



## GETTING STARTED GUIDE



### **Cisco Unified Communications 500 Series INCLUDING LICENSE AND WARRANTY**

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# 1 Cisco One-Year Limited Hardware Warranty Terms

There are special terms applicable to your hardware warranty and various services that you can use during the warranty period. Your formal Warranty Statement, including the warranties and license agreements applicable to Cisco software, is available on Cisco.com. Follow these steps to access and download your warranty and license agreements from Cisco.com.

1. Launch your browser, and go to this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/cetrans.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/cetrans.htm)

The Warranties and License Agreements page appears.

2. To read the *Cisco Information Packet*, follow these steps:
  - a. Click the **Information Packet Number** field, and make sure that the part number 78-5235-03C0 is highlighted.
  - b. Select the language in which you would like to read the document.
  - c. Click **Go**.

The Cisco Limited Warranty and Software License page from the Information Packet appears.

- d. Read the document online, or click the **PDF** icon to download and print the document in Adobe Portable Document Format (PDF).



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**Note**

You must have Adobe Acrobat Reader to view and print PDF files. You can download the reader from Adobe's website: <http://www.adobe.com>

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3. To read translated and localized warranty information about your product, follow these steps:
  - a. Enter this part number in the Warranty Document Number field:  
78-10747-01C0
  - b. Select the language in which you would like to view the document.
  - c. Click **Go**.

The Cisco warranty page appears.

- d. Read the document online, or click the **PDF** icon to download and print the document in Adobe Portable Document Format (PDF).



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**Note**

You must have Adobe Acrobat Reader to view and print PDF files. You can download the reader from Adobe's website: <http://www.adobe.com>

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You can also contact the Cisco service and support website for assistance:

<http://www.cisco.com/en/US/support/index.html>

## Duration of Hardware Warranty

One (1) Year

## Replacement, Repair, or Refund Policy for Hardware

Cisco or its service center will use commercially reasonable efforts to ship a replacement part within ten (10) working days after receipt of a Return Materials Authorization (RMA) request. Actual delivery times can vary, depending on the customer location.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

## To Receive a Return Materials Authorization (RMA) Number

Contact the company from whom you purchased the product. If you purchased the product directly from Cisco, contact your Cisco Sales and Service Representative.

Complete the information below, and keep it for reference.

Company product purchased from	
Company telephone number	
Product model number	
Product serial number	
Maintenance contract number	

## 2 Overview

This section provides overview and detailed information about the Cisco Unified Communications 500 Series for Small Business (Cisco Unified 500 Series).

The Cisco Unified 500 Series product family is an all-in-one, simple, smart, and affordable unified communications solution designed specifically for growing businesses with 8 to 50 employees. Each configuration of Cisco Unified 500 Series is tied to a maximum number of supported users and includes relevant licenses for call control, voice messaging, and Cisco Unified IP Phones.

The Cisco Unified 500 Series family consists of the following two platforms:

- 8- and 16-user platform
- 24-, 32- and 48-user platform

The 8- and 16-user platform includes 8 switched Power-over-Ethernet (PoE) ports, 4 foreign exchange stations (FXS) ports, 4 foreign exchange office (FXO) or 2 ISDN BRI ports for international deployments, voice messaging, automated attendant, a music-on-hold (MoH) audio port, a WAN Ethernet uplink port, an Ethernet expansion port, and a console/aux port.

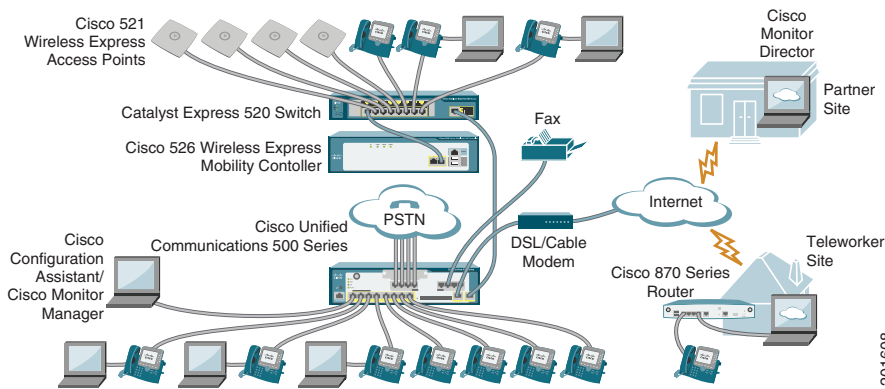
The 24- and 32-user platform includes 8 switched Power-over-Ethernet (PoE) ports, 4 foreign exchange stations (FXS) ports, 8 foreign exchange office (FXO) or 4 ISDN BRI ports.

The 48-user platform includes 8 switched Power-over-Ethernet (PoE) ports, 4 foreign exchange stations (FXS) ports, 12 foreign exchange office (FXO) or 6 ISDN BRI ports. Alternatively, the 48-user platform could include 8 switched Power-over-Ethernet (PoE) ports, 4 foreign exchange stations (FXS) ports, 4 foreign exchange office (FXO) or 2 ISDN BRI ports and one T1/E1 voice controller.

