

Release Notes

Polycom PVX Version 8.0.2



Polycom is pleased to announce the release of Polycom PVX™ version 8.0.2.

Polycom PVX version 8.0.2 delivers unprecedented technology and performance to computer video conferencing. With premium audio and video algorithms and enhanced collaboration features, the Polycom PVX software delivers power and performance never before seen in computer video conferencing.

Working together with a computer and a standard USB camera, the Polycom PVX 8.0.2 software application brings video conferencing to your desktop. It is ideal for employees who work from home, sales or consulting professionals who travel, educators conducting distance learning events, or health care professionals delivering services in remote facilities. Polycom PVX software extends Polycom's unmatched capabilities and conference room performance to the desktop.

Polycom PVX 8.0.2 will continue to support the ViaVideo™ and ViaVideo II cameras. However, Polycom recommends using standard USB 2.x webcams to achieve the highest video quality. When you choose a standard webcam, the computer's processing capabilities let you use additional features such as H.264 and Siren™ 14. View-only mode allows users without cameras to participate in video conferences using audio and to share content using People+Content™ and standards-based H.239.

What's New in Release 8.0.2?

Polycom PVX 8.0.2 is a maintenance release. This release includes general improvements to SIP interoperability and stability, support for the SIP Express Router (SER) SIP server, and other minor improvements.

What's New in Release 8.0.1?

Polycom PVX 8.0.1 is a maintenance release. A number of minor improvements have been added to PVX for this release; however, the major change is that you can now specify the CPU resources required by your camera.

A new tab, the Advanced Tab, has been added to the Video page. Settings on this tab allow you to configure PVX to compensate for a higher CPU load from your camera driver. You can lower the estimated CPU power by a fixed amount and, thereby, enhance the quality of your PVX video.

What's New in Release 8.0?

- VGA (640x480) Resolution Support - Polycom PVX 8.0.0 supports sending and receiving video at VGA and half-VGA resolutions. This can be enabled on systems with higher speed CPUs and USB 2.0 cameras.
- Session Initiation Protocol (SIP) Support - Point-to-point SIP calling, direct dialed or through a Nortel™ MCS or Microsoft® LCS 2005 (SP1) proxy server, is supported.
- Universal Plug and Play (UPnP™) Support - Polycom PVX 8.0.0 supports secure firewall traversal calls using UPnP-enabled home routers.
- Automatic Gain Control - Significant improvements were made to audio input levels. A new automatic gain control was added that adjusts microphone input to minimize echo reflected back to the far site. It also adjusts the audio level into a conference to improve the volume match with other endpoints connected to an MCU.
- H.239 Standards Based People+Content - Polycom PVX has full support for H.239 standards based People+Content.
- Improved Calling with People+Content - The frame rate for people video is no longer affected by enabling People+Content. At the point that content is sent or received, Polycom PVX adjusts to leave more CPU cycles for content video.
- Asymmetric Call Support - Polycom PVX 8.0.0 supports calls with ADSL or cable modems with asymmetric bandwidth for upload and download.
- Network Adapter Management - Polycom PVX 8.0.0 offers more flexibility in controlling which network adapter is used for video calls. The Network setup page was streamlined to make configuration easier.
- Global Directory Server (GDS) ISDN Dialing Enhancement - Endpoints listed in a directory with both an ISDN number and an ISDN extension will be dialed by appending the extension to the number separated by a delimiter of ##.
- Recent Calls List - The list includes incoming calls that were not answered.
- New Security Features - New security setup options allow users to:
 - Restrict SIP setup page access.
 - Lock user settings and prevent factory default settings from being restored inadvertently.
 - Disable location profile settings.

- User Interface Improvements
 - Enhanced full-screen video allows users to see the Toolbar and PIP while showing full-screen video. In earlier versions, switching to full-screen video disabled access to all other windows except the video window, which had exclusive use of the desktop.
 - For systems without a camera, a user-configurable image can be displayed in the local video window.
 - Users now have direct access to the camera, tone pad, and data sharing controls from the main Toolbar.
 - By using Location Profiles, users can better control multiple location network settings.
- Additional Software Updates
 - Users can disable the H.264 video algorithm on the Setup > Video page.
 - The default media port range was changed to 3230-3237.
 - T.120 is disabled by default.
 - The web management interface is no longer supported.

Hardware and Software Requirements

Windows®	Windows XP with Service Pack 1 or later (recommended) Windows 2000 with Service Pack 4 or later
Processor	<p>Webcam with computer processing (recommended)</p> <p>H.263 People video only:</p> <ul style="list-style-type: none"> • 1.0 GHz Intel® Pentium® 3 • 1.2 GHz Intel Pentium 4 • 900 MHz Intel Pentium M • 1800+ AMD™ Athlon™ XP <p>H.264 People video only:</p> <ul style="list-style-type: none"> • 1.5 GHz Intel Pentium 4 • 1.2 GHz Intel Pentium M • 1800+ AMD Athlon XP <p>People+Content:</p> <ul style="list-style-type: none"> • 2.0 GHz Intel Pentium 4 • 1.4 GHz Intel Pentium M • 1800+ AMD Athlon XP <p>ViaVideo I and ViaVideo II camera</p> <p>H.263 People video only:</p> <ul style="list-style-type: none"> • 800 MHz Intel Pentium® III • Any Intel Pentium 4 or Intel Pentium M • 1800+ AMD Athlon XP <p>People+Content:</p> <ul style="list-style-type: none"> • 1.2 GHz Intel Pentium 4 • 900 MHz Intel Pentium M • 1800+ AMD Athlon XP <p>(Polycom PVX requires a processor that supports the Intel SSE™ processor extensions. SSE is not supported on the Pentium II family or AMD Athlon CPUs prior to the Athlon XP.)</p>
RAM	256 MB Note: More RAM may be required for users running multiple applications.
Video Memory	Minimum requirement: 16 MB
Hard Drive Space	60 MB available (for Polycom PVX software)
USB Camera	USB 1.x or 2.x webcam, ViaVideo, or ViaVideo II camera (USB 2.x webcam recommended) (camera is optional for view-only calls)
Audio	<ul style="list-style-type: none"> • Headphones • Microphone - options include a headset or webcam with built-in microphone or a standalone analog microphone. • Computer speakers (external or internal) • Speakers connected directly to ViaVideo
Monitor	SVGA (800 x 600) or higher resolution
Network Access	Broadband IP (64 kbps and above)

Microsoft Internet Explorer®	Version 6.0 or later
Windows Media Player®	Version 9.0 or later
Microsoft DirectX® Software	Version 9.0b or later

For information about setting up Polycom PVX for use with a ViaVideo or ViaVideo II, see the documentation that came with the camera. For information about setting up Polycom PVX for use with a webcam, see the documentation that comes with the software.

Supported Audio Devices and Webcams

Polycom PVX software is tested extensively with a wide range of audio devices and webcams. For a list of compatible devices and for important information about factors you should consider when selecting your audio and video devices, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at

http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

SoundStation2 and SoundStation2W

To make calls with PVX using the Polycom SoundStation2™ or SoundStation2W™, you need the Computer Calling Kit. For more information about this kit, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at

http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

System Performance

For systems with a ViaVideo or ViaVideo II camera, most of the media processing is done by the camera. People+Content sharing requires computer processing and, therefore, demands a higher performance processor. Systems with a 1.2 GHz Pentium 4 or later can support People+Content. Content sharing will benefit from additional CPU speed.

For systems with a webcam, all of the processing is done on the computer. There are a wide range of computer performance levels. To optimize the video experience on each system, a CPU resource manager within the Polycom PVX software gauges the system performance and adjusts the media features accordingly.

You can also adjust the way Polycom PVX allocates system resources between PVX and other applications. To do this, on the Setup > General page, click **Performance**. Choose one of these performance settings:

Setting	Description
Balanced	Good video without too great an impact on general application performance.
Other Applications	More processing power for running critical applications while reducing the processing allocated to people video and audio.
Polycom PVX	Great audio and video while reducing the responsiveness of other applications.

Factors Affecting Video

The video format in a call depends on many factors — both on the near-site system and on the far-site system.

