



# Physical interface guide

for Cisco TelePresence SX80

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Our main objective with this guide is to address your goals and needs. Please let us know how well we succeeded!

May we recommend that you visit the Cisco web site regularly for updated versions of this guide.

The user documentation can be found on  
▶ <http://www.cisco.com/go/telepresence/docs>

### How to use this guide

The top menu bar and the entries in the Table of contents are all hyperlinks. You can click on them to go to the topic.

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## Chapter 1

# Introduction

This document describes the physical interface of the following codec:

- Cisco TelePresence SX80

## User documentation

The user documentation for the Cisco TelePresence systems running the TC software includes several guides suitable for various user groups.

- **Installation guide:**  
How to install the product
- **Getting started guide:**  
Initial configurations required to get the system up and running
- **Administering TC Endpoints on CUCM:**  
Tasks to perform to start using the product with the Cisco Unified Communications Manager (CUCM)
- **Administrator guide (this guide):**  
Information required to administer your product
- **Quick reference guides:**  
How to use the product
- **User guides:**  
How to use the product
- **API reference guide:**  
How to use the Application Programmer Interface (API), and reference guide for the command line commands
- **Video conferencing room primer:**  
General guidelines for room design and best practice
- **Video conference room acoustics guidelines:**  
Things to do to improve the perceived audio quality
- **Software release notes**
- **Regulatory compliance and safety information guide**
- **Legal & license information**

## Downloading the user documentation

We recommend you visit the Cisco web site regularly for updated versions of the user documentation. Go to:

