

Polycom® Desktop Phone Guide







Business Media Phones	VVX [®] 500	VVX [®] 1500	VVX [®] 1500D	
Summary	An affordable Performance Business Media Phone delivering best-in-class desktop and Unified Communications for busy professionals.	The first Business Media Phone combining advanced IP telephony, one-touch video and integrated business application into a seamless, lifelike experience.	An easy-to-use dual stack Business Media Phone for H.323 and SIP environments.	
Application Target	Knowledge Worker/Professional's Office, Call center	Executive Office/Manager's Office/Professionals	Executive Office/Manager's Office/Professionals	
User Interface Features				
LCD Display	3.5 in TFT LCD Display	7 in TFT LCD display with adjustable screen angle	with adjustable screen angle 7 in TFT LCD display with adjustable screen ang	
Touch Display	Gesture based, capacitive touch	Resistive touch screen interface	Resistive touch screen interface	
Unicode Character Support	•	•	•	
Audio Features				
Polycom HD Voice™ Technology	•	•	•	
Full Duplex Speakerphone with Acoustic Clarity Technology	•	•	•	
Basic Features				
Lines (Registrations)	12	6	6	
Dual-stack H.323/SIP	•	*(With H.323 license)	•	
Line/Speed Dial keys	12	6	6	
Videomail Support	*(With camera accessory)	•	•	
Polycom® Teleworker Solution		•	•	
Busy Lamp Field (BLF) Functionality	•	•	•	
Advanced Features				
Polycom Productivity Suite™	•	•	•	
Polycom Desktop Connector	•	•	•	
Polycom MyInfoPortal (Weather, News widgets)	•	•	•	
Webkit-Based Full Browser	•	•	•	
Exchange Calendar Integration	•			
USB Call Recording	•			
Connectivity				
USB Port	2 x USB 2.0	1 x USB 2.0 1 x USB 2.0		
Ethernet Port	2 × 10/100/1000	2 × 10/100/1000	2 × 10/100/1000	















SoundPoint® IP Desktop Phones	SoundPoint IP 321/331	SoundPoint IP 335	SoundPoint IP 450	SoundPoint IP 550	SoundPoint IP 560	SoundPoint IP 650	SoundPoint IP 670
Summary	Entry-level IP phones with excellent sound quality, an enterprisegrade feature set and built-in PoE support.	Two-line, entry-level phone providing unparalleled Polycom HD Voice™ technology.	Three-line desktop phone featuring Polycom HD Voice™ and productivity enhancing.	Revolutionary sound quality and advanced features in a four-line SIP phone.	Unrivaled voice experience cutting edge SIP and GigE in a four-line phone.	High-performance IP phone with Polycom HD Voice™ technology.	A premium SIP desktop phone with color display that delivers a rich voice, visual, and applications experience.
Application Target	Cubicle/Common Area	Cubicle/Call Center	Cubicle	Manager/ Professional's Office	Manager/ Professional's Office	Executive Office/ Attendant's Desk with Backlit Expansion Modules	Executive Office/ Attendant's Desk with Color Expansion Modules
User Interface Features							
LCD Display	102 x 33 pixel backlit	102 x 33 pixel backlit	256 x 116 pixel backlit graphical	320 x 160 pixel backlit graphical	320 x 160 pixel backlit graphical	320 x 160 pixel backlit graphical	320 x 160 pixel backlit color
Unicode Character Support	European character set	European character set	•	•	•	•	•
Expansion Module Support						Up to 3 Backlit Expansion Modules	Up to 3 Color Expansion Modules with AC Adaptor
Audio Features							
Polycom HD Voice™ Technology		•	•	•	•	•	•
Full Duplex Speakerphone with Acoustic Clarity Technology	•	•	•	•	•	•	•
Telephony Keys							
Line/Speed Dial keys	2	2	3	4	4	6 (48 with Expansion Module)	6 (48 with Expansion Module)
Context-sensitive Soft Keys	3	3	4	4	4	4	4
Display/Menu Navigation Keys	5	5	5	6	6	6	6
Maximum Simultaneous Call Totals	8	8	8	24	24	24	24
Advanced Features							
XML Microbrowser	•	•	•	•	•	•	•
PTT and Multicast Group Paging	•	•	•	•	•	•	•
Busy Lamp Field (BLF) Functionality			•	•	•	•	•
Premium ACD and Hoteling			•	•	•	•	•
Connectivity							
SIP	•	•	•	•	•	•	•
USB Port						•	•
Ethernet	IP 321 – 1 × 10/100 IP 331 – 2 × 10/100	2 × 10/100	2 x 10/100	2x 10/100	2 x 10/100/1000	2 x 10/100	2 × 10/100/1000

^{© 2012} Polycom, Inc. All rights reserved. Polycom®, the names and marks associated with Polycom's products are trademarks and/or service marks of Polycom, Inc. And are registered and/or common law marks in the United States and various other countries. All other trademarks are property of their respective owners. No portion hereof may be reproduced of transmitted in any form or by any means, for any purpose other than the recipient's personal use, without the express written permission of Polycom.



Polycom® CMA® Desktop for Windows® and Mac OS® X

High-quality, standards-based video collaboration for both Mac and PC users

The Polycom® Converged Management Application™ (CMA®) Desktop application is a robust and full-featured video software client that enables face-to-face communication across environments and operating systems. Now with feature parity for Mac and PC, and the addition of SIP Support, the CMA Desktop 5.2 solution is an easy, cost-effective, and secure way to work from anywhere.

The CMA Desktop software is centrally deployed and managed by the Polycom Converged Management Application (CMA) 5000/4000 system, a standards-based management application which enables large-scale directory services, centralized provisioning, and management for thousands of video endpoints, including high definition telepresence, legacy video conferencing systems, and other video infrastructure components. Teams and individuals are able to securely connect with any standards-based H.323 or SIP video conferencing room, telepresence suite, Windows-based desktop, and other Max OS X clients, giving them the ability to work with disparate and global teams from anywhere.

The Polycom CMA Desktop solution accelerates the benefits of mobile and desktop communications across the entire organization by delivering high-quality video and voice communications and standards-based content sharing. Easy to learn and highly intuitive, CMA Desktop software allows users to simply point and click to call to collaborate with colleagues over video from any place, at any time. Users can quickly verify contact availability and status, initiate chat conversations through instant messaging, and conduct sidebar conversations with multiple individuals.

Polycom CMA Desktop clients are managed and monitored within the same video ecosystem as telepresence and traditional video conferencing systems, providing a powerful solution that spans all video client environments. The client enables IT administrators to have unprecedented provisioning, management, and reporting capabilities for successfully deploying desktop video across the organization. Polycom CMA software centrally controls user permissions through Microsoft® Active Directory® credentials, and manages endpoint software. Up to 5000 registered clients, including a mixture of Polycom CMA Desktop, telepresence, and traditional video conferencing systems can be supported.