Some of the other factors that can affect the video format include:

- System processor and speed
- PVX settings under Setup > General > Performance
- PVX settings under Setup > Video
- Gatekeeper configuration under Setup > H.323
- Audio format
- Presence of content video (send or receive)
- Camera type

Camera Driver Load

The **For the camera you have selected, specify the camera driver's load on the system** setting on the Setup > Video > Advanced page allows you to configure PVX properly, especially if you need to compensate for a higher CPU load from the camera driver. This setting enables you to lower the estimated CPU power by a fixed amount so you can enhance the quality of your PVX video.

The original video capture driver load for PVX is approximately 150 MHz worth of CPU resources. Therefore, on a 1.5 GHz computer, the video capture driver will use 10% of the CPU (you can check this using the Task Manager). On a faster computer, the load will be less, such as 5% on a 3.0 GHz system.

In the **For the camera you have selected, specify the camera driver's load on the system** field on the Setup > Video > Advanced page:

If you select...	Subtract this amount from your actual CPU speed...
Low	None
Medium	200 MHz
High	600 MHz

The following table lists some examples of what you should specify for the **For the camera you have selected, specify the camera driver's load on the system** setting for some of the webcams supported by PVX:

For this camera...	Select this setting...	
AVerMedia® AVerTV™ GO 007 FM Plus PCI	Low	
Creative® WebCam Live!® Motion	High	
Creative WebCam Live! Pro	Medium	
GlobalMedia® IREZ™ KD 1394	Low	
GlobalMedia iREZ K2 USB 2.0	Medium	
Logitech® QuickCam® for Notebooks Pro	P/N 961398-04030 Driver version 9.5.0	High
	P/N 961240-04030 Driver version 8.4.1	Medium
Logitech QuickCam Pro 4000	Driver version 7.3.0	Low
	Driver version 8.4.8	Low
	Driver version 9.0.2	Medium
Logitech QuickCam Pro 5000	Driver version 9.0.2	Low
Logitech QuickCam Fusion™	Driver version 9.0.2	Medium Note: If the Logitech Audio Echo Canceller (AEC) is enabled, select High.
Logitech QuickCam Orbit MP	Driver version 9.0.2	Medium
Veo™ Velocity Connect		Medium
V-Stream TV2800 (V-Stream Xpert DVD Maker USB 2.0)		Low

Note that, for best performance, only one USB camera at a time should be plugged into the computer.

For important additional information about the camera driver load, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

PVX 8.0.2 Processor/Bit-rate/Resolution Tables

The tables in this section provide overall targets for different computer processor types and call speeds.

Keep the following in mind when viewing the tables:

- The values listed in the tables assume that PVX is set to **Balanced** on the Setup > General > Performance page. If you select **Other Applications** on this page, PVX will use less processing power; if you select **Polycom PVX**, PVX will use more of the CPU. For more information, refer to System Performance on page 5.
- The values listed are based on the **Low** camera driver load setting. To check this setting, see the **For the camera you have selected, specify the camera driver's load on the system** field on the Setup > Video > Advanced page. If your camera driver load setting is set to **High** or **Medium**, you must manually compensate for the different setting as follows:
 - If your camera driver load setting is set to **High**, subtract 600 MHz from the speed shown. For example, if your system's CPU speed is 2000 MHz, subtract 600 MHz from that, for a total of 1400 MHz.
 - If your camera driver load setting is set to **Medium**, subtract 200 MHz from the speed shown. For example, if your system's CPU speed is 2000 MHz, subtract 200 MHz from that, for a total of 1800 MHz.

For more information about the camera driver load, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

- The values listed are set to maximize the video experience for a wide variety of user situations and can change in each release.

H.264 People Video Receive

Processor	Resolution Options	Maximum Receive People Video Rate
Intel Pentium 4 1.5 GHz	VGA/4@15	384 kbps
Intel Pentium M 1.8 GHz	VGA/4@30	384 kbps
Intel Pentium 4 2.0 GHz Intel Pentium M 1.4 GHz AMD Athlon XP 1800+	VGA/4@30 VGA/2@15	1920 kbps
Intel Pentium 4 2.4 GHz	VGA/4@30 VGA/2@15	1920 kbps
Intel Pentium 4 3.2 GHz Intel Pentium 4 2.8 GHz (HTT)	VGA/4@30 VGA/2@30 VGA@15	1920 kbps
Intel Pentium 4 3.6 GHz Intel Pentium 4 3.4 GHz (HTT)	VGA/4@30 VGA/2@30 VGA@30	1920 kbps

H.264 People Video Transmit with Smoother Motion (default)

Processor	Call Rates (kbps)				Maximum People Video Rate
	<128	128 - <256	256 - <512	512 - 1920	
Intel Pentium 4 1.5 GHz	VGA/4@15	VGA/4@15	VGA/4@15	N/A	384 kbps
Intel Pentium 4 1.8 GHz	VGA/4@30	VGA/4@30	VGA/4@30	N/A	384 kbps
Intel Pentium 4 2.0 GHz Intel Pentium M 1.4 GHz AMD Athlon XP 1800+	VGA/4@30	VGA/4@30	VGA/4@30	VGA/4@30	1920 kbps
Intel Pentium 4 2.4 GHz	VGA/4@30	VGA/4@30	VGA/4@30	VGA/4@30	1920 kbps
Intel Pentium 4 3.2 GHz Intel Pentium 4 2.8 GHz (HTT)	VGA/4@30	VGA/4@30	VGA/2@30	VGA/2@30	1920 kbps
Intel Pentium 4 3.6 GHz Intel Pentium 4 3.4 GHz (HTT)	VGA/4@30	VGA/4@30	VGA/2@30	VGA@30	1920 kbps

H.264 People Video Transmit with Sharper Image

Processor	Call Rates (kbps)				Maximum People Video Rate
	<128	128 - <256	256 - <512	512 - 1920	
Intel Pentium 4 1.5 GHz	VGA/4@15	VGA/4@15	VGA/4@15	N/A	384 kbps
Intel Pentium 4 1.8 GHz	VGA/4@30	VGA/4@30	VGA/4@30	N/A	384 kbps
Intel Pentium 4 2.0 GHz Intel Pentium M 1.4 GHz AMD Athlon XP 1800+	VGA/4@30	VGA/2@15	VGA/2@15	VGA/2@15	1920 kbps
Intel Pentium 4 2.4 GHz	VGA/4@30	VGA/2@15	VGA/2@15	VGA/2@15	1920 kbps
Intel Pentium 4 3.2 GHz Intel Pentium 4 2.8 GHz (HTT)	VGA/4@30	VGA/2@15	VGA@15	VGA@15	1920 kbps
Intel Pentium 4 3.6 GHz Intel Pentium 4 3.4 GHz (HTT)	VGA/4@30	VGA/2@15	VGA@15	VGA@30	1920 kbps

In the tables above:

- VGA/4 is 320x240 (or CIF/SIF for interop)
- VGA/2 is 320x480 (or 2CIF/2SIF for interop)
- VGA is 640x480 (or 4CIF/4SIF for interop)
- Processors are Pentium 4 or Pentium 4 with HTT

H.263 People Video

H.263+ video is scaled in a similar way to H.264. However, it is not as efficient and it is not used at any call rate unless H.264 is disabled on PVX or the far site does not support H.264.

For example:

- On a 2.4 GHz Pentium 4, PVX will support 1920 kbps VGA/4@30fps
- On a 3.6 GHz Pentium 4, PVX will support 1920 kbps VGA@30fps

The CPU speed for H.263+ video is based on the **Low** camera driver load setting. To check this setting, see the **For the camera you have selected, specify the camera driver's load on the system** field on the Setup > Video > Advanced page. If your camera driver load setting is set to **High** or **Medium**, you must manually compensate for the different setting as follows:

- If your camera driver load setting is set to **High**, subtract 600 MHz from the speed shown. For example, if your system's CPU speed is 2000 MHz, subtract 600 MHz from that, for a total of 1400 MHz.
- If your camera driver load setting is set to **Medium**, subtract 200 MHz from the speed shown. For example, if your system's CPU speed is 2000 MHz, subtract 200 MHz from that, for a total of 1800 MHz.

