

# Polycom® VSX™ 7000s



## The world's most powerful set-top video conferencing system for medium-sized groups and special applications.

The Polycom VSX 7000s offers flexibility, reliability and a robust architecture for virtually any meeting room, classroom, or medium group environment. With a unique integrated sound system, the Polycom VSX 7000s raises the bar for quality audio with Polycom StereoSurround™ audio. During a video conference, voices from remote participants are heard in stereo. With dual speakers and dual microphones you'll hear each speaker clearly, easily decipher multiple simultaneous conversations and experience pure, rich sound.

In addition, the VSX 7000s offers truly exceptional video with H.264 and television-like quality Pro-Motion™, an easy-to-use customisable user interface, standard AES software encryption, touch panel integration capabilities and voice add-on capabilities. The VSX 7000s provides flexibility in any conferencing environment; you can choose between a VGA or TV monitor as your main display, choose your dialling method as IP (H.323 or SIP) or ISDN, and connect a second camera or VCR to display pictures, movies or presentations to all conference participants. Whenever Content is displayed, whether it is coming from a PC, a document camera or from a DVD, the conference participants always see both the speaker and the content, for a seamless meeting experience. For a complete conferencing solution, consider combining the VSX 7000s with the Polycom Media Centre solution with a choice of single or dual LCD displays or plasmas.

There are many optional features and components that can be added to the VSX 7000s to further enhance any video conference. Tremendous value is added to the VSX 7000s when combined with the SoundStation VTX 1000®, allowing users to dial video calls right from their conference room as well as use the SoundStation VTX 1000 as the stereo microphone for the VSX 7000s. This combination saves conference table space (no mics or wires are needed) as well as provides double the range of microphone pickup so that all conference participants are clearly heard, even in large rooms.

Another option that can be added to the VSX 7000s is the presenter package, including Visual Concert™ and People+Content™ IP. Both of these allow users to display PC content during the meeting; Visual Concert is used to connect a laptop directly to the VSX 7000s, while People+Content IP is used to share PC content cable-free. PC content can include PowerPoint presentations, audio files, pictures or documents. More options include ISDN capability, speaker kits, additional microphones and more – all designed to allow you to create the perfect conferencing environment for your meeting room.

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 numerous environments, anywhere around the globe. That's why more organisations worldwide prefer using Polycom conferencing solutions. Because when people work together, great things happen.

- ▶ 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. Employs standard-based H.264 compression and Pro-Motion™ video for optimal viewing
- ▶ Multimedia made easy – Show high-res images or presentations in your meetings while also sharing video. And, you can share PC 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
- ▶ 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 SE 200, Polycom Global Management System™, Polycom PathNavigator™, Polycom Conference Suite™ and the Polycom MGC™

# Polycom VSX 7000s Specifications

H.323, SIP and H.320 compliant

## VSX 7000s Bundled Solutions

- VSX 7000s VTX: VSX 7000s with SoundStation VTX 1000 instead of microphone array
- VSX 7400s Presenter: VSX 7000s, Visual Concert VSX, People+Content IP
- VSX 7400s Presenter VTX: VSX 7400s with SoundStation VTX 1000 instead of microphone array
- VSX 7800s Presenter MP: VSX 7000s, Visual Concert VSX, People+Content IP, 4-way MPPPlus
- VSX 7800s Presenter MP VTX: VSX 7800s and SoundStation VTX 1000 instead of microphone array

## 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 512 Kbps to 2 Mbps

## Video Inputs: Main Camera + 2 Connectors

- Integrated main camera
- 1 x S-Video; 4-pin mini DIN (document camera or second camera)
- 1 x S-Video; 4-pin mini DIN (VCR)
- Dedicated connections for VCR/DVD-R playing and recording

## RS-232 Data Port: 1 x 8-pin mini DIN

- Control port for custom integration with remote devices such as Crestron® and AMX® control systems
- Connectivity for closed captioning teletype device or PTZ control for auxiliary PowerCam™
- Communication port for transmission of serial data (i.e. medical devices) over ISDN and IP calls

## Video Outputs: 4 Connectors

- 1 x S-Video; 4-pin mini DIN (Main monitor)
- 1 x S-Video (Second monitor)
- 1 x VGA HD-15 (main or second monitor display)
- 1 x S-video (VCR)

## Video Formats

- NTSC/PAL
- XGA, SVGA, VGA

## Integrated Main Camera

- Ultra-quiet, ultra-fast action pan/tilt/zoom (PTZ)
- 65° field of view
- Tilt Range: +/- 25° (Up/Down)
- Pan Range: +/- 100° (Left/Right)
- Total Field of View: 265°
- 12x Zoom; f:4.2 to 42mm
- F=1.85 to 2.9 mm
- Auto focus
- Automatic white balance
- Camera presets – local and far-end (up to 99)
- Standards-based, far-end camera control (FECC)

