



Cisco Unified IP Conference Phone Installation

- [Cisco Unified IP Conference Phone Installation Overview, on page 1](#)
- [Before You Begin, on page 1](#)
- [Cisco Unified IP Conference Phone Components, on page 3](#)
- [Cisco Unified IP Conference Phone Setup, on page 5](#)
- [IP Phone Startup Verification, on page 11](#)
- [Network Settings, on page 12](#)
- [Cisco Unified IP Phone Security, on page 12](#)

Cisco Unified IP Conference Phone Installation Overview

This chapter helps you set up and install the Cisco Unified IP Conference Phone on an IP telephony network.



Note Before you install a conference phone, you must decide how to configure the conference phone in your network. After you have determined your configuration requirements, you can install the conference phone and verify its functionality. For more information, see [Cisco Unified IP Phones and Telephony Networks](#)

Before You Begin

Before you install the conference phone, review the requirements in the following sections.

Network Requirements

For the Cisco Unified IP Conference Station to successfully operate as an endpoint in your network, your network must meet these requirements:

- VoIP network:
 - VoIP configured on your Cisco routers and gateways
 - Cisco Unified Communications Manager installed in your network and configured to handle call processing

- IP network:
 - Support for Dynamic Host Configuration Protocol (DHCP) or manual assignment of IP address, gateway, and subnet mask



Note The conference phone displays the data and time from Cisco Unified Communications Manager. If the Cisco Unified Communications Manager server is located in a different time zone than the conference stations, the conference stations do not display the correct local time.

Cisco Unified Communications Manager Setup

The conference phone requires Cisco Unified Communications Manager to handle call processing. See the *Cisco Unified Communications Manager Administration Guide* or to context-sensitive help in the Cisco Unified Communications Manager application to ensure that Cisco Unified Communications Manager is correctly setup to manage the conference phone and to properly route and process calls.

If you plan to use autoregistration, verify that it is enabled and properly configured in Cisco Unified Communications Manager before connecting any conference station to the network. For information about enabling and configuring autoregistration, see *Cisco Unified Communications Manager Administration Guide*.

You must use Cisco Unified Communications Manager to configure and assign telephony features to the conference phones.

In Cisco Unified Communications Manager, you can add users to the database, add users to user groups, and associate users with specific conference phones. In this way, users gain access to Cisco Unified Communications Self Care Portal that allow them to configure items such as call forwarding and voice messaging system options.

Related Topics

[Cisco Unified Communications Manager IP Phone Addition Methods](#)
[Available Telephony Features](#)

Wireless Microphone Region Setting

The Wireless Microphone Frequency Lock feature provides a secure DECT frequency for wireless microphones by locking down the Wireless Region setting. The Cisco Unified IP Conference Phone 8831 is shipped from the manufacturer with the mask and the Wireless Region setting configured for your region.

The Cisco Unified IP Conference Phone 8831NR does not support wireless microphones.

For additional information, see *Cisco Unified IP Conference Phone 8831 Release Notes for Firmware Release 10.3(1)*.

Safety

Review the following warnings before installing the conference station. To see translations of these warnings, see the Regulatory Compliance and Safety Information for Cisco Unified IP Conference Stations document that accompanied this device.



Attention Read the installation instructions before you connect the system to its power source.



Attention Only trained and qualified personnel should be allowed to install, replace, or service this equipment.



Attention Ultimate disposal of this product should be handled according to all national laws and regulations.



Attention Do not work on the system or connect or disconnect cables during periods of lightning activity.



Caution To avoid electric shock, do not connect safety extra low voltage (SELV) circuits to teleconference station network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.

The following warnings apply when you use an external power supply.



Attention This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15 A U.S. (240 VAC, 10 A international) is used on the phase conductors (all current-carrying conductors)



Attention The device is designed to work with TN power systems.



Attention The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.

Cisco Unified IP Conference Phone Components

The Cisco Unified IP Conference Phone includes these components on the conference phone or as accessories for the conference phone.

Network Ports

The underside of the conference phone sound base has a single network port. This port is labeled LAN.

Your conference phone has a 10/100 Base-T autosensing Ethernet port. This port supports Mbps half- or full-duplex connections to external devices. You can use either Category 3 or 5, or 5e cabling for 10-Mbps connections, but you must use Category 5 or 5e for 100 Mbps connections.

Use the ethernet network port to connect the conference phone to the network. You must use a straight-through cable on this port. The conference phone can also obtain inline power from a switch over this connection (PoE).