For more information about the camera driver load, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

Installing Polycom PVX Version 8.0.2

Before You Begin

If you have ViaVideo version 5.x or earlier currently installed on your system and you wish to preserve user preferences and directories, you will first need to upgrade to Polycom PVX version 6.x before upgrading to PVX version 8.0.2. Polycom PVX 6.x downloads and release notes are available on Polycom's website at www.polycom.com/videosoftware.

If you have ViaVideo version 5.x or earlier and do not need to preserve user preferences and directories, then use the Windows Add/Remove Programs Control Panel to uninstall ViaVideo and install PVX version 8.0.2 as directed in the next section.

If you are upgrading from PVX version 8.0.0, be sure that you select **Use local settings** on the Setup > GMS page before you begin the upgrade to version 8.0.2. (If **Use provisioned settings** is selected, some of the settings might get lost during the upgrade.)

Updating to PVX Version 8.0.2

To install Polycom PVX 8.0.2 for the first time or to upgrade from Polycom PVX 6.x or 8.x:

1. Close any programs running on your computer.
2. If you are using a ViaVideo or ViaVideo II camera, make sure that the camera is turned off.
3. Download the PVX version 8.0.2 installation file from the Polycom website, www.polycom.com/videosoftware.
4. Double-click the downloaded installation file.
5. When the install wizard starts, follow the instructions on the screen.
6. When installation is complete, verify the new software version number in the Polycom PVX System Information screen.

Post-Installation Note:

Should you decide at any time to reinstall PVX version 6.x, you must first uninstall version 8.0.x using the Microsoft Windows Add/Remove Programs utility. Before uninstalling PVX, make a note of your existing user settings and directories and back up any files that you personally created and placed in the PVX program files directory, typically C:\Program Files\Polycom\PVX, that you wish to save. All files in the PVX directory are deleted during the uninstall process.

Tools for System Administrators

The tools listed in this document are being made available to system administrators to facilitate deployment and management of PVX systems. The PVXSET utility allows administrators to set or query PVX configuration properties. The PVX Capability Viewer allows administrators to view the video capabilities for a variety of system configurations.

While these tools are now being offered by Polycom, their immediate use is contingent upon their implementation “as-is” and without technical support from Polycom Services. Fully supported versions of these tools may be made available in a future release of the Polycom PVX software.

As always, user feedback is encouraged. Your comments and suggestions will assist in the future planning and development of these and other tools for system administrators that will ultimately enhance the Polycom PVX user experience. To submit feature enhancement ideas, go to www.polycom.com and click on **Support > Video > Suggest Product Enhancements**.

PVXSET Utility

Note: Polycom does not support the PVXSET utility.

PVXSET is an unsupported utility that enables administrators to set or query PVX configuration properties. The PVXSET application and a sample .pvp file (sample.pvp) are installed automatically when you install the PVX software. The sample file contains additional information about using PVXSET.

When PVX is installed, the .pvp and .pvq file extensions are associated with the PVXSET utility. Double clicking a file with one of these extensions will cause PVXSET to process that file.

You can run PVXSET while the PVX application is open or closed. Please note that if PVX is open when you set properties, some property changes may not take effect until PVX is closed and restarted.

When you start PVXSET, you see a status dialog showing the name of the file that is running and the completion status. Click **Details** to display each property that was processed in a .pvp file.

Keep the following guidelines in mind when you create your .pvp and .pvq files:

- List each property on a separate line.
- Blank lines are ignored.
- Use only valid property names. See sample.pvp for a list of recognized property names.
- Start comment lines with a semicolon. Comments cannot be on the same line as a property.

Using PVXSET to Set Properties

To set properties, you create an ASCII text file with a .pvp extension. This file contains the properties and values you want to set. See the information contained in the sample.pvp file for a list of recognized properties and the allowable settings for each.

Use this format for each property. Note that if you leave the value blank, the property is set to an empty value.

```
property_name = value
```

The following example sets the AES Encryption property to Auto:

```
; AES encryption: 0 - None, 1 - Auto
H323_ENCRYPTION = 1
```

Using PVXSET to Query Properties

To get properties, you create an ASCII text file with a .pvq extension. This file contains the properties you want to query. See the information contained in the sample.pvp file for a list of recognized properties and the allowable settings for each.

When you run the query, the results are saved to a .pvp file in the same directory and with the same root name as the source .pvq file. For example, running C:\pvxsetfiles\gatekeeper.pvq generates a new text file named C:\pvxsetfiles\gatekeeper.pvp.

Use this format for each property you want to query.

```
property_name =
```

The following example queries the system to discover the AES Encryption setting.

```
; AES encryption: 0 - None, 1 - Auto  
H323_ENCRYPTION =
```

Using .pvp Files to Initialize Systems for New Users

Most PVX properties are unique to each PVX user; however, some properties are computer-specific (that is, they are common for all users on a particular computer). When a new user launches PVX for the first time, PVX will initialize properties for that user. If that user is the first user on the computer, PVX will initialize the computer-specific properties, as well.

At first launch, PVX displays a setup wizard to help the user to set up the system. Alternatively, an administrator could provide a .pvp initialization file that contains the initial settings. This file could contain all or some of the needed values. The file must be named InitConfig.pvp, and it must reside in the same folder as the PVX executable, ViaVideoNG.exe (typically C:\Program Files\Polycom\PVX). Refer to the sample.pvp file for more information about creating an InitConfig.pvp file.

The first time each user on the computer opens PVX, PVX parses the configuration file, sets the designated properties, and then proceeds with the first-time-use initialization.

Running PVXSET from the Command Line

PVXSET supports three quiet modes when you run the application from the command line.

- **Normal mode** displays all messages. For example, this command runs sample.pvp in normal mode:
pvxset sample.pvp
- **Super quiet mode** suppresses all messages, progress messages, warning message, and error messages. To run in super quiet mode, precede the file name with /qq. For example, this command runs sample.pvp in super quiet mode:
pvxset /qq sample.pvp
- **Quiet mode** suppresses all messages except error messages. To run in quiet mode, precede the file name with /q. For example, this command runs sample.pvp in quiet mode:
pvxset /q sample.pvp

PVXSET Feature Limitations

- When you use PVXSET to set the license number and key code running the system for the first time, PVX crashes on startup. When you use PVXSET to set the license number and key code running the system for the first time, the software is not activated. To activate the license, run the setup wizard, and then use PVXSET to set the license number and key code. When you use PVXSET to set the license number and key code, calls are limited to 5 minutes until PVX is restarted. PVXSET cannot be used to query password values. If you attempt to query password values using a .pvq file, the resulting .pvp password value will contain "<password value is hidden.>" If you run this .pvp file, the password will be changed.
- When you use the PVXSET utility to set a property while PVX is shutting down, PVXSET will fail to connect to VVManager. When you use the PVXSET utility to set a property, none of the Out-of-Box setup pages are shown. When you use the PVXSET utility to show all setup wizard pages, none of the setup wizard pages are shown. When you use the PVXSET utility to hide all setup wizard pages, the GENERAL_WIZ_SHOWPAGE property is not always set correctly.
- PVX version 8.0.2 has improved and simplified the Quality of Service (QoS) feature. To use the H323_QOS_ENABLE property to enable QoS, remove the semicolon and use the value "TRUE", as shown in this example. To disable QoS, use the value "FALSE".

```

;-----
; Network Configuration
;-----
; Enable Quality of Service (QoS) to give increased
; priority to video, audio,
; and far-end camera control that is transmitted on
; the network.
; Set to TRUE or FALSE.
H323_QOS_ENABLE = TRUE

```

- If you use a .pvp file to specify a gatekeeper, GDS, or ILS, the PVX will not register with these servers until the PVX application is restarted.
- If you use PVXSET to change the system's H.323 name, the H.323 name is reset to the User Name when you restart PVX.

PVX Capability Viewer

The PVX Capability Viewer allows administrators to view the video capabilities of various system configurations. This program can be found in the PVX program files directory, typically C:\Program Files\Polycom\PVX.

To view the capabilities of a system:

1. Double-click the VvCapView.exe application file.
2. Do one of the following:
 - To view the capabilities of the current system, clear **Choose a different PC configuration**.
 - To view the capabilities of other system configurations, click on the **Choose a different PC configuration** check box, select a computer model, and enter both the processor speed and size of the L2 cache.
3. Click **View** to view the Summary window, which displays system capabilities in Balanced mode.
4. In the Summary window, click **Details** to view the system capabilities for all three performance modes: Balanced, Favor Other Applications, and Favor Polycom PVX.
5. In the Details window, click **Save** to save the capabilities detail to a text file.

