

## KNOWLEDGE BASE ARTICLES

- Codec C Series
- EX Series
- MX Series
- Profile Series
- Quick Set Series

 SEPTEMBER 2013



### Thank you for choosing Cisco!

Your Cisco product has been designed to give you many years of safe, reliable operation.

The articles in this Knowledge Base give advice on installation, interoperability, configuration, firewalls, and many other frequently asked questions.

Our main objective 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](http://www.cisco.com/go/telepresence/docs).

### How to use this guide

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

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## Chapter 1

# Introduction

## About this guide

Several small articles related to the Cisco TelePresence products listed below are gathered in this Knowledge Base document. Most of the articles are in question-answer form and cover installation, interoperability, configuration, firewalls, and many other frequently asked questions.

### Products covered in this guide

- Codec C Series:
  - Codec C40
  - Codec C60
  - Codec C90
- EX Series:
  - EX90
  - EX60
- MX Series
  - MX200
  - MX300
- Profile Series using Codec C Series:
  - Profile 42"
  - Profile 52"/ 55"
  - Profile 52" Dual/ 55" Dual
  - Profile 65"
  - Profile 65" Dual
- Quick Set Series
  - SX20 Quick Set
  - Quick Set C20

## Software

You can download the software for your product from the Cisco web site, go to:

► <http://www.cisco.com/cisco/software/navigator.html>



## Chapter 2

# Questions

## Questions by category

The questions in this knowledge base are listed by category below. The article numbers are used as a reference only.

Many of these articles apply to multiple product series.

### Audio

- 325: [There is no audio coming out from my codec when it is connected to my monitor with an HDMI cable, why?](#)
- 326: [The audio on the dual stream is out of sync with the dual stream video, why?](#)
- 624: [Can I use the Cisco TelePresence Performance Mic 20 external microphone on the EX and MX video systems?](#)
- 692: [Why can I hear my voice in my speakers when I am using a Cisco TelePresence video system?](#)
- 696: [What kind of external speakers can I use with the C20 and SX20 codecs?](#)

### Cables

- 307: [What is the maximum length of the HDMI cable connecting a codec to a monitor?](#)
- 308: [What is the maximum length of the cable between a codec and a camera when using HD-SDI?](#)
- 609: [My computer is connected to the DVI-I input of the EX90, but the desktop is not displayed on the screen. Why?](#)
- 610: [What resolutions does the EX90 support on the DVI-I PC-screen input?](#)
- 673: [Are there any requirements or limitations on the length of the Ethernet cable when connecting the Touch controller to a codec?](#)

### Camera

- 303: [My C Series Codec does not seem to boot up \(no video is displayed on the monitor\), why?](#)
- 332: [I installed a second PrecisionHD 1080p Camera on my C Series codec, but I am unable to control it. Why?](#)
- 333: [I installed a video camera to the video input number 2 on my C90 using component video, now I am not able to get any video when I activate this source. Why?](#)

In the electronic version of this document the entries in the list below are all hyperlinks. Just click the question to go to the relevant article in Chapter 3, Questions and answers.

### Configuration

- 300: [The monitor does not go to standby mode when it is connected to a codec.](#)
- 302: [How do I change the output for my On Screen Display \(OSD\) from HDMI 1 to another output?](#)
- 303: [My C Series Codec does not seem to boot up \(no video is displayed on the monitor\), why?](#)
- 309: [Is the API \(dataport commands\) for the C Series and SX20 codecs backward compatible with the MXP platform?](#)
- 311: [How do I enable HTTPS on my video system?](#)
- 313: [I changed the video output on my codec to a new resolution not supported by the monitor, how do I revert this?](#)
- 315: [How do I place a call from the GUI on the video system without changing the default dial protocol?](#)
- 319: [My monitor displays the image from my codec outside of the monitor frame, why?](#)
- 321: [I lost some of my settings after I powered down my codec. Why?](#)
- 325: [There is no audio coming out from my codec when it is connected to my monitor with an HDMI cable, why?](#)
- 328: [What is the difference between encryption 'Best Effort' on the video systems using TC software and encryption 'Auto' on the MXP platform?](#)
- 329: [Why can I only place point-to-point calls on my codec?](#)
- 330: [How do I install the MultiSite option key?](#)
- 332: [I installed a second PrecisionHD 1080p Camera on my C Series codec, but I am unable to control it. Why?](#)
- 333: [I installed a video camera to the video input number 2 on my C90 using component video, now I am not able to get any video when I activate this source. Why?](#)
- 363: [Is transcoding supported for the H.239/dual stream?](#)

- 524: Are there any shortcuts on the remote control?
- 528: Which resolutions do the video systems support at 60 fps?
- 530: What is the relationship between transmitted frame rate and bandwidth on the video systems?
- 545: How do I call someone on a different IP network?
- 558: How do I record my video calls?
- 609: My computer is connected to the DVI-I input of the EX90, but the desktop is not displayed on the screen. Why?
- 610: What resolutions does the EX90 support on the DVI-I PC-screen input?
- 611: Can I run MultiSite on EX and MX video systems?
- 612: Are the MX and EX systems compatible with other Cisco TelePresence endpoints?
- 615: How do I get phone books on my MX and EX systems?
- 617: Do the MX and EX systems have support for Cisco TMS Agent large scale provisioning?
- 620: Can I send content on the EX90 using HDMI 1 as input source?
- 622: Can I use the MX and EX systems as a USB hub?
- 623: Do the MX and EX systems support 60 fps?
- 625: Can I use the MX and EX systems as VoIP phones?
- 630: When connecting to the DVI-I output on the C40 codec, nothing is displayed on the screen, why?
- 631: When connecting to the second HDMI output on the Cisco TelePresence Codec C20, C40, SX20 or EX90, nothing is displayed on the screen, why?
- 667: My computer is connected to the DVI-I input, but the desktop is not displayed on the screen. Why?
- 694: How do I setup a Cisco TelePresence video system so that I am not disturbed by incoming calls when I am already in a call?
- 695: Which configurations on my video system require a reboot to take effect?
- 697: How can I set up self view in full screen mode on my secondary monitor?

