Software version TC4
OCTOBER 2012

The Physical Interface Guide

Cisco Telepresence System Codec C60

What's in this guide?

The top menu bar and the entries in the Table of Contents are all hyperlinks, just click on them to go to the topic.

We recommend you visit our web site regularly for updated versions of the user documentation. Go to: http://www.cisco.com/go/telepresence/docs - and navigate in the right pane to find the TelePresence product documentation.

Table of Contents

Chapter 1

Introduction

About this guide

The purpose of this document is to describe the physical interface for the Codec C Series listed below.:

- Cisco TelePresence System Codec C60

User documentation

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

- Video conference room primer
- Video conference room acoustics guidelines
- Installation guides for the TelePresence systems
- Software release notes for the TC software
- Getting started guide for the TelePresence systems
- User guide for the TelePresence systems
  - When using the Touch controller, ref. TC4.1 version of the user guide
  - When using the Remote Control, ref. TC4.0 version of the user guide
- Quick reference guides for the TelePresence systems
- Administrator guides for the TelePresence systems
- Camera user guide for the PrecisionHD cameras
- API reference guides for the Codec C Series
- TC Console user guide for the Codec C Series
- Physical interfaces guides for the Codec C Series
- Regulatory compliance and safety information guides
- Legal & license information for products using TC software

Download the user documentation

Go to: ▶ http://www.cisco.com/go/cseries-docs

Software download

Go to: ▶ http://www.cisco.com/cisco/software/navigator.html

Chapter 2

Connecting to the codec

Basic setup when connecting to Codec C60

The illustration shows you the basic setup when connecting the monitor, PC, camera, microphone, loudspeakers (if applicable), LAN and line voltage to your codec.

Inputs	Outputs	Basic Setup
1	1	The main connectors for basic setup are highlighted in orange.

Power Switch

First connect the cables, then turn the codec on.

Monitor (audio from HDMI 1 or Line Out 1-2)

Microphone

Loudspeakers (optional)

LAN/ Ethernet

Mains Power Cable

Make sure the codec has been switched off and disconnected from the line voltage whenever connecting or disconnecting other equipment.

Chapter 3

The physical interface

The front panel

There are four LED's in the front of the Codec:

- Power – The POWER LED turns ON when power is connected, otherwise OFF
- Call – The CALL LED turns ON when there are active calls on the codec, otherwise OFF
- Infrared – The IR LED flashes when infrared signals are received
- Alarm – The ALARM LED turns ON when there is no connection to the network, otherwise OFF

Rear panel sockets overview

The Codec C60 provides great flexibility for the connection of audio and video equipment.

The illustration below shows the rear panel of the Codec C60.

Inputs	Outputs	Basic Setup
1 ←	1 →	The main connectors for basic setup are highlighted in orange.

Video sockets

The video input sockets comprise:

- 2 x HDMI
- 2 x DVI-I
- 1 x Composite or 1 x S-Video(YC)

The video output sockets comprise:

- 1 x HDMI
- 1 x DVI-I
- 1 Composite

Audio sockets

The audio input sockets comprise:

- 4 x XLR Female – Microphone/Line In
- 2 x RCA – Line In (1 Left, 2 Right)
- 1 x HDMI

The audio output sockets comprise:

- 2 x RCA – 1 Left (SPDIF), 2 Right
- 1 x HDMI

Other sockets

The other sockets comprise:

- Ethernet 1 and Ethernet 2
- COM – Serial data port
- Camera control – serial port
- Power socket
- Grounding – Chassis grounding
- Power On/Off switch
- GPIO–General Purpose Input/Output
- USB Host*, USB Device*, T Link*

***** For future use

Codec C60 Rear Panel

The following pages give a detailed description of the rear panel sockets and connectors.

Video inputs

HDMI 1–2

2 x HDMI sockets, digital video input 1–2. There is audio input on HDMI 2 in.

HDMI – High Definition Multimedia Interface (digital, sound & picture)

Typical use: Camera, DVD, PC.

Main connector. The HDMI 1 input is the main connector to the PrecisionHD 1080p camera.

DVI-I 2 and 3

2 x DVI-I sockets, digital/analog video input 2, 3.

- DVI-D
- DVI-A (Analog RGB / VGA)
- DVI-A Analog component/YPbPr

DVI-I – Digital Video Interface – Integrated (digital DVI-D and analog DVI-A)

Typical use: Two digital video inputs for PC presentations or used for the PrecisionHD camera.

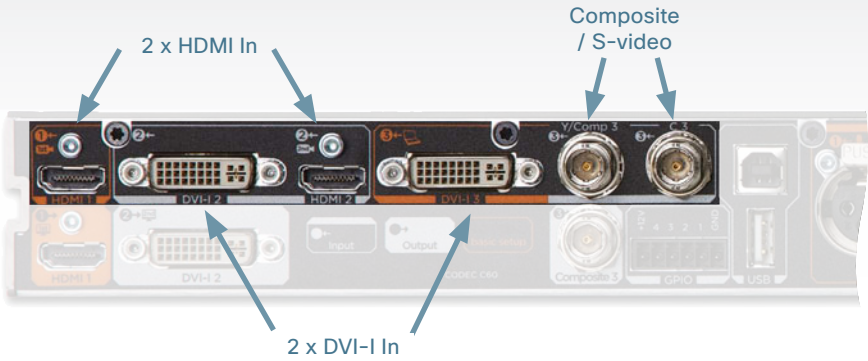
Composite 3 / S-Video (YC) 3

2 BNC sockets, analog video input 3.

The S-Video (YC) and the composite inputs uses the same physical connectors, and will not be able to be connected at the same time.

