



**REALPRESENCE IMMERSIVE TELEPRESENCE STUDIO
TECHNICAL SPECIFICATIONS**

Solution Components:

	9-Seat	21-Seat
Displays	(3) 84" Ultra HD LCD w/LED backlight Display Resolution 3840 x 2160 (UD) Aspect Ratio 16:9	(3) 84" Ultra HD LCD w/LED backlight Display Resolution 3840 x 2160 (UD) Aspect Ratio 16:9
Codec	(3) RealPresence Group Series	(3) RealPresence Group Series
Cameras	(1) Camera Cluster which includes (3) High-definition cameras (1080p60)	(1) Camera Cluster which includes (3) High-definition cameras (1080p60)
Audio	3-channel audio (5 speakers spatial audio) (1) SoundStructure C16 audio processor	3-channel audio (5 speakers spatial audio) (2) SoundStructure C16 audio processor
Microphones	(3) Polycom Digital Ceiling Microphones	(6) Polycom Digital Ceiling Microphones
Lighting	2 rows of optimized lighting fixtures	3 rows of optimized lighting fixtures
Touch Control Interface	10.1" Tablet	10.1" Tablet
Content Display	(1) 55" 1080p HD LCD w/ LED backlight	(1) 55" 1080p HD LCD w/ LED backlight
Design Elements	Media Wall Main Table Back Wall (optional) Ceiling Cloud Structure (optional)	Media Wall Main Table Back Table Back Wall (optional) Ceiling Cloud Structure (optional)
Chairs (ordered separately)	9 (on video)	21 (on video)

Room Design Elements

The RealPresence Immersive Studio is available in a 9-Seat and a 21-Seat configuration. The media wall main table and/or back table are available in two color choices, Ash (light wood color) or Walnut (dark wood color).

RealPresence Immersive Studio 9- Seat

Accommodates 9 people around the main table on camera or 16 comfortably around the main table for use when not in an Immersive Telepresence call (*Walnut wood finish shown*).



RealPresence Immersive Studio 21-Seat

Accommodates 21 people on camera (2 rows - 9 at the main table and 12 at the back table). The main table will seat 16 comfortably when not in an Immersive Telepresence call (*Ash wood finish shown*).

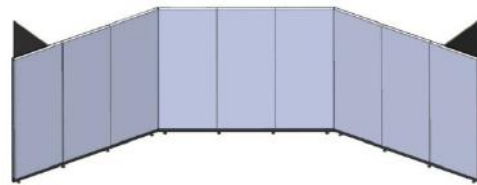
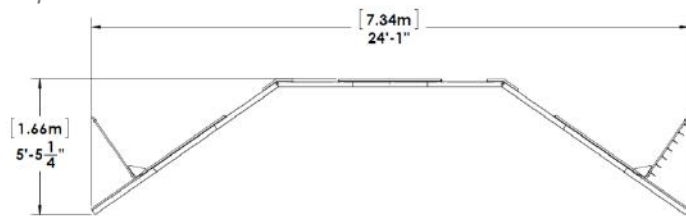


Back Wall

	9-Seat	21-Seat
Back Wall Height	8 ft. 5 in.	8 ft. 5 in.
	2.56 m	2.56 m
Back Wall Width	24 ft. 1 in.	29 ft. 3 in.
	7.35 m	8.92 m
Back Wall Depth	5 ft. 5¼ in.	8 ft. 7⅞ in.
	1.66 m	2.62 m

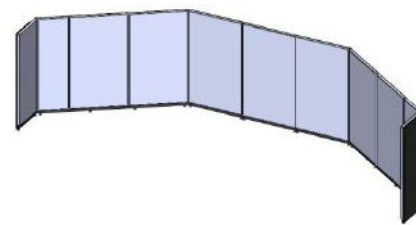
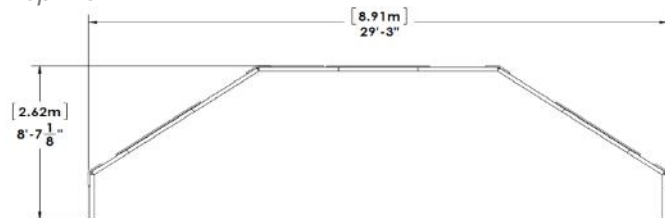
9- Seat Back Wall