The capabilities shown in the VvCapView.exe file are based on the **Low** camera driver load setting. To check this setting, see the **For the camera you have selected, specify the camera driver's load on the system** field on the Setup > Video > Advanced page. If your camera driver load setting is set to **High** or **Medium**, the VvCapView.exe file does not reflect this, so you must manually compensate for the different setting as follows:

- If your camera driver load setting is set to **High**, subtract 600 MHz from the speed shown in the **Speed** field in the VvCapView.exe file. For example, if the **Speed** field shows 2000 MHz, subtract 600 MHz from that, for a total of 1400 MHz.
- If your camera driver load setting is set to **Medium**, subtract 200 MHz from the speed shown in the **Speed** field in the VvCapView.exe file. For example, if the **Speed** field shows 2000 MHz, subtract 200 MHz from that, for a total of 1800 MHz.

For more information about the camera driver load, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

Network Profile Management and Configuration

PVX enables users to specify different network settings depending upon the location in which they're using the system. System configurations can be set for particular locations and the network settings can be saved as a named profile.

Several profiles can be created for a single user. Then, whenever the system is moved to a different location, the profile selection can simply be changed rather than having to change multiple network settings on various Setup pages.

Location profiles are configured from the Setup > Network page. PVX provides three default profiles: Office, Home, and Travel.

- To activate a profile, simply choose the location name from the list.
- To create a new profile, change a profile name or description, or copy, edit, or delete a profile, simply click the **Configure Profiles** button.

All the configuration settings on the Network page apply to a location profile, including all items on the Connection, Ports, QoS, and Bandwidth pages. Other settings that are defined per location are:

- General > Call Settings Page
 - Maximum time in call
- Video > Video Sources Page (for ViaVideo cameras only)
 - Power Frequency
 - 60 Hz
 - 50 Hz
- H.323 Page
 - Use PathNavigator™ OneDial for gateway calling
 - Dial Prefix

Creating .plcm Speed-dial Files

You can create speed-dial desktop shortcuts for PVX directory entries that you dial frequently.

To create a shortcut on their desktop, and make a call, users can do the following:

1. Click the **Directory** button on the main PVX page or on the Toolbar.
2. Click and drag any directory entry onto their desktop.
A new speed-dial icon will appear on the desktop. The filename will correspond to the directory entry and will be appended with an extension of .plcm.
3. To make a call to the entry on the desktop, either double-click the icon or right-click the icon and select **Call** from the menu.

You can also manually create speed-dial files as text files with a .plcm extension. To do so, use this format:

```
NAME=<Name Field>
SPEED=<Speed Field>
NUMBER1=<IP Address Field; can also be a DNS name>
NUMBER2=<not used; leave blank>
EXT=<H.323 Extension (E.164) Field>
SIP=<SIP Address Field>
ISDN=<ISDN Number Field>
```

This is a sample file named AnyUser.plcm.

```
NAME=AnyUser
SPEED=512
NUMBER1=100.100.100.100
NUMBER2=
EXT=
SIP=
ISDN=
```

When creating the speed-dial files:

- The speed must equal one of the call speeds listed in the directory's **Call Rate** list. These speeds can be configured by going to the Network > Bandwidth page and clicking the **Call Speeds** button.
- If you enter both a SIP and a H.323 number, PVX will dial the call using the H.323 number. If you want to place a SIP call, do not enter an H.323 number in the speed-dial file.
- Unused fields should remain blank.

Feature Limitations

The following types of feature limitations are described in this section:

- Audio Issues
- Calling Issues
- Microsoft Windows Issues
- NAT/Firewall Traversal
- Network Issues
- Session Initiation Protocol (SIP) Issues
- User Interface
- ViaVideo and ViaVideo II Hardware Issues
- Video Issues
- VideoMail Issues
- Webcam Hardware Issues

Audio Issues

- When you upgrade from 6.0.2 to 8.0.2, the **Echo Cancellation** setting will change from **Off** to **Internal**. **Internal** is the default setting for 8.0.2 and is roughly equivalent to the **Off** setting in 6.0.2.

If you experience lip-sync and CPU usage problems when using PVX with a new Logitech camera (such as the QuickCam Fusion and the QuickCam Pro 5000), check if the camera has built-in AEC. If it does, disable AEC using the camera's configuration software. You may also want to disable all other Logitech features, such as face tracking. For more information, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at

http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

- For optimum audio performance, connect an external microphone to the same device as the external speaker set. Once connected, be sure to select the device in the PVX audio options under Setup > Audio > Audio Input Device.
- You may experience audio anomalies using USB audio with your ViaVideo or ViaVideo II cameras. Polycom recommends using analog audio instead.
- To minimize the echo that might be returned to the person at the far site, do the following:
 - Verify that **Automatic Gain Control** is enabled on the Setup > Audio page.
 - Reduce the volume of the local speakers.
 - Separate the microphone and speakers as far as possible.
- You may notice loss of far-site audio when you speak at the same time as the far site when using a ViaVideo or ViaVideo II camera.
- Many Bluetooth® headsets only support telephone quality audio and degrade the wideband audio feature in PVX. Consider the frequency response and convenience tradeoff when using a Bluetooth headset.

- You may notice an increase or decrease of the system's audio volume level when starting the Polycom PVX application.
- When using a headset with the ViaVideo or ViaVideo II cameras, connect the headset to the camera via a 2.5 mm stereo jack to the 3.5 mm stereo plug adaptor. While many cell phone headsets are compatible for use with ViaVideo cameras, those that support an audio range up to 7 kHz are recommended.
- While PVX supports audio algorithms up to Siren 14, audio algorithms up to G.722 only are supported in calls using a ViaVideo or ViaVideo II camera. This is a limitation of the camera.
- If a ViaVideo or ViaVideo II camera's audio cable is connected to a microphone jack and the playback volume is too loud, check to make sure that there is no microphone level adjustment enabled. This may be labeled **Microphone Boost** on some audio devices.

Calling Issues

- Before troubleshooting calling issues, check first to ensure that the latest firmware versions and device drivers are downloaded onto all peripherals such as routers, webcams, etc., that are connected to the PVX system. Often, simply updating these items with the latest drivers or firmware will correct the problem.
- If you switch to a different camera while recording VideoMail, the system begins recording a new VideoMail instead of continuing to record the existing VideoMail.
- System names that contain the ampersand character (&) may not be displayed correctly on the System Information page. In addition, system names that contain the ampersand character (&) cannot be added to the Global Management System™ using the Global Management System web interface.
- In a call between two PVX systems, if you enable VGA People and then disable it, the transmit people frame rate drops to 15 fps. The frame rate returns to 30 fps after you restart PVX.
- On a PVX set to use the "Other Applications" performance setting, sending content in an H.323 768 kbps call uses 85% of the system resources.
- In a 64 kbps call between PVX and Windows Messenger, the receive bandwidth on the PVX is much higher than 64 kbps. This is a known characteristic of Windows Messenger.
- After you restart a Japanese system, you must click the **Change Password** button twice on the Setup > Locks page the first time you try to open the Change Password dialog box.
- In a 768 kbps video switching conference with H.263 video, a PVX system using a webcam may connect in secondary mode (audio only).
- Although PVX supports both encrypted call mode and H.239, some Network Address Translator (NAT)/firewall devices do not. If you

encounter difficulty with call connection or data sharing and your system is connected to a NAT/firewall, you may experience better results by disabling one or both of these options in the Polycom PVX application.

