# Polycom G7500

## Contents

# Introduction

This guide can help you plan and prepare a video-conferencing room prior to installing the Polycom G7500 system. The user of this guide should have:

- Familiarity with video conferencing technology.
- Prior Knowledge and experience with audio/video (AV) cable installation and management.

# Installation Prerequisites

Before installers arrive onsite, install any cabling inside floors, walls, and ceilings/installation of any ceiling/wall mounted brackets used to support Poly and non-Poly equipment. This includes displays, projectors, microphones, speakers, projection screens, and cameras. If you are using an installer, they can install the system, test, and show the system working in a temporary position leaving you to then unplug and route cables as you wish.

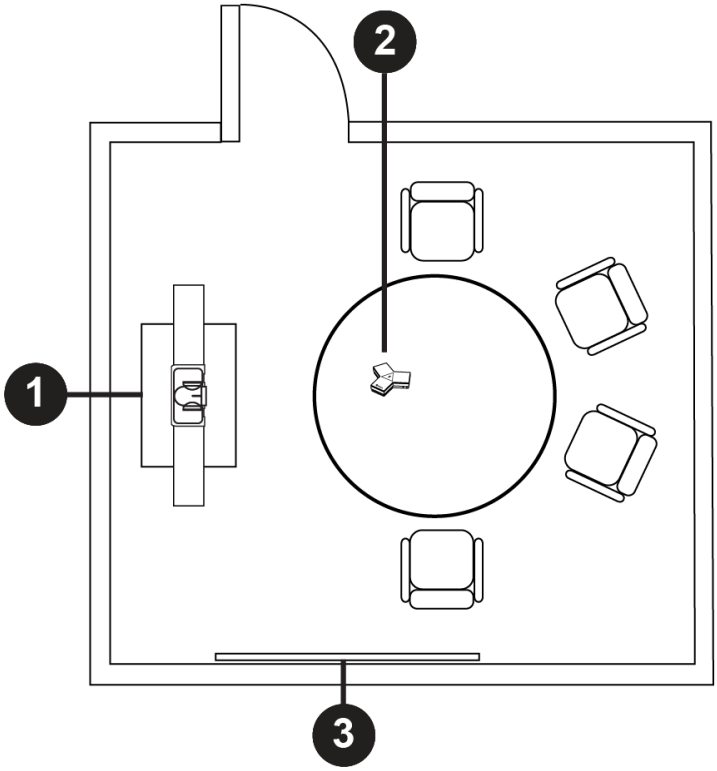
# Room Layout Examples

This section provides information about how to set up a room for video conferencing using the Polycom G7500 systems and other Poly products.

## *Layout Diagrams*

Use the following diagrams as examples for setting up a conference room with Poly G7500 systems. Poly recommends that you contract an experienced contractor to ensure all the components operate as a single cohesive system.

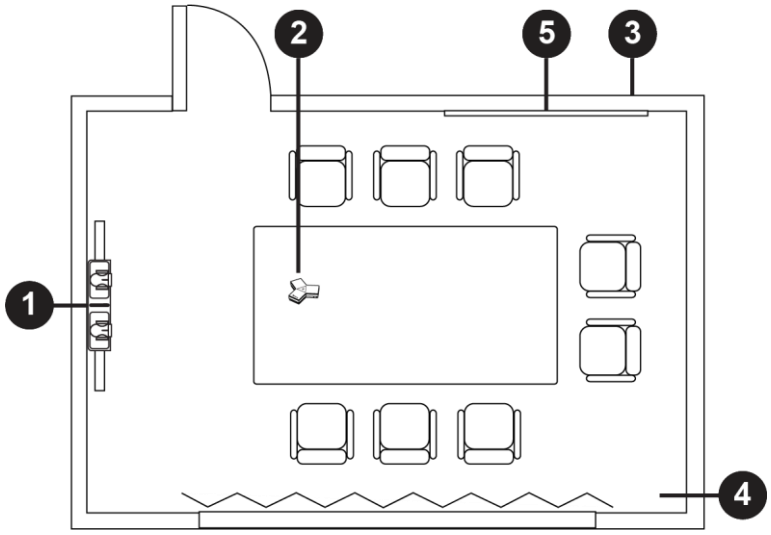
# Small Conference Room




**Small Conference Room**

| Number | Description |
|---|---|
| 1 | Polycom G7500 System with single display and EagleEye IV camera |
| 2 | Polycom IP Table Microphone |
| 3 | Physical whiteboard |

