

# Polycom® iPower™ 9000 Codec

*Ultimate multimedia platform for integration*



## Highlights

**Ultimate Video and Audio Quality** – Industry's first H.264\* delivers sharpest video at low bandwidth while Pro-Motion continues to deliver highest resolution video. Siren™14 audio brings the highest audio fidelity for the most natural conferencing experience.

**Increased ROI with Off the call** – Improve productivity for every meeting whether in a video call or not. Access information from the system itself or simply plug in a laptop and share files.

**Complete multimedia capabilities** – People+Content™ streaming gives full experience of the meeting to participants in non-video equipped locations. Meetings can now be recorded and stored digitally for future viewing with ad hoc meetings, the internal multipoint offers industry's best collaboration experience for up to 12 IP sites.

## Features

Highest data rate over H.323 (IP) with up to 4 Mbps and up to 2 Mbps over H.320 (ISDN)

Best experience with internal multipoint for up to 12 IP sites with Pro-Motion interlaced video and full People+Content

Most natural audio for conferencing with Siren 14

Integrated People+Content streaming

Industry first and only Digital Conferencing Recording offering

Extensive connectivity for conferencing and collaboration devices

Most comprehensive remote management with SNMP, Polycom Global Management System™, and WebRemote™

Complete sets of IP Quality of Service (QoS) mechanisms



*Sleek, rack-mountable design*



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Video

*Connect. Any Way You Want.*

# Polycom iPower 9000 Codec Technical Specifications

## Audio, video and data specifications

ITU-T H.320 and H.323 compliant

### Audio

- 14 kHz with Siren 14
- 7 kHz with PT716plus, PT724, G.722.1, G.722
- 3.4 kHz with G.711, G.723.1, G.728, G.729
- Integrated Dynamic Echo Cancellation (IDEC™)
- Automatic Gain Control (AGC)
- Automatic Noise Suppression (ANS)

### Video

- H.261, H.263, H.263+, H.263++, H.264\*

### Data

- T.120, Integrated Microsoft NetMeeting
- H.281 far-end camera control for H.320
- Annex Q far-end camera control for H.323
- H.243 multipoint

### People video resolution

- CIF (352 x 288 pixels)
- QCIF (176 x 144 pixels)
- 30 fps at 256 Kbps and above
- Pro-Motion™ interlaced video (352 x 480 pixels) at 336 Kbps and above
- NTSC/4 (352 x 240 pixels)

### Content video resolution

- PC input
- XGA (1024x768)
- SVGA (800x600)
- VGA (640x480)
- S-Video or composite inputs
- 4CIF (704 x 576 pixels), NTSC, CIF (352 x 288 pixels)

### People+Content™ features

- Dual Images (view people and high resolution content simultaneously)
- Synchronized content ("what you see, they see")
- Persistent previews (video thumbnails)
- Customizable video source labels
- Auto-sensing inputs

### System connections

#### Video input

- Main camera: 4-pin mini DIN DB15 (PTZ) – people
- Auxiliary: 4-pin mini DIN DB15 (PTZ) – people or content
- Video content (document camera, etc.): 4-pin mini DIN – content
- PC/laptop direct input (or ImageShare™ II): 15-pin D sub – content VCR (RCA) – content

#### Audio input

- 2 microphone inputs (PowerMic™), daisy-chains up to 8 microphones
- Line-level (RCA)
- 1 PC audio input (3.5 mm)
- 1 VCR input with ducking (RCA, left and right)

#### Video output

- Main display/content display: SVGA or XGA (15-pin D sub)
- People display: NTSC or PAL (S-video, composite)
- VCR output (RCA)

#### Audio output

- Main audio left and right (RCA)
- VCR output (RCA, left and right)

#### Quality of Service

- IP Precedence (ToS) / DiffServ DHCP (CoS)
- Resource Reservation Protocol (RSVP)
- Dynamic bandwidth allocation
- Proactive network monitoring
- Packet and jitter control
- NAT support
- Asymmetric speed control
- Fixed firewall supported
- Lip synchronization

### Network interface

- IP (LAN, DSL, cable modem), Ethernet 10/100, up to 4 Mbps
- ISDN, Quad BRI S/T, up to 512 Kbps
- V.35/RS-449 with RS-366 dialing, up to 2 Mbps
- Voice-only and voice-add calls over ISDN and IP
- Optional wireless IP via USB

