



# Polycom® VSX™ 8000

The ultimate in an easy-to-install, high performance video conferencing system



## Benefits

**Form Factor** – Sleek 1U rack mount design that's perfect for integrated environments

**Professional-Grade Connectivity** – Phoenix-style audio connectors for balanced, line-level input and output as well as S-Video, serial and VGA input and output for video

**Solutions Oriented Interoperability** – Designed to seamlessly integrate with Polycom Vortex Installed Voice Products, SoundStation VTX 1000™ conference phone and Polycom MGC™ audio and video bridge products

**Versatility in Peripheral Choice** – Add on a touch panel control device, teletype control device for closed-captioning, medical control device or secure encryption devices

**Modular Network Interfaces** – Use the 10/100 Ethernet connection built-in or plug in a QBR1 or PRI ISDN network module or a Serial (V.35/RS-530/RS-449) network module

**The Polycom Solution** – Everything you need to deploy and manage a complete video conferencing network with Polycom Global Management System™, Polycom PathNavigator™, Polycom Conference Suite and the Polycom MGC™

A sleek rack mount design, professional grade connectivity and versatile interoperability make this product the perfect choice for integrated and custom environments.

If you are looking for a video conferencing system that combines ease of installation with the highest quality audio and video, the Polycom VSX 8000 offers the perfect marriage of form and function.

The VSX 8000 is specially designed with professional integrators in mind. Starting with the slim, highly integrated, 1U design including: professional grade connectivity, direct VGA input supporting People+Content™ collaboration and versatile slide-in trays to support circuit switched connectivity options (QBR1, PRI, Serial (V.35/RS4449/RS530).

Audio integration flexibility is unparalleled with Phoenix-style connectors, true balanced signals along with the ability to support mixers, direct microphone inputs with phantom power as well the Polycom Digital Tabletop VSX Microphones. Polycom's patent pending Siren™ 14 Stereo Audio is an integral part of every system and is easily configured for any room. Video participants can hear far-end participant's voices project in stereo through left and right speakers for a truly life-like meeting experience.

The VSX 8000 delivers video performance that will impress even the most demanding customers using the industry's most advanced video technologies, H.264 and Pro-Motion™. Standards based H.264 video offers outstanding video quality at call speeds up to 512 kbps, providing superior video without weighing down the network. For higher bandwidth calls, Pro-Motion, high-resolution, television-like video is an excellent choice for the absolute highest quality picture.

The VSX 8000 offers a rich feature set including an easy to use, customizable user interface, AES encryption software, built-in quality of service and quality of experience with Polycom's implementation of audio and video error concealment, SNMP support and Gatekeeper and Firewall utilities. Control of the VSX 8000 is accomplished over multiple serial ports for complete API control by external control systems, a full range of IR options as well as control passing with the popular Polycom Vortex Installed Voice Products. All in all, a complete package for integrators to design into a wide range of video conferencing applications.

The ultimate choice for professional integrators. The power of Polycom conferencing and collaboration solutions. With integrated video, voice, data, and Web capabilities, only Polycom solutions let your customers connect, conference, and collaborate anytime, anywhere and any way they want. It's our commitment to making distance communications as natural and interactive as being there. Install systems faster, smarter, and more efficiently with Polycom VSX 8000 and other Polycom conferencing and collaboration solutions.



Connect. Any Way You Want.

# Polycom VSX 8000 Specifications

ITU H.323 and H.320 compliant  
Cisco AVVID Certified

## Bandwidth

- Maximum Data Rate IP and Serial/V.35: Up to 2 Mbps
- Maximum Data Rate ISDN: Up to 2 Mbps

## Video Standards & Protocols

- H.261, Annex D
- H.263+ Annexes: F, I, J, L, N, T
- H.263++ Annexes: W
- H.264
- ITU 60-fps full screen – Pro-Motion™

## Frame Rates (Point-to-Point)

- Intelligently selects frame rate for best performance video
- 30 fps at 56 kbps up to 2 Mbps
- 60 fields per second up to 2 Mbps

## Video Inputs: 4 Connectors

- 1 x S-Video; Professional Y/C BNCs (main video camera)
  - 1 x DB15; PowerCam™ and PowerCam Plus power, PTZ control, IR, mic input
- 1 x S-Video; 4-pin mini DIN (second camera with PTZ control)
- 1 x S-Video; 4-pin mini DIN (VCR or DVD player)
- 1 x VGA (Content input from laptop)

## Serial Data Port: 2 Connectors

- 2 x DB9
- Control port for custom integration with remote devices such as Crestron and AMX control systems
- Integration with Polycom Vortex® Installed Voice Products
- Communication port for transmission of serial data (i.e. medical devices) over ISDN calls
- Auxiliary camera control

## Video Outputs: 4 Connectors

- 1 x S-Video; Professional Y/C BNCs (main display)
- 1 x S-Video; 4-pin mini DIN (second display)
- 1 x S-Video; 4-pin mini DIN (VCR or DVD player)
- 1 x VGA (Content display)

