CHAPTER 4

Camera Management

This chapter provides information and instructions for managing the Cisco Video Surveillance 2620 IP Camera, and includes the following topics:

- Understanding the IP Camera User Interface, page 4-1
- Adjusting the IP Camera Focus and Zoom, page 4-4
- Powering the IP Camera On or Off, page 4-4
- Resetting the IP Camera, page 4-4
- Viewing Live Video, page 4-5

Understanding the IP Camera User Interface

After you log in to the IP camera, you can access the IP camera windows and perform a variety of administrative and user procedures.

The links and activities that you can see and access in the IP camera windows depend on your IP camera privilege level.

- Administrator—Can access all IP camera windows, features, and functions.
- Viewer—Can access the Camera Video & Control window with limited controls, and can access the **Refresh**, **Logout**, **About**, and **Help** links from that window.

IP Camera Window Links

The IP Camera user interface includes links that you use to access various windows and perform other activities. Table 4-1 describes each link and lists the IP camera privilege level that you must have to access the link.

Table 4-1   Links in the IP Camera Windows

Link	Description	Privilege Level
Refresh	Updates the information in the window that is currently displayed.	Administrator User
Home	Displays the Home window.	Administrator

Table 4-1   *Links in the IP Camera Windows (continued)*

Link	Description	Privilege Level
View Video	Displays the Camera Video & Control window. You may be prompted to install ActiveX controls when trying to access this window for the first time. ActiveX controls are required to view video from the IP camera. Follow the on-screen prompts to install ActiveX controls.	Administrator User
Setup	Provides access to the configuration menus for the IP camera.	Administrator
Logout	Logs you out from the IP camera.	Administrator User
About	Displays a pop-up window with model, version, and copyright information for the IP camera.	Administrator User
Help	Displays reference information for the window that is currently displayed.	Administrator User

IP Camera Windows

The IP camera user interface includes these main windows:

- Home window—Displays the system information that is described in Table 4-2.

- Setup window—Provides access to the IP camera configuration windows.

- Camera Video & Control window—Displays live video from the camera and lets you control a variety of camera and display functions.

Table 4-2   Home Window Information

Field	Description
General Information	
ID	Identifier of the IP camera.
Name	Name of the IP camera.
Current Time	Current date and time of the IP camera.
S/N	Serial number of the IP camera.
Firmware	Version of the firmware that is installed on the IP camera.
Codec	Version of the codec that is running on the IP camera.
Part Number	Cisco manufacturing part number of the IP camera.
Top Assembly Revision	Cisco assembly revision number.
Network Status	
MAC Address	MAC address of the IP camera.
Configuration Type	Method by which the IP camera obtains its IP address.
LAN IP	IP address of the LAN to which the IP camera is connected.
Subnet Mask	Subnet mask of the LAN to which the IP camera is connected.
Gateway Address	IP address of the gateway through which the IP camera is connected.
Primary DNS	IP address of the primary DNS server, if configured for the IP camera.
Secondary DNS	IP address of the secondary DNS server, if configured for the IP camera.
IO Port Status	
Input Port 1	Current state of input port 1 on the IP camera.
Output Port 1	Current state of output port 1 on the IP camera.
Stream 1 and Stream 2	
User	IP camera user name of each user who is accessing the primary video stream (Stream 1) or the secondary video stream (Stream 2) through a client PC or a third-party device.
	Be default, users appear in order of start time. To displays users in ascending order of any information in any corresponding column, click the column heading. Click a column heading again to reverse the display order.
IP Address	IP address of the client device.
Start Time	Time and date that the client accessed the video stream for this session.
Elapsed Time	Length of time that the client has been accessing the video stream.

Adjusting the IP Camera Focus and Zoom

To adjust the IP camera focus and zoom, perform the following steps while viewing video from the camera. For information about viewing video, see "Viewing Live Video" section on page 4-5.

Procedure

Step 1   Login to the IP camera.

The Home window appears.

Step 2   Click the **View Video** link.

The Camera Video & Control window appears.

Step 3   Verify that the field of view is correctly set.

Step 4   Click the **Focus/Zoom** toggle button located below the video pane.

Step 5   The focus and zoom controls appear.

Step 6   While watching the video pane, perform the following steps:

    a.   Move the **Zoom** slider until you achieve the desired zoom level.

    b.   Move the **Focus** slider until the video image is at its sharpest.

Step 7   (Optional) Click **Auto Focus** to have the IP camera automatically adjust its focus. To automatically adjust the focus to a particular region in the field of view, check the **Specify Region** check box and draw or select a region before clicking Auto Focus.