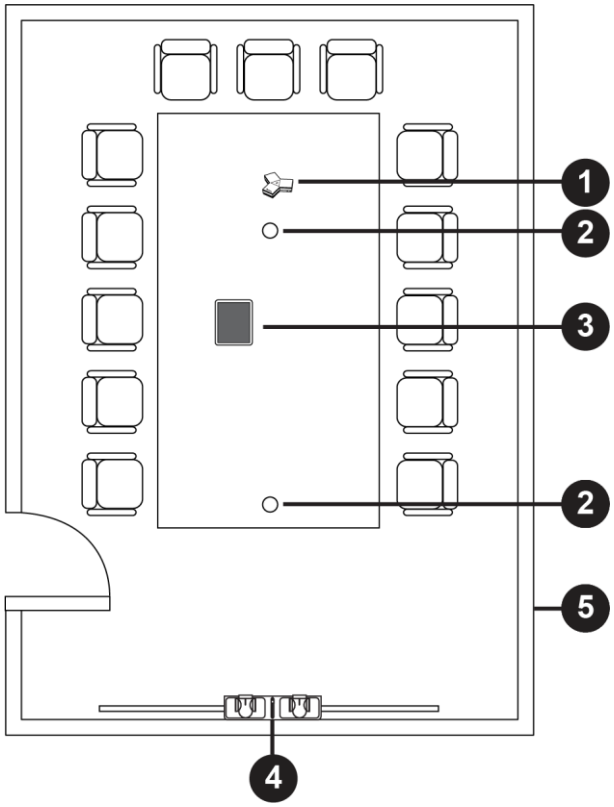
# Medium Conference Room




**Medium Conference Room**

| Number | Description |
|---|---|
| 1 | Polycom G7500 system with dual displays and EagleEye IV, EagleEye Producer, or EagleEye Director II camera |
| 2 | Polycom IP Table Microphone |
| 3 | Acoustic panels |
| 4 | Acoustic-quality drapes |
| 5 | Physical whiteboard |

