Honeywell | Performance Series

# Performance Series IP Cameras Software Configuration Guide

| | | |
|---|---|---|
| H2W2PRV3 | HBW2PR1 | HEW2PR2 |
| H2W4PRV3 | HBW2PR2 | HEW2PRW1 |
| H4W2PRV2 | HBW4PR1 | HEW4PR2 |
| H4W4PRV2 | HBW4PR2 | HEW4PR3 |
| H4W4PRV3 | HEW2PR1 | HEW4PRW3 |

**Recommended**

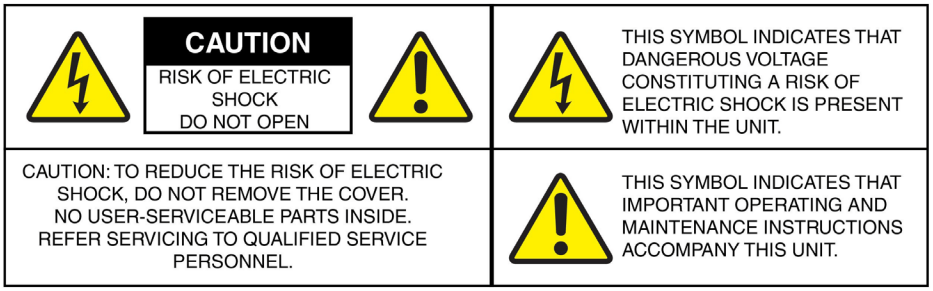
Find the latest version of this and other Performance Series IP camera documents on the Honeywell Video website. Go to: http://www.honeywellvideo.com/products/cameras/ip/index.html to find your camera and view/download the latest documentation.

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

| Issue | Date | Revisions |
|---|---|---|
| A | 07/2016 | New document. |
| B | 09/2016 | Added specification and dimension information for MFZ IP cameras |
| C | 11/2016 | Edited Manufacturer's Declaration of Conformance |

# 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 this product is intended for use with a Listed Power Adapter marked with "Limited Power Source", "LPS", on the unit, output rated 12 V DC, minimum 0.7A, Tma=60°C or from Power over Ethernet (PoE) provided by Listed Information Technology Equipment meeting the IEEE 802.3af PoE standard.**

**The Ethernet connection is not intended to be connected to exposed (outside plant) networks. Do not connect two power sources to the camera at the same time.**

**CAUTION** Invisible LED radiation (850 nm). Avoid exposure to beam.

# Regulatory Statements

## FCC Compliance Statement

**Information to the User**: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

| | |
|---|---|
| **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 B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

# Manufacturer's Declaration of Conformance

The equipment supplied with this guide meets the provisions of the following European Union council directives:

- 2014/30/EU for EMC
- 2001/95/EC for safety, and
- 2011/65/EU for RoHS compliance.

## 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.
   - Any wall or ceiling mounting of the product should follow the manufacturer's instructions and use a mounting kit approved or recommended by the manufacturer.
3. **POWER SOURCES –** This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your facility, consult your product dealer or local power company.

4. **MOUNTING SYSTEM** - Use only with a mounting system recommended by the manufacturer, or sold with the product.
5. **ATTACHMENTS/ACCESSORIES** - Do not use attachments/accessories not recommended by the product manufacturer as they may result in the risk of fire, electric shock, or injury to persons.
6. **CLEANING** - Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
7. **SERVICING** - Do not attempt to service this unit yourself. Refer all servicing to qualified service personnel.
8. **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.

# 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**

# Table of Contents

# Figures

# Tables

# About This Document

This document provides instructions for accessing, configuring, and operating the Performance Series IP cameras. This document is intended for system installers, administrators, and operators.

## Overview of Contents

This document contains the following chapters and appendixes:

- *Chapter 1, Introduction*, provides an overview of the main features of the Performance Series IP cameras.
- *Chapter 2, Getting Started*, describes how to install the ConfigTool to access the camera remotely from a web browser. It also describes how to update your camera's firmware.
- *Chapter 3, Logging In and Viewing Live Video*, describes how to log in to a camera and the Live View interface.
- *Chapter 4, Playing Back Video*, describes how to search for recorded video and snapshots and how t o export them (H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2 only).
- *Chapter 5, Configuring Camera Settings*, describes all configurations, including camera configurations, network configurations, and storage configurations.
- *Chapter 6, Configuring Events and Alarms*, shows how to set up notifications for alarm inputs, motion detection, and network failure events.
- *Chapter 7, Troubleshooting*, lists common problems and solutions.
- *Chapter 8, Camera Specifications*, lists the specifications of the Performance Series IP cameras.

# 1 Introduction

This chapter contains the following sections:



## Overview

Honeywell's Performance Series IP cameras integrate traditional camera and network video technology, combining video data collection and transmission. These flexible, fully featured cameras are the ideal choice for a wide range of indoor and outdoor surveillance applications.

Plug-and-play compatible with Honeywell 4/8/16-channel Performance Series Embedded NVRs, the cameras offer 2 or 4 megapixel resolution at up to 30 frames per second and use video compression technology to save bandwidth and storage while ensuring maximum video quality. All of the cameras are True Day/Night with intelligent IR capability, providing up to 200 ft (60 m) of illumination in low-light and nighttime scenes. Also, all of the cameras support WDR function at up to 120 dB.

Each camera comes with configurable motion detection and camera tamper detection and supports up to 4 user-defined privacy mask areas. In addition to a 12 VDC adapter, all of the cameras support Power over Ethernet (PoE), eliminating the need for a separate power supply and associated wiring. Select models also support local video storage on microSDHC cards (up to 128 GB) when network service is interrupted.

You can monitor Performance Series IP cameras from anywhere, at any time, using the free HonView Touch mobile app for both Apple and Android smartphones and tablets.

## Key Features

Key features of the Performance Series IP cameras include the following:

**Camera**

- Day/Night mode auto-switch
- Picture parameter setup, such as electronic shutter and gain
- Motion detection
- Wide Dynamic Range
- Backlight compensation
- Video watermark function to prevent modification
- IR night vision

**Storage**

- Central server backup (configure in Alarm or Schedule settings)

- Recording over Internet, files stored on client PC
- Network storage (FTP)

**Network Monitoring**

- One-channel video data transmission to a network
- Terminal and decoding
- Delay time less than 270 ms (network bandwidth support required)
- Up to 20 connections
- Compatible with the following network protocols: IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, Bonjour, 802.1X

**Network Management**

- Camera configuration and management via Ethernet
- Device management via Internet or client PC

**User Management**

- Each user belongs to specific group
- Different user rights for each group
- User rights cannot exceed group rights

**System Management**

- Log function
- System resource information and running real-time status display

# Camera Dimensions

This section displays the dimensions and main components/connectors of each Performance Series IP camera.

## HEW2PR1/HEW4PR3/HEW2PRW1/HEW4PRW3 Ball Cameras

**Figure 1-1 HEW2PR1/HEW4PR3/HEW2PRW1/HEW4PRW3 Dimensions**

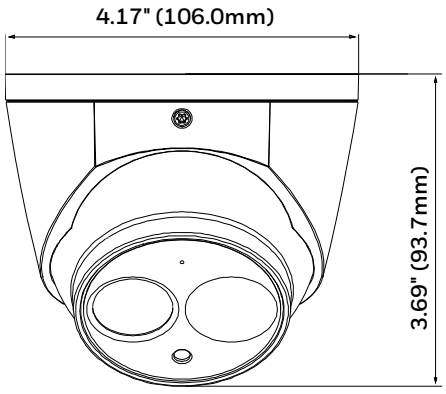
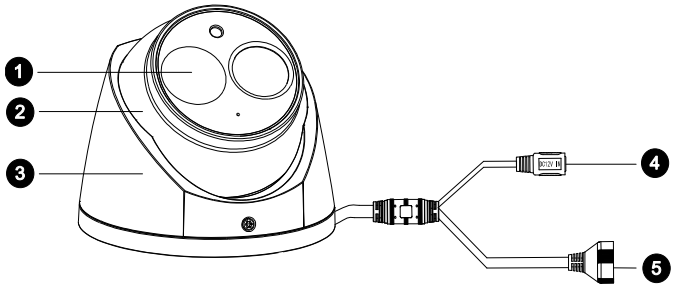


**Figure 1-2 HEW2PR1/HEW4PR3/HEW2PRW1/HEW4PRW3 Components**




| | |
|---|---|
| 1 | Lens |
| 2 | Camera module |
| 3 | Camera enclosure |
| 4 | 12 VDC connector |
| 5 | LAN connector |

# H2W2PRV3/H2W4PRV3 Micro Dome Cameras

**Figure 1-3 H2W2PRV3/H2W4PRV3 Dimensions**

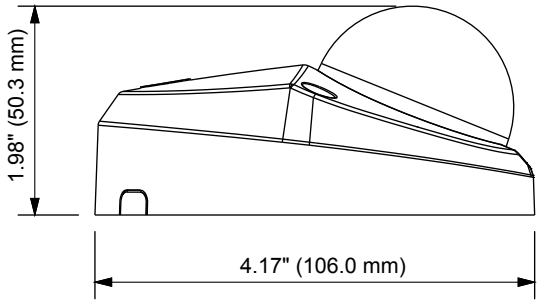
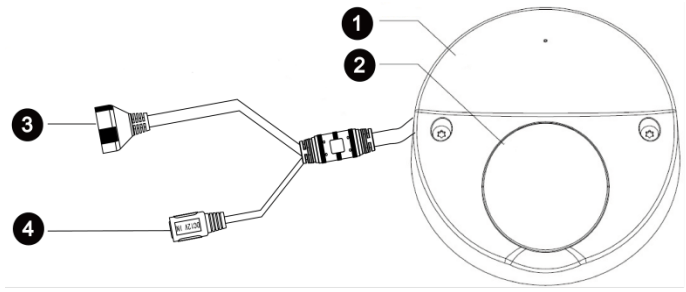



**Figure 1-4 H2W2PRV3/H2W4PRV3 Components**




| | |
|---|---|
| 1 | Enclosure |
| 2 | Dome Cover |
| 3 | LAN connector |
| 4 | 12 VDC connector |

# HBW2PR1/HBW4PR1 Bullet Camera

**Figure 1-5 HBW2PR1/HBW4PR1 Dimensions**

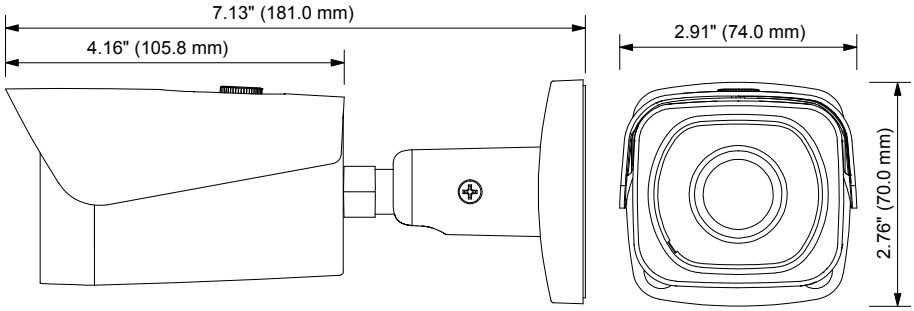
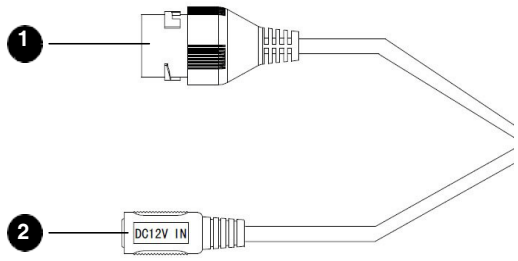



**Figure 1-6 HBW2PR1/HBW4PR1 Components**




| | |
|---|---|
| 1 | LAN connector |
| 2 | 12 VDC connector |

# H4W4PRV3 Mini Dome Camera

**Figure 1-7 H4W4PRV3 Dimensions**

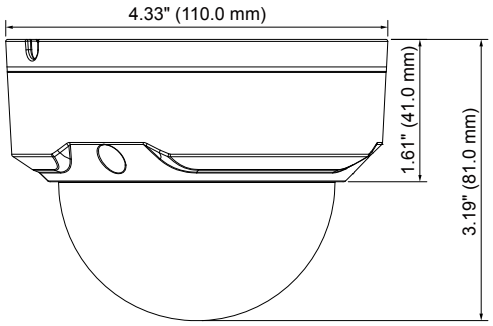
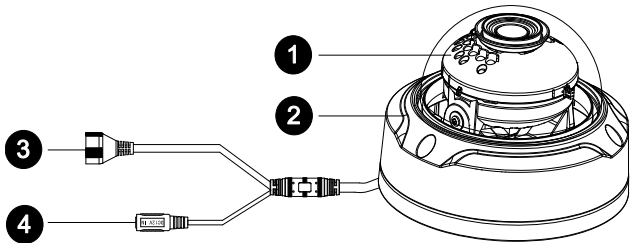



**Figure 1-8 H4W4PRV3 Components**




| | |
|---|---|
| 1 | Camera module |
| 2 | Camera enclosure |
| 3 | LAN connector |
| 4 | 12 VDC connector |

# H4W2PRV2/H4W4PRV2 Mini Dome Camera

**Figure 1-9 H4W2PRV2/H4W4PRV2 Dimensions**

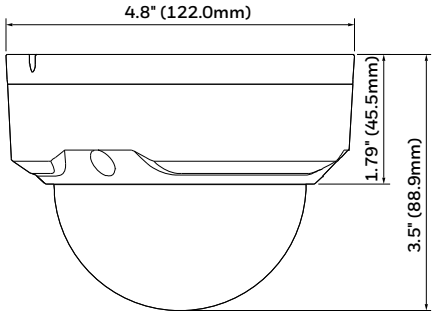
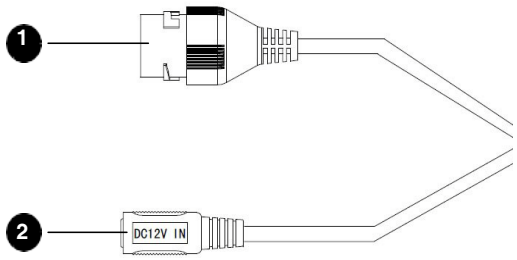



**Figure 1-10 H4W2PRV2/H4W4PRV2 Components**




| | |
|---|---|
| 1 | LAN connector |
| 2 | 12 VDC connector |

# HEW2PR2/HEW4PR2 Ball Camera

**Figure 1-11 HEW2PR2/HEW4PR2 Dimensions**

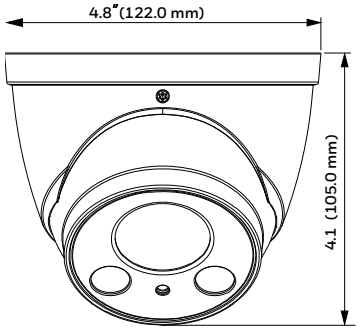
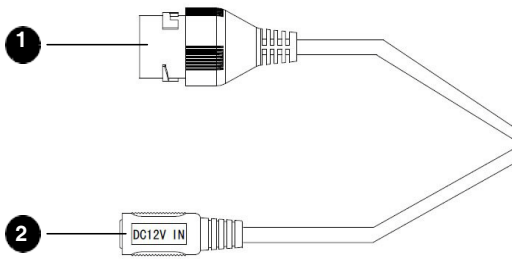



**Figure 1-12 HEW2PR2/HEW4PR2 Components**




| | |
|---|---|
| 1 | LAN connector |
| 2 | 12 VDC connector |

# HBW2PR2/HBW4PR2 Bullet Camera

**Figure 1-13 HBW2PR2/HBW4PR2 Dimensions**

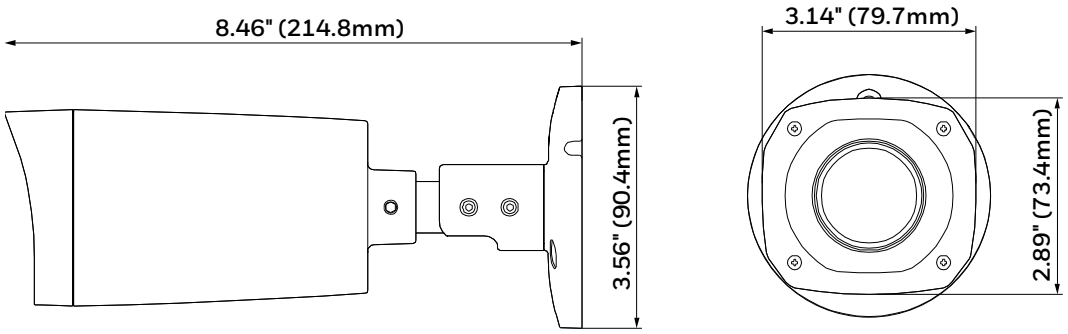
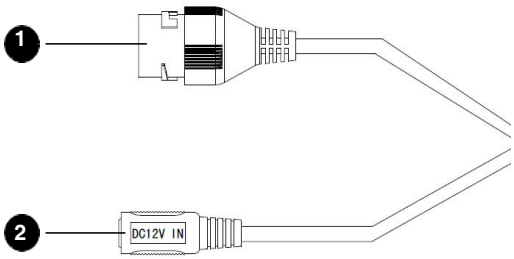



**Figure 1-14 HBW2PR2/HBW4PR2 Components**




| | |
|---|---|
| 1 | LAN connector |
| 2 | 12 VDC connector |

# 2 Getting Started

This chapter contains the following sections:



## Installing the ConfigTool IP Utility

Before you can start using your camera, you must install the ConfigTool IP utility on your PC.

1. Insert the software CD that came with your camera into your PC's disk drive.
2. Open the **Honeywell ConfigTool** folder, and then double-click **Honeywell ConfigTool.**exe.
3. On the ConfigTool welcome screen, click **Next**.
4. Read the User License Agreement. If you agree, select **I agree**.
5. If you want, you can change the installation directory (by default, ConfigTool will be installed in C:\Program Files). To proceed with the installation, click **Install**.
6. If the installation is successful, the message "Installation is complete!" appears. Click **Enjoy Now** to open ConfigTool.

## Discovering Your Device on the Network

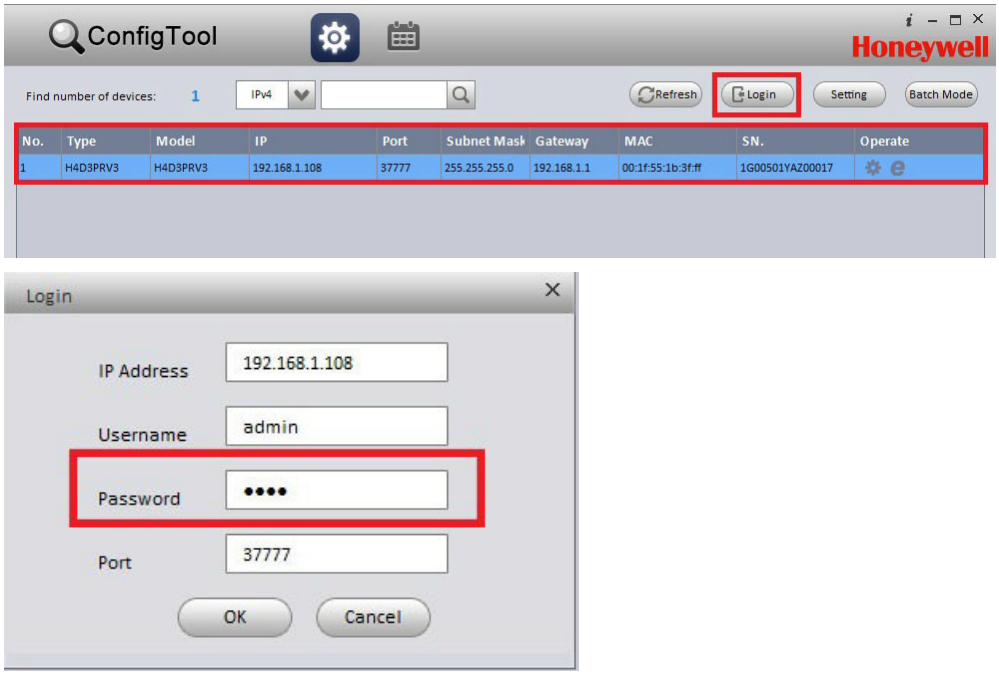
Use ConfigTool to discover your IP device(s) on the network. To discover your device(s), open ConfigTool. All of the connected IP devices on the network are listed. To refresh the list, click **Refresh**.

## Assigning a New IP Address to Your Device

The current IP address of your device appears in the **IP** column of the ConfigTool main interface. If you want, you can assign a new static IP address to the device.

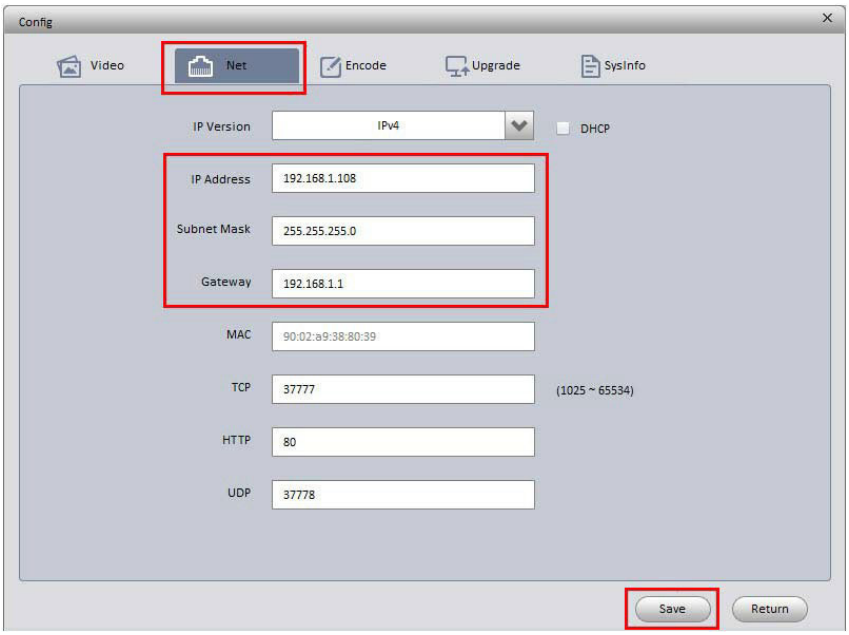
1. From the list of devices in ConfigTool, click the device that you want to assign a new IP address to.
2. Click **Login**, type the login user name and password for the device (the default user name is **admin** and the default password is **1234**), and then click **OK**.