## Video Formats

- NTSC/PAL
- Graphics: XGA, SVGA, VGA

## People Video Resolution

- Pro-Motion interlaced video (60/50 fields full-screen video for NTSC/PAL)
- 4SIF (704 x 480)
- 4CIF (704 x 576)
- SIF (352 x 240)
- CIF (352 x 288)
- Choice of 4:3 or 16:9 display aspect ratios
- Display People on VGA Second Monitor

## Content Video Resolution

- XGA (1024 x 768), SVGA (800 x 600), VGA (640 x 480) for Content on VGA displays
- People video support for 4CIF and SIF on VGA Display
- Up to 4CIF for Content on NTSC/PAL displays

## Audio Standards & Protocols

- Polycom Siren 14 Stereo ready
- 14 kHz bandwidth with Siren™ 14 on IP, ISDN, and IP/ISDN mixed calls
- 7 kHz bandwidth with G.722, G.722.1
- 3.4 kHz bandwidth with G.711, G.728, G.729A

## Audio Features

- Seamless integration with Polycom Vortex Installed Voice Products
- Audio add-in using SoundStation VTX 1000™ conference phone
- Audio add-in over ISDN
- Audio add-in over POTS
- Full-duplex digital audio
- Instant Adaptation Echo Cancellation
- Automatic Gain Control (AGC) – Voice activated
- Automatic Noise Suppression (ANS)
- Ability to turn off Echo Cancellation when external audio equipment is used

- Audio Mixer (Mic, VCR, line-in)
- Built-in tonal speaker test
- Real-time audio level meter for local and far-end microphones
- Microphone and VCR input audio mixing
- Ability to talk over VCR audio

## Audio Inputs: 6 Connectors

- 1 x Conference link
  - Supports up to (3) microphones
  - Supports SoundStation VTX 1000 conference phone
- 2 x RCA/Phono, line level input for VCR, DVD player or audio mixer
- 2 x Phoenix connectors; balanced line level or direct microphone inputs with 24 V Phantom power
- 1 x RJ-11 for analog speaker telephone

## Audio Outputs: 6 Connectors

- 2 x Phoenix connectors; balanced line level output
- 2 x RCA/Phono, Line Level output for VCR record
- 2 x RCA/Phono, Line Level output for speakers

## Other ITU-Supported Standards

- H.221 communications
- H.224/H.281 far-end camera control
- Annex G standard for FECC in H.323 calls
- H.225, H.245, H.239, H.241
- H.231 in multipoint calls
- H.243 MCU password
- H.233, H.234, H.235V3 encryption standards
- Bonding, Mode 1

## Network Interfaces Supported

- IP (LAN, DSL, cable modem)
- Single 10/100 Ethernet port (10 bps/100Mbps/Auto)
- Optional ISDN QBRI (Basic Rate Interface) Module
- Optional ISDN PRI (Primary Rate Interface) Module T1/E1
- Optional Serial Module (V.35/RS-530/RS-449 with RS-366 dialing)

## Network Features

- Integration with Cisco Systems' CallManager Version 4.0
- Automatic IP/ISDN calling
- Down speeding over IP and ISDN
- Audio & Video Error Concealment over IP and ISDN, mixed calls
- IP address conflict warning
- Fast Connect IP for quick video connections
- Maximum call length digital timer
- Auto SPID detection and line number configuration
- MGC Click&View™ for individual screen layouts
- Polycom OneDial™ intelligent call management attempts call on preferred network (IP or ISDN) and automatically rolls over to secondary network if needed
- Polycom PathNavigator™ support for easy call placement and network cost optimization
- TCP/IP, DNS, WINS, DHCP, ARP, HTTP, FTP, Telnet
- Basic SIP\* (Session Initiation Protocol) implementation
- Chair control through API command or Integrated Web Interface
- Software Upgradeable Inverse Multiplexer (IMUX)

## Conference on Demand

- Initiates unscheduled MGC calls from the endpoint
- Utilizes Polycom Office (PathNavigator and MGC)
- Auto selects either the internal or external bridge
- Dials all participants simultaneously

## Security

- COMSEC tested by Titan Systems, Information Security Systems Division, and independently validated to operate with approved government encryption technologies
- KG-194/KIV-7 encryptor support with on screen and address book dialing
- Enhanced integration for independently certified, classified encryption devices
- Account validation number entry
- Secure password authentication
- Unique factory default passwords
- Administrator password

- Dial-in meeting password
- Encrypted password for VSX Web access
- Ability to disable remote interfaces (FTP, Telnet, HTTP, SNMP)
- Ability to disable mixed protocol multipoint calls
- Auto-Answer (On/Off)
- Allow access to user settings (On/Off)

## Embedded Encryption

- Advanced Encryption Standard (AES)
- FIPS validated by National Institute of Standards & Technology (NIST) certified agency
- 128-bit key length
- AES software encryption on ISDN, IP and Serial/V.35 up to 2 Mbps
- Standards-based H.235V3 (IP)
- Standards-based H.233/H.234 (ISDN/Serial)
- Automatic key generation and exchange
- Supported in People+Content™
- Supported in Point-to-Point IP, ISDN and mixed network calls