To physically expand the base configuration of 8 PoE ports to a larger number of user densities, the solution supports a Cisco Unified Communications companion switch. The specialized companion switch is part of the Cisco Catalyst Express family and supports simplified and immediately operational deployments.

Figure 1 shows the typical deployment of a Cisco Unified 500 Series in a Cisco Smart Business Communications System. The Cisco Smart Business Communications System is a unified communications solution for small businesses that provides voice, data, video, security, and wireless capabilities while integrating with existing desktop applications like calendar, e-mail, and Customer Relationship Management (CRM).

**Figure 1 Cisco Unified 500 Series: Typical Deployment**



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## Hardware Configuration

Table 1 summarizes the maximum configurations possible, based on built-in ports and other hardware features of the Cisco Unified 500 Series, and organized by model.

**Table 1 Maximum Possible Configurations**


<b>Cisco Unified 500 Series Model</b>	<b>Primary PSTN Enabled via Software Configuration</b>		
	<b>Using FXO</b>	<b>Using SIP Trunk</b>	<b>Using DID</b>
UC520-8U-4FXO-K9 UC520W-8U-4FXO-K9 or UC520-8U-2BRI-K9 UC520W-8U-2BRI-K9	4 FXS, 8 PoE, and 4 FXO or 2 BRI	SIP trunk, 4 FXS, 8 PoE, and 4 FXO or 2 BRI	4 FXS/DID, 4 FXS, 8 PoE, and 4 FXO or 2 BRI
UC520-16U-4FXO-K9 UC520W-16U-4FXO-K9 or UC520-16U-2BRI-K9 UC520W-16U-2BRI-K9	4 FXS, 8 PoE, and 4 FXO or 2 BRI	SIP trunk, 4 FXS, 8 PoE, and 4 FXO or 2 BRI	4 FXS/DID, 4 FXS, 8 PoE, and 4 FXO or 2 BRI
UC520-24U-8FXO-K9 UC520-24U-4BRI-K9	4 FXS, 8 PoE, and 8 FXO or 4 BRI	SIP trunk, 4 FXS, 8 PoE, and 8 FXO or 4 BRI	4 FXS/DID, 8 PoE, and 8 FXO or 4 BRI
UC520-32U-8FXO-K9 UC520W-32U-4BRI-K9	4 FXS, 8 PoE, and 8 FXO or 4 BRI	SIP trunk, 4 FXS, 8 PoE, and 8 FXO or 4 BRI	4 FXS/DID, 8 PoE, and 8 FXO or 4 BRI
UC520-48U-12FXO-K9 UC520-48U-6BRI-K9	4 FXS, 8 PoE, and 12 FXO or 6 BRI	SIP trunk, 4 FXS, 8 PoE, and 12 FXO or 6 BRI	4 FXS/DID, 8 PoE, and 12 FXO or 6 BRI

Table 2 lists the labels and descriptions for the WAN, LAN, and other interfaces, along with the values for these interfaces in the preconfigured software configuration on the Cisco Unified 500 Series.



**Note** In [Table 2](#), all slot or ports are numbered from right to left, unless otherwise noted.

**Table 2** *Cisco Unified 500 Series: Interfaces*

<b>Description</b>	<b>Label</b>	<b>Value in Software Configuration</b>
Console/Aux port	CONSOLE	—
Fast Ethernet 10/100 expansion port	EXPANSION	FastEthernet0/1/8
Fast Ethernet 10/100 WAN port	WAN	FastEthernet0/0
Fast Ethernet 10/100 Power over Ethernet (PoE) ports	Power Over Ethernet, and PWR 0 LNK to PWR 7 LNK	FastEthernet0/1/0 to 0/1/7
FXS (Foreign Exchange Station) ports	FXS, and 0–3	port 0/0/0 to 0/0/3
FXO (Foreign Exchange Office) ports	FXO, and 0–3	port 0/1/0 to 0/1/3
ISDN BRI ports	B0 - B1	Numbered top to bottom, port 0/1/0 to 0/1/1
VLAN number for data network	—	Vlan1
VLAN number for voice network	—	Vlan100
Music-on-Hold (MoH) port		voice-port 0/4/0
Compact Flash slot	COMPACT FLASH	flash
(Factory Option) VIC:BRI*	VIC2-2BRI-NT/TE and 0 -1	port 0/2/0 to 0/2/1
(Factory Option) VIC: FXO*	VIC2-2FXO and 0-1 VIC2-4FXO and 0-3	port 0/2/0 to 0/2/1 or port 0/2/0 to 0/2/3
(Factory Option) VIC: FXS*	VIC3-2FXS/DID and 0-1 VIC-4FXS/DID and 0-3 VIC3-4FXS/DID and 0-3	port 0/2/0 to 0/2/1 or port 0/2/0 to 0/2/3
T1/E1	VWIC2-1MFT-T1/E1	port 0/3

\* Only one optional VIC can be factory-installed in a Cisco Unified 500 Series.