**Figure 2-1 Log In to a Device**




3. On the **Config** screen, click the **Net** tab, type the new IP settings in the **IP Address**, **Subnet Mask**, and **Gateway** fields, and then click **Save**.

**Figure 2-2 Network Settings**



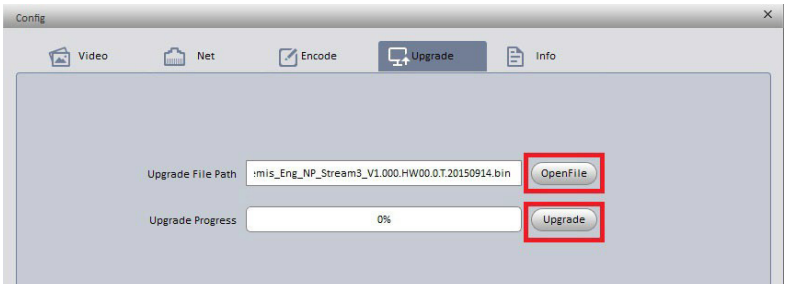
# Upgrading Your Device's Firmware

Before you begin using your camera, make sure you have the latest firmware installed. You can upgrade a single device or multiple devices at the same time.

## To upgrade a single device:

1. From the list of devices in ConfigTool, click the device that you want to upgrade.
2. Click **Login**, type the login user name and password for the device (the default user name is **admin** and the default password is **1234**), and then click **OK**.
3. On the **Config** screen, click the **Upgrade** tab.
4. Click **OpenFile**, navigate to the directory that contains the firmware file, and then click **Upgrade**.

**Figure 2-3 Upgrade Screen**

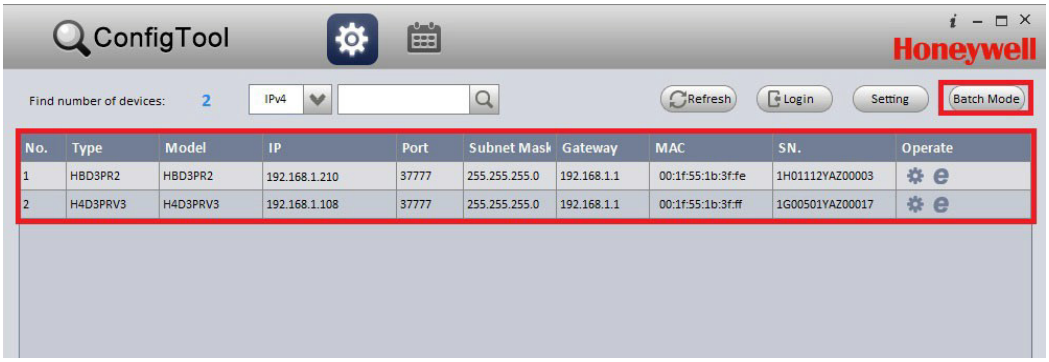



When the upgrade is complete, the device will reboot. While the device is rebooting, the message "Device is offline: [*device IP address*]" appears.

## To upgrade multiple devices simultaneously

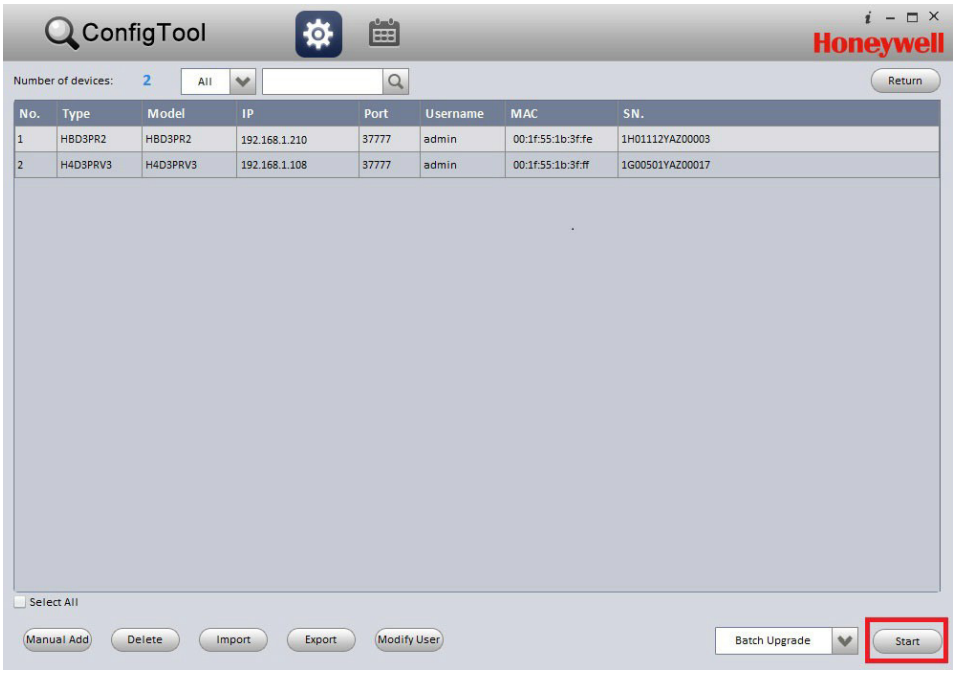
1. In ConfigTool, click **Batch Mode**.

**Figure 2-4 Select Batch Mode**



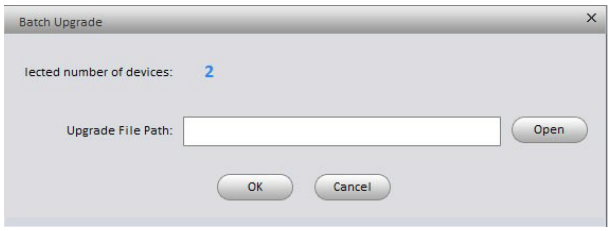

2. From the list of devices, click all of the devices that you want to upgrade, and then click **Start.**

**Figure 2-5 Batch Mode Screen**




3. On the **Batch Upgrade** screen, click **Open**, navigate to the directory that contains the firmware file, and then click **OK**.

**Figure 2-6 Batch Upgrade Dialog Box**




When the upgrade is complete, the devices will reboot. While a device is rebooting, the message "Device is offline: [*device IP address*]" appears.

# Opening a Web Client

You can configure individual camera settings using the web client. To open the web client from ConfigTool, click the device that you want to open a web client for, and then, in the **Operate** column, click the Microsoft Internet Explorer icon. The web client opens in your browser.

# 3 Logging In and Viewing Live Video

This chapter contains the following sections:



## Logging In to the Camera via the Web Client

Using the web client, you can monitor live video, play back recorded video, and configure camera settings.

### Before You Begin

Before you log in to the web client, ensure that the following conditions are met:

- The camera is properly connected to the network.
- The camera's IP address and the PC's IP address are in the same network segment. If there is a router, set the corresponding gateway and subnet mask.
- A network connection has been established. To check this, ping the camera's IP address. (Enter "ping [IP address]").

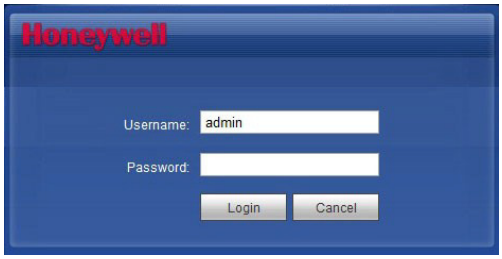
### Logging In to the Camera

1. Open **Internet Explorer**, type the camera's IP address in the address bar, and then click **Enter**. For example, if your camera's IP address is **192.168.1.108**, you would type http://192.168.1.108.

   **Note** Only Internet Explorer 11 and Firefox 46.0.1 (or later) browsers are supported.

2. On the login screen, enter the admin user name and password, and then click **Login**. The default user name is **admin** (case-sensitive) and the default password is **1234**.

   **Figure 3-1 Login Window**



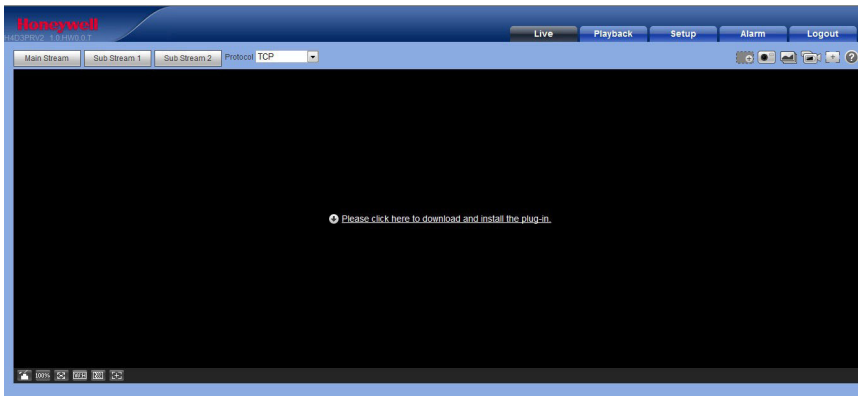
# Installing the Browser Plug-In

If you are logging in for the first time, you will be prompted to download and install a browser plug-in. Follow the on-screen instructions to install the plug-in. When the installation is complete, the web client automatically refreshes and the Live View interface opens (*Figure 3-5*).

If this is your first time logging in, you will see the following message:

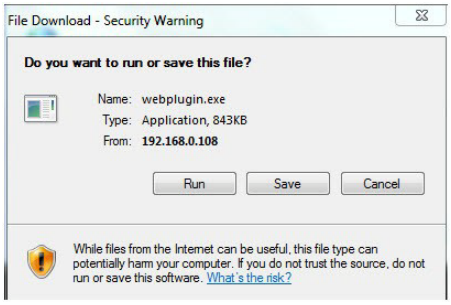
**Please click here to download and install the plug-in.**

**Figure 3-2 First-time Login Message**




1. Click **Please click here to download and install the plug-in**. A message appears asking if you want to run or save the file.

   **Figure 3-3 File Download Security Warning Message for the Plug-in**

2. Click **Run**. A security warning appears.

   **Figure 3-4 Internet Explorer - Security Warning**

3. Click **Run** to start the installation. The **Ready to Install** window appears.
4. Click **Install**.

When the plug-in installation is complete, the installation page closes and the web client displays the Live View interface (*Figure 3-5*).

# Using the Live View Interface

The Live View interface has four areas with controls and options for monitoring live video.

**Figure 3-5 Live View Interface**


1. Video encoder settings area (see *Video Encoder Settings, page 13*)
2. System menus (see *System Menus, page 14*)
3. Live View controls toolbar (see *Live View Controls, page 14*)
4. Live View window settings toolbar (see *Live View Window Configuration, page 15*)

## Video Encoder Settings

In the video encoder settings area of the Live View interface, you can choose a stream and set the stream protocol.

**Figure 3-6 Video Encoder Settings**


**Table 3-1 Video Encoder Settings**

| Setting | Description |
|---|---|
| Main Stream | In a normal network bandwidth environment, the main stream can record audio/video files and support a network monitor.<br>Set the main stream resolution if your camera supports it. |
| Sub Stream 1/Sub Stream 2 | If the network bandwidth is not sufficient, you can use the sub stream to support a network monitor. |
| Protocol | You can select the stream media protocol from the drop-down list. There are three options: **TCP**, **UDP**, or **Multicast**. |

# System Menus

**Figure 3-7 System Menu**


When you log in to the camera using the web client, the Live View interface opens by default. To access the Playback, Setup, and Alarm interfaces, or to log out, select the corresponding tab in the system menus area.

# Live View Controls

From the Live View controls toolbar, you can zoom in on a scene, take a snapshot, or manually record video. These controls are described in more detail below.

**Figure 3-8 Live View Window Controls**

**Table 3-2 Live View Window Controls**

| Icon | Control | Description |
|---|---|---|
|  | **Digital Zoom** | While viewing live video, click and hold down the left mouse button to zoom in on a specific area. Right-click the mouse to return to the previous magnification. |
|  | **Snapshot** | Click to take a snapshot, saved as a JPEG at the default location (**\picture download**).<br>To change the save path, see *Path* on page 44. Or go to **Setup→Camera →Video→Path**. |
|  | **Triple Snap** | Click to take three snapshots at 1 fps. All images are saved to **Setup→Camera→Video →Path.** |
|  | **Record** | Click to start manual recording. All video is saved to **Setup→Camera→Video→Path**. |
|  | **Help** | Click to open Help. |
|  | **Easy Focus** | Click to open. You can see AF Peak and AF Max adjustments on the Preview window. Select from AF Peak and AF Max.<br>AF Peak: Displays the video's definition when focusing.<br>AF Max: Displays the most suitable focus for video definition.<br>The closer AF Peak and AF Max are, the better the focus.<br>**Note** Easy focus is available only for HBW2PR2/HBW4PR2/HEW2PR2/ HEW4PR2/H4W2PRV2/H4W4PRV2 cameras. |

# Live View Window Configuration

From the Live View window configuration toolbar, you can adjust the screen brightness, contrast, hue, or saturation; change the screen size and/or aspect ratio; and adjust image fluency. These controls are described in more detail below.

**Figure 3-9 Live View Window Configuration Toolbar**


**Table 3-3 Live View Window Configuration Tools**

| | | |
|---|---|---|
|  | **Image Control** | Click to open the Image Adjustment panel. Drag the sliders to set brightness, contrast, hue, and saturation, or click reset to return to the default settings.<br>Alternatively, you can go to **Setup→Camera →Conditions** to adjust these settings.<br>**Note** Image adjustments apply only to video displayed with the web client interface. |
|  | **Original Size** | Click to return video display to original size (depends on resolution of bit stream). |
|  | **Full Screen** | Click to enter full-screen mode. Press Esc or double-click the mouse to exit full screen. |
|  | **Width and Height Ratio** | Click to return video display to original aspect ratio (or an aspect ratio suitable for the window). |
|  | **Adjust Fluency** | Click to select a fluency level based on your network connection. The default setting is **Normal**. If your network connection is slow, you can select **Fluent** to make the video appear smoother (however, there may be a decrease in image quality). |
|  | **Zoom and Focus** | Click to open the Zoom and Focus panel. Drag the sliders to adjust the zoom and focus, and then click Auto Focus.<br>**Note** This option is available only for HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/H4W2PRV2/ H4W4PRV2. |

# 4 Playing Back Video

This chapter only applies to these following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/H4W2PRV2/H4W4PRV2.

This chapter contains the following sections:



## Introduction

This chapter describes how to play back recorded video and saved snapshots on H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/H4W2PRV2/H4W4PRV2 cameras using the web client, how to zoom in and take snapshots while playing back recorded video using the Playback Assistant, and how to create custom video clips.

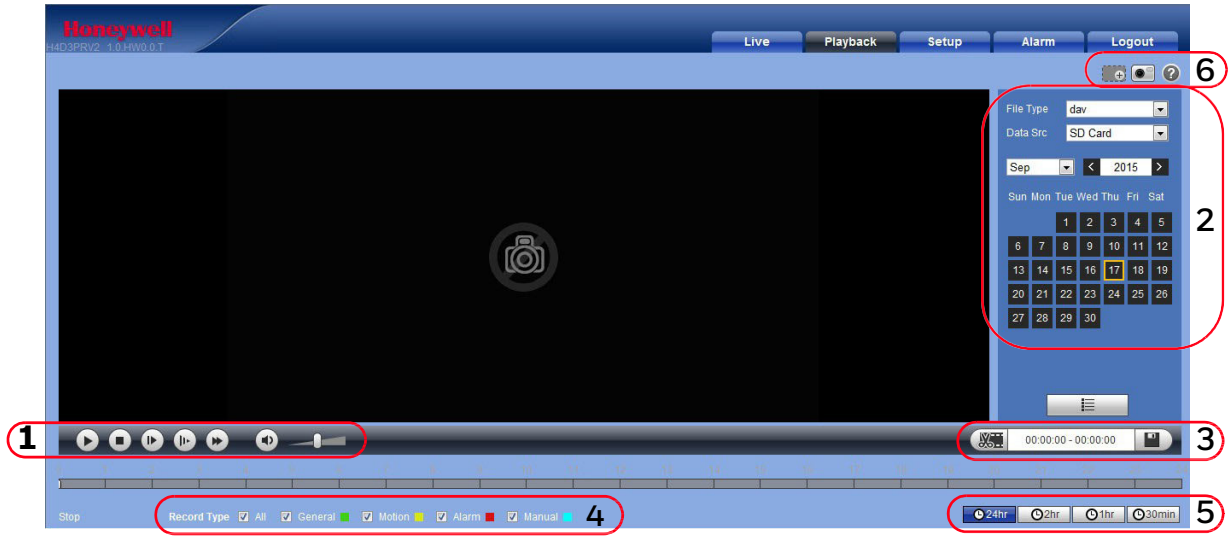
| | |
|---|---|
| **Note** | Before you can play back recorded video or saved snapshots, you must first configure storage settings in the **Setup** menu. See *Configuring Storage Settings* on page *43*. |

Click the **Playback** tab to display the playback interface.

## Overview of the Playback Interface

The Playback interface has six areas with controls and options for playback (see *Figure 4-1*).

**Figure 4-1 Playback Interface**




1 Playback controls (see *Playback Controls on page 17*)

2 Calendar area (see *Playing a Recorded File from the Calendar on page 18*)

3 Clip selection (see *Creating a Video Clip on page 20*)

4 Record type (see *Searching for a File by Recording Type on page 19*)

5 Timeline configuration (see *Timeline Configuration on page 19*)

6 Playback Assistant (see *Using the Playback Assistant on page 20*)

# Playing Back Recorded Video

## Playback Controls

**Figure 4-2 Playback Controls**

**Table 4-1 Playback Controls**

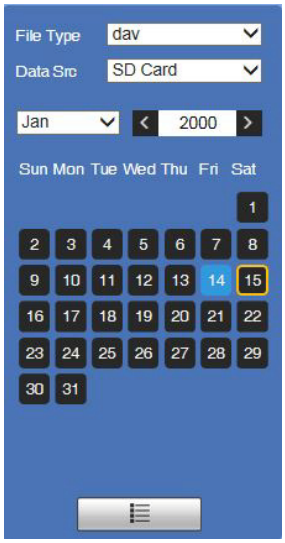
| Control | Description |
|---|---|
|  | Click to play video. While in **Play** mode, this button changes from  to  . |
|  | Click to stop video playback. |

| Control | Description |
|---|---|
|  | Click to go to next frame.<br>**Note** Video playback must be paused before you can use this function. |
|  | Slow playback |
|  | Fast playback |
|  | Mute sound |
|  | Volume control |

# Playing a Recorded File from the Calendar

On the playback calendar, a day in **BLUE** indicates a day on which video was recorded.

**Figure 4-3 Playback Calendar**




For the **File Type**, select **dav** for video playback and **jpg** for snapshots. The default **Data Source** is **SD Card**.

## Playing a Recorded File

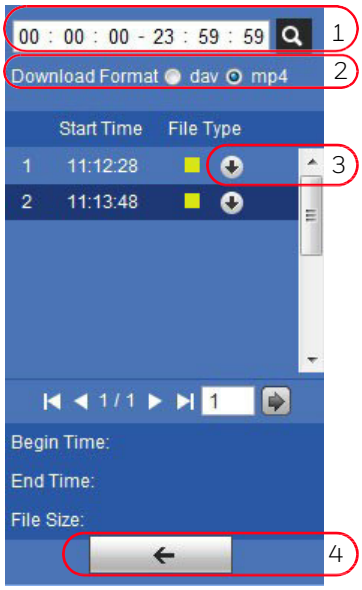
1. In the Playback interface, in the calendar area, use the options to find a recording:
   a. In the **File Type** box, select **dav**.
   b. In the **Data Src** box, select **SD Card**.
   c. Select the month and year that you want to search. Dates with recorded video are shown in blue.
   d. Click the date (in blue) that you want to view video for. The timeline (*Figure 4-4*) displays the recordings for that day as color-coded bars.
      - Green indicates normal recording.
      - Yellow indicates motion detection recording
      - Red indicates alarm-triggered recording.

- Blue indicates manual recording.

**Figure 4-4 Recording Timeline**

2. Click on the timeline to select a playback time.
3. Click to open the list of recorded files.
4. Double-click a file in the file list to begin playback, and to see the file size, start time, and end time. Use the *Playback Controls*, page *17*, to review the video.

**Figure 4-5 Playback File Details**




1 Enter a start and end time to search for recorded video.

2 Select a recording type. Select **dav**, as MP4 is not supported.

3 Click the download button to download the **dav** file to the local computer.

4 Click to return to the calendar interface.

**Note** On the playback file interface, you can download a file to your local PC.

## Searching for a File by Recording Type

By selecting a recording file type, you can filter by a particular recording type so that the timeline and file list display only those types of recorded files. You can also select the record type to display in the Playback window. The filter is at the top of the Playback window.

**Figure 4-6 Recording Type Filter in Playback**


## Timeline Configuration

You can configure the playback timeline in Playback to show the last 24 hours, 2 hours, 1 hour, or 30 minutes of recorded video. Click to select.

