



# CHAPTER 4

## Camera Management

This chapter provides information and instructions for managing the Cisco Video Surveillance 6020 IP Camera, and includes the following topics:

- [Understanding the IP Camera User Interface, page 4-1](#)
- [Adjusting the IP Camera Focus and Zoom, page 4-3](#)
- [Powering the IP Camera On or Off, page 4-4](#)
- [Resetting the IP Camera, page 4-4](#)
- [Viewing Live Video, page 4-4](#)
- [Managing the Local Storage, page 4-12](#)

## 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
<b>View Video</b>	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
<b>Setup</b>	Provides access to the configuration menus for the IP camera.	Administrator
<b>Logout</b>	Logs you out from the IP camera.	Administrator
		User
<b>About</b>	Displays a pop-up window with model, version, and copyright information for the IP camera.	Administrator
		User
<b>Help</b>	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
<b>General Information</b>	
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.
<b>Network Status</b>	
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.

**Table 4-2** Home Window Information (continued)

Field	Description
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.
<b>IO Port Status</b>	
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.
<b>Stream 1 and Stream 2</b>	
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.  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.
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 4-4](#).

### 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:
- Move the **Zoom** slider until you achieve the desired zoom level.
  - 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 1-3](#)). 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 <a href="#">“Performing the Initial Setup of the IP Camera” section on page 3-1</a> .

## 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.



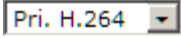
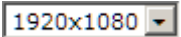



To view live video, log in to the IP camera, then click **View Video** in the IP camera Main window menu bar. The Camera Video & Control window appears. This window displays live video from the camera and lets you control a variety of camera and display functions.

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:




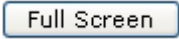





- Video image controls
- Motion detection controls

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





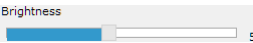

**Table 4-4 Camera Video & Control Window Controls**

Control	Description
<b>Video controls</b>	
Video Codec drop-down list 	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.
Video Resolution drop-down list 	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 704 x 480.  You cannot configure a secondary stream if you configure this resolution for 1920 x 1080.
<b>Image tools</b>	
<b>Hotspot Zoom</b> 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 <b>Hotspot Zoom</b> button and click the video display. The first five clicks zoom the display. The sixth click returns to unzoomed display.
<b>Hotspot Pan/Tilt</b> 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 <b>Hotspot Pan/Tilt</b> 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.
<b>Save Snapshot</b> 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 <b>Save</b> and follow the on-screen prompts to save the image with the name and in the location that you want.



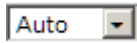
**Table 4-4** Camera Video & Control Window Controls (continued)

Control	Description
<b>Flip</b> button 	Rotates the video image by 180 degrees.
<b>Mirror</b> button 	Reverses the video image.
<b>Restore</b> button 	Displays the default video image, which is not rotated and not reversed.
<b>Full Screen</b> button 	Displays the video image in full screen mode. To return to normal display mode, click the full screen image.
<b>Audio Control</b>	
<b>Disable Speaker</b> toggle button 	Click the <b>Disable Speaker</b> button to mute audio that is sent from the IP camera to the PC that you are using. The button changes to the <b>Enable Speaker</b> button. Click the <b>Enable Speaker</b> button to unmute audio. The button changes to the <b>Disable</b> button.
<b>Enable Speaker</b> toggle button 	
<b>Mute Microphone</b> toggle button 	<p><b>Note</b> 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 <b>Mute Microphone</b> button, it changes to the <b>Unmute Microphone</b> button. Click the <b>Unmute Microphone</b> button to unmute audio that is sent to the IP camera. The button changes to the <b>Mute Microphone</b> button.</p>
<b>Unmute Microphone</b> toggle button 	
<b>Restore</b> button 	Resets audio controls to their default values.