Related Topics

[Conference Phone Power
Phone Connections](#), on page 6

Wired Extension Microphone Kit

The optional wired extension microphone kit includes two wired omni-directional microphones. Connecting a microphone kit enhances the room coverage of the conference phone. The sound base has two wired microphone ports and you can connect one or both wired microphones.

If the conference phone is connected to another sound base in Linked Mode, the primary base station supports one or two wireless microphones, or it supports one wired microphone. The secondary unit supports only one wired microphone; a wireless microphone cannot be connected to a secondary Sound Base. You cannot mix microphone kits: if you plan to connect a microphone to both sound bases, they must both be wired microphones.



Note Wired and wireless microphones cannot be used at the same time, and the wireless microphones have a higher priority. Attempting to connect a wired microphone to a conference phone that has paired or connected channels results in a warning to the user that the wired microphone is disabled. To solve this problem, unpair any paired or connected wireless microphones before connecting a wired microphone.



Table 1: Wired Microphone Buttons

Item	Description
1	Mute button.

Wireless Extension Microphone Kit

The optional wireless microphone extension kit enhances the room coverage of the conference phone. Two wireless microphones can be paired to the conference phone.

The Cisco Unified IP Conference Phone 8831NR does not support wireless microphones.

Wireless microphones support an 8-hour call before the battery requires charging. The charger is separate device, and is not connected to the conference phone.

LEDs on the wireless microphone base indicate the connection status of the microphone, and an icon will also be displayed on the conference phone screen. The LEDs and the display screen also indicate the mute status of the wireless microphone.

If your conference phone is to be configured to use wireless extension microphones, you can access the configuration menu from the conference phone by choosing **Apps > Admin Settings > Wireless Microphones**. From this menu, the user can choose which channel to set in pairing mode, initiate the pairing process, and set the wireless microphone range.

The wireless microphone range is used to set the baseband power and effective RF range for the wireless microphones. There are three possible setting for the wireless microphone range:

- Low
- Medium
- High

If the conference phone is connected to another sound base in Linked Mode, the primary base station supports one or two wireless microphones, or it supports one wired microphone. The secondary unit supports only one wired microphone; a wireless microphone cannot be connected to a secondary Sound Base. You cannot mix microphone kits: if you plan to connect a microphone to both sound bases, they must both be wired microphones.



Note Wired and wireless microphones cannot be used at the same time, and the wireless microphones have a higher priority. Attempting to connect a wired microphone to a conference phone that has paired or connected channels results in a warning to the user that the wired microphone is disabled. To solve this problem, unpair any paired or connected wireless microphones before connecting a wired microphone.

Related Topics

[Wired Extension Microphone Kit](#), on page 4

[Wireless Microphone Menu](#), on page 9

[Unpair Wireless Microphone](#), on page 11

[Pair Wireless Microphone](#), on page 10

Cisco Unified IP Conference Phone Setup

You must connect the Cisco Unified IP Conference Phone to the network and to a power source before using it.



Note Before connecting the ethernet cable to the device, you must first install a ferrite bead on the ethernet cable.



Note Before you install a conference phone or phone, even if it is new, upgrade the device to the current firmware image. Before using external devices, see the Readme file for safety and performance information.

See [Buttons and Hardware](#) for a diagram of the connections for the Cisco Unified IP Conference Phone.

Related Topics

[Install Ferrite Bead on Network Cable](#), on page 7

Phone Connections

The Sound Base contains the network and power connection for the phone. The base also contains the mini-USB connection for the DCS, the wired microphone ports, and the daisy chain port for the Linked Mode feature.

You can use the graphic and table below to identify connections and ports on the Sound Base.