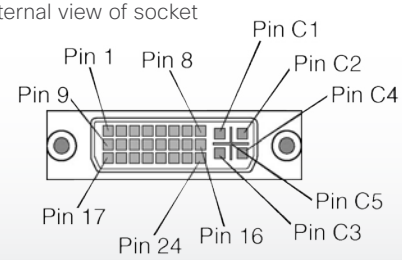
- S-Video 3 – Connect to the Y/Comp 3 (luma) and C 3 (chroma) connectors
- Composite 3 – Connect to Comp 3 connector

Typical use: Camera and DVD.



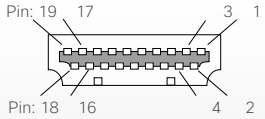
DVI-I pin-out

External view of socket



HDMI pin-out

External view of socket



HDMI Pin-out			
Pin	*Assignment*	*Pin*	*Assignment*
1	T.M.D.S. Data 2+	11	T.M.D.S. Clock Shield
2	T.M.D.S. Data 2 Shield	12	T.M.D.S. Clock–
3	T.M.D.S. Data 2–	13	CEC
4	T.M.D.S. Data 1	14	Reserved (N.C. on device)
5	T.M.D.S. Data 1 Shield	15	SCL
6	T.M.D.S. Data 1–	16	SDA
7	T.M.D.S. Data 0	17	DDC/CEC Ground
8	T.M.D.S. Data 0 Shield	18	+5 V Power (max 50 mA)
9	T.M.D.S. Data 0–	19	Hot Plug Detect
10	T.M.D.S. Clock+		

Levels

Composite. 1 Vpp, 75 Ω

S-Video (YC):

Y: 1 Vpp, 75 Ω
C (PAL): 0.3 Vpp, 75 Ω
C (NTSC): 0.28 Vpp, 75 Ω

Video input formats

2 x HDMI inputs, supported formats

- 1920 x 1080@60, 59.94 Hz (1080p60)
- 1920 x 1080@50 Hz (1080p50)
- 1920 x 1080@30, 29.97 Hz (1080p30)
- 1920 x 1080@25 Hz (1080p25)
- 1920 x 1080@24, 23.97 Hz (1080p24)
- 1920 x 1200@50 Hz (WUXGA)
- 1680 x 1050@60 Hz (WSXGA+)
- 1600 x 1200@50, 60 Hz (UXGA)
- 1440 X 900@60 Hz (WXGA+)
- 1400 x 1050@60, 75 Hz
- 1366 x 768@60 Hz
- 1360 x 768@60 Hz
- 1280 x 1024@60, 75, 85 Hz (SXGA)
- 1280 x 960@60, 85 Hz
- 1280 x 800@60 Hz (WXGA)
- 1280 x 768@60, 75, 85 Hz (WXGA)
- 1280 x 720@60, 59.94 Hz (720p60)
- 1280 x 720@50 Hz (720p50)
- 1152 x 864@75 Hz
- 1024 x 768@60, 70, 75, 85 Hz (XGA)
- 848 x 480@60 Hz
- 800 x 600@56, 60, 72, 75, 85 Hz (SVGA)
- 720 x 576@50 Hz (576p50)
- 720 x 480@60, 59.94 Hz (480p60)
- 640 x 480@60, 72, 75, 85 Hz (VGA)

2 x DVI-I inputs, supported formats

Digital (DVI-D)

- Same as HDMI inputs, ref. *above*.

Analog RGB (DVI-A)

- 1920 x 1080@60 Hz (1080p60)
- 1920 x 1200@50 Hz (WUXGA)
- 1680 x 1050@60 Hz (WSXGA+)
- 1600 x 1200@60 Hz (UXGA)
- 1440 x 900@60 Hz (WXGA+)
- 1400 x 1050@60, 75 Hz
- 1366 x 768@60 Hz
- 1360 x 768@60 Hz
- 1280 x 1024@60, 75, 85 Hz (SXGA)
- 1280 x 960@60, 85 Hz
- 1280 x 800@60 Hz (WXGA)
- 1280 x 768@60, 75, 85 Hz (WXGA)
- 1280 x 720@60 Hz (720p60)
- 1152 x 864@75 Hz
- 1024 x 768@60, 70, 75, 85 Hz (XGA)
- 848 x 480@60 Hz
- 800 x 600@56, 60, 72, 75, 85 Hz (SVGA)
- 720 x 576@50 Hz
- 720 x 480@60, 59.94 Hz (480p60)
- 640 x 480@60, 72, 75, 85 Hz (VGA)

Analog YPbPr (DVI-A)

- 1920 x 1080@60 Hz (1080p60)
- 1920 x 1080@50 Hz (1080p50)
- 1920 x 1080@30 Hz (1080p30)
- 1920 x 1080@25 Hz (1080p25)
- 1280 x 720@60 Hz (720p60)
- 1280 x 720@50 Hz (720p50)
- 1280 x 720@30 Hz (720p30)
- 720 x 576@50 Hz (576p50)
- 720 x 480@60 Hz (480p60)

Extended Display Identification Data (EDID)

1 x S-Video/Composite input, supported formats

- PAL/NTSC

Video outputs

HDMI 1

1 x HDMI socket, digital video and audio output 1.

