

# ▶ Polycom® SoundPoint IP® 650

High Performance IP Phone with  
Polycom HD Voice



## Delivering revolutionary voice quality, an advanced feature set, and the expandability to support SoundPoint IP Expansion Modules

Designed to appeal to both executive users who require advanced features and applications, and telephone attendants who need multiple line support, the Polycom SoundPoint IP 650 sets the standard for high-performance IP phones.

### Revolutionary Voice Quality

The SoundPoint IP 650 is the first IP phone to use Polycom's revolutionary HD Voice technology to bring life-like richness and clarity to voice communications. Polycom HD Voice incorporates wideband audio for over twice the voice clarity, Polycom's patented Acoustic Clarity Technology 2, as well as best-in-class system design to deliver unprecedented voice quality.

### Advanced Features and Applications<sup>2</sup>

The phone supports Microsoft® Live Communications Server 2005 for telephony and presence, and interoperates with Microsoft Office Communicator. The SoundPoint IP 650 also features a USB port for future applications.

### Enhanced Call Handling Capabilities

The SoundPoint IP 650 accommodates 6 lines in standalone mode, and 12 lines as an attendant console, when equipped with SoundPoint IP Expansion Modules. The phone supports shared call/bridged line appearance<sup>2</sup>, an essential feature for effective phone interaction between executives and their assistants. The phone's busy lamp field (BLF)<sup>2</sup> functionality enables phone attendants to monitor the on-hook / off-hook status of key contacts, and dispatch incoming calls for those contacts more efficiently.

### Expandability

When equipped with up to three Expansion Modules, the SoundPoint IP 650 delivers the advanced call handling capabilities and enhanced user interface of a high-performance attendant console. Designed to improve productivity of telephone attendants, the SoundPoint IP attendant console allows effective and efficient management and monitoring of up to 24 simultaneous calls on up to 12 lines.

### Intuitive User Interface

The SoundPoint IP 650 delivers all of its capabilities through an intuitive user interface, featuring a backlit 320x160 graphical grayscale LCD display, easy-to-navigate menu, and a combination of 26 dedicated hard keys and 4 context-sensitive soft keys for easy access to essential telephony features.

### Efficient Installation and Provisioning

Designed to make installation, configuration, and upgrade as simple and efficient as possible, the SoundPoint IP 650 boasts a two-port Ethernet switch and integrated Power over Ethernet circuitry. The SoundPoint IP 650 can be centrally configured and upgraded in the field from an FTP, TFTP, HTTP<sup>4</sup>, or HTTPS<sup>4</sup> server and supports provisioning server redundancy.

### Benefits

- ▶ **Revolutionary Voice Quality –** Polycom HD Voice enables life-like interactivity, richness, and clarity of voice communications
- ▶ **Advanced Features & Applications –**
  - Integration with Microsoft LCS 2005 and Microsoft Office Communicator
  - USB port for future applications
  - XHTML microbrowser Backlit 320x160 graphical grayscale LCD
  - Integrated PoE support
- ▶ **Advanced Call Handling Capabilities –**
  - Six lines (standalone) / 12 lines with Expansion Module(s)
  - Shared call / bridged line appearance<sup>2</sup>
  - Busy lamp field (BLF)<sup>2</sup>
- ▶ **Expandability –** Supports up to three SoundPoint IP Expansion Modules for an attendant console application
- ▶ **Proven –** Polycom is the leading independent supplier of standards-based IP phones that are fully interoperable with key IP PBX and Softswitch platforms.

# Polycom® SoundPoint IP® 650 Specifications

## Lines (Direct Numbers)

- Up to six lines (standalone mode)
- Up to 12 lines with Expansion Module(s)

## SoundPoint IP Expansion Module Support

- Supports up to three Expansion Module

## Display

- 320 x 160 backlit grayscale graphical LCD
- White LED backlight with custom intensity control

## Feature Keys

- 4 context-sensitive "soft" keys
- 26 dedicated "hard" keys
  - 6 line keys with bi-color (red/green) LED
  - 8 feature keys
  - 6 display/menu navigation keys
  - 2 volume control keys
  - Illuminated mute key
  - Illuminated headset key
  - Illuminated hands-free speakerphone key
  - Dedicated hold key

## Headset and Hearing Aid Compatibility

- Dedicated RJ-9 headset port
  - Amplified headsets are recommended
- Compliant with ADA Section 508 Recommendations: Subpart B 1194.23 (all)
- Hearing Aid Compatible (HAC) headset for magnetic coupling to approved HAC hearing aids
- Compatibility with commercially-available TTY adapter equipment

## Audio Features

- Polycom HD Voice technology delivers life-like voice quality for each audio path - the handset, the hands-free speakerphone, and the headset<sup>1</sup>
- Full-duplex hands-free speakerphone
  - Type 1 compliant with IEEE 1329 full duplex standards
- Frequency response - 150Hz - 7kHz for handset, headset<sup>1</sup> and hands-free speakerphone modes
- Codecs: G.722 (wideband), G.711  $\mu$ /A, and G.729A (Annex B)
- Individual volume settings with visual feedback for each audio path
- Voice activity detection
- Comfort noise fill
- DTMF tone generation/DTMF event RTP payload
- Low-delay audio packet transmission
- Adaptive jitter buffers
- Packet loss concealment
- Acoustic echo cancellation
- Background noise suppression

