



Camera Management

This chapter provides information and instructions for managing the Cisco Video Surveillance 3050 IP Camera, and includes the following topics:

- [Understanding the IP Camera User Interface, page 4-1](#)
- [Adjusting the IP Camera Viewing Angle and Focus and Completing the Installation, page 4-3](#)
- [Powering the IP Camera On or Off, page 4-7](#)
- [Resetting the IP Camera, page 4-7](#)
- [Viewing Live Video, page 4-8](#)

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.	Administrator
	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.	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.
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.

Table 4-2 Home Window Information (continued)

Field	Description
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.
Stream 1 and Stream 2	
User	<p>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.</p> <p>By default, users appear in order of start time. To display 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.</p>
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.

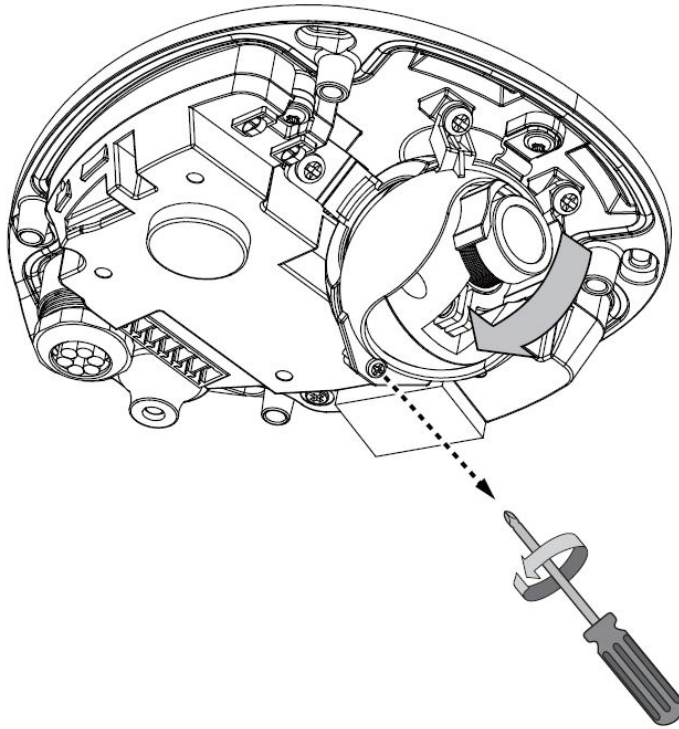
Adjusting the IP Camera Viewing Angle and Focus and Completing the Installation

To adjust the IP camera viewing angle and focus and complete the installation of the IP camera, perform the following steps. For information about viewing video, see [“Viewing Live Video” section on page 4-8](#).

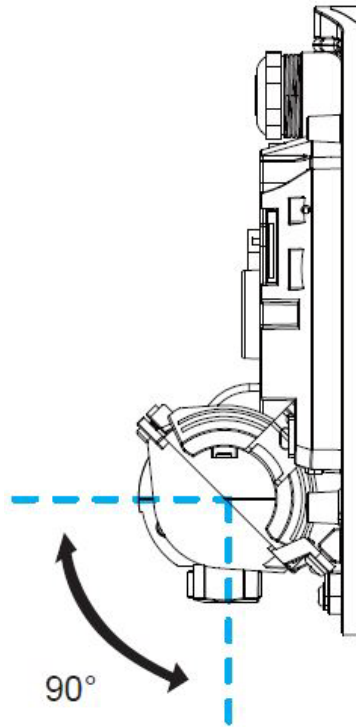
Procedure

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- Step 1** Log in to the IP camera.
- The Home window appears.
- Step 2** While viewing video in the Home window, take these actions to adjust the viewing angle:
- Loosen (but do not remove) the lens module retention screw on top of the lens module, as shown in [Figure 4-1](#).

Figure 4-1 *Loosening the Lens Module Retention Screw*



- a. Adjust the lens to the desired viewing angle, as shown in [Figure 4-2](#).

Figure 4-2 *Adjusting the Lens Viewing Angle*

- b. Tighten the lens module retention screw so that the lens orientation remains fixed if the camera experiences shock or vibration.

Step 3 While viewing video in the Home window, take the following actions to fine-tune the camera focus, if needed (see [Figure 4-3](#)).

