



Cisco IP Phone 7800 and 8800 Series Accessories Guide for Cisco Unified Communications Manager

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CHAPTER

1

Accessories Overview

- [Accessory Support, page 1](#)

Accessory Support

Cisco phones support many different accessories, including headsets, external speakers, wall mount kits, and key expansion modules. Accessory support varies between phone models, so review the information in this chapter before you purchase or use an accessory.

In addition to the accessories listed in this document, you may be able to purchase other items for your phone such as power cords, power cubes, or spare bezels. For more information, consult your phone's data sheet. The Cisco IP Phone 8800 Series data sheets can be viewed here: <http://www.cisco.com/c/en/us/products/collaboration-endpoints/unified-ip-phone-8800-series/datasheet-listing.html>. The Cisco IP Phone 7800 Series data sheets can be viewed here: <http://www.cisco.com/c/en/us/products/collaboration-endpoints/unified-ip-phone-7800-series/datasheet-listing.html>.

Related Topics

[Headsets, on page 5](#)

[Cisco IP Phone Key Expansion Module Setup Overview, on page 15](#)

[Wall Mount Kits, on page 29](#)

Accessory Support for the Cisco IP Phone 7800 Series

In the table, an X indicates support for a particular phone model and a dash (-) indicates no support.

Table 1: Accessory Support for the Cisco IP Phone 7800 Series

Accessory	Type	Cisco IP Phone			
		7811	7821	7841	7861
Cisco Accessory					
Wall Mount Kit		X	X	X	X

Accessory	Type	Cisco IP Phone			
		7811	7821	7841	7861
Footstand		X (non-adjustable)	X	X	X
Cable Lock		-	-	-	-
Third-Party Accessories					
Headsets	Analog Cisco IP Phone 7821, 7841, and 7861 cannot detect when an analog headset is plugged into it. The headset is displayed in the Accessories window.	-	X	X	X
	Analog Wideband	-	X	X	X
	Wired	-	X	X	X
	USB	-	-	-	-
	Electronic hookswitch	-	X	X	X
	Bluetooth	-	-	-	-
Microphone	External PC	-	-	-	-
Speakers	External PC	-	-	-	-

Accessory Support for the Cisco IP Phone 8800 Series

In the table, an X indicates support for a particular phone model and a dash (-) indicates no support.

Table 2: Accessory Support for the Cisco IP Phone 8800 Series

Accessory	Type	Cisco IP Phone						
		8811 and 8841	8845	8851	8851NR	8861	8865	8865NR
Cisco Accessory								
Cisco IP Phone 8800 Key Expansion Module	Add-on module	-	-	X	X	X	X	X
				Supports up to 2 expansion modules.		Supports up to 3 expansion modules.		

Accessory	Type	Cisco IP Phone						
		8811 and 8841	8845	8851	8851NR	8861	8865	8865NR
Wall Mount Kit	X	X	X	X	X	X	X	X
Footstand		X	X	X	X	X	X	X
Cable Lock		X	X	X	X	X	X	X
Third-Party Accessories								
Headsets	Analog	X	X	X	X	X	X	X
	Analog Wideband	X	X	X	X	X	X	X
	Bluetooth	-	X	X	-	X	X	-
	USB	-	-	X	X	X	X	X
	Electronic Hookswitch	X	X	X	X	X	X	X
		See Note 1.		See Note 2.				
Microphones	External PC	-	-	-	-	X	X	X
Speakers	External PC	-	-	-	-	X	X	X

**Note**

Electronic Hookswitch users should be aware of the following:

- The Electronic Hookswitch connects to Cisco IP Phone 8811, 8841, and 8845 with the auxiliary port.
- The Electronic Hookswitch connects to Cisco IP Phone 8851, 8851NR, 8861, 9965, and 8865NR with the auxiliary port, the USB port, or with Bluetooth.



Headsets

- [Headsets, page 5](#)
- [Headset Control on Cisco Unified Communications Manager, page 8](#)
- [Headset Configuration on Your Phone, page 11](#)

Headsets

Cisco Systems performs internal testing of third-party headsets for use with Cisco IP Phones. But Cisco does not certify or support products from headset or handset vendors.

Headsets connect to your phone using either the USB or the auxiliary port. Depending upon your headset model, you have to adjust your phone's audio settings for the best audio experience, including the headset sidetone setting.

After you apply a new sidetone setting, wait one minute and then reboot the phone for the setting to be stored in flash.

The phone reduces some background noise that a headset microphone detects. You can use a noise canceling headset to further reduce the background noise and improve the overall audio quality.

We recommend the use of good quality external devices; for example, headsets that are screened against unwanted radio frequency (RF) and audio frequency (AF) signals. Depending on the quality of headsets and their proximity to other devices, such as mobile (cell) phones and two-way radios, some audio noise or echo may still occur. Either the remote party or both the remote party and the Cisco IP Phone user may hear an audible hum or buzz. A range of outside sources can cause humming or buzzing sounds; for example, electric lights, electric motors, or large PC monitors.



Note

Sometimes, use of a local power cube or power injector may reduce or eliminate hum.

Environmental and hardware inconsistencies in the locations where Cisco IP Phones are deployed mean that no single headset solution is optimal for all environments.

We recommend that customers test headsets in the intended environment to determine performance before making a purchasing decision to deploy on a large scale.

You can use only one headset at a time. The most-recently connected headset is the active headset.

Related Topics

[Accessory Support](#), on page 1

Audio Quality

Beyond physical, mechanical, and technical performance, the audio portion of a headset must sound good to the user and to the party on the far end. Sound quality is subjective, and we cannot guarantee the performance of any headsets. However, various headsets from leading headset manufacturers are reported to perform well with Cisco IP Phones.

For additional information, see https://www.cisco.com/c/en/us/products/unified-communications/uc_endpoints_accessories.html

Wired Headsets

A wired headset works with all Cisco IP Phone features, including the Volume and Mute buttons. These buttons adjust the earpiece volume and mute the audio from the headset microphone.

Bluetooth Wireless Headsets


Cisco IP Phone 8861 and 8865 support Bluetooth. For a list of supported headsets, see http://www.cisco.com/c/en/us/products/unified-communications/uc_endpoints_accessories.html.

Bluetooth enables low-bandwidth wireless connections within a range of 66 feet (20 meters). The best performance is in the 3- to 6-foot (1- to 2-meter) range. Bluetooth wireless technology operates in the 2.4 GHz band, which is the same as the 802.11b/g band. Interference issues can occur. We recommend that you:

- Use 802.11a, 802.11n, or 802.11ac that operates in the 5 GHz band.
- Reduce the proximity of other 802.11b/g devices, Bluetooth devices, microwave ovens, and large metal objects.

The Cisco IP Phone uses a shared key authentication and encryption method to connect with headsets. The Cisco IP Phone can connect with up to 50 headsets, one at a time. The last connected headset is used as the default. Pairing is typically performed once for each headset.

After a device is paired, the Bluetooth connection is maintained as long as both devices (phone and headset) are enabled and within range of each other. The connection typically reestablishes itself automatically if either of the devices powers down then powers up. However, some headsets require user action to reestablish the connection.

The Bluetooth icon  indicates that Bluetooth is on, whether a device is connected or not.

Potential interference issues can occur. We recommend that you reduce the proximity of other 802.11b/g devices, Bluetooth devices, microwave ovens, and large metal objects. If possible, configure other 802.11 devices to use the 802.11a channels.

For a Bluetooth wireless headset to work, it does not need to be within direct line-of-sight of the phone. But some barriers such as walls or doors can affect the connection. Interference from other electronic devices can also affect performance.

When headsets are more than 30 feet (10 meters) away from the Cisco IP Phone, Bluetooth drops the connection after a 15- to 20-second timeout. The paired headset reconnects when it comes back into range of the Cisco IP Phone. For certain phone types that operate in power-save modes, you can wake up the headset by tapping on the operational button.

Enable the headset before you add it as a phone accessory.

The phone supports various Handsfree Profile features that allow you to use devices such as Bluetooth wireless headsets for certain tasks. For example, instead of pressing Redial on the phone, you can redial a number from the Bluetooth wireless headset by following instructions from the headset manufacturer.

Cisco IP Phone 8811, 8841, 8851NR, and 8865NR do not support Bluetooth wireless headsets. These hands-free features apply to Bluetooth wireless headsets that are used with the Cisco IP Phone 8845, 8851, 8861 and 8865:

- Answer a call
- End a call
- Change the headset volume for a call
- Redial
- Caller ID
- Divert
- Hold and Accept
- Release and Accept

Hands-free devices have different feature activation methods. Device manufacturers may also use different terms when referring to the same feature.

**Important**

Only one headset type works at any given time. If you use both a Bluetooth headset and an analog headset that are attached to the phone, enabling the Bluetooth headset disables the analog headset. To enable the analog headset, disable the Bluetooth headset. Plugging a USB headset into a phone that has Bluetooth headset enabled disables both the Bluetooth and analog headset. If you unplug the USB headset, you can either enable the Bluetooth headset or disable the Bluetooth headset to use the analog headset.

For information about how to use your Bluetooth wireless headset, see:

- *Cisco IP Phone 8800 Series User Guide*
- User Guides provided with your headset

Wireless Headsets

Your Cisco IP Phone 7800 Series phones support wireless headsets. For a list of supported wireless headsets, see http://www.cisco.com/c/en/us/products/unified-communications/uc_endpoints_accessories.html

Refer to your wireless headset documentation for information about connecting the headset and using the features.