**Figure 4-7 Playback Timeline Configuration**

# Using the Playback Assistant

The Playback Assistant buttons allow you to zoom in and out on video, and to take snapshots.

| | |
|---|---|
| **Note** | Playback Assistant is only supported by the following models: HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/H4W2PRV2/H4W4PRV2. |

## Zooming In and Out

To zoom in, in the Playback Assistant area (see *Figure 4-1*), click the **Zoom In** button  , and then use the scroll wheel on your mouse to zoom in on an area of the video.

Right-click the mouse to return the video to its original size.

## Taking a Snapshot

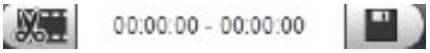
Click  while playing video to manually take a snapshot. The snapshot is saved to the file path on your local PC. To configure the file path, see *Path* on page 44.

# Creating a Video Clip

You can clip and save a section of recorded video during video playback using the clip function. Playback of recorded video is automatically paused during clipping.

| | |
|---|---|
| **Note** | Creating Video Clip function is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2. |

**Figure 4-8 Clip Function Controls**

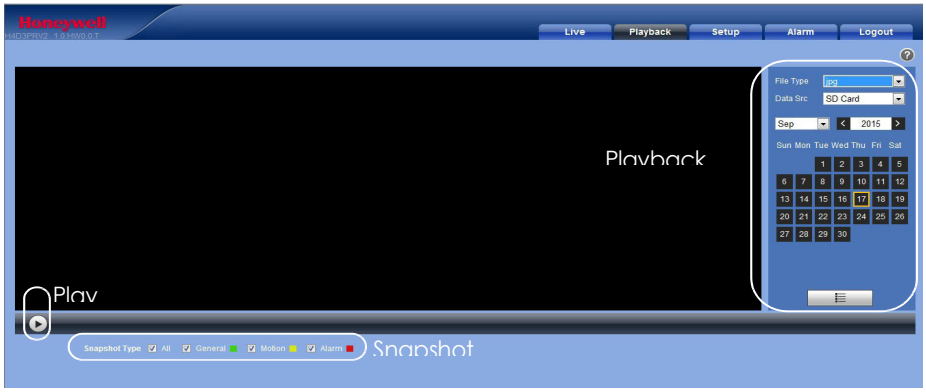



1. Find the recording that you want to create a clip from.
2. On the timeline, click the recording at the time you want to start the clip, and then click  . This designates the start time of the clip.
3. Next, click the recording at the time you want to end the clip, and then click  . This designates the end time of the clip.
4. Click  to save the clipped file to your local PC. To configure the saving path, see *Path* on page 44.

# Viewing Snapshots

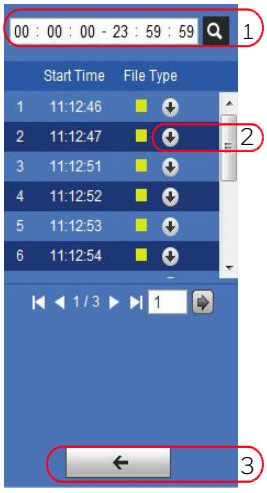
| | |
|---|---|
| **Note** | Viewing snapshots function is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2. |

**Figure 4-9 Snapshot Playback Control Interface**




1. In the Playback interface, in the calendar area, do the following:
   a. In the **File Type** box, select **jpg**.
   b. In the **Data Src** box, select **SD Card**.
   c. Select the month and year that you want to search. Dates with snapshots are shown in blue.
   d. Click the date (in blue) that you want to view snapshots for.
2. In the **Snapshot Type** area, you can refine your search results by selecting specific snapshot types to search (**General**, **Motion**, or **Alarm**).
3. Click the file list button below the calendar to display a list of snapshots for the selected date.

**Figure 4-10 List of Snapshots**




1 Enter a start and end time to search for recorded video.

2 Click the download button to download the **jpg**. file to the local computer.

3 Click to return to the calendar interface.

4. If you want, you can refine your search results further by entering a specific time range to search.
5. To view a snapshot, double-click the file name (start time). To download a snapshot to your local PC, click the download button next to the file name. To configure the saving path, see *Path* on page 44.

# 5 Configuring Camera Settings

This chapter contains the following sections:



## Configuring Camera Settings

### Conditions

On the **Conditions** tab, you can view camera property information. The configurations become valid immediately after they are saved.

| | |
|---|---|
| **Note** | The settings that are available on the **Conditions** tab may differ depending on the selections made in the **Profile Management** setup (see *Profile Management* on page *25* for more information). |

**Figure 5-1 Camera Setup Window**

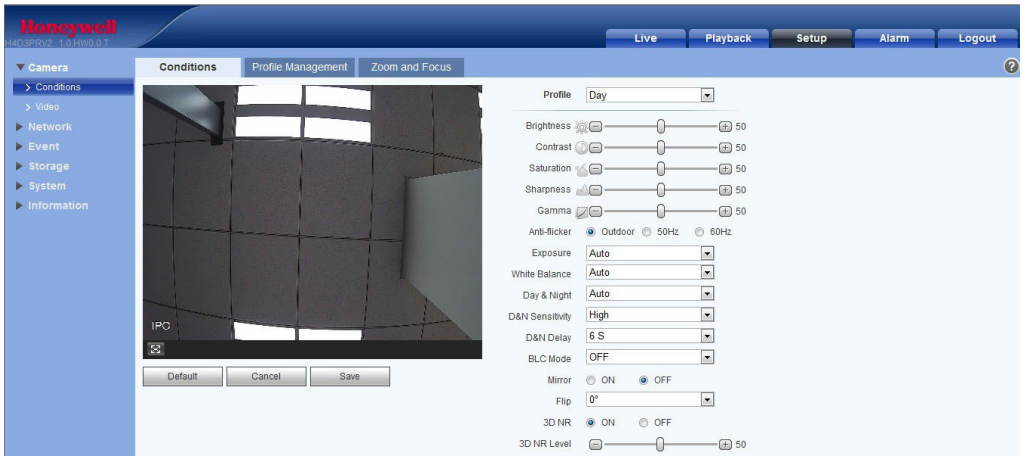


**Table 5-1 Camera Configurations**

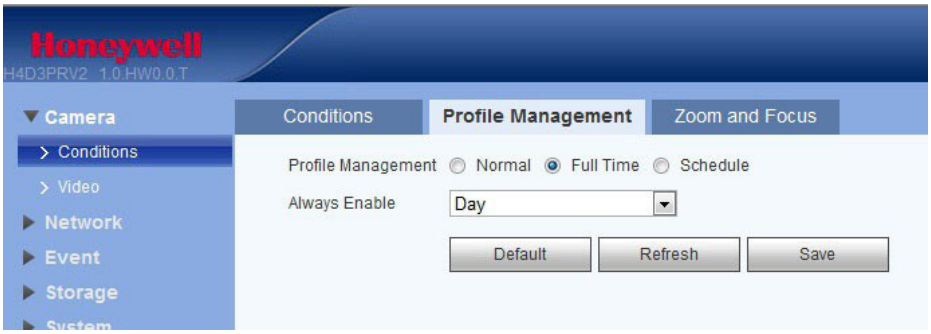
| Parameter | Function | |
|---|---|---|
| **Profile** | Select from **Normal**, **Day**, **Night**. | |
| **Brightness** | Adjusts monitor brightness. Choosing a higher value increases the video brightness. Adjustments to this value affects the brightness of the video. Select from **0** to **100**. The recommended range is between **40** and **60**. The default value is **50**.<br>**Note** If this value is too high, then the video can become hazy. | |
| **Contrast** | Adjusts monitor contrast. Choosing a higher value increases the contrast. Select from **0** to **100**. The recommended range is between **40** and **60**. The default value is **50**.<br>**Note** If this value is too low, then the video can become hazy. If this value is too high, then the dark parts of the video could lose details, and the bright parts of the video could become overexposed. | |
| **Saturation** | Adjusts monitor color saturation. Choosing a higher value increases the color saturation/strength. This value has no effect on the general brightness of the video. Select from **0** to **100**. The recommended range is between **40** and **60**. The default value is **50**.<br>**Note** You might see a distortion in grays if the white balance is off. | |
| **Sharpness** | Adjusts video sharpness. Choosing a higher value increases the sharpness of the video. Select from **0** to **100**. The recommended range is between **40** and **60**. The default value is **50**.<br>**Note** Choosing a higher value can introduce video noise to the image. | |
| **Gamma** | Adjusts dynamic range. Choosing a higher value increases the brightness of the image non-linearly. Select from **0** to **100**. The recommended range is between **40** and **60**. The default value is **50**. | |
| **Anti-flicker** | **Outdoor:** In Outdoor mode, you can select any exposure mode to avoid flicker.<br>**50Hz:** When the current is 50Hz, the system can automatically adjust the exposure according to the environment's brightness to prevent stripes in the video.<br>**60Hz:** When the current is 60Hz, the system can automatically adjust the exposure according to the environment's brightness to prevent stripes in the video. | |
| **Exposure** | **Auto** | The video brightness can automatically change according to the changes in the scene's lighting. If you set a higher gain max value, then you will get less noise. |
| | **Low Noise** | The video whole brightness can automatically change within the proper exposure range according to the different environments. The higher the gain max value is, the lower the noise.<br>For the same environments, the noise of the low noise mode shall be lower than the noise of the auto mode. |
| | **Low Motion Blur** | The video whole brightness can automatically change within the proper exposure range according to the different environments. The lower the gain max value is, the lower the amount of motion blur in the image.<br>For the same environments, the noise of the **Low Motion Blur** mode will be lower than that of the **Auto** mode. |
| | **Manual** | Displays manual exposure values. |

| Parameter | Function | |
|---|---|---|
| **White Balance** | Sets the **White Balance** mode, which affects the general hue of the video. This function is on by default.<br>You can select different scene modes such as **Auto**, **Sunny**, **Outdoor**, **Night**, or **Customized**, to achieve the best quality video.<br>**Auto**: Auto white balance is on. The system automatically adjusts the color temperature to ensure that the video color is correct.<br>**Sunny**: The white balance threshold is set to sunny mode.<br>**Night**: The white balance threshold is set to night mode.<br>**Customized**: You can manually set the gain for the red/blue channel. The value ranges from **0** to **100**. | |
| **Day & Night** | Sets the camera color and the black-and-white mode.<br>**Color**: The camera outputs video in color.<br>**Auto**: The camera switches from **Color** to **Black & White** according to the conditions, such as if the scene is generally bright, or if IR illumination is required.<br>**Black & White**: The camera outputs black-and-white video. | |
| **Sensitivity** | Adjusts the sensitivity threshold at which the camera switches from **Color** to **Black & White** mode. Set to **Low**, **Medium** (default), or **High**.<br>**Note** Available only when **Day & Night** is set to **Auto**. | |
| **Delay** | Adjusts the delay value of the switch from **Color** to **Black & White** mode. The value ranges from **2** to **10**. The default value is 6.<br>**Note** Available only when **Day & Night** is set to **Auto**. | |
| **BLC Mode** | **OFF** | BLC is off. BLC is disabled by default. |
| | **BLC (Default or Customized)** | The camera automatically adjusts the exposure to suit the conditions, so that the darkest area of the video can be seen. Default applies BLC to the entire scene. Customized allows the user to apply BLC to a specified portion of the scene. |
| | **WDR** | By lowering the brightness of the brightest area, and enhancing the brightness of the darkest area, WDR balances brightness and darkness in a scene so that both the darkest area and the lightest area can be seen clearly at the same time.<br>This value ranges from **1** to **100**.<br>**Note** When you switch the camera from non-WDR to WDR mode, there might be a few seconds lapse in video. |
| | **HLC** | When the HLC function is enabled, the camera can lower the brightness of the brightest section of video, according to the selected HLC control level. HLC can reduce the amount of halo and lower the brightness of the entire video image.<br>This value ranges from **1** to **100**. The default value is **50** when HLC is turned on. |
| **Mirror** | Click to switch the video from left to right. This function is disabled by default. | |

| Parameter | Function |
|---|---|
| **Flip** | **No Flip**: This is the default setting.<br>**Flip 180°**: Rotates the video 180°.<br>**Flip 90°**: Rotates the video by 90°.<br>**Flip 360°**: Rotates the video by 360°. |
| **3D Noise Reduction** | 3D noise reduction is enabled by default. |
| **3D NR Level** | This value ranges from **0** to **100**. The default is **50** when 3D NR is on. |
| **Full-screen Test** | Click the button on the bottom left of the video window to begin a full-screen test. Double-click to return to the normal screen. |
| **Default** | Click to return the camera to the default setup. |
| **Cancel** | Click to cancel the current operation and restore the previously saved operation. |
| **Save** | Click to save the currently configured customized settings. |

# Profile Management

**Figure 5-2 Profile Management Tab**




Profile management has three modes: **Normal**, **Full Time**, and **Schedule**.

- Select **Normal** to configure the video as normal.
- Select **Full Time**, and you must select either **Day** or **Night** for the video.
- Select **Schedule**, and you can configure a detained time interval.

| | |
|---|---|
| **Note** | When you make changes to the video configuration, you will immediately see the effects of those changes in the video. However, you must click **Save** to save and apply these settings. |

# Zoom and Focus

| | |
|---|---|
| **Note** | This section only applies to HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2 motorized focus/zoom cameras. |

**Figure 5-3 Motorized Zoom and Focus**

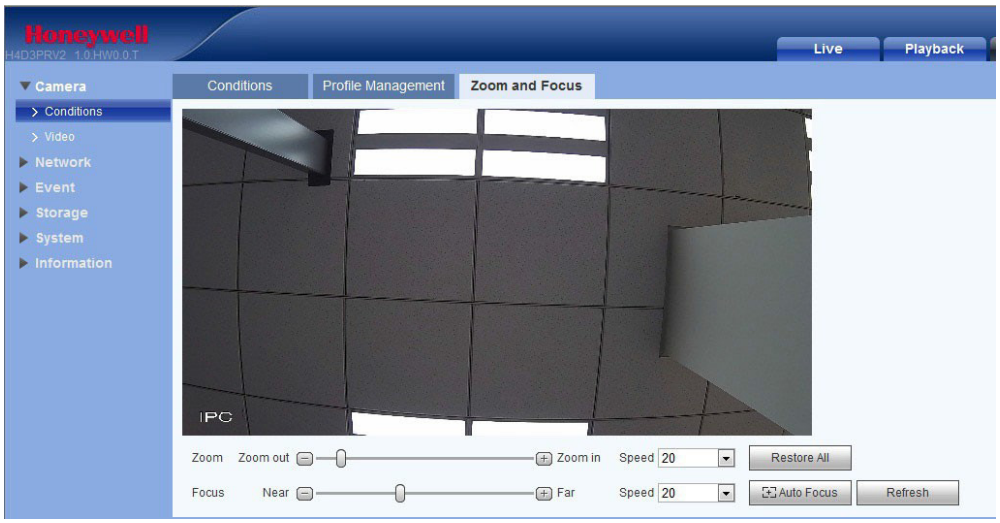



**Table 5-2 Zoom and Focus**

| Parameter | Function |
|---|---|
| **Zoom** | Adjust the focal length of the lens by clicking "+" to zoom in or "–" to zoom out. Changing the **Speed** setting adjusts the length of a single-click increment.<br>**Note** After adjusting zoom, the lens will focus automatically. |
| **Focus** | Adjust the definition of the image by clicking "+" to focus far or "–" to focus near. Changing the **Speed** setting adjusts the length of a single-click increment. |
| **Auto Focus** | Click to adjust the focus automatically. |
| **Restore All** | Click to reset the lens to 0 position.<br>**Note** Reset the lens periodically if you are making a lot of zoom and focus adjustments. |
| **Refresh** | Click to refresh the video image. |

# Video Configuration

## Video Bit Stream

Figure 5-4 Video Bit Stream Configuration Window

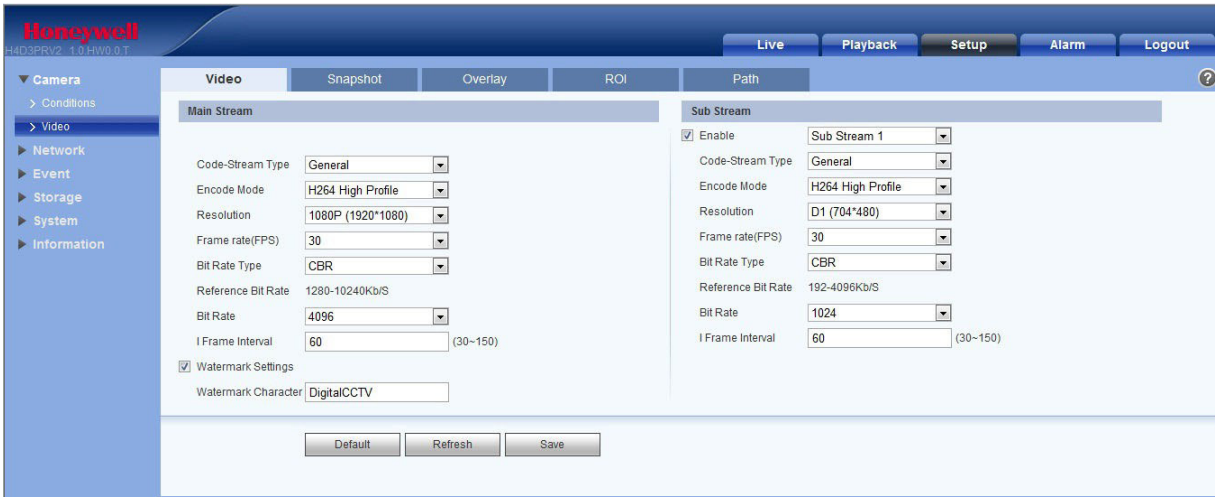



Table 5-3 Video Bit Stream Configurations

| Parameter | | Function |
|---|---|---|
| **Main Stream** | **Code-Stream Type** | General bit stream. |
| | **Encode Mode** | Select from four options for **Encode Mode**: **H.264** (Main Profile), **H.264H** (High Profile), **H.264B** (Baseline Profile), and **MJPEG** mode.<br>**H.264**: Main profile encoding mode.<br>**H.264H**: High profile encoding mode.<br>**H.264B**: Baseline profile encoding mode.<br>**MJPEG**: In this encoding mode, the video needs a larger bit stream to guarantee the video definition. You can use the maximum bit stream value in the **Recommended Bit** to get better video output. |
| | **Resolution** | You can select from multiple resolutions from the drop-down list.<br>The recommended bit stream value is different for each resolution. |
| **Main Stream** | **Frame Rate (FPS)** | PAL: 1–25 fps; NTSC: 1–30 fps. |
| | **Bit Rate Type** | Select either **VBR** or **CBR**.<br>**Note** You can set the video quality in VBR mode. |
| | **Reference Bit Stream** | Displays the **Reference Bit Rate** value according to the resolution and frame rate that you have selected. |
| | **Bit Rate** | In **VBR**, the Bit Rate here is the maximum value. In **CBR**, it is a fixed value. See the **Reference Bit Stream** for a recommended value. |
| | **I Frame Interval** | Set the number of P-frames between I-frames. The value ranges from **25** to **150**. The default value is **50**.<br>The recommended value for **I Frame Interval** is 2 times the frame rate setting. |

| Parameter | | Function |
|---|---|---|
| | **Watermark** | This function allows you to verify that the video has not been altered. Select to enable the watermark function, and then type the watermark text. The default watermark text is **DigitalCCTV**. The maximum length is 85 digits. Only numbers, letters, and the underscore character ( _ ) can be used. |
| **Sub Stream** | **Enable** | Select **Sub Stream 1** or Sub **Stream 2**.<br>Click the check box to enable the extra stream. Sub Stream 1 is enabled and Sub Stream 2 is disabled by default. |
| | **Code-Stream Type** | General bit stream (this is a unique option). |
| | **Encode Mode** | Select from four options for **Encode Mode**: **H.264** (Main Profile), **H.264H** (High Profile), **H.264B** (Baseline Profile), and **MJPEG** mode.<br>**H.264**: Main profile encoding mode.<br>**H.264H**: High profile encoding mode.<br>**H.264B**: Baseline profile encoding mode.<br>**MJPEG**: In this encoding mode, the video needs a larger bit stream to guarantee the video definition. You can use the maximum bit stream value in the **Recommended Bit** to get better video output. |
| | **Resolution** | There are multiple resolutions to select from the drop-down list. The recommended bit stream value is different for each resolution. |
| | **Frame Rate** | PAL: 1–25 fps; NTSC: 1–30 fps. |
| | **Bit Rate Type** | Select either **VBR** or **CBR**.<br>**Note** You can select the video quality in VBR mode. The value ranges from **1** to **6**. |
| | **Recommended Bit Rate** | Recommended bit rate value according to the resolution and frame rate you have set. |
| | **Bit Rate** | In CBR, the bit rate here is the maximum value. In dynamic video, the system needs a lower frame rate or lower video quality to adapt to the current bandwidth. |
| | **I Frame Interval** | Set the number of P-frames between I-frames. The value ranges from **25** to **150**. The default value is **50**.<br>The recommended value for **I Frame Interval** is 2 times the frame rate setting. |

# Snapshot

**Figure 5-5 Snapshot Configuration Interface**

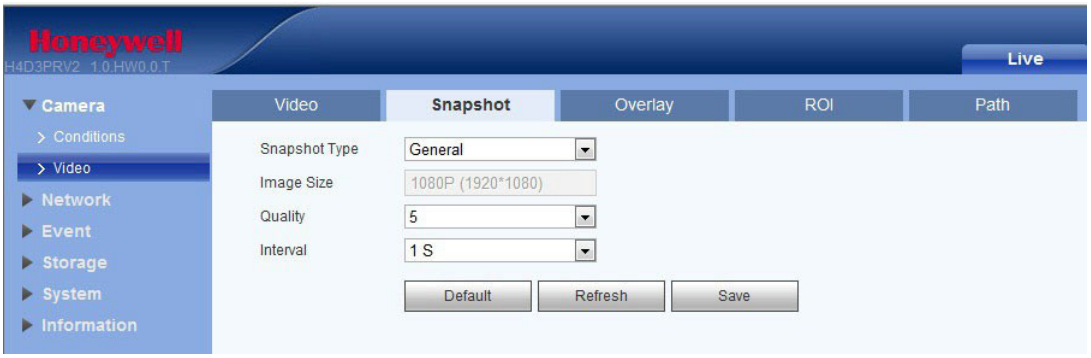


**Table 5-4 Snapshot Configurations**

| Parameter | Function |
|---|---|
| **Shapshot Type** | Select from either **General** (schedule) or **Event** (activation). |
| **Image Size** | Same as the main stream resolution. |
| **Quality** | Select from six levels of image quality. |
| **Interval** | Set the snapshot frequency from **1s** to **7s**. |

| | |
|---|---|
| **Note** | See *ROI* on page *30* for information about configuring where snapshots are saved. Snapshots are saved as JPEGs. |