HDMI – High Definition Multimedia Interface (digital, sound & picture).

Typical use: Monitor, recording device.

Main connector. The HDMI output 1 is the main connector to the monitor.

DVI-I 2

1 x DVI-I socket, digital/analog video output 2.

- DVI-D.
- DVI-A (Analog RGB / VGA).

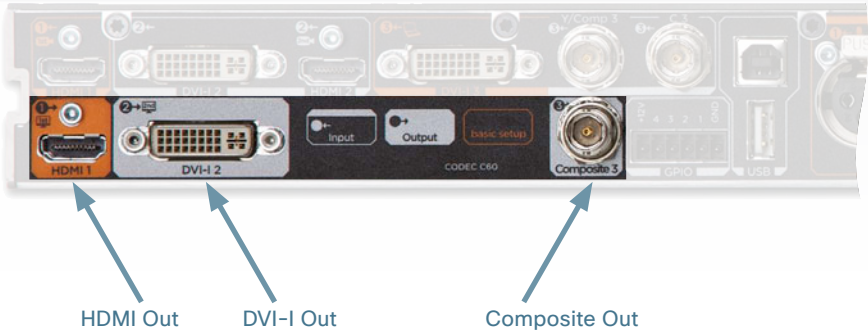
DVI-I – Digital Video Interface – Integrated (digital DVI-D and analog DVI-A).

Typical use: Monitors.

Composite 3

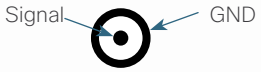
1 x BNC sockets, analog video output 3.

Typical use: Monitor.



BNC pin-out

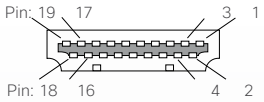
External view of socket



BNC – Bayonet Neill-Concelman

HDMI pin-out

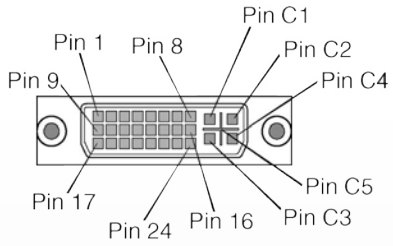
External view of socket



Please refer to previous pages for pin-out scheme.

DVI-I pin-out

External view of socket



Video output formats

1 x HDMI and 1 x DVI-I outputs, supported formats

- 1920 x 1080@60 Hz (1080p60)
- 1920 x 1200@60Hz (WUXGA)
- 1600 x 1200@60 Hz (UXGA)
- 1366 x 768@60 Hz
- 1360 x 768@60 Hz
- 1280 x 720@60 Hz (720p60)
- 1280 x 1024@60 Hz (SXGA)
- 1280 x 768@60 Hz (WXGA)
- 1024 x 768@60 Hz (XGA)
- 800 x 600@60 Hz (SVGA)
- 640 x 480@60 Hz (VGA)

VESA Monitor Power Management

1 x Composite output, supported formats

BNC Connector

- PAL/NTSC

Levels

Composite. 1 Vpp, 75 Ω

Audio inputs

Unused, but connected audio inputs should be set to Off to avoid unwanted audio/noise.

Microphone/Line In 1–4 (XLR)

4 x Balanced XLR sockets, audio input 1–4.

Main connector: The Microphone/Line In 1 is the main connector for the microphone.

All four microphone inputs are for balanced electret microphones, 48V phantom powered via XLR connectors.

The phantom powering of all four XLR sockets can be individually switched off. The input will then be a balanced line level input.

All Microphone/Line In 1–4 are equipped with acoustic echo canceller.

Use Microphone/Line In 1–4 to connect to an external microphone amplifier or an external mixer.

Default configuration: In default configuration, all Microphone/Line In inputs are enabled and configured as microphones.

Line In 1–2 (RCA)

2 x RCA sockets, audio input 1–2

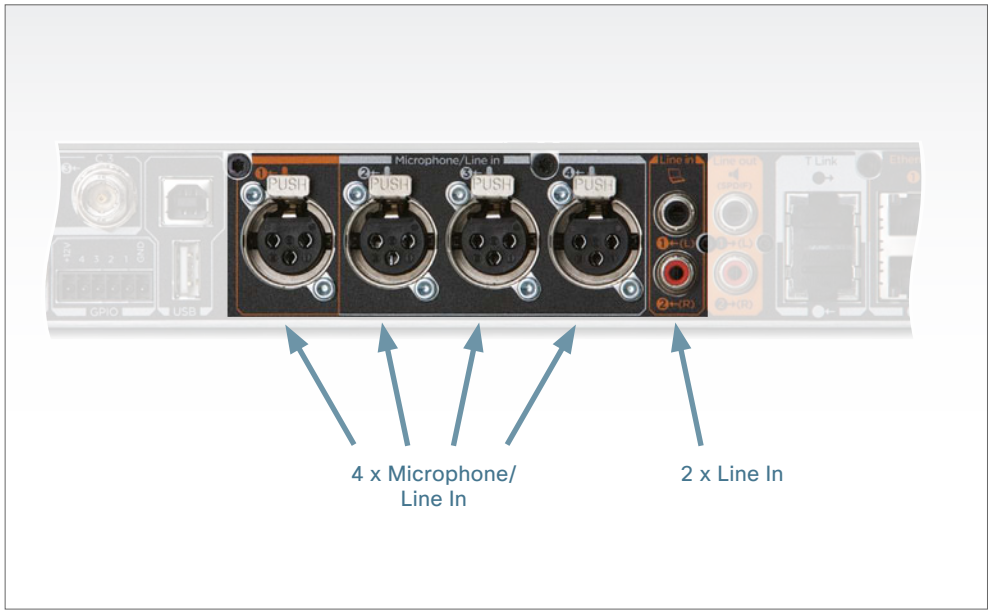
Audio Line In 1–2 are used when connecting to PC and to external playback devices, such as VCR's or DVD players.