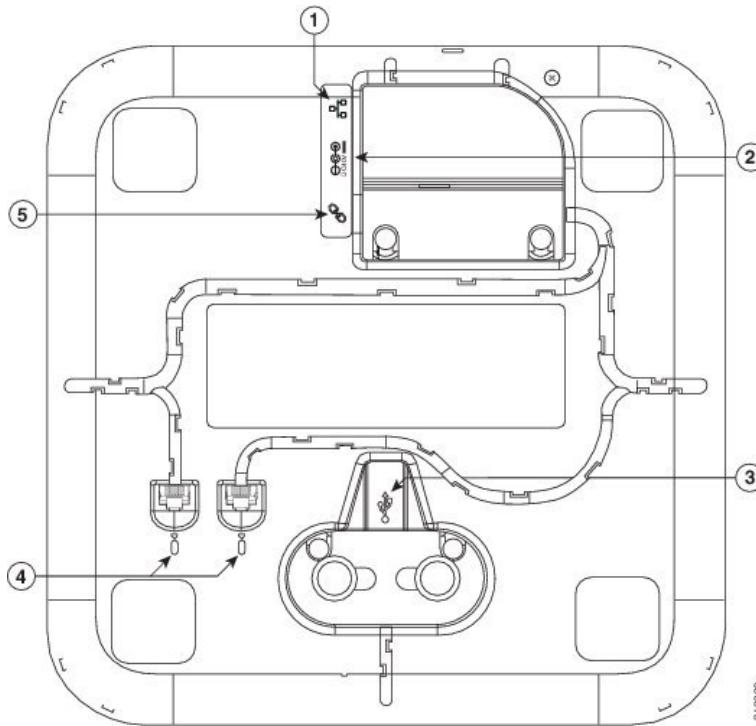


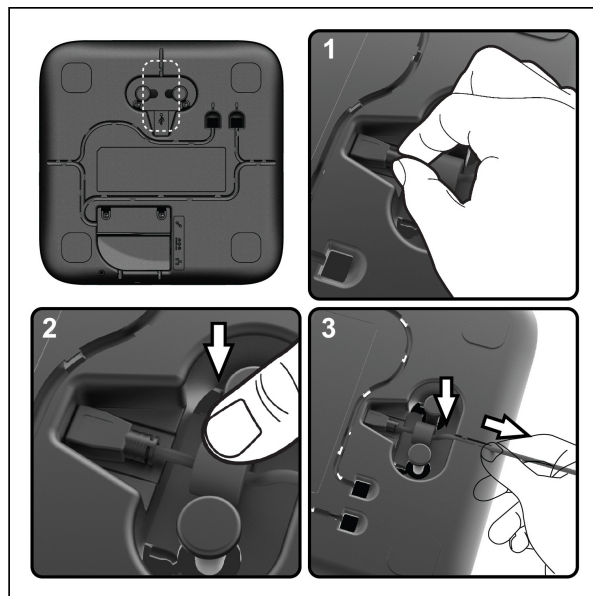
Table 2: Sound Base Connections and Ports

	Item	Description
1	Network port	Network port (10/100 SW) connection. IEEE 802.3af power enabled.
2	Wall power	Local power connection.

	Item	Description
3	Mini USB port	Connects the base station to the DCU. Attention When connecting the USB cable, firmly press down on the ferrite bead to ensure it seats correctly between the posts.
4	Wired microphone ports	Two RJ11 microphone ports. An optional wired microphone can be connected to each port.
5	Linked Mode daisy chain port	Supports the connection of two base stations in Linked Mode.

Connect Mini-USB Cable to DCU

The following images show how to install the USB cable.

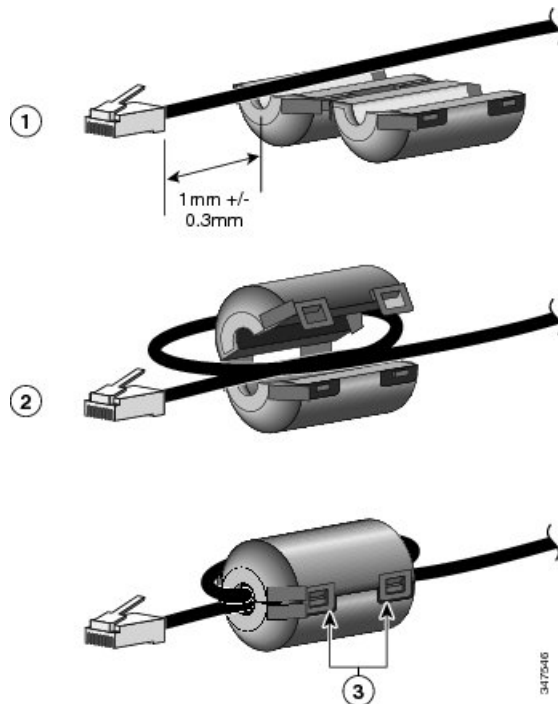


Procedure

-
- Step 1** Insert the mini-USB connector into the port on the base of the phone.
 - Step 2** Seat the ferrite bead between the posts and press the bead down firmly.
 - Step 3** Thread the cable in the cable channel. Make sure that you leave some slack in the cable.
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Install Ferrite Bead on Network Cable

The following images show how to install the ferrite bead on the network cable.