## Monitor

- 300: The monitor does not go to standby mode when it is connected to a codec.
- 302: How do I change the output for my On Screen Display (OSD) from HDMI 1 to another output?
- 303: My C Series Codec does not seem to boot up (no video is displayed on the monitor), why?
- 313: I changed the video output on my codec to a new resolution not supported by the monitor, how do I revert this?
- 318: My Pioneer plasma monitor does not display the image correctly from my codec. Why?
- 319: My monitor displays the image from my codec outside of the monitor frame, why?
- 325: There is no audio coming out from my codec when it is connected to my monitor with an HDMI cable, why?
- 609: My computer is connected to the DVI-I input of the EX90, but the desktop is not displayed on the screen. Why?
- 610: What resolutions does the EX90 support on the DVI-I PC-screen input?
- 630: When connecting to the DVI-I output on the C40 codec, nothing is displayed on the screen, why?
- 662: What should I do before contacting TAC?
- 667: My computer is connected to the DVI-I input, but the desktop is not displayed on the screen. Why?
- 688: How can I use a dedicated monitor for showing presentations only?
- 689: How do I select which monitor output is primary and which is secondary?

## Touch controller and remote control

- 524: Are there any shortcuts on the remote control?
- 643: The call is disconnected when I pick up the handset of the Touch controller of my EX90. Why?
- 668: Which TelePresence endpoints can be used with the Touch controller, and which ones have it as the standard user interface?
- 670: Do all of the Touch controllers support the use of handset for audio?



673: Are there any requirements or limitations on the length of the Ethernet cable when connecting the Touch controller to a codec?

674: What is the difference between the Touch controller for EX Series, SX20 and C Series?

675: Does the Touch controller come in a wall mount version?

676: Can I connect more than one Touch controller to a Cisco TelePresence video system?

677: Can I use both the Touch controller and the remote control at the same time?

## Video

302: How do I change the output for my On Screen Display (OSD) from HDMI 1 to another output?

303: My C Series Codec does not seem to boot up (no video is displayed on the monitor), why?

318: My Pioneer plasma monitor does not display the image correctly from my codec. Why?

319: My monitor displays the image from my codec outside of the monitor frame, why?

324: Why does the System information display 1920×1088 pixels when I am placing a call using 1080p?

326: The audio on the dual stream is out of sync with the dual stream video, why?

333: I installed a video camera to the video input number 2 on my C90 using component video, now I am not able to get any video when I activate this source. Why?

528: Which resolutions do the video systems support at 60 fps?

530: What is the relationship between transmitted frame rate and bandwidth on the video systems?

609: My computer is connected to the DVI-I input of the EX90, but the desktop is not displayed on the screen. Why?

610: What resolutions does the EX90 support on the DVI-I PC-screen input?

611: Can I run MultiSite on EX and MX video systems?

623: Do the MX and EX systems support 60 fps?

630: When connecting to the DVI-I output on the C40 codec, nothing is displayed on the screen, why?

631: When connecting to the second HDMI output on the Cisco TelePresence Codec C20, C40, SX20 or EX90, nothing is displayed on the screen, why?

662: What should I do before contacting TAC?

667: My computer is connected to the DVI-I input, but the desktop is not displayed on the screen. Why?

## Other

612: Are the MX and EX systems compatible with other Cisco TelePresence endpoints?

619: Can the MX and EX video systems be wall mounted?

625: Can I use the MX and EX systems as VoIP phones?

643: The call is disconnected when I pick up the handset of the Touch controller of my EX90. Why?



## Chapter 3

# Questions and answers

**300: The monitor does not go to standby mode when it is connected to a codec.**

When a codec goes to standby, all monitor outputs are disabled. Some consumer monitors do however not go into standby when they receive no video on the HDMI input. In the newer releases TC4.2 and higher Cisco TelePresence has implemented CEC (Consumer Electronics Control). This allows the codec to signal standby to a monitor.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

**302: How do I change the output for my On Screen Display (OSD) from HDMI 1 to another output?****Configuring the OSD output from the menu on screen**

You can change this in the GUI through the administrator settings. From the *Home* menu select *Settings > Administrator settings > Advanced configuration > Video > OSD* and set Output to the relevant video output.

**Configuring the OSD output using an API command**

You can use an API command to set the OSD output to the relevant video output. Log in as **admin** using SSH (secure shell) and execute the command:

```
xConfiguration Video OSD Output: <1-4>
```

**Configuring the OSD output using the remote control**

You can use a **special** sequence on the remote control.

Use the remote control to enter the following sequence: **'Disconnect-key \* # \* # 0 X #'** where X = the video output where you want to display the OSD.

- X = 1 for HDMI 1
- X = 2 for DVI 2 (HDMI 2 for C20)
- X = 3 for HDMI 3
- X = 4 for DVI 4

In addition to changing the OSD output it also resets the output to default resolution, which is XGA for DVI and 720p for HDMI.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

**Related questions:**

313: I changed the video output on my codec to a new resolution not supported by the monitor, how do I revert this?

524: Are there any shortcuts on the remote control?

### 303: My C Series Codec does not seem to boot up (no video is displayed on the monitor), why?

#### Check the monitor

Check to make sure that the monitor is turned on and connected to the codec

#### Check the camera cable

Check to make sure you have not plugged the RJ45 end of the camera cable into the Ethernet port of the camera.

- Cisco TelePresence PrecisionHD 1080p camera: The RJ45 end of the camera cable should go to the connector marked **Codec Control In**.
- Cisco TelePresence PrecisionHD camera: The RJ45 end of the camera cable should go to the connector marked **HD Video Out Codec**.

#### Applies to the following products:

- Codec C20
- Codec C40
- Codec C60
- Codec C90

#### Related questions:

662: What should I do before contacting TAC?

