Poly Video Room Preparation Guide

SUMMARY

This guide provides integrators, resellers, and installers with information about preparing conference rooms for system installation.

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1 Before You Begin

Use this guide to plan and prepare your video conferencing room before installing a Poly Studio G62, Poly G7500, Poly Studio X Family system (Poly Studio X70, Poly Studio X50, Poly Studio X30), Poly Studio V Family system (Poly Studio V12, Poly Studio V52, Poly Studio V72), a Poly Studio E60, or a Poly Studio E70 camera.

Audience, Purpose, and Required Skills

This document is intended for Poly partners, resellers, and installers who want guidance in preparing conference rooms for system installation.

You must be familiar with the following concepts before beginning:

- Current telecommunications practices, protocols, and principles.
- Telecommunication basics, video conferencing, and voice or data equipment.
- Knowledge and experience with audio/video (A/V) cable installation and management.

Installation Prerequisites

Before installers arrive onsite, install the following items:

- Cabling inside floors, walls, and ceilings.
- Ceiling- or wall-mounted brackets used to support Poly and non-Poly equipment. This includes displays, projectors, microphones, speakers, projection screens, and cameras.

NOTE: If you're using installers, they can install the system, test it, and show the system working in a temporary state. You can then unplug and route cables as you wish.

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2 Before you begin

This section provides clarifying information about this guide.

Audience, Purpose, and Required Skills

This document is intended for Poly partners, resellers, and installers who want guidance in preparing conference rooms for system installation.

You must be familiar with the following concepts before beginning:

- Current telecommunications practices, protocols, and principles.
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Installation Prerequisites

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NOTE: If you're using installers, they can install the system, test it, and show the system working in a temporary state. You can then unplug and route cables as you wish.

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- The Poly Documentation Library provides support documentation for active products, services, and solutions. The documentation displays in responsive HTML5 format so that you can easily access and view installation, configuration, or administration content from any online device.
- The HP Community provides additional tips and solutions from other HP product users.
- The Poly Partner Network is a program where resellers, distributors, solutions providers, and unified communications providers deliver high-value business solutions that meet critical customer needs, making it easy for you to communicate face-to-face using the applications and devices you use every day.
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- Poly Lens enables better collaboration for every user in every workspace. It is designed to spotlight the health and efficiency of your spaces and devices by providing actionable insights and simplifying device management. You can also download current software for your products directly from the Poly Lens cloud.

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3 General Room Recommendations

The following sections provide general guidelines to improve room acoustics and create a more enjoyable collaborative experience with your Poly video conferencing system.

Following the recommendations significantly enhances the effectiveness of your conference room for meetings and presentations.

Some sections are reprinted from the *Basics of Audio and Visual Systems Design: Revised Edition*, Chapter 12, "Videoconferencing" written by Scott Sharer, CTS, and Jim Smith, CVE, CTS, copyright 2003, with permission of the Audiovisual and Integrated Experience Association® https://www.avixa.org.

Walls

The construction of the walls affects the quality of your video conferencing experience.

Consider the following recommendations.

NOTE: Wall materials are available from a variety of manufacturers. Be sure to consult your local building codes for additional requirements for your region.

Table 3-1 Wall Recommendations

Recommendation	Explanation
Make sure that the conference room walls are built from slab to slab.	This means that there are no gaps from the concrete of one floor to the concrete of the next floor.
Use resilient, gypsum board mountings to close any gaps.	The required thickness of the gypsum board is 15.9 mm (5/8 in.) or more. For example, one layer of 15.9 mm (5/8 in.) and one layer of 12 mm (1/2 in.) bonded together is ideal for the inside of the room, with a 12 mm (1/2 in.) thick layer (or as required by local building codes) for the outside walls.
Use an appropriate thickness for the inside and outer walls.	There must always be a difference in thickness between the material used on the inside versus outer walls. The difference in thickness subdues mechanical coupling (vibration) between the two layers. A good overall wall thickness is 152.4 mm (6 in.). Poly recommends that you use offset stud construction. This is typically a 152.44 mm (6 in.) header and footer with 88.9 mm (3.5 in.) verticals attached in an alternating pattern, with one toward the outside of the footer and the next toward the inside.

Table 3-1 Wall Recommendations (continued)

Recommendation	Explanation
Place fiberglass dense batting or mineral rock wool, 101.6 mm to 152.4 mm (4 in. to 6 in.) thick (the equivalent of R-11 to R-13), in the wall space.	The thickness of the batting isn't critical, but you must loosely place it in the wall space, not compacted to fit. The resulting wall has excellent acoustic isolation from the outside world. You can achieve more significant acoustic isolation by placing an additional barrier layer within the wall space. Typically, this barrier is made of a dense polymer material, about 3.175 mm (1/8 in.) thick, and the sound-dampening improvement through the wall is roughly a factor of 10.

Windows

Because natural light and sound from windows vary, windows can interfere with the acoustics of a room, alter the way a camera renders colors and brightness, and affect the quality of the video conferencing experience in general. Windows not only transmit room sound, but they also let unwanted outside noise intrude on the conference space.

Consider the following recommendations.

Table 3-2 Windows Recommendations

Recommendation	Explanation
Cover any outdoor-facing windows with curtains.	If this isn't possible, consider removing the windows entirely.
Use window treatments that match the interior look and feel of the space and provide a high level of sound and light block.	A heavyweight drape of 268 g (4 oz) or more, of heavy fullness, with no less than 15 cm (6 in.) fullness or no less than 20 cm (8 in.) centers per fold is best.
Avoid using sheer draperies or standard vertical or horizontal blinds.	These window treatments don't efficiently block sound and light.

Ceiling

Adding high-quality acoustic tiles optimizes the room's sound quality.

If you choose to add acoustic tiles to enhance the rooms acoustics, consider the following recommendations.

NOTE: Consult your local building codes for materials allowed in the various aspects of room acoustic modifications.

Table 3-3 Ceiling Recommendations

Recommendation	Explanation
Install 2.5 cm (1 in.) thick compressed dense core fiberglass tiles to the room's ceiling.	These types of ceiling tiles work well with indirect lighting.

Table 3-3 Ceiling Recommendations (continued)

Recommendation	Explanation
Blanket the ceiling tiles completely from the plenum (air space) area.	This prevents sound from bouncing around uncontrolled and traveling from room to room throughout the plenum. Use a minimum of 15 cm (6 in) thick unfaced dense fiberglass batting or mineral rock wool (the equivalent of R-15 to R-19) for the blanket.
Add a barrier layer between the ceiling tiles and the blanket.	This improves acoustic performance and minimizes extraneous noise from leaving or entering the room through the ceiling. If the weight of the blanket and barrier layer prevents easy access to and from the ceiling, suspend the blanket and barrier layer above the ceiling tiles instead of resting on them.

Floors

Conference room floors are typically out of the camera view but require planning because the material you choose might impact the quality of acoustics in the room. A room with carpet, for example, absorbs sound more effectively than one with hard flooring material.

In addition to choosing floor covering material that best suits aesthetic considerations, consider the following recommendations:

- Choose flooring that is neutral in color.
- Use carpeting with an underlying pad.
- If you must use hard flooring material, note that extra consideration for the acoustic absorptive qualities of the ceiling becomes significantly more important.

Heating, Ventilation, and Air Conditioning

The location of heating, ventilation, and air conditioning (HVAC) equipment within the ceiling of a conference room often renders the room unusable for video or audio-only conferences due to the noise associated with the equipment. Consider using a room where all HVAC equipment is located outside the meeting room.

If the meeting room must include HVAC equipment, consider including the following adaptations to provide the best meeting experience.

Table 3-4 Heating, Ventilation, and Air Conditioning Recommendations

Recommendation	Explanation
Include at least a 1.2 m (4 ft) separation between any HVAC equipment (particularly the air conditioning equipment) and the microphones.	Your room may require a greater distance, depending on the noise level of your HVAC equipment.
Replace the air vents with low-velocity diffusers.	This eliminates wind noise when the HVAC system is running.
Install HVAC ducts and diffusers that are oversized for the general application in the space.	Insulated flexible ducts and noise dampening diffusers with a minimum diameter of 0.61 m (2 ft) generally work best.

Table 3-4 Heating, Ventilation, and Air Conditioning Recommendations (continued)

Recommendation	Explanation
Install all ducts with gradual bends and curves rather than rigid 90-degree corners.	This minimizes thunder-like sounds when the HVAC system turns on and air pushes through the ductwork into the room.

Vibration

Excessive room or wall vibration can negatively affect video performance due to camera movement that may be noticeable by far-end participants.

Many factors cause room or wall vibration, such as HVAC equipment mounted nearby, heavy machinery in use nearby, high-rise structural vibrations, building sway or movement, and even trains or subways passing nearby or underneath the building.

Consider the following tips for addressing vibration issues:

- Consult the building manager, an architect, or a contractor to determine the optimal placement for your Poly system if building vibrations are a concern.
- If there are known vibration issues, please contact your Poly sales representative or speak to your Poly project manager before system installation.

Room Color

The color of the walls in the meeting room can significantly impact the far end's experience and alter the far end's perception of the video quality.

Consider the following color usage recommendations:

- Avoid saturated color walls such as pure red or pure yellow as they can affect the auto white balance of the cameras.
- Walls in light gray with hints of blue work best. For rooms with bright lighting, slightly darker colors work as well.
- If your room includes acoustic panels, make sure that panels within the camera view are colored silver, light gray, quartz, or champagne.

Lighting Recommendations

When preparing to install a Poly VideoOS system, you must provide optimal lighting that strengthens the capability of the video camera to effectively manage differences in brightness.

The brightness of the lighting in a video conference room plays an important role in determining the quality of video for the far end. Well-lit rooms, scenes, and images have a better chance of accurate detection, which ultimately results in better framing experiences.

Table 3-5 Lighting Recommendations

Recommendation	Explanation
Use indirect fluorescent or LED lighting for 80% to 85% of the room's lighting and use evenly distributed direct lighting for the remaining 15% to 20%.	Indirect lighting works by using the upper walls and ceiling as reflectors to diffuse the light. It also helps minimize shadows on participants' faces and makes the room more comfortable for viewing the far end on the monitor. Direct light on the walls creates backlight separation between foreground and background objects or surfaces.
Use a consistent color temperature.	Varying colors of lighting in a camera's field of view can interfere with its automatic compensations. Poly recommends a color temperature of 3,000 K to 3,800 K. If there's a significant quantity of outdoor light entering the room, use a light temperature that is more than 5,500 K. Avoid using 2,800 K light sources.
Use no less than 30 fc (323 lux) and ideally as much as 55 fc (592 lux) of light on participants' faces in view of the camera.	Bright light increases the range of in-focus objects. Participants at the far end see more people in sharp focus, and the codec has an easier time encoding the image. Make sure that lighting is completely even across the field of view and illuminates conference participants' faces without being in the camera's field of view.
Avoid standard direct fluorescent lights or spotlights.	This type of lighting can interfere with the clarity of video sent to the far end and cast significant shadows on the participants.
Avoid dark environments or situations where bright light is thrown on the camera lens.	Too much backlight causes dark image generation and can make the faces of those on camera blend in with the room background.

Acoustic Recommendations

The acoustic and noise levels in a room can greatly impact the audio quality during a meeting. Sounds from adjacent rooms (such as meeting rooms, offices, kitchens, reception areas, restrooms, or data centers) might interfere with the audio during conferences.

Make sure the Noise Criteria (NC) rating for the room is better than NC30 with less than a 43dBA SPL ambient noise level. If the room doesn't meet the NC rating, consider another room, or consult with an architect to help you determine ways to reduce noise within the room. The quieter the room, the easier it is to hear others in the same room, hear the far end, and for the far end to hear you.