## User Interface

- User-friendly graphical interface
- Customizable home screen and color themes
- Kiosk mode with scrolling marquee
- User-selectable camera icons and ring tones
- Up to (99) user defined camera presets
- Speed Dial List on home page
- Persistent Preview (Far-site PIP) on all screens
- Picture-In-Picture (PIP) (On/Off, Moveable)
- Dual-Monitor Emulation
- Numerical menu navigation (Similar to mobile phone)
- Date, Time Server accessibility
- Calendar and Conference scheduling
- Alert Signal on home page
- Do Not Disturb (On/Off)
- VSX Web for remote monitoring

## Directory Services

- 4,000+ number global directory
- 1,000+ number local directory
- Limitless multipoint entries
- Live address book with Polycom Global Directory
- Services automatically and quickly updates directory with address changes or new endpoints
- Live address book with Polycom Global Directory
- Services automatically and quickly removes endpoints from directory if they are turned off
- Polycom Global Directory Services integrates with Active Directory/LDAP
- Directory Server backup in the event Polycom Global Directory is not accessible
- Automatic ISDN localization of calls

## System Management

- SNMP for enterprise management
- Diagnostics and software upgrades via PC, LAN
- Integrated VSX Web management tool
- Web Director: Remote administrator video monitoring and control from VSX Web (enabled/disabled from endpoint for security)
- Out-of-box setup from VSX Web
- Place a call from VSX Web
- Language independence between set-top interface and VSX Web
- System configuration from VSX Web
- Recent Calls Log – Records last 99 incoming and outgoing calls
- Call Detail Record (CDR) – Reports all incoming and outbound calls along with call statistics
- CDR Feature On/Off
- Downloadable CDR data for processing requires no external management system
- Account number validation at call initiation integrated with Polycom Global Management System™ for billing purposes
- Administrator-configurable dialing speeds

- Complete support for The Polycom Office™ including:

- Polycom Global Management System
- Polycom OneDial
- Polycom PathNavigator
- Polycom Conference Suite
- Polycom MGC
- Polycom SoundStation VTX 1000
- Polycom Vortex®

## Quality of Service and Experience – iPriority™

- Video Error Concealment
- Audio Error Concealment
- Universal Plug and Play (UPnP)
- IP Precedence (ToS)
- DiffServ (DSCP) (CoS)
- Dynamic Bandwidth Allocation
- Proactive Network Monitoring
- Packet and jitter control
- Network Address Translation (NAT) support
- Automatic NAT discovery
- Configurable video/audio/FECC service value
- Asymmetric speed control
- Alternate Gatekeeper support
- TCP/UDP fixed-port firewall support
- Lip synchronization
- Echo cancellation
- Echo suppression
- Auto gatekeeper discovery
- Automatic gateway dialing profiles
- Specify outbound call routing for gateway/ISDN

## Collaboration Solutions

- Closed captioning support
- Web Streaming in and out of a call, RTP based, suitable with QuickTime players

## System Options

- People+Content (using ImageShare II)
- PowerCam™ Plus Camera
- PowerCam Camera
- Polycom Digital Tabletop Microphone
- Internal Multipoint Feature

## Language Support (12 languages)

- Chinese (Simplified), Chinese (Traditional), English, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish
  - Documentation translations in all languages
  - User interface translations in all languages
  - Keypad audio dialing confirmation in all languages
  - VSX Web translations in all languages
  - Remote controls labeled in all languages

## Electrical

- Auto sensing power supply
- Operating voltage/power 90-250 VAC, 47-63 Hz/ 80 watts

## Environmental Specifications

- Operating Temperature: 0-40° C
- Operating Humidity: 15-80%
- Non-Operating Temperature: -40-70° C
- Non-Operating Humidity (Non-condensing): 10-90%

## Physical Characteristics

- Video Base Unit (W/H/D): 17.25"/1.73"/9.68"; 438.15 mm/43.83 mm/245.85 mm
- Video Base Unit Weight: 8.4 lbs; 3.8 kg

## Warranty

- One-year return to factory parts and labor
- One-year software updates and upgrades

\* SIP video extensions are in the process of being standards ratified.



VSX 8000 shown with optional QBRI network module installed

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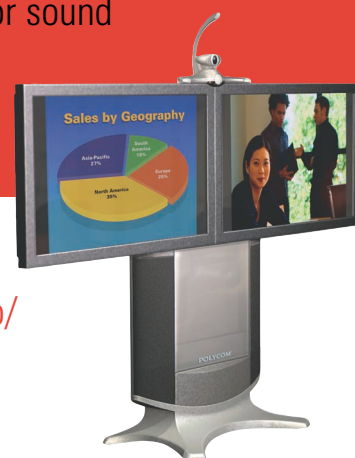
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# Polycom® VSX™ 8400/8800

A powerful video conferencing system with innovative packaging and superior sound



## Benefits

**Sensible Solutions** – Everything included in a single solution to minimize your effort and maximize your time where it counts

**Extraordinary Audio & Video** – Smooth motion, high resolution video combined with crystal clear *stereo* audio makes you forget you're in a video conference

**Effortless Usability** – Dial calls with the remote control or an integrated touch panel, even with a SoundStation VTX 1000 conference phone! Share laptop content with the push of a single button

**Additional Features** – Calls are always secure with industry approved AES encryption. Stream your conferences for viewing at a later time. Add multiple sites over audio or video to a single call

**The Polycom Solution**– Everything you need to deploy and manage a complete video conferencing network with Polycom Global Management System™, Polycom PathNavigator™, Polycom Conference Suite and the Polycom MGC™

Sophisticated styling, extraordinary audio/video and effortless usability make these products the ultimate in innovative video conferencing technology.