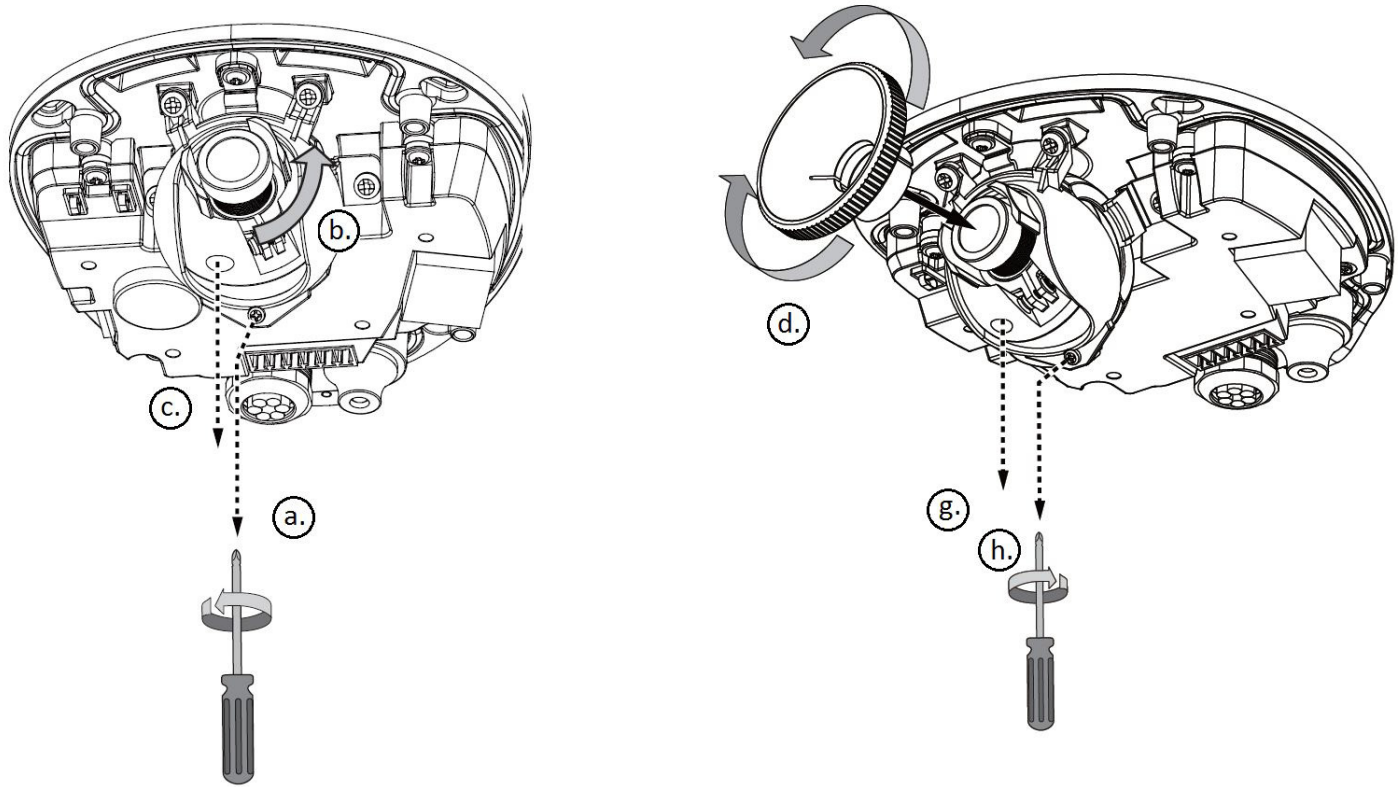
The focus of the IP camera is set from 1.0 meter to infinity by default. Fine-tune the IP camera focus if you want the device to focus on objects that are less than 1 meter from it or if its lens has lost focus.

- a. Loosen the retention screw on top of the lens module.
- b. Rotate the lens module to the side to access the lens focus retention screw.
- c. Loosen the focus retention screw.