- Secure business-grade video and audio right from your Mac or PC desktop
- Centralized deployment and management supporting up to 5000 registered clients
- Advanced provisioning for setting client access rights and capabilities prior to deployment.
- Microsoft® Active Directory® integration for simplifying management and to help ensure access to accurate contact information for everyone in the organization
- Ease-of-use with a powerful and simple click-to-call interface
- Deployment is not restricted by the user's physical location, use in the office or on the road with ease
- Consistent usability across the entire video network reduces learning curve and increases productivity
- Cost-effective way to video-enable the entire workforce on one network with a one-time fee

Software and hardware specifications

Protocols used

- · SIP
- · H.323
- · LDAP/H.350
- XMPP
- · HTTPS/XML Provisioning
- AES-Media encryption
- Polycom LPR™
- · H.323 Content, H.239 dual stream
- · SIP Content, BFCP
- H. 224/H.281 far-end camera control
- · H. 225, H.245, H.241
- H.460 NAT/firewall traversal
- · H.235 security
- DNS
- NTLMv1, NTLMv2

Windows OS requirements

- Supported Microsoft PC Operating Systems:
- · Windows XP with Service Pack 2 or later
- Windows XP Professional—32 bit
- Windows XP Home Edition-32 bit
- Windows XP Tablet PC Edition-32 bit
- Windows Vista® with Service Pack 1 or later–32 bit, 64 bit
- Windows Vista Ultimate, Enterprise, Business
- Windows Vista Home Premium, Basic
- Windows 7–32 bit, 64 bit
- Windows 7 Ultimate, Enterprise, Professional
- Windows 7 Home Premium, Basic
- DirectX 9.0b-10.0 compatible adapter.
- Note: Only the English version of Windows OS is supported.
- Adobe® AIR® 2.0 or above

Windows PC requirements

- Audio only: Intel® Atom™ CPU
- Basic (up to QVGA): Intel Core™ 2 Duo 2 CPUs 1.6 GHz
- Premium (up to VGA, Polycom People+Content™technology): Intel Core 2 Duo 2.0 GHz, Intel Core i3 2 CPUs 1.6 GHz, Intel Core i5 2 CPUs 1.6 GHz or higher
- HD Receive (up to 720p): Core 2 Duo 2 CPUs 1.6 GHz or higher (up to 15fps), Core 2 Duo 2.0 GHz or higher (up to 30fps), Core i5 4 CPUs 2.0 GHz or higher (up to 30 fps)



- HD Transmit (up to 720p): Core i3 4 CPUs 1.8 GHz or higher (up to 15 fps), Core i3 2 CPUs 2.5 GHz or higher (up to 15 fps), Core i5 4 CPUs 2.0 GHz or higher (up to 30 fps)
- · RAM: 2GB
- · Storage: 200MB
- 256MB video RAM recommended for Windows Vista, Windows 7
- Display: XGA, 16-bit color or higher
- Note: SSE2 processor extensions are required for all processor types.

Mac OS requirements

- Supported Operating Systems:
- Mac OS X 10.6 Snow Leopard
- Mac OS X 10.7 Lion
- Models: Systems with x86 processor (with the exception of MacBook Air®, unless CPU load is low and ambient temperature is cool)
- · Adobe AIR 2.0 or above

Mac PC requirements

- Basic (up to QVGA): Intel Core 2 Duo 2 CPUs 1.6 GHz
- Premium (up to VGA, People + Content): Intel Core 2 Duo 2.0 GHz, Intel Core i3 2 CPUs 1.6 GHz, Intel Core i5 2 CPUs 1.6 GHz or higher
- HD Receive (up to 720p): Core 2 Duo 2 CPUs 1.6 GHz or higher(up to 15fps), Core 2 Duo 2.0 GHz or higher (up to 30fps), Core i5 4 CPUs 2.0 GHz or higher (up to 30fps)
- HD Transmit (up to 720p): Core i3 4 CPUs
 1.8 GHz or higher (up to 15fps), Core I 3 2
 CPUs 2.5 GHz or higher (up to 15fps), Core i5 4 CPUs 2.0 GHz or higher (up to 30 fps)

- · RAM: 2GB
- · Storage: 200MB
- 256 MB video RAM
- · Display: XGA, 16-bit color or higher
- Results based on test scenarios; actual performance may vary based on software or hardware configurations. The processor types and speeds listed are for reference guides. Polycom CMA Desktop software will have equivalent capabilities on other processors with equivalent performance.

Video standards & protocols

- H.261, H.263, H.263+, H.264, H.239
- Multiple Monitor Support (must be supported by video card)
- Picture-In-Picture (PIP)
- Video-only mode with tool bar operation
- Brightness control-automatic or manual adjustment (provided by USB camera)

Audio standards & protocols

- 20 kHz with G.719
- 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.729A to G.729a
- Full duplex audio
- · Echo cancellation
- Automatic gain control (AGC)
- Polycom Siren LPR technology
- Polycom Siren 14 at 24kbps, 32kbps and 48kbps

Network access

 Network 128 kbps and above (Cable, DSL, or LAN)

Supported USB cameras

- USB 2.0 Web Cameras: Microsoft LifeCam HD-5000, HD-6000, HD-7000, LifeCam Cinema®, LifeCam Studio.
 Logitech® C100, C210, C270, C310, C160, C600 and C905, Logitech Webcam Pro 9000, Logitech QuickCam® Vision Pro for Mac®
- Integrated Cameras: iSight® built-in camera, Lenovo® integrated Webcam

Supported audio devices

- Logitech USB Headset H330, H530, Logitech PC Headset 860, Philips 3.5mm SHM7110U Headset, Logitech ClearChat™ Comfort, Logitech PC Headset 860, Logitech PC Headset 960, Somic Headset DT-893.
- Integrated Microphones; Lenovo integrated webcam. Built-in microphone on MacBook®, MacBook Air, MacBook Pro, iMac®, and Apple Cinema Display® (LED). Logitech QuickCam Vision Pro and Logitech 2MP Webcam C600
- Polycom has fully qualified the Audio devices listed above for interoperation with the CMA Desktop video client on both Windows and Mac OS. Other devices may also work with CMA Desktop.

General

- · Client-supported languages: English
- USB input device selection capability from in-call window

Languages

 Simplified Chinese, Traditional Chinese, English, French, German, Japanese, Korean, Russian, and International Spanish.



About Polycom

Polycom is the global leader in standards-based unified communications (UC) solutions for telepresence, video, and voice powered by the Polycom® RealPresence® Platform. The RealPresence Platform interoperates with the broadest range of business, mobile, and social applications and devices. More than 400,000 organizations trust Polycom solutions to collaborate and meet face-to-face from any location for more productive and effective engagement with colleagues, partners, customers, specialists, and prospects. Polycom, together with its broad partner ecosystem, provides customers with the best TCO, scalability, and security for video collaboration, whether on-premises, hosted, or cloud-delivered. Visit www.polycom.com or connect with Polycom on Twitter, Facebook, and LinkedIn.

Polycom, Inc. 1.800.POLYCOM www.polycom.com





Polycom® Telepresence m100

The #1 standalone, standards-based, business-class desktop video app in the world

Mobile and desktop users can now experience the freedom of HD-quality visual communications from anywhere. Unlike competitive systems, the Polycom® Telepresence m100 solution utilizes industry standard protocols, allowing seamless connection to the millions of room and immersive telepresence systems in use today worldwide. Users can enjoy person-to-person calling or even one-to-many through a video bridge. Within minutes, the simple software can be downloaded and installed. Users can search for contacts, friends, and colleagues in their directory and simply click-to-call.

Telepresence m100 solution is perfect for small and medium businesses that need a cost-effective way to add to their communication tools. The intuitive interface lets users search directories for colleagues or friends and click a name to call, discuss projects and share virtually anything from their desktop to remote participants and teams.

Larger organizations will use the software to conduct efficient talent interviews and build vendor relationships. The software also gives remote users the ability to simply download the software-based video client to stay connected to these large organizations without providing expensive transportation. Remote users can stay connected to large organizations without expensive and reoccurring travel or less than adequate communication devices. Vendors and contractors are no longer required to be onsite, saving company office space requirements. This flexible and secure software offers a powerful, low-risk and standards-based way to build relationships.

For users of group conferencing systems, the premium performance and advanced features of the Polycom Telepresence m100 solution will perfectly integrate and complement larger room systems while maximizing end-to-end conferencing and collaboration quality.

The Telepresence m100 solution offers a number of innovative features, including Polycom Constant Clarity™ technology. Even when Internet connections are less than optimal, Constant Clarity technology protects visual communications with the same technology used in premium-grade immersive telepresence solutions.