► <http://www.cisco.com/go/sx-docs>



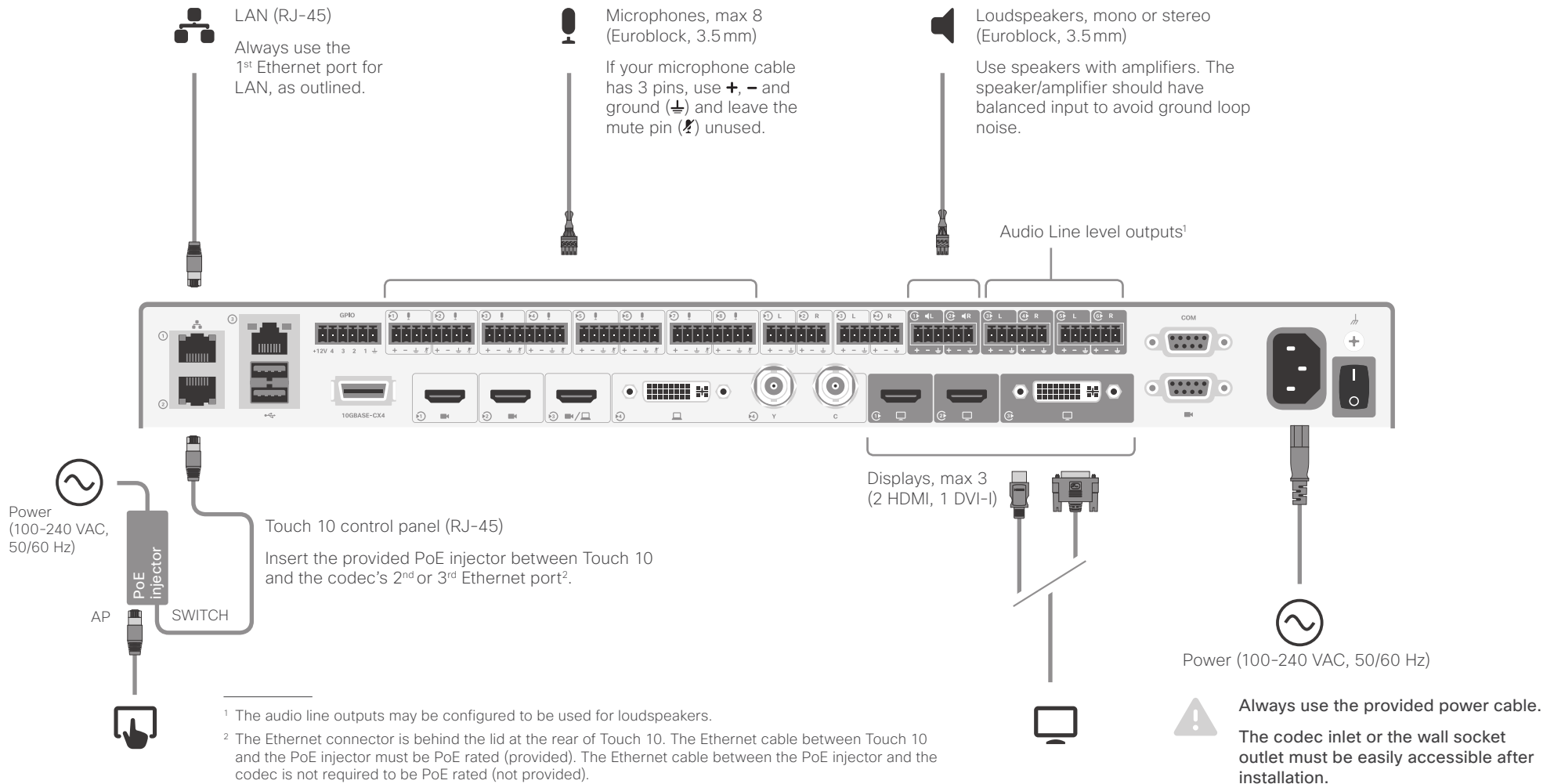
## Chapter 2

# Connecting to the codec

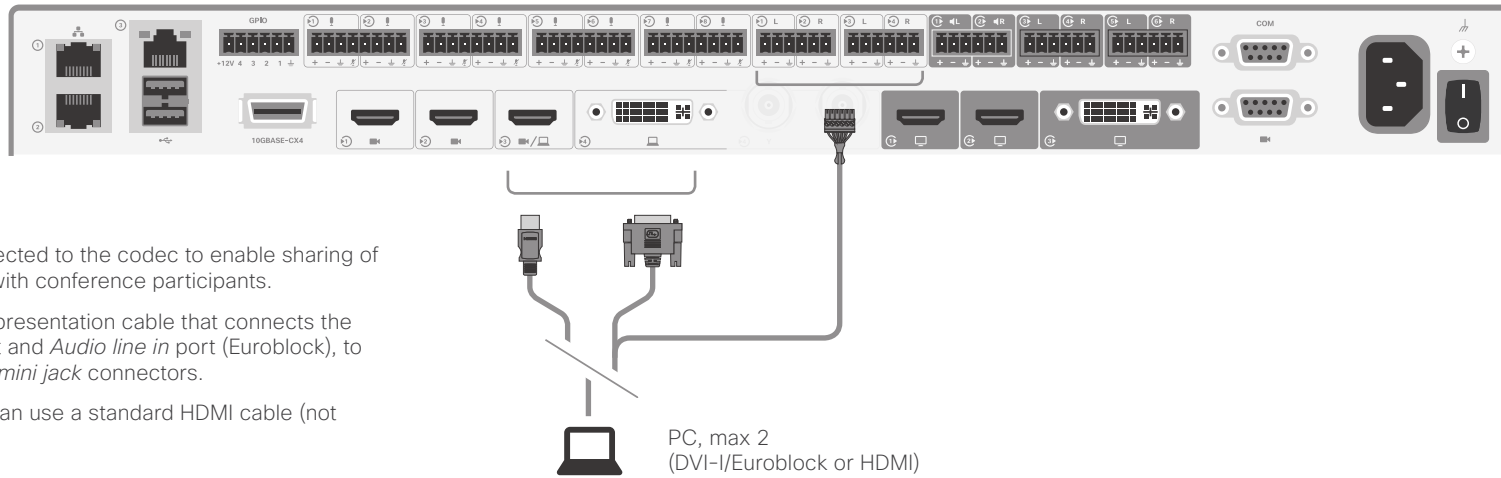
## Connect to LAN, microphones, loudspeakers, Touch 10, displays and power



Make sure all units are switched off when connecting or disconnecting cables.



## Connect a PC (optional)



A PC can be connected to the codec to enable sharing of content locally or with conference participants.

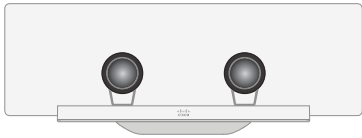
Cisco offers a PC presentation cable that connects the codec's *DVI-I* input and *Audio line in* port (Euroblock), to the PC's *VGA* and *mini jack* connectors.

Alternatively, you can use a standard HDMI cable (not included).