- When you are in an audio-only call, you may lose your local video if you click the **PIP** button. Local video will return once the call is terminated. To avoid losing local video, do not click the **PIP** button in an audio-only call.
- If your system is registered with a gatekeeper, you must use quotes when you call an alias or extension that includes a space in the name. For example, to dial Polycom Austin as an alias, you must enter "Polycom Austin" in the address field to connect the call.
- When placing a call from the Directory dialog either by manually entering an address or by selecting a number from a directory, use the Call Quality list to choose a call rate for that address. The selected rate will override the rate stored in the directory for that number. If you choose a different address from the directory, the call will be placed using the rate stored in the directory rather than the Call Quality override rate.
- If you change the available speeds on the directory list or remove the current directory default speed, you must go back to the directory and explicitly change to the new speed. If you do not select a new speed in the directory, Polycom PVX will continue to place calls at the previous default speed, even though that speed no longer appears in the list. Go to the Network > Bandwidth page and click on the **Call Speeds** button to select up to six speed settings.
- If you are having problems with E.164 or ISDN dialing, check that the **Dial using H.323 extension when connected to a gatekeeper** setting is enabled on the Setup > Directory page.
- You may see incorrect information in the Recent Calls list when dialing E.164 prefixes through an MCU.
- Encryption is not supported when the system is registered to a gatekeeper that is configured to do H.245 routed signaling. Either change the **AES Encryption** setting to **Off** on the Setup > General > Call Settings page or disable H.245 routed signaling on the gatekeeper.
- The use of the Call Forwarding feature requires that your system be registered with a gatekeeper. Once you have registered your system with a gatekeeper, the Call Forwarding options will be enabled.
- The use of People+Content requires calling speeds above 128 kbps.
- When dialing into a password-protected VSX™ multipoint call from PVX, you may encounter black video for up to 30 seconds. During this time, the far-site system is being prompted to accept or decline your incoming call. PVX endpoints will not be prompted to enter a password.
- Once you have closed a PVX chat session, you must reactivate data sharing by turning it off and then on again before beginning a new chat session.
- The **Maximum Call Rate** setting on the Bandwidth tab under Setup > Network does not currently apply to inbound SIP calls.
- Dynamic bandwidth allocation is not currently supported in SIP calls.

- PVX calls that are transferred to an invalid extension will display black video and require manual disconnection of the call.
- When a call is placed from a PVX system registered to a gatekeeper to an endpoint with call forwarding activated, the entry saved to the address book when the call completes will need to be modified. The IP address of the endpoint will appear correctly in the address book, but the system name will not.
- In a call using Toolbar View, when you click the **Transfer** button on the Toolbar, the call is transferred to the address in the **Enter address and click Call to dial** field.

Microsoft Windows Issues

- If you experience difficulty with PVX call connection, ensure that the latest Microsoft Windows updates are installed on the operating system. Often, simply installing the latest updates will correct the problem.
- Do not change the screen resolution when PVX is running. If you need to change the screen resolution, exit from the PVX application, change the resolution, and then restart PVX.
- Changing the Windows font size while PVX is running causes PVX to crash.
- On a Windows 2000 system, VideoMail recorded when PVX is muted does not include audio. On Windows XP systems, VideoMail includes audio regardless of whether the system is muted.
- On a Windows 2000 computer, if you turn off or disconnect a ViaVideo camera while PVX is running and then restart the system, PVX may fail to properly initialize. To correct this problem, reconnect or turn on the ViaVideo camera, and restart PVX. To prevent this problem, go to Setup > General page and choose **Always Use ViaVideo hardware**.
- When you install the ViaVideo camera and Polycom PVX software on a Windows 2000 system, you must restart the computer in order to complete the installation. If you do not restart the computer, DiffServ does not display correctly.
- When you run Polycom PVX software on a system running Windows XP, screen fonts in the Polycom PVX windows may appear to be blurred. If this happens, turn off ClearType font smoothing by following these steps:
 1. Right-click the Windows XP desktop and choose **Properties**.
 2. Click the Appearance tab, and then click **Effects**.
 3. Do one of the following:
 - Clear the **Use the following method to smooth edges of screen fonts** check box.
 - Set this option to use **Standard font smoothing**.
- Some Windows 2000 systems may fail to exit stand-by mode if they entered stand-by while Polycom PVX was running. On these systems, exit Polycom PVX before entering stand-by mode.

- Some laptops will slow the clock speed when running on batteries, thereby causing the Polycom PVX software to show a processor alert. To correct, connect the computer to AC power and restart Windows or reconfigure the Power Options settings in the Windows control panel to maximize performance (shorter battery time).

NAT/Firewall Traversal

- PVX does not save the **Use UPnP router to detect address setting** correctly as part of a Profile. To work around this problem, manually re-enable this setting when you switch to a Profile that should use UPnP.
- When the PVX system is configured to be behind a NAT/firewall and set to use a UPnP router to detect the address, the IP address is not always displayed on the home screen.

Network Issues

- The QoS tab on the Setup > Network page has been simplified so that a single setting allows you to enable or disable QoS. In PVX version 8.0.0, IP Precedence and DiffServ had to be set separately, which did not work reliably on all Windows systems.
- Restoring the system to factory defaults does not reset the allocation of system resources to the “Balanced” setting. The default port on a server is typically 1002 or 389, depending on the installed versions of ILS and Windows. Note that the default port for PVX is 389.
- If you change the **Media port range** on the Ports tab of the Setup > Network page and then upgrade to PVX version 8.0.2, the values you entered in the **Media port range** field will be set back to the default values.
- If you register to an invalid Global Directory Server, the PVX user interface may hang briefly and then recover.
- Users with the Windows XP operating system will not be able to place or receive video calls if the Internet Connection Firewall is enabled. To correct this:
 1. Right-click **My Network Connections**.
 2. Select **Network Properties**.
 3. In Local Area Connection Properties, select **Advanced**.
 4. Clear the **Internet Connection Firewall** option.
- Users running Windows XP Service Pack 2 may experience difficulty establishing a connection to incoming calls through a firewall. If this occurs, do the following:
 1. Click **Start** and then choose **Settings > Control Panel**.
 2. Select **Windows Firewall**.
 3. Select **Exceptions**.

4. Confirm that the **vvsys.exe** and **Windows NetMeeting** check boxes are selected.
- T.120 may not work properly through some NAT devices.
 - If calls stop working after you configure the software and the NAT device, ensure that the NAT is still configured properly. Internal testing has shown that some NAT devices can lose their settings and must be reconfigured. Verify that you have the latest firmware for your NAT device.
 - After installing a new NAT device and configuring the NAT device settings in the Polycom PVX software, you must power cycle both the device and the computer. To do this:
 1. Close all applications currently running on the system.
 2. Power off the computer.
 3. Power off the NAT device.
 4. After 30 seconds, power on the NAT device.
 5. Power on the computer.
 6. Restart Polycom PVX.
 - If the system is registered with an Internet Locator Server or a Global Directory and you delete the server address, the system displays a server error message. Clear the **Register** check box instead.
 - Auto-discovery of a gatekeeper may not operate properly if the PVX system is connected to a router.
 - PVX calls conducted over a network that uses a combination of both a NETGEAR® router and a Cisco® Gatekeeper may disconnect after a period of approximately four minutes.
 - PVX systems registered to the Global Management System that are also located behind a NAT must open port 3603 (TCP) on the NAT firewall device.

Session Initiation Protocol (SIP) Issues

- T.120 is not supported in SIP calls. In a SIP call that uses a 128 kbps continuous presence meeting room on the MGC™, the audio is received before the video. In a SIP call from a system behind a UPnP router, the receiving site sees the calling system's internal IP address instead of the external address. In a SIP 768 kbps transcoding MGC call with auto audio and H.263 video, the IP+48 card on the MGC crashes when the second PVX starts to connect. If you place a SIP call using a SER server and hang up before the call connects, your PVX system crashes. You can specify the server name in the format <host>:<port>, where <host> can be either an IP address or a DNS name.
- Encryption and People+Content do not work in SIP calls.
- On the Setup > SIP page, you must enter the IP address of the SIP proxy server in the Proxy Server field. In PVX version 8.0.0, you were not

required to enter the Proxy Server if it was the same as the Registrar Server; however, in version 8.0.2 you are required to enter an address in both fields in order to register to the server.