Headset Control on Cisco Unified Communications Manager

You can enable and disable some headsets from the Product Specific Configuration area on Cisco Unified Communications Manager. Use the information in the following sections to guide you as you work with your headset.

Confirm that your phone supports a headset before you enable it.

Related Topics

[Accessory Support, on page 1](#)

Disable a Wired Headset

You can use Cisco Unified Communications Manager Administration to disable your wired headset and speakerphone.

Procedure

-
- Step 1** In Cisco Unified Communications Manager Administration, choose **Device > Phone**.
 - Step 2** In the Find and List Phones window, enter the search criteria for the phone and click **Find**.
 - Step 3** Click the Device Name that you want. The Phone Configuration window is displayed.
 - Step 4** In the Product Specific Configuration Layout portion of the Phone Configuration window, select **Disable Speakerphone and Headset**.
 - Step 5** Click **Save**.
-

Enable the Wideband for Analog Headsets on the Cisco Unified Communications Manager

Although analog headsets are supported on the phone, the phones cannot detect when an analog headset is plugged in. For this reason, by default, the analog headset displays in the Accessories window on the phone screen.

Display of the analog headset as the default allows users to enable wideband for the headset.

If the screen doesn't display an On or Off softkey, follow these steps to ensure that you can enable wideband on an analog headset:

Procedure

- Step 1** In Cisco Unified Communications Manager Administration, choose **Device > Phone**.
 - Step 2** In the Find and List Phones window, enter the search criteria for the phone to which you want to add the analog headset, then click **Find**.
 - Step 3** Click the Device Name that you want. The Phone Configuration window is displayed.
 - Step 4** On the Product Specific Configuration Layout portion of the Phone Configuration window, ensure that the Wideband Headset UI Control option is enabled. This option is enabled by default.
 - Step 5** In the Product Specific Configuration Layout portion of the Phone Configuration window, you can set the Wideband Headset option. This option is also enabled by default.
 - Step 6** Click **Save**.
-

Enable a USB Headset

You must enable the applicable USB port (either the back USB or the side USB port) in Cisco Unified Communications Manager Administration. Also, for the Enable/Disable USB Classes parameter in Cisco Unified Communications Manager Administration, ensure that Audio Class is selected.

Procedure

- Step 1** In Cisco Unified Communications Manager Administration, choose **Device > Phone**.
 - Step 2** Select the desired phone.
 - Step 3** Navigate to the Phone Configuration window, and select **Override Common Settings**.
 - Step 4** Click **Save**.
 - Step 5** Click **Apply Config**.
 - Step 6** Restart your phone.
-

Disable a USB Headset

To disable your USB headset, you disable the USB port on your phone. Another way is to select a different headset in the Accessories window on the phone.

Procedure

- Step 1** In Cisco Unified Communications Manager Administration, choose **Device > Phone**.
 - Step 2** Select the desired phone.
 - Step 3** In the Phone Configuration window, uncheck **Override Common Settings**.
 - Step 4** Click **Save**.
 - Step 5** Click **Apply Config**.
 - Step 6** Restart your phone.
-

Enable a Bluetooth Wireless Headset

Before a user can use a Bluetooth wireless headset, you must enable it.

Procedure

- Step 1** In Cisco Unified Communications Manager Administration, choose **Device > Phone**.
 - Step 2** Locate the phone you want to modify, and go to the Phone Configuration window for that phone.
 - Step 3** In the Phone Configuration window, select **Enable** for the Bluetooth setting and **Handsfree** for the Bluetooth Profiles setting.
 - Step 4** Save your changes.
-

Enable an Electronic Hookswitch

An electronic hookswitch connects a wireless headset to your phone. A Bluetooth headset is one headset that can be used with your electronic hookswitch. For more information about other wireless headsets that work with an electronic hookswitch, go to the following URL:

http://www.cisco.com/c/en/us/products/unified-communications/uc_endpoints_accessories.html

Procedure

- Step 1** In Cisco Unified Communications Manager Administration, select **Device > Phone**.
 - Step 2** Locate the phone that you want to set up.
 - Step 3** Navigate to the Product Specific Configuration area.
 - Step 4** Set the Wireless Headset Hookswitch Control field to **Enable**.
 - Step 5** Select **Save**.
-

Headset Configuration on Your Phone

After you enable a headset on Cisco Unified Communications Manager, you set up the headset on the user's phone. Use the following sections to guide you when working with a headset.

Before you set up a headset, make sure that the phone supports the specific headset.

Related Topics

[Accessory Support, on page 1](#)

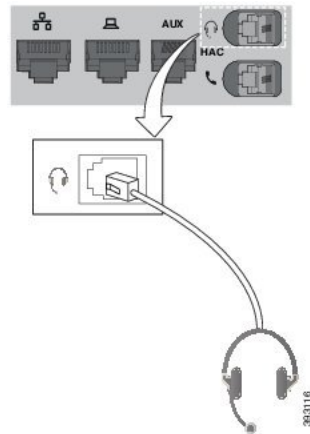
Connect a Standard Headset

Standard headsets plug into the back of the phone.

Procedure

Plug the headset into the jack on the back of the phone and press the cable into the cable channel.

Figure 1: Standard Headset Connection




Enable Wideband on Analog Headsets on the Phone

Although analog headsets are supported on the phone, the phones cannot detect when an analog headset is plugged in. For this reason, by default, the analog headset is displayed in the Accessories window on the phone screen.

Displaying the analog headset as the default allows users to enable wideband for the analog headset.

The phone is unable to detect whether the headset supports the wideband codec, but the user can enable wideband on analog headsets by following these steps:

Procedure

- Step 1** On the Cisco IP Phone, press **Applications** .
- Step 2** Select **Accessories**.
- Step 3** Highlight the analog headset, then press **Setup**.
- Step 4** Press **On** to turn on the wideband. Press **Off** to turn off the wideband.
-

Connect a USB Headset


Both wired and wireless USB headsets are supported. Your USB port is located either on the back or on the side of your phone.

If you are on an active call and unplug a USB headset, the audio does not switch to the handset. Press the **Speakerphone** button or pickup the handset.


Procedure

Plug the USB headset plug into the USB port on the phone.

Turn Bluetooth On or Off


When Bluetooth is active, the Bluetooth icon  appears in the phone screen header.

Procedure

- Step 1** Press **Applications** .
- Step 2** Select **Bluetooth**.
- Step 3** Press **On** or **Off**.
-

Add a Bluetooth Headset

Procedure

- Step 1** Make your Bluetooth headset discoverable.
- Step 2** Press **Applications** .
- Step 3** Select **Bluetooth** > **Add Bluetooth device**.

Your phone searches for discoverable accessories.

Step 4 Select your headset and press **Connect**.

Step 5 (Optional) If prompted, enter the PIN for your headset.

Disconnect a Bluetooth Headset

You should disconnect your Bluetooth headset before you use it with another device.

Procedure

Step 1 Press **Applications** .

Step 2 Select **Bluetooth**.

Step 3 Select a Bluetooth headset.

Step 4 Press **Disconnect**.

Remove a Bluetooth Headset

Remove your Bluetooth headset if you aren't going to use it with your phone again.

Procedure

Step 1 Press **Applications** .

Step 2 Select **Bluetooth**.

Step 3 Select a Bluetooth headset and press **Delete**.

Enable an E-Hookswitch Headset

Electronic Hookswitch headsets use a base station and a wireless headset. The base station plugs into your phone headset jack. After installing the headset, you enable it on the Cisco Unified Communications Manager.

Procedure

Step 1 Press **Applications** .

Step 2 Navigate to **Settings > E-Hookswitch connected**.

Step 3 Select **Yes**.



Key Expansion Modules

- [Cisco IP Phone Key Expansion Module Setup Overview, page 15](#)
- [Set up the Key Expansion Module in Cisco Unified Communications Manager, page 17](#)
- [Column Mode for the Cisco IP Phone 8800 Key Expansion Module, page 17](#)
- [Connect a Key Expansion Module to a Cisco IP Phone, page 19](#)
- [Key Expansion Module Buttons, page 23](#)
- [Access Key Expansion Module Setup, page 24](#)
- [Place a Call on the Key Expansion Module, page 25](#)
- [Adjust the Key Expansion Module Screen Brightness, page 25](#)
- [Reset the Single LCD Screen Key Expansion Module, page 26](#)
- [Reset the Dual LCD Screen Key Expansion Module, page 26](#)
- [Troubleshoot the Key Expansion Module, page 26](#)
- [Key Expansion Module Power Information, page 27](#)

Cisco IP Phone Key Expansion Module Setup Overview

Key expansion modules add extra line appearances, speed dials, or programmable buttons to the phone. The programmable buttons can be set up as phone line buttons, speed-dial buttons, or phone feature buttons. But Simplified dialing is not supported on expansion modules.



Caution

The slots in the side of the phone are designed only for use with the spine connectors on the key expansion module. Insertion of other objects permanently damages the phone.

There are 3 expansion modules available:

- Cisco IP Phone 8800 Key Expansion Module—Single LCD screen module, 18 line keys, 2 pages, configure with one or two column displays.

- Cisco IP Phone 8851/8861 Key Expansion Module—Dual LCD screen module for audio phones, 14 line keys, 2 pages, configure with one-column display only.
- Cisco IP Phone 8865 Key Expansion Module—Dual LCD screen module for video phones, 14 line keys, 2 pages, configure with one-column display only.