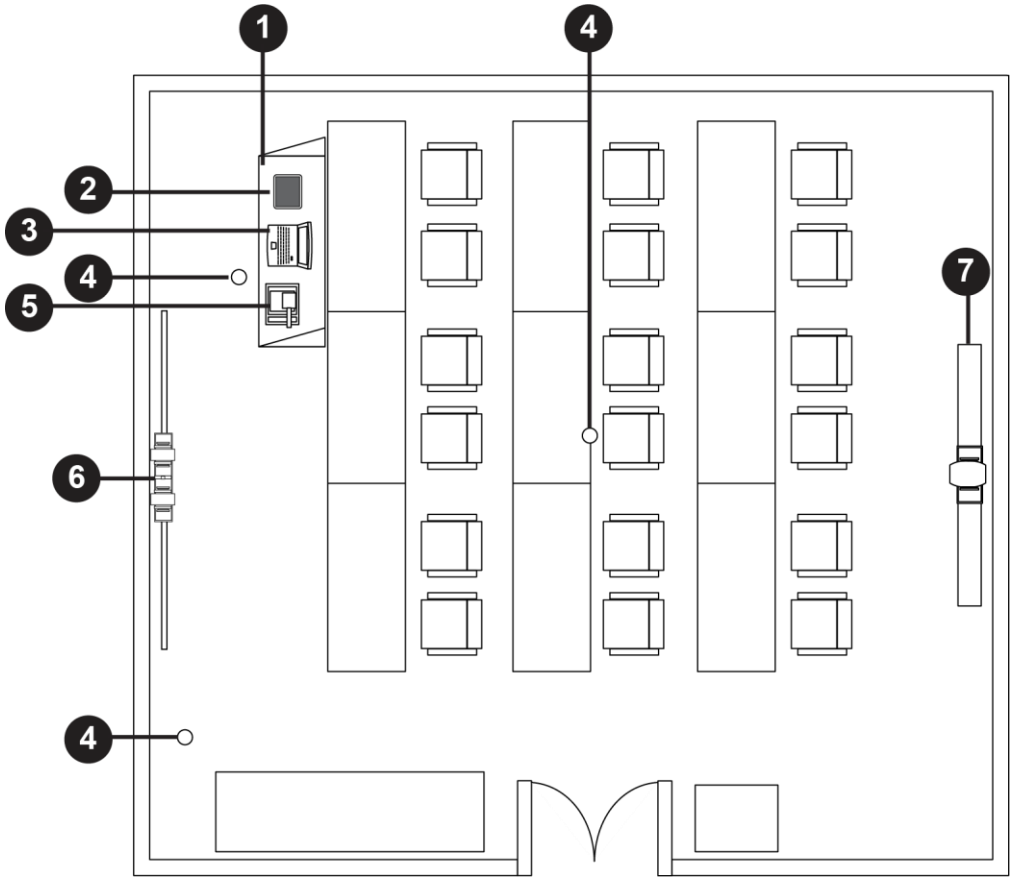
# Large Conference Room




**Large Conference Room**

| Number | Description |
|---|---|
| 1 | Polycom IP Table Microphone |
| 2 | Polycom IP Ceiling Microphone |
| 3 | Touch-enabled controller |
| 4 | Polycom G7500 system with dual displays and EagleEye IV, EagleEye Producer, or EagleEye Director II camera |
| 5 | Acoustic panels |

# Classroom




**Classroom**

| Number | Description |
|---|---|
| 1 | Teacher’s podium |
| 2 | Touch-enabled controller |
| 3 | Computer |
| 4 | Polycom IP Microphone, RealPresence Group Series Microphone with a connection through the Polycom IP Microphone Adapter, or Polycom SoundStructure with a direct analog (3.5 mm) connection to the G7500 system. |
| 5 | Document camera |
| 6 | Polycom G7500 system with dual displays and EagleEye Producer or EagleEye Director II camera |
| 7 | EagleEye Director II camera |

# Monitor Options

The Polycom G7500 system can be set in single- or dual-monitor configurations. We recommend that you set up the system in the dual-monitor configuration. Monitors can be touch enabled for an enhanced experience.

If you've purchased a Poly video conferencing system, consider the following prior to the installation visit:

- Display and audio connections
- Codec placement
- Camera placement

# Codec Placement

Measure your space before installation, and make a plan for placing the codec. Place the codec within the standard cable lengths to ensure cables reach the desired equipment. Additional cables or connectors are required if you place equipment outside of the standard cable lengths.

Cable lengths for basic setup:

- **Screen** – Supplied HDMI cable (2) length: 1.83 m (6 ft)
- **Camera** – Supplied HDCI cable length: 3 m (9.8 ft)
- **Polycom IP Table Microphone –** Supplied shielded LAN cable length: 7.6 m (25 ft)
- **LAN connection** – Supplied codec network cable length: 3.6 m (12 ft)
- **Power supply** – Approximately 3 m (9.8 ft) supplied for the codec. (The display and other devices associated with the system may require additional outlets.)
- **Poly EagleEye Cube USB camera** – Supplied with camera cable length: 2 m (6.6 ft)

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

You should also take note of the important safeguards mentioned in the Safety and Regulatory Notices on the Polycom Support site.

# Cables

Supplied cables and connection options are outlined below. If your chosen display does not support the supplied input, you must purchase the appropriate cables or adapters prior to installation. Compliance information is provided for the Restriction of certain Hazardous Substances Directive (RoHS) in the G7500 Safety and Regulatory Notice on the Polycom Support site.

Audio is provided digitally through HDMI. Your display must have internal amplification and speakers; otherwise, you need to provide external amplification.

You can view cable drawings on the Polycom Community web page.

**Note:** Figures and part number are provided for reference only.

## *Network Cables*

This section includes information about the network cables you can use with your G7500 system.

### CAT 5e LAN Cable

This cable connects the G7500 system to the LAN. It has orange RJ-45 connectors on both ends. It meets category 5e requirements and is wired according to EIA/TIA-568B. The maximum approved length for this cable is 100 m (328 ft) on an 802 network.

**Cat 5e LAN Cables**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 3.6 m (12 ft) | 2457-23537-001 | Yes |

## *Video and Camera Cables*

This section includes information about the video and camera cables you can use with your G7500 system.