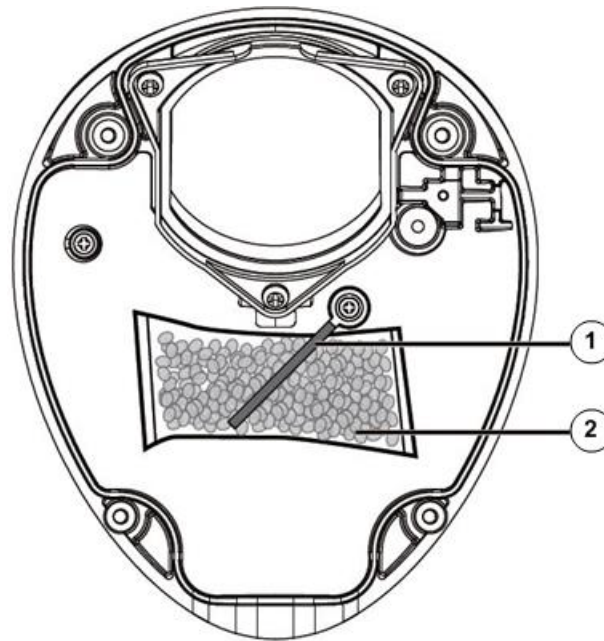


Note You can also rotate the lens module to correct the field of view when the IP camera is mounted on a tilted surface.

- d. Use the provided focus adjustment tool to adjust the lens focus by rotating the lens clockwise or counter-clockwise.
- e. Rotate the lens module back to the correct orientation.
- f. Tighten the lens focus retention screw.
- g. Tighten the lens module retention screw.

Figure 4-3 Fine-Tuning the IP Camera Focus

Step 4 Remove the provided desiccant bag from the aluminum foil vacuum bag and attach the desiccant bag to the inner side of the dome cover, under the retainer clip, as shown in [Figure 4-4](#).

Figure 4-4 *Installing the Desiccant Bag*

1	Retainer clip.
2	Desiccant bag.

The silica gel helps remove moisture from inside the camera.
 Replace the silica gel whenever you open the dome cover.

- Step 5** Attach the dome cover to the IP camera and secure the dome screws by using the provided screwdriver.
 Make sure to secure the screws tightly to keep out moisture.
 Make sure that all parts of the IP camera are installed securely.

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.

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.



View Video

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 Control	
Video Codec drop-down list 	Choose the codec for video transmission (H.264 or MJPEG).
Video Resolution display 	Displays the resolution for video transmission. The resolutions in this depends on the video standard that you selected.

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








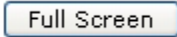
Control	Description
Viewer	
Video viewer drop-down list 	Choose the viewer to use for video. Options are: <ul style="list-style-type: none"> • ActiveX—Available only if you are using accessing the IP camera through Microsoft Internet Explorer. Allows you to configure several IP camera options, such as motion detection and privacy zone. • QuickTime—Allows viewing of H.264 streams only. Does not allow you to configure several IP camera options, such as motion detection and privacy zone. • VLC —Allows viewing of H.264 and MJPEG streams. Does not allow you to configure several IP camera options, such as motion detection and privacy zone. The default video viewer value is ActiveX.
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 	Not supported.
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 that you view in your browser window by 180 degrees. This button affects the viewed video only. The camera stores the video in the original orientation. If you want the camera to store a flipped image, use the Flip option as described in the Flip button row of this table.
Mirror button 	Reverses the video image that you view in your browser window. This button affects the viewed video only. The camera stores the video in the original orientation. If you want the camera to store a mirrored image, use the Mirror option as described in the Mirror button row of this table.
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.

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








Control	Description
Audio Control	
Enable/Disable Speaker toggle button	<p>Click the Disable Speaker button  to mute audio that is sent from the IP camera to the PC that you are using. The button changes to the Enable Speaker button .</p> <p>Click the Enable Speaker button to unmute audio. The button changes to the Disable button.</p>
Mute/Un-Mute Microphone toggle button	<p>Click the Mute Microphone button  to mute the audio stream that is captured and sent to the IP camera from the internal or external microphone of the PC that you are using. When you click this button, the speaker that is attached to the IP camera does not play audio that is transmitted from your PC.</p> <p>Note If you are simultaneously accessing other IP cameras in different browser sessions on the same PC, clicking this button in one browser session does not mute the audio that the PC sends to the other IP cameras.</p> <p>When you click the Mute Microphone button, it changes to the Un-Mute Microphone button .</p> <p>Click the Un-Mute Microphone button to unmute audio that is sent to the IP camera. The button changes to the Mute Microphone button.</p>
Restore button 	Resets audio controls to their default values.
Speaker Volume slider 	<p>When the speaker is unmuted, drag this slider to adjust the volume at which your PC speakers play the audio from the IP camera, or enter a value from 0 through 100 in the field and press the Enter key.</p> <p>The default value is 50.</p>
Microphone Sensitivity slider 	<p>Drag this slider to adjust the gain of the PC microphone (that is, how sensitive it is to the audio that it picks up and that is sent to the IP camera), or enter a value from 0 through 100 in the field and press the Enter key.</p> <p>The default value is 50.</p>

