



## Overview

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This chapter provides information about the Cisco Video Surveillance PTZ IP camera features, instructions for accessing the user interface, and information about the user interface. It includes the following topics:

- [PTZ IP Camera Features, page 1-1](#)
- [Accessing the PTZ IP Camera, page 1-3](#)
- [Restoring or Resetting the IP Camera from the Command Line, page 1-4](#)
- [Supported Browsers, page 1-5](#)
- [Browser Notes, page 1-5](#)
- [Understanding the PTZ IP Camera User Interface, page 1-7](#)

## PTZ IP Camera Features

The Cisco Video Surveillance PTZ IP cameras are primarily used for monitoring wide open outdoor areas such as building entrances, airports, highways, and parking lots.

The dome cover protects the camera body against rain and dust. The wide temperature range allows the camera to operate under extreme weather conditions.

The following PTZ IP cameras are available:

- Cisco Video Surveillance SD Outdoor 2830 PTZ IP Camera, NTSC
- Cisco Video Surveillance SD Outdoor 2835 PTZ IP Camera, PAL
- Cisco Video Surveillance HD Outdoor 6930 PTZ IP Camera

The Cisco Video Surveillance PTZ IP cameras offer a feature-rich digital camera solution for a video surveillance system.

The 2830 and 2835 standard-definition (SD) cameras feature:

- NTSC and PAL models
- D1, 4CIF, and CIF resolution at 30 frames per second (fps)
- 12 x optical zoom
- 360 continuous rotation
- Support for PoE+ and High PoE
- Local storage

- IP66 rating

The 6930 high-definition (HD) camera features:

- Full HD resolution (1920 x 1080) at 30 fps
- 20 x optical zoom
- 360 continuous rotation
- Support for PoE+ and High PoE
- Local storage
- IP66 rating

In addition, the PTZ IP cameras provide networking and security capabilities, including multicast support, hardware-based Advanced Encryption Standard (AES), and hardware-based Data Encryption Standard/Triple Data Encryption Standard (DES/3DES) encryption. The cameras can be powered through an external power supply or by integrated Power over Ethernet (PoE).

The PTZ cameras include the following key features:

- **H.264 and MJPEG compression**—The PTZ IP camera can generate H.264 and MJPEG streams simultaneously.
- **Progressive scan video**—The PTZ IP camera captures each frame at its entire resolution using progressive scan rather than interlaced video capture, which captures each field of video.
- **Analog video output**—The PTZ IP camera supports analog video for all resolutions with 15 fps or lower with no secondary stream.
- **Medianet**—The PTZ IP camera supports the Auto Smartports feature of the Media Services Interface (MSI). MSI enables a camera to participate as an endpoint in the Cisco medianet architecture when connected to a medianet enabled switch.
- **Day/night switch support**—An IR-cut filter provides increased sensitivity in low-light conditions.
- **Multi-protocol support**—These protocols are supported: DHCP, HTTP, HTTPS, NTP, RTP, RTSP, SMTP, SNMP v2 and v3, SSL/TLS, and TCP/IP.
- **Web-based management**—You perform ongoing administration and management of the PTZ IP camera through web-based configuration menus.
- **Pan, tilt, and zoom**—You can remotely set the camera to monitor a certain area by using the pan, tilt, and zoom controls.
- **Motion detection**—The PTZ IP camera can detect motion in user-designated fields of view by analyzing changes in pixels and generate an alert if motion is detected.
- **Flexible scheduling**—You can configure the PTZ IP camera to respond to events that occur within a designated schedule.
- **Syslog support**—The PTZ IP camera can send log data to a Syslog server.
- **IP address filter**—You can designate IP addresses that can access the PTZ IP camera and IP addresses that cannot access the PTZ IP camera.
- **User-definable HTTP/HTTPS port number**—You can define the port that is used to connect to the camera through the Internet.
- **DHCP support**—The PTZ IP camera can automatically obtain its IP addresses in a network in which DHCP is enabled.
- **Network Time Protocol (NTP) support**—The PTZ IP camera can calibrate its internal clock with a local or Internet time server.