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


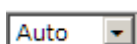


Control	Description
Speaker Volume slider and field 	When the speaker is unmuted, drag this slider to adjust the volume at which your PC speakers play the audio from the IP camera, or enter a value from 0 through 100 and press the <b>Enter</b> key.  The default value is 50.
Microphone Sensitivity slider and field 	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 and press the <b>Enter</b> key.  The default value is 50.
<b>Camera Settings</b>	
Up Arrow toggle button 	Click the Up Arrow to display the camera settings. The button changes to the Down Arrow button  Click the Down Arrow button to hide the camera settings. The button changes to the Up Arrow button.
Down Arrow toggle button 	When the Up Arrow is clicked to display the camera settings, three drawers appear to the right of the video image. The camera settings are grouped into the three drawers as follows: <ul style="list-style-type: none"> <li>• <a href="#">Picture Adjustments</a></li> <li>• <a href="#">Exposure Control</a></li> <li>• <a href="#">Advanced Settings</a></li> </ul> To view the settings within a drawer, click on it to expand it. To hide the settings, click on the drawer to collapse it.
Save button	Saves the current camera settings configuration.
<b>Picture Adjustments</b>	
<b>Note</b> These controls appear when you click <b>Camera Settings Up Arrow &gt; Picture Adjustments drawer</b> .	
Brightness slider 	To control the brightness of the video image, drag the slider, or enter a value from 1 through 10 and press the <b>Enter</b> 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 	To control contrast of the video image, drag the slider, or enter a value from 1 through 10 and press the <b>Enter</b> key. A higher value increases the contrast and a lower value decreases the contrast.  The default value is 5.

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

Control	Description
Sharpness slider 	<p>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 <b>Enter</b> key. 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, or enter a value from 1 through 100 and press the <b>Enter</b> key. 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>
White Balance Mode 	<p>Choose one the following White Balance modes from the drop-down list:</p> <ul style="list-style-type: none"> <li>• <b>Manual</b>—Choose this option if you want to set the white balance by setting RGain (Red Gain) and BGain (Blue Gain) manually.</li> <li>• <b>Auto</b>—White balance is automatically set by camera, which is suitable for most conditions.</li> </ul> <p>The default setting is Auto.</p>

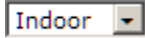
**Exposure Control**

**Note** These controls appear when you click **Camera Settings Up Arrow > Exposure Control** drawer.

Exposure Level 	<p>Increases or decreases the exposure level. For example, if you want to add light (overexpose) to properly expose the image, set the value to +1. If you need to underexposure the scene, set value to -1.</p> <p>Default value is 0.0</p>
Exposure Mode 	<p>Choose one of the following Exposure modes:</p> <ul style="list-style-type: none"> <li>• <b>Auto</b>—Automatically sets the exposure level, which is suitable for most conditions.</li> <li>• <b>Manual</b>—Choose this option if you want to set Exposure time and Gain control manually.</li> </ul> <p>Default setting is Auto.</p>
Exposure Time 	<p>The Exposure time option is available only when the Exposure mode is set to Manual. Specifies the range of shutter speed settings to be used by the IP camera. Shutter speed is measured in fractions of a second. You can adjust both ends of the shutter speed range.</p> <p>Default range is 1/5 sec to 1/32000 sec in Manual mode.</p>
Gain Control 	<p>The Gain control option is available only when the Exposure mode is set to Manual. Specifies the range of gain (amount of amplification applied to pixel values) settings to be used by the IP camera. You can adjust both ends of the gain control range.</p> <p>Default range is to 0 to 100.</p>

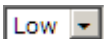
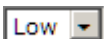
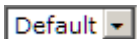