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



Control	Description
Camera Settings controls	
Note	<p>To display these controls click the Expand icon  next to Camera Settings under the video image. The icon changes to the Collapse icon . Click the Collapse icon to hide these controls.</p> <p>If you make changes to any of the Camera Settings options, click the Save button to save the changes.</p>
Profile Controls	
The following controls appear when you check the Enable Profiling check box in the Advanced Settings area of the Setup > Feature Setup > Camera window.	
Refresh button	Click this button to reset the Camera Settings options in the Picture Adjustment, Exposure Controls, and Advanced Settings areas to their last-saved values.
Profile options	<p>You can configure different settings for day and night mode. Based on the day or night mode, the respective profiles and settings are automatically selected and applied on the IP camera sensor.</p> <p>From the left drop-down list, choose one of the following options to designate when the current profile (which consists of the Camera Settings options in the Picture Adjustment, Exposure Controls, and Advanced Settings areas in the View Video window) is applied:</p> <ul style="list-style-type: none"> • Day—The profile is applied when the camera is in day mode • Night—The profile is applied when the camera is in night mode <p>From the right drop-down list, choose one of the following options to designate option settings for a profile:</p> <ul style="list-style-type: none"> • Indoor—Sets the Camera Settings options to a profile that is suitable for indoor conditions • Outdoor—Sets the Camera Settings options to a profile that is suitable for outdoor conditions • Lowlight—Sets the Camera Settings options to a profile that is suitable for low light conditions • Custom—Indicates that Camera Settings are or will be configured to values other than the values that the Indoor, Outdoor, or Lowlight profiles specify
Save Day/ Save Night buttons	<p>The Save Day button appears when you choose Day from the left Profile drop-down list. Click this button to save the current Camera Settings options as the Day profile to be applied when the camera is in day mode.</p> <p>The Save Night button appears when you choose Night from the left Profile drop-down list. Click this button to save the current Camera Settings options as the Night profile to be applied when the camera is in day mode.</p>

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

Control	Description
Restore Day/Restore Night buttons	<p>The Restore Day button appears when you choose Day from the left Profile drop-down list. Click this button to set the Camera Settings options to their factory default values for the Indoor Day profile.</p> <p>The Restore Night button appears when you choose Night from the left Profile drop-down list. Click this button to set the Camera Settings options to their factory default values for the Indoor Night profile.</p>
Picture Adjustments	
Brightness slider	<p>To control the brightness of the video image, drag the slider to select a value from 1 through 10. 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.</p> <p>The default value is 5.</p>
Contrast slider	<p>To control contrast of the video image, drag the slider to select a value from 1 through 10. A higher value increases the contrast and a lower value decreases the contrast.</p> <p>The default value is 5.</p>
Sharpness slider	<p>To control the sharpness of the video from the IP camera, drag the slider to select a value from 1 through 100. A higher value increases the sharpness and a lower value decreases the sharpness.</p> <p>The default value is 50.</p>
Saturation slider	<p>To control the saturation of the video from the IP camera, drag the slider to select a value from 1 through 100. A higher value increases the saturation and a lower value decreases the saturation.</p> <p>High saturation provides a vivid, intense color for a video image. With less saturation, the video image appears more muted and gray.</p> <p>The default value is 50.</p>
Restore button	Resets brightness, contrast, sharpness, and saturation to their default values.
White Balance Mode drop-down menu	<p>Choose one the following white balance modes:</p> <ul style="list-style-type: none"> • Auto—White balance automatically set by camera and suitable for most conditions. • Manual—Choose this option if you want to set the white balance by setting RGain (Red Gain) and BGain (Blue Gain) manually. <p>The default setting is Auto.</p>
Exposure Control	
Exposure level drop-down menu	<p>Choose a value to increase or decrease the exposure level of the video image.</p> <p>The default value is 0.0.</p>
Exposure mode drop-down menu	<p>Choose one of these options:</p> <ul style="list-style-type: none"> • Manual—Choose this option if you want to set Exposure time and Gain control manually. • Auto—Suitable for most conditions. <p>The default setting is Auto.</p>