To provide the best conferencing experience, consider the following acoustic treatment tips to maximize the performance of the integrated microphones:

- Use acoustic treatment on at least two adjoining walls, including the walls with mounted monitors.
- Use acoustic treatment on any walls adjoining hallways or office spaces.
- Cover at least 50% of the wall with acoustic panels that are 2.5 cm (1 in.) thick compressed, dense-core fiberglass (fabric-covered or equivalent) with an average sound absorption index of 0.9.

- To reduce noise disturbance to surrounding areas, laminate an additional barrier layer to the dense-core material, such as 1 cm (3/8 in) thick fiber compression board. Place the barrier layer against the existing wall material then place the acoustic absorption panels on the interior-room side of that. The barrier panels must have a sound absorption index of 0.9 and an additional specification of a sound transmission coefficient (STC) of 20. A high-quality conference room wall usually has an STC of 60 or more.

NOTE: A high-quality conference room wall usually has an STC of 60 or more.

You can also minimize acoustic and noise levels near a conference room by enabling and configuring Poly Acoustic Fence and Poly Acoustic Fence with Beam Shaping Technology. For more information, see *Poly Acoustic Fence and Poly Acoustic Fence with Beam Shaping Technology*.

Network Readiness

Network readiness is an important component of preparing a room for high-quality video communication.

Make sure that your network bandwidth and security measures meet the minimum requirements of your applicable platforms and supports your anticipated network traffic. For more information, see the network and firewall requirements outlined in the following documentation (as applicable):

- *Poly Video Mode Administrator Guide*
- Prepare your organization's network for Microsoft Teams
- System Requirements for Zoom Rooms

4 System Characteristics and Cable Lengths

The following tables provide the characteristics and cable lengths for the G62, G7500, Studio X Family systems, Studio V Family, Studio E60 and Studio E70.

Poly Studio G62 specifications

Poly Studio G62 systems are suitable for medium to large-sized conference rooms.

Mounting options

The Poly Studio G62 ships with magnetic on each corner of the bottom of the system. This allows you to install the Poly Studio G62 inside a rack without additional hardware, or by using the Poly Studio G62 magnetic mounting plate.

Magnetic mounting plate -Poly Studio G62 Mounting Plate and Optional PoE Injector Quick Start Guide

Table 4-1 Poly Studio G62 Characteristics

Characteristic	Description
Physical	34.92 cm W × 3.81 cm H × 13.87 cm D (13.75 in. × 1.5 in × 5.5 in.) 0.95 kg (2.1 lbs)
HDMI cables	Supplied HDMI cable (1) length: 1.83 m (6ft)
Ethernet cable	Supplied network cable length: 3m (9.8 ft)
Power	Powered using a PoE+ Class 4 port, injector, or switch. No power supply provided.
Power consumption	Typical operating voltage/power 100 to 240 VAC, 50/60 Hz 54V DC input, 3.34A, 180W Typical BTU/h: 65

Poly G7500 specifications

Poly G7500 systems are suitable for large-sized conference rooms.

You can mount your Poly G7500 in a rack or by using the optional wall mount bracket.

Wall mount - Poly G7500 Wall Mount Setup Sheet

Table 4-2 Poly G7500 Characteristics and Cable Lengths

Characteristic	Description
Physical	34.92 cm W × 3.81 cm H × 13.87 cm D (13.75 in. × 1.5 in × 5.5 in.) 0.95 kg (2.1 lbs)
HDMI cables	Supplied HDMI cable (2) length: 1.83 m (6 ft)
Camera cable	Supplied HDCI cable length: 3 m (9.8 ft)
Poly IP Table Microphone	Supplied shielded LAN cable length: 7.6 m (25 ft)
Ethernet cable	Supplied codec network cable length: 3.6 m (12 ft)
Power supply cable	Approximately 3 m (9.8 ft) supplied for the codec **NOTE:** The display and other devices associated with the system might require additional outlets.
Power consumption	Typical operating voltage/power 100 to 240 VAC, 50/60 Hz 54V DC input, 3.34A, 180W Typical BTU/h: 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio E60 specifications

Poly Studio E60 cameras are suitable for large-sized conference rooms.

Mounting options

You can mount your Poly Studio E60 using one of the following options:

- Wall mount (above or below the monitor) - Poly Studio E60 Wall Mount Quick Start Guide

  Poly Studio E60 Wall Mount Template
- Display clamp - Poly Studio E60 Display and Tripod Mount Quick Start Guide
- Ceiling mount - Poly Studio E60 Ceiling Mount Quick Start Guide

  Poly Studio E60 Ceiling Mount Template
- Tripod mount - Poly Studio E60 Display and Tripod Mount Quick Start Guide

Table 4-3 Poly Studio E60 Power and Connectivity

Characteristic	Description
Physical	200 mm W x 165.9 mm H x 158.4 mm D (7.87 in. x 6.53 in. x 6.24 in) 1796 g (3.96 lbs)
Resolution	2160p, 4K UHD (3840 x 2160)
Camera range	10m (32.8 ft)

Table 4-3 Poly Studio E60 Power and Connectivity (continued)

Characteristic	Description
Zoom	12x optical zoom
Field of View	71°
Power over Ethernet (PoE) connection	Supplied network cable length: 4.57 m (15 ft)
Power consumption	12VDC at 1.2A External power supply input spec: 100-240V 50/60Hz, 1.5A External power supply output spec: 12.0V DC, 5.0A, 60.0W, L.P.S

For more specifications on this system, see the product specifications page on the HP support site.

Poly Studio E70 specifications

Poly Studio E70 cameras are suitable for large-sized conference rooms.

Mounting options

You can mount your Poly Studio E70 using one of the following options:

- Wall mount (above or below the monitor) - Poly Studio E70 Wall Mount Quick Start Guide
- Display clamp - Poly Studio E70 Display Clamp Quick Start Guide
- VESA mount - Poly Studio E70 VESA Mount Quick Start Guide

Table 4-4 Studio E70 Power and Connectivity

Characteristic	Description
Physical	321 mm W x 102 mm H x 89.1 mm D (12.63 in x 4.02 in x 3.51 in) 907 g (2 lbs)
Resolution	2160p, 4K UHD (3840 x 2160)
Camera range	Up to 25ft
Camera zoom	7.3x digital zoom
Field of View	120° HFOV, 70° HFOV 78° DFOV, 140° DFOV 68 VFOV, 40° VFOV
Ethernet cable for power over Ethernet (PoE) connection	Supplied network cable length: 4.57 m (15 ft)
Power consumption	12VDC at 1.2A External power supply input spec: 100-240V 50/60Hz, 1.5A External power supply output spec: 12.0V DC, 5.0A, 60.0W, L.P.S
Connection type	USB and IP LLN connectivity

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio V12 specifications

Poly Studio V12 systems are suitable for medium and large conference rooms.

Mounting options

You can mount your Poly Studio V12 using one of the following options:

- Wall mount (above or below the monitor) Poly Studio V12 Wall Mount Setup Sheet
- Display mount Poly Studio V12 Display Mount Quick Start Guide
- Table stand Poly Studio V12 Stand Setup Sheet

Table 4-5 Poly Studio V12 Characteristics and Cable Lengths

Characteristic	Description
Physical	2.63 x 22.7 x 3.07 in (6.68 x 57.65 x 7.8 cm) Data Sheet 22.7 x 2.67 x 2.95 in (577 x 68 x 75 mm) Poly Spaces 1.8 lb (816.5 g) Data Sheet
USB Type-C cable	Supplied cable 1.83 m (6 ft)
Cameras	120° HFOV 132° DFOV
Camera range	Up to 15 ft (4.57 m)
LAN connection	Supplied network cable length: 2 m (6.6 ft)
Power supply cable	Optional Poly PoE++ 65 W 2.5G adapter (B5NH6AA)
Power consumption	

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio X72 specifications

Poly Studio X72 systems are suitable for large conference rooms.

Mounting options

You can mount your Poly Studio X72 using one of the following options:

- Wall mount (above or below the monitor) - Poly Studio X72 Wall Mount Quick Start Guide

  Wall Mount Template
- Table stand
- VESA mount

Table 4-6 Poly Studio X72 Characteristics and Cable Lengths

Characteristic	Description
Physical	40.18 mm W × 135.8 mm H × 119.33 mm D (33.1 in. × 5.3 in. × 4.6 in.); 7.05 lbs/3.2 kg
HDMI Cables	Supplied HDMI cable (2) length: 1.83 m (6 ft)
Cameras	120° HFOV, 70° HFOV 78° DFOV, 140° DFOV 68 VFOV, 40° VFOV
Camera range	Minimum distance: 1 m (3 ft) Maximum distance: 7.62 m (25 ft)
HDMI Cables	Supplied HDMI cable (2) length: 1.83 m (6 ft)
Ethernet cable	Supplied codec network cable length: 3.6 m (12 ft)
Power supply cable	Approximately 3 m (9.8 ft) supplied for the codec **NOTE:** The display and other devices associated with the system might require additional outlets.
Power consumption	Typical operating voltage/power 37 VA @ 120 V @ 60 Hz; 37 VA @ 230 V @ 50/60 Hz Typical BTU/h 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio V72 specifications

Poly Studio V72 systems are suitable for medium and large conference rooms.

Mounting options

You can mount your Poly Studio V72 using one of the following options:

- Wall mount (above or below the monitor)
- Display mount
- Table stand

Table 4-7 Poly Studio V72 Characteristics and Cable Lengths

Characteristic	Description
Physical	40.18 mm W × 135.8 mm H × 119.33 mm D (33.1 in. × 5.3 in. × 4.6 in.); 7.05 lbs/3.2 kg
HDMI cables	Supplied HDMI cable (1) length: 1.83 m (6 ft)
Cameras	120° HFOV, 70° HFOV 78° DFOV, 140° DFOV 68 VFOV, 40° VFOV

Table 4-7 Poly Studio V72 Characteristics and Cable Lengths (continued)

Characteristic	Description
Camera range	Minimum distance: 1 m (3 ft) Maximum distance: 7.62 m (25 ft)
HDMI cables	Supplied HDMI cable (1) length: 1.83 m (6 ft)
LAN connection	Supplied codec network cable length: 3.6 m (12 ft)
Power supply cable	Approximately 3 m (9.8 ft) supplied for the codec **NOTE:** The display and other devices associated with the system might require additional outlets.
Power consumption	Typical operating voltage/power 37 VA @ 120 V @ 60 Hz; 37 VA @ 230 V @ 50/60 Hz Typical BTU/h 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio X70 specifications

Poly Studio X70 systems are suitable for medium and large conference rooms.

Mounting options

You can mount your Poly Studio X70 using one of the following options:

- Wall mount (above or below the monitor) - Poly Studio X72 Wall Mount Quick Start Guide

  Wall Mount Template
- VESA mount - Poly Studio X70 VESA Mount Quick Start Guide
- Table Mount - Poly Studio X70 Table Mount Quick Start Guide

Table 4-8 Poly Studio X70 Characteristics and Cable Lengths

Characteristic	Description
Physical	40.18 mm W × 135.8 mm H × 119.33 mm D (33.1 in. × 5.3 in. × 4.6 in.); 7.05 lbs/3.2 kg
Cameras	120° HFOV, 70° HFOV 78° DFOV, 140° DFOV 68 VFOV, 40° VFOV
Camera range	Minimum distance: 1 m (3 ft) Maximum distance: 7.62 m (25 ft)
HDMI cables	Supplied HDMI cable (2) length: 1.83 m (6 ft)
LAN connection	Supplied codec network cable length: 3.6 m (12 ft)

Table 4-8 Poly Studio X70 Characteristics and Cable Lengths (continued)

Characteristic	Description
Power supply cable	Approximately 3 m (9.8 ft) supplied for the codec **NOTE:** The display and other devices associated with the system might require additional outlets.
Power consumption	Typical operating voltage/power 37 VA @ 120 V @ 60 Hz; 37 VA @ 230 V @ 50/60 Hz Typical BTU/h 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio V52 specifications

Poly Studio V52 premium USB video bars are suitable for medium-sized conference rooms.