Table 3 lists the labels and descriptions for the interfaces on a Cisco Catalyst Express 520, along with the values for these interfaces in the software configuration on the Cisco Unified 500 Series:

**Table 3 Cisco Catalyst Express 520 Switch: Interfaces**

Description	Label	Value in Software Configuration
Ethernet 10/100/1000 dual purpose port	1000BASE-X	GigabitEthernet1
Small form-factor pluggable (SFP) module slot for uplink or server connectivity.	1000BASE-FX	
Fast Ethernet 10/100 Power over Ethernet (PoE) ports	Left-to-right, 10BASE-T / 100BASE-TX and 1X-8X or 1X-24X	Left-to-right, FastEthernet1 to 8 FastEthernet1 to 24

Table 4 lists the default values for IP addresses in the preconfigured software configuration for a Cisco Unified 500 Series system

**Table 4 IP Addresses and Subnet Mask**

Description	IP Address in Software Configuration
Cisco Unified Communications Manager Express (Cisco Unified CME)	10.1.1.1 255.255.255.0
All IP phones to be connected	10.1.1.11 to 10.1.1.254 255.255.255.0
All data devices to be connected	192.168.10.11 to 192.168.10.254 255.255.255.0
Network on expansion port of Cisco Unified 500 Series	192.168.10.1 255.255.255.0

## Software Components

The Cisco Unified 500 Series is shipped with a factory-installed software configuration for a basic IP telephony system. This system enables phone users to make and receive calls using the preconfigured numbers on their IP phones within minutes after connecting the Cisco Unified 500 Series to the Ethernet and their IP phones to the platform. For informations, see the [“Default Software Configuration”](#) section on page 43.


Table 5 summarizes the software components of the Cisco Unified 500 Series.

**Table 5** *Cisco Unified 500 Series Software Components*

<b>Software Component</b>	<b>Description</b>	<b>Benefits</b>
Cisco Unified Communications Manager Express (Cisco Unified CME)	Entry-level call processing system that provides a wide range of IP telephony features for small to medium-sized business customers and autonomous small enterprise branch offices.	All files and configurations for IP phones are stored internally on the Cisco Unified 500 Series for a cost-effective, highly reliable, IP communications solution.
Cisco Unity Express	Provides voice mail and automated attendant services specifically designed for the small and medium-sized branch office environment.	Users can easily and conveniently manage their voice messages and greetings with intuitive telephone prompts and a straightforward web-based GUI that allows simple administration
Security	Protects against information theft, virus outbreaks, and application abuse, whether from known or unknown threats, internal or external sources.	Integrated for a robust array of security features.
Cisco IOS Firewall	Protects customer networks against network and application layer attacks, viruses, worms, and at the same time providing effective control on various application traffic flowing through the network.	Help businesses guarantee network uptime and security.



**Table 5 Cisco Unified 500 Series Software Components (continued)**

Software Component	Description	Benefits
Cisco Secure VPN	Carries private data over a public network and extends remote access to users over a shared infrastructure.	Most cost-effective method to provide increased VPN throughput with minimal effect on processing.
 <p><b>Note</b> Before you can use the Configuration Assistant, the application must be installed on a PC or laptop to be connected to the Cisco Unified 500 Series.</p>	GUI application for managing most systemwide and phone-based features allows you to easily customize the software configuration before or while deploying a PBX or keysystem telephony system at a customer site.	No specialized training or Cisco IOS software command-line experience required to create or customize software configuration on a Cisco Unified 500 Series.

# License Support

Table 6 lists the maximum number of phones and devices supported in Cisco Unified CME, based on licensing and organized by model.

**Table 6 Cisco Unified CME License Support**

<b>Cisco Unified 500 Series Model</b>	<b>Cisco Unified CME Licenses</b>	<b>Maximum Devices (Wired and Wireless)</b>
UC520-8U-4FXO-K9 UC520W-8U-4FXO-K9 UC520-8U-2BRI-K9 UC520W-8U-2BRI-K9	8 + 2 for teleworkers	10 IP phones 4 analog <sup>1</sup>
UC520-16U-4FXO-K9 UC520W-16U-4FXO-K9 UC520-16U-2BRI-K9 UC520W-16U-2BRI-K9	16 + 2 for teleworkers	18 IP phones 4 analog <sup>1</sup>
UC520-24U-8FXO-K9 UC520-24U-4BRI-K9	24+4 for teleworkers	28 IP phones
UC520-32U-8FXO-K9 UC520-32U-4BRI-K9	32+4 for teleworkers	36 IP phones 4 analog <sup>1</sup>
UC520-48U-12FXO-K9 UC520-48U-6BRI-K9 UC520-48U-T/E/F-K9 UC520-48U-T/E/B-K9	48+4 for teleworkers	52 IP phones 4 analog <sup>1</sup>

<sup>1</sup> Number of analog station ports is increased to eight with factory-installed optional VIC.