You can use more than one expansion module per phone. The Cisco IP Phone 8851 and 8851NR support up to 2 modules. The Cisco IP Phone 8861, 8865, and 8865NR support up to 3 modules. But each module must be the same type. This means that you cannot mix audio expansion modules with video expansion modules. You also cannot use a video expansion module on an audio phone or an audio expansion module on a video phone.

When adding features to your expansion module, remember that each line button supports only one feature. You cannot add more features than the number of programmable line keys on your expansion module.

Also note the line mode when working with a key expansion module. In Session line mode, the first line key on the expansion module is line 6 of the phone template. In Enhanced line mode, it is line 11 of the phone template. Only the first 25 characters are displayed on a line.

Table 3: Available Line Keys in Each Session Mode

Cisco IP Phone Model	Single LCD screen expansion module	Dual LCD screen expansion module
Cisco IP Phone 8851 and 8851NR	Session Line Mode: 77	Session Line Mode: 61
	Enhanced Line Mode: Not supported	Enhanced Line Mode: 66
Cisco IP Phone 8861 Cisco IP Phone 8865 and 8865NR	Session Line Mode: 113	Session Line Mode: 89
	Enhanced Line Mode: Not supported	Enhanced Line Mode: 94

Figure 2: Cisco IP Phone 8861 with Three Cisco IP Phone 8800 Key Expansion Modules



Related Topics

[Accessory Support, on page 1](#)

Set up the Key Expansion Module in Cisco Unified Communications Manager

Expansion modules are enabled from the Expansion Module Information area of the Phone Configuration page on Cisco Unified Communications Manager. If you configure the expansion module incorrectly, an error message displays on the phone. You cannot configure the phone for a dual LCD module and then install a single LCD module. But your choice of expansion module is not permanent. You can configure another module if your needs change.

Procedure

-
- Step 1** In Cisco Unified Communications Manager Administration, choose **Device > Phone**. The Find and List Phones window appears. You can search for one or more phones that you want to configure for the Cisco IP Phone 8800 Key Expansion Module.
- Step 2** Select and enter your search criteria and click **Find**. The Find and List Phones window appears with a list of phones that match your search criteria.
- Step 3** Click the phone that you want to configure for the Cisco IP Phone 8800 Key Expansion Module. The Phone Configuration window appears.
- Step 4** If you have an expansion module with a single LCD screen, scroll down to the Product Specific Configuration area. Enable the One Column Display for KEM field for one-column mode, or disable the field for two-column mode.
- Step 5** Scroll down to the Expansion Module Information section. Select the appropriate expansion module for the Module 1 field. Depending upon your phone, your choices may include:
- CP-8800-Video 28 Button Key Expansion Module
 - CP-8800-Audio 28 Button Key Expansion Module
 - BEKEM 36-Button Line Expansion Module
- Step 6** (Optional) Depending upon your phone model, you can add extra expansion modules. Repeat the previous step for Module 2, and Module 3.
- Step 7** Click **Save**.
- Step 8** Select **Apply Config**.
- Step 9** Restart the phone.
-

Column Mode for the Cisco IP Phone 8800 Key Expansion Module

If you are using the Cisco IP Phone 8800 Key Expansion Module, you can set it up in one-column mode or two-column mode. Set your mode from the Product Specific Configuration area of your Cisco Unified

Communications Manager Administration. Two-column mode is the default on the Cisco IP Phone 8800 Key Expansion Module.

The Cisco IP Phone 8851/8861 Key Expansion Module and the Cisco IP Phone 8865 Key Expansion Module do not support two-column mode.

**Note**

If the label is longer than the display space in both one- and two-column mode, the text contains an ellipsis (...).

One-Column Mode

In one-column mode, each row in the display corresponds to one line accessed by either the left or right-side buttons. In this configuration, the key expansion module displays 9 lines on page 1, and 9 lines on page 2.

Figure 3: A Cisco IP Phone 8800 Key Expansion Module in One Column Mode



Two-Column Mode

In two-column mode, each of the buttons on the left and right of the screen is assigned to different lines. In this configuration, the key expansion module displays 18 lines on page 1, and 18 lines on page 2.

Figure 4: A Cisco IP Phone 8800 Key Expansion Module in Two Column Mode

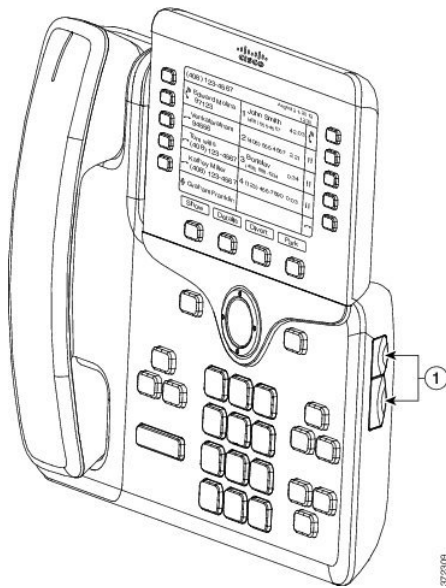


Connect a Key Expansion Module to a Cisco IP Phone

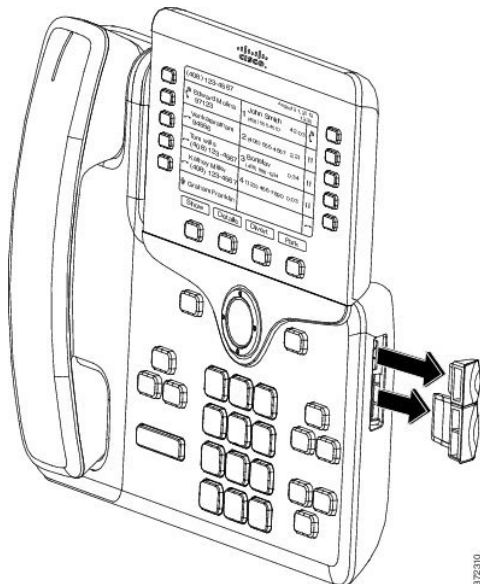
If you want to install more than one expansion module, you repeat steps 7-9 to connect the other expansion modules together.

Procedure

-
- Step 1** Unplug the Ethernet cable from the phone.
 - Step 2** If installed, remove the footstand from the phone.
 - Step 3** Locate the accessory connector covers on the side of the phone. This diagram shows the location.



Step 4 Remove the two accessory connector covers, as shown in the diagram.



Caution The slots are designed for the spine connector only. Insertion of other objects will cause permanent damage to the phone.

Step 5 Position the phone so that the front of the phone faces up.

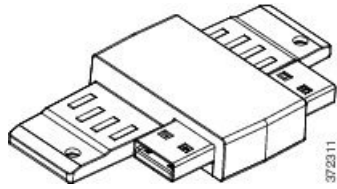
Step 6 Connect one end of the key expansion module spine connector to the accessory connector on the Cisco IP Phone.

a) Align the spine connector with the accessory connector ports.

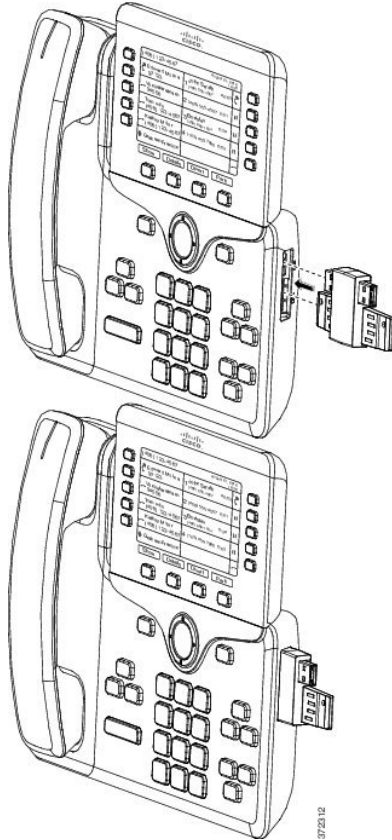
Note Install the connector in the orientation shown in the following diagrams.

b) Firmly press the spine connector into the phone.

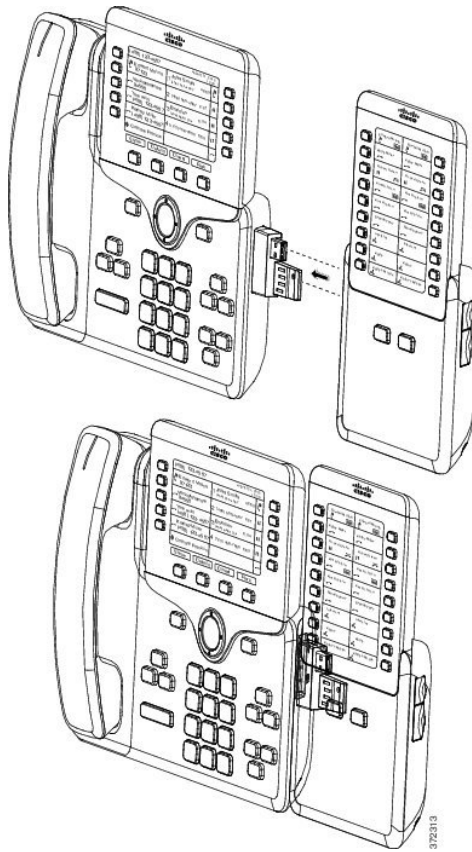
This diagram shows the spine connector.