Main connectors: The Line In 1 is the main connector to a PC.

Stereo. For systems with stereo I/O the audio inputs can be configured in stereo pairs:

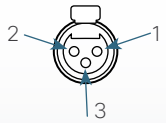
- Connect the left channel to Line In 1
- Connect the right channel to Line In 2

Default configuration for Line In 1–2: In the default configuration Line In 1 and 2 are configured as stereo inputs for external playback devices, such as a PC.



XLR pin-out

External view of socket



Pin 1: Gnd
Pin 2: Hot
Pin 3: Cold/neutral

XLR - Electrical Connector (Cannon XL series with Rubber compound)

RCA pin-out

External view of socket

RCA - Phono Plug (the Radio Corporation of America)

Audio outputs

Line Out 1–2 (RCA)

2 x RCA sockets, audio output 1–2

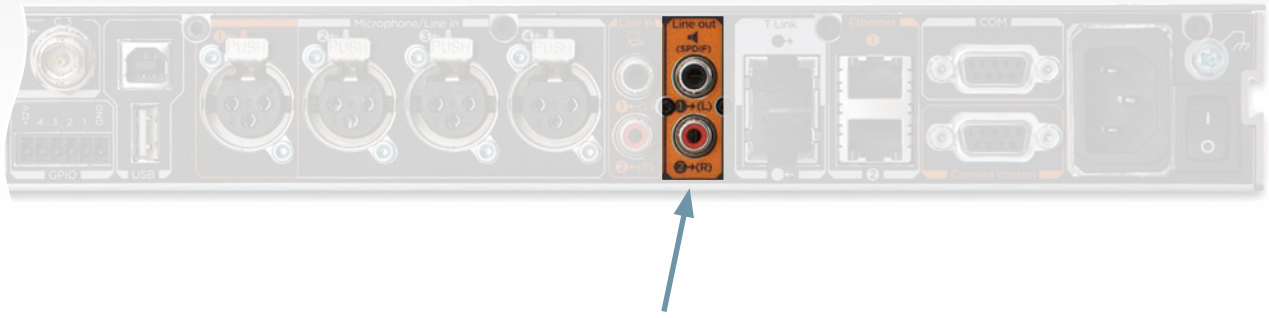
Can be configured as two stereo pairs.

Main connector: Line Out 1 (left) and Line Out 2 (right) are the main connectors to the local loudspeaker system.

The local loudspeaker system may or may not include the DNAM (Digital Natural Audio Module).

Default configuration Line Out 1–2: In default configuration, Line Out 1 and 2 are configured as stereo speakers.

if a DNAM is present or SPDIF* is active on Line Out 1, then Line Out 1 provides a digital stereo speaker signal and Line Out 2 is not active.



2 x Line Out

RCA pin-out

External view of socket

RCA - Phono Plug (the Radio Corporation of America)

What is a Line output

A Line output consists of all signals from the local side and all signals from the far end side.

What is a Speaker output

A Speaker output consists of all signals from the local side, except microphones, and all signals from the far end side.

Left channel

The Left channel consists of all the Left channel and Mono signals.

Right channel

The Right channel consists of all the Right channel and Mono signals.

*SPDIF - Sony/Philips Digital Interface, used by the Digital Natural Audio Module.

Audio HDMI in-/output

HDMI In 2

1 x HDMI connector with audio input.

Typical use: Use HDMI In 2 (2–8 channels) to connect to external playback devices as DVD players. Each input support up to two channels at 48kHz sampling rate.

Unused, but connected audio inputs should be set to Off to avoid unwanted audio/noise.

HDMI Out 1

1 x HDMI connector, audio out 1

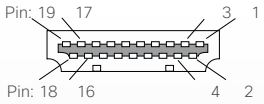
Use HDMI Out 1 to connect to a flat screen with speakers. HDMI 1 will provide stereo audio speaker signals at 48kHz.

Main connector: The HDMI output 1 is the main connector to the monitor.

HDMI 1: Audio from far end and PC.

HDMI pin-out

External view of socket



Please refer to previous pages for pin-out scheme.

Audio signal levels tables

Microphone Inputs 1 to 4 XLR female			
Signal levels	*Clipping level*		*Nominal level*
Level setting [dB]	*[mVpp]*	*[dBu]*	*[dBu]*
0.0	275.0	-18.0	-36.0
1.0	245.1	-19.0	-37.0
2.0	218.4	-20.0	-38.0
3.0	194.7	-21.0	-39.0
4.0	173.5	-22.0	-40.0
5.0	154.6	-23.0	-41.0
6.0	137.8	-24.0	-42.0
7.0	122.8	-25.0	-43.0
8.0	109.5	-26.0	-44.0
9.0	97.6	-27.0	-45.0
10.0	87.0	-28.0	-46.0
11.0	77.5	-29.0	-47.0
12.0	69.1	-30.0	-48.0
13.0	61.6	-31.0	-49.0
14.0	54.9	-32.0	-50.0
15.0	48,9	-33.0	-51.0
16.0	43,6	-34.0	-52.0
17.0	38,8	-35.0	-53.0
18.0	34,6	-36.0	-54.0
19.0	30,9	-37.0	-55.0
20.0	27,5	-38.0	-56.0
21.0	24,5	-39.0	-57.0
22.0	21,8	-40.0	-58.0
23.0	19,5	-41.0	-59.0
24.0	17,4	-42.0	-60.0

This specification is valid for Mic 1–4 inputs if Microphone Level setting is selected.