Table 7 lists the maximum numbers of mailboxes supported on the Cisco Unified 500 Series, based on licensing and organized by model.

**Table 7 Cisco Unity Express License Support**

Cisco Unified 500 Series Model	Mailboxes	General Delivery Mailboxes (GDMs)
UC520-8U-4FXO-K9 UC520W-8U-4FXO-K9 UC520-8U-2BRI-K9 UC520W-8U-2BRI-K9	12 + 2 for teleworkers	5 GDM
UC520-16U-4FXO-K9 UC520W-16U-4FXO-K9 UC520-16U-2BRI-K9 UC520W-16U-2BRI-K9	20 + 2 for teleworkers	5 GDM
UC520-24U-8FXO-K9 UC520-24U-4BRI-K9	24+4 for teleworkers	10 GDM
UC520-32U-8FXO-K9 UC520-32U-4BRI-K9	32+4 for teleworkers	10 GDM
UC520-48U-12FXO-K9 UC520-48U-6BRI-K9 UC520-48U-T/E/F-K9 UC520-48U-T/E/B-K9	48+4 for teleworkers	15 GDM

### 3 Equipment

This section contains information about the Cisco Unified 500 Series hardware, including the following topics:

- [Items in Box, page 11](#)
- [Items Not Included, page 12](#)
- [Front Panel View, page 13](#)
- [Cisco Product Identification Tool, page 15](#)

#### Items in Box

The following items ship with the Cisco Unified 500 Series:

- Accessory kit containing:
  - Rubber feet for desktop installation
  - RJ-45 to RJ-45 Ethernet cable
  - Light blue RJ-45-to-DB9 console cable
  - Wall-mount bracket for power supply (included with 8- and 16-user models only)
  - Rack-mount brackets for chassis (included with 32- and 48-user models only)
  - *Getting Started Guide for Cisco Unified Communications 500 Series for Small Business* (this guide)
  - *Cisco Smart Business Communications System Setup*
  - *Customer License Letter*
  - *Regulatory Compliance and Safety Information Roadmap*
  - *Cisco Smart Business Communications System Software and Documentation* CD-ROM

A separate rack-mount kit (Part Number: 53-2993-01) can be ordered for the 8- and 16-user models. The kit includes the following:

- Power supply bracket
- Rack-mount brackets for chassis
- Assembly hardware (screws)
- *Installing Components for Cisco Unified Communications 500 Series for Small Business*

## Items Not Included

Individual items in this list may be required:

- Cisco Unified IP phones



### Note

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For a list of supported Cisco Unified IP phones, see the appropriate Cisco Unified 500 Series Matrix at [http://www.cisco.com/en/US/products/ps7293/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps7293/prod_installation_guides_list.html).

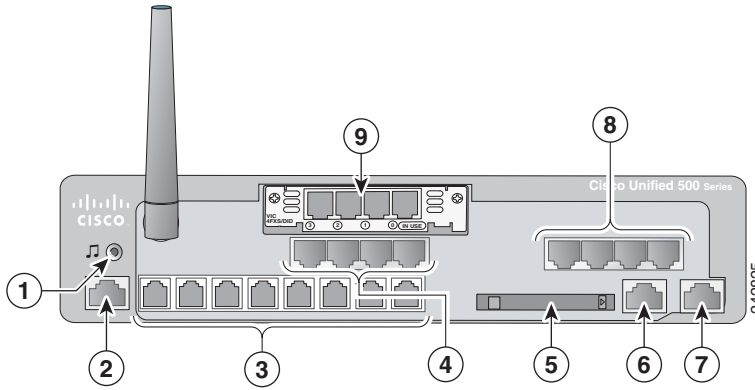
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- Cables for connecting phones
- Cable for connecting external audio device to the 3.5 mm MoH port
- Cables for WAN interfaces, voice interfaces, or additional LAN interfaces
- PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools

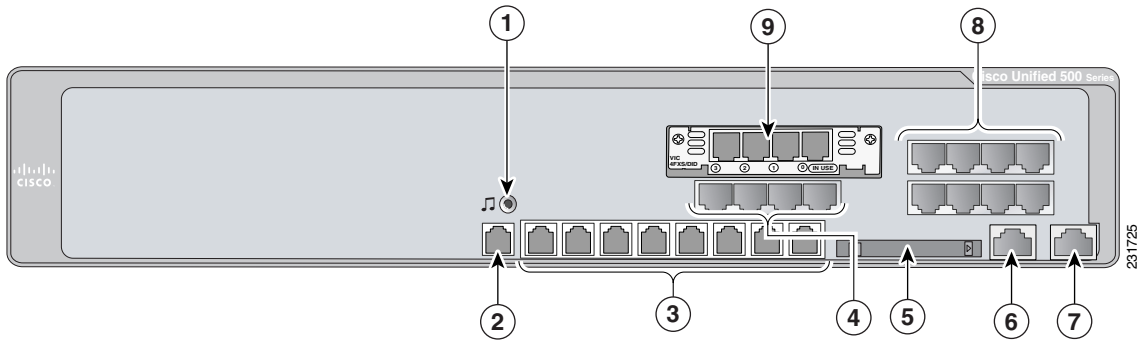
# Front Panel View

See [Figure 2](#) and [Figure 4](#) for views of the front panels of Cisco Unified 500 Series 8- and 16-user models and [Figure 3](#) and [Figure 5](#) for the 24-, 32- and 48-user models.