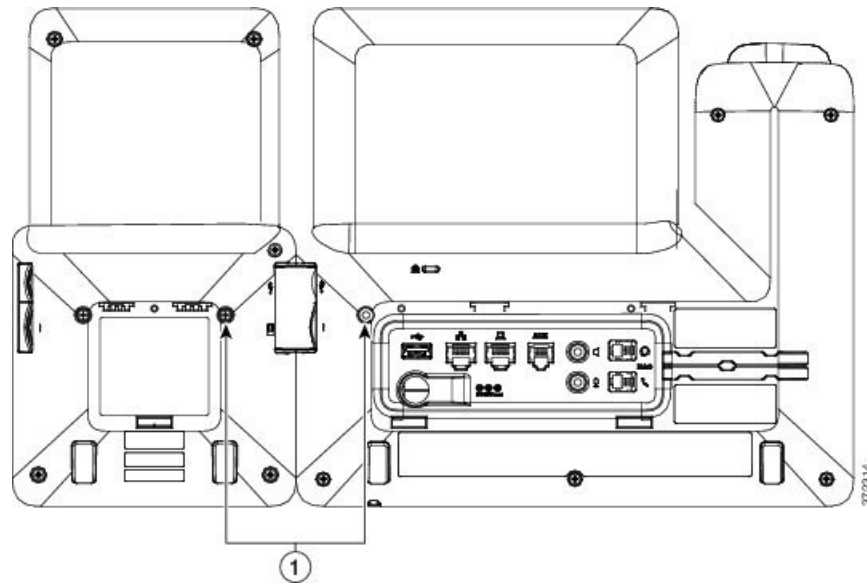
This diagram shows the installation of the spine connector.



- Step 7** Connect the other end of the spine connector to the key expansion module as shown in this diagram.
- Align the spine connector with the key expansion module accessory connector ports.
 - Firmly press the key expansion module into the spine connector.



- Step 8** (Optional) Use a second key expansion module spine connector to connect the second key expansion module to the first key expansion module.
- Step 9** (Optional) Use a third key expansion module spine connector to connect the third key expansion module to the second key expansion module.
- Step 10** Use a screwdriver to fasten the screws into the phone.
This step ensures that the phone and key expansion module remain connected at all times. This diagram shows the location of the screw holes on the phone and one key expansion module.



Note Make sure that the screws are fully inserted into the phone and tightened.

Step 11 (Optional) Install the footstands on the phone and on the key expansion module, and adjust both footstands to rest evenly on the work surface.

Step 12 Plug the Ethernet cable into the phone.

Key Expansion Module Buttons

The following figure and table describes the function and appearance of the buttons on the key expansion module.

Figure 5: Key Expansion Module Buttons

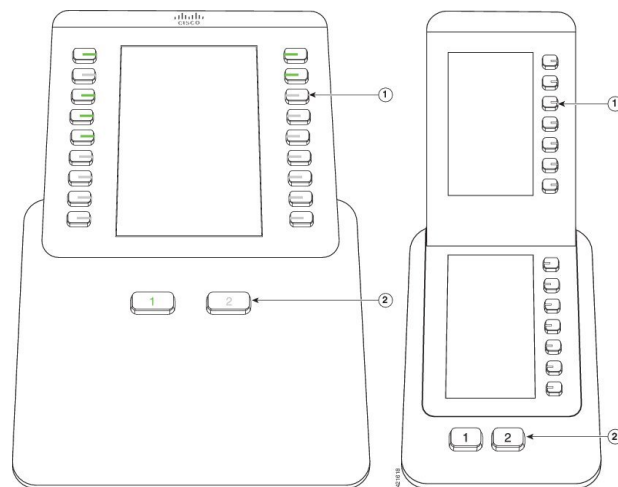












Table 4: Placement and Function of Key Expansion Module Buttons

	<p>LCD screen—Displays the phone number, speed-dial number (or name or other text label), phone service, phone feature, or privacy assigned to each button.</p> <p>Icons that indicate line status resemble (in both appearance and function) the icons on the phone to which the key expansion module is attached.</p>
1	<p>Lighted buttons—Line buttons. Each button or pair of buttons corresponds to one line. The lights beneath each button indicate the state of the corresponding line as follows:</p> <ul style="list-style-type: none">  Light off—Line available or a call is ringing on an inactive page.  Green steady—Line in use by you, or you have a call on hold.  Green, flashing—Enhanced line mode only. You have a call on hold.  Red steady—Line in use by someone else or someone else has a call on hold on a shared line.  Red, flashing—Enhanced line mode only. Someone else has a call on hold on a shared line.  Amber steady—Line ringing.  Amber, flashing—Enhanced line mode only. Line ringing.
2	<p>Page buttons—2 buttons. The button for page 1 is labeled as 1 and the button for page 2 is labeled as 2. The lights in each button indicate the state of the page as follows:</p> <ul style="list-style-type: none">  Green steady—Page is in view.  Light off—Page is not in view.  Amber steady—Page is not in view with one or more alerting calls on the page.

Access Key Expansion Module Setup

After you install one or more key expansion modules on the phone and configure them in Cisco Unified Communications Manager Administration, the phone automatically recognizes the key expansion modules.

When multiple key expansion modules are attached, they are numbered according to the order in which they connect to the phone:

- Key expansion module 1 is the expansion module closest to the phone.
- Key expansion module 2 is the expansion module in the middle.

- Key expansion module 3 is the expansion module farthest to the right.

You can select a key expansion module, and then choose one of the following softkeys:

- Exit: Returns to the Applications menu.
- Details: Provides details about the selected key expansion module.
- Setup: Allows you to configure the brightness of the selected key expansion module. Setting the brightness can also be done using the Preferences menu on the phone.

Procedure

-
- Step 1** On the phone, press **Applications** .
- Step 2** Press **Accessories**.
All properly installed and configured key expansion modules display in the list of accessories.
-


Place a Call on the Key Expansion Module

Procedure

-
- Step 1** Press the line button on the key expansion module.
- Step 2** Dial a phone number.
- Step 3** Pick up your handset.
-

Adjust the Key Expansion Module Screen Brightness

Procedure

-
- Step 1** Press **Applications** .
- Step 2** Select **Settings > Brightness > Brightness - Key expansion module x**, where x is the number of the key expansion module.
- Step 3** Press right on the Navigation pad to increase brightness. Press left on the Navigation pad to decrease brightness.
- Step 4** Press **Save**.
-

Reset the Single LCD Screen Key Expansion Module

If you are having technical difficulties with your Cisco IP Phone 8800 Key Expansion Module, you can reset the module to the factory default settings.

Procedure

-
- Step 1** Restart the expansion module by disconnecting the power source, waiting a few seconds, and then reconnecting it.
 - Step 2** As the expansion module powers up, press and hold **Page 1**. As the LCD screen turns white, continue pressing **Page 1** for at least one second.
 - Step 3** Release **Page 1**. The LEDs turn red.
 - Step 4** Immediately press **Page 2** and continue pressing **Page 2** for at least one second.
 - Step 5** Release **Page 2**. The LEDs turn amber.
 - Step 6** Press Lines **5, 14, 1, 18, 10, and 9** in sequence.
The LCD screen turns blue. A spinning icon is displayed in the center of the screen.
The key expansion module resets.
-

Reset the Dual LCD Screen Key Expansion Module

If you are having technical difficulties with your dual LCD screen key expansion module, you can reset the module to the factory default settings. This task applies only to the Cisco IP Phone 8865 Key Expansion Module and the Cisco IP Phone 8851/8861 Key Expansion Module.

Procedure

-
- Step 1** Restart the module by disconnecting it and then reconnecting it to the phone.
 - Step 2** As the module powers up, hold down both of the page keys until the LEDs on the first 7 line keys turn green.
-

Troubleshoot the Key Expansion Module

Procedure

-
- Step 1** Open a CLI.
 - Step 2** Enter the following command to enter debug mode:
debugsh

- Step 3** Enter ? to see all available commands and options.
- Step 4** Use the applicable commands and options to find the desired information.
- Step 5** To exit debug mode, press **Ctrl-C**.

Key Expansion Module Power Information

If you use a key expansion module with your phone, then Power over Ethernet (PoE) is often enough to power your expansion modules. But a power cube is required for a Cisco IP Phone 8851/8861 Key Expansion Module or a Cisco IP Phone 8865 Key Expansion Module supported by 802.3af PoE. A power cube is also needed for smartphone or tablet charging when your expansion module is attached.

Cisco IP Phone 8800 Key Expansion Module Power Consumption

48V DC, 5W per key expansion module

Cisco IP Phone 8851/8861 Key Expansion Module and Cisco IP Phone 8865 Key Expansion Module Power Consumption

48V DC, 3.5W per key expansion module

Cisco IP Phone 8800 Key Expansion Module, Cisco IP Phone 8851/8861 Key Expansion Module, and Cisco IP Phone 8865 Key Expansion Module Power Scheme

The phone can power one key expansion module directly. For more information, see the Power-Supply Compatibility Table.

If you are charging a smartphone or a tablet, the side USB draws up to 500mA/2.5W.