Top View



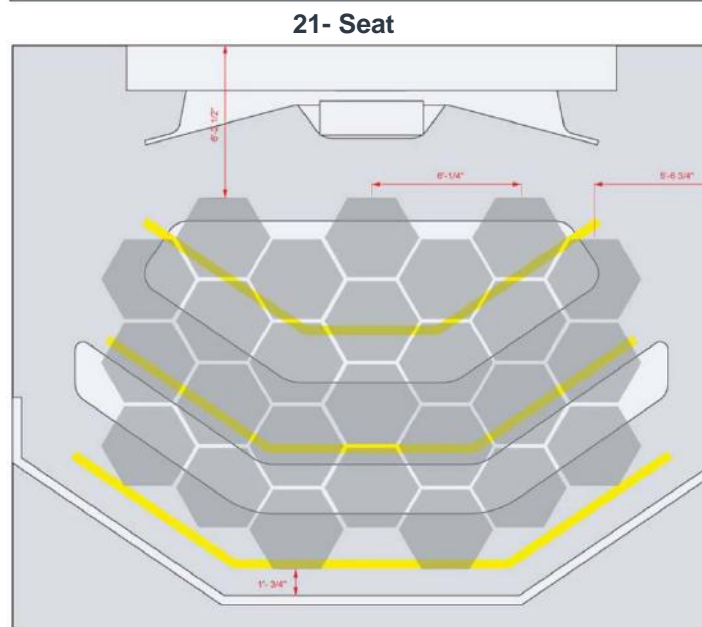
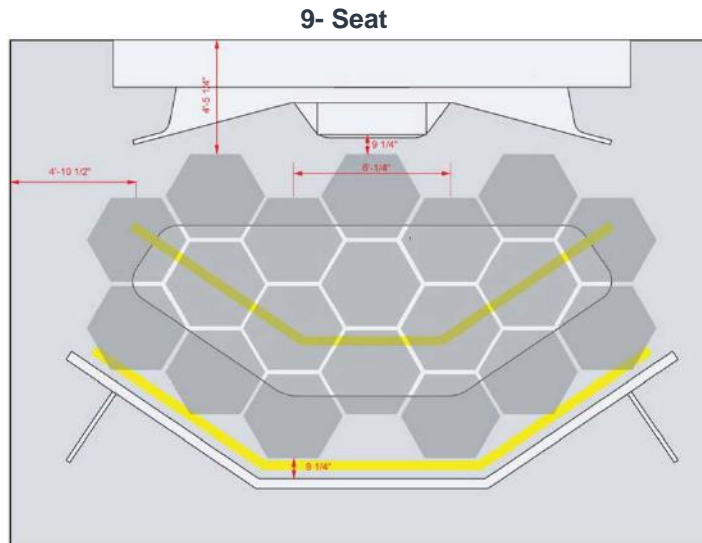
21- Seat Back Wall

Top View



Ceiling Cloud

The ceiling cloud is an optional feature for the RealPresence Immersive Studio. The cloud is an acoustic ceiling treatment that adds both to the aesthetics of the room as well as reduces reverberation and contributes to superior acoustic performance. The hexagonal acoustic ceiling tiles are grouped together using a beam structure and fastened to any ceiling treatment. Microphones and lighting are also fastened to the ceiling and suspended below the cloud tiles. The yellow highlighting on the images below illustrates where the rows of lights are installed.



Seating

The RealPresence Immersive Studio does not ship with chairs or stools. They are offered as an option. It is recommended that the chairs and/or stools be uniform in all Studios. For those purchasing chairs not offered by Polycom, it's important to keep to the dimensions listed below.