## 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)
- QSIF (175 x 120), 4CIF (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

- Audio add-in over SoundStation VTX 1000 conference phone
- Audio add-in over ISDN
- Full-duplex digital audio
- Instant Adaptation Echo Cancellation
- Automatic Gain Control (AGC) – Voice activated
- Automatic Noise Suppression (ANS)
- 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 VCR audio

## Audio Inputs: 3 Connectors

- 1 x Conference Link
  - Supports up to (3) microphones
  - Supports SoundStation VTX 1000 conference phone
- 1 x RCA input for stereo or mono input from VCR
- 1 x RCA input for stereo or mono input from external mixer

## Audio Outputs: 2 Connectors

- 2 x RCA/Phono, Line Level output for VCR record

## Polycom VSX Microphone Array

- 360° voice pick up
- Three cardioid elements per microphone
- Flotation feet reduce transmission of tabletop noise
- Integrated mute button
- Optional Polycom Ceiling Microphone Array is available

## Integrated Speaker and Subwoofer

- Frequency response: 80 Hz to 22 kHz
- Crossover frequency to subwoofer: 216 Hz
- Total Output Power: 20 Watts (RMS)
- Customise audio for user environment
- Master volume control
- Midrange and subwoofer speakers On/Off
- Subwoofer adjustable level
- User-tuned treble and bass controls

## 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 Mbps/100Mbps/Auto)
- Optional ISDN QBRI (Basic Rate Interface) Module
- Optional ISDN PRI (Primary Rate Interface) Module T1/E1
- Optional Serial Module with appropriate cables

- Optional wireless LAN support via customer provided wireless bridge

## Network Features

- Integration with Cisco Systems® CallManager Version 4.0
- Down speeding over IP and ISDN
- Audio & Video Error Concealment over IP, ISDN and 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)

## Internal Multipoint Features (Optional)

- Mixed protocol dialing connects a total of four endpoints (IP/ISDN/Serial)
- StereoSurround and Siren 14 audio
- Dual monitor emulation
- 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
- Voice Activated Switching – view current speaker
- Continuous Presence – see all locations
- Automatic Presentation – switch between presenter and continuous presence mode
- Audio add-in over ISDN
- Cascading for up to 10 conference participants

## Conference on Demand

- Initiates unscheduled MGC calls from the endpoint
- Utilises The Polycom Office™ (Polycom 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
- Account validation number entry
- SNMP trap notification of all failed login attempts from HTTP, FTP or Telnet
- 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 & mixed multipoint 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
- 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

- Baseline mode setting for legacy system interoperability
- 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 – last 99 incoming and outgoing calls
- Call Detail Record (CDR) - Reports all incoming and outgoing 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 dialling 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
- Packet and jitter control
- Adjustable Packet Size
- NAT/firewall traversal (H.460)
- 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 dialling profiles
- Specify outbound call routing for gateway/ISDN

## Collaboration Solutions

- People and Content (PC, VCR/DVD, Doc cam) are displayed simultaneously
- Visual Concert VSX (Audio and video input from PC or Macintosh®) (Optional)
  - 1 x audio input for laptop
  - 1 x VGA output for projector
  - 3 x 10/100 Ethernet hub
  - Content Output: 1280 x 1024, 60 Hz
  - Content Output: Up to 1024 x 768
- People+Content IP (Optional)
  - Show content from laptop/PC over IP network connection
  - Content displayed in native resolution
  - Supports Windows® 2000 and Windows XP
- QoSX (Optional)
  - Connect to Visual Concert to show content from laptop/PC
  - Content displayed in native resolution
  - Up to 10 voice 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

## Furniture solutions

- Media Centre with audio system
- Media Centre
- Media Cart
- Video Cart
- Wall Mount Solution

## 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 dialling confirmation
  - VSX web
  - Remote control (no Hungarian/Polish)

## Electrical

- Auto sensing power supply
- Operating voltage/power: 90-260 VAC, 47-63 Hz/ 80 Watts
- Max 74 VA@115v60Hz, 87 VA@220v/50Hz
- Max Heat Dissipation: 273 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): 300.3mm/148mm/244.5mm
- 11.82"/5.83"/9.63"
- Video Base Unit Weight: 2.8 kg/6.0 lbs
- Subwoofer (W/H/D): 175.2mm/272.4mm/220mm
- 6.9"/10.72"/8.67"
- Subwoofer Weight: 4.08 kg/9.0 lbs

## Warranty

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

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