Table 5: Power-Supply Compatibility Table

Configuration	802.3af Power over Ethernet (PoE)	802.3at PoE	Cisco IP Phone Power Cube 4
8851 and 1 expansion module	Yes	Yes	Yes
8851 and 2 expansion modules	No	No See the third note.	Yes
8861 and 1 expansion module	No	Yes	Yes
8861 and 2 expansion modules	No	Yes See the first note.	Yes
8861 and 3 expansion modules	No	Yes See the first note.	Yes
8865 and 1 expansion module	No	Yes	Yes

Configuration	802.3af Power over Ethernet (PoE)	802.3at PoE	Cisco IP Phone Power Cube 4
8865 and 2 expansion modules	No	Yes See the second note.	Yes
8865 and 3 expansion modules	No	Yes See the second note.	Yes

**Note**

Be familiar with the following items:

- Cisco IP Phone 8861 using 802.3at PoE: The fast-charging feature on the back USB is not supported when more than one expansion module is used.
- Cisco IP Phone 8865: The fast-charging feature on the back USB requires Cisco Universal PoE (UPoE) when more than one expansion module is attached.
- Cisco IP Phone 8851 with 2 expansion modules: 802.3at PoE is supported only with v08 or later hardware. You can find the phone version information on the lower back of the phone as part of the TAN and PID label. Version information is also located on the individual phone packaging.



Wall Mount Kits

- [Wall Mount Kits, page 29](#)
- [Wall Mount Components, page 30](#)
- [Install a Spare Wall Mount Kit, page 35](#)
- [Remove the Phone from the Wall Mount Kit, page 43](#)
- [Adjust the Handset Rest on Your Phone, page 44](#)

Wall Mount Kits

Each wall mount is unique to your phone model and cannot be used for another phone. If you are planning to attach your phone to a wall, purchase the wall mount kit specific to your phone. For additional information, refer to the phone model data sheet.

To check which phone model you have, press **Applications**  and select **Phone information**. The **Model number** field shows your phone model.

Table 6: Wall Mount Kits

Cisco IP Phone	Cisco Wall Mount Kit	Notes
Cisco IP Phone 7811	Spare Wallmount Kit for Cisco IP Phone 7811	
Cisco IP Phone 7821 and 7841	Spare Wallmount Kit for Cisco IP Phone 7800 Series	
Cisco IP Phone 7861	Spare Wallmount Kit for Cisco IP Phone 7861	
Cisco IP Phone 8811 and 8841	Spare Wallmount Kit for Cisco IP Phone 8800 Series	

Cisco IP Phone	Cisco Wall Mount Kit	Notes
Cisco IP Phone 8851, 8851NR, and 8861	Spare Wallmount Kit for Cisco IP Phone 8800 Series	This wall mount kit cannot be used with a key expansion module.
	Spare Wallmount Kit for Cisco IP Phone 8800 Series with Single 36-key Key Expansion Module	This wall mount kit is available for Cisco IP Phone 8851, 8851NR, and 8861 because only these phones support a key expansion module.
	Spare Wallmount Kit for Cisco IP Phone 8800 Series with Single 28-key Key Expansion Module (lockable)	This wall mount kit is available for Cisco IP Phone 8851, 8851NR, and 8861 that with a key expansion module. It is lockable.
Cisco IP Phone 8845, 8865, and 8865NR	Spare Wallmount Kit for Cisco IP Phone 8800 Video Series	This wall mount kit is available for Cisco IP Phone 8845, 8865, and 8865NR only. It can be locked, but it cannot be used with a key expansion module.

Related Topics

[Accessory Support, on page 1](#)

Wall Mount Components

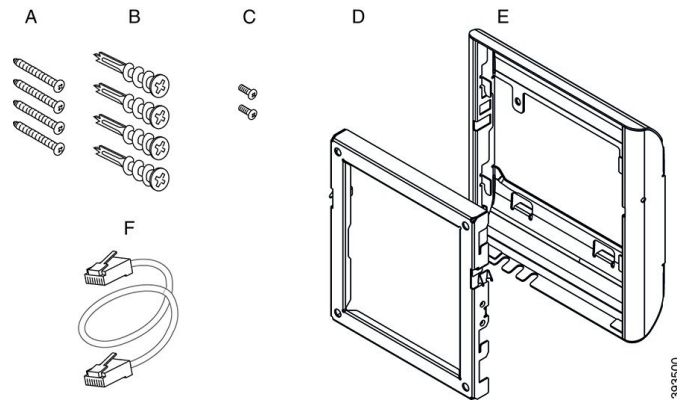
You can attach a wall mount kit to most surfaces, including concrete, brick, or other hard surfaces. But the items in your wall mount kit are for drywall use only. If you mount your phone on other surfaces, obtain the appropriate screws and anchors.

Check and see that you have the correct components before you install your kit. For each phone model, use the table and diagram to check the contents of your wall mount kit.

Spare Wall Mount Kit for Cisco IP Phone 7811

Item	Component
A	4 M4 x 25-mm Phillips-head screws
B	4 anchors
C	2 M3 x 7-mm self-tapping screws
D	1 wall bracket
E	1 phone bracket
F	One 200-mm Ethernet cable

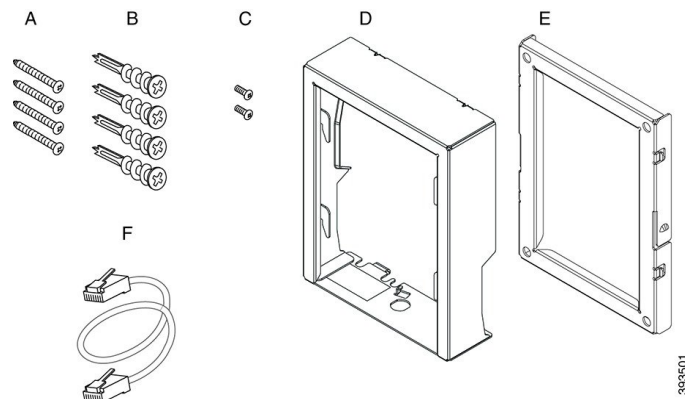
Figure 6: Components of Spare Wall Mount Kit for Cisco IP Phone 7811



Spare Wall Mount Kit for Cisco IP Phone 7800 Series

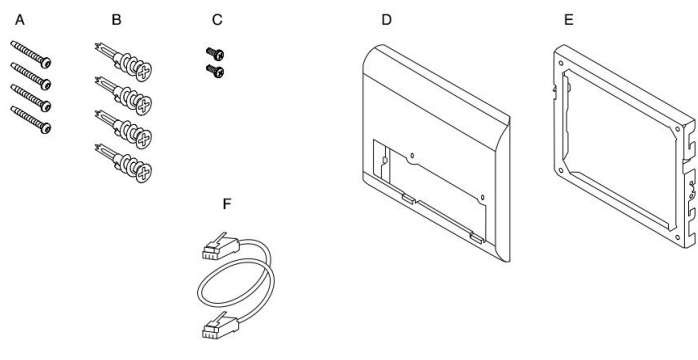
Item	Component
A	4 M8-18 x 1.25-inch Phillips-head screws
B	4 anchors
C	2 M2.5 x 6-mm machine screws
D	1 phone bracket
E	1 wall bracket
F	One 6-inch Ethernet cable

Figure 7: Components of Spare Wall Mount Kit for Cisco IP Phone 7800 Series



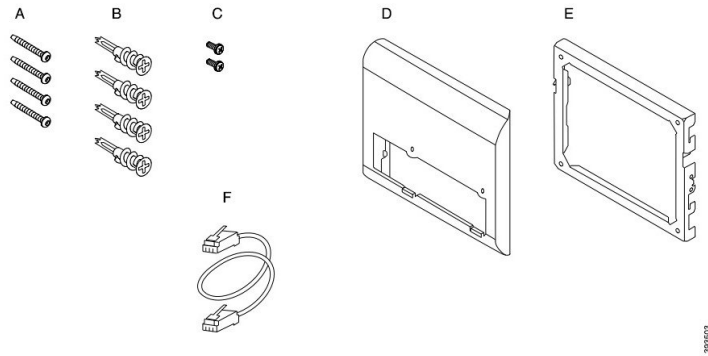
Spare Wall Mount Kit for Cisco IP Phone 7861

Item	Component
A	4 M4 x 25-mm Phillips-head screws
B	4 anchors
C	2 M3 x 7-mm self-tapping screws
D	1 phone bracket
E	1 wall bracket
F	One 200-mm Ethernet cable

Figure 8: Components of Spare Wall Mount Kit for Cisco IP Phone 7861**Spare Wall Mount Kit for Cisco IP Phone 8800 Series**

Item	Component
A	4 #8-18 x 1.25-inch Phillips-head screws
B	4 anchors
C	2 K30x8mm self-tapping screws
D	1 phone bracket
E	1 wall bracket
F	One 6-inch Ethernet cable

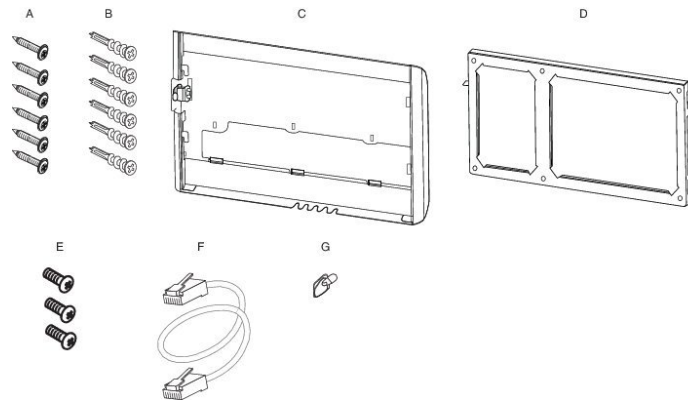
Figure 9: Components of Spare Wall Mount Kit for Cisco IP Phone 8800 Series