### 307: What is the maximum length of the HDMI cable connecting a codec to a monitor?

The HDMI cable going from the Cisco TelePresence Codec to the monitor can be up to 15 meters/50 feet long. This requires a good quality category 2 cable. Longer extensions are possible using HDMI/DVI extenders.

#### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

### 308: What is the maximum length of the cable between a codec and a camera when using HD-SDI?

The maximum length the HD-SDI supports is 100 meters/330 feet.

#### Applies to the following products:

- Codec C90

### 309: Is the API (dataport commands) for the C Series and SX20 codecs backward compatible with the MXP platform?

The API of the Cisco TelePresence Codecs is XML-based and you can find a lot of similarities. However, it is not compatible with the MXP range.

#### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

### 311: How do I enable HTTPS on my video system?

From TC2.0.0 and above the system auto-generates a self-signed HTTPS certificate. The system must have a name set, in order for this to work. This enables you to use HTTPS without any configuration. You can still upload your own certificate by following the below steps.

You have to upload a certificate in PEM format. This can be done using the web interface of the Cisco TelePresence Codec:

1. Open a web browser and enter the **IP address** or **DNS name** to connect to the Cisco TelePresence Codec by HTTP.
2. Select the **Upload certificates** tab
3. Click **Browse...** and locate the certificate files (**.PEM**)
4. Enter the **Passphrase** (optional)
5. Click the **Upload** button to start the certificate installation.

#### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

### 313: I changed the video output on my codec to a new resolution not supported by the monitor, how do I revert this?

#### Configuring the OSD output using the remote control

You can use a **special** sequence on the remote control.

Use the remote control to enter the following sequence: '**Disconnect-key \* # \* # 0 X #**' where X = the video output where you want to display the OSD.

- X = 1 for HDMI 1
- X = 2 for DVI 2 (HDMI 2 for C20)
- X = 3 for HDMI 3
- X = 4 for DVI 4

In addition to change the OSD output it also resets the output to default resolution, which is XGA for DVI and 720p for HDMI.

#### Configuring the OSD output using an API command

You can use an API command to set the OSD output to the relevant video output.

Log in as **Admin** using SSH (secure shell) and execute the command:

```
xConfiguration Video OSD Output: <1-4>
```

#### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

#### Related questions:

302: How do I change the output for my On Screen Display (OSD) from HDMI 1 to another output?

### 315: How do I place a call from the GUI on the video system without changing the default dial protocol?

In the *Call* menu, enter **sip:** or **h323** before the URI/H323 ID, for example: **sip:name@company.com**

To see the default dial protocol options, open the *Home* menu and go to *Settings > Administrator settings > Advanced configuration > Conference 1 > DefaultCall > Protocol*.

On the Touch controller, enter *More > settings* menu and go to *Administrator settings > Call Settings*.

#### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

### 318: My Pioneer plasma monitor does not display the image correctly from my codec. Why?

Some of the Pioneer monitors must be set to PC mode to display the image correctly. Consult the *Pioneer monitors user manual* for further information.

#### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

### 319: My monitor displays the image from my codec outside of the monitor frame, why?

Most monitors over-scan TV resolutions such as 720p and 1080p.

To fix this, you must go into the monitor's menu system and find the setting to avoid this. Different monitors use different terms but you should look for something like: Just Scan, Pixel by Pixel or Underscan.

Some monitors only have this option for the native resolution of the display, therefore if you can't find it, go to the codec's administrator settings menu and change the video output resolution and try again. To set the resolution for the video output HDMI 1, open the *Home* menu and go to *Settings > Administrator settings > Advanced configuration > Video > Output > HDMI 1 (or 3)* and set the Resolution.

Some monitors do not have this setting at all. Then you can use the VGA input of the monitor and select a PC resolution from the administrator settings menu. Set video output resolution to 1024×768 (XGA), 1280×1024 (SXGA) or 1360×768 (WXGA) (only applicable for the C60 and C90). To set the resolution for the video output DVI 2, open the *Home* menu and go to *Settings > Administrator settings > Advanced configuration > Video > Output > DVI 2 (or 4)* and set the Resolution.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

### 321: I lost some of my settings after I powered down my codec. Why?

The codec uses some time to synchronize the current configuration with the stored startup configuration. Do not restart the codec using the power button immediately after a recent configuration change. Wait at least one minute before powering down the system using the power switch.

**Note:** It is recommended to reboot the system from the menu on screen. To do this, open the *Home* menu and go to *Settings > Restart*. This also synchronizes the configurations ensuring no data is lost.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

### 324: Why does the System information display 1920×1088 pixels when I am placing a call using 1080p?

1080p is 1920×1080 pixels. However to be able to code the image, the resolution must be dividable by 16. The picture is divided into macro blocks of 16×16 pixels when coded, hence you receive a resolution of 1920×1088 instead of 1920×1080.

**Note:** The codec adds 8 black lines at the bottom of the coded image. These lines are removed again at the far end side. No scaling is done to accomplish this.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

### 325: There is no audio coming out from my codec when it is connected to my monitor with an HDMI cable, why?

Check whether the video output resolution for HDMI 1 is set to 800×600 or 1900×1200. Due to an issue with these two resolutions we are running them in DVI mode (DVI over HDMI), and the DVI mode does not support audio. To check or change the video output resolution, open the *Home* menu and go to *Settings > Administrator settings > Advanced configuration > Video > Output > HDMI 1 > Resolution*.

To fix this you can:

1. Select another video output resolution for HDMI 1
2. or, use the audio from Audio Line Out 1 and 2.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

### 326: The audio on the dual stream is out of sync with the dual stream video, why?

The Cisco TelePresence Codecs do not support lip-sync (synchronizing audio and video) on the dual channel. The audio is only synchronized with the main stream. Currently lip-sync for the second stream is not supported by the H.239 standard defining dual streams for H.323.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

### 328: What is the difference between encryption 'Best Effort' on the video systems using TC software and encryption 'Auto' on the MXP platform?