In today's Internet-driven world, the ability to conduct real-time communication and collaboration is critical to an organization's survival. As the market leader in unified collaboration, our award-winning conference technology makes it easy for people to interact and maximize productivity with high-quality voice, video and content sharing—over any network, anywhere around the globe. That's why more organizations worldwide use and prefer Polycom conferencing solutions. To meet the needs of a large deployment above 100 users, consider the Polycom CMA® Desktop enterprise solution.



- Premier-quality audio, video, and content – Crisp high resolution video with H.264 High Profile technology, high fidelity 14 kHz audio, and HD content sharing
- Simple and easy to use Along with an easy-to-use interface similar to your favorite chat program, click-to-call features and organization directory offer more benefits without extra complications
- Mobility Always on, always connected. Stay in touch with colleagues and customers from the office, home, or while traveling
- Superior innovation Polycom Constant Clarity™ technology produces high-quality audio and video over less than optimal Internet connections
- High return on investment Works with existing hardware and software solutions from other Polycom Telepresence m100 users to room systems using H. 323 and SIP
- Low total cost of ownership —
 User-friendly download requires
 little to no IT staff support to install
 or maintain. Using standard USB
 cameras that are often already in
 place is also cost effective

Product Specifications

Protocols used

- · H.323
- SIP
- · SIP Content BFCP
- H.323 Content H.239
- LDAP/H.350
- · AES-Media encryption
- · H.460 Firewall Traversal

Audio

- · 20KHz with G.719
- · 14kHz with Polycom Siren 14
- 7kHz with G.722, G.722.1
- 3.4kHz with G.711, G.728
- Full Duplex Audio
- · Echo Cancellation
- · Automatic Gain Control (AGC)
- Automatic Noise Suppression (ANS)
- · Voice over IP (VoIP)

Video

- · H.261, H.263, H.263+, H.264
- Multiple Monitor Support must be supported by PC video card
- · Picture-In-Picture (PIP)

People Video Resolution

- · HD
- VGA (640x480) High resolution webcam
- Half-VGA (320x480)
- CIF (352 x 288 pixels)
- SIF (352 x 240 pixels)
- QCIF (176 x 144 pixels)
- QVGA (160 x 120 pixels) Native Web camera resolution
- · 720p receive only

Content Video Resolution

- Show PC desktop as Content:
 - Capture Native resolution of computer desktop
 - Transmit and Receive XGA (1024 x 768)
- 4CIF (704 x 576 pixels)
- CIF (352 x 288 pixels)

Data

- H.323 Annex Q far-end camera control
- Security
- · H.235 v3 AES encryption
- Admin lock-down of configuration pages
- · Cameras Supported



- USB 2.0 Web Cameras: Microsoft®
 HD-5000, Microsoft LifeCam Cinema™,
 LifeCam HD-6000, Logitech C100,
 Logitech® C210, Logitech C310,
 Logitech Webcam Pro 9000, Logitech
 Webcam C905
- Polycom has fully qualified the USB devices listed above for interoperation with Telepresence m100 software.
 Other USB devices may also work with Telepresence m100 software
- Directory Services
- Supports Polycom Global Address Book
- · Support for Active Directory
- LDAP through Polycom Global Address Book
- Supports Local Address Book
 - Contact List
 - Most Recently Called List
- · Dialing Capabilities
- DNS alias
- E.164 extension
- IP address
- H.323 external gatekeeper, gateway, and MCU support
- SIP URI

Quality of Service (QoS) and experience – Polycom Constant Clarity™ technology

- Error concealment for optimal experiences even over the public internet
- Network Address Translation (NAT) support

- Automatic gatekeeper discovery
- Configurable fixed port ranges
- Lip synchronization
- · Asymmetric call speed

PC Hardware Requirements

- Basic (up to QVGA):1.5 GHz P4, 1.2 GHz Pentium M/AMD Turion or higher
- Standard (up to CIF, People+Content):
 2.0 GHz P4, Pentium M/AMD
 Turion 1.4 GHz
- Premium (up to VGA, People+Content):
 3.2 GHz Pentium, Pentium M/AMD
 Turion 2.0 GHz
- HD (up to 720p): Quad Core Duo 2.0 GHz
- RAM: XP 1GB, Vista 2GB
- Windows XP, Windows Vista, and Windows 7
- Storage: 30MB
- 256 MB video RAM recommended for Vista
- · Display: XGA, 16-bit color or higher

Operating Systems

 Windows 2000, XP, Windows Vista®, Windows 7

Language Support

English



About Polycom

Polycom is the global leader in standards-based unified communications (UC) solutions for telepresence, video, and voice powered by the Polycom® RealPresence® Platform. The RealPresence Platform interoperates with the broadest range of business, mobile, and social applications and devices. More than 400,000 organizations trust Polycom solutions to collaborate and meet face-to-face from any location for more productive and effective engagement with colleagues, partners, customers, specialists, and prospects. Polycom, together with its broad partner ecosystem, provides customers with the best TCO, scalability, and security for video collaboration, whether on-premises, hosted, or cloud-delivered. Visit www.polycom.com or connect with Polycom on Twitter, Facebook, and LinkedIn.

Polycom, Inc. 1.800.POLYCOM www.polycom.com





Polycom® HDX® 4000 Series

Turn your personal workspace into a global meeting environment

Performance-engineered to deliver life-like collaboration, the Polycom® HDX® 4000 solution combines extraordinary visual and audio capabilities with practical everyday functionality for bringing video to desktops and personal meeting environments.

The HDX 4000 series leverages the H.264 High Profile video compression standard to use up to half the bandwidth of alternative telepresence solutions, making it ideal for offices within enterprises as well as remote sites, branch offices, and teleworking environments. In addition, the exclusive Polycom Lost Packet Recovery™ quality of service technology helps ensure sustained high-quality interactions, even over congested networks.

Personal communication like you've never experienced

The Polycom HDX 4000 solution combines a series of unique innovations to deliver powerful rich-media communication. Built to high-definition-television (HDTV) industry standards, the HDX 4000 LCD display provides vibrant colors and smooth movement control. Using Polycom HD Voice™ technology and dual, built-in microphones, users are able to hear remote participants in full stereo, while advanced four-way speakers deliver astonishingly life-like audio. As a result, interactions with colleagues and partners, across campus or around the globe, are more natural than ever.

Polycom HDX 4000 series systems offer great flexibility for group video conferencing, with an optional embedded multipoint feature that allows multiple locations to be brought into conferences quickly and easily. Polycom HDX 4000 series systems also include powerful tools for content sharing, with presentations, graphics, spreadsheets and multimedia files incorporated into visual communication to facilitate better collaboration.

Additionally, with Polycom People On Content™ embedded chroma key technology, the user's image can be inserted into the foreground of the content and appear to be part of the presentation. With a modern, streamlined design, the HDX 4000 series combines professional-level visual communication with full PC and Mac monitor functionality.



