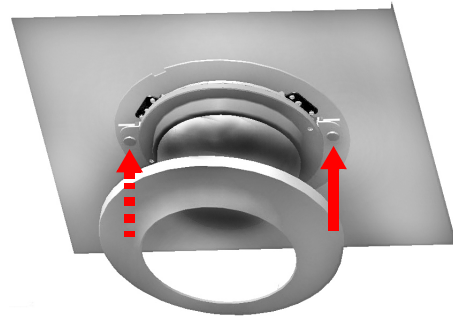
1. Pull the loose end of the safety cable through the opening in the ceiling and attach it to one of the eyelets on the bracket frame.
2. Pull the camera cable(s) through the opening in the ceiling and connect the cable(s) to the camera.
3. Insert the camera and bracket assembly into the opening in the ceiling and attach the camera and bracket assembly to the ceiling support ring using the two supplied thumb screws. Use a Phillips driver to tighten the screws.





**Step 5: Attach the trim ring**

Attach the trim ring to the ceiling support ring by lining up the two magnets on the trim ring with the two thumb screws on the ceiling support ring.



---

**Note** No screws are needed to attach the trim ring.

---



# Index

## Numerics

2DNR. See digital noise reduction  
3DNR. See digital noise reduction

## A

accessing camera from a browser [38](#)  
ActiveX settings, enabling in Internet Explorer [38](#)  
administrator password, changing [110](#)  
alarm output [30](#)  
alarms  
    assigning a PTZ camera function [94](#)  
    configuring inputs [90](#)  
    disabling [90](#)  
    enabling [90](#)  
    enabling alarm relay output [92](#)  
    normally closed [90](#)  
    normally open [90](#)  
    recording clip to a network storage device [93](#)  
    recording clip to an SD card [93](#)  
    saving settings [95](#)  
    sending an HTTP notification [94](#)  
    sending messages to an email server [92](#), [99](#)  
    sending messages to an FTP server [92](#), [99](#)  
    setting notifications [87](#)  
    specifying a file name format [94](#)  
    uploading images to an email server [92](#)  
    uploading images to an FTP server [92](#)  
assigning camera a static IP [36](#)  
audio  
    bit rate [56](#)  
    enabling recording to SD card [56](#)  
    full-duplex [55](#)  
    gain [56](#)  
    line-out [30](#)  
    mic-in [30](#)  
    recording [56](#)  
    simplex (listen only) [55](#)  
    simplex (talk only) [55](#)  
auto calibration [83](#)  
auto pan  
    deleting [62](#)  
    programming [61](#)  
    running [62](#)

## B

backlight compensation [78](#)  
bit rates [50](#), [51](#), [56](#)

## C

cables  
    alarm [30](#)  
    audio [30](#)  
    connections [29](#)  
    crossover [31](#)  
    network [31](#)  
camera settings  
    backlight compensation [78](#)  
    exposure [74](#)  
    white balance [77](#)  
camera specifications [141](#)  
cautions [3](#)  
ceiling mount [26](#)  
Certificate Authority [113](#)  
certificates  
    creating self-signed certificate [114](#)  
    installing CA-issued certificates [115](#)  
    requesting CA-issued certificate [115](#)  
CIF resolution [46](#)  
compression settings. See video compression  
connections [29](#)  
connectors  
    alarm [30](#)  
    audio [30](#)  
    network [31](#)  
    power [32](#)  
    RJ45 [31](#)  
constant bit rate (CBR) mode [51](#)

## D

D1 resolution [46](#)  
defaults, restore factory settings [86](#), [134](#)  
digital noise reduction  
    2D [84](#)  
    3D [84](#)  
dimensions [20](#)  
disk cleanup settings [130](#)

DSCP (Differentiated Services Code Point) value [121](#)  
 Dynamic DNS (DDNS) service [125](#)

## E

email server [92, 99](#)  
 exposure compensation [79](#)  
 exposure settings [74](#)  
 eyelet [25](#)

## F

flat roof mount [28](#)  
 frame rate control [53](#)  
 FTP server [92, 99](#)

## G

G.711 speech codec [56](#)  
 G.726 speech codec [56](#)  
 GOV length, setting [48](#)

## H

H.264-1 bit rate [50](#)  
 H.264-2 bit rate [51](#)  
 HDZ camera
 

- accessing from a browser [38](#)
- assembling [24](#)
- assigning a static IP [36](#)
- connections [29](#)
- dimensions [20](#)
- features [19](#)
- finding on a network [35](#)
- mounting [24](#)
- parts list [23](#)
- specifications [141](#)

 home function [66](#)  
 Honeywell Device Search [35](#)  
 HTTP notification [94, 100](#)  
 HTTPS [113, 120](#)

## I

ICR function. See IR cut filter  
 IEEE 802.1X [115](#)  
 I-frames [48](#)  
 image
 

- calibration [83](#)
- flip [80](#)
- sharpness [79](#)

 in-ceiling bracket [153](#)  
 IP address
 

- dynamic (DHCP) [118, 119](#)
- static [36, 118](#)

 IP filter [116](#)  
 IPv6 address configuration [120](#)  
 IR cut filter [82](#)

## L

lanyard [25](#)  
 LED indicators [31](#)

## M

MAC address [36](#)  
 microSDHC card [30, 93, 95, 98, 129](#)  
 mimic tours
 

- deleting [61](#)
- programming [59](#)
- running [60](#)

 MJPEG over HTTP [53, 120](#)  
 motion detection
 

- enabling [96](#)
- enabling alarm relay output [98](#)
- saving settings [101](#)
- sending an HTTP notification [100](#)
- setting a motion detection window [96](#)
- setting sensitivity [97](#)
- specifying a file name format [101](#)
- uploading images to an email server [99](#)
- uploading images to an FTP server [99](#)
- uploading images to an SD card [98](#)