Mounting options

You can mount your Poly Studio V52 using one of the following options:

- Stand mount - Poly Studio V52 Stand Quick Start Guide
- Wall mount (above or below the monitor) - Poly Studio V52 Wall Mount Quick Start Guide
- Display mount - Poly Studio V52 Display Mount Quick Start Guide
- VESA mount - Poly Studio V52 VESA Mount Quick Start Guide

Poly Studio V52 can be connected to:

- Microsoft Teams Rooms on Windows conferencing PC
- Zoom Rooms on Windows conferencing PC
- Bring your own device (BYOD) PC running Windows, macOS, or ChromeOS

Table 4-9 Poly Studio V52 Characteristics and Cable Lengths

Characteristic	Description
Physical	762 mm W × 102 mm H × 102 mm D (30 in × 4 in × 4 in) 5.6 lbs/2.54 kg
Camera	95° HFOV 110° DFOV 54° VFOV
Camera range	Up to 20 ft
HDMI cables	Supplied HDMI cable (1) length: 1.83 m (6 ft)
Ethernet cable	Supplied codec network cable length: 4.57 m (15 ft)

Table 4-9 Poly Studio V52 Characteristics and Cable Lengths (continued)

Characteristic	Description
Power cable	Approximately 3 m (9.8 ft) supplied for the codec **NOTE:** The display and other devices associated with the system might require additional outlets.
Power consumption	Typical operating voltage/power: 37 VA @ 120 V @ 60 Hz; 37 VA @ 230 V @ 50/60 Hz Typical BTU/h: 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio X52 specifications

Poly Studio X52 systems are suitable for medium-sized conference rooms.

Mounting options

You can mount your Poly Studio X52 using one of the following options:

- Stand mount - Poly Studio X52 Stand Quick Start Guide
- Wall mount (above or below the monitor) - Poly Studio X52 Wall Mount Quick Start Guide
- Display mount - Poly Studio X52 Display Mount Quick Start Guide
- VESA mount - Poly Studio X52 VESA Mount Quick Start Guide

Table 4-10 Poly Studio X52 Characteristics and Cable Lengths

Characteristic	Description
Physical	762 mm W × 102 mm H × 102 mm D (30 in × 4 in × 4 in) 5.6 lbs/2.54 kg
Camera	95° HFOV 110° DFOV
Camera range	Up to 20 ft
HDMI cables	Supplied HDMI cable (2) length: 1.83 m (6 ft)
Ethernet cables	Supplied codec network cable length: 4.57 m (15 ft)
Power cable	Approximately 3 m (9.8 ft) supplied for the codec **NOTE:** The display and other devices associated with the system might require additional outlets.
Power consumption	Typical operating voltage/power: 37 VA @ 120 V @ 60 Hz; 37 VA @ 230 V @ 50/60 Hz Typical BTU/h: 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio X50 specifications

Poly Studio X50 systems are suitable for small-sized conference rooms.

Mounting options

When deciding to mount above or below the display, consider the standard viewing height of seated participants, typically 48" and the height of the display. When possible, position your camera to align with participant viewing height.

You can mount your Poly Studio X50 using one of the following options:

- Stand mount - Poly Studio X50 Stand Quick Start Guide
- Wall mount (above or below the monitor) - Poly Studio X50 Wall Mount Setup Sheet
- Display mount - Poly Studio X50 Display Mounting Kit

Table 4-11 Poly Studio X50 Characteristics and Cable Lengths

Characteristic	Description
Physical	762 mm W × 102 mm H × 102 mm D (30 in × 4 in × 4 in); 5.6 lbs/2.54 kg
Camera	110° HFOV 121° DFOV 62° VFOV
Camera range	6.1 m (20 ft)
HDMI cables	Supplied HDMI cable (2) length: 1.83 m (6 ft)
Ethernet cable	Supplied codec network cable length: 4.57 m (15 ft)
Power cable	Approximately 3 m (9.8 ft) supplied for the codec **NOTE:** The display and other devices associated with the system might require additional outlets.
Power consumption	Typical operating voltage/power: 37 VA @ 120 V @ 60 Hz; 37 VA @ 230 V @ 50/60 Hz Typical BTU/h: 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio X30 specifications

Poly Studio X30 systems are suitable for focus rooms and small conference rooms.

Mounting options

You can mount your Poly Studio X30 above or below a monitor.

When deciding to mount above or below the display, consider the standard viewing height of seated participants, typically 48" and the height of the display. When possible, position your camera to align with participant viewing height.

You can mount your Poly Studio X30 using one of the following options:

- Stand mount - Poly Studio X30 Stand Setup Sheet
- Wall mount (above or below the monitor) - Poly Studio X30 Wall Mount Setup Sheet
- Display mount - Poly Studio X30 Display Mount Setup Sheet

Table 4-12 Poly Studio X30 Characteristics and Cable Lengths

Characteristic	Description
Physical	441.8 mm W x 62.5 mm H x 61.6 mm D (17.38 in. x 2.46 in. x 2.42 in.); 1.6 lbs/.73 kg
Camera	112° HFOV DFOV VFOV
Camera range	Minimum distance: 1 m (3 ft) Maximum distance: m (13 ft)
HDMI cables	Supplied HDMI cable (2) length: 1.83 m (6 ft)
Ethernet cables	Supplied codec network cable length: 4.57 m (15 ft)
Power consumption	Typical operating voltage/power: 37 VA @ 120 V @ 60 Hz; 37 VA @ 230 V @ 50/60 Hz Typical BTU/h: 65

For more specifications on this system, see the Product specifications page on the HP support site.

Poly Studio X32 specifications

Poly Studio X32 systems are suitable for focus rooms and small conference rooms.

Mounting options

You can mount your Poly Studio X32 above or below a monitor.

When deciding to mount above or below the display, consider the standard viewing height of seated participants, typically 48" and the height of the display. When possible, position your camera to align with participant viewing height.

You can mount your Poly Studio X32 using one of the following options:

- Stand mount - Poly Studio X32 Stand Setup Sheet
- Wall mount (above or below the monitor) - Poly Studio X32 Wall Mount Setup Sheet
- Display mount - Poly Studio X32 Display Mount Setup Sheet

Table 4-13 Poly Studio X32 Characteristics and Cable Lengths

Characteristic	Description
Physical	22.7 x 2.6 x 2.95 in (576.8 x 66.1 x 74.8 mm) 2.51 lb (1139.9 g)
Camera	120° HFOV 132° DFOV
Camera range	Up to 15 ft (4.57 m)
HDMI cable	Supplied HDMI cable length: 1.83 m (6 ft)
Ethernet cable	Supplied Cat 6a Ethernet cable length: 3.66 m (12 ft)
Power consumption	

For more specifications on this system, see the Product specifications page on the HP support site.

5 Room Layout Recommendations

Following the requirements, recommendations, and considerations in this section provides the best meeting experience for meeting participants.

NOTE: For detailed conference room setup for offices, and configuration options available on different platforms, visit the HP Hybrid Home & Enterprise Video Conferencing website.

Consider the following information before the installation visit for your Poly Studio G62 or Poly G7500 or Studio X Family video conferencing system:

- Recommended room dimensions
- Codec placement
- System characteristics and cable lengths
- LAN ports and power outlet placement
- Camera placement
- Microphone placement
- Display options

Recommended Room Dimensions

Poly recommends using the appropriate video conferencing system based on your conferencing room size. Using a video conferencing system in a room that is too large, for example, might lead to cut off audio or a decrease in video quality.

The following table lists recommended room dimensions.

NOTE: Camera distance refers to the recommended maximum distance of the room participant that is furthest from the camera. See Camera Placement on page 24 for more information, including example camera framing diagrams.

Table 5-1 Room Dimensions

Room Size	Recommended Dimensions	Recommended Poly System	Camera Distance
Extra Large	>6 m (19.7 ft) x 10 m (32.8ft)	Poly Studio G62 with Poly Studio E60	> 10 m (32.8 ft)

Table 5-1 Room Dimensions (continued)

Room Size	Recommended Dimensions	Recommended Poly System	Camera Distance
Large	5.5 m (18 ft) x 8.5 m (20 ft)	Poly Studio G62 with Poly Studio E70	6.1 m (20 ft)

Codec Placement

The location of your codec depends on several factors, and correct placement ensures a great conferencing experience.

Measure your space before installation and plan the codec placement.

1. Place the codec within the standard cable lengths to ensure that cables reach the required equipment. You might need additional cables or connectors if you place equipment outside of the standard cable lengths.

NOTE: If you need to extend the length of cables between your system components, Poly recommends working with your A/V integrator or partner. They can help you implement certified solutions that work with the unique requirements in your environment.

2. Place your codec in an area that provides ventilation around the codec. Poly recommends a minimum distance of 35 mm (1.3 inches) on each side of the codec. Covering the ventilation opening can result in overheating and system instability.

IMPORTANT: Review the important safeguards for your system mentioned in the Safety and Regulatory Notices located at the Poly Online Support Center.

Camera Placement

When planning the placement of your cameras, think about room size, monitor location, camera type and other options to ensure you provide the optimum viewing experience for the far-side.

Camera types

Use the camera that is best suited to your conference room size. Choose from the following options:

- Connect one or two Poly Studio E60 or Poly Studio E70 cameras to the two Poly Studio G62 USB Type-A ports.

  Use a StarTech ST4300USBM Mountable 4-Port USB hub to connect up to three USB cameras to the system.

- Connect a Poly Studio E70 camera, powered using a PoE or an optional Poly Studio E70 power adapter, to the Poly Studio G62 LLN port.

  Connect a Poly Studio E60 camera, powered using a PoE or an optional Poly Studio E60 power adapter, to the Poly Studio G62 LLN port.

Monitor and Camera Position

Consider the following display placement and camera mounting tips:

- **Monitor height** - Mount the display so that the center of the display is at eye level with seated participants, approximately 1.07 m (42 in.) from the finished floor. Then position the camera as close to that level as possible.
- **Camera on top of display** - When placing your camera on the display, choose locations that are near to the center lines (vertical and horizontal) of the display showing the far-side speakers. This location lends itself to a natural sense of eye contact.
- **Camera height** - Don't mount cameras at extreme heights and then point them down like surveillance cameras. Mounting cameras at extreme heights may cause eye contact issues and skew the images of people. Detections may also become a problem.

  A practical maximum height is 1.8 m to 2.1 m (6 ft to 7 ft) from the floor to the center line of the camera housing (the lower camera lens).

- **Camera horizontal position with two monitors** - Centering a camera between multiple displays may be aesthetically pleasing, but it can compromise eye contact.
- **Background** - Don't point your camera at a busy background. This includes busy patterns or interior and exterior windows that have a lot of traffic.
- **Participant distance from camera** - The parallax error appears less pronounced as the distance between the camera and the subject increases. Participants in a large conference room with offset cameras may be able to view eye contact as normal, but huddle or focus rooms may be too small for the camera distance to compensate for the perceived error.

Camera mounting recommendations

The position and elevation of the monitor in a meeting room determines whether you mount the camera above or below the display.

NOTE: The Poly Studio X and Poly Studio E70 electronics don't allow pan or tilt when the camera is at full-wide angle. You must zoom in to allow pan or tilt.

