Cisco TelePresence MCU 4500 Series

Getting started

61-0011-08

Contents

General information

About the Cisco TelePresence MCU 4500 Series

The Cisco TelePresence MCU 4500 Series is a range of technologically advanced and powerful Multipoint Control Units (MCU). They are designed to combine continuous presence at high definition and the highest possible voice quality.
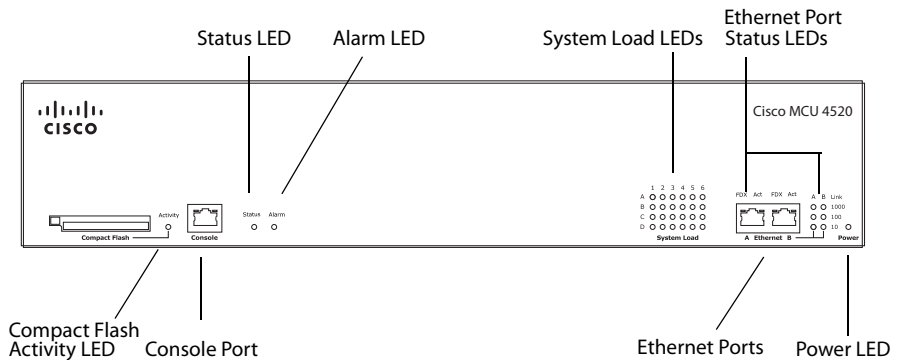
Package contents

The following items are included with the MCU. Verify that you have these items before installing the device:

▸ Cisco TelePresence MCU unit

▸ Console cable (blue)

▸ Power cable

▸ Rack mounting kit

Port and LED location

Figure 1 shows the position of ports and LEDs on the MCU.

Figure 1: MCU front panel

LED behavior

Table 1 describes the behavior of the LEDs.

Table 1: MCU LED behavior

LED	Color	Indicates
Compact Flash Activity	Flashing green	One of: ▸ the MCU is booting ▸ a configuration change has been made ▸ the configuration is being transferred by FTP
Status	Green	The MCU is operating normally
Alarm	Red	The MCU is booting or has developed a fault, for example: ▸ temperature is outside normal limits ▸ fan failure ▸ battery failure of the internal clock Refer to the web interface for more information about the problem (go to **Status > Health**
System Load	Green	The MCU is processing conference data. The LEDs represent the media processing load of the MCU. The column numbered 1 represents audio load. The other columns represent video DSP load. Media processing load is also displayed in the web interface: go to **Status > General**

Table 1: MCU LED behavior (continued)

LED		Color	Indicates
Ethernet Port Status, for each Ethernet port:			
	FDX	Green	The link has been negotiated as a full-duplex link
	Act	Green	Packets are being transmitted on this port
	Link	Green	The speed of the link from this port, which is either 10, 100, or 1000 Mbps
Power		Blue	The MCU is receiving power

Connecting the MCU

Before you start

IMPORTANT: Before installing the MCU, you must read the safety information at http://www.cisco.com/go/telepresence/safety.

Step one: Connect power

Connect the power connector on the rear of the unit to the power supply using the supplied power cable. (There is no On/Off switch.)

Step two: Connect to Ethernet Port A

Connect an Ethernet cable from Ethernet Port A to an Ethernet switch (rather than a hub, to minimize interference from other devices on the network). The Ethernet port is a 10/100/1000 Mbps auto-sensing connection.

Only connect to Ethernet Port B if you need to connect the MCU to a second subnet.

Do not connect Ethernet Port A and Ethernet Port B to the same subnet.

Initial configuration

Step one: Connect to the console port

1   Ensure power is connected to the MCU and the Status LED is green.

2   Connect the console port of the MCU to the serial port of your PC using the blue RJ45 to DB9 cable supplied.

3   Use a serial terminal program, such as Secure CRT or HyperTerminal, to connect to the MCU. Set your terminal software to the following settings:

- Baud rate: 38400
- Data bits: 8
- Parity: none
- Stop bits: 1
- Flow control: none

4   Press Enter and the following command prompt appears on the terminal:
     `MCU:>`

Step two: Configure Ethernet Port A settings

The default setting for the MCU Ethernet ports is auto-sensing mode. If the switch ports to which you connect the MCU are not also set to auto-sensing mode, then you need to configure the MCU Ethernet ports to use the same speed and duplex mode.