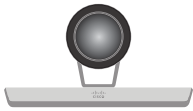
## About cameras

The codec has three HDMI camera inputs, and can therefore support up to three cameras.

Cisco provides the following cameras:



**Cisco TelePresence SpeakerTrack 60** is based on two Cisco TelePresence Precision 60 cameras and a microphone panel for advanced speaker tracking.



**Cisco TelePresence Precision 60** is a full HD camera with 1080p60 resolution, 20x total zoom, and wide angle view.



**Cisco TelePresence PrecisionHD 1080p 4xS2** is a full HD camera with 1080p60 resolution and 4x optical zoom.

You can use any combination of these cameras, as long as the maximum number of cameras does not exceed three<sup>4</sup>.

See how to connect the cameras on the following pages.

For more details about the Cisco cameras, refer to camera guides that are available at [▶ http://www.cisco.com/go/camera-docs](http://www.cisco.com/go/camera-docs)

<sup>4</sup> Note that Cisco TelePresence SpeakerTrack 60 consists of two cameras.



## Connecting Cisco TelePresence SpeakerTrack 60

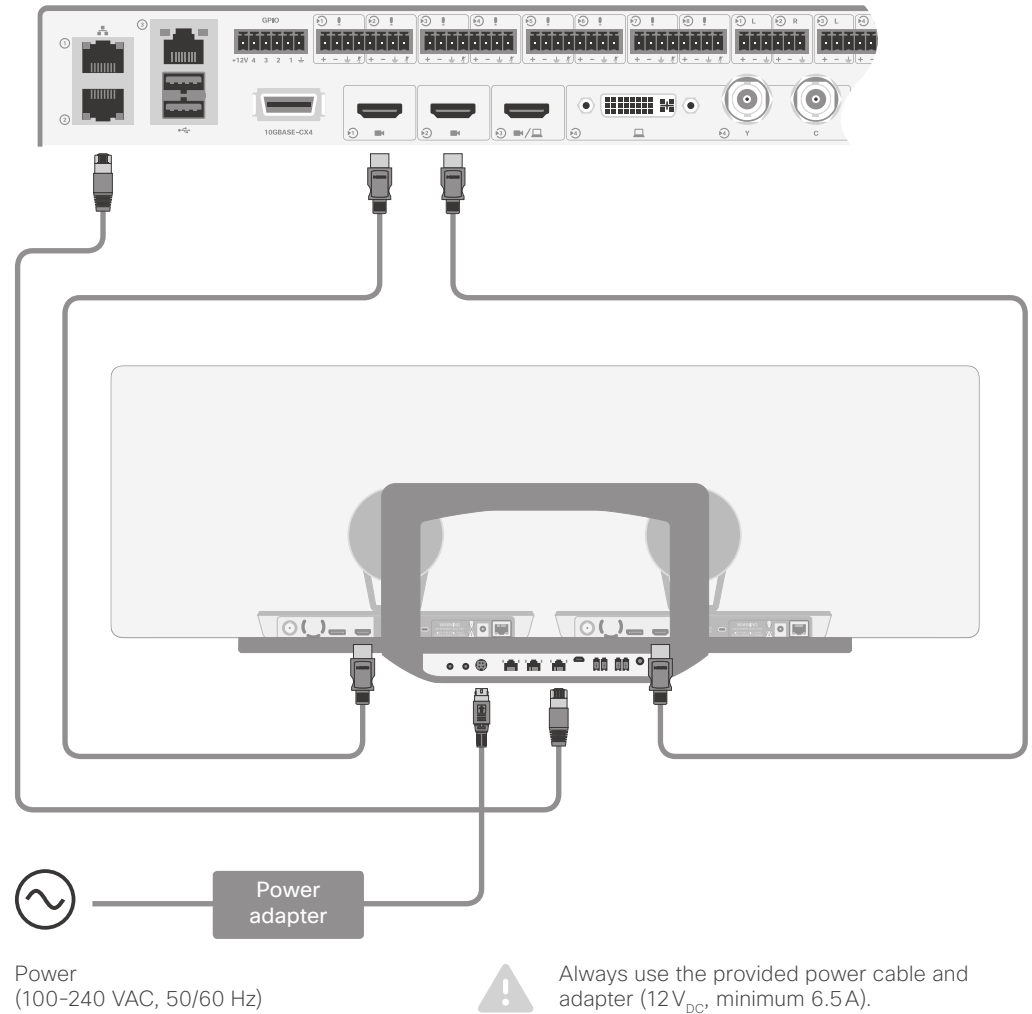
Connect the two cameras in the SpeakerTrack 60 assembly to the codec's 1<sup>st</sup> and 2<sup>nd</sup> camera inputs (HDMI).