Line Inputs 1 to 4 XLR female			
Signal levels	*Clipping level*		*Nominal level*
Level setting [dB]	*[Vpp]*	*[dBu]*	*[dBu]*
0.0	34.7	24.0	6.0
1.0	31.0	23.0	5.0
2.0	27.6	22.0	4.0
3.0	24.6	21.0	3.0
4.0	21.9	20.0	2.0
5.0	19.5	19.0	1.0
6.0	17.4	18.0	0.0
7.0	15.5	17.0	-1.0
8.0	13.8	16.0	-2.0
9.0	12.3	15.0	-3.0
10.0	11.0	14.0	-4.0
11.0	9.8	13.0	-5.0
12.0	8.7	12.0	-6.0
13.0	7.8	11.0	-7.0
14.0	6.9	10.0	-8.0
15.0	6.2	9.0	-9.0
16.0	5.5	8.0	-10.0
17.0	4.9	7.0	-11.0
18.0	4,4	6.0	-12.0
19.0	3,9	5.0	-13.0
20.0	3,5	4.0	-14.0
21.0	3,1	3.0	-15.0
22.0	2,8	2.0	-16.0
23.0	2,5	1.0	-17.0
24.0	2,2	0.0	-18.0

This specification is valid for Line 1–4 inputs if Line Level setting is selected.

Line Inputs 1 to 4 Female RCA/phone			
Signal levels	*Clipping level*		*Nominal level*
Level setting [dB]	*[Vpp]*	*[dBu]*	*[dBu]*
0.0	17.4	18.0	0.0
1.0	15.5	17.0	-1.0
2.0	13.8	16.0	-2.0
3.0	12.3	15.0	-3.0
4.0	11.0	14.0	-4.0
5.0	9.8	13.0	-5.0
6.0	8.7	12.0	-6.0
7.0	7.8	11.0	-7.0
8.0	6.9	10.0	-8.0
9.0	6.2	9.0	-9.0
10.0	5.5	8.0	-10.0
11.0	4.9	7.0	-11.0
12.0	4.4	6.0	-12.0
13.0	3.9	5.0	-13.0
14.0	3.5	4.0	-14.0
15.0	3.1	3.0	-15.0
16.0	2.8	2.0	-16.0
17.0	2.5	1.0	-17.0
18.0	2,2	0.0	-18.0
19.0	2,0	-1.0	-19.0
20.0	1,7	-2.0	-20.0
21.0	1,6	-3.0	-21.0
22.0	1,4	-4.0	-22.0
23.0	1,2	-5.0	-23.0
24.0	1,1	-6.0	-24.0

Line outputs 1 to 2 Female RCA/phone			
Signal levels	*Absolute max output level*		*Nominal level*
Level setting [dB]	*[Vpp]*	*[dBu]*	*[dBu]*
-24.0	1,1	-6.0	-24.0
-23.0	1,2	-5.0	-23.0
-22.0	1,4	-4.0	-22.0
-21.0	1,5	-3.0	-21.0
-20.0	1,7	-2.0	-20.0
-19.0	1,9	-1.0	-19.0
-18.0	2,2	0.0	-18.0
-17.0	2.5	1.0	-17.0
-16.0	2.8	2.0	-16.0
-15.0	3.1	3.0	-15.0
-14.0	3.5	4.0	-14.0
-13.0	3.9	5.0	-13.0
-12.0	4.4	6.0	-12.0
-11.0	4.9	7.0	-11.0
-10.0	5.5	8.0	-10.0
-9.0	6.2	9.0	-9.0
-8.0	6.9	10.0	-8.0
-7.0	7.8	11.0	-7.0
-6.0	8.7	12.0	-6.0
-5.0	9.8	13.0	-5.0
-4.0	11.0	14.0	-4.0
-3.0	12.3	15.0	-3.0
-2.0	13.8	16.0	-2.0
-1.0	15.5	17.0	-1.0
0.0	17.4	18.0	0.0

Notes:

1. Default levels are marked with white text on black
2. For the dBu value for input clipping level and absolute max output level, a sine waveform is assumed
3. If numbers in dBV are required, dBV value is 2.2 dB lower than the dBu value.
   Example: -10 dBu equals -12.2 dBV