⚠ Only connect to Ethernet Port B if you need to connect the MCU to a second subnet.

⚠ Both ends of the Ethernet connection must be configured in the same way. For example, either configure both ends of the link to be auto-sensing or configure both ends to operate at the same speed and duplex.

⚠ To establish a 1000Mbps connection, both ends of the link must be configured as auto-sensing.

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▸ To configure Ethernet Port A, enter the following for auto-sensing mode:
`ethertype A auto`
or to configure a speed and duplex, use the following command:
`ethertype A <10|100> <half|full>`
▸ To display the current configuration and status of the Ethernet ports, enter:
`status`

For example, to configure a full-duplex 100Mbps link, enter:

`ethertype A 100 full`

> ⚠ To establish a 1000Mbps connection, both ends of the link must be configured as auto-sensing.

Step three: Assign an IP address to the MCU (optional)

The default setting for the MCU is to use DHCP to obtain an IP address. You can assign a static IP address if you prefer or if a DHCP server is not available. If you want the IP address of the MCU to be assigned by your DHCP server, omit this step.

> ⚠ From version 4.2, MCU software supports IPv4 and IPv6 addressing. Default setting: Port A is configured to assign an IPv4 address using DHCP; IPv6 on Port A is disabled.

From Version 4.2:

▸ To assign a static IPv4 address to Port A, use the following command:
`static A <IP address> <netmask> [<default gateway address>]`

For example, to assign an address of 192.168.1.2 where the default gateway is at 192.168.1.1, enter:
`static A 192.168.1.2 255.255.255.0 192.168.1.1`

▸ To set DNS manually, use this command:
`dns <DNS server address> [<secondary DNS server>][<domain>]`

▸ To return to using DHCP after setting a static IPv4 address, use the following command:
`dhcp -4 A`

> ⚠ For information on assigning a static IPv6 address type `help static`, for information on assigning an automatic IPv6 address type `help dhcp` or else refer to the online help.

Step four: Discover the IP address of the MCU

1   To display the current status of the IP address, enter: `status`
     If you have DHCP enabled on your network and you are allowing the MCU to
     acquire its address using DHCP, the IP address that has been acquired by
     Ethernet Port A will be shown; if you have assigned a static IP address, that is the
     address that will be shown.

2   Make a note of the IP address. You will use this to access the web interface of the
     unit.

Configuring the MCU

Step one: Log in to the MCU

All administration of the MCU is performed via the web interface.

To log in to the web interface of the MCU:

1   Use your browser to navigate to the IP address of the MCU (to discover the IP address, refer to the previous section).

2   Click **Log in** and enter the user name `admin` with no password. The **Login information page** is displayed.

⚠   Cisco recommends that you change the admin account to use a password as soon as possible. To do that, click **Change password** on the **Login information** page or go to **Users**, click the **admin** link, and provide the required user information.

Step two: Using an H.323 gatekeeper or SIP registrar (optional)

If you have H.323 endpoints, using an H.323 gatekeeper can make it easier for participants to call in to a conference. You can configure the MCU to use an external gatekeeper or its own built-in gatekeeper. For information about using the built-in gatekeeper, refer to the online help.

If you have SIP endpoints, using a SIP registrar can make it easier for participants to call in to a conference.

To configure the MCU to use an H.323 gatekeeper:

1   In the web interface of the MCU, go to **Settings > H.323**.

2   Enable **H.323 gatekeeper usage** and configure the settings you require, using the online help for further assistance.

3   Click **Apply changes**.

To configure the MCU to use a SIP registrar:

1   In the web interface, go to **Settings > SIP**.

2   Enable **SIP registrar usage** and configure the settings you require, using the online help for further assistance.

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3   Click **Apply changes**.