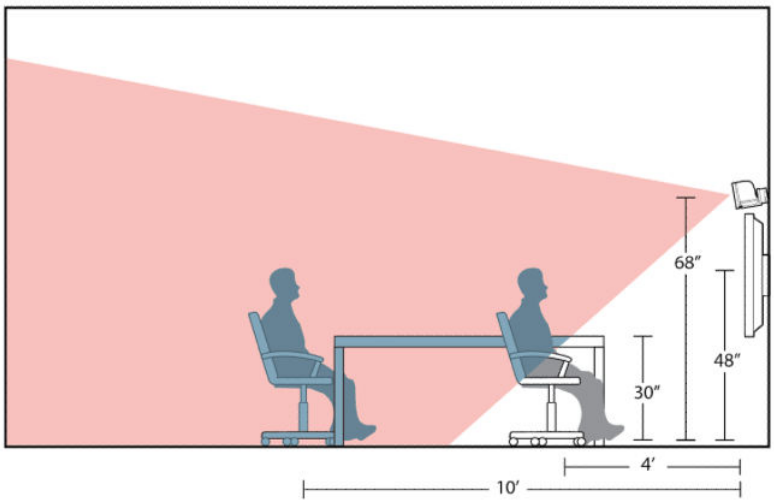
Camera mounted on top of the display

When mounting a camera on top of a monitor, tilt the camera so that its center line aligns with the furthest participant. The tilt angle will typically be no more than 5 degrees to 10 degrees.

Poly camera mounting hardware includes an articulating hinge allowing you to tile the camera down when mounting on top of a monitor. You can tilt the hinge to an angle that provides a wide enough field of view for your conference room layout. For best results, Poly recommends that you position the camera so that its center line points to the person seated furthest from the camera.

The following diagram shows the perspective of the camera when the room participant at the furthest distance from the camera is 3 m (10 ft) away. At this distance, slightly tilting the camera forward captures the room participant in the camera's narrow and wide VFOV.

Figure 5-1 Camera in a modest tilt position

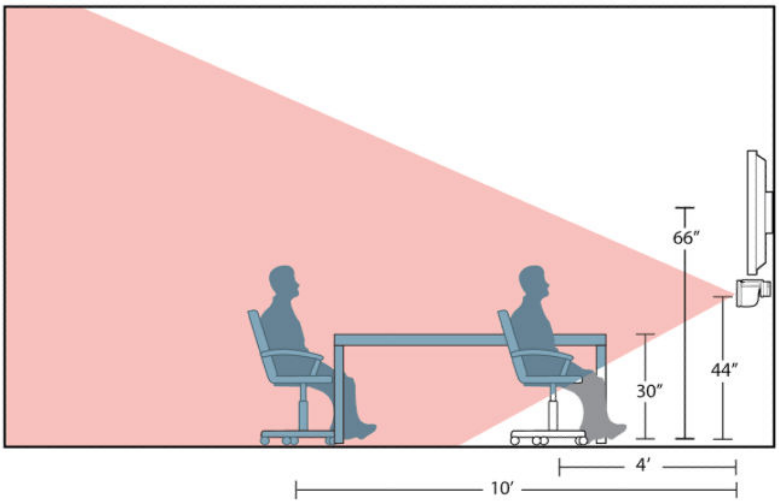


Camera mounted below the display

When mounting the camera on the bottom of the display, the camera should remain at a ninety degree angle and be positioned at viewing height approximately 42 to 48 inches. Mounting the camera below the display can present a more natural view for far end participants. However, it can also render an unintentional and possibly unflattering perspective to the far-side viewers if a meeting attendee walks in front of the camera

Some Poly cameras require that the camera mount upside down when placed below a monitor. Consult the quick start guide for your camera or video bar to ensure you mount it correctly. For cameras that mount upside down, you may need to invert the video input in the camera settings.

The following diagram shows the perspective of the camera when the room participant at the furthest distance from the camera is 3 m (10 ft) away.



Camera Auto-Framing

Poly camera framing technology can automatically frame groups of people and follow conversations in meeting rooms.

Position the cameras in the room to provide optimal framing performance. Framing options and behavior depend on your connected camera.

Consider the following tips for obtaining optimal camera framing performance:

- Keep the camera FOV free of distractions. Avoid having an open doorway, glass wall to a corridor, or a window in the background of the meeting participants.
- Maintain a consistent color temperature of room lighting including any contribution by outside windows.
- Don't place items in the camera's FOV that can distract the camera's system performance. Examples are human-like figures or statues on the meeting table or human facial images on the wall. The camera may detect these and decide to focus on them.
- Refer to a camera's distance specifications to avoid detection failures.

See your conferencing application's support documentation for details on supported cameras, multicamera support, certification, and camera switching support.

LAN Ports and Power Outlet Placement

Planning cable layouts and confirming the number of power outlets you need are important considerations before installing a Poly system.

Consider the following power outlet and cabling tips:

- To connect IP LLN peripherals, such as Poly Studio E70 cameras or Poly IP microphones, to a Poly Studio G62, you'll need a Netgear A/V Line M4250 GSM4210PD Ethernet switch.

Peripherals such as a Poly TC8, Poly TC10, or Poly Trio C60 that require PoE IP connectivity should be connected a separate PoE switch with network access.

- In most cases, your Poly conferencing solution requires access to multiple Ethernet ports on the same subnet.

  If possible, place the teleconferencing system near LAN ports in the wall.

  Make sure that there are available Ethernet ports near the location of a paired Touch Controller device or Trio phone for the best installation experience.

- Poly recommends running all cables underneath the floor to avoid accidentally tripping or falling. If you can't run cables under the floor, consider using an in-carpet solution or an over-the-floor cable cover.

- Verify that the room includes enough power outlets located near your system and controller if the controller isn't using PoE.

Microphone Placement

The ideal location for microphones in a conference environment is near the speaker. When speakers see the microphone while in a seated position relative to the video screen and within the distance guidelines presented in this document, the room microphone detects their voices more clearly.

Consider the following tips for optimal microphone placement:

NOTE: Sound levels decrease by one-fourth at the microphone as the distance from the speaker doubles, which can quickly cause an unfavorable audio experience.

- Placing microphones with a similar distance between participants helps the far end hear conversations more smoothly and even sounding.
- Direct sound is preferable to reflected sound. Avoid positioning participants with their back to a microphone, which can cause their voices to sound dull and contain significant amounts of room reverberance.
- Position a table microphone closer to the display to enable the microphone to hear meeting participants directly, which improves the fidelity of the audio sent to the far end.
- Multiple microphones are ideal for meetings with rectangular conference tables where people sit along a long edge. Using multiple microphones ensures there's even coverage of each speaker.
- Avoid placing any microphones where direct airflow from fans or HVAC might touch the microphone.
- The minimum distance to place a microphone in relation to a room loudspeaker is 1 m (3 ft).

Audio Pickup Ranges

Understanding the audio pickup range for a microphone can also help you determine the most suitable locations for your microphones. Microphone pickup range refers to the distance at which a microphone is sensitive to sound.

The following tables list the typical and maximum audio pickup ranges for the Poly Studio USB and Poly Studio R30 built-in microphones and common microphone solutions. Typical audio pickup ranges refer to acceptable audio quality under most room conditions without causing the far end difficulty in understanding the speech.

Distances that are further than the typical range might be acceptable under conditions with good room acoustics (low reverberance and noise). The maximum audio pickup range value refers to the recommended furthest distance under any room conditions.

NOTE: All distances are subject to the ambient noise and reverberant characteristics of the room in use.

Table 5-2 Audio Pickup Ranges for Common Microphone Solutions

Microphone Solution	Typical Distance	Maximum Distance
Poly IP table microphone	Circle with a radius of 1 m (3.3 ft) away from the microphone	Circle with a radius of 2.5 m (8.2 ft) away from the microphone
Poly IP ceiling microphone	Circle with a radius of 1.5 m (4.9 ft) directly below the microphone	Circle with a radius of 3.5 m (11.5 ft) directly below the microphone
HP Poly Studio A2 Table Mic	Circle with a radius of 1.8 m (5.9 ft) away from the microphone	Circle with a radius of 4.3 (14 ft) away from the microphone with NoiseBlock AI enabled

Example Microphone Placement Layouts

This section includes diagrams of example layouts of Poly IP table microphones and ceiling microphones.

The circles in the diagrams represent the audio pickup range for typical (small circle) and maximum (large circle) distances from the system.

Poly IP Table microphone placement

1 m (3.3 ft) from the microphone = works under all room conditions

2.5 m (8.2 ft) from the microphone = maximum distance under typical room conditions

Table microphones should be placed no closer than 2m apart and no further than 5m apart.

Poly IP Ceiling microphone placement

1.5 m (4.92 ft) from the microphone = works under all room conditions

3.5 m (11.48 ft) from the microphone = maximum distance under typical room conditions

Poly IP Ceiling mics should be placed no closer than 3m apart and no further than 7m apart.

HP Poly Studio A2 Table Microphone placement

Place table microphones at least 2.5 m (8.2 ft) from a Poly video bar = works under all room conditions