Procedure

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- Step 1** Align the ferrite bead with the head of the network cable and move the ferrite bead along the cable until there is a gap of 1.0 mm +/- 0.3 mm between the bead and the connector.
 - Step 2** Place the cable into the ferrite bead channel and loop the cable around the ferrite bead so that the cable exits the bottom of the bead.
 - Step 3** Hold the cable in the ferrite bead channel and close the ferrite bead. Snap the latch closed.
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Install Cisco Unified IP Conference Phone



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- Note** Before you install a conference phone, even if it is new, upgrade the conference phone to the current firmware image. Before using external devices, see the Readme file for safety and performance information.
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Procedure

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- Step 1** Connect the power supply to the Cisco DC Adapter port. See the [Power Guidelines](#) for more information about powering your conference phone.
 - Step 2** Connect a straight-through Ethernet cable from the switch to the network port on the conference phone. Each Cisco Unified IP Conference Phone 8831 ships with one ethernet cable in the box.

You can use either Category 3, 5, or 5e cabling for 10-Mbps connections, but you must use Category 5 or 5e for 100 Mbps connections.

See [Network Ports, on page 3](#) for guidelines.

Step 3 (Optional) Connect wired extension microphones.

Performance Guidelines

Follow these guidelines to ensure optimum performance with the conference phone and the wired or wireless extension microphones if they are connected.

- Use the conference phone in closed offices and conference rooms up to 20 feet by 20 feet (without external microphones) and 20 feet by 30 feet (with external microphones).
- Place the conference phone base on a flat surface and make sure that it is clear from any reflective surfaces.
- Maintain a minimum distance of four feet between each external microphone and the conference phone base and other objects.
- Make sure that all microphones are acoustically unobstructed.
- Position the external microphones toward the areas that need to be covered, and so that the main pickup direction is pointed away from the conference phone.
- Seat all conference participants the same distance from the conference phone.
- Speak at normal conversation levels and direct your voice toward the conference phone.
- Do not move or handle the conference phone base or the external microphones while on a call, and do not shuffle papers near the equipment.
- Minimize background noise from air conditioning units, fans, or other equipment in the office or conference room.

Wireless Microphone Menu

The Wireless Microphone menu provides options for setting the pairing and range options for the wireless expansion microphones. A maximum of two wireless microphones can be paired with the conference station at a time.

The Cisco Unified IP Conference Phone 8831NR does not support wireless microphones.

To access the Wireless Microphone menu, navigate to **Apps > Admin Settings > Wireless Microphones**.

The following table describes the Wireless Microphone Options and, where applicable, explains how to change them.

Table 3: Wireless Microphone Options

Option	Description	To Change
Wireless Microphone 1	The channel that can be used to pair the first microphone.	See Pair Wireless Microphone , on page 10 or Unpair Wireless Microphone , on page 11
Wireless Microphone 2	The channel that can be used to pair the second microphone.	See Pair Wireless Microphone , on page 10 or Unpair Wireless Microphone , on page 11
Wireless Microphone Range	<p>Sets the baseband power and effective RF range for the wireless microphones.</p> <p>The RF range can be set to</p> <ul style="list-style-type: none"> • Low • Medium • High 	Select Low, Medium or High, and press Select . Or press Default to select the default setting and press Select .

Pair Wireless Microphone

Before you begin

The microphone must be in the off state before you can pair it to the conference station. A microphone is off if the microphone's LED is off. To turn off the wireless microphone, hold down the microphone button until the microphone LED turns solid red, then release.

Procedure

Step 1 Choose **Apps > Admin Settings > Wireless Microphones**.

Step 2 Select either Wireless Microphone 1 or Wireless Microphone 2.

If the selected channel is available, a `Pair microphone 1?` or `Pair microphone 2?` prompt displays, and the **Pair** softkey displays.

If a microphone is already linked to a particular channel, pairing cannot be initiated on the selected channel and the dialog shows that the microphone is linked.

Step 3 Press **Pair**.

If the channel is ready to pair, the pairing process begins and a text message displays.

Step 4 Put the microphone that corresponds to the selected channel in pairing mode by pressing the microphone's Mute button until the LED lights solid red.

If pairing succeeds, the screen reverts to the Wireless Microphones Menu, and the message `Mic X Paired Successfully!` displays.

If pairing times out or fails, the status is updated and you can cancel or retry.

Step 5 Press **Cancel** to revert to the Wireless Microphones Menu.