## Call Handling Features<sup>2</sup>

- Shared call/bridged line appearance
- Flexible line appearance (one or more line keys can be assigned for each line extension)
- Busy Lamp Field (BLF)
- Distinctive incoming call treatment/call waiting
- Call timer
- Call transfer, hold, divert (forward), pickup
- Called, calling, connected party information
- Local three-way conferencing
- One-touch speed dial, redial
- Call waiting
- Remote missed call notification
- Intercom
- Automatic off-hook call placement
- Do not disturb function

## Other Features

- Integration with Microsoft LCS 2005 for telephone and presence<sup>3</sup>
  - Compatibility with Microsoft Office Communicator and Windows® Messenger 5.1
- Clients Universal Serial Bus (USB)
  - Full Host Controller
  - Compliant with OHCI 1.1 specification
  - Support for Full-speed and Low-speed peripherals
    - Type-A receptacle interface
- Local feature-rich GUI
- Time and date display
- User-configurable contact directory and call history (missed, placed, and received)
- Customizable call progress tones
- Wave file support for call progress tones
- Unicode UTF-8 character support. Multilingual user interface encompassing Chinese, Danish, Dutch, English (Canada/US/UK), French, German, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Slovenian, Spanish, Swedish

## Protocol Support

- IETF SIP (RFC 3261 and companion RFCs)

## Network and Provisioning

- Two-port 10/100 Mbps Ethernet switch
- Manual or dynamic host configuration protocol (DHCP) network setup
- Time and date synchronization using SNTP
- FTP/TFTP/HTTP/HTTPS4 server-based central provisioning for mass deployments.
- Provisioning server redundancy supported
- Web portal for individual unit configuration
- QoS Support – IEEE 802.1p/Q tagging (VLAN), Layer 3 TOS, and DSCP
- Network Address Translation (NAT) support – static
- RTCP support (RFC 1889)
- Event logging
- Local digit map
- Hardware diagnostics
- Status and statistics

## Security<sup>2</sup>

- Transport Layer Security (TLS)<sup>3</sup>
- Encrypted configuration files<sup>3</sup>
- Digest authentication
- Password login
- Support for URL syntax with password for boot server<sup>4</sup>
- HTTPS secure provisioning<sup>4</sup>
- Support for signed software executables<sup>4</sup>

## Power

- Built-in, auto-sensing IEEE 802.3af Power over Ethernet
- External Universal AC adapter (included 48V DC)<sup>5</sup>

## Approvals

- FCC Part 15 (CFR 47) Class B
- ICES-003 Class B
- EN55022 Class B
- CISPR22 Class B
- AS/NZS CISPR 22 Class B
- VCCI Class B
- EN55024
- EN61000-3-2; EN61000-3-3
- ROHS compliant

## Safety

- UL 60950
- CE Mark
- CAN/CSA-C22.2 No. 60950
- EN 60950-1
- IEC 60950-1
- AS/NZS 60950

## Operating Conditions

- Temperature: +10 to +40 degrees C (+50 to +104 degrees F)
- Relative humidity: 20%-85% (noncondensing)

## Storage Temperature

- -40 to +70 degrees C (-40 to +160 degrees F)

## SoundPoint IP 650 Comes with:

- SoundPoint IP 650 console
- Handset with handset cord
- Base stand
- Network (LAN) cable
- Universal power adapter (including country-specific cord kit)<sup>5</sup>
- Quick Start Guide
- Product registration card

## Size

- 10.5 in x 6 in x 7.5 in x 2.5 in (26.5 cm x 15 cm x 19 cm x 6.5 cm) (W x H x D x T)

## Weight

- Shipping: 2.75 lb (1.26 kg)

## Part Numbers/UPC Codes

- 2200-12651-001 / 610807522959 for NA, TWN
- 2200-12651-002 / 610807522966 for Japan
- 2200-12651-012 / 610807522973 for AU, NZ
- 2200-12651-015 / 610807522980 for UK, HK, Singapore, Malaysia
- 2200-12651-016 / 610807522997 for Korea
- 2200-12651-022 / 610807523000 for China
- 2200-12651-122 / 610807523017 for ROE

## Box Dimensions/Weight

- 12.5 in x 13.25 in x 3.5 in
- 2045g (for all countries)

## Master Carton Quantity

- Five

## Country of Origin

- Thailand

## Warranty

- One year

1. To enjoy the benefits of Polycom HD Voice when using the phone in the headset mode, you must use a wideband headset.
2. Most software-enabled features and capabilities must be supported by the server. Please contact your IP PBX/Softswitch vendor or service provider for a list of supported features.
3. Requires SIP version 2.0.1 or higher.
4. Requires BootROM version 3.2.X or higher.
5. Please contact Polycom for current device driver support

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**Polycom Headquarters**  
4750 Willow Road  
Pleasanton, CA 94588  
1.800.POLYCOM or  
+1.925.924.6000

**Polycom EMEA**  
270 Bath Road  
Slough  
Berkshire SL1 4DX  
+44 (0)1753 723000

**Polycom Asia Pacific**  
8 Shenton Way  
#11-01 Temasek Tower  
Singapore 068811  
+65.6389.9200