For customers that desire the greatest quality, performance group video conferencing system available today, the Polycom VSX 8800 and VSX 8400 offer multiple possibilities. With ideal, convenient packaging, the highest quality audio/video and unparalleled ease of use, these systems are excellent choices for large format conferencing environments.

Both the Polycom VSX 8800 and 8400 models feature the new patent pending Polycom Siren 14 Stereo Audio, delivering unprecedented audio clarity, in stereo. The slim-design VSX 8800 and 8400 systems deliver advanced video with H.264 and Pro-Motion for television-like video, and an extraordinarily easy to use interface. Together, these features produce a meeting environment so real you can't help but focus on the business at hand.

For maximum performance in a high-end video conferencing system, choose the VSX 8800. Included are tools to enable the addition of multiple participants in a single video conference, People+Content™ collaboration, voice tracking PowerCam™ Plus camera and Siren 14 Stereo with high-fidelity speakers. The VSX 8800 can also be paired with Polycom's state-of-the-art display solution, the Executive Collection. Dual flat panel displays show off the high-quality video and high-resolution presentation material while the technology behind the scenes is hidden in a thin profile cabinet.

The VSX 8400 is ideal for use in an instructor or presenter environment. With the standard People+Content feature and PowerCam camera, the instructor and the presentation are the focus of the video conference. The system is so flexible you can connect multiple peripherals such as a DVD or VCR player, a document camera or a projector for added presentation impact. For convenient integrated conferencing, Polycom offers a combination VSX 8400 and SoundStation VTX 1000™ conference phone bundle. In this configuration, both audio and video participants can be added to the same conference by simply using the VTX 1000 keypad, making video conferencing truly as easy as using a telephone.

*The ultimate choice for video conferencing. The power of Polycom conferencing and collaboration solutions.* With integrated video, voice, data, and Web capabilities, only Polycom solutions let you connect, conference, and collaborate anytime, anywhere and any way you want. It's our commitment to making distance communications as natural and interactive as being there. Work faster, smarter, and more efficiently with Polycom VSX 8000 series and other Polycom conferencing and collaboration solutions.



*Connect. Any Way You Want.*

# Polycom VSX 8400/8800 Specifications

ITU H.323 and H.320 compliant  
Cisco AVVID Certified

## Bandwidth

- Maximum Data Rate IP and Serial/V.35: Up to 2 Mbps
- Maximum Data Rate ISDN: Up to 2 Mbps

## Video Standards & Protocols

- H.261, Annex D
- H.263+ Annexes: F, I, J, L, N, T
- H.263++ Annexes: W
- H.264
- ITU 60-fps full screen – Pro-Motion

## Frame Rates (Point-to-Point)

- Intelligently selects frame rate for best performance video
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## Video Inputs: 4 Connectors

- 1 x S-Video; Professional Y/C BNCs (main video camera)
  - 1 x DB15; PowerCam and PowerCam Plus power, PTZ control, IR, mic input
- 1 x S-Video; 4-pin mini DIN (second camera with PTZ control)
- 1 x S-Video; 4-pin mini DIN (VCR or DVD player)
- 1 x VGA (Content input from laptop)

## Serial Data Port: 2 Connectors

- 2 x DB9
- Control port for custom integration with remote devices such as Crestron and AMX control systems
- Integration with Polycom Vortex® Installed Voice Products
- Communication port for transmission of serial data (i.e. medical devices) over ISDN calls
- Auxiliary camera control

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## Video Formats

- NTSC/PAL
- Graphics: XGA, SVGA, VGA

## People Video Resolution

- Pro-Motion interlaced video (60/50 fields full-screen video for NTSC/PAL)
- 4CIF (704 x 480)
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- SIF (352 x 240)
- CIF (352 x 288)
- Choice of 4:3 or 16:9 display aspect ratios
- Display People on VGA Second Monitor

## Content Video Resolution

- XGA (1024 x 768), SVGA (800 x 600), VGA (640 x 480) for Content on VGA displays
- People video support for 4CIF and SIF on VGA Display
- Up to 4CIF for Content on NTSC/PAL displays

## Audio Standards & Protocols

- Polycom Siren 14 Stereo ready
- 14 kHz bandwidth with Siren™ 14 on IP, ISDN, and IP/ISDN mixed calls
- 7 kHz bandwidth with G.722, G.722.1
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## Audio Features

- Seamless integration with Polycom Vortex Installed Voice Products
- Audio add-in using SoundStation VTX 1000 conference phone
- Audio add-in over ISDN
- Audio add-in over POTS
- Full-duplex digital audio
- Instant Adaptation Echo Cancellation
- Automatic Gain Control (AGC) – Voice activated
- Automatic Noise Suppression (ANS)
- Audio Mixer (Mic, VCR, line-in)
- Built-in tonal speaker test
- Real-time audio level meter for local and far-end microphones
- Microphone and VCR input audio mixing
- Ability to talk over VCR audio
- Ability to turn off Echo Cancellation when external audio equipment is used