### Poly EagleEye Cube USB Camera Cable

This cable connects the Poly EagleEye Cube USB camera to the G7500 system. It is male USB-C to male USB-A.

**EagleEye Cube USB Camera Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 2 m (6.6 ft) | — | Yes |

# HDMI Monitor Cable

This cable connects the G7500 system HDMI output to an HDMI monitor. It is male HDMI to male HDMI.

**HDMI Monitor Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 1.8 m (6 ft) | 2457-28808-004 | Yes |

# HDCI Polycom EagleEye IV Digital Camera Cable

This cable, also referred to as a mini-HDCI, is a male HDCI to male mini HDCI. It connects a system to a Polycom EagleEye IV camera, It also connects an EagleEye Producer that is used with an EagleEye IV camera or an EagleEye Digital Extender to a system.

**Note:** The 10 m (32.8 ft) HDCI Polycom EagleEye Digital IV camera cable is not supported. Use the EagleEye Digital Extender for cable runs longer than 3 m (9.8 ft).

**HDCI EagleEye IV Digital Camera Cables**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 0.3 m (1 ft) | 2457-28808-004 | Yes |
| 0.457 m (1.5 ft) | 2457-64359-018 | Yes |
| 1 m (3.28 ft) | 2457-64356-100 | Yes |
| 3 m (9.84 ft) | 2457-64356-001 | Yes |

# Mini-HDCI Cable Applications

This list provides guidelines for what cable, device, and peripheral connections are supported with G7500 systems and mini-HDCI cables.

The following connections are supported with all G7500 Systems and mini-HDCI cables (0.3 m/1ft; 0.457 m/1.5 ft; 1 m/3.28 ft; 3 m/9.84 ft):

- EagleEye IV to codec
- EagleEye IV to EagleEye Digital Extender
- EagleEye IV  to Digital Breakout Adapter
- Codec to EagleEye Digital Extender
- EagleEye Producer to codec
- EagleEye Director II to codec
- EagleEye Director II to EagleEye Digital Extender
- EagleEye Director II to Digital Breakout Adapter
- EagleEye Producer to EagleEye Digital Extender

- EagleEye Producer to Digital Breakout Adapter
- EagleEye IV to codec
- EagleEye IV to EagleEye Digital Extender

# HDCI Polycom EagleEye IV Camera to Polycom EagleEye Producer Digital Cable

This cable connects a Polycom EagleEye Producer to a Polycom EagleEye IV camera, It is male HDCI to male mini HDCI.

**Polycom EagleEye IV Camera to Polycom Producer Digital Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 0.3 m (1 ft) | 2457-64356-030 | Yes |

# HDCI Polycom EagleEye Producer Camera Digital Cable Adapter

This cable connects the HDCI output of the Polycom EagleEye Producer to an EagleEye IV Digital Camera cable. It is male HDCI to male mini HDCI.

**Polycom EagleEye Producer Camera Digital Cable Adapter**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 0.2 m (0.7 ft) | 2457-69794-001 | Yes |

# Polycom G7500 Digital Breakout Codec Adapter

This breakout adapter allows the input of HDMI and serial for control into an HDCI input on G7500 codecs. You can also use this adapter with the G7500 Digital Breakout Camera Adapter to extend the distance between an EagleEye IV camera or an EagleEye Producer and a G7500 codec.

## *Recommendation for Use*

- Use with HDCI Polycom EagleEye IV camera cable. Either 2457-64356-001 (3 m), 2457-64365-100 (1 m), or 2457-64356-018 (457 mm).
- Use with certified HDMI compliant cable.
- Use with certified EIA/TIA-RS-232 cable. Use straight-through type, not crossover.
- Do not hot plug the serial cable. Disconnecting or connection the RS-232 cable during operation may cause unexpected system behavior. If this happens, cycle the power to the codec or camera to eliminate this issue.