- **Support for C and CS mount lenses**—The PTZ IP camera supports a variety of C and CS mount lenses.
- **Power options**—The PTZ IP camera can be powered with 24 volts AC, which is provided through an optional external power adapter, or through PoE (802.3af), which is provided through a supported switch.
- **Camera access control**—You can control access to PTZ IP camera configuration windows and live video by configuring various user types and log in credentials.
- **Open Network Video Interface Forum (ONVIF) 2.6**—ONVIF is an open industry forum for the development of a global standard for the interface of IP-based physical security products. The following features are supported:
  - Device Discovery Service
  - Device Service
  - Media Service
- **Apps**—You can extend the functionality of a supported Cisco IP Camera by uploading and running an app on the camera

## Accessing the PTZ IP Camera

After you perform the initial configuration as described in the [Chapter 2, “Initial Setup of the PTZ IP Camera,”](#) follow the steps in this section each time that you want to access the PTZ IP camera windows to make configuration settings, view live video, or perform other activities.

You access these windows by connecting to the PTZ IP camera from any PC that is on the same network as the PTZ IP camera and that meets these requirements:

- Operating system—Microsoft Windows 7 (32-bit or 64-bit), 8 (32-bit or 64-bit), 10 (32-bit or 64-bit)
- Browser—See the [“Supported Browsers” section on page 1-5.](#)

You need this information to access the PTZ IP camera windows:

- IP address of the PTZ IP camera. By default, the PTZ IP camera attempts to obtain an IP address from a DHCP server in your network. If the PTZ IP camera cannot obtain an IP address through DHCP within 90 seconds of powering up or resetting, it uses the default IP address of 192.168.0.100.
- Port number, if other than the default value. Default port numbers for the PTZ IP camera are 443 for HTTPS and 80 for HTTP. The PTZ IP camera administrator can configure an HTTPS port and an HTTP port as described in the [“Initialization Window” section on page 9-1.](#)
- Your user name and password for the PTZ IP camera. The PTZ IP camera administrator configures user names and passwords as described in the [“User Window” section on page 9-2.](#)

To access the PTZ IP camera windows, perform the following these steps.

### Before you Begin

The Microsoft .NET Framework version 2.0 or later must be installed on the PC that you use to connect to the PTZ IP camera. You can download the .NET Framework from the Microsoft website.

## Procedure

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**Step 1** Start a supported browser and enter the following in the address field:

*protocol://ip\_address:port\_number*

where:

- *protocol* is **HTTPS** for a secure connection or **HTTP** for a non-secure connection. You can use HTTP only if you configure the camera to accept non-secure HTTP connections as described in [Chapter 2, “Initial Setup of the PTZ IP Camera.”](#)
- *ip\_address* is the IP address of the PTZ IP camera. The default IP address is 192.168.0.100.
- *port\_number* is the port number that is used for HTTPS or HTTP connections to the PTZ IP camera. You do not need to enter a port number if you are connecting through the default HTTPS port 443 or the default HTTP port 80.

For example,

- Enter the following for a secure connection if the IP address is 192.168.0.100 and the HTTPS port number is 443:

**https://192.168.0.100**

- Enter the following for a secure connection if the IP address is 203.70.212.52 and the HTTPS port number is 1024:

**https://203.70.212.52:1024**

- Enter the following for a non-secure connection if the IP address is 203.70.212.52 and the HTTP port number is 80:

**http://203.70.212.52**

- Enter the following for a non-secure connection if the IP address is 203.70.212.52 and the HTTP port number is 1024:

**http://203.70.212.52:1024**

**Step 2** Enter your PTZ IP camera user name and password in the Username and Password fields, then click **Login**.

To log in as the PTZ IP camera administrator, enter the user name **admin** (which is case sensitive) and the password that is configured for the administrator. To log in as a user, enter the user name and password that are configured for the user.

The Home window for the PTZ IP camera appears.