HDX 4500



HDX 4002

- Natural communication experiences – HD video up to 1920x1080 30 fps
- Clear understanding of all participants – High-definition voice and Polycom Siren™ 22 technology deliver high-fidelity stereo sound
- Improved information sharing Sharing graphics, presentations, and rich-media content across HD and non-HD systems
- Life-like interactions Two HD display options (24" for HDX 4500, 20.1" for HDX 4002) deliver ultrarealistic, face-to-face communication

Package includes

- Polycom HDX 4500
 - Polycom People+Content[™],
 People+Content IP[™], People on Content[™],
 control pad and cables
- Polycom HDX 4002
 - People+Content™, People+Content IP™,
 People on Content™ and cables

Video standards & protocols

- H.264, H.264 High Profile IP, H.263++, H.261
- H.239/Polycom People+Content
- H.263 & H.264 Video Error Concealment

People video resolution

- 1080p 30 fps from 1024 Kbps (HDX 4500)
- 720p, 60 fps from 832 Kbps (HDX 4500)
- 720p, 30 fps from 512 Kbps
- 4SIF/4CIF, 30 fps from 128 Kbps
- 4SIF/4CIF, 60 fps from 512 Kbps
- SIF (352 x 240), CIF (352 x 288)
- QSIF (176 x 120), QCIF (176 x 144)

Supported PC input resolutions

1920 x 1080, 1680 x1050, 1280 x 1024, 1280 x 720, 1024 x 768, 800 x 600

Display-HDX 4500

- · 24" Widescreen LCD display
- 1920 x 1080 native resolution
- · 16:9 aspect ratio
- 2nd monitor output (DVI)
 - Supports up to 1080p display

Display-HDX 4002

- 20.1" Widescreen LCD display
- 1680 x 1050 Native resolution
- 16:9 Aspect ratio

Camera

- 1920x1080 video capture resolution (HDX 4500)
- 1280 x 720 video capture resolution (HDX 4002)
- · 2X digital zoom
- · EPTZ camera control
- · Privacy shutter

Speakers

- Frequency range: 100 Hz–20 kHz
- Four built-in speakers (HDX 4002)
- Two built-in speakers (HDX 4500)
- · Headset input for privacy

Audio standards and protocols

- · Polycom StereoSurround
- 22 kHz bandwidth with Polycom Siren™ 22
- 14 kHz bandwidth with Polycom Siren 14
- · Annex C
- 7 kHz bandwidth with G.722, G.722.1
- 3.4 kHz bandwidth with G.711, G.728, G.729A
- Automatic Gain Control

Polycom Constant Clarity™

- · Automatic gain control
- Automatic noise suppression
- · Keyboard noise reduction
- · Live music mode
- · Instant adaptation echo cancellation
- · Audio error concealment
- Siren™ LPR

Other 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 dual stream
- H.231 in multipoint calls
- · H.243 chair control
- · H.460 NAT/firewall traversal
- BONDING, Mode 1
- BFCP (RFC 4562)
- TIF

User interface

- · Directory services
- System management
 - Polycom Converged Management Application™ (CMA®)
 - Web-based UI
 - SNMP
- CDR
- International languages (16)
- Wildcard language tool
- USB software update

Network

- Interfaces—2-port 10/100 auto NIC switch, RJ45 connectors
 - Auto-MDIX
- RJ11 analog phone connector (HDX 4002)
- H.323 and/or SIP up to 4 Mbps
- RS232
- Data pass-through
- Closed caption
- H.320 (optional) (HDX 4002 only)
- Polycom Lost Packet Recovery[™] (LPR[™])
- Reconfigurable MTU size (IP only)
- Microsoft® ICE support

- Microsoft® Lync™ support
- Microsoft® Office Communications Server integration

Security

- · Secure Web
- · Security mode
- AES FIPS 197, H.235V3 and H.233/234
- FIPS 140-2 Validation Certificate (#918)
- IPv6 (DISA)
- www.polycom.com/govcerts
- Secure password authentication

Options

- MPPlus internal multipoint software for up to 4 sites
- Polycom Touch Control (HDX 4500 only)
- Polycom HDX 4500 Remote Control
- RTV/CCCP
- TIP

Environmental Specification

- Operating temperature: 0—40°C
- Operating humidity: 10—80%
- Non-operating temperature: -40°—70°C
- Non-operating humidity (non-condensing): 10—90%
- Maximum altitude: 10,000 feet

Electrical

- Auto sensing power supply
- Typical operating voltage/power
 - 189VA @ 115V @ 60 Hz @ .67 PF
 - 192VA @ 230V @ 60 Hz @ .66 PF
 - 196VA @ 230V @ 50 Hz @ .65 PF

Physical Characteristics

- HDX 4500
 - 20.5" (H) x 29.13" (W) x 8.22" (D)
- HDX 4002 LCD with stand:
- Display: 20.1" (H) x 21.9" (W) x 9.3" (D)
- Base Box with removable stand:
- 13.87" (H) x 5.08" (W) x 11" (D)

Warranty

One-year return to factory parts and labor



About Polycom

Polycom is the global leader in standards-based unified communications (UC) solutions for telepresence, video, and voice powered by the Polycom® RealPresence® Platform. The RealPresence Platform interoperates with the broadest range of business, mobile, and social applications and devices. More than 400,000 organizations trust Polycom solutions to collaborate and meet face-to-face from any location for more productive and effective engagement with colleagues, partners, customers, specialists, and prospects. Polycom, together with its broad partner ecosystem, provides customers with the best TCO, scalability, and security for video collaboration, whether on-premises, hosted, or cloud-delivered. Visit www.polycom.com or connect with Polycom on Twitter, Facebook, and LinkedIn.

Polycom, Inc. 1.800.POLYCOM www.polycom.com





Polycom® RealPresence® Mobile for Android™

Expand the reach of your video network to the mobile user, and interact face-to-face with your colleagues and customers from wherever you are

Polycom® RealPresence® Mobile software is a mobile application client software with "meeting-on-the-go" ability. Not just with voice, but also with full, standards-based video that provides an engaging, face-to-face experience. Now you have access to video collaboration on your Android powered smartphone or tablet, wherever you are. Meet face-to-face with colleagues or customers and even collaborate on content right from your mobile device.

Imagine this scenario: You access your email one moment, and take a video call from Germany at the start of the hour. After the call you take a quick coffee break where you see the latest sports scores. While waiting for a meeting, you look at updates to the floor plans of your new office. Before lunch, you call in to a video meeting with your team members who are on various unified communications (UC) devices and conference rooms spread around the country. For your lunch break, you go to the dentist. In the waiting room, you sit back and listen in real time to the quarterly business review. All this is handled on your favorite UC device: your device, now empowered with a standards-based video application, Polycom® RealPresence® Mobile.

Business users require their mobile video collaboration to be reliable, high-quality, and secure and to resemble the experience they are used to in the conference room. Polycom's patented technologies, Constant Clarity™, and strict compliance to industry standards means that a mobile video call can be completed from whatever wireless networks are available. Unlike competitive apps that struggle to connect in bandwidth-challenged areas, RealPresence Mobile software ensures call quality with no user interaction required.

As a standards-based application, the RealPresence Mobile solution seamlessly connects to the more than two million video conferencing systems deployed throughout the world. When combined with the Polycom® RealPresence® Platform solutions, you make multiparty calls easily, fully participate securely in the discussion, and even see content being shown in the meeting. Download the free app on your Android smartphone or tablet, and easily link to a video-enabled network of business devices anywhere.





- Ease-of-use Connect immediately with colleagues across the enterprise with a simple touch
- Premier quality See every expression, hear every nuance of the conversation and convey your message with impact
- Mobility Stay connected whether in the office or on the road
- Confidence Trust that your mobile video communications will always connect, even in bandwidth-challenged locations
- Flexibility Beyond simple email and entertainment, leverage your personal mobile device for greater business use with video collaboration
- Scale Expand your videoenabled network through centralized deployment, management and monitoring

Polycom RealPresence Mobile for Android Specifications

Devices

- · ASUS Transformer Tab (TF300)
- HTC One X, One S, Jetstream
- Motorola XOOM™
- DROID XYBOARD 10.1 by Motorola
- Samsung Galaxy Tab™ (8.9", 10.1")
- Samsung Galaxy Tab 2 (7", 10.1")
- · Samsung Galaxy Note, SII, SIII

Operating Systems

- · Tablets
 - Android 3.1 and above
- Smartphones
 - Android 4.0 and above

User Interface

- · Gesture-based multi-touch interface
- · On-screen virtual keyboard
- · Dual Camera switching
- DTMF
- · Call Statistics
- · Video and Audio Mute
- · Self View
- Volume control
- · Recent Calls List
- · Contact List