Spare Wall Mount Kit for Cisco IP Phone 8800 Series with Single 28-key Key Expansion Module (Lockable)

Item	Component
A	6 #8-18 x 1.25-inch Phillips-head screws
B	6 anchors
C	3 K30x8mm self-tapping screws
D	1 phone bracket
E	1 wall bracket
F	One 6-inch Ethernet cable
G	1 key if the bracket includes the optional lock

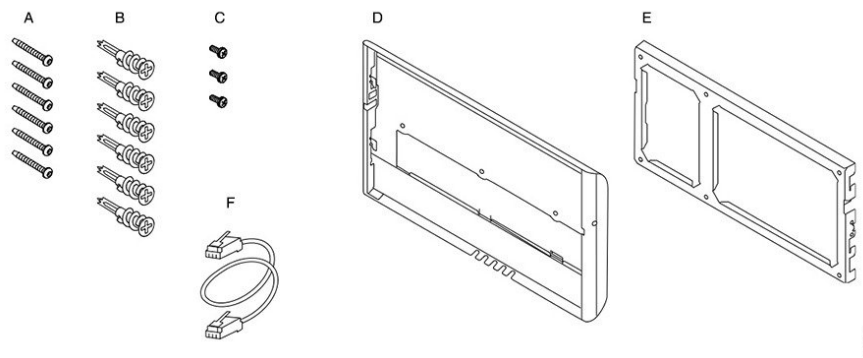
Figure 10: Components of Spare Wall Mount Kit for Cisco IP Phone 8800 Series with Single 28-key Key Expansion Module (Lockable)



Spare Wall Mount Kit for Cisco IP Phone 8800 Series with Single 36-key Key Expansion Module

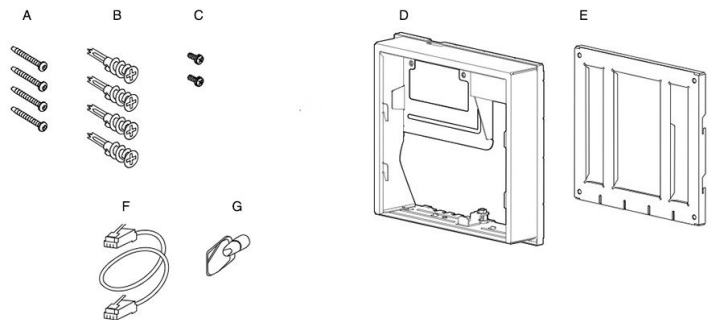
Item	Component
A	6 #8-18 x 1.25-inch Phillips-head screws
B	6 anchors
C	3 K30x8mm self-tapping screws
D	1 phone bracket
E	1 wall bracket
F	One 6-inch Ethernet cable

Figure 11: Components of Spare Wall Mount Kit for Cisco IP Phone 8800 Series with Single 36-key Key Expansion Module



Spare Wall Mount Kit for Cisco IP Phone 8800 Video Series

Item	Component
A	4 #10-12x1-inch Phillips-head screws with
B	4 anchors
C	2 #4-40x1/4-inch machine screws
D	1 phone bracket
E	1 wall bracket
F	One 6-inch Ethernet cable
G	1 key if the bracket includes the optional lock
H	1 sheet metal screw (not shown)

Figure 12: Components of Spare Wall Mount Kit for Cisco IP Phone 8800 Video Series

Install a Spare Wall Mount Kit

Make sure that a working Ethernet connection is available nearby before you install your wall mount kit. If the phone covers the connector, the connector must be flush or recessed to the wall.

Complete your installation in the following order:

- Attach the wall bracket to the wall
- Attach the phone bracket to the phone
- Attach the cables to the phone
- Attach the phone to the wall bracket

Attach the Wall Bracket to the Wall

Each wall mount kit is slightly different, so refer to the appropriate example when attaching the bracket to the wall.

Before You Begin

Obtain one of each of the following:

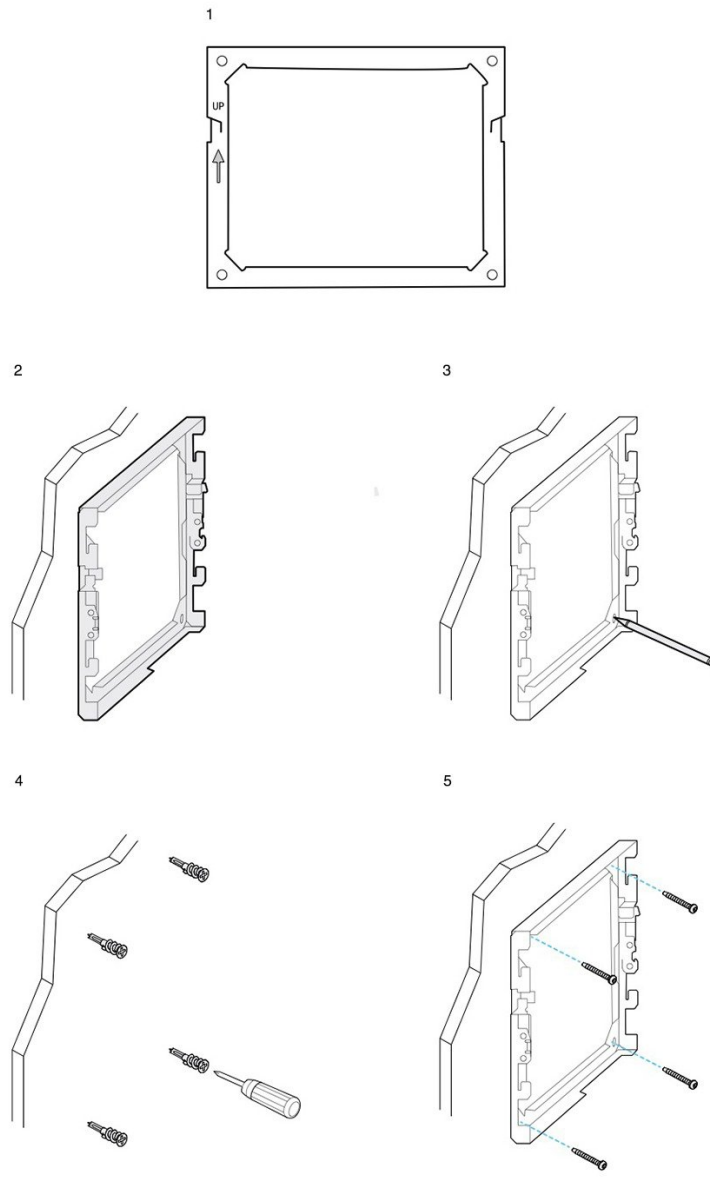
- #2 Phillips-head screwdriver
- Level
- Pencil

Procedure

- Step 1** Hold the bracket against the wall, with the arrow pointing up.
- Step 2** Use the level to ensure that the bracket is level.
- Step 3** Use a pencil to mark the screw holes.
- Step 4** Center the anchor over the pencil mark and use a #2 Phillips-head screwdriver to press the anchor into the wall. Screw the anchor clockwise into the wall until it is seated flush.
- Step 5** Use the included screws and the #2 Phillips-head screwdriver to attach the bracket to the wall through the anchors.
-

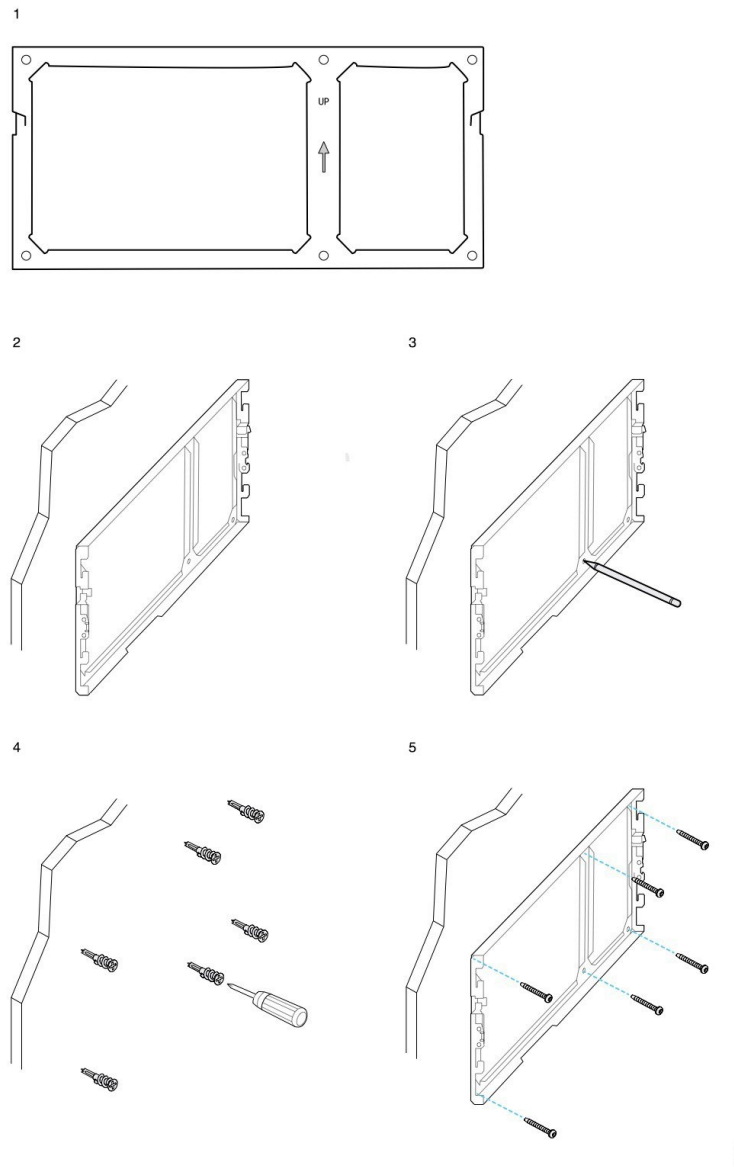
Examples of a Wall Bracket Attached to a Wall

The following diagram illustrates attaching a Cisco IP Phone 7800 and 8800 series wall bracket to a wall.