Also connect SpeakerTrack 60 to the codec's 2<sup>nd</sup> or 3<sup>rd</sup> Ethernet port, and to power.<sup>1</sup>

Refer to the installation guide that comes with SpeakerTrack 60 for further information about camera assembly and cabling.

**Tip!** Should you for any reason run out of Ethernet ports, just connect a switch to the codec's 2<sup>nd</sup> or 3<sup>rd</sup> Ethernet port.

Never connect the switch to the 1<sup>st</sup> Ethernet port. This is reserved for LAN connection only.



<sup>1</sup> Note that the camera surface is hot when the camera is in operation.

## Connecting Cisco TelePresence Precision 60

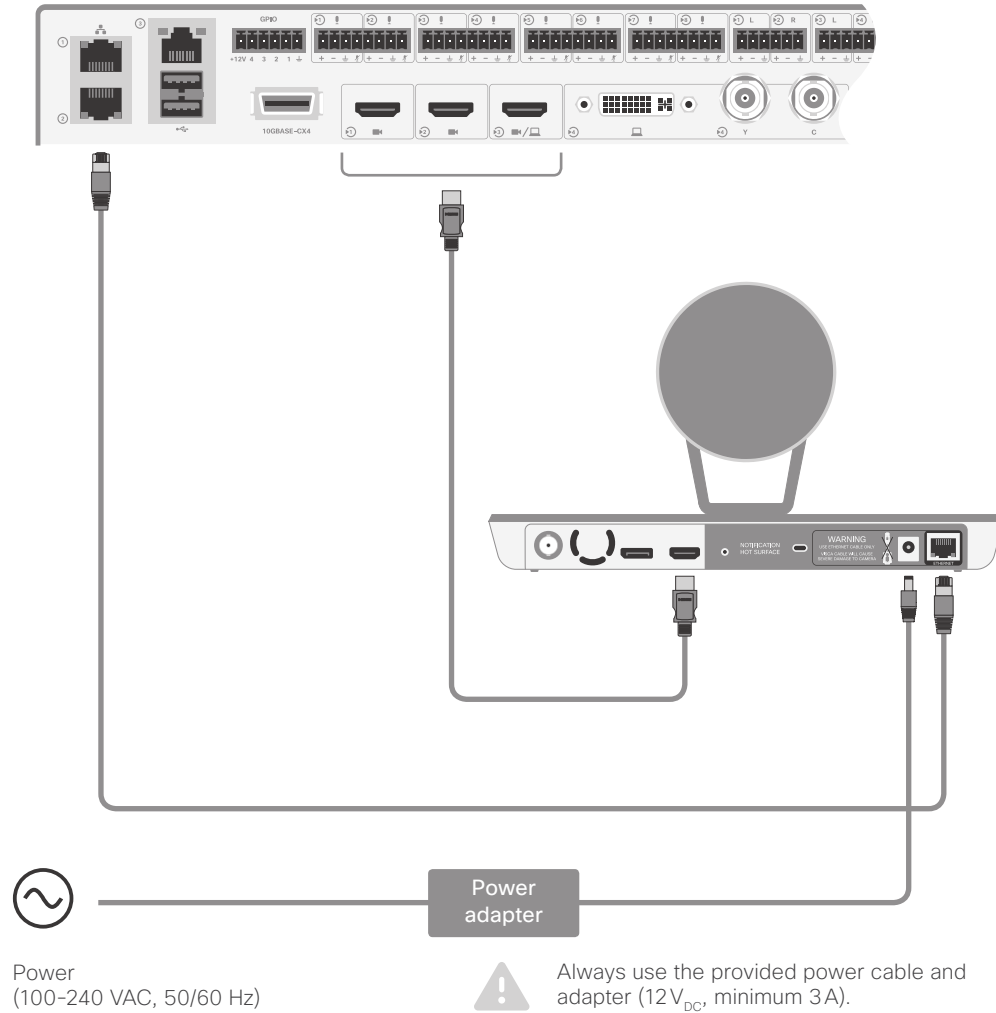
Connect the camera to one of the codec's camera inputs (HDMI).