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# Restoring or Resetting the IP Camera from the Command Line

Restoring the IP camera resets all of its settings to their factory default values. Resetting the IP camera resets all of its settings except static network settings, user information (user name, password, and privilege level for each user), and ONVIF setting (enabled or disabled) to their factory default values.

You can perform these procedures from the IP Camera Maintenance window as described in the [“Maintenance Window” section on page 9-4](#). If you need to restore or reset the IP camera but cannot access its web-based menus, you also can perform these procedures from the command line.

To restore or reset the IP camera from the command line, perform the following steps:

### Procedure

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- Step 1** Access the IP camera server via an SSH client and log in as the root user.
- Step 2** Take either of these actions:
- To restore the IP camera:
    - a. Enter this command:  
`root@camera:~# factoryRestore`
    - b. When you see the caution message and the confirmation prompt type **Y** and press **Enter**.
  - To reset the IP camera:
    - a. Enter this command:  
`root@camera:~# factoryReset`
    - b. When you see the caution message and the confirmation prompt type **Y** and press **Enter**.
- Step 3** Exit the SSH session.
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## Supported Browsers

This section describes the web browsers that you can use to access the IP camera web-based interface. After upgrading the camera firmware, clear the browser cache and reload the web page to ensure that the new features display.

The following browsers are supported:

- Microsoft Windows:
  - Microsoft Internet Explorer version 9.0, 10.0, and 11.0, 32-bit only. Motion detection, exposure region, and privacy region are not supported when VLC is selected as the video viewer.
  - Google Chrome version 42.0 or later. Streaming video is supported only with version 42.0.
  - Mozilla Firefox version 45.0.0 or later.
- Apples IOS
  - Google Chrome version 42.0 or later. Streaming video is supported only with version 42.0.
  - Mozilla Firefox version 45.0.0 or later.
  - Safari version 7.1.8 or later.

## Browser Notes

The following sections provide information that you can use to resolve issues with the display of video in your browser.

## ActiveX Control Issues

Some IP camera operations require that ActiveX controls be installed on your system. If these controls are not installed, the system prompts you to install them. If ActiveX does not work properly after installation, close your browser and restart your PC.

## Downloaded Video Display Issues

If you are using Microsoft Internet Explorer on a system that is running Microsoft Windows 8 or 10, and a video recording that you download from the Local Storage window or the History window does not display properly, either of these actions:

### Option 1: Disable Protected Mode

Disabling Internet Explorer protected mode allows provides browser add-ons with read/write access to the system, including the ActiveX add-on that is needed to view downloaded video from a camera.

1. In Internet Explorer, choose **Tools > Internet Options**.
2. In the Internet Options window, click the **Security** tab.
3. In the “Select a zone to view or change security settings” area, click **Internet**.
4. Uncheck the Enabled **Protected Mode** check box.
5. Click **OK**.
6. In the Warning dialog box, click **OK** to confirm the change.
7. Exit Internet Explorer.
8. Try again to download the file.

### Option 2: Add the IP Camera to Trusted Sites

Adding an IP camera to the Internet Explorer trusted sites provides that camera with read/write access to the system, which is needed to view downloaded video from that camera.

1. In Internet Explorer, choose **Tools > Internet Options**.
2. In the Internet Options window, click the **Security** tab.
3. In the “Select a zone to view or change security settings” area, click **Trusted sites**.
4. In the Trusted sites dialog box, enter **https://ip\_address**, where *ip\_address* is the IP address of the IP camera from which you want to view downloaded video, and then click **Add**.
5. In the Trusted sites dialog box, click **Close**.
6. In the Internet Options window, click **OK**.
7. Exit Internet Explorer.
8. Try again to download the file.

# Understanding the PTZ IP Camera User Interface

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

The links and activities that you can see and access in the PTZ IP camera windows depend on your PTZ IP camera privilege level. Privilege levels are configured as described in the “[User Window](#)” section on [page 9-2](#) and include the following:

- **Administrator**—Can access all PTZ 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.

## PTZ IP Camera Window Links

The PTZ IP camera user interface includes links that you use to access various windows and perform other tasks. [Table 1-1](#) describes each link and lists the PTZ IP camera privilege level that you must have to access the link.