Audio

- Encode
 - G.711u/A, G.722.1C
- Decode
 - G.711u/A, G.722.1C
- · Automatic Gain Control (AGC)
- Automatic Echo Cancellation (AEC)
- Polycom Siren™ LPR
- · Full duplex
- DTMF

Video (Motorola ZOOM, Samsung Galaxy Tab 10.1) Tegra 2 Based

- H.264
- Point-to-point calling
- Encode

- Up to HD/720p/30 fps (rear camera), up to VGA/15 fps (front camera)
- Decode
- Up to HD/720p/30 fps
- Camera selection
- · Privacy mode
- Error resiliency

Video (All other supported devices)

- · H.264
- · Point-to-point calling
- Encode
 - Up to QVGA/15 fps
- Decode
 - Up to 480 x 352/30 fps
- Camera select
- · Privacy mode
- · Error resiliency

Content (Motorola XOOM, Samsung Galaxy Tab 2) Tegra 2 based

- H.263 (non-nVidia Tegra 2 based tablet or phone)
- H.264
 - Receive up to 720p/5 fps

Content (All other supported devices)

- H.263+
- · H.264
- Receive up to 720p/5 fpss

Networks

- WiFi: 802.11 a/b/g/n
- 3G/4G

Error Resiliency

 Polycom® Siren™ Lost Packet Recovery audio technology

Peripheral Devices

- 3.5 mm headset
- Stereo Bluetooth® headset

Supported Languages

• English

Other Standard Protocols

- Signaling
 - H.323
 - SIP
- · H.460 Firewall Traversal

Professional Features

- Available through the Polycom®
 Converged Management Application™
 (CMA®) 4000/5000 and Polycom
 RealPresence® Resource Manager
- · Microsoft® Active Directory®
- Single Sign-on through Active Directory credential check
- Simplified dialing by extension
- H.235v3 Media Streams
- · H.239 Content Recieve
- BFCP Content Receive
- AES Media Encryption
- Centralized Provisioning

*Professional features are available when supported tablets are connected to the Polycom® Converged Management Application™ (CMA®) 4000/5000 and Polycom RealPresence® Resource Manager









About Polycom

Polycom is the global leader in open standards-based unified communications (UC) solutions for voice and video collaboration, trusted by more than 415,000 customers around the world. Polycom solutions are powered by the Polycom® RealPresence® Platform, comprehensive software infrastructure and rich APIs that interoperate with the broadest set of communication, business, mobile and cloud applications and devices to deliver secure face-to-face video collaboration in any environment. Polycom and its ecosystem of over 7,000 partners provide truly unified communications solutions that deliver the best user experience, highest multi-vendor interoperability, and lowest TCO. Visit www.polycom.com or connect with us on Twitter, Facebook, and LinkedIn to learn how we're pushing the greatness of human collaboration forward.

Polycom, Inc. 1.800.POLYCOM www.polycom.com





Polycom® RealPresence® Mobile for Apple® iOS

Expand the reach of your video network to the mobile user, and interact face-to-face with your colleagues and customers from wherever you are.

Polycom® RealPresence® Mobile software is a mobile application client software with "meeting-on-the-go" ability. Not just with voice, but also with full, standards-based video that provides an engaging, face-to-face experience. Now you have access to video collaboration on your iPad or iPhone, wherever you are. Meet face-to-face with colleagues or customers and even collaborate on content right from your mobile device. Experience breakthrough control of room system experiences right from your personal iPad with innovative Polycom® SmartPairing.

Imagine this scenario: You are walking towards a conference room to start a video conference. On the way, you receive an urgent incoming video call from your director of operations in Germany on your iPad. It seems that there is a problem on the manufacturing line that needs your immediate attention. While on the call, you need to review and share latest design specifications with other stakeholders. The visual collaboration session is still going when you reach the conference room. You use Polycom's industry-first SmartPairing™ technology to easily transfer the mobile video call to the videoconferencing unit in the conference room. Once transferred, your iPad becomes a wireless controller for your room system.

Business users require their mobile video collaboration to be reliable, high-quality, and secure and to resemble the experience they are used to in the conference room. Polycom's patented technologies, Constant Clarity™, and strict compliance to industry standards means that a mobile video call can be completed from whatever wireless networks are available. Unlike competitive apps that struggle to connect in bandwidth-challenged areas, RealPresence Mobile software ensures call quality with no user interaction required.

As a standards-based application, the RealPresence Mobile solution seamlessly connects to the more than two million video conferencing systems deployed throughout the world. When combined with the Polycom® RealPresence® Platform solutions, you make multiparty calls easily, fully participate securely in the discussion, and even see content being shown in the meeting. Download the free app on your iPad® or iPhone®, and easily link to a video-enabled network of business devices anywhere.





- Ease-of-use Connect immediately with colleagues across the enterprise with a simple touch
- Premier quality See every expression, hear every nuance of the conversation and convey your message with impact
- Mobility Stay connected whether in the office or on the road
- Confidence Trust that your mobile video communications will always connect, even in bandwidth-challenged locations
- Flexibility Control the conference room system right from your personal Pad with the industry-first SmartPairing
- Scale Expand your videoenabled network through centralized deployment, management and monitoring

Supported Hardware

- iPad
- · The new iPad
- · iPhone 4S
 - 16-64GB
 - WiFi

Supported Software

- · iPad iOS 4.3.2 or later
- · iPhone 4S iOS 5.1 or later

User Interface

- Polycom SmartPairing™ (iPad)
- Gesture-based multi-touch interface
- On-screen virtual keyboard
- Dual Camera switching
- DTMF
- · Video and Audio Mute
- · Self View
- Volume control
- · Recent Calls List
- Contact List

Audio

- Encode
 - G.711u/A, G.722.1C
- Decode
 - G.711u/A, G.722.1C
- · Automatic Gain Control (AGC)
- Automatic Echo Cancellation (AEC)
- Polycom Siren™ LPR
- Full duplex
- DTMF

Video

- H.264, H.264 SVC
- Encode
 - Up to 480 x 352/15 fps
- Decode
 - Up to 480 x 352/30 fps
- · Camera selection
- Privacy mode
- Error resiliency



Content

- · H.263+, H.264
- Encode
- Up to 720p/4 fps (.pdf on iPad)
- Decode
 - Up to 720p/5 fps

Networks

- WiFi: 802.11 a/b/g/n
- 3G/4G

Peripheral Devices

- 3.5 mm headset
- · Stereo Bluetooth® headset

Professional Features

- Available through the Polycom®
 Converged Management Application™
 (CMA®) 4000/5000 and Polycom
 RealPresence® Resource Manager
- Microsoft® Active Directory® through Polycom® CMA® 4000/5000 software or Polycom® RealPresence® Resource Manager
- Single Sign-on through Active Directory credential check
- · Simplified dialing by extension
- H.235v3 Media Streams

- AES Media Encryption
- H.239 Content Receive
- · BFCP Content Receive
- FECC, Far End Camera Control (iPad)
- · Centralized Provisioning
- Supported Languages: French, German, Simplified Chinese, Traditional Chinese, Japanese, Korean, Russian, English, and Spanish

Other Standard Protocols

- · Signaling
 - H.323, SIP
- H.460, Firewall Traversal

*Professional features are available when connected to the Polycom® Converged Management Application™ (CMA®) 4000/5000 or Polycom RealPresence® Resource Manager









About Polycom

Polycom is the global leader in open standards-based unified communications (UC) solutions for voice and video collaboration, trusted by more than 415,000 customers around the world. Polycom solutions are powered by the Polycom® RealPresence® Platform, comprehensive software infrastructure and rich APIs that interoperate with the broadest set of communication, business, mobile and cloud applications and devices to deliver secure face-to-face video collaboration in any environment. Polycom and its ecosystem of over 7,000 partners provide truly unified communications solutions that deliver the best user experience, highest multi-vendor interoperability, and lowest TCO. Visit www.polycom.com or connect with us on Twitter, Facebook, and LinkedIn to learn how we're pushing the greatness of human collaboration forward.