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

Control	Description
Flickerless check box	<p>Appears when you choose Manual from the Exposure mode drop-down menu.</p> <p>Flickering can occur when a combination of indoor and outdoor light get to the IP camera, due to a difference in capture frequency and actual indoor lighting frequency. Check this check box to limit the range of exposure time, which prevents flickering.</p>
Exposure time slider	<p>Appears when you choose Manual from the Exposure mode drop-down menu.</p> <p>To control the minimum length of time in seconds that the IP camera keeps its iris open for each frame, drag the left slider box. To control the maximum length of time in seconds that the IP camera keeps its iris open for each frame, drag the right slider box.</p> <p>When capturing video, the IP camera automatically selects the optimum value between the minimum and maximum values that you configure.</p> <p>If the Flickerless check box is not checked, the minimum exposure value is 1/32000 and the maximum value is 1/5. If the Flickerless check box is checked, the minimum exposure value is 1/120 and the maximum value is 1/5.</p>
Gain control slider	<p>Appears when you choose Manual from the Exposure mode drop-down menu.</p> <p>To control the minimum gain of the IP camera, drag the left slider box. To control the maximum gain, drag the right slider box. A value of 0 does not boost the gain, so the image may appear darker in a darker environment. A higher value increases the exposure of the image, which can cause the image to look brighter, but can also cause the image to appear more noisy.</p> <p>When capturing video, the IP camera automatically selects the optimum value between the minimum and maximum values that you configure.</p>
Iris mode drop down menu	<p>Appears only when you choose Auto from the Exposure mode drop-down menu. Choose one of these options for the IP camera iris:</p> <ul style="list-style-type: none"> • Indoor—Suitable for indoor conditions • Outdoor—Suitable for outdoor conditions <p>Note This feature is not supported on Cisco 3421v cameras.</p>

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

Control	Description
Measurement Window	<p>Choose one of the following options to control how the IP camera calculates exposure:</p> <ul style="list-style-type: none"> • Full View—The entire IP camera image is considered for the exposure calculation. • Custom—Lets you draw up to 4 Inclusion regions and up to 4 Exclusion regions for the exposure calculation. <p>To designate regions, right-click the video image, choose Draw Region, then hold down the left mouse button and draw the region, which is indicated by a green rectangle.</p> <p>A region is an Inclusion region by default.</p> <p>To move a region, left-click it and drag its window to the desired area.</p> <p>To resize a region, left-click it and drag an edge or corner of the region to the desired size.</p> <p>To remove a region, left-click it, then right-click it and choose Delete Region.</p> <ul style="list-style-type: none"> • BLC—Back Light Compensation causes only the middle part of the IP camera image, indicated by a white dashed rectangle, to be considered for the exposure calculation.
Region Properties	<p>Appears when you click a custom region that you created.</p> <p>To expand region properties information, click the + icon next to Region Properties. The icon changes to a – icon, which you click to collapse region properties information.</p> <ul style="list-style-type: none"> • Location—X and Y coordinates, respectively, of the top left corner of the selected custom region. To expand location information, click the + icon next to Location. The icon changes to a – icon, which you click to collapse region location information. • Region Type—Type of the region (Inclusion or Exclusion). To change the region type, left-click that region, click Region Type, then choose one of the following values from the drop-down menu that appears on the Region Type line. Alternatively, you can double-click Inclusion or Exclusion to toggle between these values. <ul style="list-style-type: none"> – Inclusion—The region is used to calculate the exposure value – Exclusion—The region is ignored in the exposure value calculation
Advanced Settings	
Enable Low Light Compensation check box	In a low-light environment, check this check box to reduce noise in the video image.
Enable DRX check box	In situations in which there is significant contrast between light and dark parts of an image, check this check box to cause the IP camera to continually adjust the image for optimal appearance.

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

Control	Description
Sensitivity drop-down menu	Appears when you check the Enable DRX check box. Choose Low or High to specify how quickly the IP camera adjusts the image for optimal appearance.
Strength drop-down menu	Appears when you check the Enable DRX check box. Choose Low , Medium , or High to specify the relative adjustment that the IP camera makes between the light and dark parts of an image.
Gamma Curve	Select a gamma curve value to adjust the monitor gray-scale for video from the IP camera.
Flip button	Rotates the video image that appears in your browser by 180 degrees and retains the flipped image on the camera.
Mirror button	Reverses the video image that appears in your browser and retains the reversed image on the camera.

