Polycom® Open Telepresence Experience™

OTX™ 100

Software version 3.0.3

Video & Audio Technology

Solution Includes:

- Polycom HDX™ video codec supporting 1080p at 30fps or 720p at 60fps
- Polycom Digital Ceiling Microphone Array
- Polycom StereoSurround™ speaker kit
- High-definition 65-inch LCD display
- High-definition video camera
- Polycom Touch Control user interface
- Motorized 21.5-inch high resolution content displays integrated in conference table (Standard Version Only)
- Power and LAN access for laptop at the table (Standard Version Only)

Room Environment

OTX 100 Standard Room Size Requirements

	With Complete Experience Kit (Includes OTX Rear Wall and Lights)			Without Complete Experience Kit (Does Not Include OTX Rear Wall and Lights)		
	Width	**Depth**	**Height**	**Width**	**Depth**	**Height**
Recommended Room Size	17 ft 8 3/4 in (5.407 m)	15 ft 6 in (4.724 m)	8 ft 8 in (2.642 m)	17 ft 8 3/4 in (5.407 m)	15 ft 6 in (4.724 m)	8 ft 8 in (2.642 m)
Minimum Room Size	15 ft 8 3/4 in (4.794 m)	15 ft 6 in (4.724 m)	8 ft 0 in (2.438 m)	14 ft 4 1/2 in (4.382 m)	13 ft 9 in (4.191 m)	8 ft 0 in (2.438 m)

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OTX 100 Compact Room Size Requirements

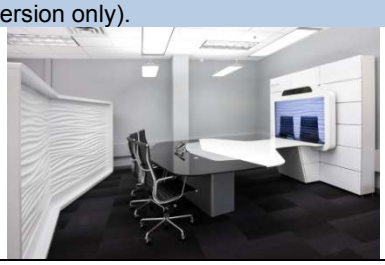
	With Complete Experience Kit	Without Complete Experience Kit (Does Not Include OTX Rear Wall and Lights)		
		Width	**Depth**	**Height**
Recommended Room Size	Complete Experience Kit is not available for the OTX 100 Compact Model	10 ft 0 in (3.048 m)	13 ft 9 in (4.191 m)	8 ft 8 in (2.642 m)
Minimum Room Size		9 ft 0 in (2.743 m)	9 ft 0 in (2.743 m)	8 ft 0 in (2.438 m)

Options

Complete Experience Kit

If you are planning to use the OTX Complete Experience kit: The Complete Experience kit includes the OTX rear wall, ceiling lights and Signage Solution (the Complete Experience kit is available for the OTX 100 Standard version only).

	Width	Depth	Height
Rear Wall	14 ft 3 in (4.343 m)	2 ft 3 in (0.701 m)	5 ft 8½ in (1.742 m)



Lighting

Four lighting elements 12” x 4’ [365.76 cm x 121.92 cm]
Fluorescent lamp, 4100K

Seating

- Four seats on-camera
- Eight seats for off-the-call use

Chairs

Chairs are to be supplied by the customer. Polycom recommends the Herman Miller® Eames® Aluminum Group Executive chair (Polycom p/n 2200-61923-001). For more information, see http://www.hermanmiller.com/Products/Eames-Aluminum-Group-Chairs). This chair complements the décor of the OTX 300 in both style and size. If you do not purchase these chairs, Polycom highly recommends that you purchase chairs that are the same size, color and shape to maintain the design integrity of the room.

For customers choosing to supply their own chairs, the dimensions must NOT exceed:

- Arm span: 24.5” [62.23cm]
- Wheel base: 27” [68.58cm]

Close Up Option

The OTX 100 includes an optional feature, which when enabled via software during installation, allows the user to either zoom the center camera in for a “close up” view of the center two participants or out for the standard “wide shot” view of the participants. There are specific scenarios where this feature would be deployed:

- A point to point call between an OTX 100 and an HDX or other traditional video conferencing system (single display endpoints)
- Any call via an RMX or MGC bridge (including multipoint)

Video and Audio Specifications

Display Specification	High Definition Video Display	Aspect Ratio
65” LCD display	1920 x 1080p full HD	16:9
Video Standards	**Description**	
H.264	Video codec – Baseline, High Profile (HiP), Main line (TIP support)	
H.239	People+Content	
H.261 and H.263++	For compatibility with legacy video conferencing endpoints	
LPR (Lost Packet Recovery)	Video Error Concealment to preserve video quality during packet loss events	
AES Media Encryption	For secure video/audio and content	
Audio Standards		
Siren™ 22	22kHz	
Siren LPR (Lost Packet Recovery)	Siren LPR preserves audio quality during packet loss events	
G722.1 Annex C	14kHz with Polycom Siren 14	
G.722, G.722.1	7kHz	
G.711	3.4kHz	
AAC-LD	20kHz (TIP support)	

Content Sharing*

On a call, content is displayed on the tabletop content monitors.