**Figure 2 Cisco Unified 500 Series with FXO Ports (8- and 16-user model)**



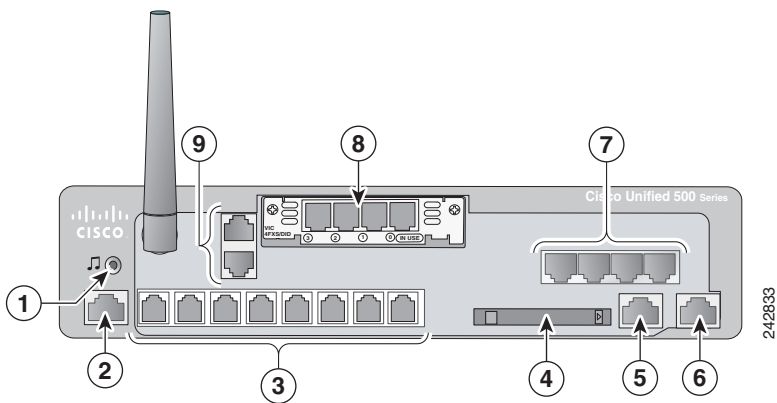
**Figure 3 Cisco Unified 500 Series with FXO Ports (24-, 32-, and 48-user model)**



<b>1</b>	Music-on-hold (MoH) port	<b>6</b>	WAN port
<b>2</b>	Console/Aux port	<b>7</b>	Expansion port

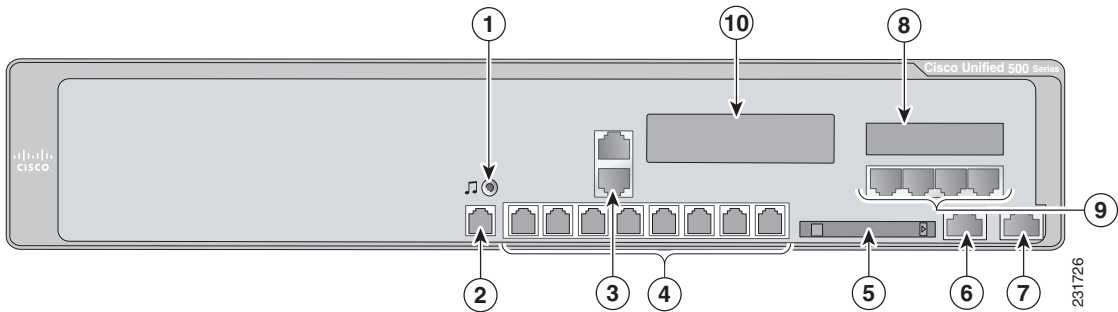
<b>3</b>	Power over Ethernet (PoE) ports	<b>8</b>	FXS ports
<b>4</b>	FXO ports	<b>9</b>	(Optional) Factory-installed VIC or T1/E1 VWIC
<b>5</b>	Compact Flash slot		

**Figure 4 Cisco Unified 500 Series with BRI Ports (8- and 16-user model)**



<b>1</b>	Music-on-hold (MoH) port	<b>6</b>	Expansion port
<b>2</b>	Console/Aux port	<b>7</b>	FXS ports
<b>3</b>	Power over Ethernet (PoE) ports	<b>8</b>	(Optional) One factory-installed VIC or T1/E1 VWIC
<b>4</b>	Compact flash slot	<b>9</b>	BRI ports
<b>5</b>	WAN port		

**Figure 5 Cisco Unified 500 Series with BRI Ports (24-, 32-, and 48-user model)**



<b>1</b>	Music-on-hold (MoH) port	<b>6</b>	WAN port
<b>2</b>	Console/Aux port	<b>7</b>	Expansion port
<b>3</b>	BRI ports	<b>8</b>	Fixed configuration slot for BRI or FXO (depending on your configuration)
<b>4</b>	Power over Ethernet (PoE) ports	<b>9</b>	FXS ports
<b>5</b>	Compact flash slot	<b>10</b>	Expansion or fixed configuration slot (depending on your configuration)

## Cisco Product Identification Tool

The Cisco Product Identification tool provides detailed illustrations and descriptions showing where to find serial number labels on Cisco products. It includes the following features:

- A search option that allows browsing for models using a tree-structured product hierarchy
- A search field on the final results page making it easier to look up multiple products
- Clear identification of end-of-sale products in results lists

The tool streamlines the process of locating serial number labels and identifying products. Serial number information expedites the entitlement process and is important for access to support services.

Access the Cisco Product Identification tool at <http://tools.cisco.com/Support/CPI/index.do>.