The difference is in MultiSite calls.

On the MXP platform with Encryption set to Auto: If one of the participants is not able to do encryption in the MultiSite, then none of the participants are encrypted.

On systems using the TC software with Encryption set to Best Effort: All participants able to do encryption are encrypted. Thus, you can have a MultiSite with a mix of encrypted and unencrypted sites.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

### 329: Why can I only place point-to-point calls on my codec?

You need to have the **MultiSite option** installed to place MultiSite calls.

**Check your options from the System information menu**

1. Open the *Home* menu and go to: *Settings > System information*.
2. Make sure **MultiSite** is listed in the *Software > Options installed*

**Check your options using the web interface**

Enter the IP address of your codec on a web browser

1. Select *Configurations* and *Advanced Configurations*.
2. From the menu on the left select *Conference 1*.
3. In the scroll down menu for **IncomingMultisiteCall Mode** select **Allow**.

**Check your options using an API command**

Log into the video system as **admin** using SSH (Secure Shell):

1. Execute the API command:  
`xStatus SystemUnit`
2. Make sure the MultiSite option is listed as True.

*Applies to the following products:*

- SX20 Quick Set
- Codec C40
- Codec C60
- Codec C90
- EX90

**Related questions:**

330: How do I install the MultiSite option key?

### 330: How do I install the MultiSite option key?

MultiSite is allowed as default setting. If MultiSite is disabled, it can be turned back on.

Follow the instructions below to install **MultiSite option** using the web interface:

1. Enter the IP address of your codec on a web browser
2. Select *Configurations* and *Advanced Configurations*.
3. Select *Conference 1* from the menu on the left.
4. In the scroll down menu for **IncomingMultisiteCall Mode** select **Allow**.

Follow the instructions below to install the **MultiSite option** key on your codec:

1. Log into the system as admin using **SSH** (Secure Shell)
2. Execute the following command:  

```
xCommand SystemUnit OptionKey Add Key: <enter the key>
```
3. Reboot the system.

*Applies to the following products:*

- SX20 Quick Set
- Codec C40
- Codec C60
- Codec C90
- EX90

*Related questions:*

329: Why can I only place point-to-point calls on my codec?

611: Can I run MultiSite on EX and MX video systems?

### 332: I installed a second PrecisionHD 1080p Camera on my C Series codec, but I am unable to control it. Why?

To control the second camera you need to use a VISCA cascading cable. The VISCA cascading cable connects the first camera to the second camera and can be ordered from Cisco.

You need to configure the video input source to set which camera you should control, when this particular video input source is active:

1. Login to the codec as **admin** using **SSH** (Secure Shell).
2. To configure the second camera to be connected to video input source 2, run the following API command:

```
xConfiguration Video Input Source 2 CameraControl CameraId: 2
```

*Applies to the following products:*

- Codec C40
- Codec C60
- Codec C90

### 333: I installed a video camera to the video input number 2 on my C90 using component video, now I am not able to get any video when I activate this source. Why?

A C90 codec can connect up to 12 HD video input sources, but only five can be active simultaneously. As default the video input source number 2 is set to be HDMI. You can find more information on the video input sources in the Administrator Guide for the C90 codec.

To change this, open the *Home* menu on the C90 codec and go to: *Settings > Administrator settings > Advanced configuration > Video > Input > Source 2* and set the Connector to YPbPr.

*Applies to the following products:*

- Codec C90

### 363: Is transcoding supported for the H.239/dual stream?

No, the H.239/dual stream does not support transcoding. Therefore, the dual stream capability in an internal MultiSite is restricted by the common denominator.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

#### 524: Are there any shortcuts on the remote control?

The following remote control shortcuts are available:

##### Quick access

- **Home menu:** Press the **OK / V** key when no menus are shown (same as pressing the **home** key in any menu).
- **System Information and Call status :** Press the **right-most function key** on the **home** menu.
- **Advanced Configuration:** Press the **fourth function key** (from left) on the **System Information and Call status** page. The quick key sequence is "**home- right-most function key - fourth function key**" (or "**V- right-most function key - fourth function key**" when no menus are shown).

##### Quick Call

- **Call menu:** Press any **number key** in idle mode (when not in a call).
- **Recent calls:** Press the **call** key when the **Call** menu is not visible.
- **Dial last number:** Press the **call** key twice.

##### Camera Control

- **Camera control soft menu :** Press any **arrow** or **zoom** key in idle mode.
- **Camera presets:** Press the **number key** corresponding to the desired camera preset on the **Camera control** soft menu to change preset.

##### Other

- **Standby mode:** Press and hold the **Disconnect-key** for 5 seconds.
- **Restore resolution and OSD:** When not in a call, enter the sequence following sequence with the remote control "**Disconnect-key - \* - # - \* - # - 0 - x - #**" where **x** is output **1** to **4** to change the OSD and restore the resolution (1280×720@60Hz for HDMI and 1024×768@60Hz for DVI) to the selected output.
- **DTMF:** Pressing a **number key** in a call gives the DTMF (Dual Tone Multiple Frequencies) sound for the pressed number.

##### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

##### Related questions:

302: How do I change the output for my On Screen Display (OSD) from HDMI 1 to another output?

#### 528: Which resolutions do the video systems support at 60 fps?

The supported resolutions at **60 fps** are **w288**, **w448**, **w576** and **w720**.

Please note the following:

- The Cisco TelePresence Codec **C20**, **SX20**, **MX200**, **MX300** and **EX60** can encode 60 fps in point-to-point calls, but not if a presentation is running at the same time.
- The Cisco TelePresence Codec **C40**, **C60** and **EX90** can encode 60 fps in point-to-point calls, also when presentations are running at the same time, but not in MultiSite.
- The Cisco TelePresence Codec **C90** can encode 60 fps in point-to-point calls, when running presentations, and in MultiSite.

##### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

##### Related questions:

530: What is the relationship between transmitted frame rate and bandwidth on the video systems?

### 530: What is the relationship between transmitted frame rate and bandwidth on the video systems?

The transmitted video call frame rate (fps) depends on how much bandwidth is available, the *Threshold60fps* setting and whether the active video source is configured for **Sharpness** or **Motion**.

By navigating to the *Advanced Configuration > Video > Input > Source n > OptimalDefinition > Threshold60fps* the **resolution** for which the codec tries to encode **60fps** for video source n can be selected. The **60fps** resolutions available are:

- **512×288** (w288)
- **798×448** (w488)
- **1024×576** (XGA / w576)
- **1280×720** (720p / w720)

If enough bandwidth is available, the codec transmits **60fps** at this resolution, otherwise it uses **30fps** as long as *Quality* is set to **Motion**. Selecting **Never** makes the codec transmit **30fps** at any resolution, and should be selected if **1080p** is desired.

The *Quality* can be set to either **Sharpness** or **Motion** by navigating to the *Advanced Configuration > Video > Input > Source n > Quality*.

If the active video source is configured for **Sharpness**, video transmission is done at the highest resolution possible (up to the input resolution) where it is possible to maintain **60 fps**.

#### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

#### *Related questions:*

528: Which resolutions do the video systems support at 60 fps?

### 545: How do I call someone on a different IP network?

Cisco TelePresence provides a number of different solutions that enable organizations on different networks to communicate using video.

#### **The Cisco VCS or Expressway solution**

The Cisco VCS/Expressway is most suitable for large-scale deployments. It allows you to connect across organizations without requiring any exceptions or extra ports to be opened on the firewall. In this solution, both organizations need to have a Cisco VCS and you need to configure a connection between the two Cisco VCSs.

#### **The IP Gateway solution**

The Cisco TelePresence IP Gateway also allows organizations using different networks to connect using video. In this solution, no Cisco VCS is required. Only one of the organizations needs to have an IP Gateway. The IP Gateway allows video calls from the Internet to endpoints inside the organization's private network without compromising security. For example, if "company B" has an IP Gateway, then "company A" can call into "company B," see the directory and scroll to find the person they want. The IT administrator may need to open ports on the company firewall to allow this.

#### **The MCU solution**

Organizations using the Cisco TelePresence MCU can configure it to have one port connected to their own network and one port connected to the Internet. In this solution, you need the video firewall feature key which enables people from outside your network to join video conferences securely and from any vendor's endpoint. For more information, see [How do I configure the video firewall in a Cisco TelePresence MCU/IP VCR?](#)

#### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

**558: How do I record my video calls?**

You can record your video calls, and include all participants and any presentations using the Cisco TelePresence Content Server. For more information, please refer to the Content Server user documentation

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

**609: My computer is connected to the DVI-I input of the EX90, but the desktop is not displayed on the screen. Why?**

There can be several reasons to this:

**The EX90 input source is set to DVD**

If both the DVI-I/PC and HDMI/DVD inputs are connected, make sure the input source is set to PC.

1. Tap the *Settings* icon in the top left corner on the Touch controller main menu.
2. Select *Settings > Source* and set the source to *PC*. Note that the *Source* selector icon is only visible if both input sources are connected.

**The EX90 fails to detect the DVI-I input source type**

The DVI-I input of the EX90 is capable of reading both digital and analog input signals. The EX90 auto-detects the signal type by default. However, in some situations, it may be necessary to manually set up the EX90 to the correct input signal type.

1. Tap the *Settings* icon in the top left corner on the Touch controller main menu.
2. Select *Settings > Display settings* and set the *DVI Mode*. *Change this setting to Digital..*

**The computer does not support the resolution**

The computer is not capable of outputting any of the supported input resolutions defined on the EX90.

**The computer graphics card does not have the latest driver installed**

Check that you are running the latest driver available from your graphics card vendor.

**The cables are not connected properly**

Check that the cables are connected.

*Applies to the following products:*

- EX90

*Related questions:*

610: What resolutions does the EX90 support on the DVI-I PC-screen input?

#### 610: What resolutions does the EX90 support on the DVI-I PC-screen input?

The EX90 has one *DVI-I* (integrated analog and digital) input.

The following resolutions are supported on the EX90 PC screen *digital* input:

- **1920×1200** – native resolution, recommended
- 1920×1080 (not full screen)
- 1776×1000 (not full screen)
- 1680×1050
- 1600×1200 (not full screen)
- 1440×900
- 1400×1050 (not full screen)
- 1280×1024 (not full screen)
- 1280×960 (not full screen)
- 1280×800
- 1280×768 (not full screen)
- 1280×720 (not full screen)
- 1152×648 (not full screen)
- 1024×768 (not full screen)
- 960×600 (not full screen)
- 800×600 (not full screen)

The following resolutions are supported on the EX90 PC screen *analog* input:

- **1920×1200** – native resolution, recommended
- 1680×1050
- 1600×1200 (not full screen)
- 1440×900
- 1280×1024 (not full screen)
- 1024×768 (not full screen)
- 800×600 (not full screen)

*Applies to the following products:*

- EX90

*Related questions:*

609: My computer is connected to the DVI-I input of the EX90, but the desktop is not displayed on the screen. Why?

#### 611: Can I run MultiSite on EX and MX video systems?

MultiSite is available on EX90, but not on EX60, MX200 and MX300. On EX90 up to 3-sites can connect in MultiSite.

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

*Related questions:*

329: Why can I only place point-to-point calls on my codec?

330: How do I install the MultiSite option key?

#### 612: Are the MX and EX systems compatible with other Cisco TelePresence endpoints?

The MX and EX systems are fully standards-compliant systems and connect with all current Cisco TelePresence endpoints from PC video using Jabber Video, desktop systems, set-tops, Profile room systems and the TelePresence T3. Cisco TelePresence endpoints as well can be called directly from TC5 with 1.7.4 or higher.