Place table microphones 1.2 m -1.8 m (4 ft - 5.2 ft) apart from each other

Example layouts

Figure 5-2 1 IP Table or 1 IP Ceiling Microphone Layout

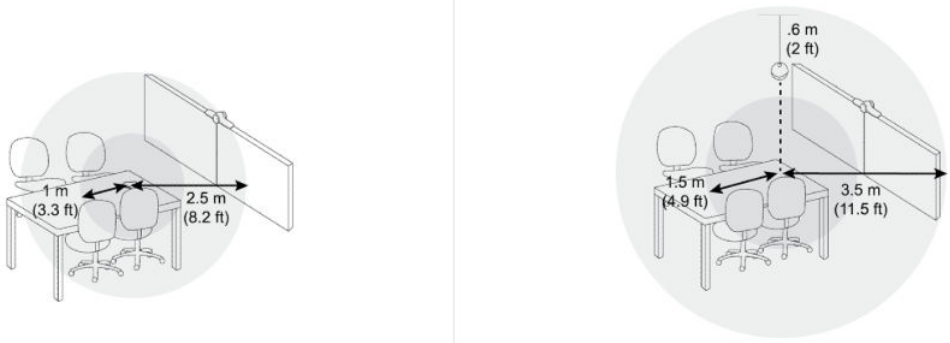


Figure 5-3 2 IP Table or 2 IP Ceiling Microphone Layout

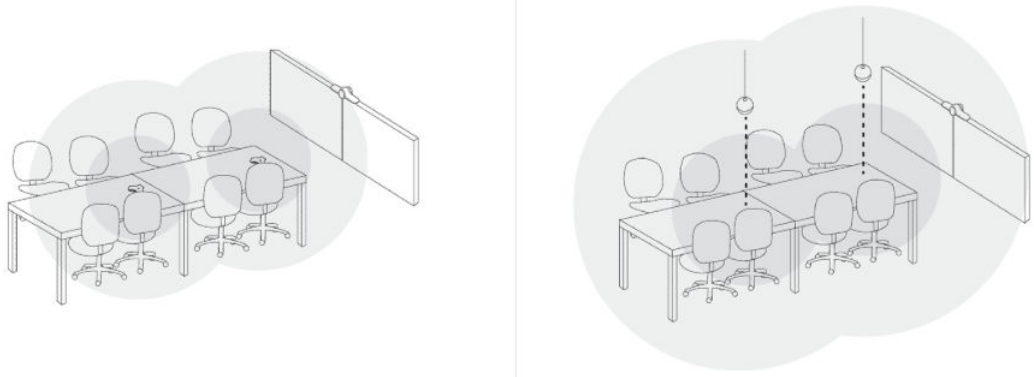


Figure 5-4 3 IP Table or 3 IP Ceiling Microphone Layout

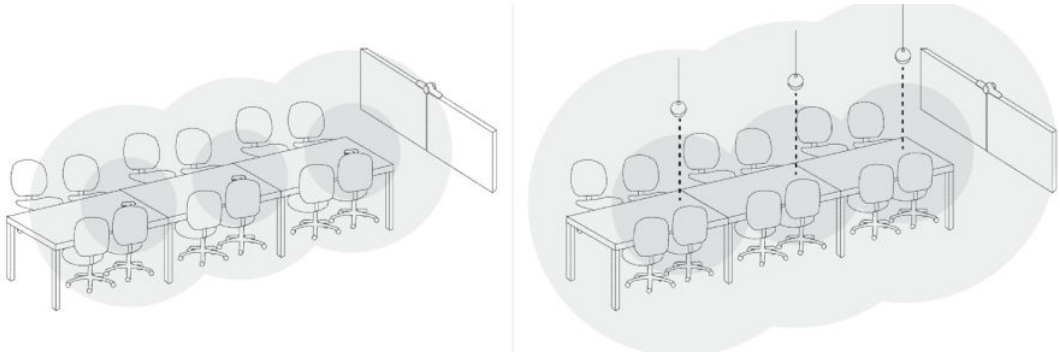
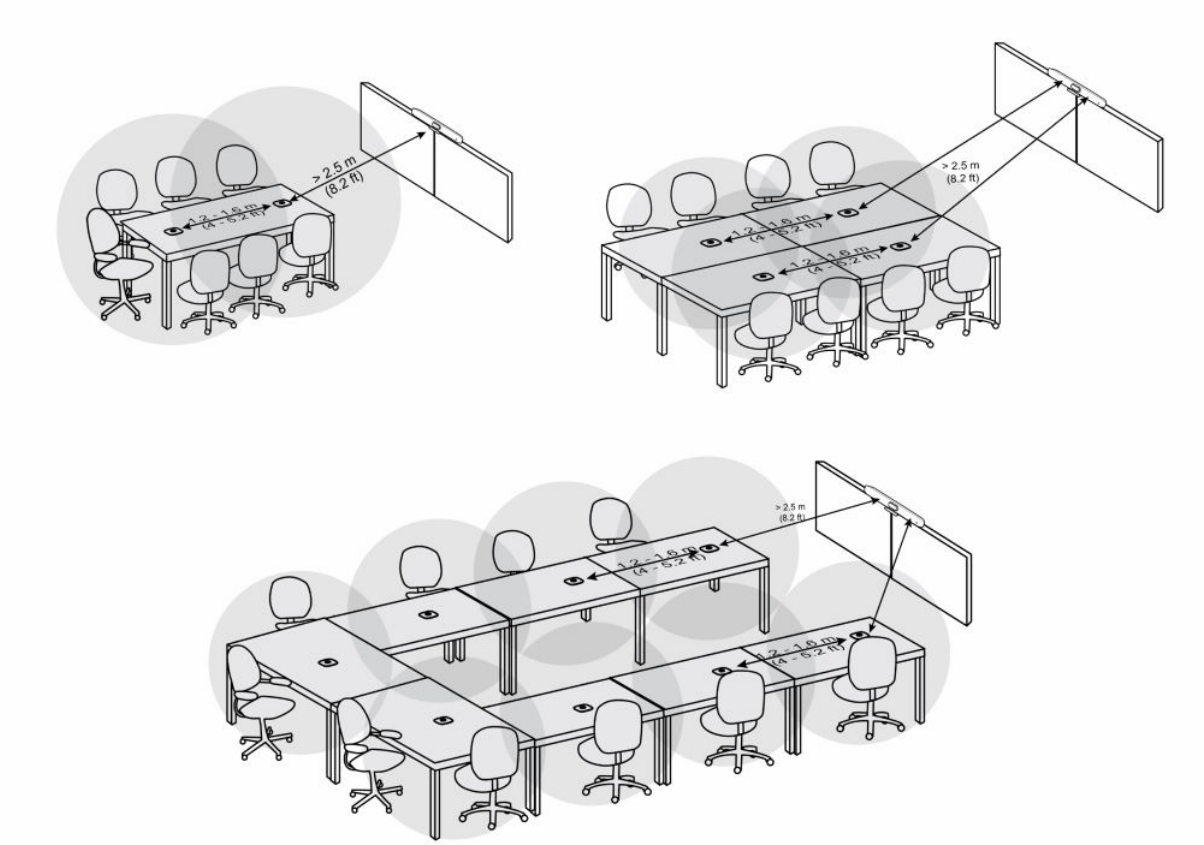


Figure 5-5 HP Poly Studio A2 Table Microphone Layout for Small, Medium, and Large/Extra Large Rooms



Maximum Volume and Full Duplex

A room's audio level can affect the audio quality during a meeting. Using excessively loud room audio can alter the behavior of acoustic echo cancellation (AEC), the technology that provides full-duplex (interactive or two-way) communication in a conference environment.

When AEC detects excessive room gain, it switches to half-duplex (one-way) communication in which room participants must take turns speaking or shout to be heard above another person who is speaking.

Studio X Family systems have integrated speaker and microphone components within their structure. These systems are more susceptible to the consequences of excessive room gain than G7500 systems that have mechanically separated microphone and speaker components.

Poly recommends the following to minimize room gain:

- Use an expansion microphone to eliminate the proximity of the microphone to the loudspeaker.
- Reduce the remote speaker volume in the room. In most conference spaces, remote video participants are in the same room and use a conversational loudness level of approximately 72 dBA SPL at the listener.

Display Options

G7500, Studio X70, Studio X50, and Studio X52 systems are available in single- or dual-monitor configurations. Poly recommends setting up these systems in the dual-monitor configuration.

Studio X30 systems are available only in single-monitor configuration. You can use touch-enabled monitors with G7500 and Studio X Family systems for an enhanced experience.

6 Poly Acoustic Fence and Poly Acoustic Fence with Beam Shaping Technology

Poly Acoustic Fence and Poly Acoustic Fence with Beam Shaping are different technologies that reduce unwanted sounds in a conference setting.

G7500 systems support Poly Acoustic Fence, while Studio X Family systems support Poly Acoustic Fence with Beam Shaping.

Poly Acoustic Fence with Poly Studio G62 or Poly G7500 Systems

Poly Acoustic Fence limits the pickup of microphone audio to designated areas in open office environments. This feature only affects the audio transmitted from the room to the far end, not the audio output from the far end.

Poly Acoustic Fence consists of primary microphones and fence microphones that determine the area where audio is picked up and sent to the far end. The primary microphones pick up the audio within the fence boundaries. The fence microphones define the boundary of audio that is picked up and sent to the far end. Any audio outside of the fence isn't picked up.

Poly Acoustic Fence technology provides the following features:

- Mutes sounds outside the fence when no one is speaking inside it.
- Lowers sounds outside the fence by 12 dB when someone is speaking inside it.
- Mutes the people speaking in the room when someone leaves the fenced area.
- Enables you to adjust the width of the audio fence beam to define the area where sounds are picked up.

NOTE: Poly Acoustic Fence is not supported on HP Poly Studio A2 at this time.

Poly Acoustic Fence Ceiling Microphone Array

The fence ceiling microphone array is specially processed to develop a null of approximately +/- 45 degrees, centered at the location of the dot on the ceiling microphone array. This null helps substantially in discriminating between sounds originating inside versus outside the fence region.

When hanging the fence ceiling microphone array, it's very important to rotate the ceiling microphone arrays so that the dot points to the middle of the fence region. Roughly, sounds outside the +/- 45-degree beam width are outside the fence region, and sounds inside the +/- 45-degree beam width are inside the fence region.

Figure 6-1 Ceiling microphone array dot location



Supported Poly Acoustic Fence Configurations

The following table lists the possible configurations supported for Poly Acoustic Fence with Poly G7500 systems.

NOTE: If you mix table and ceiling microphones, the primary microphone must be a table microphone. The primary microphone can be a ceiling microphone if you use only that type of microphone.

Table 6-1 Supported Poly Acoustic Fence Configurations for G7500

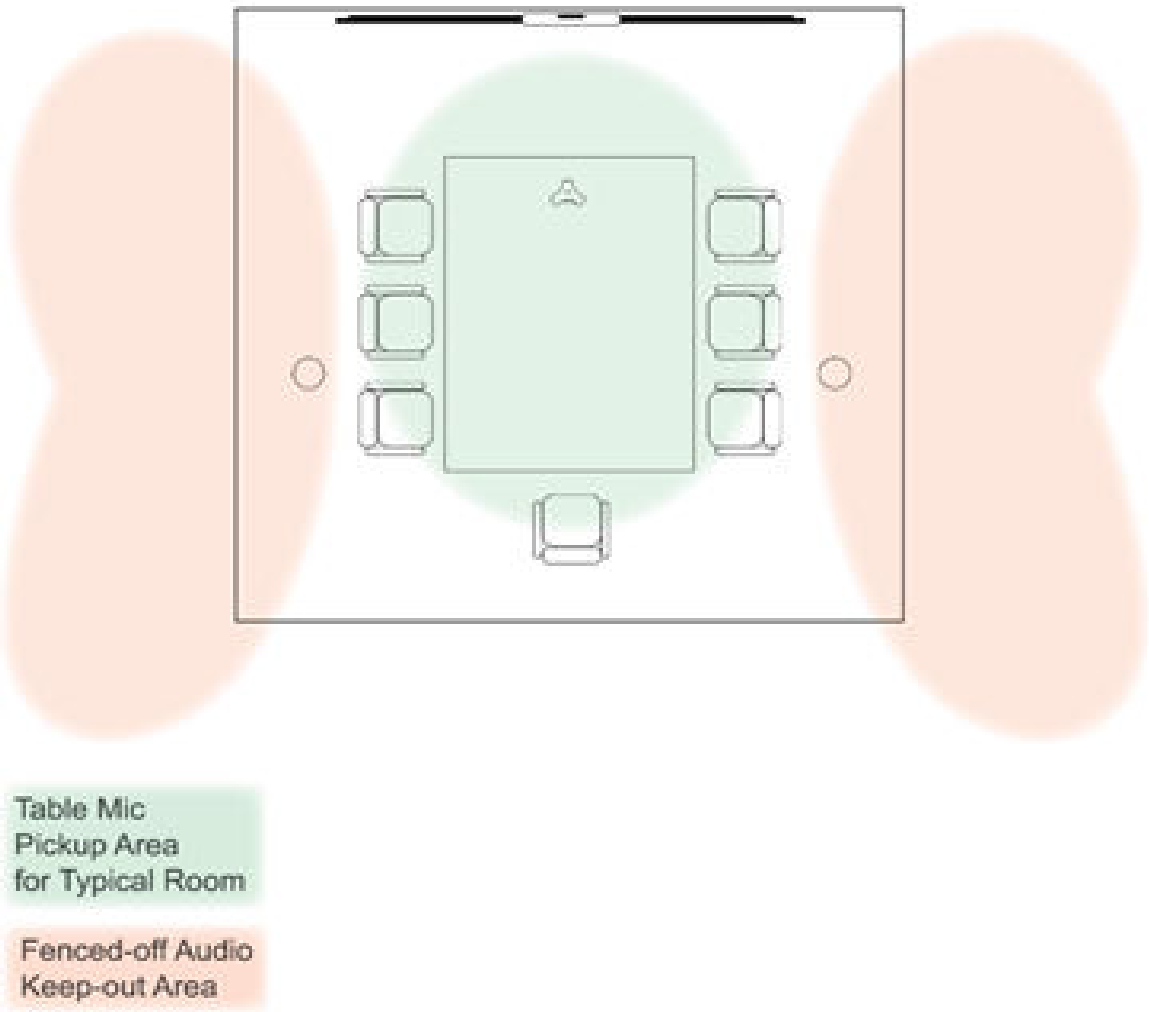
Primary Microphone	Fence Microphone	Configuration
One ceiling microphone array	One or two ceiling microphone arrays	Rotate fence ceiling microphone arrays so that the dot points to the primary microphone area. The region opposite the dot is the area where unwanted sounds occur. The first ceiling microphone array you pair with the system is the primary microphone.
One table microphone array	One ceiling microphone array directly above table microphone array	The primary pick-up area is a ~ +/- 45-degree area beneath the ceiling microphone array. Rotation isn't necessary for this configuration.
One table microphone array	Two ceiling microphone arrays	Rotate the fence ceiling microphone arrays so that the dot points to the primary microphone area. The region opposite the dot is the area where unwanted sounds occur.