- Poly tested with cables less than 3 meters in a normal environment. The maximum cable length possible depends on the signal quality of the HDMI and serial signals at the output of the Digital Breakout Adapter (DBA) and associated cables, if the mating device has an equalizer, and the electrical noise in the installed environment. To ensure proper operation with all devices, the HDMI and EIA/TIA-RS 232 specs should be met at the input to all mating devices.
- The following HDMI features are not provided: DDC for EDID support, HDCP, and CEC.
- Without EDID support, digital (HDMI) sources connected to the system must have a mechanism for bypassing EDID detection, for setting up the video resolution manually, or using a fixed video resolution. See the Supported Video Format Resolutions table below.
- If the mating device has an equalizer, and the electrical noise is in the installed environment, the signal quality is dependent on the quality of the HDMI and serial signals at the output of the DBA and associated cables. To ensure proper operation with all devices, the HDMI and EIA/TIA-RS-232 specifications should be met at the input to all mating devices.

**Supported Video Format Resolutions**

| Mode | Active Pixels | Active Lines | Vertical Refresh Hz | Pixel Clock MHz | Video Standard |
|---|---|---|---|---|---|
| 480i | 720 | 480 | 59.94 | 27 | CEA-861-D:6 |
| 576i | 720 | 576 | 50 | 27 | CEA-861-D:21 |
| 480p60 | 720 | 480 | 59.94 | 27 | CEA-861-D:2 |
| 576p50 | 720 | 576 | 50 | 27 | CEA-861-D:17 |
| 720p50 | 1280 | 720 | 50 | 74.25 | CEA-861-D:19 |
| 720p60 | 1280 | 720 | 59.94 | 74.25(1.001) | CEA-861-D:4 |
| 1080i50 | 1920 | 1080 | 50 | 74.25 | CEA-861-D:39 |
| 1080i60 | 1920 | 1080 | 59.54 | 74.25(1.001) | CEA-861-D:5 |
| 1080p50 | 1920 | 1080 | 50 | 148.50 | CEA-861-D:31 |
| 1080p60 | 1920 | 1080 | 59.94 | 148.50(1.001) | CEA-861-D:16 |

**G7500 Digital Breakout, Codec Adapter**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| — | 2215-68473-001 | Yes |

# Polycom G7500 Digital Breakout Camera Adapter

This breakout adapter allows Polycom EagleEye IV cameras to be broken out into HDMI and serial (DB9) signals. You can also use this adapter with the Polycom G7500 Digital Breakout Codec Adapter to extend the distance between an EagleEye IV camera or EagleEye Producer and a G7500 codec.

## *Recommendation for Use*

- Use the supplied Polycom power supply (part number 1465-52748-040).
- Verify the polarity of the power supply as shown on the DBA next to the power supply unit.

- Use with HDCI Polycom EagleEye IV Camera Cable. Either 2457-64356-001 (3 m), 2457-64356-100 (1 m), or 2457-64356-018 (457 mm).
- Use with certified HDMI compliant cable.
- Use with certified EIA/TIA-RS-232 cable. Use straight-through type, not crossover.
- Do not hot plug the serial cable. Disconnecting or connecting the RS-232 cable during operation may cause unexpected system behavior. If this happens, cycle the power to the codec or camera to eliminate this issue.
- Poly tested with cables less than 3 meters in a normal environment. The maximum cable length possible depends on the signal quality of the HDMI and serial signals at the output of the DBA and associated cables, if the mating device has an equalizer, and the electrical noise in the installed environment. To ensure proper operation with all devices, the HDMI and EIA/TIA-RS 232 specifications should be met at the input to all mating devices.
- To successfully upgrade the software of a connected device (e.g., EagleEye IV camera, EagleEye Producer, EagleEye Digital Extender), the breakout adapter must be used in pairs: one for the camera and another for the codec connected via HDMI and DB9. Otherwise, you have to connect the device directly to the codec. This includes if you are connecting a camera and codec to a switcher.
- Only the breakout camera adapter is needed if you want to connect a camera to an HDMI input on the codec.

**G7500 Digital Breakout Camera Adapter**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| — | 2215-68485-001 | Yes |

## HDCI Adapter for Polycom EagleEye Director II

This adapter connects a camera’s mini-HDCI output to the mini-HDCI input on the base of the EagleEye Director II. This connection must be secured before a camera can be mounted to the EagleEye Director II.

**HDCI EagleEye Director II Adapter**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| — | 1696-69473-001 | Yes |

# *Audio Cables*

This section includes information about the audio cables you can use with your G7500 system. IP microphones don’t need special audio cables and connect directly to the G7500 system with LAN cables. Use audio cables to connect non-IP microphones to a Polycom Microphone IP Adapter. Use a LAN cable to connect the Microphone IP Adapter to the G7500 system.