- If you register to a SIP server on the Setup > SIP page, unregister, and then place a SIP call, the far site will display your IP address as unreadable characters. To correct this issue, restart the system after changing SIP server settings.
- SIP calls to systems using MSN Windows Messenger or Microsoft Office Communicator may:
 - Report incorrect calling rates on the PVX Media Statistics page.
 - Connect with audio only.
 - Connect at line rates lower than those requested when the call was dialed.
 - Fail to resume video transmission if the Pause feature on Communicator is activated.
- PVX SIP calls to a VSX version 7.5.2 may intermittently fail to connect. Redialing the call or upgrading the VSX to version 8.x will correct the problem.
- If two PVX endpoints with identical user names both register to the same Microsoft LCS server, the second user to register will be able to answer incoming PVX SIP calls from a third system. The first to register will not.
- PVX systems located behind a Cisco PIX® firewall will be unable to receive incoming SIP calls routed through a Microsoft LCS server.
- Nortel MCS Servers will confirm registration of a PVX system even if a blank or incorrect server password is used.
- Nortel MCS servers do not support PVX SIP calls that use a ViaVideo camera.
- PVX SIP calls through an SMC SMC7004BR NAT firewall device will transmit an incorrect IP address to a far-site system. If the far-site system saves that information in the address book and attempts to place a return call using the saved entry, the call will not connect.
- If a PVX system that is registered to a Microsoft LCS server does not answer an incoming SIP call, the call cannot be returned using the address as listed in the Recent Call log.

User Interface

- In this version of PVX, you must enter the access password on both the Page Access page and the Feature Access page.
- To display help on using the menu tree in the PVX Setup screens, click the ? Button in the upper left corner of the screen and then click the menu tree. Displaying help by right-clicking the menu tree is not supported.
- The help topic which describes the setup pages incorrectly implies that the user can set the default SIP port.

- The online help incorrectly states that you can enter the password on either the Page Access or the Feature Access pages. In the current version, you must enter the password on each page in order to change any settings.
- The online help incorrectly states that you can set the default SIP port. The default SIP port cannot be changed by the user.
- On some wide-screen laptops, the PVX screen title text may be distorted.

ViaVideo and ViaVideo II Hardware Issues

- Do not shut down PVX while the ViaVideo or ViaVideo II camera is being loaded. Doing so causes vvsys.exe to crash.
- The Polycom PVX software may intermittently fail to recognize the ViaVideo cameras. If this happens, close the camera's shutter for approximately 10 seconds and reopen it. You may need to restart the Polycom PVX application if the camera preference is set to **Use ViaVideo hardware if present**.
- ViaVideo camera users who do not plan on switching between their ViaVideo and a webcam, should configure their system to always use ViaVideo hardware. This prevents Polycom PVX from switching to webcam mode if a ViaVideo camera is not detected on startup. To do this, go to the Setup > General page.
- If you use a laptop docking station, you may encounter difficulty while loading the ViaVideo camera's firmware. If this happens, connect the ViaVideo unit directly to computer's USB port.
- If you experience problems loading ViaVideo firmware through a USB hub, connect the ViaVideo unit directly to computer's USB port instead.

Video Issues

- If you are using a new Logitech QuickCam for Notebooks Pro camera, you may see horizontal streaks in the video under very low lighting conditions.
- With some webcam drivers, the camera appears to be connected when it is not actually connected. The system does not display an alert and no video is displayed locally or during a call.
- Users may experience no video from the Polycom PVX application after a computer restart or upon leaving hibernation or standby mode. To correct this, cycle the power switch to refresh the ViaVideo camera's firmware.
- Users may experience no video from the Polycom PVX application after a computer restart if **Auto-Start Application in Background** under the General tab is selected. To correct this, open the system's Windows Task Manager, click on the Processes tab, click on **vvsys.exe**, and click **End Task**. Exit the Windows Task Manager and restart the Polycom PVX application.
- For optimal low light calibration with the ViaVideo camera, the camera lens must be completely covered. To cover the lens, move the slider on the

front of the camera to the middle position. With the slider in the middle position, the camera is still running but the lens is covered.

If the lens cover is not completely closed during calibration, you may need to repeat the calibration process. To repeat the camera calibration:

1. Power off the ViaVideo camera.
 2. In Polycom PVX , go to **Setup**.
 3. Click **Reset** to restore default factory settings.
 4. Restart Polycom PVX and complete the setup wizard.
 5. Power on the ViaVideo camera.
After approximately 30 minutes, the camera calibration will begin.
 6. When prompted, move the slider on the front of the camera to the middle position to cover the lens.
- ViaVideo cameras may display corrupted video if the camera has been on for a long period of time. Use one of the following solutions to correct:
 - Recycle the power on the ViaVideo camera.
 - Close all programs and restart the Polycom PVX application.
 - When the user launches the Polycom PVX application, the application loads software to the ViaVideo camera. This is normal operation for the ViaVideo unit. This occurs when:
 - The camera is powered on.
 - The computer is restarted and the application is launched while the camera is powered on.
 - The ViaVideo camera software may fail to load when the customer is using a non-powered USB hub. Complete the following steps to load the software to the camera:
 1. Power off the ViaVideo camera.
 2. Disconnect the USB cable from the back of the ViaVideo camera.
 3. Verify that the Polycom ViaVideo device driver has been removed from the computer's device manager.
 4. Reconnect the USB cable to the back of the ViaVideo camera.
 5. Power on the ViaVideo camera.
 6. Verify the existence of the Polycom ViaVideo device driver in the computer's device manager.
Note: If the Polycom ViaVideo device driver is not present, restart the computer and repeat steps 1-5.
 7. Launch the Polycom PVX application software.
 - To optimize video quality, application sharing is disabled in Polycom PVX by default. Users of Microsoft NetMeeting® who enable the application sharing function may notice a slight decline in video quality. Microsoft disables some DirectX video features in order to provide a more accurate view of remote applications.

- When using dual monitors, PVX will not work if the secondary monitor is on the left of or above the primary monitor. The secondary monitor must be to the right of or below the primary monitor.
- When sharing applications from PVX, users on the receiving end may notice distorted content on the sender's desktop in other open windows that are not being shared. This is an intentional security feature that protects information in any open window that is not the target of the data share.
- If you are in a call while your PVX window is set to Toolbar mode, and the far site transmits VGA video, you may need to reposition or resize the far-site video window on your desktop after the call connects.
- High resolution H.263 calls should be conducted at speeds greater than 768 kbps.
- Calls from a system using a webcam and PVX version 6.0.1 to a system using PVX version 8.0 will connect without video on the 6.0.1 system. Upgrading the 6.0.1 system to PVX version 6.0.2 will correct the problem.

VideoMail Issues

- If you are having difficulty saving a VideoMail file, it may be because Windows has not appended the .asf extension correctly in the File Save dialog box. If you explicitly enter the .asf extension as part of the file name, the file will be saved correctly. For example, in the file name field, enter the file name as **MyVideoMail.asf**.
- Recording VideoMail is interrupted when an incoming call is automatically answered. To resolve this issue, turn off the Auto-Answer feature.
- If you leave the VideoMail box open after recording a VideoMail message and then place a call, you cannot play or record VideoMail until you close the VideoMail box and then reopen it.
- The VideoMail feature cannot be used if you are in a call and the VideoMail control panel is disabled.
- Use of the VideoMail recording feature with third party cameras is currently supported on Windows XP operating systems only.
- If you expand the PVX window to preview a VideoMail recording and the video image does not expand as well, the problem may be resolved by temporarily disabling hardware acceleration. To disable hardware acceleration, go to the Setup > Video page and clear the **Use DirectX Hardware Acceleration** box.
- Because VideoMail is recorded to the system's hard drive, the size of a VideoMail recording is limited only by the available space on your hard drive.

Webcam Hardware Issues

- On the Setup > Video > Advanced page, if you select **Low** or **High** in the **For the camera you have selected, specify the camera driver's load on the**

system field, and then you press **Reset** to restore the system defaults, the camera driver load setting does not change back to **Medium**. Since this setting is machine-dependent, it does not get automatically restored.

If you have a new Logitech camera, such as the QuickCam 5000 Pro, Orbit MP, QuickCam Fusion, or a new QuickCam for Notebooks Pro, the local video may become choppy or may freeze if you enable **Enable VGA 30 frames per second** on the Setup > Video > Advanced page. For most cameras, you should not enable this setting. For important information about how to set this and other settings to achieve optimum video quality, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

Polycom has qualified the cameras listed in the *Selecting Audio and Video Devices for Use with Polycom PVX* document (available at http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf) for use with Polycom PVX software. Many other cameras with Microsoft WDM video capture support will also work, although some are not fully compatible or place their own demands on the CPU that prevent them from being included on the list. Polycom continues to evaluate cameras and will add them as appropriate.