**Table 4-4 Camera Video & Control Window Controls (continued)**

Control	Description
Iris Mode 	<p>The Iris mode is available only when the Exposure mode is set to Auto. Choose one of the following Iris modes:</p> <ul style="list-style-type: none"> <li>Indoor—Suitable for Indoor conditions.</li> <li>Outdoor—Suitable for Outdoor conditions.</li> </ul> <p>Default mode is Indoor.</p>
Measurement Window	<p>Exposure is calculated based on video data from one of the following measurement windows:</p> <ul style="list-style-type: none"> <li><b>Full View</b>—Exposure is calculated based on full view.</li> <li><b>Custom</b>—You can designate specific regions (areas within the field of view) to use for exposure calculation. Inclusion regions designate areas that are used to calculate the exposure value. Exclusion regions designate areas that are ignored when calculating the exposure value. You can draw up to four inclusion regions and four exclusion regions.</li> </ul> <p>To create a region, right-click on the video image and choose <b>Draw Region</b>. Drag the region to the desired area and drag an edge or corner of the region to resize it. To remove region, right-click on it and choose <b>Delete Region</b>. Inclusion regions are created by default. To toggle between inclusion and exclusion regions, right-click on a region and change the <b>Region Properties &gt; Region Type</b> setting.</p> <ul style="list-style-type: none"> <li><b>BLC</b>—Back Light Compensation (BLC) window adds a weighted region in the middle of the image view to give necessary exposure compensation.</li> </ul>



**Advanced Settings**

**Note** These controls appear when you click **Camera Settings Up Arrow > Advanced Settings drawer**.

Enable Low Light Compensation	This option is useful in low light situations.
Enable DRX	Check this check box to enable the Dynamic Range Enhanced (DRX) feature. DRX helps recover washed out details when there is extreme contrast lighting conditions. To reach better image quality adjust Sensitivity (Low and High) and Strength (Low, Medium and High).
Sensitivity 	The Sensitivity option is available only when DRX is enabled. Choose how sensitive (low or high) DRX is to extreme contrast lighting conditions.
Strength 	The Strength option is available only when DRX is enabled. Choose how much DRX processing (low, medium, or high) to use for recovering washed out details.
Gamma Curve 	Choose the value that provides the optimal gray-scale intensity. Larger gamma curve values make shadows darker and larger values make dark regions lighter.

**Motion detection**

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




Control	Description
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.

**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.

<b>Enable Motion Detection</b> check box	<p>Enables the motion detection feature and displays a grid over the video image.</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 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.</p> <p>You can configure the following levels for areas that the IP camera monitors for activity:</p> <ul style="list-style-type: none"> <li>• <b>Sensitivity</b>—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.</li> <li>• <b>Threshold</b>—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.</li> </ul> <p>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 <b>Enter</b> key. To reset the sensitivity and threshold to their default values of 50, click <b>Restore</b>. 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.</p>
------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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

Control	Description
<b>Full Screen</b> check box	<p>Becomes available when you click check <b>Enable Motion Detection</b> check box. Check the <b>Full Screen</b> check box to cause the IP camera to examine the entire video field for activity.</p> <p>You can configure the following items for this video field:</p> <ul style="list-style-type: none"> <li>• <b>Sensitivity</b>—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.</li> <li>• <b>Threshold</b>—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.</li> </ul> <p>To configure sensitivity or threshold, right-click anywhere in the video field border and then drag the <b>Sensitivity</b> and <b>Threshold</b> sliders to the desired values. Alternatively, enter a value from 1 through 100 for an option and press the <b>Enter</b> key. To reset the sensitivity and threshold to their default values of 50, click <b>Restore</b>.</p>
<b>Restore</b> button	<p>Deselects all areas in the video field that you have selected for motion detection monitoring.</p>
<b>Save Settings</b> button 	<p>Save the current motion detection configuration.</p>
<b>Focus/Zoom</b>	
<b>Up Arrow</b> toggle button 	<p>Click the <b>Up Arrow</b> to display the focus/zoom controls. The button changes to the <b>Down Arrow</b> button.</p>
<b>Down Arrow</b> toggle button 	<p>Click the <b>Down Arrow</b> button to hide the focus/zoom controls. The button changes to the <b>Up Arrow</b> button.</p>
<b>Focus/Zoom controls</b>	
<b>Note</b> These controls appear when you click the <b>Up Arrow</b> in the <b>Focus/Zoom</b> area.	
<b>Zoom</b> slider	<p>To control the field of view zoom factor, drag the slider left to zoom out (wide), or drag the slider to the right to zoom in (telephoto).</p>
<b>Focus</b> slider	<p>To control the field of view focus, drag the slider left to focus on near objects, or drag the slider to the right to focus on far objects.</p>
<b>Auto Focus</b> button	<p>Click to automatically focus the IP camera for the selected zoom.</p>
<b>Specify Region</b> check box	<p>Used in conjunction with the <b>Auto Focus</b> option. Check <b>Specify Region</b> check box and click <b>Auto Focus</b> to focus the IP camera with priority to a selected region in the field of view. The region is user configurable and can be moved around the screen.</p>
<b>Reset</b> button	<p>Resets the lens position and slider control positions to their default values (full wide and near).</p>