## 4 Install Cisco Unified 500 Series Chassis and Power Supply

This section contains basic installation information including the following:

- [Safety Information, page 16](#)
- [Warning Definitions, page 17](#)
- [Installation Guidelines, page 20](#)
- [Desktop Installation, page 20](#)
- [Wall-Mounting the Cisco Unified 500 Series \(8- and 16-user models only\), page 21](#)
- [Rack-Mount the Cisco Unified 500 Series, page 23](#)

### Safety Information

The *Regulatory Compliance and Safety Information* document for Cisco Unified 500 Series contains translations of the warnings that appear in this guide.

For safety information you must know before working on a Cisco Unified 500 Series, see the *Regulatory Compliance and Safety Information* document at [Cisco.com](http://Cisco.com).



# Warning Definitions



**Warning**

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## **IMPORTANT SAFETY INSTRUCTIONS**

**This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning statement to locate its translation in the translated safety warnings that accompanied this device.**

**Note: Save these instructions.**

**Note: This documentation is to be used in conjunction with the specific product installation guide that shipped with the product. Please refer to the Installation Guide, Configuration Guide, or other enclosed additional documentation for further details.** Statement 1071

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**Warning**

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**High leakage current – permanent earth connection essential before making Telecommunication Network Connection.** Statement 343



**Warning**

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**Do not work on the system or connect or disconnect cables during periods of lightning activity.** Statement 1001



**Warning**

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**Read the installation instructions before connecting the system to the power source.** Statement 1004



**Warning**

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**The plug-socket combination must be accessible at all times, because it serves as the main disconnecting device.** Statement 1019



**Warning**

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**To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-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.** Statement 1021



**Warning**

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**Hazardous network voltages are present in WAN ports regardless of whether power to the unit is OFF or ON. To avoid electric shock, use caution when working near WAN ports. When detaching cables, detach the end away from the unit first.** Statement 1026



**Warning**

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**Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and back covers are in place.** Statement 1029



**Warning**

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**Only trained and qualified personnel should be allowed to install, replace, or service this equipment.** Statement 1030



**Warning**

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**Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.** Statement 1037



**Warning**

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**Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.** Statement 1038



**Warning**

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**Ultimate disposal of this product should be handled according to all national laws and regulations.** Statement 1040



**Warning**

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**This equipment must be installed and maintained by service personnel as defined by AS/NZS 3260. Incorrectly connecting this equipment to a general-purpose outlet could be hazardous. The telecommunications lines must be disconnected 1) before unplugging the main power connector or 2) while the housing is open, or both.** Statement 1043



**Warning**

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**To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 40 deg.** Statement 1047



**Warning**

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**Voltages that present a shock hazard may exist on Power over Ethernet (PoE) circuits if interconnections are made using uninsulated exposed metal contacts, conductors, or terminals. Avoid using such interconnection methods, unless the exposed metal parts are located within a restricted access location and users and service people who are authorized within the restricted access location are made aware of the hazard. A restricted access area can be accessed only through the use of a special tool, lock and key or other means of security.** Statement 1072



**Warning**

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**No user-serviceable parts inside. Do not open.** Statement 1073

The following statement is applicable only in Scandinavian countries.



**Warning**

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**This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security.** Statement 1017

## Installation Guidelines

Before you install a Cisco Unified 500 Series, review the *Regulatory Compliance and Safety Information for Cisco Unified Communications 500 Series for Small Business* document on Cisco.com.

This platform is a self-contained unit. Do not remove or install any modules or interface cards unless otherwise directed.

When selecting an installation site, observe these guidelines:

- Cabling is away from sources of electrical noise, such as radios, power lines, and fluorescent lighting fixtures.
- Clearance to the front and back panels is such that:
  - Airflow around the platform and through the vents is unrestricted.
  - Front-panel LEDs can be easily read.
  - Access to ports is sufficient for unrestricted cabling.
- Temperature does not exceed 104°F (40°C), humidity does not exceed 85 percent, and altitude at the installation site is not greater than 10,000 feet (3049 meters).

## Desktop Installation

When installing a Cisco Unified 500 Series and power supply on a desktop, observe the following precautions:



**Caution**

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The Cisco Unified 500 Series installation must allow unrestricted airflow for cooling. For placing the platform on a desktop, keep at least 1 in. (2.54 cm) of clear space beside the cooling inlet and exhaust vents.

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**Caution**

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Do not place any items that weigh more than 10 lb (4.5 kg) on top of the chassis and do not stack.

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To install a chassis on a desktop, table, or other flat surface, place the unit upside-down on a flat surface. Attach the four rubber pads to the recessed areas on the bottom of the unit. Place the unit on a desktop.

## Wall-Mounting the Cisco Unified 500 Series (8- and 16-user models only)

You can mount the Cisco Unified 500 Series and power supply for the Cisco Unified 500 Series to a wall or other vertical surface.