 Motion JPEG quality [50](#)  
 mounting
 

- ceiling mount [26](#)
- flat roof mount [28](#)
- in-ceiling bracket [153](#)
- overview [24](#)
- parapet mount [28](#)
- wall mount [26](#)

 multicast mode [53](#)

## N

NAS [93](#)  
 network attached storage device [93](#)  
 network failure detection [101](#)  
 NTP server [109](#)

## O

OCX protocol
 

- MJPEG over HTTP [53](#)
- multicast mode [53](#)
- RTP over RTSP [52](#)
- RTP over UDP [52](#)
- RTSP over HTTP [53](#)

## P

parapet mount [28](#)  
 parts list [23](#)  
 P-frames [48](#)  
 port settings, changing [120](#)  
 PPPoE [120](#)  
 preset tours
 

- deleting [65](#)

- programming [63](#)
- running [64](#)
- presets
  - deleting [59](#)
  - going to [59](#)
  - programming [58](#)
- privacy masks
  - creating [70](#), [71](#)
  - deleting [71](#), [73](#)
  - editing position [71](#), [73](#)

## Q

Quality of Service (QoS) [120](#)

## R

- regulatory statements [3](#)
- related documents [18](#)
- resolution. See video resolution
- restore default settings [86](#), [134](#)
- roof mount [28](#)
- RTP over RTSP [52](#)
- RTP over UDP [52](#)
- RTSP [120](#)
- RTSP over HTTP [53](#)

## S

- safety instructions [5](#)
- securing camera [25](#)
- servers
  - email [92](#), [99](#)
  - FTP [92](#), [99](#)
- Simple Network Management Protocol (SNMP) [121](#)
- specifications [141](#)

- speed by zoom [81](#)
- system clock, setting [107](#), [109](#)
- system requirements [35](#)

## T

- text overlay [47](#)
- tilt angle [68](#), [80](#)
- trap reporting [123](#)

## U

- UPnP [123](#)
- users
  - adding [112](#)
  - deleting [112](#)
  - viewing login information [113](#)
  - viewing privileges [113](#)

## V

- video compression
  - setting [49](#)
- video OCX protocol [52](#)
- video resolution [46](#)
- video stream quality [50](#)

## W

- wall mount [26](#)
- warnings [3](#)
- warranty [5](#)
- web client interface [40](#)
- white balance settings [77](#)
- wide dynamic range (WDR) [82](#)





**Honeywell Security Products Americas (Head Office)**

2700 Blankenbaker Pkwy, Suite 150

Louisville, KY 40299, USA

[www.honeywell.com/security](http://www.honeywell.com/security)

☎ +1 800 323 4576

**Honeywell Security Northern Europe**

Ampèrestraat 41

1446 TR Purmerend, The Netherlands

[www.honeywell.com/security/nl](http://www.honeywell.com/security/nl)

☎ +31 (0) 299 410 200

**Honeywell Security Europe/South Africa**

Aston Fields Road, Whitehouse Industrial Estate

Runcorn, WA7 3DL, United Kingdom

[www.honeywell.com/security/uk](http://www.honeywell.com/security/uk)

☎ +44 (0) 1928 754 028

**Honeywell Security Deutschland**

Johannes-Mauthe-Straße 14

D-72458 Albstadt, Germany

[www.honeywell.com/security/de](http://www.honeywell.com/security/de)

☎ +49 (0) 7431 801-0

**Honeywell Security Products Americas  
Caribbean/Latin America**

9315 NW 112th Ave.

Miami, FL 33178, USA

[www.honeywell.com/security/clar](http://www.honeywell.com/security/clar)

☎ +1 305 805 8188

**Honeywell Security France**

Immeuble Lavoisier

Parc de Haute Technologie

3-7 rue Georges Besse

92160 Antony, France

[www.honeywell.com/security/fr](http://www.honeywell.com/security/fr)

☎ +33 (0) 1 40 96 20 50

**Honeywell Security Pacific**

Level 3, 2 Richardson Place

North Ryde, NSW 2113, Australia

[www.asia.security.honeywell.com](http://www.asia.security.honeywell.com)

☎ +61 2 9353 7000

**Honeywell Security Italia SpA**

Via della Resistenza 53/59

20090 Buccinasco

Milan, Italy

[www.honeywell.com/security/it](http://www.honeywell.com/security/it)

☎ +39 (0) 2 4888 051

**Honeywell Security Asia**

35F Tower A, City Center, 100 Zun Yi Road

Shanghai 200051, China

[www.asia.security.honeywell.com](http://www.asia.security.honeywell.com)

☎ +86 21 5257 4568

**Honeywell Security Middle East/N. Africa**

Emaar Business Park, Sheikh Zayed Road

Building No. 2, Office No. 30

Post Office Box 232362

Dubai, United Arab Emirates

[www.honeywell.com/security/me](http://www.honeywell.com/security/me)

☎ +971 (0) 4 450 5800

**Honeywell Security España**

Avenida de Italia, nº 7, 2ª planta

C.T. Coslada

28821 Coslada, Madrid, Spain

[www.honeywell.com/security/es](http://www.honeywell.com/security/es)

☎ +34 902 667 800

# Honeywell

[www.honeywell.com/security](http://www.honeywell.com/security)

+1 800 323 4576 (North America only)

<https://www.honeywellsystems.com/ss/techsupp/index.html>

Document 800-11873V4 – Rev A – 07/2014

© 2014 Honeywell International Inc. All rights reserved. No part of this publication may be reproduced by any means without written permission from Honeywell. The information in this publication is believed to be accurate in all respects. However, Honeywell cannot assume responsibility for any consequences resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.