Powering the IP Camera On or Off

The IP camera does not include an on/off switch. You power it on or off by connecting it to or disconnecting it from a power source. When you power off the IP camera, configuration settings are retained.

To power on the IP camera, take either of these actions:

- Use an STP (shielded twisted pair) Category 5 or higher network cable to connect the IP camera to a network switch that provides 802.3af compliant PoE.

- Use an optional 12 VDC or 24VAC power adapter to connect the IP camera to a wall outlet

To power off the IP camera, take either of these actions:

- If the IP camera is receiving PoE, disconnect the network cable

- If the IP camera is receiving power through the power adapter, unplug the adapter from the wall or disconnect it from the camera

Resetting the IP Camera

You reset the IP camera by pressing the Reset button on the IP Camera (see Figure 1-1 on page 1-2). There are various reset types, as described in Table 4-3.

You also can also perform these reset operations from the Maintenance Settings window as described in the *Cisco Video Surveillance 6000 Series IP Camera Configuration Guide*.

Table 4-3   Resetting the IP Camera

Reset Type	Procedure	Remarks
Reboot.	Press and immediately release the Reset button.	This action is equivalent to powering the IP camera down and then powering it up. Settings that are configured for the IP camera are retained.
Factory reset.	Press and hold the button for at least 15 seconds.	Sets all IP camera options to their default values. After you perform this procedure, follow the steps in the "Performing the Initial Setup of the IP Camera" section on page 3-1.

Viewing Live Video

After you install and set up the Cisco Video Surveillance IP Camera, you can connect to the IP camera through Internet Explorer and access the Camera Video & Control window to view live video.

The Camera Video & Control window also provides for controlling the video display, configuring preset positions, and controlling certain IP camera functions. Available controls depend on the privilege level of the user.
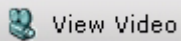
To view live video, log in to the IP camera, then click **View Video** in the IP camera Main window menu bar. The Camera Video & Control window appears. This window displays live video from the camera and lets you control a variety of camera and display functions.

The controls that you see in the Camera Video & Control window depend on your IP camera privilege level and the configurations settings for the IP camera. Users with the Administrator privilege can access all controls. Users with the Viewer privilege do not have access to the following controls:

- Video image controls
- Motion detection controls

Table 4-4 describes the controls in the Camera Video & Control window.
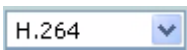
Table 4-4   Camera Video & Control Window Controls

Control	Description
Video controls	
Video Codec drop-down list H.264	Choose the codec for video transmission (H.264 or MJPEG). You can choose H.264 only if the primary video stream (channel 1) is enabled. You can choose MJPEG only if the secondary video stream (channel 2) is enabled.

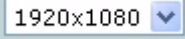*Table 4-4   Camera Video & Control Window Controls (continued)*
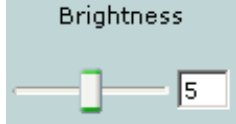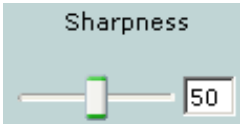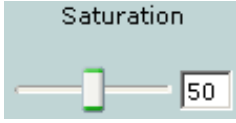
Control	Description
Video Resolution drop-down list `1920x1080`	Choose the resolution for video transmission. The resolutions in this drop-down list depend on the video standard that you selected. The default value for H.264 is 1920 x 1080. The default value for MJPEG is 1024 x 576. You cannot configure a secondary stream if you configure this resolution for 1920 x 1080.
Right Arrow toggle button ▶	Click the Right Arrow to display the video image controls. The button changes to the Left Arrow button.
Left Arrow toggle button ◀	Click the Left Arrow button to hide the video image controls. The button changes to the Right Arrow button.

Video image controls

Note   These controls appear when you click the Right Arrow in the Video Control area.

Control	Description
Brightness slider Brightness `5`	To control the brightness of the video image, drag the slider, or enter a value from 1 through 10 and press the **Enter** key. A higher value increases the brightness and a lower value decreases the brightness. For example, if the IP camera is facing a bright light and the video appears too dark, you can increase the brightness. The default value is 5.
Contrast slider Contrast `5`	To control contrast of the video image, drag the slider, or enter a value from 1 through 10 and press the **Enter** key. A higher value increases the contrast and a lower value decreases the contrast. The default value is 5.
Sharpness slider Sharpness `50`	To control the sharpness of the video from the IP camera, drag the slider, or enter a value from 1 through 100 and press the **Enter** key. A higher value increases the sharpness and a lower value decreases the sharpness. The default value is 50.
Saturation slider Saturation `50`	To control the saturation of the video from the IP camera, drag the slider, or enter a value from 1 through 100 and press the **Enter** key. A higher value increases the saturation and a lower value decreases the saturation. High saturation provides a vivid, intense color for a video image. With less saturation, the video image appears more muted and gray. The default value is 50.
Restore button	Resets white balance, brightness, contrast, sharpness, saturation, and hue to their default values.