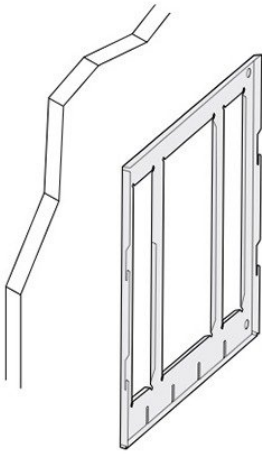
The following diagram illustrates attaching a Cisco IP Phone 8800 series wall bracket with a key expansion module to a wall.

Attach the Wall Bracket to the Wall

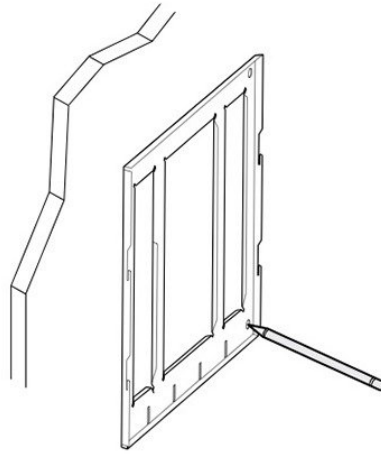


The following diagram illustrates step 2 to step 5 of attaching a Cisco IP Phone 8845 and 8865 series wall bracket to a wall.

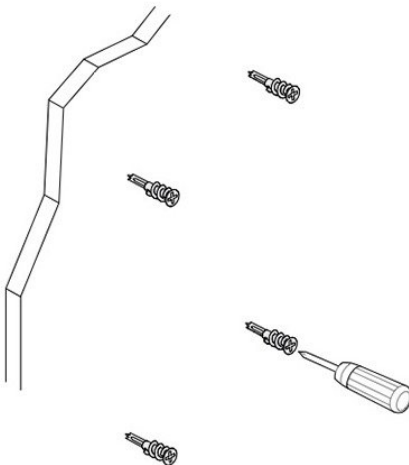
2



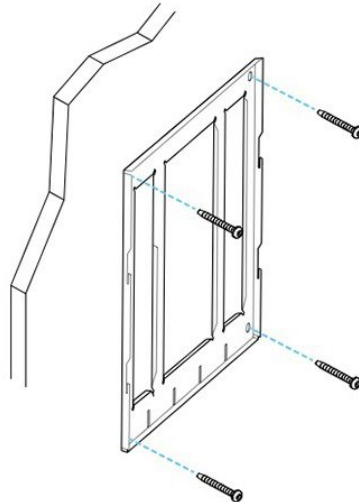
3



4



5



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Attach the Phone Bracket to the Phone

Before you attach a phone to the wall, you attach the phone bracket to the phone. The phone bracket attaches the phone to the wall bracket, and it bears the weight of the phone. Ensure that the phone bracket is attached securely to your phone. Because each phone is slightly different, refer to the appropriate example to guide you.

Before You Begin

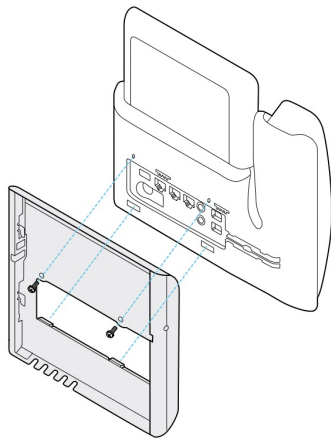
Obtain a #1 Phillips-head screwdriver.

Procedure

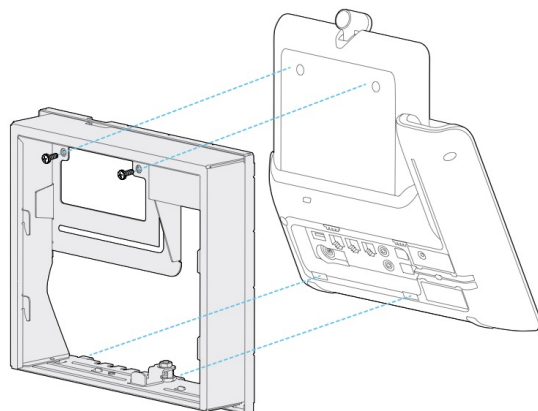
-
- Step 1** Keep the handset cord or headset cords attached, but remove any other cords from the phone base.
 - Step 2** Attach the phone bracket to the phone. Insert the tabs on the bracket into the mounting tabs on the back of the phone.
 - Step 3** Use the #1 Phillips-head screwdriver to secure the phone bracket to the phone with the self-tapping or the machine screws.
-

Examples of a Phone Bracket Attached to a Phone

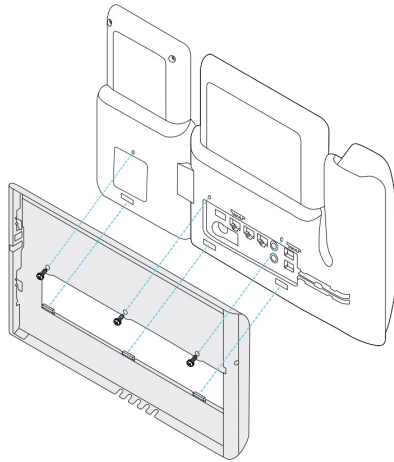
The following diagram illustrates how to attach a Cisco IP Phone 7800 and 8800 series phone to a phone bracket.



The following diagram illustrates how to attach a Cisco IP Phone 8845 and 8865 to a phone bracket.



The following diagram illustrates how to attach a phone bracket to a Cisco IP Phone 8800 series phone equipped with a key expansion module.



Attach the Cables to the Phone

Attach the phone cables to your phone before you mount the phone to the wall.

Procedure

-
- Step 1** Attach the Ethernet cable to the 10/100/1000 SW network port and to the wall jack.
 - Step 2** (Optional) Attach the cable to the 10/100/1000 computer (PC access) port.
 - Step 3** (Optional) Plug the power cord into the phone and seat the cord in the clips next to the PC port.
 - Step 4** (Optional) If the cables terminate inside the wall bracket, connect the cables to the jacks.
-

Attach the Phone to the Wall Bracket

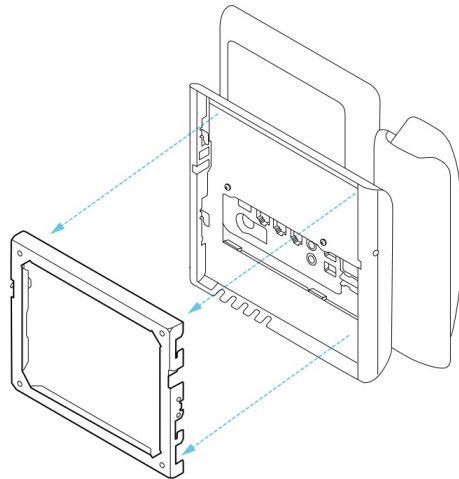
After you have installed your wall bracket on the wall, you attach your phone - with the phone bracket to it - to the wall bracket. Ensure that the phone fits securely into the wall bracket. Because each phone is slightly different, refer to the appropriate example to guide you.

Procedure

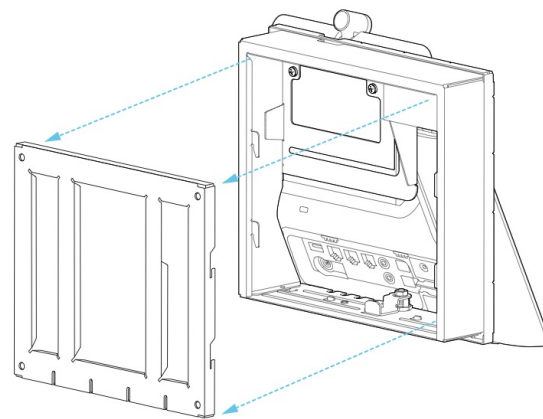
-
- Step 1** Insert the tabs on the top of the wall bracket into the slots on the phone bracket. Cables that terminate outside of the brackets can be positioned in the openings on the bracket bottom, with one cable per opening.
 - Step 2** Press the phone firmly into the wall bracket and slide the phone down. The tabs in the bracket click into position.
-

Examples of a Cisco IP Phone Attached to the Wall Bracket

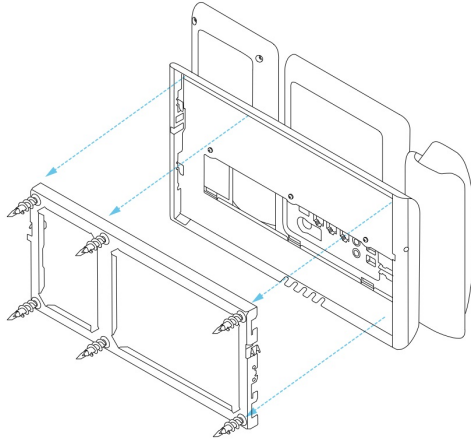
The following diagram illustrates how to attach a Cisco IP Phone 7800 and 8800 series to your wall bracket.