Off the call, content may be displayed on both the table content displays and on the main displays as shown.

Display resolution	1920x1080
Laptop connectivity	Power and LAN are optionally available at the table (10) Ethernet ports (10) power plugs, (1) VGA input, (1) HDMI inputs with one mini and one regular HDMI-display port adapters.
People + Content 1080p	**Input Formats:** - VGA 640 x 480p at 60/72/75Hz - SVGA 800 x 600p at 60/72/75Hz - VESA - XGA 1024 x 768p at 60/70/75Hz - VESA - SXGA 1280 x 1024p at 60Hz - VESA STD - SXVGA 1280 x 960p at 60Hz - VESA STD - 900P 1600 x 900p at 60Hz - VESA STD - WSXGA 1680 x 1050p at 60Hz - VESA STD - WUXGA 1920 x 1200p at 60Hz - VESA STD - HD 1920x1080 @ 60/50Hz - HD 1280X720 @ 60/50Hz - **Encoded resolutions and frame rates**: - HD 1080p Encode: 1080p <= 15fps - HD 720p Encode: 720p <= 30fps - WSXGA 1680x1050 Encode: 1024x768 <= 30fps - SXGA 1280X1024 Encode: 1280x1024 <= 30fps - XGA 1024x768 Encode: 1024x768 <= 30fps
People + Content IP	Content sharing sent over an IP connection from your computer to the video conference system (no cables necessary)

Directory Support

Global Directory (LDAP/H.350)	Supports directory services via the Polycom Converged Management Application™ (CMA™) 5000
Local Directory	Configure local directory for sites without CMA directory integration or for situations where entry on the CMA directory is not desirable

User Interface

The Polycom Touch Control is your interface to the Polycom OTX 100. It enables you to place video and audio calls, hang-up calls, adjust the volume, show content, and select options. The Polycom Touch Control is located on the main table within easy reach of the center seats at the table. Below is a summary of the tasks can perform using the Polycom Touch Control:

Button/Function	Description
Make a call	The user has the ability to dial manually or by using the Favorites menu or calling from the Directory.
Search and directory capability	Select sites from a local or CMA directory and use advanced search capabilities
Polycom Calendaring for Microsoft® Outlook*	This feature allows the user to use the Polycom Touch Control to quickly and easily view a list of scheduled meetings and join those meetings.
Meeting Composer*	Enables the meeting organizer to initiate and control a multipoint call entirely from the Polycom Touch Control*
Hang-up	Allows the user to end the call
Audio controls	Allow the user to raise and lower audio levels
Audio mute	Allow the user to stop transmission of audio through the microphone(s)
Content controls	Allow the user to start and stop sharing content
Help desk**	Button set up by the system administrator to place an audio call to a help desk that can assist users should they experience technical difficulties or have a question.

* *To complete the telepresence multipoint solution, an RMX 4000 or RMX 2000 MCU with the telepresence software option enabled and the Polycom Multipoint Layout Application (MLA) software are required. For more detailed information, please refer to the Polycom Multipoint Overview document found on the Partner Resource Center web site.*

** *An analog (POTS) line must be present for access to the your VNOC or other help desk*

Multipoint Conferencing

The OTX 100 telepresence solution provides two methods for viewing participants in a multipoint conference.

Room Continuous Presence: In this standard mode, the multipoint view will automatically be generated either to follow the general principles of Polycom Immersive Telepresence multipoint (all participants are "present" during a multipoint conference) or to fit a custom-set view configured by the conference administrator for the particular combination of sites in the conference.

Voice Activated Room Switching (VARS): VARS is different from the standard Room Continuous Presence mode in that the speaker's site is the only site seen by others. The view of the speaker's site is sized to be as large as possible on all of the other participants' displays. The current speaker sees the previous speaker's site (i.e., the speaker's layout remains unchanged). Layouts used in VARS are not customizable.

To implement telepresence multipoint conferencing with Polycom telepresence solutions, the following components are required:

Device	Function	Model(s) Supported
Endpoints/rooms	Provide experience, ease of use, etc…	RPX™, OTX, ATX™, HDX, Traditional videoconferencing endpoint
Multipoint server	Provide multisite call capability, gateway to other solutions such as ISDN/H.320, Microsoft OCS, et .	RMX™ 2000 and RMX™ 4000 with the telepresence option en bled and support d by Polycom's Multipoint Layout Application
Global Directory Access	Directory	Converged Management Application™ (CMA™), HDX Directory
Others	Call control, firewall traversal, e c.	Varies depending on network infrastructure

For more detailed information about telepresence multipoint conferencing, please refer to the Polycom Telepresence Multipoint Overview posted on the Partner Resource Center web site.