Example Layouts for Poly Acoustic Fence

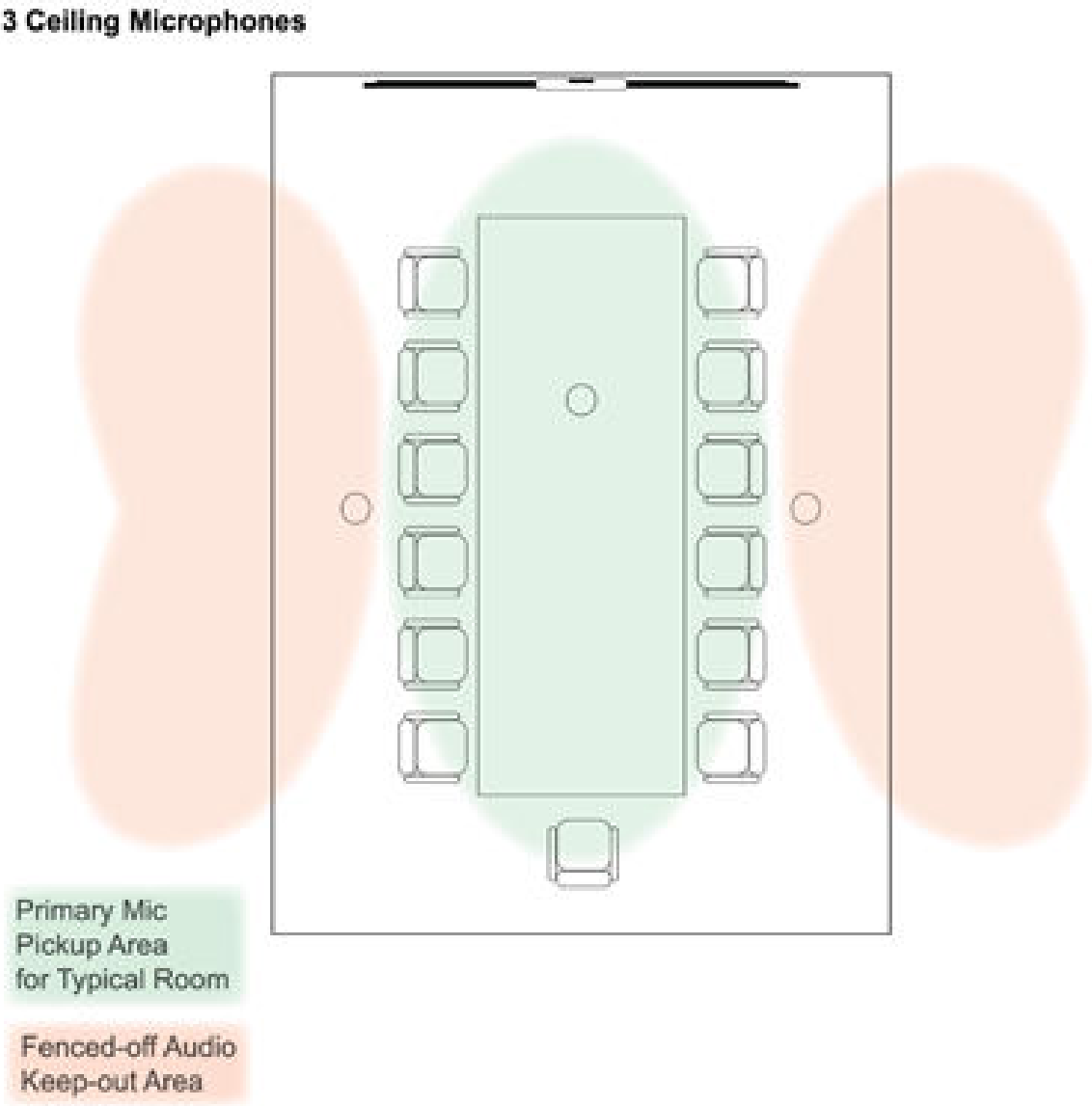
This section includes diagrams of example Poly Acoustic Fence configuration layouts.

The following example shows the table microphone as the primary microphone, and the two ceiling microphones create the fence.

1 Table Microphone &
2 Ceiling Microphones



The following example shows one ceiling microphone array as the primary microphone, and two additional ceiling microphone arrays create the fence.



Configure Poly Acoustic Fence

There are three steps for setting up Poly Acoustic Fence with G7500 systems.

Steps to configure Poly Acoustic Fence:

1. Enable the Poly Acoustic Fence feature.
2. Specify the primary IP-based microphone and then up to two secondary IP-based microphones to create the fence. The boundary radius can be 0.61 m (2 ft) or more around the microphones.
3. Adjust the Poly Acoustic Fence Sensitivity to the appropriate radius.

NOTE: Microphones connected to a Poly Microphone IP Adapter currently don't support Poly Acoustic Fence.

Enable Poly Acoustic Fence

Enable the Poly Acoustic Fence feature for Poly Studio G62 or Poly G7500 systems.

NOTE: This option isn't available if you enable Polycom StereoSurround.

1. In the system web interface, go to **Audio/Video** > **Audio** > **General Audio Settings**.
2. Select the **Enable Acoustic Fence** check box.

Specify the Primary and Fence Microphones

Use only ceiling microphones or a mix of ceiling and table microphones to use Poly Acoustic Fence with your G7500 system. You can connect up to three microphones directly to your system.

NOTE: If you use a mix of table and ceiling microphones, the primary microphone must be a table microphone. The primary microphone can be a ceiling microphone if you use only that type of microphone.

The order you pair your microphones is important if all microphones are ceiling microphones. The first IP microphone that pairs with the system is designated the primary microphone, and the remaining microphones are the fence microphones. If you connect a table microphone, it becomes the primary microphone.

By default, a microphone pairs to the system when you connect it (unless you've disabled automatic pairing).

IMPORTANT: When using Poly Acoustic Fence technology, remember which microphone is the primary one. If you disconnect this microphone, Poly Acoustic Fence no longer works, and you must reconnect all microphones (starting with the primary microphone) for it to work again.

To specify the primary and fence microphones:

1. Connect the primary microphone to an LLN port on the back of your system.
2. Connect one or more other microphones.

Adjust the Poly Acoustic Fence Sensitivity

Adjust the Poly Acoustic Fence sensitivity to define the audio fence radius around the G7500 system.

NOTE: This option isn't available if you enable Polycom StereoSurround.

To enable and configure Poly Acoustic Fence:

1. In the system web interface, go to **Audio/Video** > **Audio** > **General Audio Settings**.
2. Set the Acoustic Fence Sensitivity to adjust the radius of the fence area about the primary microphone.

   NOTE: Larger values provide a larger radius.

Specify a Different Primary Microphone

You can change the primary microphone that you're using for Poly Acoustic Fence.

1. Specify a different primary microphone:

1. Disconnect all microphones from the LLN ports on the back of your system.
2. Reconnect the microphone that you want to be the primary.

   Your primary microphone is set up.
3. Connect one or more other microphones.

Poly Acoustic Fence with Beam Shaping with Studio X Family Systems

Poly Acoustic Fence with Beam Shaping greatly reduces sounds outside a well-defined beam determined by a built-in microphone array.

- The beam is centered on a perpendicular line to the center of the Studio X Family system.
- The beam width can vary from a width of 12 degrees to 120 degrees via menu controls.
- There's no discrimination of sounds based on the tilt angle of the sound source (only the pan angle).

Configure Poly Acoustic Fence with Beam Shaping

There are two steps for setting up Poly Acoustic Fence with Beam Shaping with Studio X Family systems.

Steps to configure Poly Acoustic Fence with Beam Shaping:

1. Enable the Poly Acoustic Fence with Beam Shaping feature.
2. Adjust the width of the audio fence beam so that the built-in microphone picks up sound in the area you want.

Enable Poly Acoustic Fence with Beam Shaping

Enable the Poly Acoustic Fence with Beam Shaping feature for Studio X Family systems.

NOTE: This option isn't available if you enable Polycom StereoSurround.

1. **To enable Poly Acoustic Fence with Beam Shaping**:

1. In the system web interface, go to **Audio/Video** > **Audio** > **General Audio Settings**.
2. Select the **Enable Acoustic Fence** check box.

Adjust Poly Acoustic Fence with Beam Shaping Sensitivity

Adjust the Poly Acoustic Fence feature to define the audio fence around the Studio X Family system.

1. **To enable Poly Acoustic Fence with Beam Shaping**:

1. In the system web interface, go to **Audio/Video** > **Audio** > **General Audio Settings**.
2. Set the **Acoustic Fence Sensitivity** to adjust the width of the audio fence beam.

   Higher values increase the width of the audio fence beam.

Use 1 for the narrowest beam (12 degrees) or 10 for the widest beam (120 degrees). If you set Acoustic Fence Sensitivity to 0, the system mutes the microphone(s). The total angles are the setting number multiplied by 12.

Example Layouts for Poly Acoustic Fence with Beam Shaping

The following example layouts show the audio fence beam and noise keep out areas when the beam width for a Studio X Family system built-in microphone is set to a narrow, medium, or wide value.

Figure 6-2 Example layout for a narrow beam width configuration

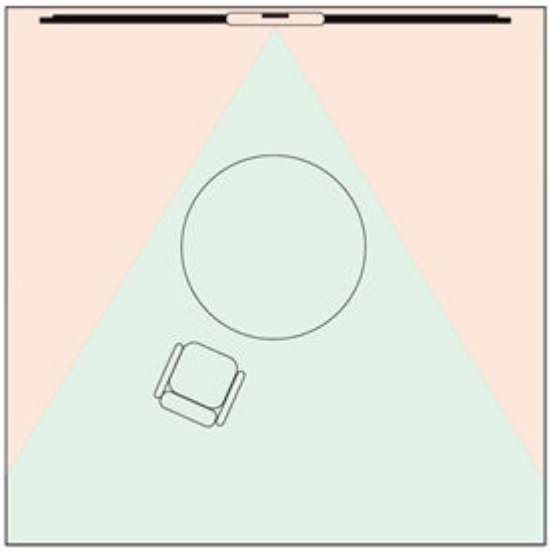


Figure 6-3 Example layout for a medium beam width configuration

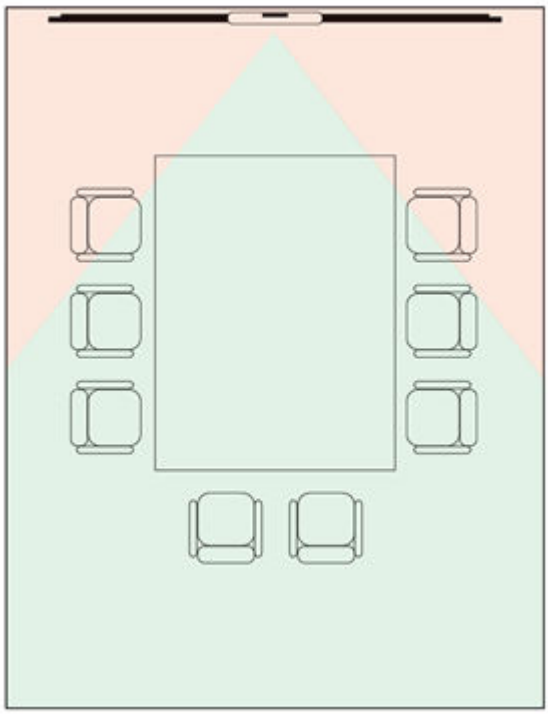
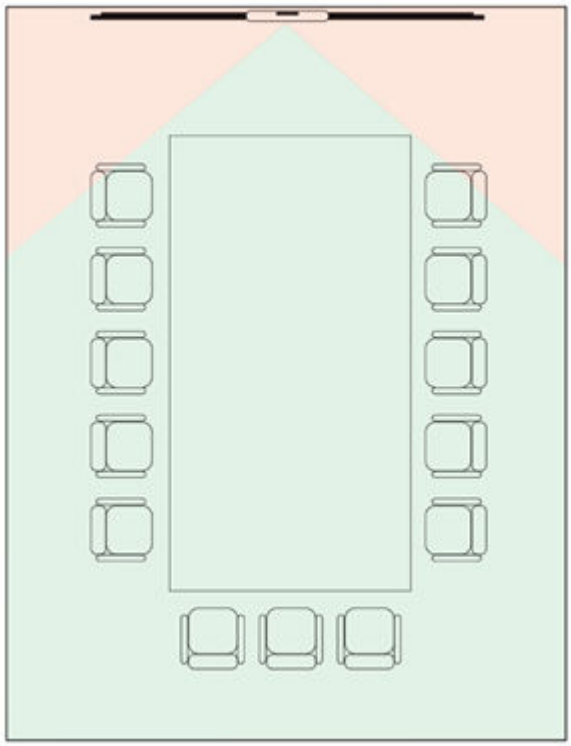