### System components

#### Chassis

- Pentium III, 256 MB RAM
- 4 dedicated DSP chips for conferencing application
- Windows 2000 Professional
- DVD drive
- 40 GB hard disk
- Ethernet 10/100 interface
- 2 RS-232, 2 USB ports
- PCI slot, full length

#### Wireless keyboard

- Infrared wireless keyboard with trackball for point-and-click functionality and dedicated video conferencing hot keys

#### Remote control

- Infrared remote control including built-in mouse functionality

### Options

#### Optional PowerCam™ Plus camera

*Silent, motorized pan-tilt-zoom camera, with Limelight automatic camera pointing including "dialog mode"*

- Tilt range: +2°/-25°, Pan range: +/-100°
- Horizontal field of view: 65°
- Total field of view: 265°
- Horizontal resolution: 460 (PAL) / 470 (NTSC) TV lines
- Zoom range: 10x
- Auto focus/brightness/white balance/iris

#### Optional iPower 70 camera

*Standard camera pan-tilt-zoom camera*

- Tilt range: +15°/-30°, Pan range: +/-100°
- Horizontal field of view: 66°
- Total field of view: 268°
- Horizontal resolution: 430 TV lines
- Zoom range: 12x
- Auto focus/brightness/white balance/iris

#### Optional PowerMic

- Smart microphone, which electronically locates the person speaking, anywhere within a full 360° radius (one included, up to eight total)

#### Optional ImageShare II

*Laptop/PC connectivity device*

- 15-pin D sub - Video input up to XGA (1024x768 at 60, 70, and 75 Hz)
- 3.5 mm - Audio stereo input

#### Optional internal multipoint

*Multipoint calling over IP (H.323)*

- Local site plus three (3) video sites at 768 Kbps each
- Full People+Content support
- Voice-activated or continuous-presence modes
- H.261, H.263, H.263+
- G.722, G.723.1, G.711
- Simultaneous voice-add over ISDN/IP
- T.120 data collaboration

#### High-capacity multipoint

- Optional local site plus eleven (11) video sites
- Same call specifications as above

#### Optional Meeting Tool Assistant

*Integrated control of select document cameras, projector and VCR devices*

- Supported devices
  - VCR: JVC SR-S365U or JVC SR-S388E
  - Document camera: ELMO EV-2000AF, ELMO EV-2500AF, Canon RE-350
  - Projector: InFocus 350 and 5XX series, Sony PX/CX family

### Optional Digital Conference Recording

- Save entire conference for archiving or transporting
- Voice switch and view permanent site selection supported
- Content store as JPEGs
- Support "On-the-Call" and "Off-the-Call"

### People+Content Streaming

- View conference with content from any LAN with standard Web browser
- Support up to 5 direct viewings (MS Media player v7.0 and above)
- Support external Microsoft Media Server for larger participants
- Voice switch and view permanent site selection supported
- Content capture as JPEGs
- Support "On-the-Call" and "Off-the-Call"

### Computer information sharing

- Plug in laptop or PC via ImageShare II
- Show iPower™ Desktop
  - Share applications running on iPower system
- Integrated web collaboration
  - WebOffice™ directly from the iPower system
- T.120 data sharing and collaboration
- Customizable shortcut for frequently used applications

### Network infrastructure

#### Browser-based management

*Complete system management via Web browser, including:*

- Call control
- Board diagnostics
- Usage statistics

#### Enterprise systems management

- Support for Polycom Global Management System, SNMP and LDAP

### iPower Control Protocol

- RS-232 serial control
- Application interface (Active-X) for Visual Basic, Visual C++ software development
- Supports Crestron™ and AMX™ control systems

### System diagnostics

- Built-in ISDN bit-error rate tester (BERT) application
- Board diagnostics
- Readiness monitoring
- Compatible with standard PC diagnostic tools

### Display option

- 34" XGA monitor for content display
- 34" NTSC/PAL monitor for people display
- High-end roll-about cart with integrated Bose speaker, enclosed storage compartment and power strip

### Electrical

- Auto-sensing power supply 110/220 Vac, 50/60 Hz

### Languages

- User interface, online help, and documentation available in English, Japanese, German, French, Spanish, Portuguese, Italian and Simplified Chinese

### Warranty

#### Hardware

- One year parts and labor (return to factory)

#### Software

- 90 days telephone support

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