Environmental Specifications

Power & Cooling

	Total Power (Watts)	BTUs/Hour	Cooling in Tons
Standby (Components off except rack components and cameras)	150	512	0.04
In Use (Max call rate with Content and doc sharing)	650	2219	0.18
Maximum (system will not exceed)	900	3070	0.26
Optional Lighting (part of the Complete Experience Kit)	540	1843	0.15

Environmental Conditions

Conference room operating temperature	41-86° F, 5-30° C
Relative humidity	20% to 80% (non-condensing)
Sound Pressure Level	43 dBA or lower
Recommended NC rating	30 or lower

Total Installed Weight

OTX 100	Units	Weight	Area	Avg. Static Load lb/ft^2 - kg/m^2
Video Wall (Includes Equipment Rack, Displays, and Camera Bracket)	lbs	629 lbs	13 sq ft	48 lb/ft
	kg	285.9 kg	1.21 sq m	235 kg/m
Multipurpose Conference Table*	lbs	588 lbs	62 sq ft	9.5 lb/ft
	kg	267.3 kg	5.76 sq m	46 kg/m
Rear Wall*	lbs	621 lbs	10.87 sq ft	57 lb/ft
	kg	282.3 kg	1.01 sq m	279 kg/m

** Applies to OTX 100 Standard Model only*

Network Interoperability

Microsoft® Office Communications Server 2007 integration	Manages all real-time (synchronous) communications including: instant messaging, VoIP, audio and video conferencing.
Microsoft™ Lync support	A single platform that can enhance, extend, and even replace traditional and IP PBX systems.
Telepresence Interoperability Protocol (TIP)	Cisco Proprietary protocol used to communicate in native mode to Cisco CTS systems
Dual Stack H.323/SIP	Supports the Polycom Open Collaboration Network (POCN) for integration with UC partners including Siemens, BroadSoft and Avaya

High Profile Bandwidth requirements

Support for the following data rates with QoS enabled, bidirectional, with a 50% burst increase within 100ms window.
Bandwidth estimates are based on network traffic in one direction and do not include overhead and management traffic

For this table 1 Mbps equals 1,024 Kbps which equals 1,024,000 bits per second.

Frame Rate	Minimum	Recommended	Maximum
1080p30 High Profile	1.5 Mbps per suite	3 Mbps per suite	6 Mbps per suite
720p60 High Profile	1.5 Mbps per suite	3 Mbps per suite	6 Mbps per suite

H.264 Bandwidth Requirements (not High Profile)

Frame Rate	Minimum	Recommended
1080p30	3 Mbps per suite	6 Mbps per suite
720p60	2 Mbps per suite	4 Mbps per suite

Note: Bandwidth estimates are based on network traffic in one direction and do not include overhead and management traffic.

Performance

- Packet loss < 0.1%
- End to end latency <150 ms
- Packet jitter < 40 ms

LAN Connection Requirements

The customer has a choice of LAN wiring option which will depend on whether they want a switch in the OTX 100 room, or prefer home runs back to a managed switch.

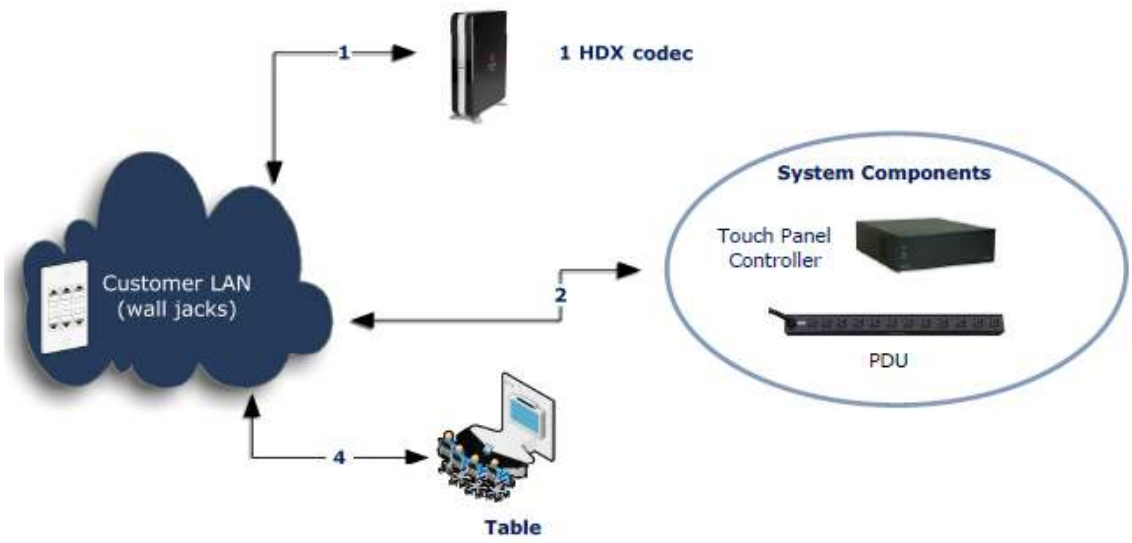
Supported LAN wiring options include:

- Home runs for OTX 100, table and system components (Figure 2.0)
- Home runs for the OTX 100, system components and LAN switch which will distribute network to the table (Figure 2.1)

For voice add-on, you will need to supply an **analog line**. Voice add-on is necessary to enable access to a VNOC or other help desk.

If you do not put a managed switch in the telepresence suite, the OTX solution needs the following number of 100/1000BASE-T network connections, on RJ-45 connectors as well as static IP addresses.

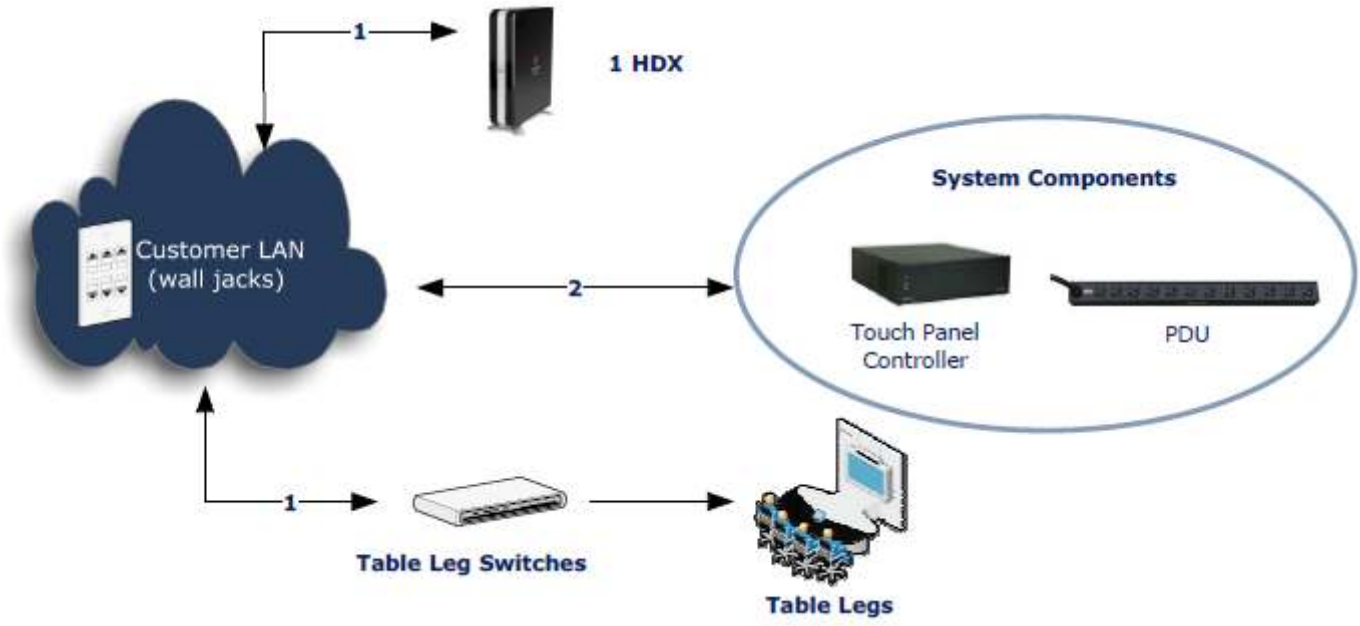
Default OTX 100 network wiring configuration



Required LAN Connections			
LAN connection for HDX	**System Components (Touch Panel Controller & PDU)**	**LAN connection for Table legs**	**Total LAN Connections**
1	2	4	7

Figure 1.0 – default network configuration

Alternate OTX 100 network wiring configuration



Required LAN Connections			
LAN connections for HDX	**LAN connections for system components**	**LAN connection switch**	**Total LAN connections**
1	2	1	4

Figure 2.0 – alternate network configuration

Recommendations for customer-supplied switch

- Rack mountable, 1U height
- Input power: 100-240 VAC, auto-ranging, 50-60 Hz
- Acoustic noise-recommend maximum of 43 dBa, ISO 7779. It is the responsibility of the customer to investigate and select the appropriate managed switch for their particular application.

Regulatory Compliance

- CE Marking
- FCC Part 15 Class A
- UL
- cUL
- CE
- VDE
- RoHS
- WEEE
- CSA
- C-Tick