For further information on interoperability, refer to the release notes for the relevant software release (TC platform).

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 615: How do I get phone books on my MX and EX systems?

Phone books are normally provisioned to the MX and EX systems from a central server. If your video system is centrally managed, contact your system administrator to have the relevant phone books applied to your system. You can also add contacts to the *My contacts* list on the system.

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 617: Do the MX and EX systems have support for Cisco TMS Agent large scale provisioning?

Yes, these video systems do support large scale provisioning.

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 619: Can the MX and EX video systems be wall mounted?

The MX200, MX300 and EX60 can be wall mounted. The brackets you need to do this have to be ordered separately. The EX90 cannot be wall mounted.

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 620: Can I send content on the EX90 using HDMI 1 as input source?

Yes, the system auto-selects DVI or HDMI depending upon which is active – if both are active you need to choose between these two.

1. Tap the *More* icon in the bottom left corner on the Touch controller main menu.
2. Select *Settings > Sources* and select the input you want. By selecting DVD as source on the Touch controller interface, HDMI 1 is used as input source. Note that the *Source* selector icon is only visible if both input sources are connected. If there is only one source, the EX90 selects this source automatically.

*Applies to the following products:*

- EX90

#### 622: Can I use the MX and EX systems as a USB hub?

No, this is not possible. The USB host and USB device connectors are for future use.

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 623: Do the MX and EX systems support 60 fps?

Yes, but this is only recommended to be used in very good light conditions.

Login to the video system using **ssh** and execute the following **API** command to set the camera frequency:

```
xConfiguration Cameras Camera 1 FrameRate: <30Hz,60Hz>
```

**NOTE:** Because the Cisco TelePresence EX60 and EX90 are desktop systems, and the light conditions in a normal office environment are normally not good enough, the default setting is 30 Hz.

Notice also that the transmitted frame rate is affected by the **Optimal Definition** settings:

```
xConfiguration Video Input Source 3 OptimalDefinition Profile
```

```
xConfiguration Video Input Source 3 OptimalDefinition Threshold60fps
```

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 624: Can I use the Cisco TelePresence Performance Mic 20 external microphone on the EX and MX video systems?

The EX90 supports the Performance Mic 20 external microphone, but the MX200, MX300 and EX60 do not support it.

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 625: Can I use the MX and EX systems as VoIP phones?

These video systems do not have full VoIP functionality at the moment.

*Applies to the following products:*

- MX200
- MX300
- EX60
- EX90

#### 630: When connecting to the DVI-I output on the C40 codec, nothing is displayed on the screen, why?

You need to have the *DualDisplay option key* installed on the C40 codec to use the DVI-I output.

##### Check your options from the system information menu

1. Open the *Home* menu and go to: *Settings > System information*.
2. Make sure *DualDisplay* is listed in the *Software > Options installed*

##### Check your options using an API command

Log into the Cisco TelePresence System Codec C40 as *admin* using SSH (Secure Shell):

1. Execute the API command:  
`xStatus SystemUnit`
2. Make sure the DualDisplay option is listed as True.

##### Applies to the following products:

- Codec C40

#### 631: When connecting to the second HDMI output on the Cisco TelePresence Codec C20, C40, SX20 or EX90, nothing is displayed on the screen, why?

You need to have the *DualDisplay option key* installed on the Cisco TelePresence system to use the second HDMI output.

##### Check your options from the product's system information menu

1. Open the *Home* menu and go to: *Settings > System information*.
2. Make sure *DualDisplay* is listed in the *Software > Options installed*

##### Check your options using an API command

Log into the Cisco TelePresence system as *admin* using SSH (Secure Shell):

1. Execute the API command:  
`xStatus SystemUnit`
2. Make sure the DualDisplay option is listed as True.

##### Applies to the following products:

- SX20 Quick Set
- Codec C20
- Codec C40
- EX90

#### 643: The call is disconnected when I pick up the handset of the Touch controller of my EX90. Why?

The light sensor in the early production handset cradles on the Touch controller can be affected by some particular light conditions and this may cause false hang ups when the handset is picked up. Please contact your local support office if you experience this problem.

This issue can be prevented by changing the light environment of the Touch controller. Please notice that the EX90 and Touch controller can be used without the handset. Alternatively, use the EX90 in loud speaking mode or with a headset.

##### Applies to the following products:

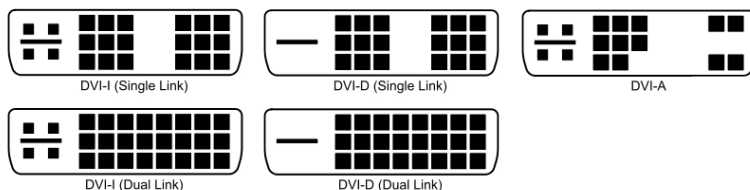
- EX90

## 662: What should I do before contacting TAC?

To help TAC to identify fixes and process RMAs on screen-related issues, please follow the steps below before raising a ticket.

Examples of screen issues include incorrect image display, unusual colors, stripes, or any other visual problems. The steps below take you through a process of elimination that allows you to identify the piece of hardware that is at fault (the screen, the cable or the codec) and show you how to gather some technical information that is useful for TAC.

1. Upgrade your codec to the latest software version (it's always best to troubleshoot on the newest software).
2. Check that the monitor is healthy by connecting it to a known healthy output device and verify that the image is displaying correctly. You can connect a 1080p camera directly to the HDMI on the monitor without going through the codec and you should see an image. This is an excellent way of testing both the camera and the monitor.
3. Try a different cable. Check the cable pins (DVI, VGA, HDMI) and if it is a DVI cable make sure you are not using a DVI-A (see image). If you have several types of DVI cables, you should try them all.