## Audio Inputs: 6 Connectors

- 1 x Conference link
  - Supports up to (3) microphones
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- 2 x RCA/Phono, line level input for VCR, DVD player or audio mixer

- 2 x Phoenix connectors; balanced line level or direct microphone inputs with 24 V Phantom power
- 1 x RJ-11 for analog speaker telephone

## Audio Outputs: 6 Connectors

- 2 x Phoenix connectors; balanced line level output
- 2 x RCA/Phono, Line Level output for VCR record
- 2 x RCA/Phono, Line Level output for speakers

## Polycom Digital Tabletop Microphone

- 360° voice pick up, 4.8 dB less reverberant than omni microphone
- Three cardioid elements per microphone
- Flotation feet reduce transmission of tabletop noise
- Integrated mute button
- Can be mounted to ceiling or walls

## Other ITU-Supported Standards

- H.221 communications
- H.224/H.261 far-end camera control
- Annex O standard for FECC in H.323 calls
- H.225, H.245, H.239, H.241
- H.231 in multipoint calls
- H.243 MCU password
- H.233, H.234, H.235V3 encryption standards
- Bonding, Mode 1

## Network Interfaces Supported

- IP (LAN, DSL, cable modem)
- Single 10/100 Ethernet port (10 bps/100Mbps/Auto)
- Optional ISDN QBRI (Basic Rate Interface) Module
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- Polycom OneDial™ intelligent call management attempts call on preferred network (IP or ISDN) and automatically rolls over to secondary network if needed
- Polycom PathNavigator support for easy call placement and network cost optimization
- TCP/IP, DNS, WINS, DHCP, ARP, HTTP, FTP, Telnet
- Basic SIP\* (Session Initiation Protocol) implementation
- Chair control through API command or Integrated Web Interface
- Software Upgradeable Inverse Multiplexer (IMUX)

## Conference on Demand

- Initiates unscheduled MGC calls from the endpoint
- Utilizes Polycom Office (PathNavigator and MGC)
- Auto selects either the internal or external bridge
- Dials all participants simultaneously

## Security

- COMSEC tested by Titan Systems, Information Security Systems Division, and independently validated to operate with approved government encryption technologies
- KG-194/KIV-7 encryptor support with on screen and address book dialing
- Enhanced integration for independently certified, classified encryption devices
- Account validation number entry
- Secure password authentication
- Unique factory default passwords
- Administrator password
- Dial-in meeting password
- Encrypted password for VSX Web access
- Ability to disable remote interfaces (FTP, Telnet, HTTP, SNMP)
- Ability to disable mixed protocol multipoint calls
- Auto-Answer (On/Off)
- Allow access to user settings (On/Off)

## Embedded Encryption

- Advanced Encryption Standard (AES)
- FIPS validated by National Institute of Standards & Technology (NIST) certified agency
- 128-bit key length
- AES software encryption on ISDN, IP and Serial/V.35 up to 2 Mbps
- Standards-based H.235V3 (IP)
- Standards-based H.233/H.234 (ISDN/Serial)
- Automatic key generation and exchange
- Supported in People+Content

- Supported in Point-to-Point IP, ISDN and mixed network calls

## User Interface

- User-friendly graphical interface
- Customizable home screen and color themes
- Kiosk mode with scrolling marquee
- User-selectable camera icons and ring tones
- Up to (99) user defined camera presets
- Speed Dial List on home page
- Persistent Preview (Far-site PIP) on all screens
- Picture-In-Picture (PIP) (On/Off, Moveable)
- Dual-Monitor Emulation
- Numerical menu navigation (Similar to mobile phone)
- Date, Time Server accessibility
- Calendar and Conference scheduling
- Alert Signal on home page
- Do Not Disturb (On/Off)
- VSX Web for remote monitoring

## Directory Services

- 4,000+ number global directory
- 1,000+ number local directory
- Limitless multipoint entries
- Live address book with Polycom Global Directory Services automatically and quickly updates directory with address changes or new endpoints
- Live address book with Polycom Global Directory Services automatically and quickly removes endpoints from directory if they are turned off
- Polycom Global Directory Services integrates with Active Directory/LDAP
- Directory Server backup in the event Polycom Global Directory is not accessible
- Automatic ISDN localization of calls

## System Management

- SNMP for enterprise management
- Diagnostics and software upgrades via PC, LAN
- Integrated VSX Web management tool
- Web Director: Remote administrator video monitoring and control from VSX Web (enabled/disabled from endpoint for security)
- Out-of-box setup from VSX Web
- Place a call from VSX Web
- Language independence between set-top interface and VSX Web
- System configuration from VSX Web
- Recent Calls Log – Records last 99 incoming and outgoing calls
- Call Detail Record (CDR) – Reports all incoming and outbound calls along with call statistics
- CDR Feature On/Off
- Downloadable CDR data for processing requires no external management system
- Account number validation at call initiation integrated with Polycom Global Management System™ for billing purposes
- Administrator-configurable dialing speeds
- Complete support for The Polycom Office™ including:
  - Polycom Global Management System
  - Polycom OneDial
  - Polycom PathNavigator
  - Polycom Conference Suite
  - Polycom MGC
  - Polycom SoundStation VTX 1000
  - Polycom Vortex

