

Polycom® VSX™ 8000

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



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 configuration and integration 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 [RS-449/RS-530]).

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 as 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 remote participants' 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. Additionally, the VSX 8000 can be easily integrated with Polycom Vortex devices for complete audio system integration, mixing and control.

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 256Kbps. 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, customisable user interface, AES encryption, built-in quality of service and quality of experience with Polycom's implementation of voice and video error concealment, iPriority, 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 organisation'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 maximise productivity over any network, in various environments, anywhere around the globe. That's why more organisations worldwide prefer using Polycom conferencing solutions. Because when people work together, great things happen.

- ▶ Flexible integration – 1U form factor 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 multiple 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 in a video call. And you can share content from your PC by connecting to the VSX 8000 directly, using ImageShare II, or by using People+Content™ IP for cable-free data sharing
- ▶ 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
- ▶ Secure Conferencing – Ensuring your video conferences are secure and private through embedded encryption via secure video, audio and data traffic; secure web management, protection against unauthorised access (web, telnet, FTP)
- ▶ The Polycom Solution – Everything you need to deploy and manage a complete video conferencing network with Polycom ReadManager SE200, Polycom Global Management System™, Polycom PathNavigator™, Polycom Conference Suite™ and the Polycom MGC™

Polycom VSX 8000 Specifications

H.323, SIP and H.320 compliant

Bandwidth

- Maximum IP Data Rate: 2 Mbps
- Maximum ISDN/V.35 Data Rate: 2 Mbps

Video Standards & Protocols

- H.261
- H.263+ Annexes: F, I, J, L, N, T
- H.263++ Annexes: W
- H.264
- ITU 50/60-fps full screen – Pro-Motion

Frame Rates (Point-to-Point)

- Intelligently selects frame rate for best performance video
- 30 fps from 56 Kbps up to 2 Mbps
- 60 fields per second from 256 Kbps to 2 Mbps

Video Inputs: 4 Connectors

- Professional BNC connections (white Y-signal luminance, yellow C-signal chrominance) for main camera
- 1 x DB15; PowerCam and PowerCam Plus power, PTZ control, IR, mic input
- 1 x S-Video; 4-pin mini DIN (2nd camera with PTZ control)
- 1 x S-Video; 4-pin mini DIN (VCR, DVD, or 3rd camera with PTZ control)
- 1 x VGA HD-15 (Content input from laptop)

Serial Data Port: 2 DB9 Connectors

- 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 and IP calls
- Auxiliary camera control

Video Outputs: 4 Connectors

- Professional BNC connections (white Y-signal luminance, yellow C-signal chrominance) for 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 HD-15 (Content or video display)

Video Formats

- NTSC/PAL
- XGA, SVGA, VGA

People Video Resolution

- Pro-Motion H.264 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)
- QSIF (176 x 120), QCIF (176 x 144)
- Choice of 4:3 or 16:9 display aspect ratios

Content Video Resolution

- XGA (1024 x 768), SVGA (800 x 600), VGA (640 x 480) for single monitor VGA or when using VGA as 2nd monitor for Content
- Up to 4CIF/4SIF on NTSC/PAL displays for People or Content

Audio Standards & Protocols

- Polycom StereoSurround
- 14 kHz bandwidth with Polycom Siren 14 (G.722.1 Annex C)
- 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, IP and 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 array, VCR, line-in)
- Built-in tonal speaker test
- Real-time audio level meter

- Microphone and VCR input audio mixing
- Ability to talk over audio 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)
- 2 x Phoenix connectors; balanced line level or direct microphone inputs with 48V Phantom power
- 1 x RJ-11 for analogue 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
- H.323 Annex Q far-end camera control
- 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
- H.460 NAT/firewall/traversal
- Bonding, Mode 1

SIP Support (Sessions Initiation Protocol)

- Register and authenticate with:
 - Microsoft LCS
 - Nortel MCS
 - Standards-based SIP servers
- FECC
- H.261, H.263, H.264
- G.711, G.722, G.722.1, G.728, G.729A, Siren 14 (G.722.1 Annex C)
- Microsoft LCS contact list support
- Microsoft LCS presence support
- Interoperable with Microsoft Office Communicator

Network Interfaces Supported

- 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 with appropriate cables

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
- 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 optimisation
- 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
- Utilises 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
- FIPS 140-2 (Pre-validation List)
 - Secure web (HTTPS)
 - Secure Telnet, FTP
 - Security mode
- Enhanced integration for independently certified, classified encryption devices
- Account validation number entry
- Secure password authentication
- Administrator password – in-room and remote access
- Dial-in meeting password
- 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 197 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 full bandwidth
- 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
- Customisable home screen and colour 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
- Calendar and Conference scheduling
- Alert Signal on home page
- Do Not Disturb (On/Off)
- Closed captioning support

Directory Services

- 4,000+ number global directory
- 1,000+ number local directory for single or multipoint entries
- Speed dial list displaying video buddy list
- 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 localisation 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 – 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

iPriority – Quality of Service Features

- 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
- Adjustable Packet Size
- NAT/firewall traversal (H.460)
- 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 synchronisation
- 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 displayed simultaneously
- People+Content™ IP
 - Show content from laptop/PC over IP network connection
 - Content shown in native resolution
 - Supports Windows® 2000 and Windows XP
- QSX (Optional)
 - Connect to VGA port to show content from laptop/PC
 - Content shown in native resolution
 - Up to 10 video participants can view content being shared
- Adjustable bandwidth for content
 - 10% Content, 90% People
 - 50% Content, 50% People
 - 90% Content, 10% People
- Web Streaming in and out of a call, RTP based, suitable with QuickTime® players

System Options

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

Language Support (15 languages)

- Chinese (Simplified), Chinese (Traditional), English (American), English (British), French, German, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish
- Translated items include:
 - Documentation (no Hungarian/Polish)
 - User interface
 - Audio dialing confirmation
 - VSX web
 - Remote control (no Hungarian/Polish)

Electrical

- Auto sensing power supply
- Operating voltage/power 85-264 VAC, 47-63 Hz/ 72 Watts
- Max 52 VA @ 115v60Hz, 69 VA@220v50Hz
- Max Heat Dissipation: 246 BTU/hour

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): 438.15 mm x 43.83 mm x 245.85 mm (17.25" x 1.73" x 9.68")
- Video Base Unit Weight: 3.8 kg. (8.4 lbs.)

Warranty

- One-year return to factory parts and labour
- 90-day Software Warranty

VSX 8000 shown with optional QBRI network module installed

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Part No. 3726-17107-002 Rev. 06/06