- Very high CPU usage can be seen in a number of situations:
 - On systems with less than a 2.0 GHz Pentium 4 or equivalent, the software is very busy with media processing with only a modest amount left for other applications. Changing the resource allocation under the Setup > General > Performance page to favor **Other Applications** can reduce the load for video processing.
 - On systems with some video capture devices, including some USB 2.0 cameras, the camera driver can use a high percentage of the CPU to do video capture. If you see the CPU load above 40% while previewing local video when not in a call, this can be the cause. Changing the system resource allocation to favor **Other Applications** under the Setup > General > Performance page can help with this somewhat. Please verify that you have the latest video capture drivers for your device.
 - When sending the desktop to the far site, you should see the CPU at or above 95%. This is expected since the desktop capture and encoder are busy running to provide the best desktop video quality. This code is running at a lower priority than normal applications, which ensures that those applications run first, but that desktop video uses all remaining CPU resources.

For important information about how to manage CPU resources to achieve optimum video quality, refer to the *Selecting Audio and Video Devices for Use with Polycom PVX* document, available at http://www.polycom.com/common/pw_item_show_doc/1,1276,4556,00.pdf.

- If you experience no video or audio in a call, please verify that the latest hardware drivers are installed and check the video or audio with the vendor's software to verify that the operating system can handle the device properly. This can make a significant difference in media performance.

- In some cases the graphics interface in older systems is too slow to render video properly. This is especially true when multiple video windows are open at the same time or if a video window is stretched to a larger size. This can be an issue with older video cards.
- You can connect multiple third-party cameras; however, not all types of cameras work with other cameras. If you experience problems using a system with two third-party cameras connected, try connecting only the camera you want to use.
- Multiple cameras of the same model are not supported.
- The camera configuration dialogs are provided by the camera vendor and may not be translated into all languages.
- If you wish to designate a preferred camera on the Setup > Video page, you must connect the camera prior to starting the PVX application. Otherwise, the camera will not appear as a selection in the Preferred Camera list.

Interoperability Testing

Polycom PVX version 8.0.2 has been tested extensively with a wide range of products. The following list is not a complete inventory of compatible equipment; it simply indicates the products that have been tested for compatibility with this release. Any interoperability issues or restrictions documented during testing are noted in the section that follows this table.

Type	Product	Version
NATs, Firewalls, Routers	Check Point Nokia IP130 Cisco Router (QoS and NAT) Cisco PIX Firewall D-Link DI-604 Linksys® BEFSR41 v2 Linksys BEFSR41 v3 Linksys BEFSX41 NETGEAR RP614 v2 Polycom V ² IU™ 5300-E SMC7004BR	NG R55 Build 127 12.3 6.3 (4) and 7.01 3.39 UPnP 1.44.2 Dec 13 2002 UPnP 1.04.8 UPnP 1.44.3 UPnP 5.20_RC3NA Apr 23 2004 UPnP 5.4.1 193r
Gatekeepers, Gateways	Cisco IP Phone 7940 Cisco Gatekeeper Ezenia! Gatekeeper Polycom PathNavigator RADVISION ECS Gatekeeper RADVISION viaIP Gateway Tandberg Gateway VCON MXM Gatekeeper (trial version)	6.0 (4.0) 12.3 (6b) 2.1 7.00.00 and 7.00.02 3.6.0.5 4.0.0.40 G2.1 3.1
External MCUs, Bridges, Call Managers	Cisco CallManager Polycom MGC-25 Polycom MGC-50 Polycom MGC-100 Polycom PCS Polycom WebOffice® RADVISION viaIP MCU Tandberg MCU	4.01 7.01.11 7.01.11 6.11 and 7.01.11 7.0.5.11 7.0.2.4 4.0.31 D3.5
SIP Servers	Microsoft LCS 2005 Nortel MCS SIP Express Router (SER)	SP1 0.9.3

Type	Product	Version
Endpoints	Aethra AVC 8400	5.1.35
	Aethra Vega Star Gold	5.2.11
	D-Link i2eye	3.0.0.194
	France Telecom eConf	3.5.1
	Huawei 8020 Plus	5.2
	Huawei 8030 mBox	5.2
	Intel TeamStation	5.0
	Microsoft NetMeeting	3.01
	Polycom Global Management System	7.0.2.6
	Polycom iPower™ 600	6.2.0.1208
	Polycom iPower 900	6.2.0.1208
	Polycom iPower 9000	5.3.0.1202 and 6.2.0.1208
	Polycom PVX	6.02.1359
	Polycom SoundPoint® IP 3000	2.8v
	Polycom SoundPoint IP 301	2.6.1
	Polycom SoundPoint IP 501	2.6.1
	Polycom SoundPoint IP 601	2.6.1
	Polycom V500™	7.5.2 and 8.0
	Polycom ViewStation® 512	7.5.2 and 7.5.4.2
	Polycom ViewStation EX	6.04 and 6.05
	Polycom ViewStation FX	6.04 and 6.05
	Polycom ViewStation SP128	7.5.4
	Polycom ViewStation SP384	7.5.4
	Polycom VS4000	6.04
	Polycom VSX 3000	7.5.2 and 8.0
	Polycom VSX 6000	7.5.2
	Polycom VSX 7000	7.5.2 and 8.0
	Polycom VSX 8000	7.5.2 and 8.0
	Sony PCS-1	3.2, 3.3 and 3.11
	Sony PCS 6000	5.01n
	Tandberg 500	B9.2
	Tandberg 800 B	B9.2
	Tandberg 880 E	E4.1 and E4.2
	Tandberg 880 F MXP	F2.3 and F2.5
	Tandberg 1000 B	B9.1 and B9.2
	Tandberg 6000 B	B9.1
	Tandberg 6000 E	E4.1
	Tandberg 6000 F MXP	F2.3
	VCON Cruiser	4.6
	VCON Escort	4.6
	VCON Falcon IP	0301.m01.d08.h10
	VCON HD3000	0206.m03.d13.h12
	VCON HD5000	3.1.06
	VCON vPoint HD	6.0.0.0115
	VCON MC8000	4.6
	VCON Vigo	5.10.0085
	VTEL Galaxy	2.2.0.070
Zydacron 350	3.01.012	

Interoperability and Compatibility Issues

Product	Issue
Aethra Vega Star Gold	In calls with Aethra Vega Star Gold version 5.2.11 systems using H.239, content can be sent by PVX to the Aethra system, but not received.
Check Point Firewall	PVX H.323 calls through a Check Point Firewall version NG R55 may connect without audio or video.
Cisco VPN	This version of Polycom PVX interoperates with Cisco VPN software version 4.0.3F and later.
Cisco PIX Firewall	The Cisco PIX firewall version 6.3 (4) does not support PVX H.323 dual stream calls with H.323 aware enabled. To correct this, disable the H.323 aware feature on the Cisco PIX firewall.
Cisco IP Gateway	The Cisco IP Gateway does not currently support PVX calls using People+Content, H.239 data sharing or encryption.
Creative Webcam Live! Pro camera	On some systems using the Creative Webcam Live! Pro camera, there may be periods when the display of local video may have a very slow frame rate (video appears jerky). This behavior may occur at the beginning of a call, while recording video mail, or immediately after starting PVX, and it may last 5-30 seconds. During this period, video transmitted to the far site will be seen at a normal frame rate. Any recorded video mail will also play back at a normal frame rate.
Ezenia! MCU	When using the Polycom PVX software with an Ezenia! MCU version 6.0, AES encryption must be disabled.
Fusion camera	Video sent from a PVX system using a Fusion camera periodically displays bright white video artifacts in calls experiencing packet loss.
Microsoft NetMeeting	The Polycom PVX application does not support G.723 audio when using a webcam. This means that connections to endpoints like NetMeeting that previously connected at G.723 may now connect with G.711. The call rate must be increased to 128 kbps or above or there will be no video. NetMeeting calls to a PVX system that are subsequently transferred by PVX will disconnect. NetMeeting does not support Call Transfer.
NETGEAR UPnP Router	A NETGEAR UPnP router may stop forwarding audio and video to the PVX system after a call has been connected for several minutes. A PVX configured to use a NETGEAR NAT receives black video when the far end sends content. If possible, configure both the NAT device and the PVX to use UPnP. A PVX behind a NETGEAR NAT cannot register to a gatekeeper if the port settings are set manually. If possible, configure both the NAT device and the PVX to use UPnP.