Cisco recommends using the 1<sup>st</sup> camera input for the main camera.

Also connect the camera to the codec's 2<sup>nd</sup> or 3<sup>rd</sup> Ethernet port, and to power.<sup>1</sup>

**Tip!** Should you for any reason run out of Ethernet ports, just connect a switch to the codec's 2<sup>nd</sup> or 3<sup>rd</sup> Ethernet port.

Never connect the switch to the 1<sup>st</sup> Ethernet port. This is reserved for LAN connection only.



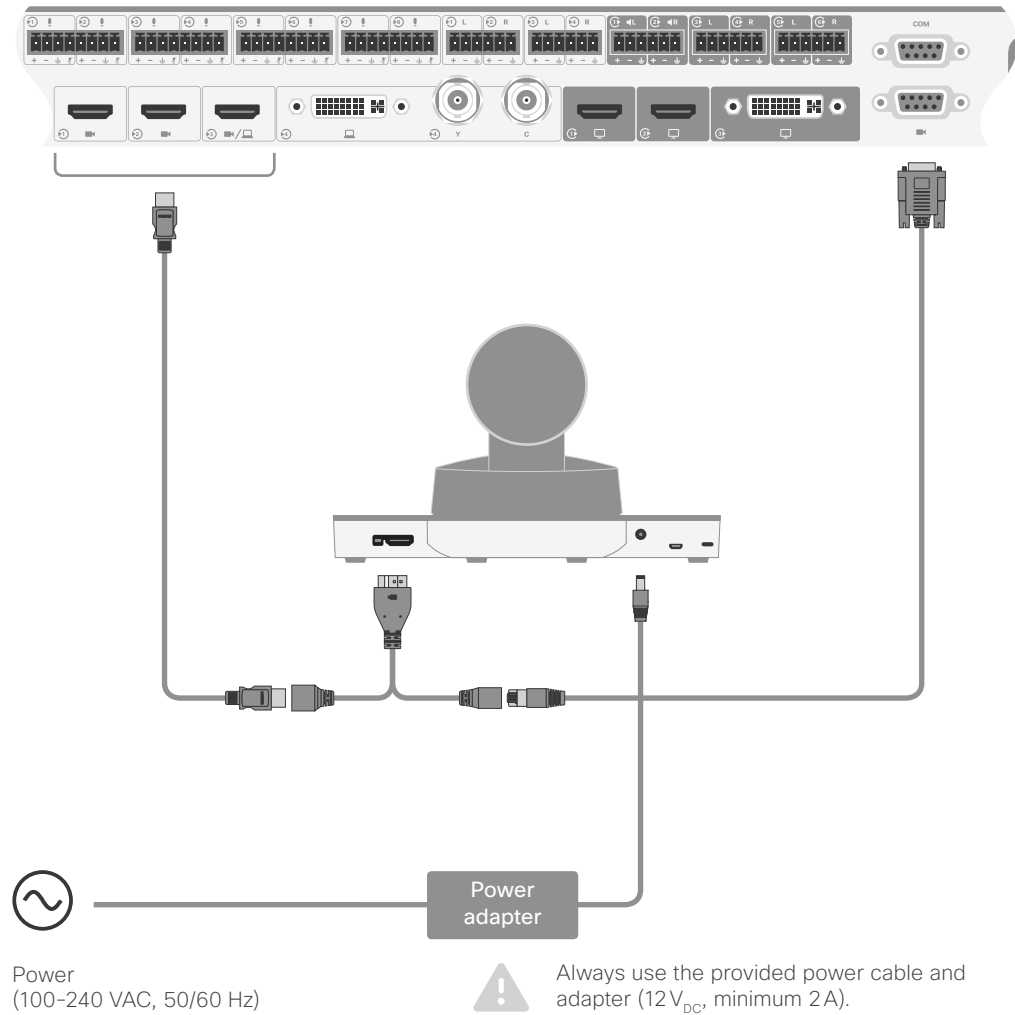
<sup>1</sup> Note that the camera surface is hot when the camera is in operation.

## Connecting Cisco TelePresence PrecisionHD 1080p 4xS2

Connect the camera to one of the codec's camera inputs (HDMI).

Cisco recommends using the 1<sup>st</sup> camera input for the main camera.