Figure 6-4 Example layout for a wide beam width configuration



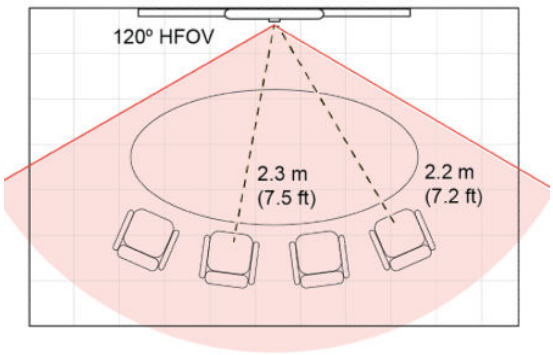
7 Room Layout Examples

The following diagrams are example layouts for setting up a conference room with Poly G7500 and Studio X Family systems.

8 Small room layout recommendation with Poly Studio V12

Poly Studio V12 works best for focus and small conference rooms.

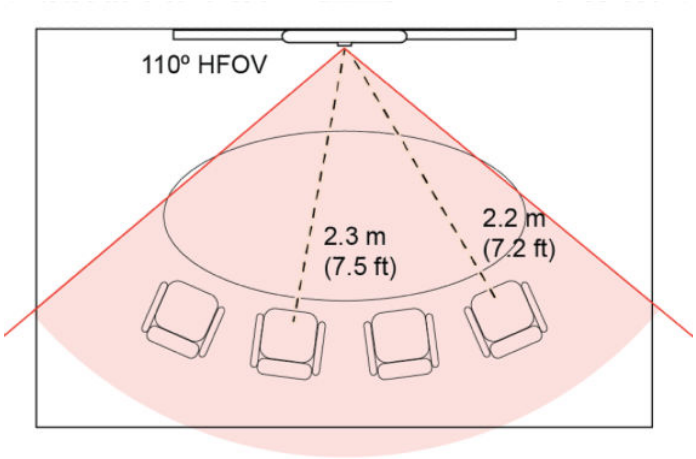
In a focus room configuration, mount the Poly Studio V12 at the front of the room and center to the table.



9 Small room layout recommendation with Poly Studio R30

Poly Studio R30 video bars work best for focus and small conference rooms.

In a focus room configuration, mount the Poly Studio R30 at the front of the room and center to the table.

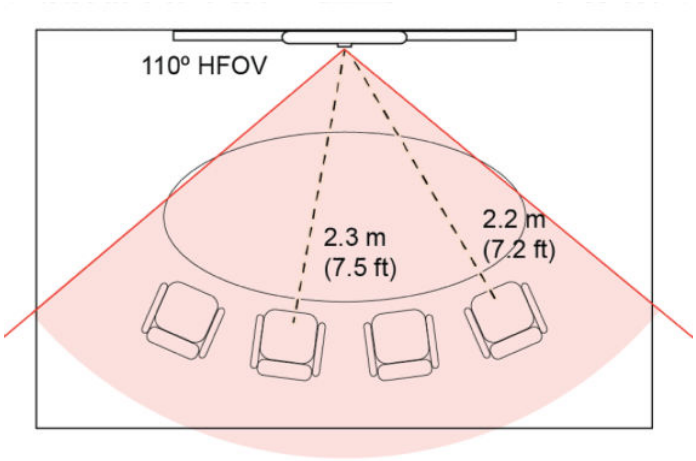


10 Small room layout recommendation with Poly Studio X30

Poly Studio X30 systems work best for small conference rooms.

Poly Studio X30 in a small conference room

In a small or huddle room configuration, mount the Poly Studio X30 at the front of the room and center to the table.

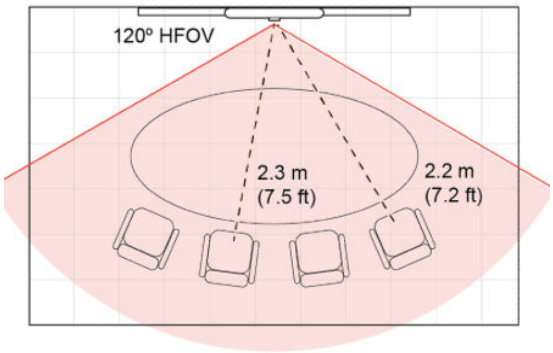


11 Small room layout recommendation with Poly Studio X32

Poly Studio X32 systems work best for small conference rooms.

Poly Studio X32 in a small conference room

In a small or huddle room configuration, mount the Poly Studio X32 at the front of the room and center to the table.

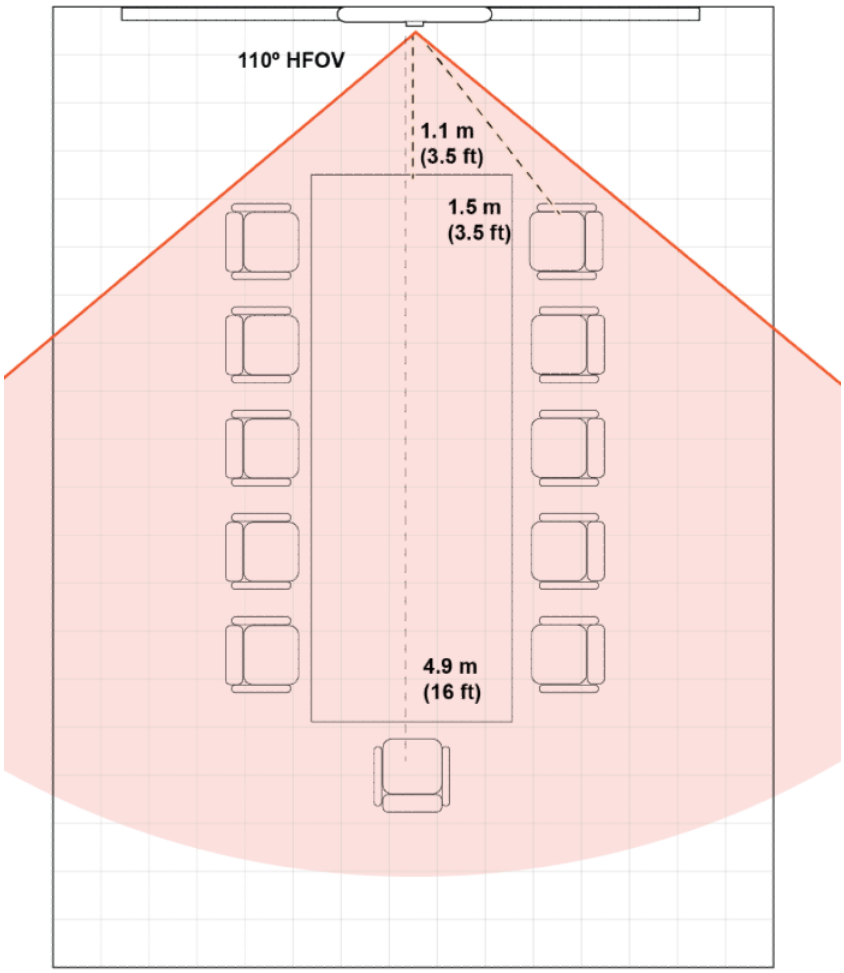


12 Medium size room layout recommendation with Poly Studio X50

Poly Studio X50 systems are suitable for medium-sized conference rooms.

Poly Studio X50 in a medium conference room

In a medium room configuration, mount the Poly Studio X50 at the front of the room and center to the table.

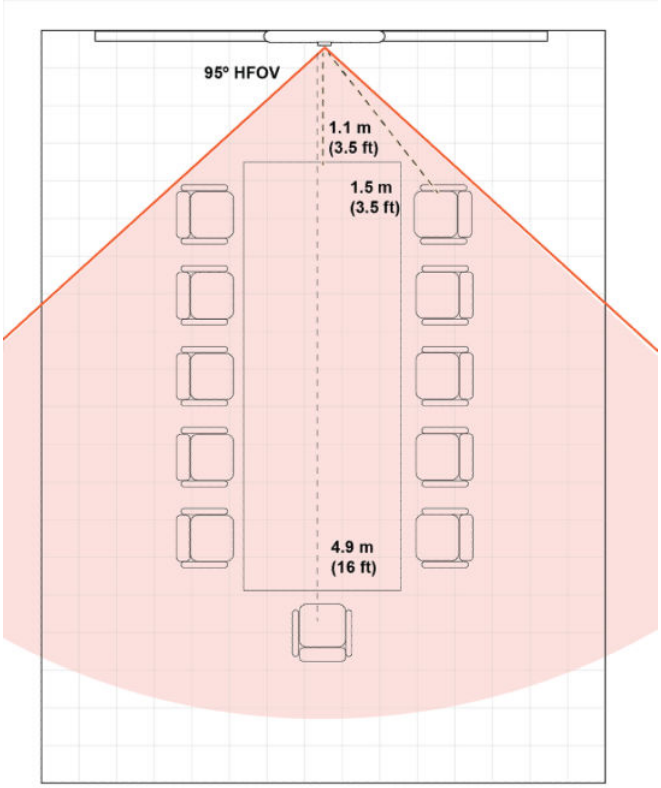

110° HFOV
1.1 m
(3.5 ft)
1.5 m
(3.5 ft)
4.9 m
(16 ft)

13 Medium room layout recommendations with Poly Studio X52 and Poly Studio V52

Poly Studio X52 and Poly Studio V52 systems are suitable for medium-sized conference rooms.

Poly Studio X52 and Poly Studio V52 in a small conference room

In a medium room configuration, mount the Poly Studio X52 or Poly Studio V52 at the front of the room and center to the table.