# Video Overlay

**Figure 5-6 Video Overlay Configuration Interface**

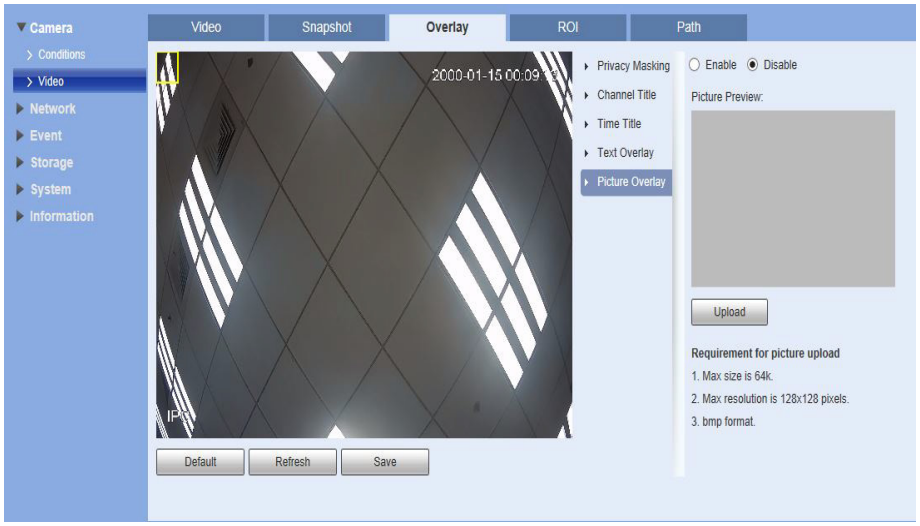



**Table 5-5 Video Overlay Configurations**

| Parameter | Function |
|---|---|
| **Privacy Mask** | Masks areas of the video for privacy.<br>You can configure up to 4 privacy mask zones. |
| **Channel Title** | Enable this function to overlay channel information in the video window. Use the mouse to drag the channel title to the desired position. |
| **Time Title** | Enable this function to overlay time information in the video window. Use the mouse to drag the time to the desired position. |
| **Text Overlay** | Enable this function to overlay text in the video window. Enter the text to be overlayed in the **Input** field and select **Right** or **Left** alignment from the drop-down menu. |
| **Picture Overlay** | Enable this function to overlay picture in the video window. Select the picture to be overlayed by clicking **Upload**. |

# ROI

**Figure 5-7 ROI Interface**

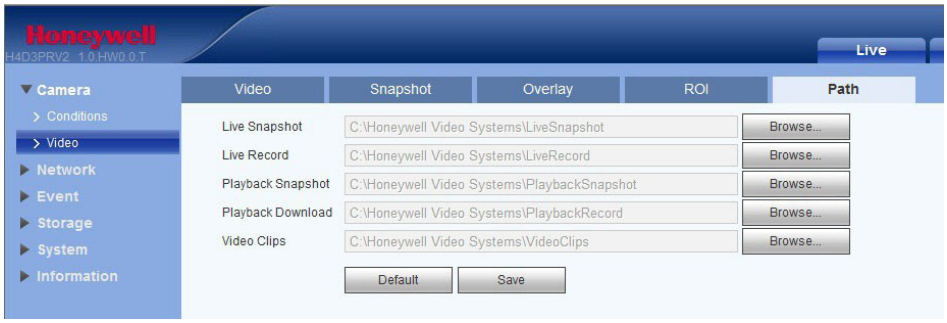

**Table 5-6 ROI Configurations**

| Parameter | Function |
|---|---|
| **Enable/Disable** | Enable or disable the Region of Interest (ROI) feature. |
| **Image Quality** | Select the image quality required for the region of interest. |

# Path

| | |
|---|---|
| **Note** | **Playback Snapshot**, **Playback Download** and **Video Clips** only apply to H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2 cameras. |

**Figure 5-8 Storage Path Interface**




Set the storage path for snapshots ( in the live interface) and for recorded video ( in the live interface). The default path for snapshots is **C:\Honeywell Video Systems\LiveSnapshot**. The default path for recorded video is **C:\Honeywell Video Systems\LiveRecord**.

Click **Save** to save any changes to the storage paths.

# Configuring Network Settings

## TCP/IP

Figure 5-9 TCP/IP Interface

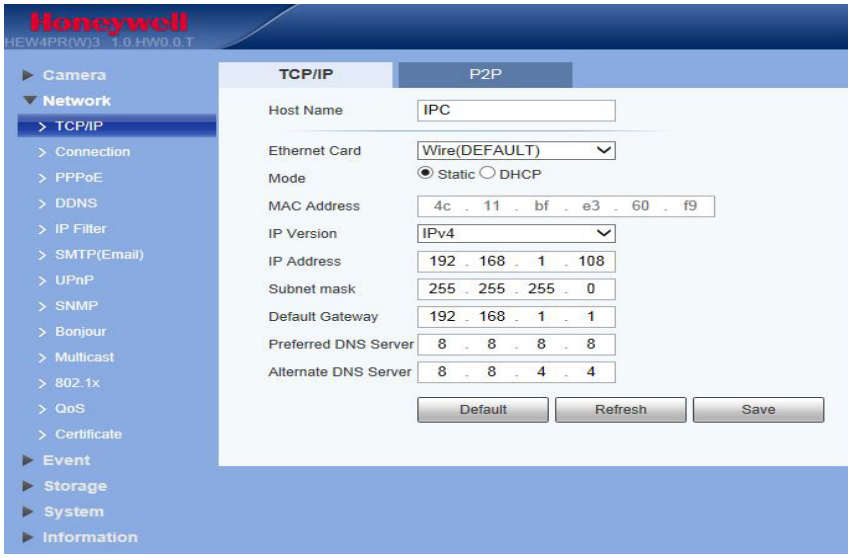



Table 5-7 TCP/IP Configuration

| Parameter | Function |
|---|---|
| **Host Name** | Configure to set the current host camera's name. Maximum 32 characters. |
| **Ethernet Card** | Select an Ethernet port. The default is **wire LAN.**<br>**Note** If you modify these settings, you will have to reboot your camera to activate the new setup. |
| **Mode** | Select **Static** or **DHCP** mode.<br>The **IP Address**, **Subnet mask**, and **Default Gateway** fields are unavailable when you select **DHCP** mode to automatically search for the IP address.<br>If **Static** mode is selected, you must manually assign the **IP Address**, **Subnet mask**, and **Default Gateway**.<br>If **DHCP** mode is selected, the **IP Address**, **Subnet mask**, and **Default Gateway** are assigned automatically.<br>**Note** **IP Address**, **Subnet mask**, **Default Gateway**, and **DHCP** are read-only when **PPPoE** is enabled. |
| **MAC Address** | Displays the MAC address. |
| **IP Version** | Select the IP version you are using: IPv4 or IPv6. |
| **IP Address** | If **Static** mode is selected, type values for the **IP Address**, **Subnet mask**, and **Default Gateway**. |
| **Preferred DNS Server** | Enter the preferred DNS server IP address. |

| Parameter | Function |
|---|---|
| **Alternate DNS Server** | Enter an alternate DNS server IP address. |
| **Enable ARP/Ping to set IP Address Service** | If you know the camera's MAC address, then use the ARP/Ping command to modify or set the camera's IP address.<br>Before operating the camera, please ensure that the network camera and the PC are in the same LAN. This function is **On** by default.<br>To enable ARP/Ping to set the IP address service:<br>1. Get an IP address. Set up the network camera and the PC in the same LAN.<br>2. Get the physical address from the label on the network camera.<br>3. Open the **Run** interface (**Start menu > Run**), and then type the following commands:<br>**arp -s <IP Address> <MAC> ping -l 480 -t <IP Address>**<br>For example:<br>**arp -s 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125**<br>4. Reboot the camera. If the setup was successful, output information such as **Reply from 192.168.0.125...** will appear in the command output lines.<br>5. Close the command line.<br>Open your browser, type **http://<IP address>** in the address bar, and then press Enter |

# P2P

**Figure 5-10 P2P Configuration Interface**


**Table 5-8 P2P Configurations**

| Parameter | Function |
|---|---|
| **Enable** | Click the checkbox if you want to access the camera using the HonView Touch app. |
| **Status** | Displays the connection status of the camera. |
| **S/N** | Displays the serial number of the camera. |
| **QR Code** | If you have the HonView Touch app installed on a mobile device, you can scan this QR code to add the camera. You can then view live video or configure the camera with the app. |

# Connection

Figure 5-11 Connection Configuration Interface

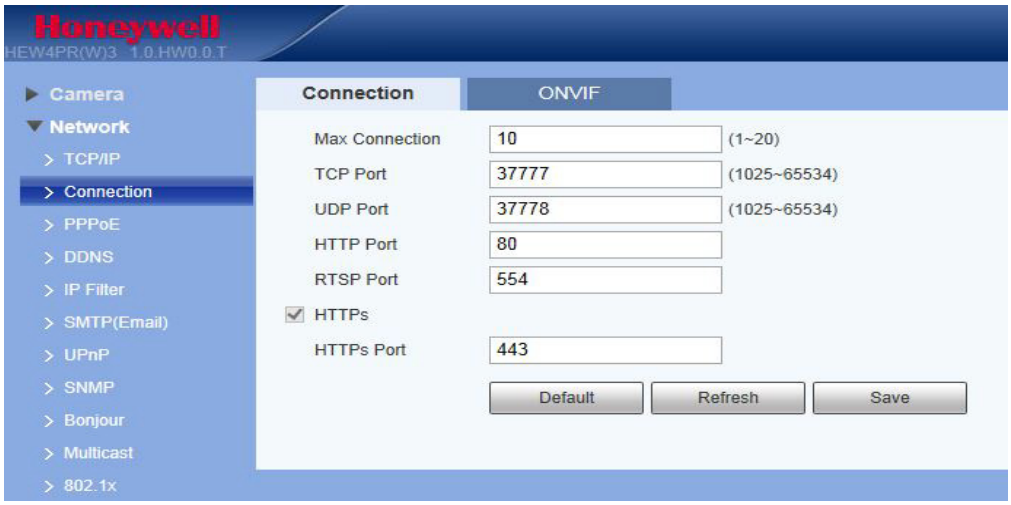



Table 5-9 Connection Configurations

| Parameter | Function |
|---|---|
| **Max Connection** | Displays the maximum number of network connections for the same camera. The value ranges from **1** to **20**. The maximum number of connections is **20**. |
| **TCP Port** | The default setting is **37777**. You can modify this setting as necessary. |
| **UDP Port** | The default setting is **37778**. You can modify this setting as necessary. |
| **HTTP Port** | The default setting is **80**. You can modify this setting as necessary. |
| **RTSP Port** | The default setting is **554**. The RTSP stream query format is:<br>**Main stream**:<br>rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0<br>**Sub stream**:<br>rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=1<br>You are required to manually enter the following four items: **Username, Password, IP**, and **Port**.<br>**IP**: The camera's IP address.<br>**Port**: The default is **554**. You can leave this field blank if you are using the default value.<br>Follow standard RTP protocols. When the encode mode is **MJPEG**, the maximum supported resolution is 2040×2040. |
| **HTTPS** | HTTPS is enabled by default. To disable HTTPS, clear the check box. |
| **HTTPS Port** | The default setting is **443**. |

# ONVIF

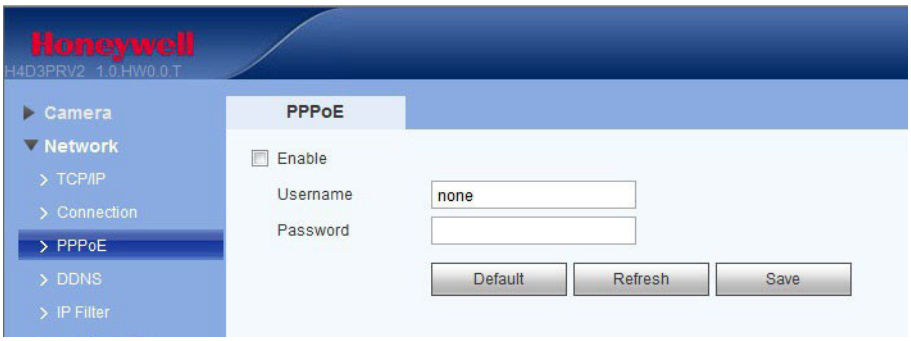
ONVIF (Open Network Video Interface Forum) is a global open standard for the interface of IP-based security products. It covers network video mode, interface, data type, and data interaction mode. The ONVIF specification aims at interoperability of network video products regardless of manufacturer.

The ONVIF setting is enabled by default.

- To enable ONVIF, on the **ONVIF** tab, click **Enable**.
- To disable ONVIF, on the **ONVIF** tab, click **Disable**.

# PPPoE

**Figure 5-12 PPPoE Configuration Interface**




1. To enable PPPoE, select the **Enable** checkbox and enter the PPPoE user name and password that you received from your Internet service provider (ISP).
2. Click **Save** to save the current setup, and then reboot the camera to activate this new setup. The camera connects to the Internet via PPPoE after rebooting.

You can access the web client through the DDNS domain name (see *DDNS* on page *35*). To access the camera using the HonView Touch app, P2P must be enabled (see *P2P* on page *32*).

---

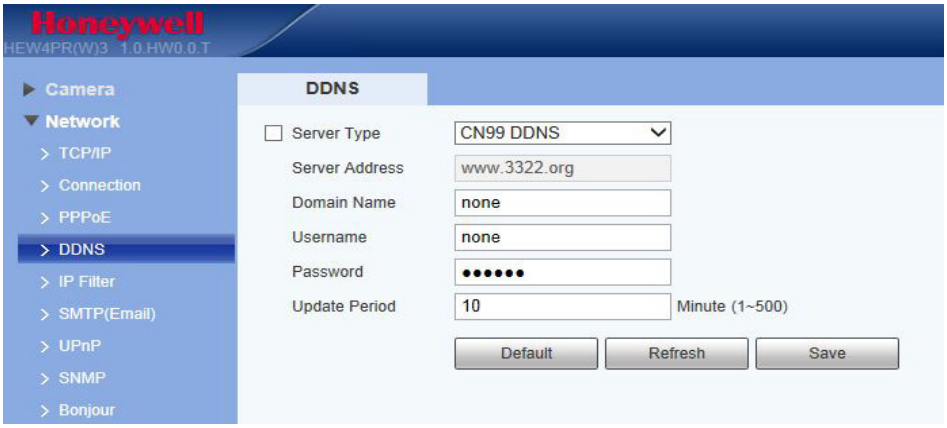
**Note** When **PPPoE** is enabled, disable **UPnP** so that it does not interfere with **PPPoE**.

---

# DDNS

## Manually Configuring the DDNS

**Figure 5-13 DDNS Configuration Interface**




To set the DDNS, go to the corresponding service website to apply a domain name, and then access the system through that domain. This works even if your IP address has changed.

**Table 5-10 DDNS Configurations**

| Parameter | Function |
|---|---|
| **Server Type** | To enable DDNS, select the check box and choose a server from the drop-down list. |
| **Server Address** | The DDNS server IP address. |
| **Domain Name** | Your self-defined domain name. |
| **Username** | The user name you enter to log into the server. |
| **Password** | The password you enter to log into the server. |
| **Update Period** | The frequency at which the camera regularly sends out the life signal (heartbeat) to the server. You can set the interval value between the camera and the DDNS server here. |

## Using Honeywell DDNS to Configure DDNS

**Figure 5-14 Using Honeywell DDNS to Configure DDNS**


Set the DDNS to connect the **Honeywell DDNS** server so that you can access the system through the servers.

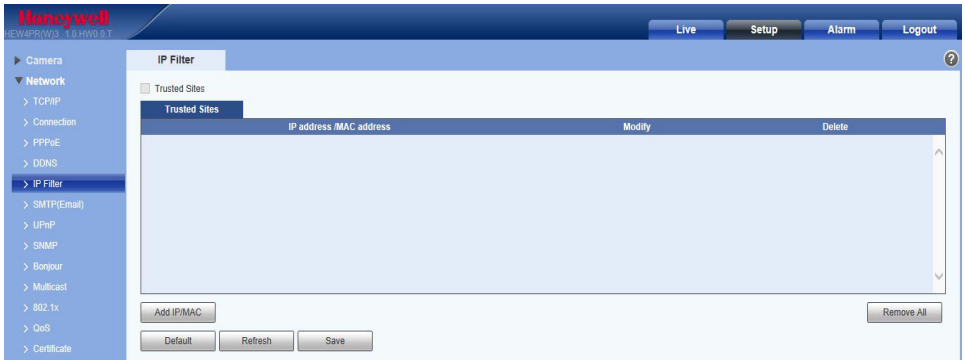
**Table 5-11 Honeywell DDNS Configurations**

| Parameter | Function |
|---|---|
| **Server Type** | To enable **DDNS**, select the check box and choose the Honeywell DDNS server from the drop-down list. |
| **Server Address** | The default server address is ***www.hennvr-ddns.com***. |
| **Mode** | Select **Auto** or **Manual**. The default is **Auto**. If you select **Manual**, then you must enter a domain name. |
| **Domain Name** | Auto and self-defined domain names both follow the format *MAC address*.hennvr-ddns.com. You can define the prefix. |
| **Username** | Optionally, enter the user name you use to log in to the server. |

# IP Filter

To restrict camera access to specific IP/MAC addresses, enable the IP filter. You can specify an IP address or an IP address segment (for example, from 192.168.1.1 to 192.168.1.100). If you do not select the check box to enable **Trusted Sites**, there will be no access limitation.

**Figure 5-15 IP Filter Configuration Interface**




To enable the IP filter:

1. Click Add IP/MAC, enter the IP address(es) or IP address segments(s) that you want to allow, and then click **Save**.
2. Select the **Trusted Sites** check box.

| | |
|---|---|
| **Note** | Trusted IP/MAC addresses must be added first before enabling **Trusted Sites**. |

| | |
|---|---|
| **Note** | If you specify a MAC address limitation here, the computer with the specified MAC address must be in the same network subnet as the IP camera. |

**CAUTION** **If you set up the IP Filter/Trusted sites options and forget the IP/MAC address that is allowed to access the camera, you will have to return the camera to the factory to repair the problem.**

# SMTP (Email)

Figure 5-16 SMTP Configuration Interface

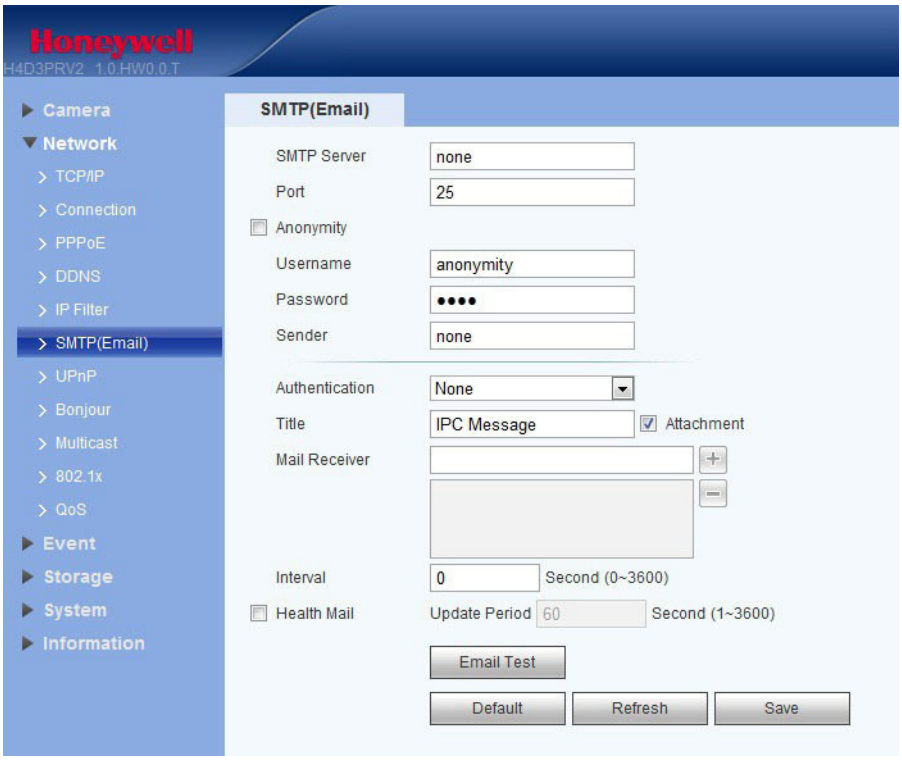



Table 5-12 SMTP (Email) Configurations

| Parameter | Function |
|---|---|
| **SMTP Server** | Enter the server address. |
| **Port** | The default setting is **25**. You can modify this setting as necessary. |
| **Anonymity** | Supports the anonymity function for the server. You can automatically log in anonymously. You do not need to enter the user name, password, and the sender information. |
| **Username** | Enter the username for the sender's email |
| **Password** | Enter the password for the sender's email |
| **Sender** | Enter the sender's email address. |
| **Authentication Enable** | This is the encryption mode. Select **SSL**, **TLS**, or **None**. |
| **Title** | Enter the email subject. |
| **Attachment** | Select the check box to have the system send out a snapshot with the email. |
| **Mail Receiver** | Enter the receiver's email address here. You can enter up to three addresses. |

| Parameter | Function |
|---|---|
| **Interval** | The interval for sending ranges from 0 to 3600 seconds. 0 seconds means that there is no interval.<br>The system will not immediately send the email when the alarm occurs. When an alarm, motion detection, or other event occurs to activate an email, the system sends the email according to the interval that you have specified here. This reduces the load on the email server when multiple emails are triggered simultaneously. |
| **Health Mail Enable** | Select the check box to enable this function. |
| **Update Period (interval)** | This allows the system to send a test email to check the connection.<br>Select the check box to enable this function, and then set the corresponding email interval.<br>You can set the Update Period so that the system sends out regularly scheduled emails. |
| **Email Test** | The system will automatically send an email to test the connection.<br>Before you can do an email test, you must save the email setup information. |

# UPnP

UPnP lets you establish the mapping relationship between the LAN and the public network. In the UPnP configuration interface, you can add, modify, or remove a UPnP item.