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

Control	Description
<b>Privacy Zone</b>	
Up Arrow toggle button 	Click the Up Arrow to display the privacy zone controls. The button changes to the Down Arrow button.
Down Arrow toggle button 	Click the Down Arrow button to hide the privacy zone controls. The button changes to the Up Arrow button.
<b>Privacy Zone controls</b>	
<b>Note</b> These controls appear when you click the Up Arrow in the Privacy Zone area.	
Enable Privacy Region	<p>Check this check box to enable the privacy zone feature that allows you to create to four user-defined privacy regions. Any video within a privacy region is masked in the video stream.</p> <p>To create a region, right-click on the video image and choose <b>Draw Region</b>. Drag the region to the desired area and drag an edge or corner of the region to resize it. To remove region, right-click on it and choose <b>Delete Region</b>.</p> <p>For each region listed under the Privacy Zone Properties area, you can configure the following properties:</p> <ul style="list-style-type: none"> <li>• <b>Current Region</b>—You can enter a name of up to 12 characters for a region.</li> <li>• <b>IsActive</b>—Specifies whether the region is active (enabled) or not active (disabled). Choose true to enable a region; choose False to disable a region.</li> </ul>
Region Color	Choose a color from the Region Color drop-down list to specify the color that will be used to mask the actual video in all privacy regions.
Save button	Saves the current privacy zone configuration.

## Managing the Local Storage

The 6000 Series IP cameras have an SD card slot that can support an optional SD memory card (up to 8 GB) for local storage purposes. If local storage is available on an IP camera and the camera loses network connectivity, video data storage switches to the local SD memory card.

For security purposes, video data stored on the SD memory card is encrypted. To view the encrypted video, you must decrypt it to H.264 or MP4 format. Encrypted files cannot be decrypted directly from an SD memory card on an IP camera; before they can be decrypted, they must either be downloaded to your PC, or the SD memory card must be moved from the IP camera to your PC.

The Cisco SD Utility allows you to manage the SD memory card and to decrypt the encrypted video data on the card. The utility can be downloaded from Cisco.com and installed on your PC. For more information see the [“Downloading and Installing the Cisco SD Utility”](#) section on page 4-13.



### Note

You cannot manage an SD memory card using the camera firmware or Cisco Video Surveillance Manager (VSM); you must use the Cisco SD Utility.

This section includes the following local storage management topics:

- [Downloading and Installing the Cisco SD Utility, page 4-13](#)
- [Formatting the SD Memory Card, page 4-13](#)
- [Downloading Encrypted Video Files from the SD Memory Card, page 4-14](#)
- [Deleting Encrypted Video Files from the SD Memory Card, page 4-14](#)
- [Decrypting Encrypted Video Files, page 4-15](#)

## Downloading and Installing the Cisco SD Utility

### Procedure

- 
- Step 1** Perform the following steps to obtain the Cisco SD Utility:
- a. Go to the Cisco Video Surveillance 6000 Series IP Cameras support page:  
[http://www.cisco.com/en/US/products/ps12663/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps12663/tsd_products_support_series_home.html)
  - b. Click **Download Software**.  
The Download Software page appears.
  - c. Choose your IP camera model from the list on the right.
  - d. Click the **Download** button for the Cisco Video Surveillance 3000, 6000 and 7000 Series camera SD Utility (CiscoSDUtilityInstallerV1.0.0.zip).
  - e. Log in and follow the on-screen prompts to download the file to your PC.
  - f. Close your Web browser.
- Step 2** Double-click the **CiscoSDUtilityInstallerV1.0.0.zip** file that you downloaded in Step 1 and follow the on-screen prompts to install the utility on your PC.
- During the installation process, the installer adds the Cisco SD Utility icon to your desktop.
- 

## Formatting the SD Memory Card

### Before you begin

- Obtain and insert an SD memory card into the SD card slot on the IP camera. SD memory cards up to 8 GB in size are supported.
- Ensure that SSH is enabled on the IP camera that you are accessing, and ensure that a root password has been set.