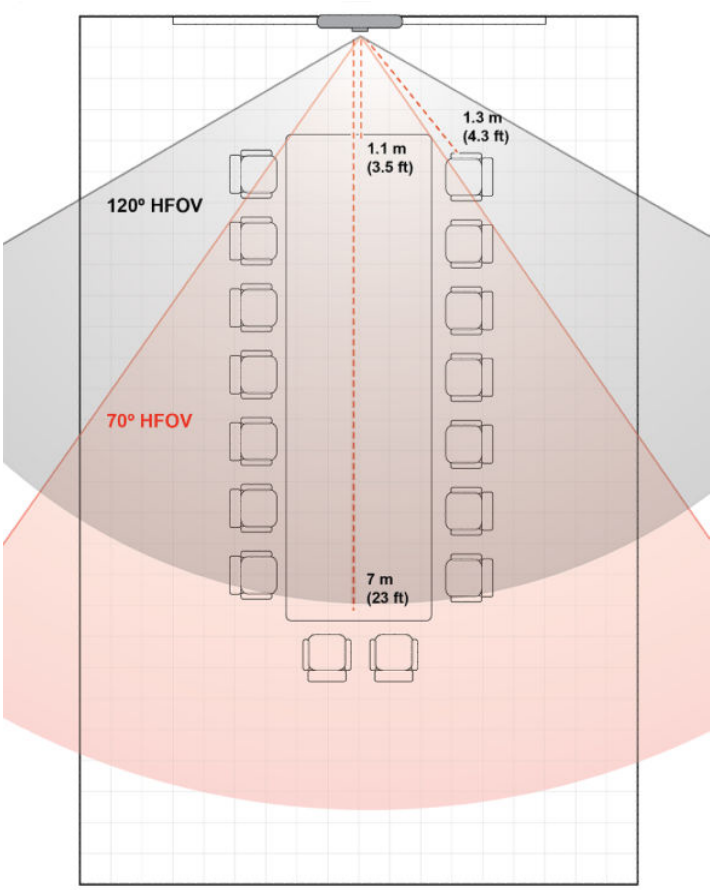


14 Large room layout recommendation with Poly Studio X70

Poly Studio X70 systems are suitable for large and medium-sized conference rooms.

Poly Studio X70 in a medium-sized conference room

In a large room configuration, mount the Poly Studio X70 at the front of the room and center to the table.

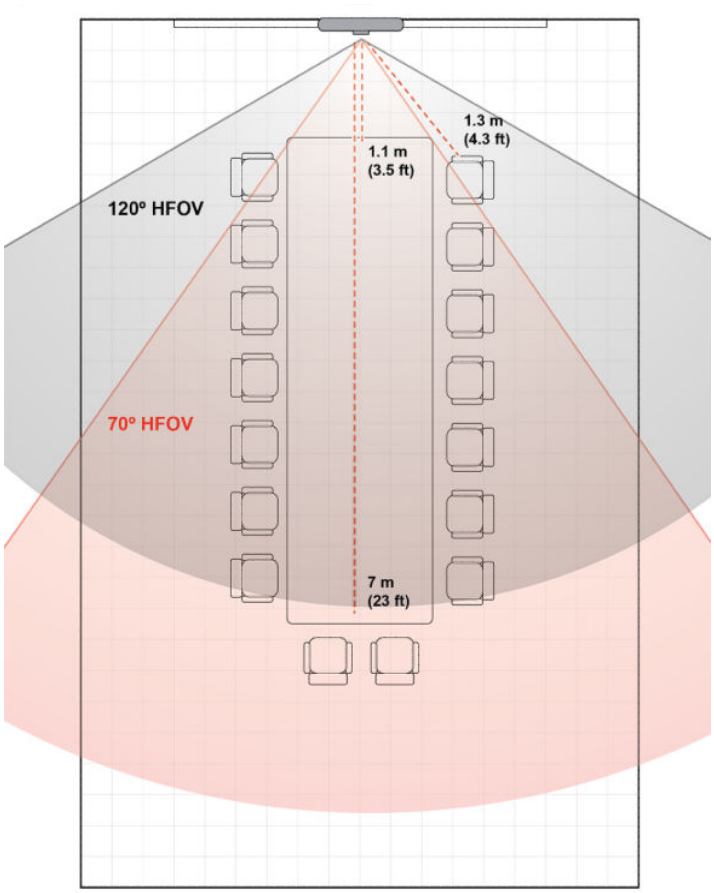


15 Large room layout recommendation with Poly Studio X72 or Poly Studio V72

Poly Studio X72 and Poly Studio V72 systems are suitable for large conference rooms.

Poly Studio X72 in a large conference room

In a large room configuration, mount the Poly Studio X72 or Poly Studio V72 at the front of the room and center to the table.



16 Large room layout recommendation for Poly Studio E60

Poly Studio E60 cameras are suitable for large conference rooms.

Poly Studio E60 in a large conference room

In a large room configuration, mount the Poly Studio E60 at the front of the room and center to the table.

The Poly Studio E60 is a mechanical pan, tilt, zoom camera that can capture participants up to 10 m (32.8 ft) from the camera.

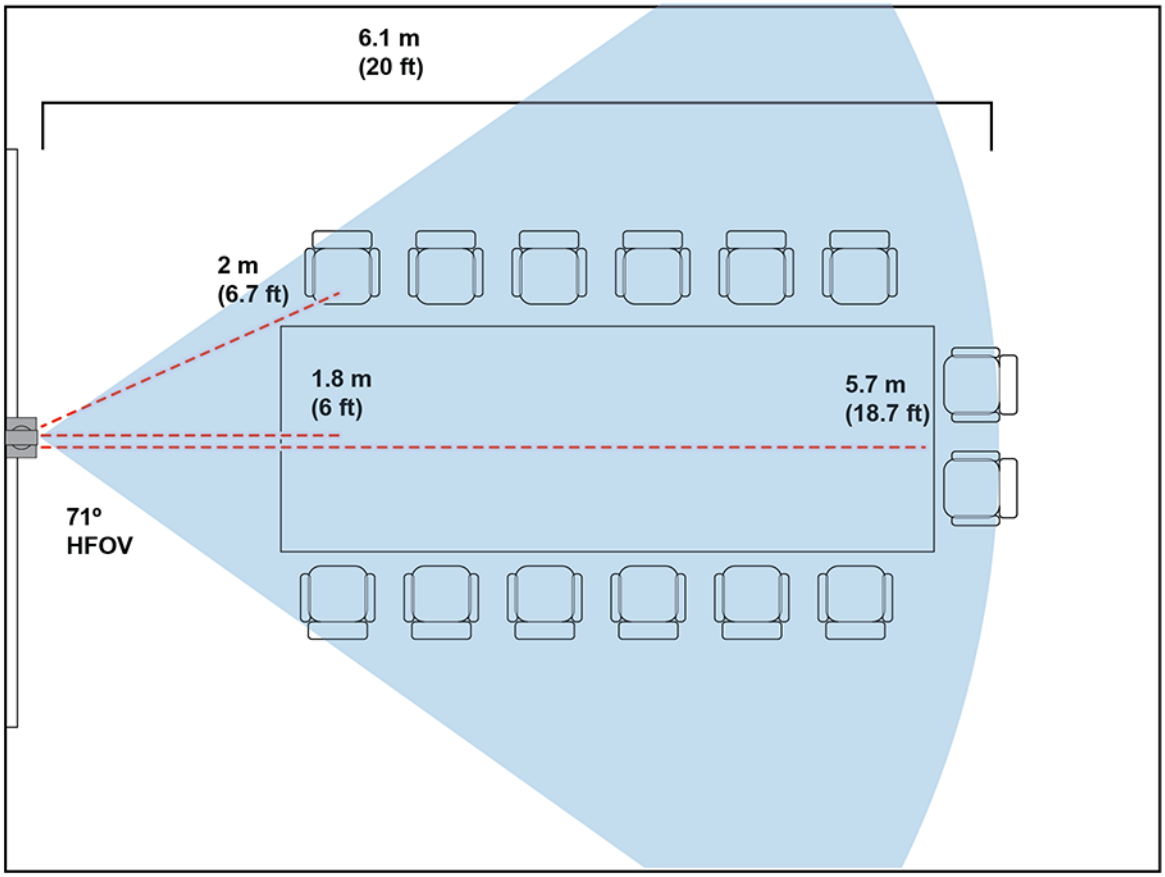
When using Director AI modes, the field of view (FOV) distance is slightly shortened. Refer to the following table for optimal ranges in different modes.

Table 16-1 Poly Studio E60 field of view distances

	PTZ	Director AI (Presenter Tracking)	Director AI (Group Framing)
Optimal range	Up to 10 m / 34 ft	1.6 m - 6 m / 5ft - 20 ft	2.2 m - 6 m / 7 ft - 20 ft

The following image gives an example of the optimal FOV of the Studio E60 camera using Director AI in a large conference room.

Figure 16-1 Poly Studio E60 AI Field of View (FOV)

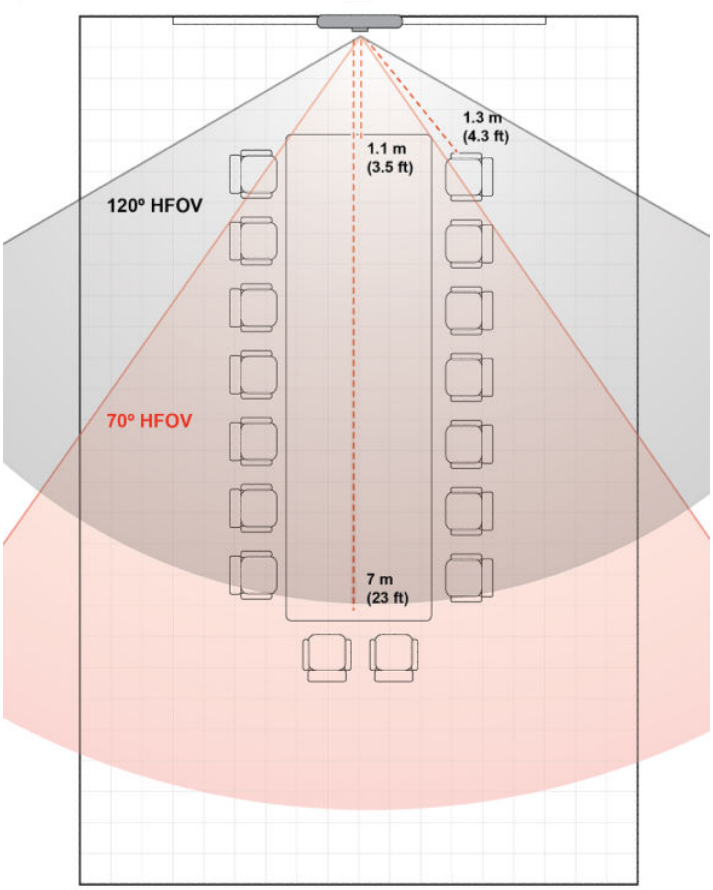


17 Large room layout recommendation for Poly Studio E70

Poly Studio E70 cameras are suitable for large conference rooms.

Poly Studio E70 in a large conference room

In a large room configuration, mount the Poly Studio E70 at the front of the room and center to the table.



18 Getting help

Poly is now a part of HP. The joining of Poly and HP paves the way for the hybrid work experiences of the future.

- To access the latest documentation for your HP Poly product, visit HP Support and follow the instructions to find your product.
- The HP Community provides additional tips and solutions from other HP product users.
- Review the Poly Regulatory and Safety Information for compliance documentation about your product.
- HP, Inc. offers a limited warranty/guarantee on this product. For details, visit www.hp.com/go/orderdocuments.
- The Worldwide HP Privacy Statement describes how HP collects, uses, discloses, and otherwise, processes your personal data.

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Document information

Review the following document information.

Model ID: Poly Bluetooth® Remote Control (model: P010), Poly IR Receiver (model: BW7650), Poly IR Remote (model: BW7600), Poly Microphone IP Adapter (model: P012), Poly IP Table Microphone (model: P013), Poly IP Ceiling Microphone (model: P014), Poly Studio X70 (model: P026), Poly Studio X50 (model: P017), Poly Studio X30 (model: P018), Poly Studio E70 (model: P025), Poly TC10 (model: P030), Poly TC8 (model: P020), Poly Studio G62 (Radio model: PBJ-STG-62R, No radio model: PBJ-STG-62N), Poly Studio X72 (Radio model: PATX-STX-72R, No radio model: PATX-STX-72N)

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Email us at documentation.feedback@hp.com with queries or suggestions related to this document.