Black Leather | Fire Code Treatment | Polished Aluminum Frame

	Seat Height	Seat Depth	Seat Width
	16 in. - 21 in. 41 cm – 53 cm	15.5 in. - 18.5 in. 39 cm – 47 cm	19.25 in. 49 cm
	23 in. – 31 in. 58 cm – 79 cm	15.5 in. - 18.5 in. 39 cm – 47 cm	19.25 in. 49 cm

Lighting

For an optimal experience, Polycom offers lighting with evenly dispersed ambient light driven from electronic ballast florescent lights. The lighting solution comes standard with room sensor* for turning the lighting and displays on upon participants entering and off after a fixed period of inactivity. If you are providing your own lighting, Polycom recommends using a lighting designer and having the lighting professionally installed.

**Exceptions may apply*

	Rows of lights	Temperature	Lumens	Power Consumption	Light Power Density (LPD)
9-Seat	2	4100K	8900lm	877.5W	1.6
21-Seat	3	4100K	8900lm	1249.5W	1.8

Minimum Room Dimensions with Back Wall, Ceiling Cloud and Lights

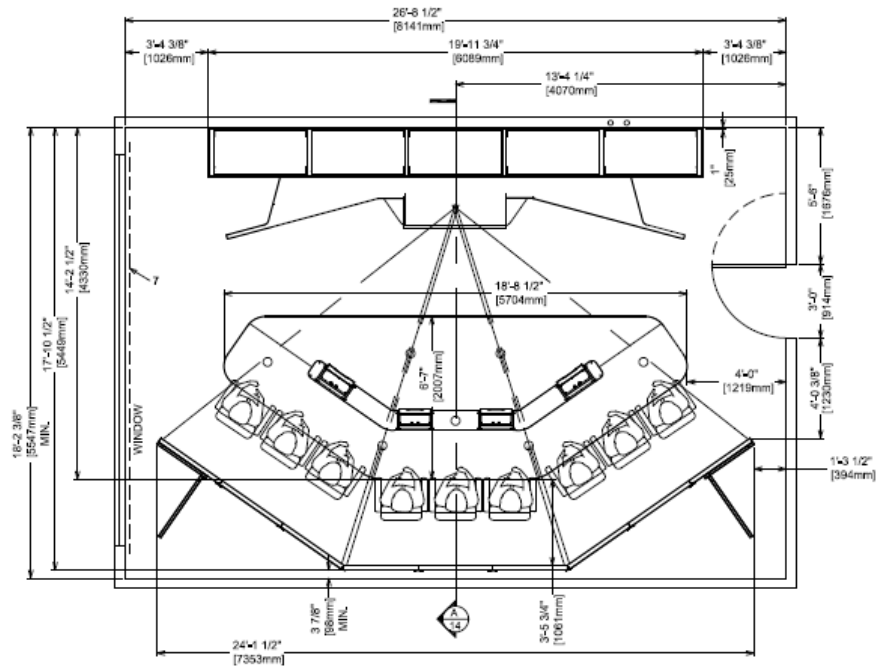
9-Seat			21-Seat		
Width	Depth	Height	Width	Depth	Ceiling Height
26 ft. 8½ in (8.141 m)	18 ft. 2¾ in (5.547 m)	8 ft. 6 in (2.591 m)	29 ft. 3 in (8.915 m)	23 ft. 0in (7.264 m)	9 ft. (2.743 m)

Minimum Room Dimensions with lights only (without Back Wall and Ceiling Cloud)