**Table 1-1** *Links in the PTZ IP Camera Windows*

Link	Description	Privilege Level
<b>Refresh</b>	Updates the information in the window that is currently displayed.	Administrator User
<b>Home</b>	Displays the System Information window. For more information, see <a href="#">Table 1-2</a> .	Administrator
<b>View Video</b>	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 PTZ IP camera. Follow the on-screen prompts to install ActiveX controls.	Administrator User
<b>Setup</b>	Displays the Setup window and provides access to the configuration menus for the PTZ IP camera.	Administrator
<b>Logout</b>	Logs you out from the PTZ IP camera.	Administrator User
<b>About</b>	Displays a pop-up window with model, version, and copyright information for the PTZ IP camera.	Administrator User
<b>Help</b>	Displays reference information for the window that is currently displayed.	Administrator User

## PTZ IP Camera Windows

The PTZ IP camera user interface includes these main windows:

- System Information window—Accessed by clicking the Home link. Displays the information that is described in [Table 1-2](#).
- Camera Video & Control window—Accessed by clicking the View Video link. Displays live video from the camera and lets you control a variety of camera and display functions. For detailed information, see [Chapter 3, “Live Video Viewing.”](#)
- Setup window—Accessed by clicking the Setup link. Provides access to the PTZ IP camera configuration windows. For detailed information, see the following chapters:
  - [Chapter 4, “Feature Setup”](#)
  - [Chapter 7, “Network Setup”](#)
  - [Chapter 9, “Administration”](#)
  - [Chapter 10, “Log Configuration”](#)

**Table 1-2** Home Window Information

Field	Description
<b>General Information</b>	
ID	Identifier of the PTZ IP camera. To configure the ID, see the <a href="#">“Basic Window”</a> section on page 7-1.
Name	Name of the PTZ IP camera. To configure the name, see the <a href="#">“Basic Window”</a> section on page 7-1.
Current Time	Current date and time of the PTZ IP camera. To set the date and time, see the <a href="#">“Time Window”</a> section on page 7-5.
S/N	Serial number of the PTZ IP camera.
Firmware	Version of the firmware that is installed on the PTZ IP camera.
Part Number	Cisco manufacturing part number of the PTZ IP camera.
Top Assembly Revision	Cisco assembly revision number.
<b>Network Status</b>	
MAC Address	MAC address of the PTZ IP camera.
Configuration Type	Method by which the PTZ IP camera obtains its IP address. To configure this method, see the <a href="#">“IP Addressing Window”</a> section on page 7-3.
LAN IP	IP address of the LAN to which the PTZ IP camera is connected. To configure this IP address, see the <a href="#">“IP Addressing Window”</a> section on page 7-3.
Subnet Mask	Subnet mask of the LAN to which the PTZ IP camera is connected. To configure the subnet mask, see the <a href="#">“IP Addressing Window”</a> section on page 7-3.
Gateway Address	IP address of the gateway through which the PTZ IP camera is connected. To configure this IP address, see the <a href="#">“IP Addressing Window”</a> section on page 7-3.

**Table 1-2 Home Window Information (continued)**

Field	Description
Primary DNS	IP address of the primary DNS server, if configured for the PTZ IP camera. To configure a primary DNS server, see the <a href="#">“IP Addressing Window” section on page 7-3</a> .
Secondary DNS	IP address of the secondary DNS server, if configured for the PTZ IP camera. To configure a secondary DNS server, see the <a href="#">“IP Addressing Window” section on page 7-3</a> .
<b>IO Port Status</b>	
Input Port	Current state of the input port(s) on the PTZ IP camera. To configure an input port, see the <a href="#">“IO Ports Window” section on page 4-23</a> .
Output Port	Current state of the output port(s) on the PTZ IP camera. To configure an output port, see the <a href="#">“IO Ports Window” section on page 4-23</a> .
<b>Stream 1 and Stream 2</b>	
User	PTZ 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.
Codec	Video codec (H.264 or MJPEG) being used for the stream.