**Figure 5-17 UPnP Configuration Interface**


## Enabling UPnP in Windows

When UPnP is enabled in Windows, the camera can be detected automatically through **My Network Places**.

| Note | The UPnP is enabled by default on Windows 7 systems. This procedure applies to Windows XP. |
|---|---|

1. Go to **Start→Control Panel→Add or remove programs**.
2. Click **Add or remove programs**, and then select **Network Services** from the **Windows Components Wizard.**

3. Click **Details**, and then click to select **Internet Gateway Device Discovery and Control client** and **UPnP User Interface**.
4. Click **OK** to begin the installation.

# SNMP

You can configure cameras using SNMP (Simple Network Management Protcol).

**Figure 5-18 SNMP Configuration Interface**

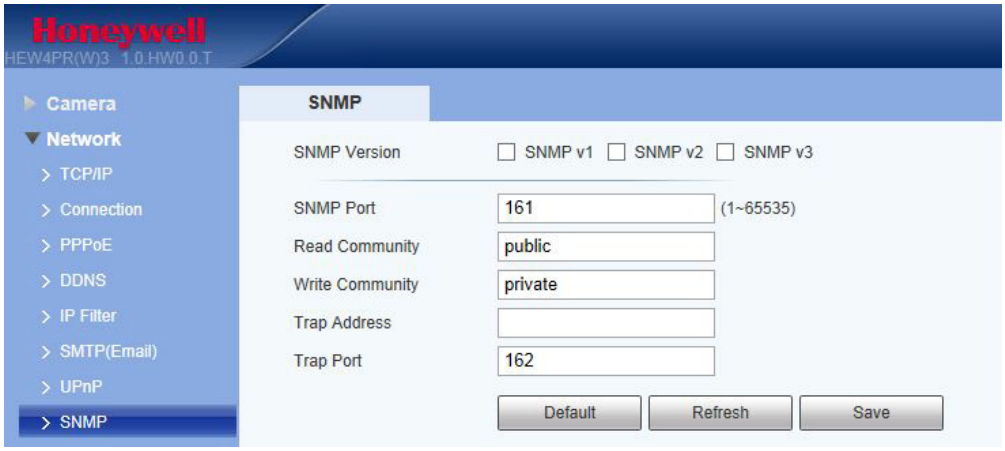


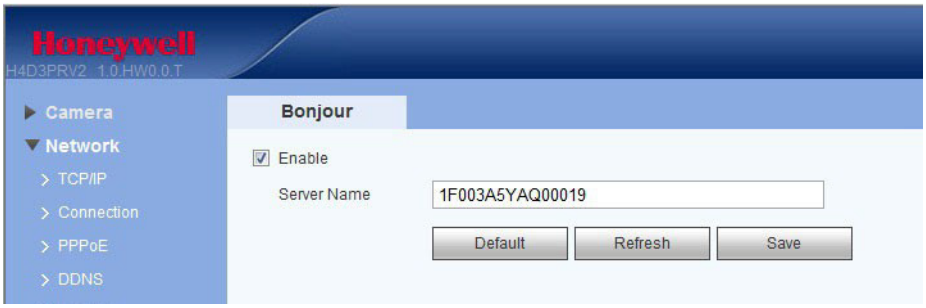

**Table 5-13 SNMP Configurations**

| Parameter | Function |
|---|---|
| **SNMP Version** | When **SNMP v1** is selected, the device can only process SNMP v1 information.<br>When **SNMP v2** is selected, the device can only process SNMP v2 information.<br>When **SNMP v3** is selected, you can set user name, password and authentication type.<br>The server needs to set the corresponding management system account when you want to access the device. For security reasons, the SNMP v1 and SNMP v2 are both null. |
| **SNMP Port** | This is the listening port of the proxy applications in the device. The default value is 161. The value ranges from 1 to 65535. |
| **Read Community** | The community string will read all the objects the SNMP supported in the specified name. The default setup is public. |
| **Write Community** | The community string will read/write/access all the objects the SNMP supported in the specified name. The default setup is write. |
| **Trap Address** | The destination address of the trap information from the proxy program of the device. |

# Bonjour

Bonjour is based on the multicast DNS service from Apple. It can automatically broadcast its service information and listen to the camera information from the other camera.

**Figure 5-19 Bonjour Configuration Interface**




If you do not know the network camera's information, such as its IP address, you can use Bonjour's browser in the same LAN to search for and access network cameras. After the network camera is detected by Bonjour, you can see the server name.

1. Click **Display All Bookmarks** in your browser.
2. Open **Bonjour**. The system should automatically detect network cameras through Bonjour on the LAN.

# Multicast

Multicast is a transmission mode for data packets. When there are multiple hosts to receive the same data packet, multiple cast (multicast) is the best option for reducing the bandwidth and the CPU load. The source host can send out just one data packet. This function depends on the relationship between group members and the router's group.

In the **Multicast** configuration interface, you can set the multicast address and port.

| | |
|---|---|
| **Note** | You must go to the **Live** interface to set the protocol to **Multicast**. See Protocols in *Video Encoder Settings* on page *13*. |

**Figure 5-20 Multicast Configuration Interface**

**Table 5-14 Multicast Configurations**

| Parameter | Function |
|---|---|
| **Enable** | Select the check box to enable the multicast function.<br>**Note** Main stream and sub stream cannot be used at the same time. |
| **Multicast Address** | The main/sub stream multicast address is **239.255.42.42** and its range is **224.0.0.0 – 239.255.255.255**. |
| **Port** | Multicast port. The main stream is **36666**, the sub stream is **36667**, and the range is **1025 – 65534**. |

# IEEE802.1X

IEEE802.1X is the access control and authentication protocol for local and metropolitan area networks. It uses a port-based network access control protocol to restrict unauthorized user and/or device access to the LAN.

IEEE802.1X supports the client's ability to manually choose how authentication works for accessing the LAN or not. IEEE802.1X supports the ability to:

- authenticate
- calculate the fee
- ensure security
- maintain requirements

**Figure 5-21 802.1X Configuration Interface**


**Table 5-15 802.1X Configurations**

| Parameter | Function |
|---|---|
| **Authentication** | PEAP (protected EAP protocol) |
| **Username** | Enter a username to log in. This username is authenticated by the server. |
| **Password** | Enter a password. |

# QoS

Quality of Service (QoS) is a network security mechanism. It fixes problems with network delays and jams. For network service, the quality of service includes the transmission bandwidth, delay, and packet loss, for example. Through QoS, you can guarantee the transmission bandwidth, reduce the delay, reduce the loss of data packets, and enhance the transmission quality with packet prioritization.

**Figure 5-22 QoS Configuration Interface**


**Table 5-16 QoS Configurations**

| Parameter | Function |
|---|---|
| **Realtime Monitor** | This value ranges from **0** to **63**. The router or the switcher can provide different service for different packets. |
| **Command** | This value ranges from **0** to **63**. The router or the switcher can provide different service for different packets. |

# Certificate

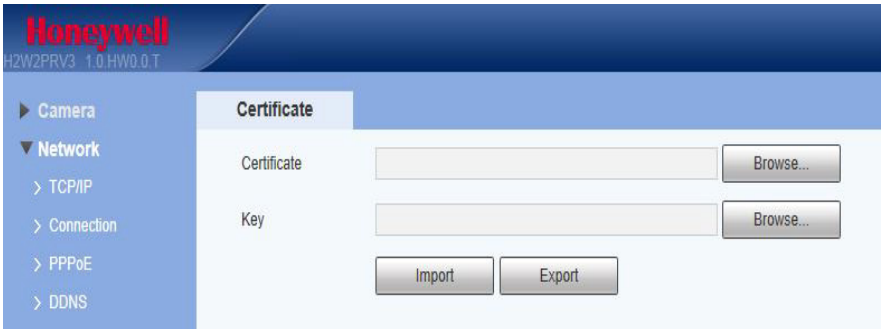
The camera uses HTTPS, a secure communication protocol that verifies the identities of visited websites and servers and encrypts data exchanged between the client and the server. When you log in to the camera's web client for the first time, some browsers may display a warning that the connection is not private/secure. To access the web client, you must install a Honeywell-signed security certificate.

The installation of the security certificate involves three sets of steps:

- Logging in (and, if applicable, configuring a security exception)
- Downloading the root certificate
- Installing the root certificate

For more details, refer to *Performance Series IP Cameras Certification Installation Guide*.

**Figure 5-23 Certificate Configuration Interface**



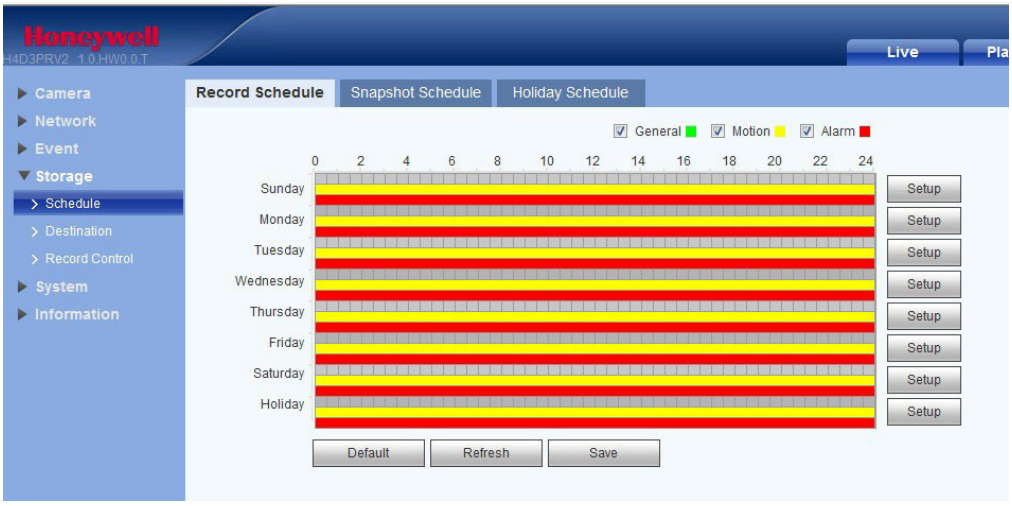
# Configuring Storage Settings

## Recording Schedule and Snapshot Schedule

You can add or remove schedules for recording and snapshots. There are three recording modes: **General** (auto), **Motion,** and **Alarm**. You can configure up to nine recording periods per day.

| | |
|---|---|
| **Note** | Ensure that you have enabled the corresponding recording mode in Setup→Storage→Conditions**.**<br>**Alarm** recording mode is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2. |

**Figure 5-24 Recording Schedule Configuration Interface**



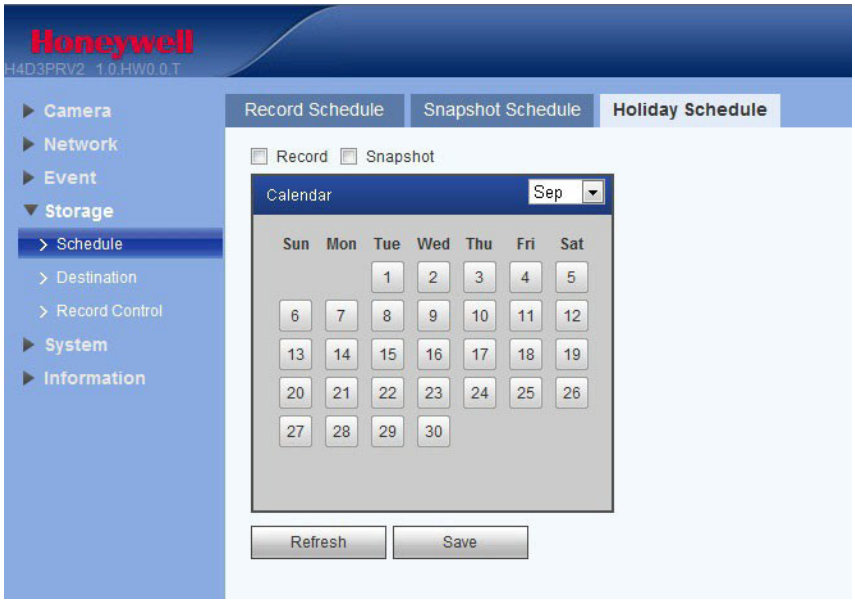

### Recording Schedule Color Codes

- **Green**: General recording/snapshot
- **Yellow**: Motion detection recording/snapshot
- **Red**: Alarm recording/snapshot

### Setting Holidays

You can set specific days as holidays for which the recording schedule is different. When enabled, the selected/configured dates will record according to the holiday setup.

**Figure 5-25 Holiday Schedule**




# Destination

## Path

On the **Path** tab, you can assign where recorded video files or snapshots will be saved. Depending on your camera model, you can save recorded video or snapshots to a microSD card, an FTP server, and/or an NAS disk.

You can also set up the system to save recorded video files and snapshots according to event type (Scheduled, Motion Detect, Alarm), corresponding to the three recording modes in the **Schedule** interface (General, Motion, Alarm).

**Figure 5-26 Path Configuration Interface**

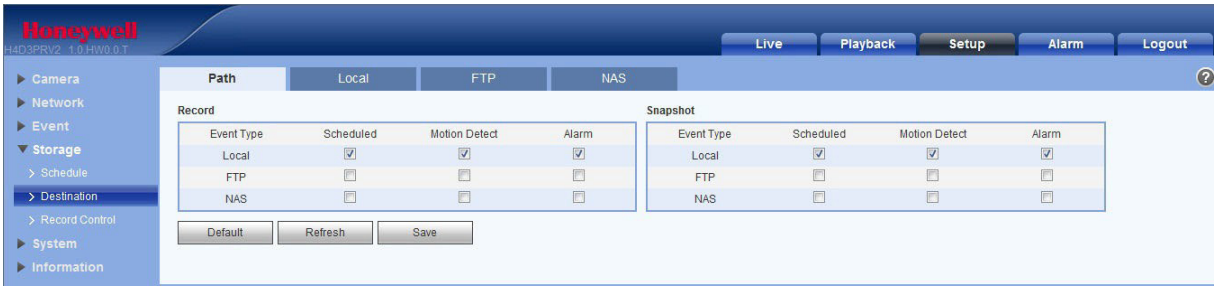



**Table 5-17 Path Configurations**

| Parameter | Function |
|---|---|
| **Event Type** | Select **Scheduled**, **Motion Detect**, or **Alarm**. |
| **Local** | Select to save files to the microSD card |
| **FTP** | Select to save files to the FTP server. |
| **NAS** | Select to save files to the NAS disk. |

## Local

On the **Local** tab, you can view local microSD card or NAS disk information. You can also access the **Read Only**, **Read & Write**, **Hot Swap**, and **Format** functions.

| | |
|---|---|
| **Note** | This function is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2. |

**Figure 5-27 Local Storage Configuration Interface**


## FTP

On the **FTP** tab, you can enable the FTP storage function. When enabled, event-triggered video and snapshots (either scheduled or motion detection, depending on what you chose in *Figure 5-26*) will be saved to the specified FTP server.

**Figure 5-28 FTP Configuration Interface**


**Table 5-18 FTP Configurations**

| Parameter | Function |
|---|---|
| **Server Address** | Enter the IP address of the FTP server. |
| **Port** | The default setting is **21**. You can modify this setting as necessary. |

| Parameter | Function |
|---|---|
| **User Name** | Enter the server user name. |
| **Password** | Enter the server password. |
| **Remote Directory** | Create a name for the directory where recorded video and snapshots will be stored. |
| **Emergency (Local)** | Enable **Emergency (Local)** to save to the local microSD card when the network connection to FTP is unavailable.<br>**Note** This function is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/ H4W4PRV2. |

## NAS

**Figure 5-29 NAS Configuration Interface**

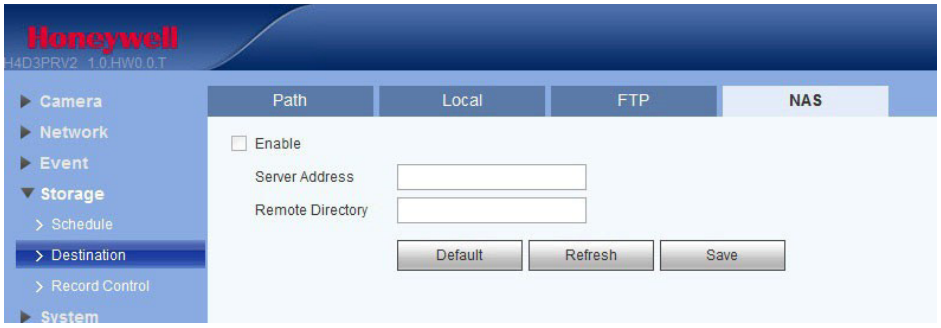



**Table 5-19 NAS Configurations**

| Parameter | Function |
|---|---|
| **Server Address** | Set the IP address of the server. |
| **Remote Directory** | Set storage directory where recorded video and snapshots will be stored. |

# Record Control

**Figure 5-30 Record Control Configuration Interface**

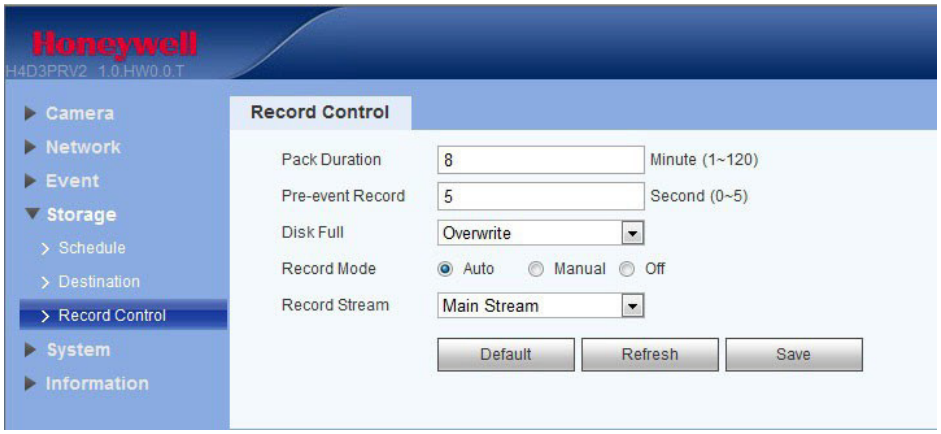


Table 5-20 Record Control Configurations

| Parameter | Function |
|---|---|
| **Pack Duration** | Select the file size. The default is **8 minutes.** |
| **Pre-event Record** | Enter a pre-record value.<br>For example, if you enter 4, the system can record the four seconds of video in the buffer. Recording begins five seconds before the event trigger. |
| **Disk Full** | Select **Stop Recording** or **Overwrite** the previous files when the HDD is full.<br>**Overwrite**: If the current working HDD is full, then the system will overwrite the previous file.<br>**Stop**: If the current working HDD is full or is overwriting, the system will stop recording. |
| **Record Mode** | Select **Auto**, **Manual**, or **Off**. |
| **Record Stream** | Select **Main Stream, Sub Stream 1** or **Sub Stream 2.** |

# Configuring System Settings

## General System Setup

The general interface includes the local host setup (including the camera name and GUI language) and the date/time setup.