4. If the monitor is healthy you should now move on to the codec. Connect the codec to another known healthy monitor and check if the same error occurs here.
5. Try a different output on the codec and see if the problem persists.
6. Important: Take a short video clip (for example, on your mobile phone) or a photo of the problematic video output. Telnet into the codec and copy the output of the 'xConfiguration' and 'xStatus' commands. Provide all this information to TAC when you raise the ticket, together with the results of the tests you have done.

By following these steps you help the TAC team to identify and resolve your problem as quickly as possible.

*Applies to the following products:*

- Codec C20
- Codec C40
- Codec C60
- Codec C90

*Related questions:*

303: My C Series Codec does not seem to boot up (no video is displayed on the monitor), why?

## 667: My computer is connected to the DVI-I input, but the desktop is not displayed on the screen. Why?

There can be several reasons to this:

### The system fails to detect the DVI-I input source type

The DVI-I input is capable of reading both digital and analog input signals. The system auto-detects the signal type by default. However, in some situations, it may be necessary to manually set up the system to the correct input signal type.

1. Tap the *Adjustments* icon in the bottom left corner on the Touch controller main menu.
2. Select *Settings > Display settings* and set the *DVI Mode*.

### The computer does not support the resolution

The computer is not capable of outputting any of the supported input resolutions defined on the system.

### The computer graphics card does not have the latest driver installed

Check that you are running the latest driver available from your graphics card vendor.

### The cables are not connected properly

Check that the cables are connected.

*Applies to the following products:*

- MX200
- MX300
- EX60

#### 668: Which TelePresence endpoints can be used with the Touch controller, and which ones have it as the standard user interface?

You can use the Touch controller with all C Series endpoints running TC software version 4.1, or later, and all EX Series and MX Series endpoints running TC software version 4.0, or later. This includes Cisco C Series Codecs and Integrator Packages (C40, C60 and C90), Quick Set C20, SX20 Quick Set, Profile Series and EX Series.

The MX, EX and Profile Series' have the Touch controller as the standard user interface. Integrator Products and Quick Sets have the Touch controller as a purchasable option.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90
- Touch controller

#### 670: Do all of the Touch controllers support the use of handset for audio?

No, only the EX Series supports the use of handset. For other installations that connect via Ethernet (over LAN or directly to the codec) there is no support for audio signaling.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90
- Touch controller

#### 673: Are there any requirements or limitations on the length of the Ethernet cable when connecting the Touch controller to a codec?

It is recommended to use a shielded Ethernet cable when connecting from the power adapter to a LAN port or when connecting directly to the secondary Ethernet port on the codec. There are no limitations on the length of the Ethernet cable, but normally it is not recommended to use more than 100 meters per cable segment.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- Touch controller

#### 674: What is the difference between the Touch controller for EX Series, SX20 and C Series?

The Touch controller for EX Series is different from the Touch controller for SX20 and C Series in two ways:

1. An audio handset can only be connected to the Touch controller for the EX Series.
2. The Touch controller for EX Series comes with a fixed 1,2 meter cable. The Touch controller for Profile Series, C Series Codecs, C20 Quick Set and SX20 Quick Set comes with a fixed 7,5 meter cable.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- EX60
- EX90
- Touch controller

#### 675: Does the Touch controller come in a wall mount version?

No, the Touch controller is only available as a table version.

##### *Applies to the following products:*

- Touch controller

#### 676: Can I connect more than one Touch controller to a Cisco TelePresence video system?

Yes. When multiple Touch controllers are connected, only the last paired device stays paired after reboot, unless connected directly to the system. When connected directly to the system, both the directly connected system and last paired system over LAN stay paired after reboot.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90
- Touch controller

##### *Related questions:*

668: Which TelePresence endpoints can be used with the Touch controller, and which ones have it as the standard user interface?

677: Can I use both the Touch controller and the remote control at the same time?

#### 677: Can I use both the Touch controller and the remote control at the same time?

No. When a codec is paired with a Touch controller it is not possible to use the remote control.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- Touch controller

##### *Related questions:*

676: Can I connect more than one Touch controller to a Cisco TelePresence video system?

#### 688: How can I use a dedicated monitor for showing presentations only?

You can set up a monitor to show only presentations by executing the following API command:

```
xConfiguration Video Monitors: DualPresentationOnly
```

This activates the secondary monitor output, but only when a presentation is shown locally or received from far end.

**NOTE:**We do not recommend using the alternative xConfiguration Video Output HDMI 1 MonitorRole: PresentationOnly – this command is designed for a specific use-case.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90

#### 689: How do I select which monitor output is primary and which is secondary?

By default you have one primary and one secondary monitor. The output is marked with 1st and 2nd screen on the back of the codec. This may be changed to alter the primary and secondary monitor.

e.g to swap the default setting on a C40 – execute the following

```
xConfiguration Video Output HDMI 1 MonitorRole: Second
```

```
xConfiguration Video Output DVI 2 MonitorRole: Primary
```

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300

#### 692: Why can I hear my voice in my speakers when I am using a Cisco TelePresence video system?

If a microphone is connected to the Line 1 and Line 2 ports on the codec, its audio comes out of the speakers. This is a normal behavior as it is designed to be used as an audio input for presentations. This can be changed via **TC console**. The details are present in the TC console User Guide.

##### *Applies to the following products:*

- Codec C40
- Codec C60
- Codec C90

#### 694: How do I setup a Cisco TelePresence video system so that I am not disturbed by incoming calls when I am already in a call?

You can avoid getting incoming calls when you are already in a call by enabling the MultiSite feature:

1. Enter the IP address of your codec on a web browser.
2. Select *Configurations* and *Advanced Configurations*.
3. Select *Conference 1* from the menu on the left.
4. In the scroll down menu for *IncomingMultisiteCall Mode* select **Deny**.

This also applies to systems without MultiSite installed.