Step 6 Press **Retry** to start the pairing process again.

Related Topics

[Unpair Wireless Microphone](#), on page 11

Unpair Wireless Microphone

If you need to connect a wired microphone to the conference station, any wireless microphones must be unpaired first. You can also use this procedure to unpair a microphone that is no longer in use.



Note This option is not available if the microphone is connected. To enable the unpair command, place the wireless microphone in its charger or turn it off.

Procedure

Step 1 Choose **Applications > Admin Settings > Wireless Microphones**.

Step 2 Select either Wireless Microphone 1 or Wireless Microphone 2.

If the selected channel is paired, the **Unpair** softkey displays.

Step 3 Press **Unpair**.

A verification prompt with the options to Cancel or **Unpair** displays.

Step 4 Press **Unpair** to continue to unpair the microphone.

The microphone channel's registration information in the base deletes. If you view the microphone channel's status in phone info menu, the status value and RFID are empty.

Step 5 Press return to revert to the wireless microphones menu and stop the process.

Related Topics

[Pair Wireless Microphone](#), on page 10

IP Phone Startup Verification

After the conference phone has power connected to it, it begins the startup diagnostic process by cycling through the following steps.

1. The specified LED buttons flash on and off during the various stages of boot up as the conference phone checks its hardware. See the following table for a list of the hardware test and the LED diagnostic status.

Table 4: LED Diagnostic Status

Hardware Test	Sound Base LEDs	DCU LEDs
Power is Ready	Green LEDs flash	Red and Green LEDs flash

Hardware Test	Sound Base LEDs	DCU LEDs
Flash is Accessible	Green LEDs flash	Red and Green LEDs flash
RAM Test Successful	Green LEDs flash	Red and Green LEDs flash
Ethernet Test Successful	—	—

2. The screen displays the Cisco Systems, Inc., logo screen.
3. The screen displays the Revolabs, Inc., splash screen
4. This message appears as the conference phone starts up.
 - Phone is not registered
5. The home screen displays:
 - Current date and time
 - Primary directory number
 - Softkeys

If the conference phone successfully passes through these stages, it has started up properly. If the conference phone does not start up properly, see [Startup Problems](#).

Network Settings

If you are not using DHCP in your network, you must configure these network settings on the conference phone after installing it on the network:

- IP address
- IP subnet information (subnet mask)
- TFTP server IP address
- You also may configure the domain name and the DNS server settings, if necessary.

Collect this information before you start to configure the conference phone.

Related Topics

[Cisco Unified IP Conference Phone Settings](#)

Cisco Unified IP Phone Security

The security features protect against several threats, including threats to the identity of the conference phone and to data. These features establish and maintain secure communication streams between the conference phone and the Cisco Unified Communications Manager server, and digitally sign files before they are delivered.

For more information about the security features, see [Cisco Unified IP Conference Phone Security Features](#) and also consult the *Cisco Unified Communications Manager Security Guide*.

Set Up Locally Significant Certificate

You can initiate the installation of a Locally Significant Certificate (LSC) from the Security Configuration menu on the conference phone. This menu also lets you update or remove an LSC.

To manually configure an LSC on the conference phone, perform these steps:

Before you begin

Ensure that the appropriate Cisco Unified Communications Manager and the Certificate Authority Proxy Function (CAPF) security configurations are complete:

- The CTL file should have a CAPF certificate.
- On Cisco Unified Communications Operating System Administration, verify that the CAPF certificate has been installed.
- The CAPF is running and configured.

For more information, see *Cisco Unified Communications Manager Security Guide*.

Procedure

Step 1 Obtain the CAPF authentication code that was set when the CAPF was configured.

Step 2 From the phone, choose **Apps > Admin Settings > Security Configuration**.

Note You can control access to the Administrator Settings Menu by using the Settings Access field in the Cisco Unified Communications Manager Administration Device Configuration window. For more information, see the *Cisco Unified Communications Manager Administration Guide*.

Step 3 Scroll to LSC and press **Update**.

The conference phone prompts for an authentication string.

Step 4 Enter the authentication code and press **Submit**.

The conference phone begins to install, update, or remove the LSC, depending on how the CAPF was configured. During the procedure, a notification message is displayed so that you can monitor progress.

The LSC install, update, or removal process can take a long time to complete. You can stop the process at any time by pressing **Exit**.

You can verify that an LSC is installed on the conference phone by choosing **Apps > Admin Settings > Security Setup** and ensuring that the LSC setting shows *Installed*.