**Warning**

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**This unit is intended to be mounted on a wall. Please read the wall mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation to people and damage to the system. Statement 248**

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## Attaching the Chassis and Power Supply to the Wall

The Cisco Unified 500 Series has two keyholes on the bottom of the chassis for mounting the unit on a wall or other vertical surface. The power supply is mounted to the wall using the wall-mount bracket. To mount the chassis and power supply on a wall, perform the following steps.

**Tip**

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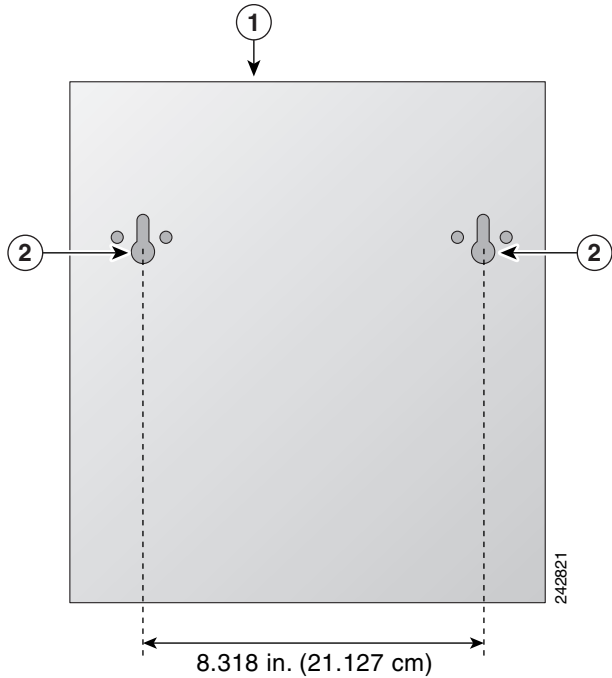
When choosing a location for wall-mounting the router, consider cable limitations and wall structure.

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**Step 1** [Figure 6](#) shows the bottom of the Cisco Unified 500 Series and the locations of the wall-mount holes.

**Figure 6** Wall-Mount Holes on Bottom of Cisco Unified 500 Series

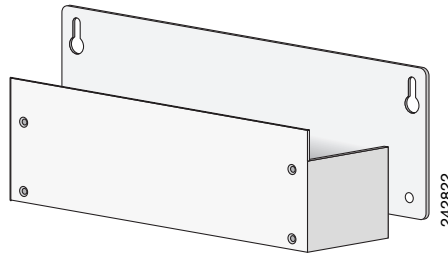


<b>1</b>	Front panel	<b>2</b>	Mounting-screw holes
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- Step 2** Align the mounting-screw holes with a wall stud, or use wall anchors.
- a. For attaching to a wall stud, use two #10 wood screws (round- or pan-head) with #10 washers, or two #10 washer-head screws. The screws must be long enough to penetrate at least 3/4 inch (20 mm) into supporting wood or into a metal wall stud.
  - b. For hollow-wall mounting, wall must be at least 1/2 inch (12.7 mm) thick. Use two wall anchors with washers. Wall anchors and washers must be a size suitable for the wall to which they are mounted.
- Step 3** Position the chassis on the wall.
- a. Orient the front and back of the chassis vertically.
  - b. The unit must be oriented with the front panel (TNV connection side) facing up and the connection to the power cord facing down.

**Step 4** Figure 7 shows the wall-mount bracket for the power supply and the mounting-screw holes on the back of the bracket. Align the mounting-screw holes with a wall stud, or use wall anchors.

**Figure 7** Wall-Mount Bracket for Power Supply



- a. For attaching to a wall stud, use two #10 wood screws (round- or pan-head) with #10 washers, or two #10 washer-head screws. The screws must be long enough to penetrate at least 3/4 inch (20 mm) into supporting wood or into a metal wall stud.
- b. For hollow-wall mounting, wall must be at least 1/2 inch (12.7 mm) thick. Use two wall anchors with washers. Wall anchors and washers must be a size suitable for the wall to which they are mounted.

- Step 5** Position the power supply in the bracket.
- a. Orient the front and back of the power supply vertically.
  - b. Position the end nearest the power cable at the top.

---

## Rack-Mount the Cisco Unified 500 Series



**Note** The Cisco Unified 500 Series and power supply can be installed in 19-inch racks only, and can only be front mounted.

---

### Attach Brackets for Rack-Mounting

To attach the brackets to the Cisco Unified 500 Series, perform the following steps.