Also connect the camera to the codec's dedicated camera control port (D-SUB 9), and to power.



## Chapter 3

# The physical interface

## The front panel



### Shutdown button

The shutdown button on the front panel can be used to switch the codec on/off, provided the power switch on the codec's rear side is on.

- To switch off the codec, hold the button until the LEDs go out.
- To switch on the codec, hold the button until the LEDs flash. It may take a few minutes for the codec to start up. The system is ready for use when the Power LED lights steadily.

The shutdown button can also be used to factory reset the codec, more about this can be found in the Administrator guide for SX80.

### Front panel LEDs

#### *Power:*

- Blinks when the system is starting up.
- Steady light when the codec is ready for use.
- Pulsates when the codec is in standby.

#### *In Call:*

- Steady light when in call.

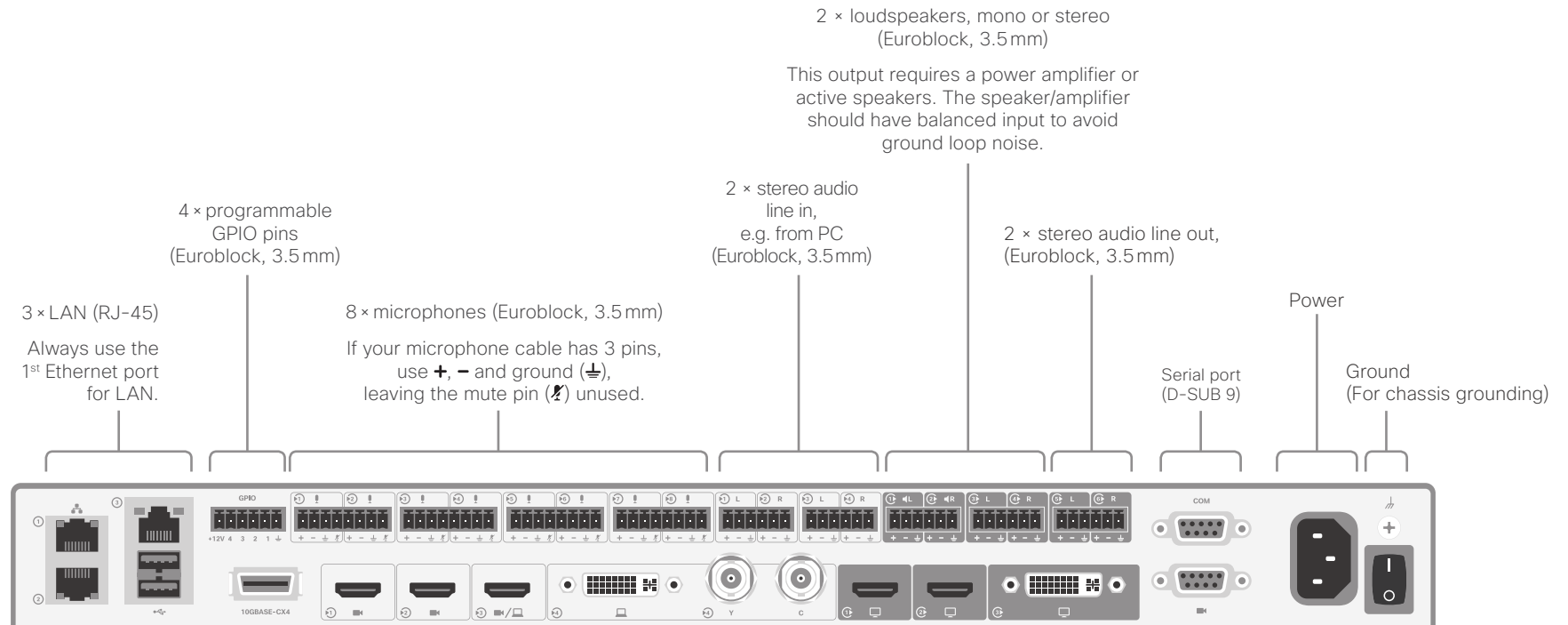
#### *IR:*

- Not in use.