## Quality of Service and Experience – iPriority™

- Video Error Concealment
- Audio Error Concealment
- Universal Plug and Play (UPnP)
- IP Precedence (ToS)
- DiffServ (DSCP) (COS)
- Dynamic Bandwidth Allocation
- Proactive Network Monitoring
- Packet and jitter control
- Network Address Translation (NAT) support
- Automatic NAT discovery
- Configurable video/audio/FECC service value
- Asymmetric speed control
- Alternate Gatekeeper support
- TCP/UDP fixed-port firewall support
- Lip synchronization
- Echo cancellation
- Echo suppression
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- Automatic gateway dialing profiles
- Specify outbound call routing for gateway/ISDN

## Collaboration Solutions

- Closed captioning support
- Web Streaming in and out of a call, RTP based, suitable with QuickTime players

## Language Support (12 languages)

- Chinese (Simplified), Chinese (Traditional), English, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish
  - Documentation translations in all languages
  - User interface translations in all languages
  - Keypad audio dialing confirmation in all languages
  - VSX Web translations in all languages
  - Remote controls labeled in all languages

## Electrical

- Auto sensing power supply
- Operating voltage/power 90-250 VAC, 47-63 Hz/80 watts

## Environmental Specifications

- Operating Temperature: 0-40° C
- Operating Humidity: 15-80%
- Non-Operating Temperature: -40-70° C
- Non-Operating Humidity (Non-condensing): 10-90%

## Physical Characteristics

- Video Base Unit (W/H/D): 17.25"/1.73"/9.68"; 438.15 mm/43.83 mm/245.85 mm
- Video Base Unit Weight: 8.4 lbs; 3.8 kg

## Warranty

- One-year return to factory parts and labor
- One-year software updates and upgrades

\* SIP video extensions are in the process of being standards ratified.

## VSX 8800 Includes

### PowerCam™ Plus Camera

- Silent, motorized pan-tilt-zoom camera with imbedded microphones enables pointing to presets
- Tilt Range: +/- 25° (Up/Down)
- Pan Range: +/- 100° (Left/Right)
- Horizontal field of view: 65°
- Total Field of View: 265°
- Horizontal resolution: 460 (PAL)/470 (NTSC) TV lines
- Zoom range: 10x
- Auto focus/white balance/brightness/iris
- Standards-based, far-end camera control (FECC)

### Polycom Digital Tabletop Microphones (2)

- 360° voice pick up, 4.8 dB less reverberant than omni microphone
- Three cardioid elements per microphone
- Flotation feet reduce transmission of tabletop noise
- Integrated mute button
- Can be mounted to ceiling or walls

### People+Content

- Using ImageShare™ II
- Laptop PC/Macintosh® connectivity device

### Internal Multipoint Features

- Mixed protocol dialing connects a total of four endpoints (IP/ISDN/Serial) through the internal MCU
- Dial-in/Dial-out Calling (IP/ISDN/Serial)
- Password protection for incoming calls
- Supports IP telephones
- Automatic IP/ISDN down speeding
- Supports People+Content from any endpoint (Not just the host site)
- Voice Activated Switching – view current speaker
- Continuous Presence – see all locations
- Automatic Presentation – switch between presenter and continuous presence mode
- MP key installation while in a call
- Audio add-in over ISDN
- Cascading for up to 10 conference participants (mix of IP/ISDN/Serial Video and ISDN Audio)

### Stereo Speaker Kit

- Includes subwoofer, (2) high-fidelity speakers and speaker stands

## VSX 8400 Includes

### PowerCam Camera

- Ultra-quiet, ultra-fast action pan-tilt-zoom (PTZ)
- Tilt Range: +/- 25° (Up/Down)
- Pan Range: +/- 100° (Left/Right)
- Horizontal field of view: 65°
- Total Field of View: 265°
- Horizontal resolution: 460 (PAL)/470 (NTSC) TV lines
- Zoom range: 10x
- Auto focus/white balance/brightness/iris
- Standards-based, far-end camera control (FECC)

### Polycom Digital Tabletop Microphones (2)

- See details above

### People+Content

- See details above

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# Polycom® VSX™ 8000 Series

## Frequently Asked Questions

### What makes up the VSX 8000 series?

The VSX 8000 series consists of the VSX 8000, VSX 8400 and the VSX 8800.

- The VSX 8000 is ideal for custom integrators that require only the codec and will design and specify all other peripherals, including microphones and cameras.
- The VSX 8400 is ideal for use in an instructor or presenter type environments. The PowerCam™ can be focused on the presenter while content is enabled using the standard People+Content™ feature. The flexibility of the system allows for multiple peripherals to be input for added presentation impact.
- The VSX 8800 offers the maximum capabilities of a high-end video conferencing system. When the need for communications from a distance includes multiple site participation, People+Content collaboration, voice tracking using the PowerCam Plus and sound distributed in Siren™ 14 Stereo, the VSX 8800 is the perfect solution.