Motion Detection

Note To display these controls click the Expand icon  next to Motion Detection under the video image. The icon changes to the Collapse icon . Click the Collapse icon to hide these controls.



If you make changes to any of the Motion Detection options, click the **Save** button to save the changes.

Enable Motion Detection check box	<p>Enables the motion detection feature.</p> <p>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.</p> <p>To designate regions, right-click the video image, choose Draw Region, then hold down the left mouse button and draw the region, which is indicated by a green rectangle (for an inclusion region) or a red rectangle (for an exclusion region).</p> <p>You can draw up to 4 Inclusion regions and up to 4 Exclusion regions for a total of up to 8 regions.</p> <p>To move a region, left-click it and drag its window to the desired area.</p> <p>To resize a region, left-click it and drag an edge or corner of the region to the desired size.</p> <p>To remove a region, left-click it, then right-click it and choose Delete Region.</p>
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Table 4-4 Camera Video & Control Window Controls (continued)

Control	Description
Region Properties	<p>To expand region properties information, click the + icon next to Region Properties. The icon changes to a – icon, which you click to collapse region properties information.</p> <ul style="list-style-type: none"> • IsActive—To indicate whether the IP camera monitors a region for motion detection, left-click that region, click IsActive, then choose True (consider region) or False (do not consider region) from the drop-down menu that appears on the IsActive line. Alternatively, you can double-click True or False to toggle between these values. • Location—X and Y coordinates, respectively, of the top left corner of the selected custom region. To expand location information, click the + icon next to Location. The icon changes to a – icon, which you click to collapse region location information. • Name—Name of the region. By default, the system assigns the name RegionX, where X is a number 1 through 8. To rename a region, click its name (which appears in bold type on this line) and type a unique name of up to 32 characters. • Region Type—Type of the region. To change the region type, left-click that region, click Region Type, then choose one of the following values from the drop-down menu that appears on the Region Type line. Alternatively, you can double-click Inclusion or Exclusion to toggle between these values. <ul style="list-style-type: none"> – Inclusion—The IP camera examines this region for motion – Exclusion—The IP camera ignores motion in this area
Sensitivity slider	<p>Becomes available when you left-click a motion detection region.</p> <p>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.</p>
Threshold slider	<p>Becomes available when you left-click a motion detection region.</p> <p>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 Low.</p>

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

Control	Description
Privacy Zone	
Note	<p>To display these controls click the Expand icon  next to Privacy Zone under the video image. The icon changes to the Collapse icon . Click the Collapse icon to hide these controls.</p> <p>If you make changes to any of the Privacy Zone options, click the Save button to save the changes.</p>
Enable Privacy Region check box	<p>Enables the Privacy Zone feature.</p> <p>You can create up to four user-defined masking zones that can used to provide regions of privacy in the camera field of view. When the Privacy Zone feature is enabled, video within privacy each region is not recorded in the camera, nor sent in the video stream. Instead of the actual video, privacy regions display as solid rectangles that you choose from the Region Color drop-down list.</p> <p>To designate regions, right-click the video image, choose Draw Region, then hold down the left mouse button and draw the region, which is indicated by a green rectangle.</p> <p>To move a region, left-click it and drag its window to the desired area.</p> <p>To resize a region, left-click it and drag an edge or corner of the region to the desired size.</p> <p>To remove a region, left-click it, then right-click it and choose Delete Region.</p>
Region Color drop-down menu	Choose the color in which the system displays the zones that are defined by privacy regions. You can choose Red , Green , Black , or Blue .
Privacy Zone properties	<p>To expand region properties information, click the + icon next to Privacy Zone Properties. The icon changes to a – icon, which you click to collapse region properties information.</p> <ul style="list-style-type: none"> • Name—Name of the region. By default, the system assigns the name RegionX, where X is a number 1 through 4. To rename a region, click its name (which appears in bold type on this line) and type a unique name of up to 32 characters . • IsActive—To indicate whether the IP camera displays a region as a privacy mask, left-click that region, click IsActive, then choose True (mask the region) or False (do not mask the region) from the drop-down menu that appears on the IsActive line. Alternatively, you can double-click True or False to toggle between these values.

