



Cisco TelePresence MCU 5300 Series Getting started

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General information

About the Cisco TelePresence MCU 5300 Series

The Cisco TelePresence MCU 5300 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

If you intend to cluster MCUs, a Cisco TelePresence MCU 5300 Series Stacking Cable must be ordered separately. Please contact your reseller or go to www.cisco.com.

Port and LED location

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

Figure 1: MCU 5300 front panel

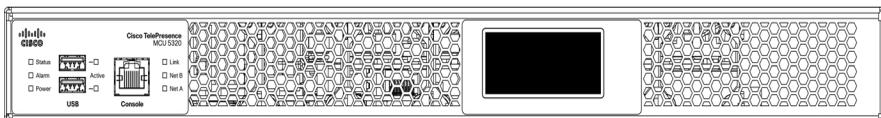
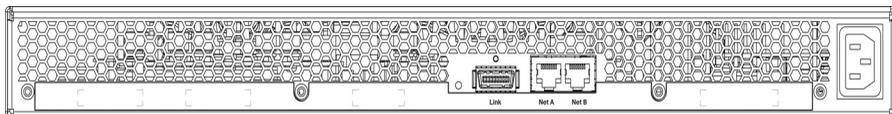


Figure 2: MCU 5300 rear panel



Front panel LED behavior

Table 1 describes the behavior of the front panel LEDs.

Table 1: MCU 5300 front panel LED behavior

LED	Color	Indicates
Status	Green	The MCU is operating normally
Alarm	Red	<p>The MCU is booting or has developed a fault, for example:</p> <ul style="list-style-type: none"> ▶ temperature is outside normal limits ▶ fan failure ▶ battery failure of the internal clock <p>Refer to the web interface for more information about the problem (go to Status > Health)</p>
Power	Blue	The MCU is receiving power
Link	Green	Illuminated when the link between stacked MCUs is active
Net B	Green	Illuminated when there is activity on network Port B
Net A	Green	Illuminated when there is activity on network Port A

Rear panel LED behavior

Table 2 describes the behavior of the rear panel LEDs.

Table 2: MCU 5300 rear panel LED behavior

LED	Color	Indicates
Link	Green	Illuminated when the link between stacked MCUs is active.
Net A	Green/ Orange	Left LED illuminated green when the interface has established a link. Right LED illuminated orange when there is activity on the interface.
Net B	Green/ Orange	Left LED illuminated green when the interface has established a link. Right LED illuminated orange when there is activity on the interface.

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.



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.



Failing to configure both sides of the Ethernet connection in the same way can result in packet loss leading to poor audio and video quality.

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 configure Ethernet Port A, enter the following for auto-sensing mode:
etherstype A auto
or to configure a speed and duplex, use the following command:
etherstype 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:

```
etherstype 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.



The MCU supports IPv4 and IPv6 addressing. Default setting: Port A is configured to assign an IPv4 address using DHCP; IPv6 on Port A is disabled.

- ▶ 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.

Note: When your MCU has an IP address, you can add an entry for it on your DNS server and use that host name to access the MCU's web interface.

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 or host name 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.

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.
- 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**
- 2 Configure the endpoint settings you require, using the online help for further assistance.
- 3 Click **Add endpoint**.

Clustering MCUs

Before you start

Up to two MCU 5300s can be clustered to increase capacity. The cluster will provide the sum of the capacities of the individual units, for example, if you cluster two MCU 5310s that each support 5 x 1080p participants, you will have a cluster that supports 10 x 1080p participants.

One of the MCUs acts as the master unit and the second as a slave. In order to cluster MCUs you will need a stacking cable which must be ordered separately. Please contact your reseller or go to www.cisco.com.

Any combination of 5300 series MCUs (5310 and 5320) in the cluster is supported.

Note that the media port mode of the cluster is as configured on the master.

Step one: Connect the MCUs using the stacking cable

Plug each end of the stacking cable into the Link sockets on the rear of the MCUs. If your cable has a protective tape or cap on the end, remove them so the metal conductors are visible within the plug. Check the orientation of the plug when inserting it into the Link socket. To remove the cable, pull the release mechanism to detach the plug. Do not pull directly on the plug.

Step two: Configure the master MCU

One of the MCUs must be configured as the master MCU and the other as a slave.

- 1 Log in to the web interface of the MCU you have selected as the master.
- 2 Go to **Settings > Media ports**.
- 3 In the **Clustering configuration** section, select **Master** from the drop down menu.
- 4 Click **Apply changes**.
- 5 Click **OK** to restart the MCU and apply the changes.
- 6 Go to **Status > Cluster** to confirm that the MCU has been correctly configured as the master.

Step three: Configure the slave MCU

- 1 Log in to the web interface of the other MCU.
- 2 Go to **Settings > Media ports**.

- 3 In the **Clustering configuration** section, select **Slave** from the drop down menu.
- 4 Click **Apply changes**.
- 5 Click **OK** to restart the MCU and apply the changes.
- 6 Go to **Status > Cluster** to confirm that the MCU has been correctly configured as the slave.

When you have configured the units as master and slave, do not use the web interface of the slave unit for normal operations. All statistics and configuration information for the cluster can be accessed via the web interface of the master unit. The slave web interface is only used for upgrading code and for network configuration.

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/alphanumeric H.323 id registered with the gatekeeper for the required endpoint
 - if you are using a SIP registrar, enter the number/alphanumeric URI 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

Instructing conference participants

You need to tell conference participants how to join conferences. You can also tell them how to navigate the Conference Control Menu via keypad tones and use Far-End Camera Controls (FECC) to navigate menus. 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.

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 help

If you experience any problems when configuring or using the product, consult the online help available from the user interface. The online help explains how the individual features and settings work.

If you cannot find the answer you need, check the web site at <http://www.cisco.com/cisco/web/support/index.html> where you will be able to:

- ▶ Make sure that you are running the most up-to-date software.
- ▶ Find further relevant documentation, for example product user guides, printable versions of the online help, reference guides, and articles that cover many frequently asked questions.
- ▶ You or your reseller can get help from our support team by raising a case. Make sure you have the following information ready before raising a case:
 - The serial number and product model number of the unit (if applicable).
 - The software build number which can be found on the product user interface (if applicable).
 - Your contact email address or telephone number.
 - A full description of the problem.

Technical specifications

Power requirements

Table 3: MCU 5300 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 4: 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.

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