# Polycom Ceiling Microphone Array Drop Cable

Use this extended length drop cable for connecting a spherical ceiling microphone array element to an electronics interface. It is 6-pin mini-DIN to 6-pin mini-DIN.

**Ceiling Microphone Array Drop Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 0.6 m (2 ft) | 2457-85785-024 | Yes |

# Polycom Shielded Plenum Crossover Cable

Use this shielded plenum crossover cable between the electronics enclosure and codec or between the electronics closure and the wall plate. It is male RJ-45 to male RJ-45.

**Shielded Plenum Crossover Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 15.2 m (50 ft) | 2457-85361-001 | Yes |

# Polycom Table Microphone Cable

Use this cable to connect a table microphone to a G7500 system. It is male RJ-45 to male RJ-45.

**Table Microphone Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 7.62 m (25 ft) | 2457-17977-001 | Yes |

# RealPresence Group Microphone Array Walta-Walta Cable

Use this cable to connect non-IP microphones to a Polycom Microphone IP Adapter. This cable can also be used to connect non-IP microphones to each other. This cable is male Walta to male Walta.

**Warning:** Verify the plug orientation when plugging in the microphone array. If while plugging in the connector you feel undue pressure that you need to “force” the cable for it to connect, the cable is likely being inserted incorrectly. Improper connection causes the current to flow in reverse polarity leading to high current that can result in severe damage to the Polycom Microphone IP Adapter.

**Group Microphone Array Walta-Walta Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 4.6 m (15 ft) | 2457-23215-001 | Yes |
| 7.6 m (25 ft) | 2457-23216-001 | Yes |
| 7.6 m (25 ft) | 2457-23216-002 | Yes |

| | | |
|---|---|---|
| 3 m (10 ft) | 2457-28978-001 | Yes |
| 15.24 m (50 ft) | 2457-29051-001 | Yes |

## Polycom EagleEye Director II RCA Audio Breakout Cable

Use this cable to connect a G7500 system to the Polycom EagleEye Director II camera and the room audio playback system. It is dual male RCA connectors (used with the EagleEye Director II dual stereo adapter for the G7500 codec) a 3.5 mm male connector (for the EagleEye Director II) and dual female RCA connectors (for the room audio playback system).

**EagleEye Director II RCA Audio Breakout Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 3 m (9.8 ft) | 2457-69476-001 | Yes |

## Polycom EagleEye Director II Dual Stereo Audio Adapter

Use this 3.5 mm adapter with a Polycom EagleEye Director II RCA Audio Breakout Cable (part number 2457-69476-001) to convert the 3.5 mm line out connection on a G7500 system to RCA.

**EagleEye Director II Dual Stereo Audio Adapter**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| — | 1517-09350-001 | Yes |

# *Serial Cables*

This section includes information about the serial cables you can use with your G7500 system.

## Polycom Serial Cable

Use this cable to connect a G7500 system to a serial device. It is 8-pin mini-DIN to DB-9.

**Note:** The 8-pin mini-DIN RS232 connection is wired per Poly RS-232 and does not follow VISCA pinout convention. Don’t try to use a cable meant to support VISCA in this application as it doesn’t work correctly.

Don’t use this adapter directly connected to multi-purpose AMX serial ports. AMX systems support both RS-232 AND RS-422. Therefore, for the most reliable RS-232 support with this adapter, use an additional null modern cross-over cable in-line that only carries pins 2, 3, and 5, with pins 2 and 3 crossed.

**RealPresence Group Series Serial Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 3 m (9.8 ft) | 2457-63542-001 | Yes |

# Straight-Through Cable

Use this cable to connect a G7500 system to a serial device. It has a DB-9 connector on each end. The maximum approved length is 30 m (100 ft).

## *Recommendation for Use*

Poly does not recommend using this straight-through serial cable for RS-232 communication from a computer, Creston system, or AMX device. For RS-232 communication, use a cross-over cable with pin 2 wired to pin 3, pin 3 wired to pin 2, and pin 5 wired to pin 5. The other pins are not used.

**Straight-Through Cable**

| Length | Part Number | RoHS Compliant |
|---|---|---|
| 7.6 m (25 ft) | 2457-09172-001 | Yes |

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