Audio hardware information table

Hardware Information				
	*Mic 1–4 **	*Line in 1–4 ***	*Line in 1–2*	*Line out 1–2*
Signal type	*Balanced*	*Balanced*	*Unbalanced*	*Unbalanced*
Connector (codec)	XLR-F	XLR-F	Female RCA/phono	Female RCA/phono
Input impedance	8100 Ohm (pin 2–3)	10k Ohm (pin 2–3)	10 k Ohm	
Output impedance				100 Ohm
Max input level when set to Min input level	–18dBu/275mVpp	24dBu/34.7Vpp	18dBu/17.4Vpp	
Max input level when set to Max input level	–42dBu/35mVpp	0dBu/4.4Vpp	-6dBu/2.2Vpp	
Max output level when set to Min output level				-6dBu/2.2Vpp
Max output level when set to Max output level				18dBu/17.4Vpp
Gain range	<–24dB (24 steps of 1dB) –>			
Phantom power	48 Volt +/- 2%			
Phantom power resistor pin 1	6800 Ohm			
Phantom power resistor pin 2	6800 Ohm			
Max phantom power current (per mic)	14mA			

* This specification is valid for Mic 1–4 inputs if Microphone Level setting is selected

** This specification is valid for Line 1–4 inputs if Line Level setting is selected

Volume control table

Volume control	
*Ring tone volume**	*Audio gain value*
0	0
1	-34.5 dB
70	0.0 dB
100	15.0 dB

* The ring tone volume, which is displayed on screen when using the TRC5 remote control, goes from 0 to 20.

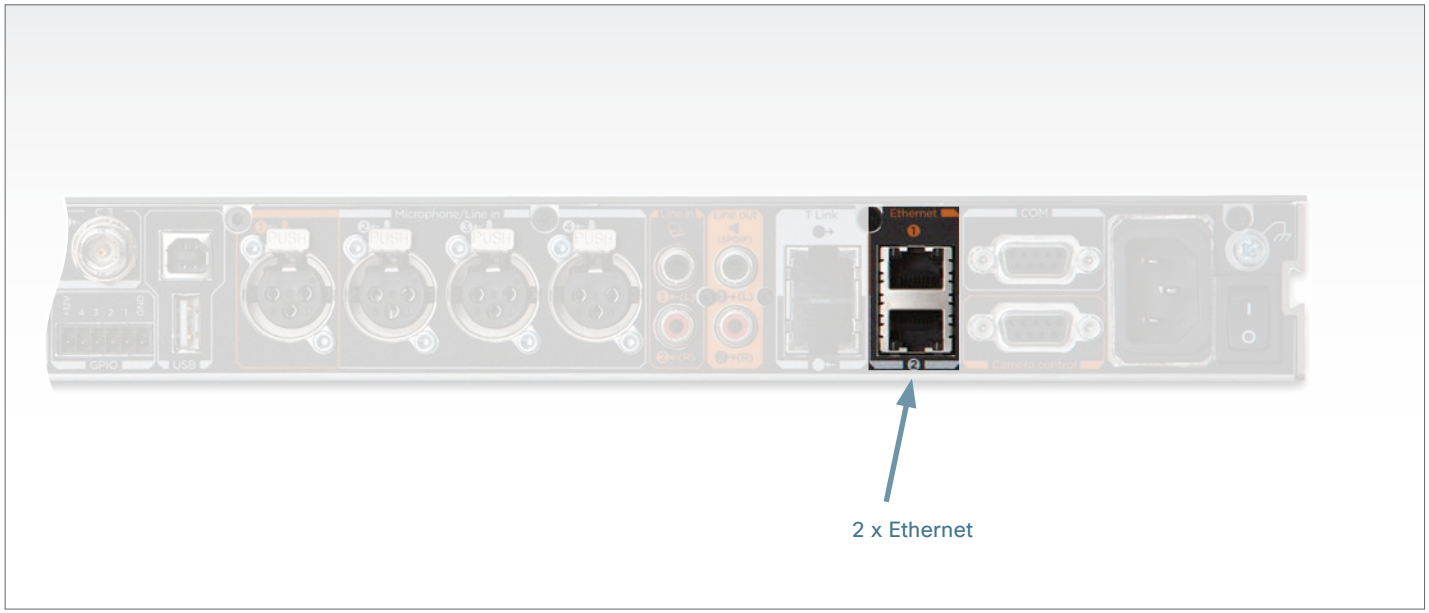
Network connectors

Ethernet interface

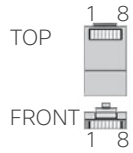
2 × Gigabit Ethernet LAN (RJ-45 Jack) interface (GbE).

Ethernet 1: Main connector for network connection

Ethernet 2: For direct pairing with the Cisco TelePresence Touch for C Series.



RJ-45 Connector pin-out



Wiring diagram
standard cable

1 ---------- 1
2 ---------- 2
3 ---------- 3
6 ---------- 6

COM port and Camera Control port

COM port

1 x COM (RS-232) data port for codec control and configuration through API commands.

Camera Control port

1 x Camera Control (RS-232) port for power and camera control (pan, tilt, zoom) using the VISCA™* protocol.