### Procedure

- 
- Step 1** Double-click the **Cisco SD Utility** icon to open the utility.
- Step 2** Enter the IP address and root password for the IP camera and click **Connect**.
- Step 3** Click **Format MMC**.
- Step 4** Click **Yes** twice to verify that you are sure that you want to format the SD card.

The SD memory card is formatted using a FAT32 partition. If the SD memory card was previously formatted using a different partition type, such as NTFS, you are prompted to verify that you want to format the SD memory card using the FAT32 partition.

---

## Downloading Encrypted Video Files from the SD Memory Card

### Procedure

---

- Step 1** Double-click the **Cisco SD Utility** icon to open the utility.
- Step 2** Enter the IP address and root password for the IP camera and click **Connect**.  
When the utility successfully connects to the IP camera, SD memory card capacity information and a list of the encrypted video files are displayed.
- Step 3** Click **Browse**.  
The Browse For Folder dialog box appears.
- Step 4** Navigate to the folder where you want to save the video file(s) and click **OK**.
- Step 5** Do one of the following to choose the encrypted files that are to be downloaded to your PC:
- To choose all encrypted video files on the SD memory card, click **Select all**.
  - To choose some of the encrypted video files on the SD memory card, click on the ones you want to download from the file list.
- Step 6** Click **Save**.  
The selected files are copied to the specified folder, leaving the original files on the SD memory card.
- 

### What to Do Next

To view the encrypted video files that have been downloaded, you must decrypt them. For more information, see the [“Decrypting Encrypted Video Files” section on page 4-15](#).

## Deleting Encrypted Video Files from the SD Memory Card

### Procedure

---

- Step 1** Double-click the **Cisco SD Utility** icon to open the utility.
- Step 2** Enter the IP address and root password for the IP camera and click **Connect**.  
When the utility successfully connects to the IP camera, SD memory card capacity information and a list of the encrypted video files are displayed.
- Step 3** Do one of the following to choose the encrypted files that are to be deleted from the SD memory card:
- To choose all encrypted video files on the SD memory card, click **Select all**.
  - To choose some of the encrypted video files on the SD memory card, click on the ones you want to delete from the file list.
- Step 4** Click **Delete**.

The selected files are deleted from the SD memory card.

---

## Decrypting Encrypted Video Files

### Before you begin

- Download the encrypted video files to your PC, or move the SD memory card containing the encrypted video files from the IP camera to your PC. For more information about downloading the encrypted video files, see the [“Downloading Encrypted Video Files from the SD Memory Card” section on page 4-14](#).
- Note the root password of the IP camera that created the encrypted video files.

### Procedure

---

- Step 1** Double-click the **Cisco SD Utility** icon to open the utility.
- Step 2** Click the **Decrypt** tab.
- Step 3** Do one of the following to specify the encrypted files that are to be decrypted:
- In the Input file(s) text box, enter the full path and filename for each file to be encrypted. Separate multiple entries with a semicolon.
  - Click the **Browse** button for the Input file(s) field, navigate to and choose the files to be encrypted, and click **Open**.
- Step 4** Do one of the following to specify the output directory where the decrypted files are to be saved:
- In the Output directory text box, enter the full path for the output directory.
  - Click the **Browse** button for the Output directory field, navigate to and choose the output directory, and click **OK**.
- Step 5** In the Conversion Type field, choose the format to which the files are to be converted (H.264 or MP4).
- Step 6** In the password text box, enter the root password for the IP camera that created the encrypted files.
- Step 7** Click **Convert**.
- The selected files are decrypted, and for each file, the Status text box indicates whether the decryption process failed or succeeded.
-