### General

Figure 5-31 General System Configuration Interface

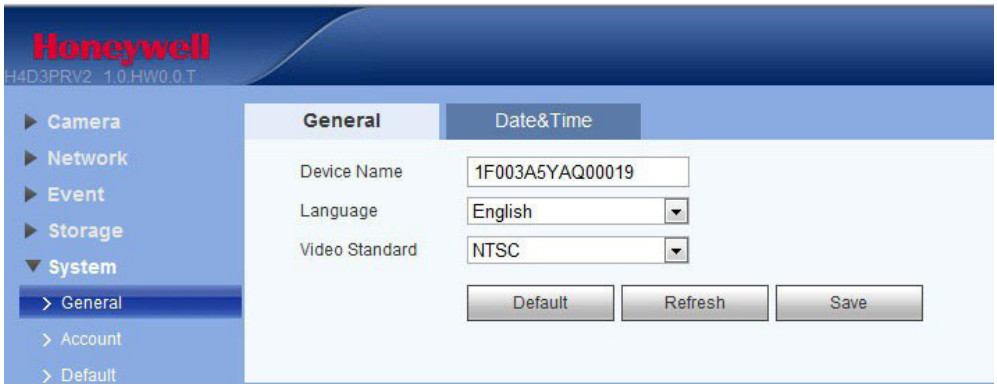



Table 5-21 General System Configurations

| Parameter | Function |
|---|---|
| **Device Name** | Enter the camera's name. |
| **Language** | Select a language from the drop-down list. |
| **Video Standard** | Select the video standard: **NTSC** or **PAL**. |

## Date and Time

**Figure 5-32 Date and Time Configuration Interface**

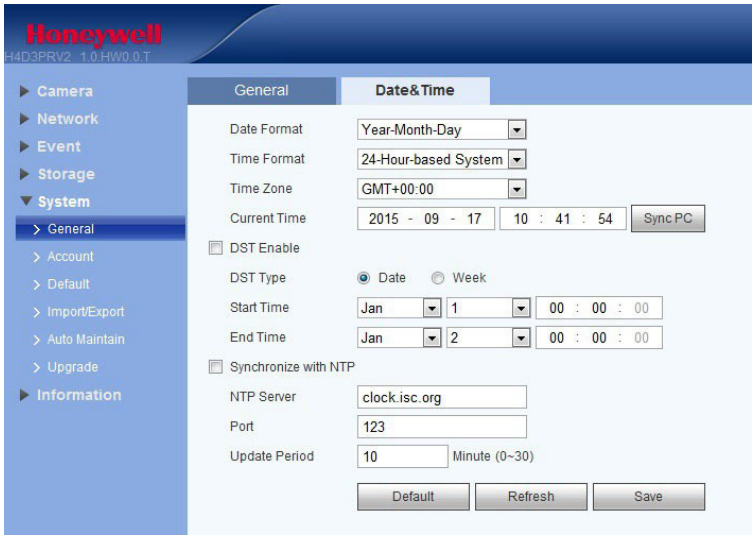



**Table 5-22 Date and Time Configurations**

| Parameter | Function |
|---|---|
| **Date Format** | Select a date format from the drop-down list. |
| **Time Format** | Select a time format, either **24-hour** or **12-hour**. |
| **Time Zone** | Select the time zone for the camera. |
| **Current Time** | Set it to set the system's time. Click **Save** to activate this time. |
| **Sync PC** | Click to sync the camera's time with your PC's time. |
| **DST** | Set when Daylight Saving Time begins and ends. Select **Date** or **Week**. |
| **NTP** | Click to enable synchronization with a Network Time Protocol (NTP) server. |
| **NTP Server** | Configure the NTP server. |
| **Port** | Configure the port for the NTP server. |
| **Update Period** | Configure synchronization periods between the camera and the NTP server. |

# Account Setup

The system supports up to 15 characters for the user name or user group name. You can use letters, numbers, and the underscore character ( _ ) for the user or group name.

You can configure up to 18 users and eight groups (default factory settings). The factory default setup includes two user levels: **user** and **admin** (case-sensitive).

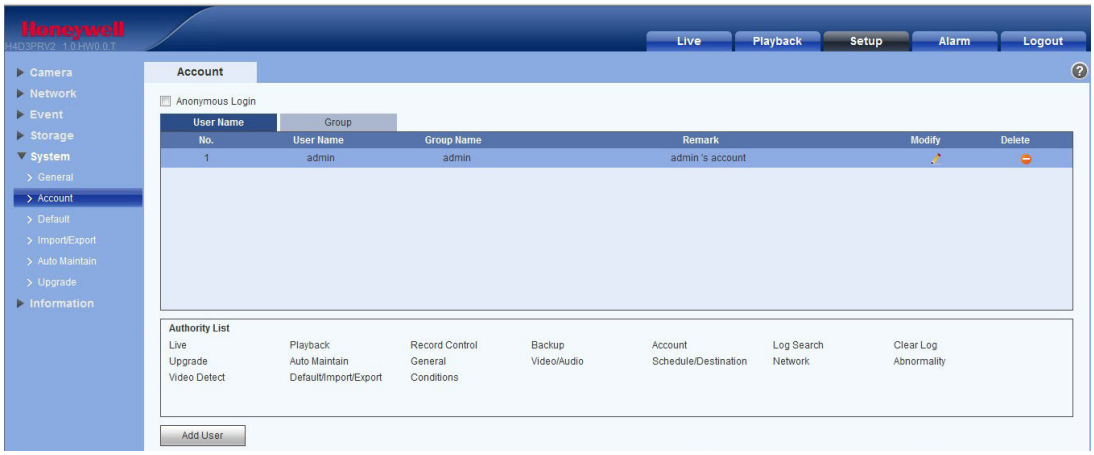
When configuring groups, you can configure the rights of those groups. You can also set rights for individuals within groups.

| | |
|---|---|
| **Note** | User management adopts group/user modes. The user name and the group name should be unique. A user can be included in only one group at a time. |

## User Name

In the **Username Configuration** interface, you can enable anonymous login, add/remove users, and modify a username.

**Figure 5-33 Username Configuration Interface**




**Enable Anonymous Login**: Click to enable. When you enter an IP, no username or password is required. You can log in anonymously (with limited rights). Click **Logout** to end your anonymous session.

**Add User**: Add a user to a group and configure that user's rights.

**Figure 5-34 Add User Configuration Interface**


There are two types of default user:

- admin
- hidden user "default"

The hidden user "default" is for internal system use only and cannot be deleted. When there is no login user, this hidden user "default" is automatically used for logging in. You can configure some rights for the hidden user, such as monitoring ability, so that the user can view channels without logging in.

To add a user, in the **Add User** configuration interface, enter a user name and password, then select a group. Ensure that a general user has fewer rights than the admin user.

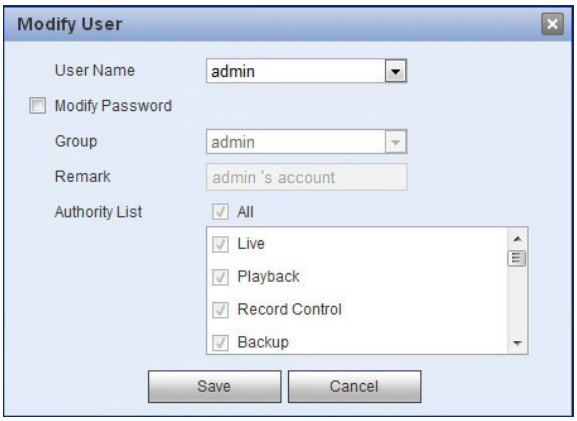
---

**Note** A user's rights cannot exceed the rights of the group to which the user belongs.

---

**Modifying Users**: Click  to modify a user's properties, including their group, passwords, and rights.

**Figure 5-35 Modifying User Interface**




**Modifying a Password**: Enter the old password once, and then enter the new password twice to confirm the new password. Click **Save** to save the new settings.

---

**Note** Passwords can contain up to 32 characters, using numbers and letters only.

---

Only users with account rights can modify other users' passwords.

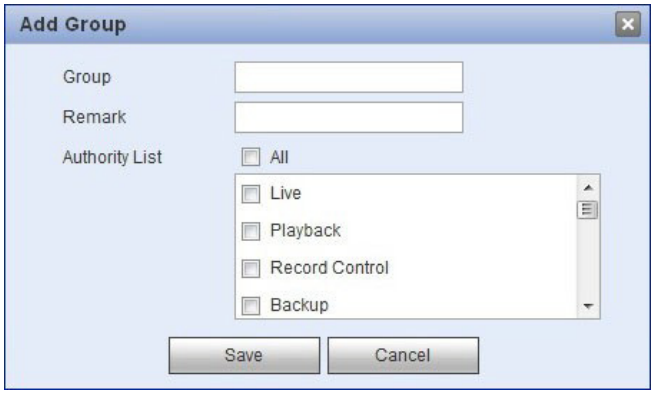
## Group

In the **Group** configuration interface, you can add/remove groups and modify group passwords.

**Figure 5-36 Group Configuration Interface**

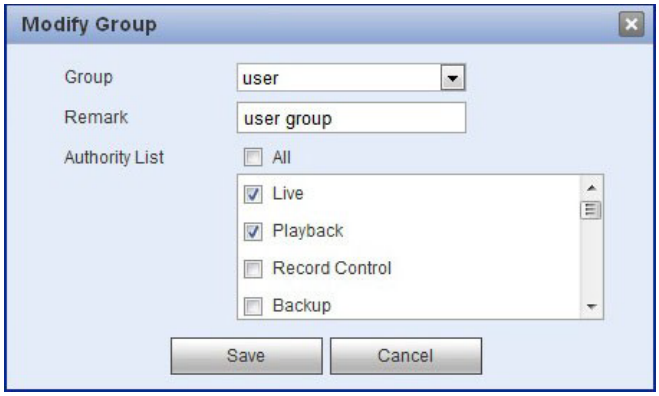

Click **Add Group**, enter the group name, select from the **Authority List** the rights that you want to assign to the group (for example, **Live**, **Record Control**, **Account**), then click **Save**.

**Figure 5-37 Add Group Interface**




Click **Modifying a Group** to edit the remark and/or the rights assigned to the group. Click **Save** to save the new settings.

**Figure 5-38 Modify Group Interface**




## Restoring Default Settings

Click **Default** to restore the camera to its factory default settings.

**Figure 5-39 Default Interface**


**Note** The system cannot reset some information, such as the network IP address.

# Import/Export

**Figure 5-40 Import/Export Configuration Interface**

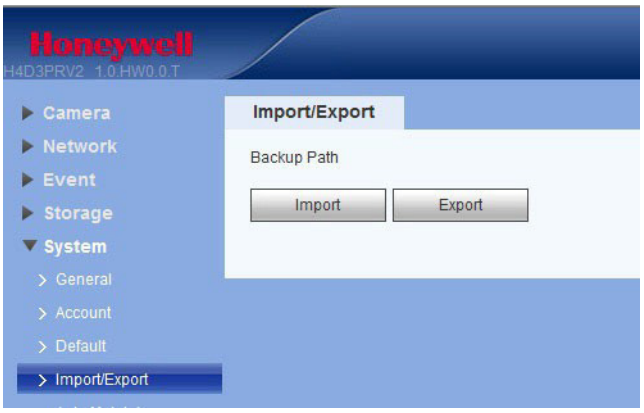



**Table 5-23 Import/Export Configurations**

| Parameter | Function |
|---|---|
| **Import** | Click to import local setup files to the system. |
| **Export** | Click to export the current system setup to your local PC. |

# Automatic Maintenance

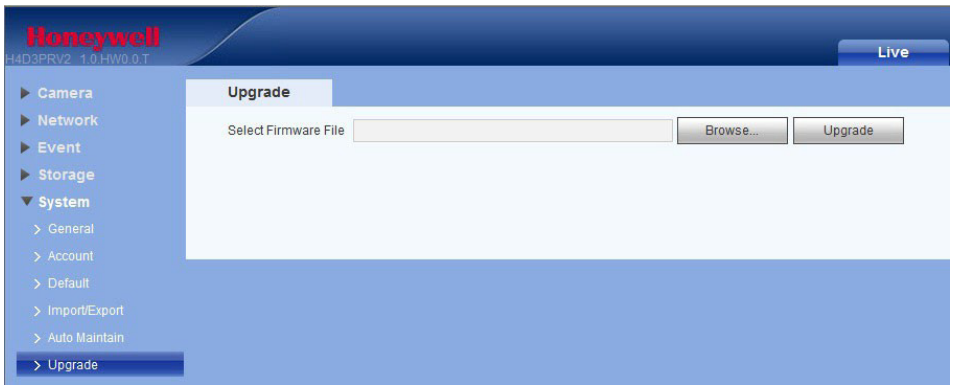
You can select either **Auto Reboot**, **Auto Delete Old Files**, or **Manual Reboot**.

**Auto Reboot**: Select the day (**Everyday** or **Monday** to **Sunday**) and the time (from **00:00** to **24:00**) to reboot the camera automatically.

**Figure 5-41 Auto Maintain Configuration Interface**

## Upgrade

Figure 5-42 Upgrade Interface




Click **Browse**, go to the location of the upgrade file on your computer, select it, and click **Upgrade**.

**CAUTION** **Selecting the incorrect upgrade file might cause a camera malfunction.**

# Viewing System Information

## Version

In the **Version** interface, you can view the system hardware features, the software version, and the release date. This information is for reference only.

Figure 5-43 Version Interface

# Log

**Figure 5-44 Log Interface**

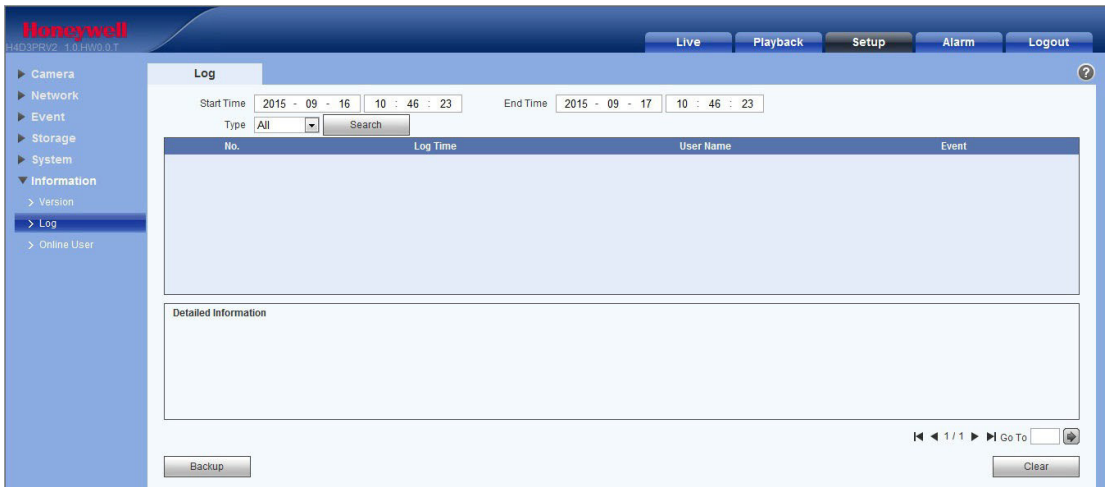



**Table 5-24 Log Interface Configurations**

| Parameter | Function |
|---|---|
| **Start Time** | Configure the start time for the requested log. |
| **End Time** | Configure the end time for the requested log. |
| **Type** | Select a log type: **System**, **Setting**, **Data**, **Event**, **Record**, **Account**, **Clear Log**. |
| **Search** | Select a log type from the drop-down list, and then click **Search** to view the list that is generated by the search. Click **Stop** to terminate the current search. |
| **Log Information** | Select one item to view its detailed information. |
| **Backup** | Click **Backup** to back up log files to the currently selected PC. |
| **Clear** | Click **Clear** to delete all the displayed log files.<br>**Note** The system does not support clearing by type. |

# Online User

You can view the current online users, group names, IP addresses, and login times.

**Figure 5-45 Online User Interface**

# 6 Configuring Events and Alarms

This chapter contains the following sections:



## Configuring Events

### Configuring Motion Detection Settings

**Figure 6-1 Video Detection Configuration Interface**

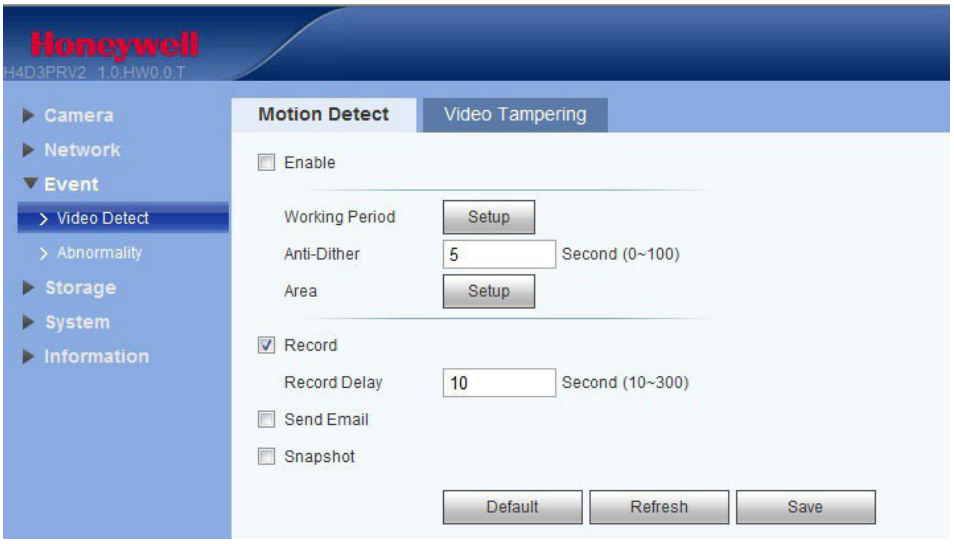


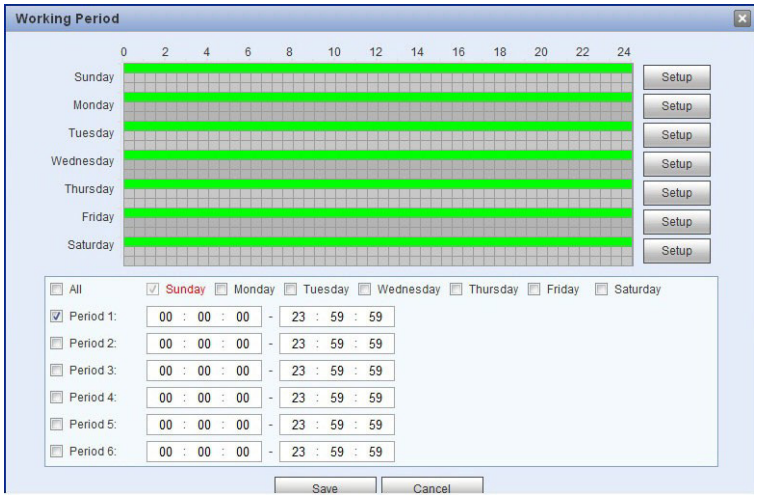

**Table 6-1 Video Detection Configurations**

| Parameter | Function |
|---|---|
| **Enable** | Select the check box to enable motion detection. |
| **Working Period** | Configure the arm/disarm period. Click **Setup** to open the setup menu. See *Configuring the Working Period* on page *56*. |
| **Anti-Dither** | The system memorizes only one event during the anti-dither period.<br>Choose an anti-dither period from **0s** to **100s**. |

| Parameter | Function |
|---|---|
| **Area** | Configure the motion detection region, its sensitivity, and area. The default settings covers the entire area. Click **Save** to enable these settings. See *Configuring the Motion Detection Area* on page 56. |
| **Record** | When **Record** is enabled, you can trigger motion detection to activate recording. |
| **Record Delay** | The system can delay recording for a specified time after the alarm has ended. Choose a delay period from **10s** to **300s**. |
| **Send Email** | When this function is enabled, the system sends an email alert when an alarm occurs. |
| **Snapshot** | Select the check box to enable the system to back up motion detection snapshot files. (See *Path* on page *44* for information about configuring where snapshots are saved.) |

## Configuring the Working Period

**Figure 6-2 Configuring the Working Period**




## Configuring the Motion Detection Area

**Figure 6-3 Configuring the Motion Detection Area**

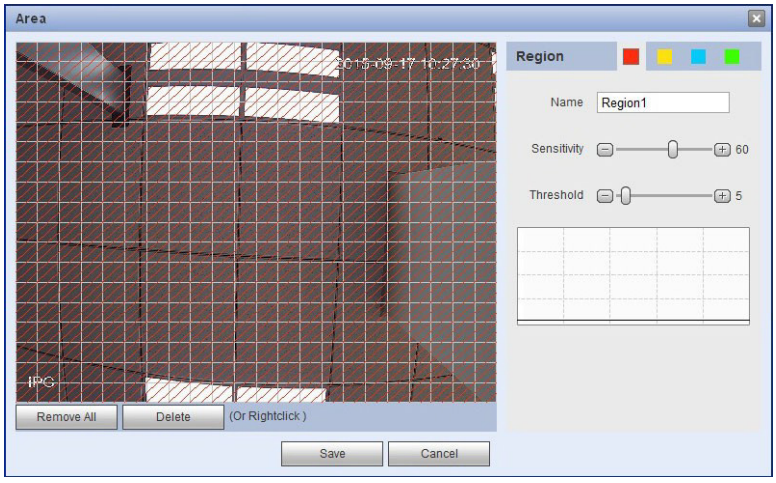


**Table 6-2 Motion Detection Area Configurations**

| Parameter | Function |
|---|---|
| **Sensitivity** | Adjusts the brightness sensitivity. You might need to increase the brightness sensitivity to trigger motion detection. You can configure up to four areas. The sensitivity ranges from **0** to **100**. We recommend that you choose a sensitivity between **30** to **70**. The default is **60**. |
| **Threshold** | The threshold determines how much change in a scene is required to trigger an alarm. The lower the threshold setting, the easier it is to trigger a motion detection alarm. You can configure up to four areas. The sensitivity ranges from **0** to **100**. We recommend that you choose a sensitivity between **5** to **50**. |
| **Remove All** | Deletes all motion detection areas. |
| **Delete** | Deletes the selected motion detection area. |