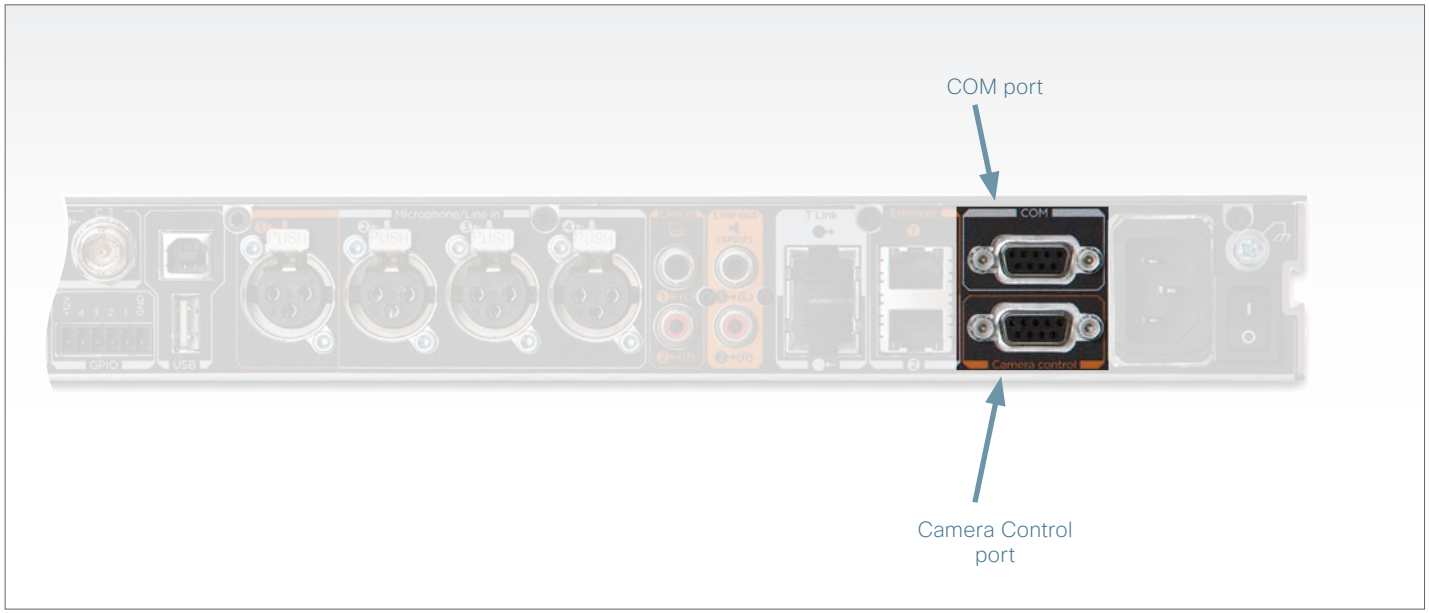
Main connector: The main camera is connected to the Camera Control port.

Power. Pin No. 4 on the Camera Control port provides 12 V DC / 1 A to the main camera.

If more than one camera is connected, only the first camera is powered from the codec. The additional cameras must be daisy chained by using a serial cable, and each will need an external power supply.

Additional cameras. For information about additional cameras, see the PrecisionHD Camera User Guide which is found on our web site, go to:
▶ http://www.cisco.com/go/telepresence/docs

*VISCA™ is a trademark of Sony Corporation



Pin-out–COM Port

Pin	*Signal name*	*Direction*
1	Carrier detect, CD	From DCE
2	Receive data, RXD	From DCE
3	Transmit data, TXD	To DCE
4	12 V / 1 A	To the main camera
5	Signal GND	
6	Data set ready, DSR	From DCE
7	Ready to send, RTS	To DCE
8	Clear to send, CTS	From DCE
9	Ring indicator, RI	From DCE

Pin-out–VISCA™ camera control RJ11, 8 pins shielded modular jack

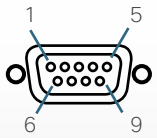
Pin	*Signal name*
8	+12V (presence 2.8mA current source when connected in daisy chain)
7	GND
6	TXD (out)
5	NC (no connect)
4	NC (no connect)
3	RXD (in)
2	GND
1	+12V

Pin-out–Camera cable

Signal name	*RJ-45 pin*		*D-SUB pin*
+12V DC	1	Twisted pair	4
GND	2		5
RX	3	Twisted pair	2
TX	6		3
NC	4	Twisted pair	1
NC	5		6
GND	7	Twisted pair	5
+12V DC	8		4

RS232 9 pin D-SUB pin-out

External view of socket



Power

Power socket

Power Cord Socket.

Accepts 100-240V, 50/60Hz, 2.8A max.