### What options are available for the VSX 8000 product series?

Other than the pre-packaged accessories in the VSX 8400/8800 packages (described above), any of these options can be added to a VSX 8000 Series system.

- Quad BRI Module – This module is inserted into the back of the codec and provides connectivity for up to (4) BRI lines.
- PRI Module - This module is inserted into the back of the codec and provides ISDN connectivity up to 2 Mbps bandwidth.
- Serial Network Module (V.35/RS-449/RS-530) – This module is inserted into the back of the codec and provides serial connection up to 2 Mbps bandwidths.
- MPPlus Software License – When installed, this license allows the user to have up to (4) sites connected during a single video conference.
- People+Content – This option includes an ImageShare™ II tabletop device designed to allow users to connect their laptop to the videoconferencing system during a call and present high-resolution graphics.
- Polycom Digital Tabletop Microphone Kit – Includes (1) microphone and one (30) foot conference link cable.
- Stereo Speaker Kit - Includes subwoofer, (2) high-grade auxiliary speakers (with speaker stands) that enable the maximum benefit of Siren 14 Stereo.

- PowerCam Plus – Silent, motorized pan-tilt-zoom camera with imbedded microphones that enables automatic pointing to presets
- PowerCam – Pan-tilt-zoom camera designed to be primary or auxiliary camera that can be programmed to go to presets using the remote control.

How do the new features of the VSX 8000 compare to the existing Polycom rack-mount type products, the VS4000 and iPower 9000?

See chart below for differentiators.

	VS4000	iPower 9000	VSX 8000
Form Factor (Rack)	2U	2U	1U
Monitor Support	(4) + VGA	(2)	(2) + VGA
POTs	■		■
PowerCam Support	■	■	■
Vortex® Integration	■	■	■
H.264 Video	■	■	■
Integrated Network Module		■	■
SIP Support			■
PowerCam Plus Support		■	■
H.239 People+Content			■
Camera Tracking		■	■
Integrated VGA-In			■
VTX 1000 Integration			■
Siren 14 Stereo Audio			■
Siren 14 Audio		■	■

### Is this a replacement for the VS4000™?

For customers that want maximum I/O in a 1U rack mount system, professional connectors and the VSX architecture and interface, the VSX 8000 is an ideal product. The VSX 8000 offers integrated People+Content (VGA built into the codec) and a card slot for easy integration of network modules in the back of the codec. While the VS4000 is still available, customers budgeting and planning new purchases are encouraged to consider the VSX 8000 for their environments.



# Polycom VSX 8000 Series Frequently Asked Questions

## Can I drop a new VSX 8000 in place of an existing VS4000?

Yes. We provide the adaptors for the video connectors and any adaptors needed for cameras and control panel connections (AMX or Crestron). We also provide Phoenix block connectors for adapting existing audio connections. The API command set will be compatible with any code written specifically for current VS4000 applications. The new API command set even includes some advanced features above and beyond what was available for the VS4000.

## Is this a replacement for the iPower™?

Although the VSX 8000 is an appliance based product, unlike the PC based iPower products, many key features have been implemented on the VSX 8000 products, such as the Siren 14 Audio, People+Content and Camera Tracking with the PowerCam Plus camera. While the iPower is still available, customers budgeting and planning new purchases are encouraged to consider the VSX 8000 for their environments.

## Does this run the same software as the other VSX type products?

Yes. VSX Release 7.0 (announced July 12, 2004) is a common software code base that runs on the V500, VSX 3000, VSX 7000 and the VSX 8000.

## What features are available in Release 7.0?

	V500™	VSX 3000	VSX 7000	VSX 8000
Siren™14 Stereo	Receive	■	■	■
H.264 Standards Video	■	■	■	■
SoundStation VTX 1000™ Integration			■	■
Voice calls over ISDN	■	■	■	■
API Command Support	■ (IP)	■ (IP)	■	■
SNMP Support	■	■	■	■
Continuous Presence on internal MP calls	N/A	■	■	■
Cascading on internal MP Calls	N/A	■	■	■
Local Video on VGA Second Monitor	N/A	N/A	■	■
Web Streaming		■	■	■
Chair Control	■	■	■	■
Closed Captioning Support	■	■	■	■
Remote Web Monitoring	■	■	■	■
H.239 People+Content	Receive	Receive	■	■
Basic SIP Implementation	■	■	■	■
Universal Plug and Play (UPnP)	■	■	■	■
Russian Language Translations	■	■	■	■
PowerCam™ Plus Track to Presets				■
Seamless Vortex® Integration				■
Direct VGA Input from Laptop				■
POTS Audio Add-In				■
(3) Monitor Support				■
(3) Auxiliary Camera Support				■

## What features and accessories come with each configuration?

	VSX 8000	VSX 8400	VSX 8800
VSX 8000 Codec + Remote Control	■	■	■
Polycom Tabletop Microphones (2)		■	■
People+Content		■	■
PowerCam		■	
PowerCam Plus			■
MPPlus Software			■
Stereo Speaker Kit			■

## Can I use the system with third party microphones?

Yes. The VSX 8000 supports (2) Phoenix-style audio input connectors for balanced, line level or direct microphone inputs with 24 V Phantom power.