⚠ Before you configure the MCU to use, and register conferences to, a SIP registrar, you must set up the MCU and its conferences on that SIP registrar.

Step three: Add endpoints (optional)

One way to add participants to a conference that you create is to have the MCU automatically call them when the conference starts. To do this, you configure their endpoints on the MCU. When you set up a conference, you can choose the endpoints from the **Pre-configured participants** list. This is easier than entering each endpoint's details every time. Participants that are pre-configured for a conference will automatically be called by the MCU to join that conference.

To define pre-configured endpoints:

1   In the web interface of the MCU, go to **Endpoints**:
   ●   To add a H.323 endpoint, click **Add H.323**
   ●   To add a SIP endpoint, click **Add SIP**
   ●   To add a VNC screen, click **Add VNC**
2   Configure the endpoint settings you require, using the online help for further assistance.
3   Click **Add endpoint**.

Using the MCU

Creating conferences

To create a conference:

1   In the web interface of the MCU, go to **Conferences** and click **Add new conference**.

2   Type a **Name** for the conference, for example *SalesMeeting*.

3   Type an optional numeric identifier, for example **123**. This will be the telephone number that participants can use to join the conference when calling in to the MCU via a gatekeeper or SIP registrar.

> ⚠ There are two types of conference participant: chairperson and guest. IDs and PINs allow participants to connect to conferences as the correct participant type. Chairperson participants use the Numeric ID and optionally, the PIN; guest participants use the Guest numeric ID and optionally, the Guest PIN. For more information, refer to the online help.

4   If you are using a gatekeeper, select **H.323 gatekeeper**; if you are using a SIP registrar, select **SIP registrar**.

5   Ensure the **Maximum duration** of the conference is sufficient (the default is one hour).

6   All other values can be left at their default settings. Refer to the online help for further information about the available settings.

> ⚠ Note that if you do not configure the conference to start immediately, it will become a scheduled conference and will be inactive until its start time.

7   Scroll down and click **Add conference**.

The conference you have created is now active (if you used the default immediate start time) and participants can join in one of two ways: either the MCU can call out to specified endpoints or endpoints can dial in. Any endpoints that have been added to a conference, as pre-configured participants, will be called in to the conference by the MCU.

Calling participants in to a conference

To call participants in to a conference:

1   In the web interface of the MCU, go to **Conferences** and click on the name of an active conference.

2   On the **Participants** tab, click **Add participant** to call out to an H.323 or SIP endpoint.

3   In the **Address** field:

   ●   where there is no H.323 gatekeeper or SIP registrar, type the IP address, host name, or SIP URI of an accessible endpoint on your network

   ●   if you are using an H.323 gatekeeper, enter the number registered with the gatekeeper for the required endpoint

   ●   if you are using a SIP registrar, enter the number registered with the SIP registrar for the required endpoint

4   Leave the other fields as their default values and click **Call endpoint**. The MCU automatically connects to the endpoint.

5   If the endpoint is not configured to automatically answer calls, accept the call on the endpoint.

Calling in to a conference

Participants can call in to conferences in either one of two ways:

▶   if you have given the conference a numeric identifier and you are using an H.323 gatekeeper or SIP registrar, tell participants to dial the numeric identifier from their endpoint to join that conference

▶   participants can dial the IP address of the MCU to access the auto attendant of the MCU. Participants will see a menu of available conferences on their video screen and will hear instructions

Streaming conferences

Streaming is a way of viewing a conference in a standard web browser. The MCU allows streaming of video and, if enabled for a conference, the streaming of data. You can also conduct a text 'chat' and add notes and drawings to the data stream.

⚠️ Note that to use the 'chat' facility when streaming a conference, your MCU needs the web conferencing feature key. For more information, contact your reseller.

You can configure two streaming options on the MCU that will be available for users to choose between when streaming conferences. For each streaming option, you must choose a media player (QuickTime, RealPlayer, or Windows Media Player) and a bit rate.

To configure streaming options:

1   In the web interface of the MCU, go to **Settings > Streaming**.
2   Configure the streaming options you require, referring to the online help for more details about options.
3   Click **Apply changes**.