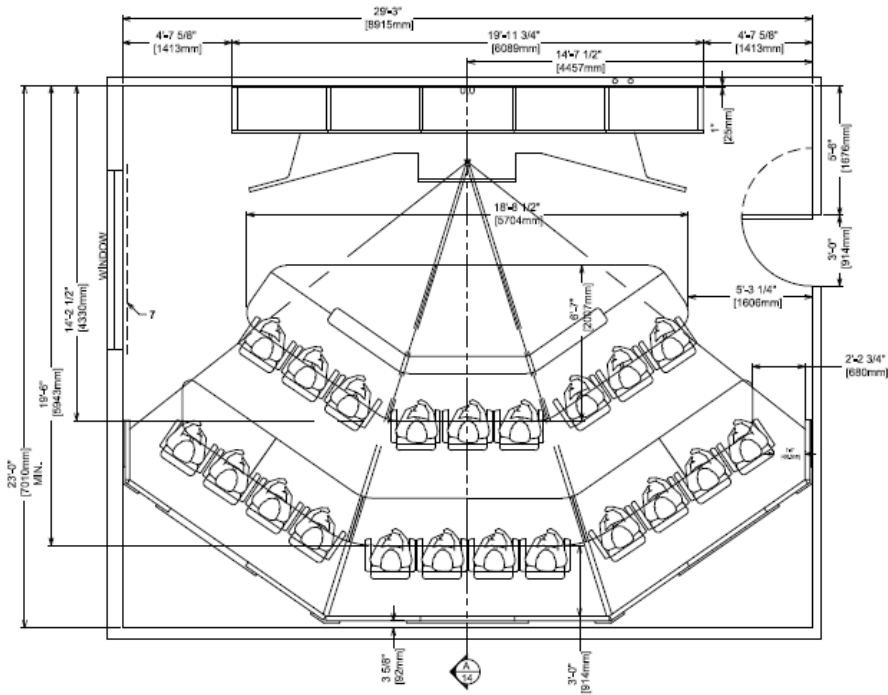
9-Seat			21-Seat		
Width	Depth	Height	Width	Depth	Ceiling Height
23ft 3½ in (7.100 m)	17ft 8 in / 212 in (5.384 m)	8 ft. 6 in (2.591 m)	28 ft. 7 in (8.712 m)	22 ft. 6 in (6.858 m)	8 ft. 6 in ^{***} (2.591 m)

^{***} The rear row of lights will be visible in the far end camera sight line. The normal ceiling height for this studio is 9ft / 2.743 m AFF (Above Finished Floor)

9 –Seat floor plan



21–Seat floor plan



Interoperability

Video	Description
H.264 AVC, H.264 High Profile, RTV	Video codec- Baseline, High Profile (HiP)
H.263 & H.264	Video Error Concealment
H.239	Polycom People + Content
Binary Floor Control Protocol (BFCP)	Content sharing via SIP
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	Description
G.719 (3-channel audio)	22kHz bandwidth
Siren™ 22	22kHz bandwidth with StereoSurround™
Siren™ LPR (Lost Packet Recovery)	Siren LPR preserves audio quality during high packet loss
G722.1 Annex C	14kHz bandwidth with Polycom Siren 14
G.722, G.722.1	7kHz bandwidth
G.711	3.4kHz bandwidth
Network Interoperability	
Dual Stack H.323/SIP	Allows for flexibility for UC environments with H.323 video based networks and the SIP call control platform
Microsoft™ Lync Server 2010 native interoperability	Unified communication platform (presence, IM, voice and video)
Microsoft™ Lync Server 2013 compatibility with a Lync 2010 feature set	Unified communication platform (presence, IM, voice and video)
Microsoft® Office Communications Server 2007 integration	Manages all real-time (synchronous) communications including: instant messaging, VoIP, audio and video conferencing.

Content

Display	(1) 55" HD LCD w/LED backlight
Display resolution	Full HD (1920x1080)
Input Sources	(1) Analog laptop interface - VGA with 3.5 mm audio connector (main table) (1) Digital laptop interface HDMI with audio embedded (main table) (Displayport available with customer supplied adapter) People & Content over IP
People/Content Swap	Place content on the people screens and relocate people video as appropriate (content supported on any of the 4 displays on or off a video call)
Content Sharing	People+Content™ via input sources list above OR People+Content™ IP application for PC/MAC
Content Frame Rate	5–60 fps (up to 1080p resolution at 60 fps)
Content Input formats	Input WUXGA (1920 x 1200) HD (1920 x 1080i) HD (1920 x 1080p) WSXGA+ (1680 x 1050) UXGA (1600 x 1200) SXGA (1280 x 1024) WXGA (1280 x 768) HD (1280 x720p), XGA (1024 x 768) SVGA (800 x 600)