Polycom, Inc. 1.800.POLYCOM www.polycom.com Polycom Asia Pacific Pte Ltd +65 6389 9200 www.polycom.asia Polycom EMEA +44 (0)1753 723282 www.polycom.co.uk





A Detailed Guide of Polycom Video, Voice, and Infrastructure Products and Solutions

Polycom® Telepresence Solutions

Polycom® RealPresence® Immersive Solutions



Polycom® RPX™ Solutions

Fully immersive solution delivering a 100% controlled, life-like experience.

- · Realize low Total Cost of Ownership (TCO) with H.264 High Profile for lower bandwidth requirements
- Fits any group or class size with seating capacity from 4-28 people
- Full screen, cinematic view supporting 2 to 4 screens
- Superior realism delivered with high definition video and audio
- HD video, audio and flexible HD content sharing
- Purpose built for executive and boardroom meetings, corporate trainings and higher education
- · Investment protection is ensured as a standards-based, interoperable solution, including TIP support



Polycom® OTX™ Solutions

Immersive Telepresence solution combining high performance with unique design elements for small groups.

- Realize low TCO with H.264 High Profile for lower bandwidth requirements
- Seats up to 4 (OTX 100) or 6 (OTX 300) on video, with flexibility for both telepresence and conventional in-person meetings
- Up to three 65-inch LCD displays create the illusion of sitting across the table from distant colleagues
- Easy to use simple and consistent touch-screen user interface across all locations
- Auto-elevating 21.5-inch widescreen content displays (OTX 300 and OTX 100 Standard)
- Optional Complete Experience Kit includes rear wall and lighting package
- · Investment protection is ensured as a standards-based, interoperable solution, including TIP support



Polycom® ATX™ Solutions

Customized Immersive Telepresence designed for integrators to create unique telepresence solutions.

- · Powerful solutions for developing and deploying customized multi-codec, telepresence meeting rooms
- Flexible design options for nearly any customer requirement allow integrators to wrap telepresence technology with furniture, components, décor and services
- Lower total cost of ownership through the use of the H.264 High Profile video compression standard for reduced bandwidth requirements of up to 50%; opens telepresence to more customers
- Standards-based interoperability and native integration with leading UC solutions support a wide range of deployments environments, including TIP support

Polycom RealPresence Room Solutions



Polycom® RealPresence® Group (300, 500, 700) Series

Next-generation HD video, voice, and content sharing capabilities for conference rooms, classrooms, and meeting spaces across the enterprise.

- Breakthrough simple user interface speeds video adoption and lowers IT support costs
- Multiple control options, including Polycom SmartPairing™ technology so your employees can start collaborating instantly with their iPad
- · 1080p60 video and content collaboration heightens realism and boosts meting productivity
- Interoperable SVC delivers a great experience even on bandwidth-limited networks
- Lowest total cost of ownership, with up to 50% bandwidth savings via H.264 High Profile
- Enable more people to join calls without requiring a separate bridge with up to 8-way multipoint
- · High-performance architecture meets your most demanding needs today and into the future



Polycom® HDX® 6000, 7000, and 8000 Series

Advanced solutions bring HD video, voice, and content sharing capabilities to conference rooms, classrooms, and meeting spaces across the enterprise.

- · Fully standards-compliant, compatible with the over 2 million video systems deployed
- High definition video quality, up to 1080p
- · Bandwidth efficient, using up to 50% less bandwidth than competitive solutions with H.264 High Profile
- Multiple ways to share HD content to fit the needs of any participant
- Legendary HD audio quality, including conversational Polycom StereoSurround™ technology



Polycom® EagleEye Director Solution

This camera tracking solution provides 'studio production' performance for enhanced interaction and productivity.

- Transforms a standard conference or class room into an immersive experience where every participant is seen clearly, even in a room of 20+ people
- Broadcast-quality camera locating highlights, zooms in, and frames active speakers in optimal proportion
- · Voice triangulation moves to the speaker's voice, whether standing or sitting
- Face-finding technology looks for speaker's face so errant noises are not a distraction
- Easily installed and configured with any Polycom HDX room telepresence system



Polycom® UC Board™

Innovative, first of its kind, solution for dynamic whiteboard collaboration over telepresence.

- · Users find using the electronic stylus of the UC Board simple and natural with nothing to "turn-on"
- · Comprehension is improved when all participants see the whiteboard as clearly as those sitting in the room
- Installation costs are minimal use existing room infrastructure from whiteboards to LCD monitors
- · Usability of telepresence increases, reducing costs in other areas and helping to achieve a fast ROI
- · Increase productivity by having import capability of slides and export of all annotations to a USB drive



Polycom® Touch Control Interface

Place control of your telepresence and audio conferences right at your fingertips.

- Touch screen solution simplifies the telepresence experience
- Sleek, inviting 7-inch, high resolution screen in full color
- Intuitive graphical user interface shows the user only the options that they need to see at any given time
- Option for all Polycom HDX room telepresence systems
- Standard interface for Polycom OTX™ and RPX™ immersive telepresence solutions
- Option to control Polycom SoundStructure® deployments

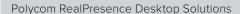


Polycom[®] Quality Definition Experience[™] (QDX[™]) 6000 Solution

The QDX system provides an optimal price-to-performance ratio for non-HD video applications.



- Affordability speeds your return on investment (ROI)
- Superb audio clarity with Polycom StereoSurround™ technology
- · Quality, performance, simplicity and affordability
- Improved collaboration with intuitive one-touch content sharing





Polycom® HDX® 4000 and 4500 Series

Polycom personal telepresence solutions are designed to bring high definition audio, video, and content to smaller spaces such as the executive desktop or small meeting room.



- Easily add a secondary display via DVI port on HDX 4500
- Fully standards-compliant, compatible with the over 2 million video systems deployed
- High definition video quality, up to 1080p
- Bandwidth efficient, using up to 50% less bandwidth than competitive solutions with H.264 High Profile
- Multiple ways to share HD content to fit the needs of any participant
- Legendary HD audio quality, including conversational Polycom StereoSurround™ technology
- Add up to 3 other participants to any call through a 4-way optional MCU





Polycom® RealPresence® Desktop for Windows®

RealPresence Desktop for Windows frees business professionals from the traditional boundaries of the conference room, allowing them to enjoy video collaboration from their personal computers from anywhere. Polycom's enterprise-class HD video software solution allows customers to pay-as-they-grow – start with a few software clients and grow up to 10,000 users. When connected to the RealPresence Resource Manager organizations can leverage app management, scalability, resiliency, security, multi-point and lifelike quality that users and IT managers demand.

- · Share the industry's highest-quality audio, video, and content though standards-based protocols
- · Quickly search existing corporate directories for ease-of-dialing
- · Select individual applications like spreadsheets, videos, presentations or share monitors all in HD quality
- Experience the value and benefit of SVC and AVC interoperability producing optimized quality even over limited bandwidth wireless networks



Polycom® Converged Management Application™ (CMA®) Desktop Software

A video conferencing application for knowledge workers, the CMA Desktop solution ensures HD enterprise-grade quality video and voice communication and standards-based content sharing. The CMA Desktop application is supported by Windows® and Mac® platforms. Supporting both H.323 and SIP call signaling, the CMA Desktop provides an excellent, cost effective solution for today's networks and tomorrows protocols.



Polycom® Telepresence m100

The perfect software video collaboration solution for the small business delivering standards-based, premium quality audio, video and content sharing.