Table 4-4   Camera Video & Control Window Controls (continued)
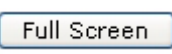
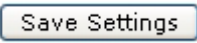| Control	Description
Image tools	
Hotspot Zoom button	Click this latch button to enables the digital zoom feature, which provides five-step digital zooming in for the normal (not full screen) video display. Click this button again to disable the digital zoom feature.
	To perform a digital zoom, engage the **Hotspot Zoom** button and click the video display. The first five clicks zoom the display. The sixth click returns to unzoomed display.
Hotspot Pan/Tilt button	Click this latch button to enable the hotspot pan/tilt feature, which lets you pan and tilt the IP camera toward a point that you click in the video display.
	To perform a hotspot pan/tilt action, engage the **Hotspot Pan/Tilt** button, then click the video image at the location toward which you want the IP camera to pan and tilt.
	This feature require that the IP camera be installed with a pan/tilt mount that supports the Pelco D protocol and that pan and tilt functions are enabled.
Save Snapshot button	Captures and saves a the current video image as a .gif file or a .jpg file in the location of your choice and with the file name of your choice.
	When you click this button, the Snapshot window appears. Click **Save** and follow the on-screen prompts to save the image with the name and in the location that you want.
Flip button	Rotates the video image by 180 degrees.
Mirror button	Reverses the video image.
Restore button	Displays the default video image, which is not rotated and not reversed.
Full Screen button	Displays the video image in full screen mode.
	To return to normal display mode, click the full screen image.
Motion detection	
Up Arrow toggle button	Click the Up Arrow to display the motion detection controls. The button changes to the Down Arrow button.
Down Arrow toggle button	Click the Down Arrow button to hide the motion detection controls. The button changes to the Up Arrow button.

Table 4-4   Camera Video & Control Window Controls (continued)

Control	Description
Motion detection controls	
Note	These controls appear when you click the Up Arrow in the Motion Detection area and are available only viewing the primary (H.264) stream.
Enable Motion Detection check box	Enables the motion detection feature and displays a grid over the video image.
	When motion detection is enabled, the IP camera monitors activity in the video field areas that you specify. If activity at a defined level occurs in any of these areas, the IP camera generates an alert and takes the configured actions.
	To designate specific areas that the IP camera monitors for activity, select the areas by clicking each grid cell over the area. A red border indicates a selected area. To deselect an area, click it again.
	You can configure the following levels for areas that the IP camera monitors for activity:
	• Sensitivity—Designates the relative amount of activity that the IP camera must detect in the area before it generates an alert. A lower value means that more, or faster, activity is required to trigger an alert. A higher value means that less, or slower, activity is required. The default value is 80.
	• Threshold—Designates the percentage of pixels that the IP camera must identify as changed in the area before it generates an alert. The camera detects pixel changes at the defined sensitivity level. The default threshold value is 10.
	To configure sensitivity or threshold, right-click a grid cell that has a red border and then drag the Sensitivity and Threshold sliders to the desired values. Alternatively, enter a value from 1 through 100 for an option and press the **Enter** key. To reset the sensitivity and threshold to their default values of 50, click **Restore**. These configuration settings affect the cell that you select. If the cell is part of a group of horizontally or vertically (but not diagonally) adjacent cells, the settings affect all cells in the group.
Full Screen check box	Becomes available when you click check Enable Motion Detection check box. Check the Full Screen check box to cause the IP camera to examine the entire video field for activity.
	You can configure the following items for this video field:
	• Sensitivity—Designates the relative amount of activity that the IP camera must detect in the area before it generates an alert. A lower value means that more, or faster, activity is required to trigger an alert. A higher value means that less, or slower, activity is required. The default value is 80.
	• Threshold—Designates the percentage of pixels that the IP camera must identify as changed in the area before it generates an alert. The camera monitors for pixel changes at the defined sensitivity level. The default threshold value is 10.
	To configure sensitivity or threshold, right-click anywhere in the video field border and then drag the Sensitivity and Threshold sliders to the desired values. Alternatively, enter a value from 1 through 100 for an option and press the **Enter** key. To reset the sensitivity and threshold to their default values of 50, click **Restore**.

Table 4-4   Camera Video & Control Window Controls (continued)

Control	Description
Restore button	Deselects all areas in the video field that you have selected for motion detection monitoring.
Save Settings button Save Settings	Save the current motion detection configuration.