# Configuring Camera Tampering Settings

**Figure 6-4 Tampering Configuration Interface**

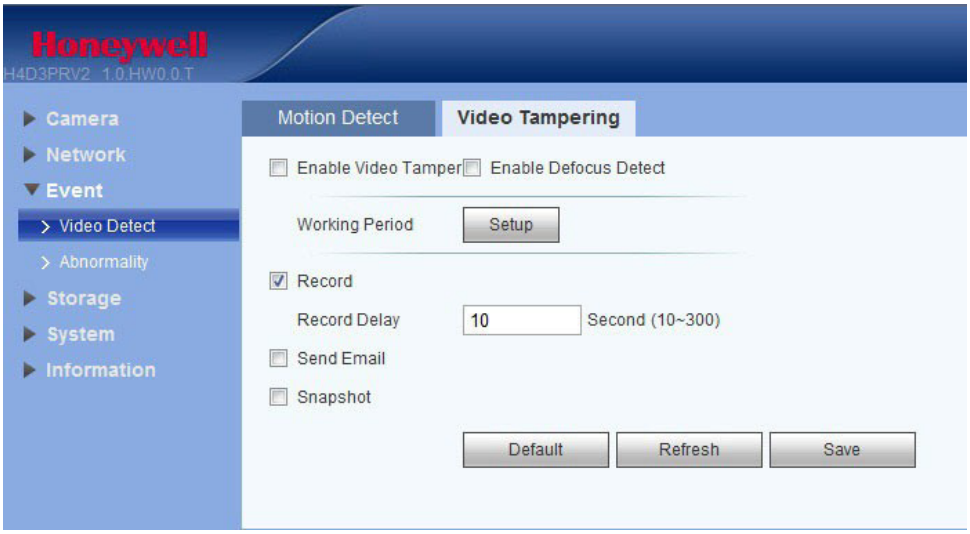
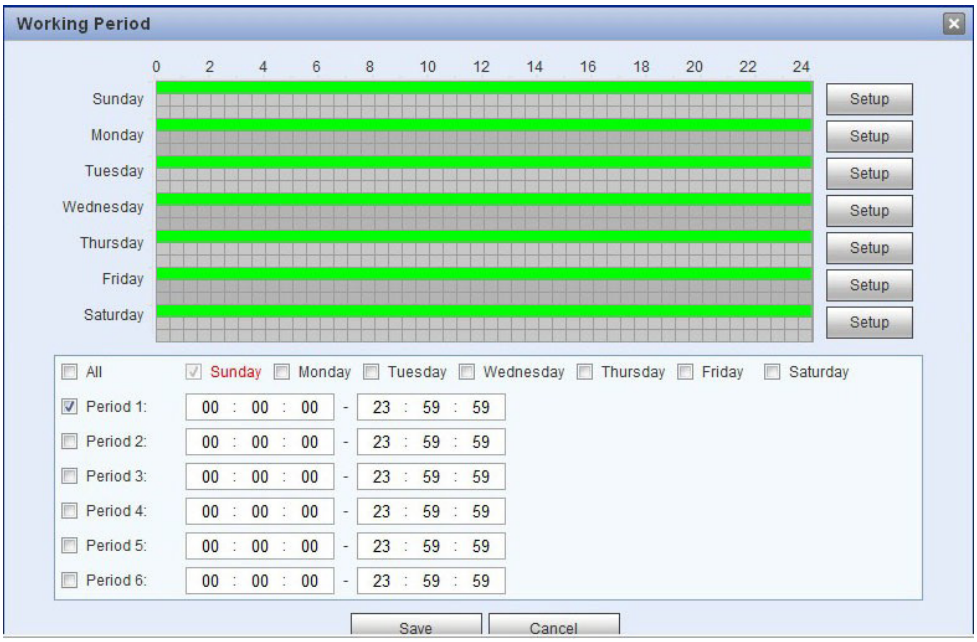



**Table 6-3 Tampering Configurations**

| Parameter | Function |
|---|---|
| **Enable** | Check to enable the **camera tampering** detection function (**Video Tamper** and/or **Defocus Detect**).<br>**Note** **Defocus Detect** is only supported by the following models: HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/H4W2PRV2/H4W4PRV2. |
| **Working Period** | The camera tampering function is activated during the specified period.<br>See *Configuring the Working Period* on page 56.<br>You can configure up to six periods per day. Select a date. If you do not select a date, the current setup will be applied to today only. You can select **All** to apply the working period to the whole week.<br>Click **OK** to save the changes. The system goes back to the **Motion Detection** interface. Click **Save** to exit. |

| | |
|---|---|
| **Record** | If **Record** is enabled, a camera tampering event can activate recording. |
| **Record Delay** | The system will wait for the specified time before it begins recording. Select from **10s** to **300s**. |
| **Send Email** | When enabled, the system sends an email alert when an alarm occurs. |
| **Snapshot** | When enabled, the system attaches a snapshot to an email alert when an alarm occurs. |

**Figure 6-5 Tampering Working Period Configuration Interface**




# Configuring System Events Settings

System events include **No SD Card, Capacity Warning, SD Card Error, Disconnection, IP Conflict**, and **Unauthorized Access**.

| | |
|---|---|
| **Note** | Only applicable to cameras with microSD cards (H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2). |

## Configuring for SD Card Event Settings

SD card events include **No SD Card**, **SD Card Error**, and **Capacity Warning**.

**Figure 6-6 No SD Card Warning Configuration Interface**

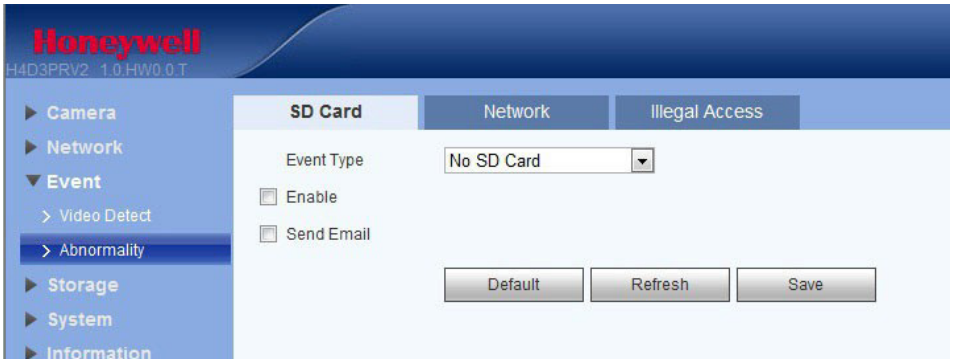



**Figure 6-7 SD Card Error Warning Configuration Interface**

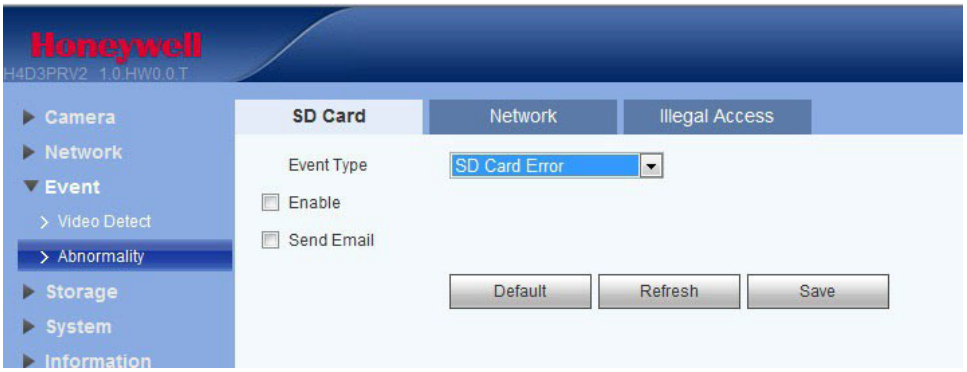
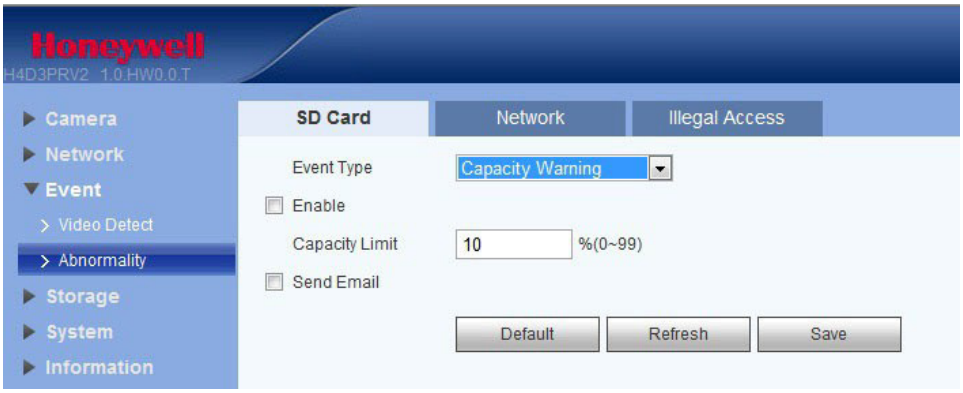



**Figure 6-8 Capacity Warning Configuration Interface**




1. Click **Enable** to trigger an alarm when a microSD card error occurs.
2. Click **Email** to send an email to a specified receiver if a microSD card error occurs.

---

**Note** Emails cannot be sent if the network is offline or if there is an IP conflict.

---

## Configuring Network Event Settings

**Figure 6-9 Disconnection Configuration Interface**

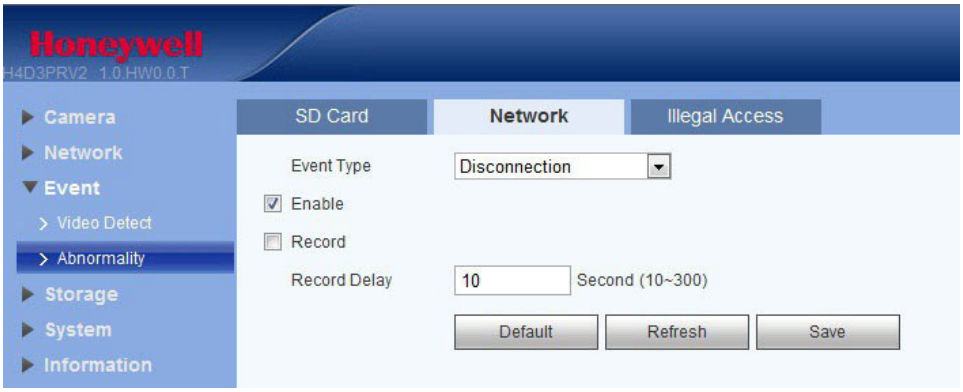
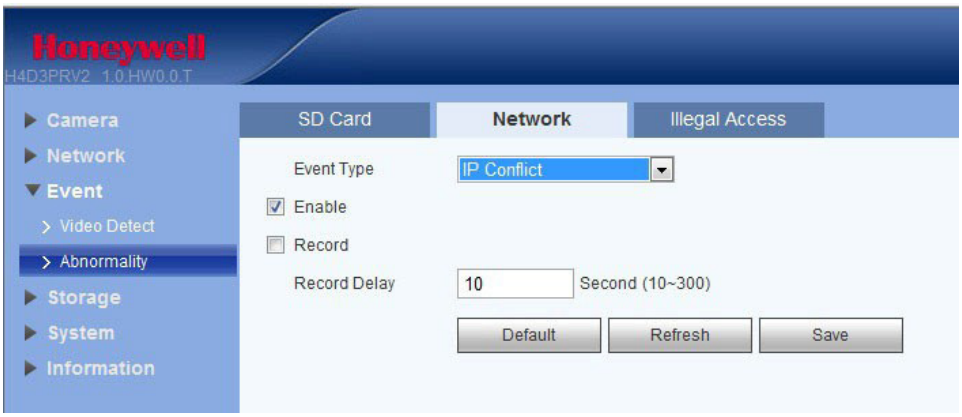



**Figure 6-10 IP Conflict Configuration Interface**



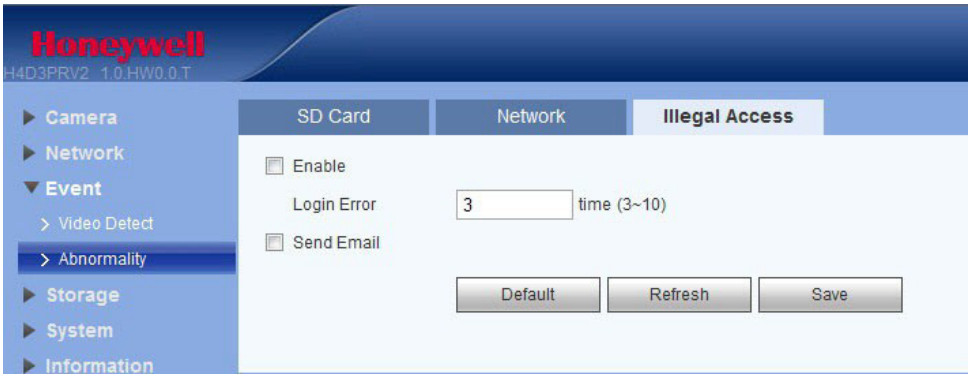

1. Click **Enable** to trigger an alarm when there is a network disconnection or an IP conflict.
2. Click **Record** to record a video to the microSD card when there is a network disconnection or an IP conflict.

| | |
|---|---|
| **Note** | **Record** is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/HEW4PR2/ H4W2PRV2/H4W4PRV2. |

### Configuring Illegal Access Event Settings

You can specify how many unsuccessful login attempts can be made before the system triggers an illegal access alarm.

**Figure 6-11 Illegal Access Configuration Interface**




1. Click **Enable** to trigger an alarm when someone tries to illegally access the camera.
2. Enter the number of times a user can attempt to log in. Select from **3** to **10**.
3. Click **Email** to send an email to a specified receiver if someone attempts to illegally access the camera.

# Configuring Alarms

Click the **Alarm** tab to open the alarm configuration interface.

**Figure 6-12 Alarm Configuration Interface**

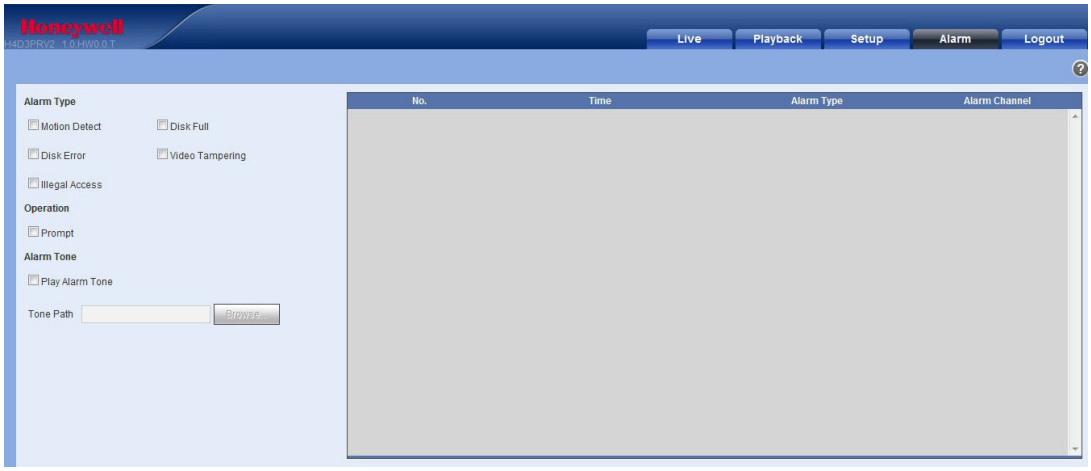


**Table 6-4 Alarm Configurations**

| Type | Parameter | Function |
|---|---|---|
| Alarm Type | **Motion Detection** | System alarms when a motion detection event occurs. |
| | **Tampering** | System alarms when the camera has been tampered with. |
| | **Disk Full** | System alarms when the disk (microSD card) is full.<br>**Note** This function is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/ HEW4PR2/H4W2PRV2/ H4W4PRV2. |
| | **Disk Error** | System records alarm information when a microSD card error occurs.<br>**Note** This function is only supported by the following models: H2W2PRV3/H2W4PRV3/HBW2PR2/HBW4PR2/HEW2PR2/ HEW4PR2/H4W2PRV2/H4W4PRV2. |
| | **Illegal Access** | System alarms when someone attempts to illegally access the camera. |
| **Operation** | **Prompt** | System displays an alarm dialog box. |
| **Alarm Tone** | **Play Alarm Tone** | When an alarm occurs, the system automatically generates an audible sound. You can select a tone from your PC for the alarm tone prompt. |
| | **Tone Path** | Select the alarm sound file. |

# 7 Troubleshooting

Refer to the following guidelines to troubleshoot any performance issues. If you require additional assistance, contact Honeywell Technical Support (see back cover for contact information).

| | |
|---|---|
| **Cannot play downloaded file** | • Use the player located on the CD that came with your camera.<br>• Ensure that DirectX 8.1 or higher is installed on your PC.<br>• Install the DivX503Bundle.exe plugin for playing AVI files.<br>• If you are running Windows XP, install the ffdshow codec. |
| **Cannot set camera frame rate above 20 fps when Embedded NVR resolution set at 3 MP or lower.** | 1. On the NVR, go to NVR setup and set the resolution to 3MP and click **Save**.<br>2. Go to **Remote Device** and click **Delete** to remove the camera. Then select the camera in the Searched Device area and click **Add**.<br>3. Click Modify for the camera in the Added Device area. Select **ONVIF** from the drop-down list of manufacturers and click **Save**.<br>You can now set the frame rate at 20 fps or above for 3 MP or lower resolutions at the NVR end. |
| **Cannot get 4 MP resolution at the NVR.** | 1. Make sure the NVR supports 4 MP (2688×1520) resolution (see *Table 7-1*).<br>2. On the NVR, go to NVR setup→**Remote Device** and click **Modify** for the 4 MP camera in the added device area. Select **ONVIF** from the drop-down list of manufacturers and click **Save**. You can now setup 4 MP resolution on the NVR end. |
| **IR video is poor.** | • Ensure that the power supply is adequate. An inadequate power supply may not be able to support the IR lights.<br>• Ensure that the objects to be illuminated are within the camera's IR range.<br>• If the IR-cut filter does not switch to Night mode, the photosensitive chip at the front of the camera may be malfunctioning. |

| | |
|---|---|
| **Cannot upgrade firmware through the network** | • If you cannot upgrade firmware over the network, try using port 3800. |
| **Cannot install/log in to web client.** | • Ensure that your browser's security settings allow ActiveX controls.<br>• Ensure that DirectX 8.1 or higher is installed on your PC.<br>• Ensure that you have a valid network setup and that you are using the correct login user name and password. |
| **Water leaking into camera housing.** | • Ensure that the front glass cap and rear waterproof cap are tightly secured. Loosening or removing the front and rear caps will allow water to enter the housing. |
| **Power supply is unstable.** | • The operating temperature range for the supplied power adapter is approximately 32°F to 104°F (0°C to 40°C). Replace with an industry-level power adapter if operating the camera in temperatures below 32°F (0°C).<br>• Use of a UPS power supply is strongly recommended. |

# Embedded NVR Integration Capacity Matrix

Refer to the following table when integrating Performance Series IP cameras with Honeywell Embedded NVRs.

**Table 7-1 Embedded NVR Integration Matrix - Maximum Frame Rate and Resolution**

| Part No | HEN04112(X) | HEN04122(X) | HEN08122(X) | HEN08142(X) | HEN08162(X) | HEN16132(X) | HEN16162(X) |
|---|---|---|---|---|---|---|---|
| H2W2PRV3 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 |
| H2W4PRV3 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 |
| HBW2PR1 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 |
| HBW4PR1 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 |
| HEW2PR1/ HEW2PRW1 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 |
| HEW4PR3/ HEW4PRW3 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 |
| H4W4PRV3 | 25/30 fps @2304×1296 20 fps @2688×1520 | **25/30 fps @2304×1296 20 fps @2688×1520** | **25/30 fps @2304×1296 20 fps @2688×1520** | **25/30 fps @2304×1296 20 fps @2688×1520** | **25/30 fps @2304×1296 20 fps @2688×1520** | **25/30 fps @2304×1296 20 fps @2688×1520** | **25/30 fps @2304×1296 20 fps @2688×1520** |
| H4W2PRV2 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 |
| H4W4PRV2 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 |
| HBW2PR2 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 |
| HBW4PR2 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 |
| HEW2PR2 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 | 25/30 fps @1920×1080 |
| HEW4PR2 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 | 25/30 fps @2304×1296 20 fps @2688×1520 |

# 8 Camera Specifications

## HEW2PR1/HEW2PRW1/HEW4PR3/HEW4PRW3 Ball Cameras

**Table 8-1 HEW2PR1/HEW2PRW1/HEW4PR3/HEW4PRW3 Specifications**

| Camera | |
|---|---|
| Image Sensor | **HEW2PR1/HEW2PRW1**: 1/2.7″ 2 megapixel progressive scan CMOS<br>**HEW4PR3/HEW4PRW3**: 1/3″ 4 megapixel progressive scan CMOS |
| Max. Effective Pixels (H×V) | **HEW2PR1/HEW2PRW1**: 1920×1080 (2 MP)<br>**HEW4PR3/HEW4PRW3**: 2688×1520 (4 MP) |
| Min. Illumination | **HEW2PR1/HEW2PRW1**: 0.01 lux @ F2.0 (Color)/0 lux (B/W with IR LEDs on)<br>**HEW4PR3/HEW4PRW3**: 0.01 lux @ F2.0 (Color)/0 lux (B/W with IR LEDs on) |
| Lens | **HEW2PR1/HEW2PRW1**: Fixed, 3.6 mm @ F2.0<br>**HEW4PR3/HEW4PRW3**: Fixed, 2.8 mm @ F2.0 |
| Horizontal Angle of View | **HEW2PR1/HEW2PRW1**: 91°<br>**HEW4PR3/HEW4PRW3**: 110° |
| Automatic Electronic Shutter | 1/3–1/100000 s |
| S/N Ratio | >50 dB |
| IR Range | Up to 130 ft (40 m), depending on scene reflectance |
| Day/Night | Auto(ICR)/Color/BW |
| BLC/WDR | BLC/HLC/WDR (120 dB) |
| White Balance | Auto/Sunny/Night/Outdoor/Manual |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Up to 4 areas |
| Privacy Masking | Up to 4 areas |

| Video | |
|---|---|
| Compression | H.264/H.264H/H.264B/MJPEG |
| Frame Rate | **HEW2PR1/HEW2PRW1**: 25/30 fps @ 1920 ×1080 (2 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF)<br>**HEW4PR3/HEW4PRW3**: 20 fps @ 2688×1520(4 MP); 20 fps @ 2560 × 1440 (4 MP); 25/30 fps @2304×1296(3 MP), 1920×1080(1080p), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF) |
| Bit Rate (H.264) | 32Kbps – 10 Mbps |
| **Network** | |
| Ethernet | RJ-45 (10/100Base-T) |
| Supported Protocols | IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, SNMP, Bonjour, 802.1X |
| Compatibility | ONVIF Profile S, CGI |
| User Access | 20 users max. |
| Mobile App | HonView Touch for iPhone, Android Phone and Tablet |
| **General** | |
| Power Supply | 12 VDC, PoE (802.3af) |
| Power Consumption | **HEW2PR1/HEW2PRW1**: 4.0 W max. (IR LEDs on)<br>**HEW4PR3/HEW4PRW3**: 3.7 W max. (IR LEDs on) |
| Operating Temperature Range | -22°F to 140°F (-30°C to 60°C) |
| Relative Humidity | <95% |
| Protection Rating | IP66 |
| Dimensions | 4.17 × 3.69 in. (106.0 × 93.7 mm) |
| Weight | 1.04 lb (0.47 kg) |
| Regulatory | FCC: Part 15B Class B |
| System Compatibility | HEN041*2(X) H.264 4-Channel 1080p Embedded Network Video Recorder<br>HEN081*2(X) H.264 8-Channel 1080p Embedded Network Video Recorder<br>HEN161*2(X) H.264 16-Channel 1080p Embedded Network Video Recorder |
| Recommended Accessories | HQA-WK2 Wall Mount<br>HQA-BB3 Junction Box (Cable Box)<br>HQA-PM Pole Mount<br>HB34S2-CM Corner Mount |