- · Always on, always connected. Stay in touch with colleagues, customers from the office, home or while traveling
- Delivers standards-based, HD audio, video, and content
- · Easy to use Simple download and install wizard requires minimal technical knowledge
- Polycom Constant Clarity™ technology produces high-quality audio and video over less than optimal connections



Polycom® VVX® Business Media Phones

The Polycom VVX series is a family of business media phones that offer a combined high quality audio and video communications experience for busy professionals. These solutions rapidly integrate to a wide range of unified communications environments.



- Premium quality desktop voice and video solutions designed for organizations and businesses of all sizes and budgets
- Intuitive, expandable, business class phones designed for the multitasking needs and shifting schedules of busy managers and knowledge workers
- · Quick payback and lower travel expenses. Empower each employee for the cost of only one business trip
- $\bullet\,$ Ready to integrate into a wide range of unified communications environments.

Polycom RealPresence Mobile Solutions



Polycom® RealPresence® Mobile Software

You're mobile. You're remote. Sometimes you're in the office. Or working from home. Wherever you are, you need to collaborate face-to-face with colleagues, meet with customers, communicate with partners, patients, students, etc.



Polycom® RealPresence® Mobile instantly transforms your tablet or smartphone into a mobile videoconference system. Only Polycom combines the weblike ease-of-use of a self-service, one-touch software app with enterprise-grade security, reliability, scale and premier-quality.

- $\bullet\,$ Free yourself from the office and conference room with the ability to meet anywhere
- Stay connected with a single device for phone calls, video conferences, email, content sharing, calendars and more
- Enjoy the same rich features normally found exclusively in conference rooms simplified dialing, camera control, content sharing, multipoint and more
- Realize the lowest total cost of ownership benefits through extensive BYOD support
- Experience the value and benefit of SVC and AVC interoperability producing optimized quality even over limited bandwidth wireless networks

Polycom® RealPresence® Platform

Video Resource Management



Polycom RealPresence Resource Manager

Polycom RealPresence Resource Manager helps IT organizations reduce ongoing management and maintenance costs and optimize video performance, and includes a rich suite of APIs for customized integration into the video network. With hardened Linux operating system, multi-tenant partitioning, and scale to 10,000 managed mobile, desktop and group video devices, confidently deploy and manage your video network with Polycom RealPresence Resource Manager application.

- Scale to 10,000 devices to manage H.323, SIP, AVC and SVC supported endpoints, bridges and recording servers
- · Easy administration through comprehensive device monitoring, provisioning, management and software
- Directories and presence engines provide simplified dialing
- · API suite for direct integrations into your key applications and systems
- Multi-tenant support for cloud based hosting
- Scheduling options via Web GUI or APIs for a holistic application



Polycom® Converged Management Application™ (CMA®) 5000 and 4000 Solutions

The CMA solution manages and deploys video throughout the enterprise and allows organizations to fully videoenable personal workspaces, desktops, conference rooms, and mobile devices. Utilizing the built in Gatekeeper, makes the CMA 4000 a cost effective management solution for small to mid size businesses.



Management

- · Profile provisioning
- · Account management
- Software upgrades
- Centralized diagnostics
- Real-time conference monitoring
- Polycom RMX® portal

Gatekeeper

- Policy and BW management
- · Participant admission
- · Least cost routing
- Up to 5000 registered users
- Standards-based presence
- One-dial easy call solution

Scheduling

- Multiple scheduling options
- · For Web and Microsoft Outlook and IBM® Lotus® Notes® software

Directory

- LDAP/H.350 service
- · Microsoft AD support Global address book (GAB)

Virtualization Management

Polycom® Distributed Media Application™ (DMA™) 7000 Solution

Mission critical application for unifying conferencing and collaboration networks, ensuring business continuity and maximizing UC investments. Includes call control for SIP and H.323 devices (AVC and/or SVC).





- Unmatched Resiliency Super cluster (up to 5 DMA nodes) and geographic redundancy
- Only solution for Guaranteed class of service and experience (silver/gold/platinum)
- API Suite Increase end user productivity and lower administration cost via API for conference monitoring, provisioning users and VMRs, resource reporting and billing
- · Provide resource management, load balancing, scale and resiliency for up to 64 Collaboration Servers, Codian 4x00, MSE 8000 MCUs
- · Native UC integration with Microsoft, Juniper, IBM



Universal Video Collaboration

Polycom® RealPresence® Collaboration Servers (RMX®) 1500, 2000, 4000



Polycom universal conference platforms are real-time media conferencing platforms designed with intelligence builtin-including dynamic resource allocation, network flexibility and reliability, and cost-effective scalability, all tightly integrated with major UC partners—connecting the most people in the highest quality at the lowest cost.

- · Universal Bridging capabilities for seamless connectivity for multiple types of devices including H.323, SIP, ISDN, PSTN (phones & cell phones); support for both AVC and Polycom SVC solutions
- · Call at any data rate, any bandwidth with support for resolutions up to 1080p, fully transcoded
- Use up to 50% less bandwidth with High Profile standard support
- Supports point-to-point calls with integrated dial-through gateway capabilities (ISDN, SIP and H.323)
- · Supports advanced bridging capabilities for Polycom Immersive Telepresence Solutions
- · Legendary audio quality, supporting StereoSurround, Constant Clarity and Conversational Stereo
- Native integration with Siemens OpenScape, IBM® Sametime®, Microsoft® OCS & Lync™, Avaya Aura® solutions



Polycom® RealPresence® Collaboration Server 800s, Virtual Edition



- $\bullet \ \ \text{Universal bridging capabilities for H.323 and SIP endpoints as well as AVC and Polycom SVC solutions}$
- Supports up to HD resolution for both AVC and SVC
- Supports mixed AVC/SVC calls for extreme flexibility
- Optimized for Mobile and Desktop video collaboration
- Legendary audio quality, supporting StereoSurround, Constant Clarity and Conversational Stereo
- Use up to 50% less bandwidth with High Profile standard support

Firewall Traversal & Security

Polycom® RealPresence® Access Director™



RealPresence Access Director provides secure video collaboration from anywhere, supporting SIP and H.323 devices and both AVC and SVC protocols. Users can connect their devices and mobile clients simply and easily – reducing the cost to support the growing number of video-enabled workers in your organization without compromising network security.

- Single server application that combines the remote and B2B calling scenarios with SIP and H.323 capabilities enabling a seamless video collaboration experience within and beyond the firewall
- · Collaborate over video while on-the-go, in the office, or from home
- Support up to 1,000 simultaneous video calls securely without requiring additional client hardware or software
- · Leverage existing investments in UC products and IT infrastructure and build towards a SIP based future.
- · Easily, securely and reliably extend the use of video collaboration to your mobile workforce



Polycom[®] Video Border Proxy[™] (VBP[™]) E Series and ST Series

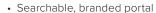
- Simplifies Inter and intra-company video communications
- Optimizes Video quality by prioritizing video traffic
- Resolves NAT/Firewall traversal problems for video and video
- Protects Video and voice devices with an application firewall VBP E Application Layer Gateway
- Multiple options and sizes to fit the need of any organization 1Mbps, 3Mbps, 10Mbps, 25Mbps, 85Mbps, or 200Mbps throughput

Video Content Management

Polycom® RealPresence® Media Manager



This powerful platform integrates with your existing IT system and network infrastructure to manage rich media by storing, cataloging, securing, and offering metadata search capability for your organization's presentations and assets.



- Viewer authentication and tracking
- Scalable live event Webcasting

- VOD pre-positioned
- Microsoft® SharePoint® and Lync™ integration

Polycom® RSS™ 4000 Solution



This network-based appliance records, archives, and streams telepresence and video conferences to desktops, mobile devices and conference rooms.