Product	Issue
<p>Polycom Global Management System</p>	<p>Global Management System managers may notice incorrect caller ID listed under the Call Status tab in the Global Management System Manager. This occurs when a Polycom PVX is in a video call with a ViewStation FX.</p> <p>The current version of Global Management System does not display alert messages from PVX systems.</p>
<p>Polycom iPower</p>	<p>T.120 does not work with an iPower if the iPower is configured for encryption required.</p> <p>iPower systems do not accept transferred calls from Polycom PVX at this time.</p> <p>When sharing data from PVX to an iPower system, you must wait until the readiness tone is heard before sending data. Sending data before the receiving end is ready to accept it, may result in having to disconnect and redial the call.</p> <p>During audio-only calls to an iPower system, the data-sharing buttons on the PVX system may appear to be active and functional when they are not.</p>
<p>Polycom MGC</p>	<p>Polycom PVX does not support sending snapshots when in a conference call with an MGC-100 using H.261 protocols. To correct this, reestablish the call using H.263 protocols.</p> <p>Users may experience ghosting and freezing image video when in a video call with an MGC-100 bridge running software version 5.0. MGC version 5.1 addresses this issue.</p> <p>PVX far end camera control (FECC) is not operable on SIP calls through a Polycom MGC conferencing bridge.</p> <p>When deactivating a T.120 data-share through a bridged MGC call, the data-share option buttons may continue to appear active and functional in the PVX application when they are not.</p> <p>PVX SIP calls through an MGC bridge to a VSX system running version 7.5.2 may result in no audio being heard from the VSX system.</p> <p>In a 384 kbps transcoded conference with dynamic bandwidth allocation, encryption, and People+Content on the MGC, the PVX system reports packet loss. To avoid this problem, disable dynamic bandwidth allocation for calls using the MGC.</p> <p>Calls using a 128 kbps continuous presence SIP conference room on the MGC+H29 connect as secondary mode. To avoid this problem, set the MGC's video algorithm to H.263 and set the video format to a format other than Auto (for example, CIF or QCIF). In a 384 kbps call that uses a continuous presence meeting room on the MGC, the transmit rate does not go above 70 kbps. In a 384 kbps transcoding multipoint call that uses People+Content on the MGC, the people transmit rate drops when the system receives content.</p>

Product	Issue
Polycom PathNavigator	<p>Users may experience an audio screech when in a Conference on Demand call. This is caused when one or more of the conference parties are placed on mute. To correct, users should unmute the far sites.</p> <p>If you designate a PathNavigator version 5.0 or 6.0 address as your system gatekeeper, call forwarding settings will not automatically be reestablished when you close and then reopen PVX. This problem does not occur with PathNavigator version 7.0.</p> <p>Call transfer cannot currently be used when you are in a call using Conference on Demand.</p> <p>T.120 is not supported in a Conference on Demand call.</p> <p>Users may experience poor video quality when only one endpoint is using PathNavigator 5.0. Use one of the following options to correct this:</p> <p>Register both end points with PathNavigator 5.0.</p> <p>De-select PathNavigator and reestablish the call.</p>
Polycom ReadManager™ SE200	<p>Systems that unregister from an SE200 gatekeeper may not be purged from the gatekeeper list. Systems registered to a SE200 gatekeeper may still be able to call the unregistered system.</p>
Polycom SoundPoint IP 600 and IP 4000	<p>Calls to Polycom SoundPoint IP 600 and IP 4000 phones version 1.5.2 are not supported.</p>
Polycom SoundPoint IP 301, 501, and 601	<p>In SIP calls placed from a SoundPoint IP 301, 501, or 601 phone to a PVX, the SoundPoint may not receive audio from the PVX. Calls from PVX to the SoundPoint experience normal audio. In order to insure proper interoperability, the SoundPoint IP phone must be configured to use only G.711 uLaw and G.711 aLaw. G.729 A/B should be disabled, and G.711uLaw should be the preferred audio algorithm.</p>
Polycom V ² IU	<p>Calls received from an endpoint using a Polycom V²IU 5300E version 5.4.1 will display an incorrect system address in the PVX address book if added when prompted at call completion. The correct endpoint dialing information should be entered manually to the address book.</p>
Polycom WebOffice	<p>Polycom WebOffice 6.0 is currently compatible only with ViaVideo version 5.1. Interoperability with Polycom PVX software may be addressed in a future release of WebOffice.</p>
RADVISION ECS Gatekeeper	<p>Encrypted calls through a RADVISION ECS gatekeeper may connect without audio or video.</p>
RADVISION vialP Gateway	<p>A loud tone may be heard from PVX systems when disconnecting calls from a RADVISION vialP Gateway.</p> <p>Content sharing using H.239 or People+Content is not supported in PVX calls placed through a RADVISION vialP Gateway version 4.0.</p>

Product	Issue
RADVISION viaIP MCU	<p>Calls through a RADVISION viaIP MCU version 3.2.38 may connect without video.</p> <p>Calls placed from PVX through a RADVISION viaIP MCU may appear to be fully encrypted when they are not. Data on the PVX statistics page may indicate that far end camera control, video, and audio channels are encrypted, when only the PVX channels are encrypted.</p>
Sony G70	PVX does not receive H.264 video in calls with the Sony G70.
Sony PCS-1600	Users will experience an audio only call when connecting to a Sony PCS-1600 video conferencing system.
Sony PCS-1 with H.264	<p>Some Sony PCS-1 systems will not decode a Polycom PVX H.264 video stream if the format is not exactly CIF. Sony has been made aware of the issue.</p> <p>In any call with the Sony PCS-1, PVX sends 30 fps and receives 15 fps.</p>
Tandberg Gateway	Calls through a Tandberg Gateway version G2.1 may send video to PVX at algorithms lower than that at which PVX is transmitting. For example, PVX may transmit H.263 video, but receive only H.261.
Tandberg 880 MXP	<p>In calls with a Tandberg 880 MXP with H.239 enabled, content may continue to display on the Tandberg system even after content sharing has been terminated. To correct this, disconnect the call and redial.</p> <p>In calls with a Tandberg 880 MXP versions B9.2, E4.2 & F2.5 with H.239 enabled, video may transmit at only 50% of the dialed rate.</p>
Tandberg 6000 E	<p>Tandberg 6000 E systems may not display far-site video if H.239 is enabled on PVX when the call is connected. To correct this, disconnect the call, disable H.239 on PVX and redial.</p> <p>In calls with a Tandberg 6000 E with H.239 enabled, content may continue to display on the Tandberg system even after content sharing has been terminated by PVX. To correct this, disconnect the call and redial.</p>
VCON Escort	Users will experience corrupted audio when a call is made from Polycom PVX to a VCON Escort at 64 kbps.
VCON HD3000	PVX is unable to send content to the VCON HD3000 when H.239 is enabled. In H.239 calls with the VCON HD3000, PVX is unable to transmit or receive H.264 video.
VCON MXM Gatekeeper	<p>The VCON MXM Gatekeeper does not currently support the Send Desktop feature in Polycom PVX.</p> <p>The VCON MXM Gatekeeper may fail to successfully register a Polycom PVX endpoint upon the initial registration attempt. Repeating the registration process typically proves to be successful on the second attempt.</p>

Product	Issue
Venturi accelerator software for Verizon wireless cards	Systems that use vlspl.dll, a DLL that is part of the Venturi accelerator software that is part of the installation used for Verizon wireless cards, may experience very slow PVX startup. To avoid this problem, uninstall the Venturi software.

Where to Get the Latest Product Information

To view the latest Polycom product documentation, visit the Documentation section of our website at www.polycom.com/videodocumentation.

Warranty and Registration

The Polycom PVX includes a 90-day software warranty.

Complete the one-time product registration form on the Polycom Resource Center website at <http://extranet.polycom.com> to access software downloads. Using the information provided as part of product registration, Polycom will make every effort to send you electronic notification of software releases as and when available.

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