# HBW2PR1/HBW4PR1 Bullet Cameras

**Table 8-2 HBW2PR1/HBW4PR1 Specifications**

| | |
|---|---|
| **Camera** | |
| Image Sensor | **HBW2PR1**: 1/2.7″ 2 megapixel progressive scan CMOS<br>**HBW4PR1**: 1/3″ 4 megapixel progressive scan CMOS |
| Max. Effective Pixels (H×V) | **HBW2PR1**: 1920×1080 (2 MP)<br>**HBW4PR1**: 2688×1520 (4 MP) |
| Min. Illumination | **HBW2PR1**: 0.01 lux @ F2.0 (Color)/0 lux (B/W with IR LEDs on)<br>**HBW4PR1**: 0.01 lux @ F2.0 (Color)/0 lux (B/W with IR LEDs on) |
| Lens | **HBW2PR1**: Fixed, 3.6 mm @ F2.2<br>**HBW4PR1**: Fixed, 3.6 mm @ F2.1 |
| Horizontal Angle of View | **HBW2PR1**: 93°<br>**HBW4PR1**: 84° |
| Automatic Electronic Shutter | 1/3 – 1/100000 s |
| S/N Ratio | >50 dB |
| IR Range | Up to 130 ft (40 m), depending on scene reflectance |
| Day/Night | Auto(ICR)/Color/BW |
| BLC/WDR | BLC/HLC/WDR (120 dB) |
| White Balance | Auto/Sunny/Night/Outdoor/Manual |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Up to 4 areas |
| Privacy Masking | Up to 4 areas |
| **Video** | |
| Compression | H.264/H.264H/H.264B/MJPEG |
| Frame Rate | **HBW2PR1**: 25/30 fps @ 1920 ×1080 (2 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF)<br>**HBW4PR1**: 20 fps @ 2688×1520 (4 MP); 20 fps @ 2560 × 1440 (4 MP); 25/30 fps @2304×1296(3 MP), 1920×1080(1080p), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF) |
| Bit Rate (H.264) | 32Kbps – 10 Mbps |
| **Network** | |
| Ethernet | RJ-45 (10/100Base-T) |
| Supported Protocols | IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, SNMP, Bonjour, 802.1X |
| Compatibility | ONVIF Profile S, CGI |

| | |
|---|---|
| User Access | 20 users max. |
| Mobile App | HonView Touch for iPhone, Android Phone and Tablet |
| **General** | |
| Power Supply | 12 VDC, PoE (802.3af) |
| Power Consumption | **HBW2PR1**: < 6.5 W<br>**HBW4PR1**: < 6 W |
| Operating Temperature Range | -22°F to 140°F (30°C to 60°C) |
| Relative Humidity | <95% |
| Protection Rating | IP66 |
| Dimensions | 7.13 × 2.76 in. (181.0 × 70.0 mm) |
| Weight | 1.16 lb (0.53 kg) |
| Regulatory | FCC: Part 15B Class B |
| System Compatibility | HEN041*2(X) H.264 4-Channel 1080p Embedded Network Video Recorder<br>HEN081*2(X) H.264 8-Channel 1080p Embedded Network Video Recorder<br>HEN161*2(X) H.264 16-Channel 1080p Embedded Network Video Recorder |
| Recommended Accessories | HQA-BB1 Junction Box (Cable Box)<br>HQA-PM Pole Mount<br>HB34S2-CM Corner Mount |

# H2W2PRV3/H2W4PRV3 Micro Dome Cameras

**Table 8-3 H2W2PRV3/H2W4PRV3 Specifications**

| | |
|---|---|
| **Camera** | |
| Image Sensor | **H2W2PRV3**: 1/2.7″ 2 megapixel progressive scan CMOS<br>**H2W4PRV3**: 1/3″ 4 megapixel progressive scan CMOS |
| Max. Effective Pixels (H×V) | **H2W2PRV3**: 1920×1080 (2 MP)<br>**H2W4PRV3**: 2688×1520 (4 MP) |
| Min. Illumination | **H2W2PRV3**: 0.01 lux @ F2.0 (Color)/0 lux (B/W with IR LEDs on)<br>**H2W4PRV3**: 0.01 lux @ F2.0 (Color)/0 lux (B/W with IR LEDs on) |
| Lens | **H2W2PRV3**: Fixed, 2.8 mm @ F2.0<br>**H2W4PRV3**: Fixed, 2.8 mm @ F2.0 |
| Horizontal Angle of View | **H2W2PRV3**: 120°<br>**H2W4PRV3**: 106° |
| Automatic Electronic Shutter | 1/3 – 1/100000 s |
| S/N Ratio | >50 dB |
| IR Range | Up to 65 ft (20 m), depending on scene reflectance |
| Day/Night | Auto(ICR)/Color/BW |
| BLC/WDR | BLC/HLC/WDR (120 dB) |
| White Balance | Auto/Sunny/Night/Outdoor/Manual |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Up to 4 areas |
| Privacy Masking | Up to 4 areas |
| **Video** | |
| Compression | H.264/H.264H/H.264B/MJPEG |
| Frame Rate | **H2W2PRV3**: 25/30 fps @ 1920 ×1080 (2 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF)<br>**H2W4PRV3**: 20 fps @ 2688×1520(4 MP); 20 fps @ 2560 × 1440 (4 MP); 25/30 fps @2304×1296(3 MP), 1920×1080(1080p), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF) |
| Bit Rate (H.264) | 32Kbps – 10 Mbps |
| Local Storage | microSD, 128 GB max. |
| **Audio** | |
| Compression | G.711, AAC |
| Interface | Built-in mic |

| Network | |
|---|---|
| Ethernet | RJ-45 (10/100Base-T) |
| Supported Protocols | IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, SNMP, Bonjour, 802.1X |
| Compatibility | ONVIF Profile S, CGI |
| User Access | 20 users max. |
| Mobile App | HonView Touch for iPhone, Android Phone and Tablet |
| **General** | |
| Power Supply | 12 VDC, PoE (802.3af) |
| Power Consumption | <5 W |
| Operating Temperature Range | -22°F to 140°F (-30°C to 60°C) |
| Relative Humidity | <95% |
| Ingress Protection Rating | IP66 |
| Dimensions | 4.17 × 1.98 in. (106.0 × 50.3 mm) |
| Weight | 1.04 lb (0.47 kg) |
| Regulatory | FCC: Part 15B Class B |
| System Compatibility | HEN041*2(X) H.264 4-Channel 1080p Embedded Network Video Recorder<br>HEN081*2(X) H.264 8-Channel 1080p Embedded Network Video Recorder<br>HEN161*2(X) H.264 16-Channel 1080p Embedded Network Video Recorder |
| Recommended Accessories | HQA-WK2 Wall Mount<br>HQA-BB3 Junction Box (Cable Box)<br>HQA-PM Pole Mount<br>HB34S2-CM Corner Mount |

# H4W4PRV3 Mini Dome Camera

**Table 8-4 H4W4PRV3 Specifications**

| | |
|---|---|
| **Camera** | |
| Image Sensor | 1/3″ 4 megapixel progressive scan CMOS |
| Max. Effective Pixels (H×V) | 2688×1520 (4 MP) |
| Min. Illumination | 0.01 lux @ F2.0 (Color)/0 lux (B/W with IR LEDs on) |
| Lens | Fixed, 2.8 mm @ F2.0 |
| Horizontal Angle of View | 106° |
| Automatic Electronic Shutter | 1/3 – 1/100000 s |
| S/N Ratio | >50 dB |
| IR Range | Up to 100 ft (30 m), depending on scene reflectance |
| Day/Night | Auto(ICR)/Color/BW |
| BLC/WDR | BLC/HLC/WDR (120 dB) |
| White Balance | Auto/Sunny/Night/Outdoor/Manual |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Up to 4 areas |
| Privacy Masking | Up to 4 areas |
| **Video** | |
| Compression | H.264/H.264H/H.264B/MJPEG |
| Frame Rate | 20 fps @ 2688×1520(4 MP); 20 fps @ 2560 × 1440 (4 MP); 25/30 fps @2304×1296(3 MP), 1920×1080(1080p), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF) |
| Bit Rate (H.264) | 32Kbps – 10 Mbps |
| **Network** | |
| Ethernet | RJ-45 (10/100Base-T) |
| Supported Protocols | IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, SNMP, Bonjour, 802.1X |
| Compatibility | ONVIF Profile S, CGI |
| User Access | 20 users max. |
| Mobile App | HonView Touch for iPhone, Android Phone and Tablet |
| **General** | |
| Power Supply | 12 VDC, PoE (802.3af) |
| Power Consumption | 4.0 W max. (IR LEDs on) |
| Operating Temperature | -22°F to 140°F (-30°C to 60°C) |

| | |
|---|---|
| Range | |
| Relative Humidity | <95% |
| Protection Rating | IP66 |
| Dimensions | 4.33 × 3.19 in. (110.0 × 81.0 mm) |
| Weight | 1.04 lb (0.47 kg) |
| Regulatory | FCC: Part 15B Class B |
| System Compatibility | HEN041*2(X) H.264 4-Channel 1080p Embedded Network Video Recorder<br>HEN081*2(X) H.264 8-Channel 1080p Embedded Network Video Recorder<br>HEN161*2(X) H.264 16-Channel 1080p Embedded Network Video Recorder |
| Recommended Accessories | HQA-WK Wall Mount<br>HQA-BB3 Junction Box (Cable Box)<br>HQA-PM Pole Mount<br>HB34S2-CM Corner Mount |

# H4W2PRV2/H4W4PRV2 Mini Dome Cameras

**Table 8-5 H4W2PRV2/H4W4PRV2 Specifications**

| | |
|---|---|
| **Camera** | |
| Image Sensor | **H4W2PRV2**: 1/2.7″ 2 megapixel progressive scan CMOS<br>**H4W4PRV2**: 1/3″ 4 megapixel progressive scan CMOS |
| Max. Effective Pixels (H×V) | **H4W2PRV2**: 1920×1080 (2 MP)<br>**H4W4PRV2**: 2688×1520 (4 MP) |
| Min. Illumination | 0.1 lux @ F1.4 (Color)/0 lux @ F1.4 (B/W with IR LEDs on) |
| Lens | MFZ, 2.7-12 mm @ F1.4 |
| Horizontal Angle of View | **H4W2PRV2**: 93°-35°<br>**H4W4PRV2**: 86°-30° |
| Automatic Electronic Shutter | 1/3 – 1/100000 s |
| S/N Ratio | >50 dB |
| IR Range | Up to 100 ft (30 m), depending on scene reflectance |
| Day/Night | Auto(ICR)/Color/BW |
| BLC/WDR | BLC/HLC/WDR (120 dB) |
| White Balance | Auto/ Manual |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Up to 4 areas |
| Privacy Masking | Up to 4 areas |
| **Video** | |
| Compression | H.264/H.264H/H.264B/MJPEG |
| Frame Rate | **H4W2PRV2**: 25/30 fps @ 1920 ×1080 (2 MP); 25/30fps @ 1280×1024 (SXGA); 25/30fps @ 1280×960 (1.3 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF)<br>**H4W4PRV2**: 20 fps @ 2688×1520(4 MP); 20 fps @ 2560 × 1440 (4 MP); 25/30 fps @2304×1296(3 MP), 1920×1080(1080p); 25/30fps @ 1280×1024 (SXGA); 25/30fps @ 1280×960 (1.3 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF) |
| Bit Rate (H.264) | 32 Kbps – 10 Mbps |
| Local Storage | microSD, 128 GB max. |
| **Network** | |
| Ethernet | RJ-45 (10/100Base-T) |
| Supported Protocols | IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, SNMP, Bonjour, 802.1X |
| Compatibility | ONVIF Profile S, CGI |

| | |
|---|---|
| User Access | 20 users max. |
| Mobile App | HonView Touch for iPhone, Android Phone and Tablet |
| **General** | |
| Power Supply | 12 VDC, PoE (802.3af) |
| Power Consumption | <8 W |
| Operating Temperature Range | -22°F to 140°F (-30°C to 60°C) |
| Relative Humidity | <95% |
| Ingress Protection Rating | IP66 |
| Vandal Resistance | IK10 |
| Dimensions | 4.80 × 3.50 in. (122.0 × 88.9 mm) |
| Weight | 1.10 lb (0.5 kg) |
| Regulatory | FCC: Part 15B Class B |
| System Compatibility | HEN041*2(X) H.264 4-Channel 1080p Embedded Network Video Recorder<br>HEN081*2(X) H.264 8-Channel 1080p Embedded Network Video Recorder<br>HEN161*2(X) H.264 16-Channel 1080p Embedded Network Video Recorder |
| Recommended Accessories | HQA-WK Wall Mount<br>HQA-BB2 Junction Box<br>HB34S2-CM Corner Mount<br>HQA-PM Pole Mount |

# HEW2PR2/HEW4PR2 Ball Cameras

**Table 8-6 HEW2PR2/HEW4PR2 Specifications**

| | |
|---|---|
| **Camera** | |
| Image Sensor | **HEW2PR2**: 1/2.7″ 2 megapixel progressive scan CMOS<br>**HEW4PR2**: 1/3″ 4 megapixel progressive scan CMOS |
| Max. Effective Pixels (H×V) | **HEW2PR2**: 1920×1080 (2 MP)<br>**HEW4PR2**: 2688×1520 (4 MP) |
| Min. Illumination | 0.1 lux @ F1.4 (Color)/0 lux @ F1.4 (B/W with IR LEDs on) |
| Lens | MFZ, 2.7-12 mm @ F1.4 |
| Horizontal Angle of View | **HEW2PR2**: 86°-30°<br>**HEW4PR2**: 86°-30° |
| Automatic Electronic Shutter | 1/3 – 1/100000 s |
| S/N Ratio | >50 dB |
| IR Range | Up to 200 ft (60 m), depending on scene reflectance |
| Day/Night | Auto(ICR)/Color/BW |
| BLC/WDR | BLC/HLC/WDR (120 dB) |
| White Balance | Auto/Manual |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Up to 4 areas |
| Privacy Masking | Up to 4 areas |
| **Video** | |
| Compression | H.264/H.264H/H.264B/MJPEG |
| Frame Rate | **HEW2PR2**: 25/30 fps @ 1920 ×1080 (2 MP), 25/30fps @ 1280×1024 (SXGA), 25/30fps @ 1280×960 (1.3 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF)<br>**HEW4PR2**: 20 fps @ 2688×1520(4 MP); 20 fps @ 2560 × 1440 (4 MP); 25/30 fps @2304×1296(3 MP), 1920×1080(1080p), 25/30fps @ 1280×1024 (SXGA), 25/30fps @ 1280×960 (1.3 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF) |
| Bit Rate (H.264) | 32 Kbps – 10 Mbps |
| Local Storage | microSD, 128 GB max. |
| **Network** | |
| Ethernet | RJ-45 (10/100Base-T) |
| Supported Protocols | IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, SNMP, Bonjour, 802.1X |
| Compatibility | ONVIF Profile S, CGI |

| | |
|---|---|
| User Access | 20 users max. |
| Mobile App | HonView Touch for iPhone, Android Phone and Tablet |
| **General** | |
| Power Supply | 12 VDC, PoE (802.3 af) |
| Power Consumption | **HEW2PR2**: <7 W<br>**HEW4PR2**: <7.5 W |
| Operating Temperature Range | -22°F to 140°F (-30°C to 60°C) |
| Relative Humidity | <95% |
| Ingress Protection Rating | IP66 |
| Dimensions | 4.80 × 4.02 in. (122.0 × 102.0 mm) |
| Weight | 1.21 lb (0.55 kg) |
| Regulatory | FCC: Part 15B Class B |
| System Compatibility | HEN041*2(X) H.264 4-Channel 1080p Embedded Network Video Recorder<br>HEN081*2(X) H.264 8-Channel 1080p Embedded Network Video Recorder<br>HEN161*2(X) H.264 16-Channel 1080p Embedded Network Video Recorder |
| Recommended Accessories | HQA-WK Wall Mount<br>HQA-BB2 Junction Box<br>HB34S2-CM Corner Mount<br>HQA-PM Pole Mount |

# HBW2PR2/HBW4PR2 Bullet Cameras

**Table 8-7 HBW2PR2/HBW4PR2 Specifications**

| | |
|---|---|
| **Camera** | |
| Image Sensor | **HBW2PR2**: 1/2.7″ 2 megapixel progressive scan CMOS<br>**HBW4PR2**: 1/3″ 4 megapixel progressive scan CMOS |
| Max. Effective Pixels (H×V) | **HBW2PR2**: 1920×1080 (2 MP)<br>**HBW4PR2**: 2688×1520 (4 MP) |
| Min. Illumination | 0.1 lux @ F1.4 (Color)/0 lux @ F1.4 (B/W with IR LEDs on) |
| Lens | MFZ, 2.7-12 mm @ F1.4 |
| Horizontal Angle of View | **HBW2PR2**: 93°-35°<br>**HBW4PR2**: 86°-30° |
| Automatic Electronic Shutter | 1/3 – 1/100000 s |
| S/N Ratio | >50 dB |
| IR Range | Up to 200 ft (60 m), depending on scene reflectance |
| Day/Night | Auto (ICR)/Color/BW |
| BLC/WDR | BLC/HLC/WDR (120 dB) |
| White Balance | Auto/ Manual |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Up to 4 areas |
| Privacy Masking | Up to 4 areas |
| **Video** | |
| Compression | H.264/H.264H/H.264B/MJPEG |
| Frame Rate | **HBW2PR2**: 25/30 fps @ 1920 ×1080 (2 MP); 25/30fps @ 1280×1024 (SXGA); 25/30fps @ 1280×960 (1.3 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF)<br>**HBW4PR2**: 20 fps @ 2688×1520(4 MP); 20 fps @ 2560 × 1440 (4 MP); 25/30 fps @2304×1296(3 MP), 1920×1080(1080p); 25/30fps @ 1280×1024 (SXGA); 25/30fps @ 1280×960 (1.3 MP), 1280×720 (720p), 704×576/704×480 (D1), 352×288/352×240 (CIF) |
| Bit Rate (H.264) | 32 Kbps – 10 Mbps |
| Local Storage | microSD, 128 GB max. |
| **Network** | |
| Ethernet | RJ-45 (10/100Base-T) |
| Supported Protocols | IPv4/IPv6, HTTP, HTTPS, TCP/IP, UDP, UPnP, ICMP, IGMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, SSL, SNMP, Bonjour, 802.1X |
| Compatibility | ONVIF Profile S, CGI |

| | |
|---|---|
| User Access | 20 users max. |
| Mobile App | HonView Touch for iPhone, Android Phone and Tablet |
| **General** | |
| Power Supply | 12 VDC, PoE (802.3af) |
| Power Consumption | **HBW2PR2**: <13 W<br>**HBW4PR2**: <12.5 W |
| Operating Temperature Range | -22°F to 140°F (-30°C to 60°C) |
| Relative Humidity | <95% |
| Ingress Protection Rating | IP66 |
| Dimensions | 2.89 × 3.14 x 8.46 in. (73.4 × 79.7 × 214.8 mm) |
| Weight | 1.43 lb (0.65 kg) |
| Regulatory | FCC: Part 15B Class B |
| System Compatibility | HEN041*2(X) H.264 4-Channel 1080p Embedded Network Video Recorder<br>HEN081*2(X) H.264 8-Channel 1080p Embedded Network Video Recorder<br>HEN161*2(X) H.264 16-Channel 1080p Embedded Network Video Recorder |
| Recommended Accessories | HBS2-BB Junction Box<br>HB34S2-CM Corner Mount<br>HQA-PM Pole Mount |

# List of Symbols

The following is a list of symbols that may appear on the camera:

| Symbol | Explanation |
|---|---|
|  | The WEEE symbol.<br>This symbol indicates that when the end-user wishes to discard this product, it must be sent to separate collection facilities for recovery and recycling. By separating this product from other household-type waste, the volume of waste sent to incinerators or landfills will be reduced, and thus natural resources will be conserved. |
|  | The UL compliance logo.<br>This logo indicates that the product has been tested and is listed by UL (formerly Underwriters Laboratories). |
|  | The FCC compliance logo.<br>This logo indicates that the product conforms to Federal Communications Commission compliance standards. |
|  | The direct current symbol.<br>This symbol indicates that the power input/output for the product is direct current. |
|  | The alternating current symbol.<br>This symbol indicates that the power input/output for the product is alternating current. |
|  | The RCM compliance logo.<br>This logo indicates that the product conforms with Australian RCM guidelines. |
|  | The CE compliance logo.<br>This logo indicates that the product conforms to the relevant guidelines/standards for the European Union harmonization legislation. |
|  | The caution symbol.<br>This symbol indicates important information. |
|  | The protective earth (ground) symbol.<br>This symbol indicates that the marked terminal is intended for connection to the protective earth/grounding conductor. |

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