#### *Alarm:*

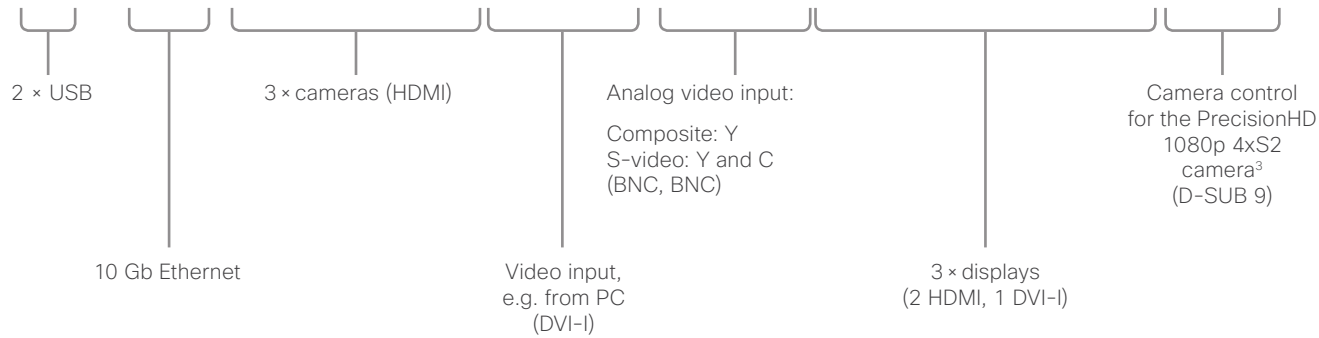
- Lights steady when a serious error occurs.

## The rear panel—overview



**Tip!** Should you for any reason run out of Ethernet ports, just connect a switch to the codec's 2<sup>nd</sup> or 3<sup>rd</sup> Ethernet port.

Never connect the switch to the 1<sup>st</sup> Ethernet port. This is reserved for LAN connection only.



**Note:** These video inputs are mutually excluding, you may only use either the DVI-I, the Composite, or the S-video at a time.

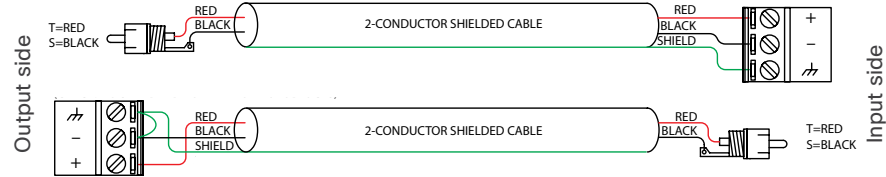


## Chapter 4

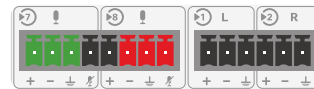
# Socket details

## Audio details

Audio Input/Output Levels			
	Microphone In	Line In	Line Out
Min. level	-48 dBu	-2 dBu	-2 dBu
Default level	-36 dBu	6 dBu	12 dBu
Max. level	22 dBu	22 dBu	22 dBu
No. of steps	70	24	24
0 dBu = 1mW@600Ω (0.775 VRMS)			



These illustrations show best practice when connecting the SX80 to unbalanced connectors.



Connect as indicated by green when using Euroblocks with 3 connectors for microphones. Do not connect as indicated by red.

**Note:** The Microphone inputs are configured for the use of Euroblocks with up to 4 ports, while the Line In/Line Out are configured for the use of Euroblocks with 3 ports only.

If you use Euroblocks with 3 ports as microphone connectors make sure the Euroblock is inserted so that the Microphone Mute is not engaged, i.e. insert it in the leftmost position possible, marked using green in the lower left Fig.



## GPIO details

1× GPIO (General Purpose Input/Output)

6 pins Euroblock, with 4 ports for On/Off control, GND and +12V.

You can configure input/output integrations by using pre-defined behavior. Exposure of states and commands for external control requires external programming.

For information about the API commands, see the API Guide for the codec, go to: ► <http://www.cisco.com/go/telepresence/docs>



Operating principles

- A contact closure between the GND and a GPIO port pin is detected as a low input signal.
- When used for voltage inputs, the GPIO port detects it as:
  - Low signal for voltages 0–1 V<sub>DC</sub>
  - High signal for voltages 2–12 V<sub>DC</sub>
- When used for outputs, the GPIO port acts as a switch to GND, and is rated for 500mA @ 48V DC. The +12V pin provides +12 VDC, and is capable of sourcing up to 500mA.
- The GND connector is a common ground for all pins in the GPIO port.

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