Streaming users will need to have installed one of the media players that you have chosen for the two streaming options. Streaming users might also need to install Java (from www.java.com).

To stream a conference:

1   In a web browser, go to the IP address of the MCU and click **Streaming.** If you are already logged in, go to **Home** and click **Streaming**.
2   If web conferencing is enabled, type in a **Sign-in name**. This is the name by which you will be identified if you 'chat'.
3   Type in the **Conference ID** (the numeric identifier of the conference).
4   Click **Stream this conference** and streaming will start.

Instructing conference participants

You need to tell conference participants how to join conferences. You can also tell them how to use the Far-End Camera Controls (FECC) to navigate menus in the auto attendant and choose conference layouts. There is a document: *Getting Started: Accessing Conferences* available in the documentation area of the Cisco web site, which you can print out and give to conference participants.

Checking for updates

It is a good idea to regularly check for updates to the main MCU software image on the Cisco web site. This section describes how to upgrade the MCU using the web. Note that you can also upgrade the MCU using FTP; this can be more reliable if you are upgrading the device remotely. Upgrading your device via FTP is described in the release notes that are available alongside the software images in the support section of the web site.

To check for, and download, updates:

1   Log in to the MCU web interface and go to **Status** > **General**.

2   Make a note of the software version that is currently installed.

3   Go to the support section of the web site and check if a more recent release is available for the MCU.

4   If a more recent release is available, download it and save it locally.

To upgrade the MCU:

1   Unzip the software release file that you downloaded.

2   In the MCU web interface, go to **Settings** > **Upgrade**.

3   In the **Main software image** section, click **Browse** and locate the unzipped file.

4   Click **Upload software image**. The browser begins uploading the file to the MCU, and a new browser window opens to indicate the progress of the upload. When finished, the browser window refreshes and indicates that the software upgrade is complete.

5   Go to **Settings** > **Shutdown** to shut down and restart the MCU.

Note that shutting down the MCU will disconnect all participants.

Troubleshooting and technical support information

Using the event log to help solve a problem

You can use the event log to produce debugging information to assist technical support in solving any problems. Event logging capture filter topics are set by default to **Errors, warnings and information**. Do not change the capture filter topic level without the guidance of technical support.

Getting more help

Cisco recommends registering your product at http://www.tandberg.com/ services/video-conferencing-product-registration.jsp in order to receive notifications about the latest software and security updates. New feature and maintenance releases are published regularly, and we recommend that the MCU's software is always kept up to date.

If you experience any problems when configuring or using the MCU, consult the online help (available within the UI of your MCU) for an explanation of how its individual features and settings work. If you cannot find the answer you need, check on the web site at http://www.tandberg.com/support to make sure that the MCU is running the most up-to-date software and for further relevant documentation.

You or your reseller can get help from our support team by raising a case at http:// www.tandberg.com/support/video-conferencing-online-support.jsp. Make sure you have the following information ready:

‣ The serial number and product model number of the unit
‣ The software build number which can be found on the product user interface
‣ Your contact email address or telephone number
‣ A full description of the problem

Technical specifications

Power requirements

Table 2: MCU 4500 Series ratings

Rating	Value
Nominal voltage	115V to 230V 50/60 Hz
Current rating	6A Maximum
Supply voltage range	100 to 240V 50/60 Hz

Over-current protection

Ensure the supply to this unit is protected by a branch circuit protector rated by a maximum of 20A.

⚠ **Caution** — over-current devices must meet applicable national and local electrical safety codes and be approved for the intended application.

Operating environment

The MCU must only be used within the following environmental conditions:

Table 3: Operating environment

Environment	Temperature	Humidity
Operating environment	0°C to 35°C	10% to 95% (non-condensing)
Non-operating environment	-10°C to 60°C	10% to 95% (non-condensing)
Optimum operating environment	21°C to 23°C	45% to 50% (non-condensing)

Anti-static precautions

When servicing or removing components or connections, first attach an anti-static wrist strap to an appropriate earth point.

Disclaimers and notices