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

#### 695: Which configurations on my video system require a reboot to take effect?

The following configurations require a reboot to take effect:

##### TC5:

- xConfiguration NetworkServices HHTP Mode
- xConfiguration NetworkServices HTTPS Mode
- xConfiguration RTP Ports Range Start
- xConfiguration RTP Ports Range Stop
- xConfiguration Network 1 Speed
- xConfiguration Network 1 IPStack (when switching from IPv4 to IPv6; not from IPv6 to IPv4)
- xConfiguration Security Audit Server Address
- xConfiguration Security Audit Server Port
- xConfiguration Security Audit OnErrorAction
- xConfiguration Security Audit Logging Mode
- xConfiguration Network Port 2 Mode: Requires reboot

##### TC6:

- xConfiguration NetworkServices HHTP Mode
- xConfiguration NetworkServices HTTPS Mode
- xConfiguration RTP Ports Range Start
- xConfiguration RTP Ports Range Stop
- xConfiguration Security Audit Server Address
- xConfiguration Security Audit Server Port
- xConfiguration Security Audit OnErrorAction
- xConfiguration Security Audit Logging Mode
- xConfiguration Network Port 2 Mode: Requires reboot

##### *Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90

**696: What kind of external speakers can I use with the C20 or SX20 codecs?**

You should use active speakers that are non-grounded. Attaching a grounded active speaker to the system creates a ground loop, which causes an annoying humming sound.

Another option is to use a ground isolator between grounded speakers and the codec.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20

**697: How can I set up self view in full screen mode on my secondary monitor?**

This is possible with TC6.0, and later software versions. To achieve this, use the following configurations:

1. xConfiguration Video SelfviewDefault OnMonitorRole: second
2. xConfiguration Video SelfviewDefault FullscreenMode:on

To change the configurations on the web interface, go to *Configuration > System Configuration > Video > SelfviewDefault*. From *OnMonitorRole* select *Second* and from *FullscreenMode* select *On*. Click *Save* to confirm the changes.

*Applies to the following products:*

- SX20 Quick Set
- Codec C20
- Codec C40
- Codec C60
- Codec C90
- MX200
- MX300
- EX60
- EX90



## Chapter 4

# Appendices

## Product overview

Cisco TelePresence Codec C20



Cisco TelePresence Codec C40



Cisco TelePresence Codec C60



Cisco TelePresence Codec C90



Cisco TelePresence Codec SX20



Cisco TelePresence EX90



Cisco TelePresence EX60



Cisco TelePresence MX200 (Table Stand)



Cisco TelePresence MX300 (Floor Stand)



Cisco TelePresence Profile 42



Cisco TelePresence Profile 52



Cisco TelePresence Profile 65



Cisco TelePresence Profile 52 Dual



Cisco TelePresence Profile 65 Dual



Cisco TelePresence PrecisionHD 1080p12x



Cisco TelePresence PrecisionHD 1080p4x



Cisco TelePresence Touch 8



Cisco TelePresence PrecisionHD 1080p2.5x



Cisco TelePresence PrecisionHD 1080p4x S2



Cisco TelePresence Remote Control 5



## User documentation

For all our products we have several guides suitable for various user groups.

You can download all the user guides for the Cisco TelePresence products from the Cisco web site:

► <http://www.cisco.com/go/telepresence/docs>

### Codec C Series

► [www.cisco.com/go/cseries-docs](http://www.cisco.com/go/cseries-docs)

### EX Series

► [www.cisco.com/go/ex-docs](http://www.cisco.com/go/ex-docs)

### MX Series

► [www.cisco.com/go/mx-docs](http://www.cisco.com/go/mx-docs)

### Profile Series

► [www.cisco.com/go/profile-docs](http://www.cisco.com/go/profile-docs)

### SX Quick Set and Quick Set C20

► [www.cisco.com/go/quickset-docs](http://www.cisco.com/go/quickset-docs)

## Document categories

For each product, you can find different types of guides in the following document categories:

### Install and Upgrade: Install and Upgrade Guides

**Installation guides:** Describes how to install an endpoint.

**Getting started guide:** Describes the initial configuration of Cisco TelePresence video systems. This includes setting passwords, and configuring IP, H.323 and SIP using the remote control, the Touch controller, or the web interface.

**Regulatory compliance and safety information:** Describes the regulatory compliance information, safety instructions, declaration of conformity and China RoHS table.

### Maintain and Operate: End-User Guides

**User guides:** You can learn about the system and call settings, camera adjustments/presets, phone book usage, call control and In-call features. In addition, instructions to the use of the remote control or Touch controller are included in these guides.

**Quick reference guides:** This two page guide describes the basics of using a video system. You will learn how to place a call, use the contact list, initiate a video conference, and share content.

**PrecisionHD Camera User Guide:** Describes the physical interface of the PrecisionHD cameras. Instructions on how connect a camera to a codec, cable pin outs, daisy chaining, VISCA commands and technical specifications are also included in this guide.

**Physical interface guides:** Describes the physical interface of the C40, C60 and C90 codecs.

### Maintain and Operate: Maintain and Operate Guides

**Administrator guides:** Provides information required to administer video systems at an advanced level. The web interface is described, and the advanced settings available via the web interface and the on-screen menu system are explained.

**Administering TC endpoints on CUCM guide:** Describes the process of getting a TC endpoint up and running with a Cisco Unified Communication Manager

### Reference Guides: Command references

**API reference guides:** Describes the API for the video systems. Commands described are the xCommand, xConfiguration, xStatus, xHistory, xEvent, xFeedback, xPreferences and SystemTools.

### Design: Design Guides

**Video conferencing room guidelines:** The Video Conferencing Room Acoustics Guidelines and Video Conferencing Room Primer include information on what should be considered when planning and setting up a video room.

### Release and General Information: Release Notes

**TC software release notes:** Describes the new features and capabilities included in the latest TC software release. A list of fixed and open bugs, known issues and information on interoperability can be found in this document.

### Release and General Information: Licensing Information

**TC software licensing information:** Describes the open source license information supported for the Cisco TelePresence products running TC software.

**NOTE:** All products do not have all types of guides.



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