The following diagram illustrates how to attach a Cisco IP Phone 8845 and 8865 to your wall bracket.



The following diagram illustrates how to attach a Cisco IP Phone 8800 series with a key expansion module to your wall bracket.



Remove the Phone from the Wall Mount Kit

The wall bracket has two tabs that lock the bracket to the phone mounting plate. These tabs must be released before you can remove the phone from the wall mount kit. Because each phone is slightly different, refer to the appropriate example to guide you.

Before You Begin

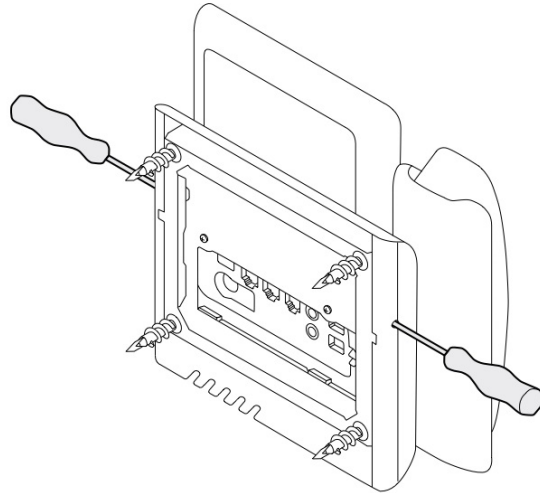
Obtain two Phillips head screwdrivers or other similar devices that have a diameter of 5 millimeters or 3/16 inch.

Procedure

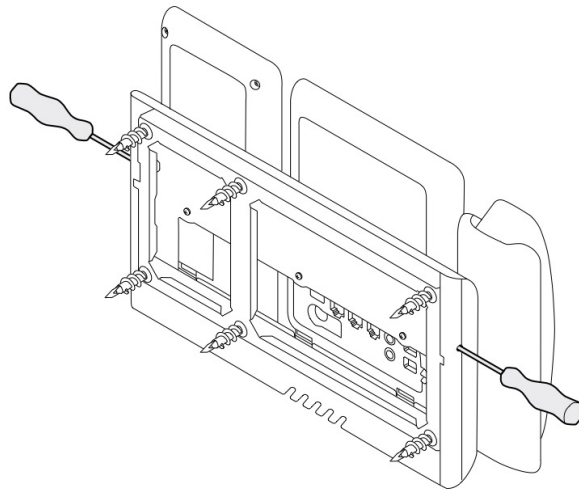
-
- Step 1** Insert a screw driver or other device into the left and right holes in the phone mounting plate. Insert to a depth of about 3/4 inch or 2 centimeters.
 - Step 2** Press inwards firmly to disengage the tabs.
 - Step 3** Lift the phone to release it from the wall bracket and pull the phone toward you.
-

Examples of Disengaging the Locking Tabs

The following diagram illustrates how to disengage the locking tabs on the Cisco IP Phone 7800 and 8800 series.



The following diagram shows how to disengage the locking tabs on the Cisco IP Phone 8800 series with a key expansion module attached.



Adjust the Handset Rest on Your Phone

Each Cisco IP Phone comes with a small removeable tab located in the phone cradle. This tab determines how the phone handset sits in the cradle. If your phone is wall mounted or if the handset slips out of the cradle too easily, you may need to adjust how the handset rests on this tab.

Before You Begin

Obtain a coin or other similar object with a thickness of about 1.75 mm or 0.069 inch.

Procedure

- Step 1** Remove the handset from the cradle. Place the edge of the coin in the space between the handset rest and the plastic tab. Remove the tab by quickly rotating the coin counterclockwise.
 - Step 2** Rotate the tab 180 degrees so the ridge points toward you and the smooth back faces down.
 - Step 3** Hold the tab between two fingers, with the corner notches facing you.
 - Step 4** Line up the tab with the slot in the cradle and press the tab evenly into the slot. An extension protrudes from the top of the rotated tab.
 - Step 5** Return the handset to the handset rest.
-



Other Accessories

- [Connect the Footstand, page 47](#)
- [Secure the Phone with a Cable Lock , page 47](#)
- [External Speakers and Microphone, page 48](#)

Connect the Footstand

If your phone is placed on a table or desk, connect the footstand to the back of the phone.

Procedure

- Step 1** Insert the connectors into the slots.
 - Step 2** Press the footstand until the connectors snap into place.
 - Step 3** Adjust the angle of the phone.
-

Related Topics

[Accessory Support, on page 1](#)

Secure the Phone with a Cable Lock

You can secure your Cisco IP Phone 8800 Series with a laptop cable lock up to 20 mm wide.

Procedure

-
- Step 1** Take the looped end of the cable lock and wrap it around the object to which you want to secure your phone.
 - Step 2** Pass the lock through the looped end of the cable.
 - Step 3** Unlock the cable lock.
 - Step 4** Press and hold the locking button to align the locking teeth.
 - Step 5** Insert the cable lock into the lock slot of your phone and release the locking button.
 - Step 6** Lock the cable lock.
-

Related Topics

[Accessory Support, on page 1](#)

External Speakers and Microphone

External speakers and microphones are plug-and-play accessories. You can connect an external PC-type microphone and powered speakers (with amplifier) on the Cisco IP Phone by using the line in/out jacks. Connecting an external microphone disables the internal microphone and connecting an external speaker disables the internal phone speaker.



Note

Using poor quality external audio devices, playing loudspeakers at very loud volumes, or placing the microphone very close to the loudspeaker may result in undesirable echo for other parties on your speakerphone calls.

Related Topics

[Accessory Support, on page 1](#)



Product Safety and Security

- [Safety and Performance Information, page 49](#)
- [FCC Compliance Statements, page 50](#)
- [Cisco Product Security Overview, page 51](#)
- [Important Online Information, page 52](#)

Safety and Performance Information

Power Outage

Your access to emergency service through the phone requires that the phone receive power. If a power interruption occurs, service or emergency calling service dialing does not function until power is restored. If a power failure or disruption occurs, you may need to reset or reconfigure the equipment before you can use service or emergency calling service dialing.

External Devices

We recommend that you use good-quality external devices that are shielded against unwanted radio frequency (RF) and audio frequency (AF) signals. External devices include headsets, cables, and connectors.

Depending on the quality of these devices and their proximity to other devices, such as mobile phones or two-way radios, some audio noise may still occur. In these cases, we recommend that you take one or more of these actions:

- Move the external device away from the source of the RF or AF signals.
- Route the external device cables away from the source of the RF or AF signals.
- Use shielded cables for the external device, or use cables with a better shield and connector.
- Shorten the length of the external device cable.
- Apply ferrites or other such devices on the cables for the external device.

Cisco cannot guarantee the performance of external devices, cables, and connectors.

**Caution**

In European Union countries, use only external speakers, microphones, and headsets that are fully compliant with the EMC Directive [89/336/EC].

Bluetooth Wireless Headset Performance

Cisco IP phones support Bluetooth Class 2 technology when the headsets support Bluetooth. Bluetooth enables low-bandwidth wireless connections within a range of 30 feet (10 meters). The best performance is in the 3- to 6-foot (1- to 2-meter) range. You can connect up to five headsets, but only the last one connected is used as the default.

Because of potential interference issues, we recommend that you move 802.11b/g devices, Bluetooth devices, microwave ovens, and large metal objects away from the wireless headset.


The Bluetooth wireless headset does not need to be within direct line-of-sight of the phone. However, some barriers, such as walls or doors, and interference from other electronic devices, can affect the connection.

**Note**

The Cisco IP Phone 7811, 7821, 7841, and 7861 does not support Bluetooth.

Ways to Provide Power to Your Phone

You can provide power to your phone in one of two ways:

- Use the power cable that comes with your phone.
- If your network supports Power over Ethernet (PoE), you can plug your phone into the network. Plug an Ethernet cable into the Ethernet phone port  and into the network.

If you are not sure whether your network supports PoE, check with your administrator.

Phone Behavior During Times of Network Congestion

Anything that degrades network performance can affect Cisco IP Phone voice and video quality, and in some cases, can cause a call to drop. Sources of network degradation can include, but are not limited to, the following activities:

- Administrative tasks, such as an internal port scan or security scan
- Attacks that occur on your network, such as a Denial of Service attack

FCC Compliance Statements

The Federal Communications Commission requires compliance statements for the following:

FCC Part 15.21 Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must be at least 20 cm from the user and must not be collocated or operating in conjunction with any other antenna or transmitter.

FCC Receivers and Class B Digital Statement

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

Cisco Product Security Overview

This product contains cryptographic features and is subject to U.S. and local country laws that govern import, export, transfer, and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute, or use encryption. Importers, exporters, distributors, and users are responsible for compliance with U.S. and local country laws. By using this product, you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

Further information regarding U.S. export regulations can be found at <https://www.bis.doc.gov/policiesandregulations/ear/index.htm>.

Important Online Information

End User License Agreement

The End User License Agreement (EULA) is located here: <https://www.cisco.com/go/eula>

Regulatory Compliance and Safety Information

Regulatory Compliance and Safety Information (RCSI) is located here: https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cuipph/all_models/regulatory_compliance/english/install/guide/iphrcsi3.html