## Are the audio line levels designed to work with external audio components?

Yes. The nominal levels and dynamic range for line level inputs and outputs are designed to directly connect to the Vortex Installed Voice Products and any other third party audio components. With the line inputs configured to direct microphone inputs, the line levels are adjustable to fit the dynamic ranges of these microphones.

## In the base VSX 8000 codec, is there an integrated IR receiver?

Yes. There is an integrated IR receiver on the front panel of the VSX 8000. For applications or installations that require a remote receiver, the VSX 8000 has integrated support Xantech line of receivers. If you use the PowerCam camera series from Polycom, each has a built-in IR receiver.

## Can I plug a VGA cable from a laptop directly into the VGA-in port on the VSX 8000 (not use the ImageShare II provided)?

Yes, the direct VGA input is active and can receive incoming content from a laptop when connected by a direct VGA cable. The VSX 8400 and VSX 8800 come with the ImageShare II, which includes a 25' video/audio cable with a tabletop plug-in solution, including the "blue button" start/stop control. However, integrators can integrate their own cables and terminate into an array of tabletop applications, but must take practical measures in ensuring the signal integrity of the VGA signals when driving longer cable runs.

## Can I use the Visual Concert™ VSX with the VSX 8000 and have only a single cable to the conference table?

No. The Visual Concert VSX product does not work with the VSX 8000. Based on feedback from our customers, Polycom has integrated the VGA-in functionality for laptop content directly into the codec. We provide the ImageShare II as an alternative input device because many people like the ease of the Blue Button for stopping and starting content flow.

### Is there flexibility in how participants can be viewed while in a multipoint call?

Yes. There are (4) settings to choose from in the user interface when using the internal multipoint capabilities. Note that, when paired with a Polycom MGC™ product, the layout options are numerous.

- Auto – Will automatically switch to a single presenter if that presenter speaks for (15) seconds or greater.
- Discussion mode – Displays up to (4) quadrants on a single screen, seen by both far and near-end participants.
- Presentation mode – Allows the presenter to see up to (4) participants on a single screen, while the participants see only the presenter.
- In Full Screen mode – The speaker is seen full screen by both far and near-end participants.

### What type of audio integration is available with this product?

There are several ways to add an audio participant to a video call.

- SoundStation VTX 1000 – Polycom's wideband conference phone can be connected to the VSX 8000 via the Conference Link cable and can be used to add audio participants to a video call.
- POTS – The POTS port on the back of the VSX 8000 allows the user to directly connect an analog phone line into the back of the codec and use that connection to add an audio participant to the video call.
- Voice over ISDN – With a QBRI or PRI module installed, the VSX 8000 can take advantage of a single BRI line to make an audio call, adding that participant to the video call.
- Polycom Vortex Integrated Voice Solutions – The VSX 8000 is available in bundled solutions with either the EF2241 or EF2280 for a seamless, integrated voice and video solution from Polycom.
- VoIP voice calls (H.323) – Voice over IP phones, such as Polycom's SoundStation® IP 3000 are supported.

### What version of SNMP is being supported?

The VSX supports the SNMPv1 (Simple Network Management Protocol version 1) standard for network management and surveillance as defined in IETF RFC1157 (Request for Comments). VSX supports mib2 (Management Information Base) definitions as defined in RFC1213 which contains various system and status information. SNMP is the de facto standard in network management for IP-based units in a network.

### Does this product support API commands?

Yes. The Integrator's Reference Manual for the VSX Series documents over 200 supported commands designed to enable flexibility and customization in integrated rooms. These commands are accepted either through a Serial port connection or through a TelNet interface.

### Where can I find pin-outs for inputs and outputs?

The Integrator's Reference Manual for the VSX Series includes back panel drawings and specifications for all input and output connectors.

### Why is this an ideal product for integrators?

Polycom has worked with the integrator community for years, learning and understanding their requirements and building new solutions that best fit their needs (i.e. Enhanced VS4000). With the VSX 8000, Polycom has incorporated feature enhancements such as a compact, 1U form factor, professional grade Phoenix audio connectors, a direct VGA-input for laptop content, an expanded API command set and the VSX product software code base, all based on direct input from our customers. All of these factors combined make the VSX 8000 an ideal integrator product.

### What type of integrator support does Polycom offer?

In addition to creating a strong integrator product, Polycom is backing this up with strong integrator support. Polycom offers complete product documentation for the VSX 8000, including a new Integrator's Reference Manual for the VSX Series which includes instructions on how to configure the RS-232 interface, an exhaustive list of all the supported commands and complete cable pin-outs. A special PASS Integrator Hotline has been established to support only integrators. Calls received on this hotline are given the highest priority into our service team of specialists trained specifically on integration issues and the Vortex and VSX 8000 products. Video engineers are specifically dedicated to support API programmers and continue developing API reference code. Quality assurance programs are in place to ensure API command integrity throughout product development and new software releases. All of these efforts have been put into place because Polycom understands the value of custom integrators and is committed to outstanding customer service.



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