- Live and On-Demand H.264 streaming to Apple and Android devices.
- Stream to live audiences in up to HD 720p
- Automatically archive in HD 1080p

- Record directly from H.323 endpoints, Microsoft Lync clients, and MCUs
- Record up to 15 simultaneous conferences
- Full management and authentication with AD



Polycom® RealPresence® Broadcast Producer

This premier software enables you to produce live and on-demand interactive presentations for large audiences.

- Enterprise-class scalability
- Seamless Integration with existing systems
- Multi-publish points and optimized distribution
- Live audience tracking and interaction
- Multi-codec playback and multiple platform choices
- · Full-featured presentation editing



Polycom® RealPresence® Capture Station

This media creation appliance is an easy-to-use solution that can transform any room into a studio for webcasting presentations that contain streaming video and audio synchronized with rich-media content.

- · Live and on-demand Webcasting
- Multi-codec, platform and playback support
- Fully customizable interface and presentation editing
- Versatile input/output options
- Seamless integration with Polycom RealPresence Media Manager

Industry Solutions



Polycom® RealPresence® Practitioner Cart® 8000

Enables medical professionals to provide patients access to care regardless of time or distance constraints.

- Life-like experience with high Definition 720p 30/60 fps or 1080p video resolution
- · Maintain eye contact through easy height adjustment
- · Highly mobile, small footprint with enclosed technology compartment for security and spill protection
- Easy addition of medical peripheral devices and connection panel
- · AES encryption for HIPAA compliancy; power system UL 60601 compliant for use in patient care environments
- Platform support for customer IT needs (laptop/PC)
- · Provisioned for mobile operation with battery power

Installed Audio Solutions



Polycom® SoundStructure® Solution

Clear and immersive audio for more productive voice and video conferences.

- Easy installation and configuration, even for very large or complex systems
- · Enhances audio quality for video conferences with deep robust integration with Polycom HDX systems
- Highly scalable solution leveraging Polycom's exclusive OBAM architecture
- · Expand functionality and protect your investment with optional modular telephony interface cards
- · Multiple deployment options and maximum performance using flexible microphone, talker and loudspeaker placements with breakthrough feedback elimination

Mobile Communications



Polycom® SpectraLink® and KIRK® Wireless Phones

Allow on-site mobile employees to roam freely throughout the workplace while delivering continuously reliable and available voice and data communications. These solutions interoperate with a customer's existing Voice over IP (VoIP) or time-division multiplexing (TDM) call control system, providing business-grade telephone functionality to a wireless device. By combining customers' existing investments in wire line infrastructure and with the power of workplace mobility, businesses of all sizes realize enhanced worker productivity and deliver improved levels of service to their customers.

- Leverage existing infrastructure with the broadest PBX and WLAN interoperability
- Ensure clear communications with unsurpassed voice quality
- Protect your investments with industry's most durable handsets
- Streamline business processes with extensive application and strategic partnerships
- · Minimize down time with best-in-class service and support

Business Communications



Polycom® SoundStation® and VoiceStation® Conference Phones

Clear, productive calls from the industry standard for group voice conferencing in meeting rooms worldwide.



• Enjoy life-like audio conversations with HD Voice technology



- Engage everyone in the conference room with exceptional 360-degree microphone coverage and multiple coverage range options
- · One-stop-shop for all your conferencing needs featuring the industry's broadest portfolio with models designed for large rooms, standard conference rooms and private offices
- · Leverage your existing communication investments with highly flexible connection options supporting analog, VoIP and digital PBXs



Polycom® SoundPoint® IP Family

The SoundPoint IP family features the most comprehensive, best-sounding, and the most interoperable high-quality IP phone solutions for small and medium-sized businesses and enterprises.

- Unrivaled voice quality for the richest desktop audio experiences HD Voice
- · Comprehensive product portfolio from basic entry level models to fully-featured multi-line devices
- Reliable devices designed for use in all business environments
- · Leverage existing VoIP investment though interoperability with the industry's broadest array of SIP call platforms
- · Simple to operate and maintain with industry's most robust SIP software and refined provisioning system

Solutions for Microsoft

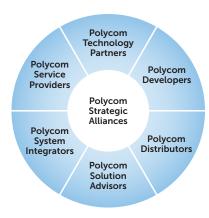
Solutions Purpose-Built for Microsoft



Polycom offers the most comprehensive portfolio of purpose-built voice and video collaboration solutions optimized for Microsoft Lync environments. These endpoints provide the most unified, intuitive, collaboration experience through enhanced Lync features including presence, plug-and-play ease of use and the most consistent UC experience from the desktop to conference room.

- Connect anytime, anywhere with the broadest portfolio of purpose-built devices optimized for use with Microsoft Lync
- Increase productivity and efficiency by combining all the features of Lync with Polycom's industry leading HD technology
- Maximize return on investment by leveraging your existing Microsoft Lync infrastructure servers, and gateways.
- Reduce total cost of ownership through native integration providing plug-and-play functionality for easy deployment

Polycom Partner Network™ Strategic Alliances



The Polycom Partner Network encompasses many types of partners, including strategic alliances with leading companies who make some of the most popular business apps, including Microsoft, IBM, and HP. Together, we ensure Polycom® solutions are interoperable with the industry's most popular business tools and most common UC environments.

Cisco Interoperability

Customers can confidently and seamlessly deploy Polycom voice and video solutions with Cisco Unified Communications Manager (CUCM) environments. With Polycom native support for TIP, Cisco TelePresence customers now have the freedom to seamlessly collaborate across standards-based teleprescence and video conferencing platforms and scale their network with standards-based Polycom solutions that deliver flexibility, investment protection and lower operating costs.













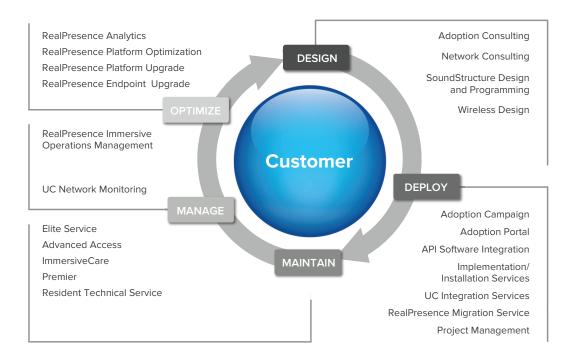


Polycom Global Services

Polycom Global Services help customers realize the full potential of their investment in Polycom, regardless of where they are in the solution lifecycle.

In the design phase, we help customers lay the groundwork for a successful deployment whether that means translating our broad portfolio into the solution that will work best for your business or evaluating the network on which the video collaboration solution will reside. Beyond simple installation, when you're ready to deploy Polycom has the expertise to integrate our products into a unified communications environment and the resources to project manage complex or geographically dispersed solutions. Once installed, Polycom maintains the technology at the level that meets your needs. Customers with mission-critical video deployments can even outsource the management of the technology to Polycom experts. Finally, to extend your return on investment, Polycom has a range of services to help you optimize infrastructure and endpoints.

Services Throughout the Solution Lifecycle





About Polycom

Polycom is the global leader in open standards-based unified communications (UC) solutions for voice and video collaboration, trusted by more than 415,000 customers around the world. Polycom solutions are powered by the Polycom® RealPresence® Platform, comprehensive software infrastructure and rich APIs that interoperate with the broadest set of communication, business, mobile and cloud applications and devices to deliver secure face-to-face video collaboration in any environment. Polycom and its ecosystem of over 7,000 partners provide truly unified communications solutions that deliver the best user experience, highest multi-vendor interoperability, and lowest TCO. Visit www.polycom.com or connect with us on Twitter, Facebook, and LinkedIn to learn how we're pushing the greatness of human collaboration forward.

Polycom, Inc. 1.800.POLYCOM www.polycom.com Polycom Asia Pacific Pte Ltd +65 6389 9200 www.polycom.asia Polycom EMEA +44 (0)1753 723282 www.polycom.co.uk

