



# REALCOM®

## VIDEOCONFERENCE



### Polycom® VSX™ 8000

#### Benefits

**Flexible integration** – Sleek, 1U form factor is perfect for integrated environments and custom applications that require premium performance in tight spaces

**Professional-grade audio and video connectivity** – Phoenix-style audio connectors for balanced, line-level I/O with phantom power and BNC, serial and VGA I/O for Video

**Superior, natural sound** – Polycom StereoSurround™ delivers crisp, natural voice clarity - even when multiples parties are speaking simultaneously - by using dual channel, Siren™ 14 technology

**Outstanding video** – Premium quality video at any bandwidth with smooth natural motion and sharp, clear images. Supports Pro-Motion™ H.264 for the highest quality images and TV-like motion handling

**Multimedia made easy** – Show high-res images, movies or presentations in your meetings while also sharing video. And, you can connect your PC directly to the VSX 8000 or share content cable-free using Polycom's unique People+Content™ IP technology

**Simplified dialing and enhanced performance** – Integrate the SoundStation VTX 1000 to launch video calls, capture soft voices clearly from across the entire room in StereoSurround and eliminate the need for microphones and wires

**Versatility in peripheral choices** – Add touch panel control device, teletype device for closed-captioning, medical control device or secure encryption devices

**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™

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**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 XGA input supporting People+Content™ collaboration and versatile slide-in trays to support circuit switched connectivity options (QBRI, 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 microphone arrays. Polycom's patent pending Polycom StereoSurround™ 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. With dual speakers and dual microphones you'll hear each speaker clearly, easily decipher multiple simultaneous conversations and experience pure, rich sound.

The VSX 8000 delivers video performance that will impress even the most demanding customers using the industry's most advanced video technologies, Pro-Motion™ H.264, starting at data rates as low as 384Kbps. Pro-Motion provides H.264 clarity combined with 60 fields for TV-like motion handling and superior video quality without weighing down the network. Outfit the VSX 8000 with Polycom's PowerCam™ Plus voice-tracking PTZ camera for a smooth, seamless conferencing experience that includes everyone in the room.

The VSX 8000 offers a rich feature set including an easy to use, customizable user interface, AES encryption, built-in quality of service and quality of experience with Polycom's implementation of voice and video error concealment, SNMP support and Gatekeeper and Firewall utilities. Control of the VSX 8000 is accomplished over multiple serial ports via a complete API command set, 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.

In today's Internet driven world, the ability to conduct real time communication and collaboration has become critical to an organization's survival. As the market leader in voice, video, data and Web solutions, our award-winning conference technology makes it easy for people to interact and maximize productivity – over any network, in just about any environment, anywhere around the globe. That's why more organizations worldwide use and prefer Polycom conferencing solutions. Because when people work together, great things happen. To learn more, please visit the Polycom Experience Center at [www.polycom.com/experience](http://www.polycom.com/experience)



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VIDEOCONFERENCE  
BANGKOK THAILAND



VideoVoiceDataWeb

# Polycom VSX 8000 Specifications

ITU H.323 and H.320 compliant

## 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 or video 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)
- 2CIF (352 x 480)- Pro-Motion H.264
- 2SIF (352 x 576)- Pro-Motion H.264
- 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 or Content on 2nd VGA Displays (when used with primary NTSC/PAL display)
- People video support for 4CIF, 4SIF, 2CIF, 2SIF, CIF and SIF on 2nd VGA display
- Single monitor graphics display (1024 x 768)
- Up to 4CIF for Content on NTSC/PAL displays

## Audio Standards & Protocols

- Polycom StereoSurround 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 48V 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 Q standard for FECC in H.323 calls
- H.225, H.245, H.241, H.331
- H.239 People+Content
- H.231 in multipoint calls
- H.243 MCU password
- H.233, H.234, H.235V3 encryption standards
- Bonding, Mode 1

## Network Interfaces Supported

- SIP Support (Session Initiation Protocol)
- 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
- 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, UDP/IP, RTP, DNS, WINS, DHCP, ARP, HTTP, FTP, Telnet
- 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
- Speed dial list displaying video buddy list
- Limitless multipoint entries
- Live address book with Polycom Global Directory Services automatically and quickly updates directory with address changes or new endpoints
- 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
- Baseline mode setting for legacy system interoperability through VSX Web Management Tool
- 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)
  - Configurable video/audio/FECC service value
- DiffServ (DSCP) (COS)
- RSVP
- Dynamic Bandwidth Allocation
- Proactive Network Monitoring
- Packet and jitter control
- Network Address Translation (NAT) support
- Automatic NAT discovery
- 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

- People and Content (PC, VCR/DVD, Doc cam) are always displayed simultaneously
- Direct VGA-in connectivity
- People+Content™ IP
  - Show content from laptop/PC over IP network connection
  - No resolution adjustment required on presenter's laptop/PC
  - Supports CIF, SIF, 4CIF, 4SIF, VGA, SVGA, XGA display resolutions
  - Zoom control
  - Supports Windows® 2000 and Windows XP
- Closed captioning support
- Web Streaming in and out of a call, RTP based, suitable with QuickTime® players
- Adjustable bandwidth for content
  - 10% Content, 90% People
  - 50% Content, 50% People
  - 90% Content, 10% People

## System Options

- People+Content (using ImageShare™ II)
- PowerCam Plus Camera
- PowerCam Camera
- Polycom Digital Tabletop Microphone
- Internal Multipoint Feature (supports up to 6 callers, 5 remote and 1 local)

## Language Support (13 languages)

- Chinese (Simplified), Chinese (Traditional), English (American), English (British), 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 85-264 VAC, 47-63 Hz/ 72 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

VSX 8000 shown with optional QBRI network module installed



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