Directory and Management Support

Local Directory	Configure local directory for sites without RealPresence Resource Manager directory integration or for situations where entry on the RealPresence Resource Manager directory is not desirable. Create up to 2,000 contacts in Favorites locally.
Polycom RealPresence Resource Manager LDAP/H.350	Directory Services, provisioning, soft updates and system monitoring
Polycom RealPresence Virtualization Manager (DMA)	Call Management and Gatekeeper functionality
Microsoft Lync Server 2010	Support for up to 200 contacts with presence

Multipoint Conferencing

The RealPresence Immersive Studio solution provides two methods for viewing participants in a multipoint conference. In order to conduct multipoint calls, you will need a multipoint server, such as the Polycom RealPresence Collaboration server with the telepresence option enabled, as well as Polycom's Multipoint Layout Application (MLA). The RealPresence Virtualization Manager for dialing is also a requirement.

Room Continuous Presence: In this standard mode, the multipoint layout will automatically be generated. All participants will be shown on the displays. The layout will be determined either by following the general principles of Polycom Immersive Telepresence multipoint or fit a custom-set view configured by the conference administrator.

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.

Network Technology

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.

High Profile Bandwidth

Minimum Recommended (per Studio)	Recommended (per Studio)	Maximum (per Studio)
9 Mbps	12 Mbps	18 Mbps

The actual bandwidth required depends on the customer's application, location, required resolution and other factors. Please refer to the RealPresence Immersive Studio for a detailed matrix of call speeds and resolutions.

LAN Connection Requirements

- 1 LAN drop required
- 1 unmanaged 24-port Ethernet switch will be provided with system
- The user interface, the touch Interface tablet, requires an IP address from the network. The touch interface connects to the primary codec in the LAN side of the codec switch.
- Static IP address allocation is recommended in blocks of 20 Sequential addresses recommended (i.e. xxx.xxx.xxx.1 thru xxx.xxx.xxx.20)
- Home Runs: 3 – (1) per codec
- 10 (min) for system components (System Controller, PDU, SoundStructure)

Environmental Specifications

Power & Cooling						
	9-Seat			21-Seat		
	Total Power (Watts)	BTUs/Hour	Cooling in Tons	Total Power (Watts)	BTUs/Hour	Cooling in Tons
Standby	320	4506	0.38	420	9406	0.78
In Use	2592	12233	1.02	2896	17828	1.49
Maximum (system will not exceed)	4485	18668	1.56	5659	27219	2.27
Optional Lighting	365	1241	0.1	708	2419	0.2

Environmental Conditions

Conference room operating temperature	41-86° F, 5-30° C
Relative humidity	20% to 90% (non-condensing)
Sound Pressure Level	40 dBA or lower
Recommended NC rating	NC18 to NC25

Total Installed Weight: 9-Seat				
9-Seat	Units	Weight	Area	Avg. Static Load lb/ft ² - kg/m ²
Front Media Wall (includes equipment rack, displays and camera bracket)	Lbs.	3675	49.19	74.7
	Kg	1666.9	4.57 sq. m	364.7
Multipurpose Conference Table	Lbs.	781	96.3	8.1
	Kg	354.3	8.95 sq. m	39.5
Back Wall	Lbs.	831	9.9	83.94
	Kg	377	0.92	409.83

Total Installed Weight: 21-Seat				
21-Seat	Units	Weight	Area	Avg. Static Load lb/ft ² - kg/m ²
Front Media Wall (includes equipment rack, displays and camera bracket)	Lbs.	3675	49.19	74.7
	Kg	1666.9	4.57 sq. m	364.7
Multipurpose Conference Table	Lbs.	781	96.3	8.1
	Kg	354.3	8.95 sq. m	39.5
Back Table	Lbs.	843	54,289	15.5
	Kg	382.4	5,044	75.7
Back Wall	Lbs.	895	9,397	95.24
	Kg	406.0	0.873	465

Regulatory Compliance

- CE Marking
- FCC Part 15 Class A
- UL
- cUL
- CE
- CCC
- VDE
- RoHS
- WEEE
- CSA
- C-Tick
- Relevant components compliant to ASTM E84 (UL 723) and EN 13501-1:2007 Class D