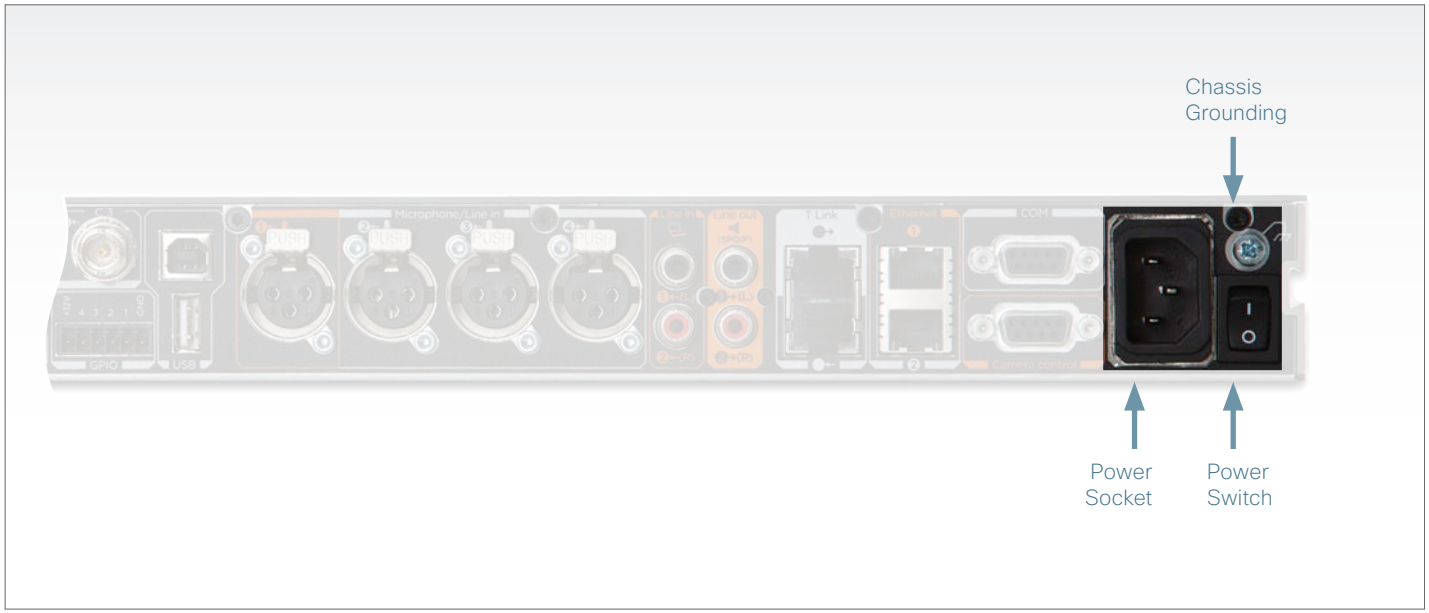
CAUTION! This equipment must be grounded.

Power switch

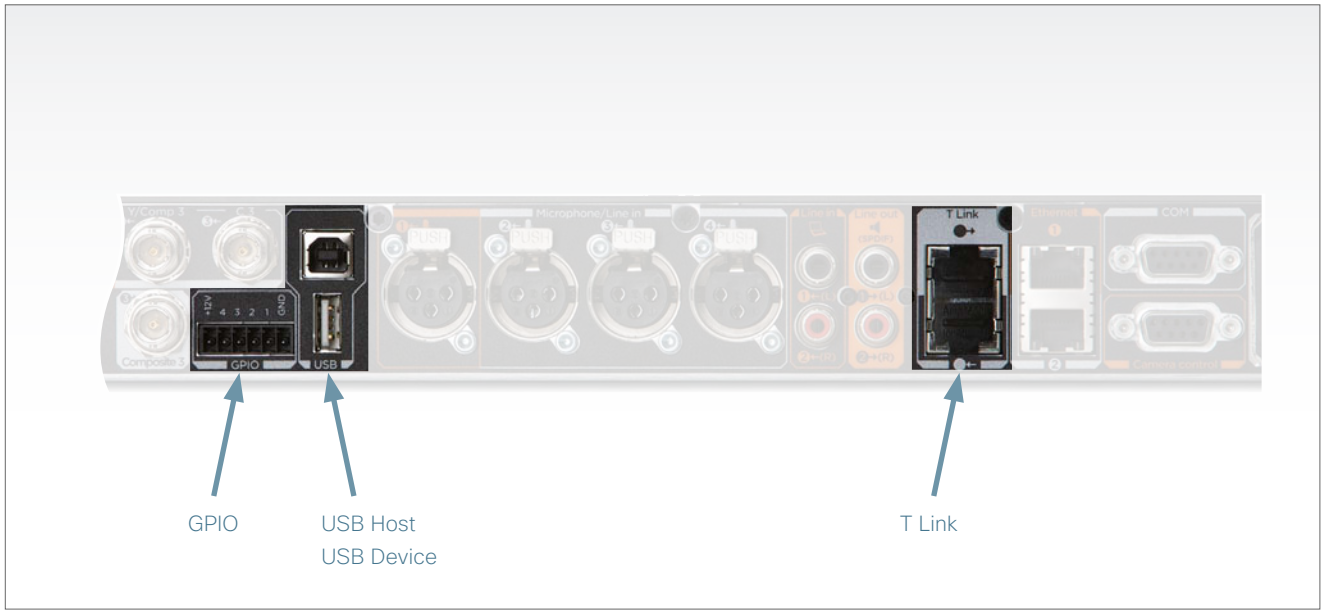
Power Switch (On/Off)

Chassis grounding

For grounding of the chassis



GPIO and other connectors



GPIO

1 × GPIO (General Purpose Input/Output)

6 pins Phoenix plug, having 4 ports for On/Off control, GND and +12V.

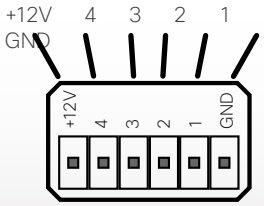
You can configure input/output integrations by using pre-defined behavior, defined by API commands. Exposure of states and commands for external control requires external programming.

For information about the API commands, see the API Guide for the codec. Go to: ► http://www.cisco.com/go/cseries-docs

Usage information

- 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 VDC
  - High signal for voltages 2 - 12 VDC
- When used for outputs, the GPIO port acts as a switch to GND, and is rated for 500mA @ 12V 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.

GPIO pin-out



USB

1 × USB Host

1 × USB Device

For future use.

T Link

2 × T Link, RJ45 connector.

The cable for T Link out must be shielded.

For future use.

On our web site you will find an overview of the worldwide Cisco contacts.
Go to: http://www.cisco.com/web/siteassets/contacts

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