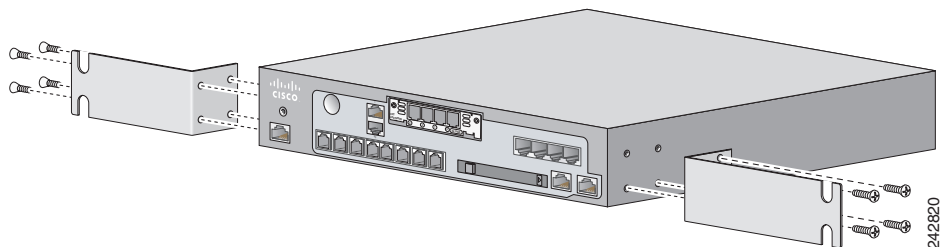


**Caution** Do not overtorque the screws. The recommended torque is 6 to 8 in-lb (0.7 to 0.9 N-m).

---

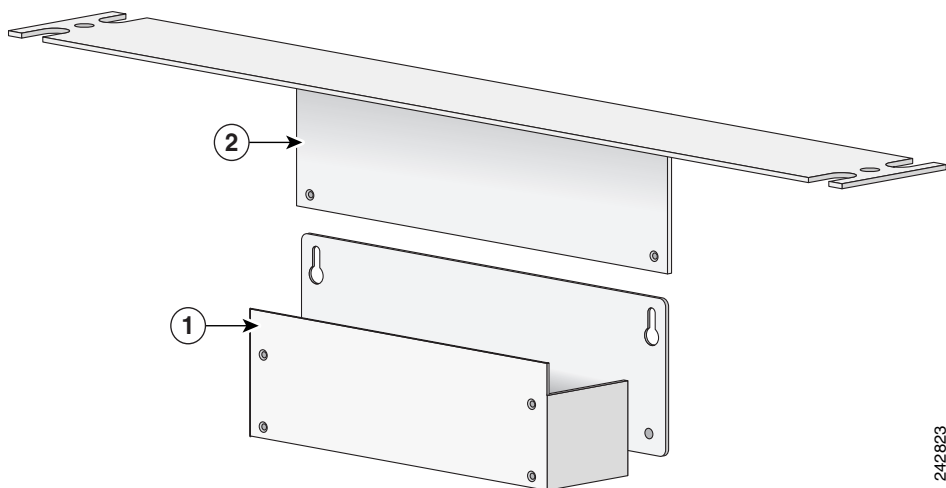
**Step 1** Attach the mounting brackets to the sides of the Cisco Unified 500 Series chassis as shown in [Figure 8](#), using the screws provided. Use four screws on each side. Use a number 2 Phillips screwdriver to install the bracket screws.

**Figure 8** *Attaching Rack-Mount Brackets to Cisco Unified 500 Series*



**Step 2** [Figure 9](#) shows the brackets in the rack-mount kit for the power supply. (This step applies to the 8- and 16-user models only.)

**Figure 9** *Brackets for Rack-Mounting Power Supply*

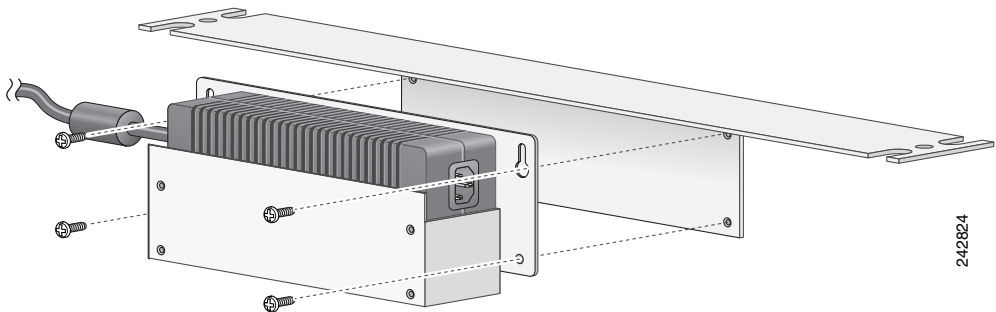


<b>1</b>	Wall-mount bracket	<b>2</b>	Rack-mount bracket
----------	--------------------	----------	--------------------



- Step 3** Position the power supply in the wall-mount bracket. (This step applies only to the 8- and 16-user models.)
- Orient the front and back of the power supply vertically.
  - Position the end nearest the power cable at the top.
- Step 4** Assemble the brackets for rack-mounting the power supply as shown in [Figure 10](#), using the four screws provided. Use a number 2 Phillips screwdriver to install the bracket screws.

**Figure 10** *Assembling Rack-Mount Kit for the Power Supply*



## Installing the Cisco Unified 500 Series and Power Supply in a Rack

To mount the chassis and power supply in a 19-inch rack, perform the following steps.



### Warning

**To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:**

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006



### Caution

Chassis installation must allow unrestricted airflow for chassis cooling.

**Note**

---

Be sure to leave space above and below each unit in a rack to allow for cooling air circulation.

---

**Tip**

---

If you are deploying a single integrated wireless access point, connect the antenna to the front panel before you mount the Cisco Unified 500 Series on a wall. It is difficult to attach an antenna after the platform is mounted to a wall.

---

---

**Step 1** Use two screws for each side (supplied with the rack) to attach Cisco Unified 500 Series with rack-mount brackets, then power supply with rack-mount bracket to a 19” rack.

**Step 2** Start the lower pair of screws first, resting the brackets on the lower screws while you insert the upper pair of screws.

---

**Tip**

---

The screw slots in the brackets are spaced to line up with every second pair of screw holes in the rack. When the correct screw holes are used, the small threaded holes in the brackets line up with unused screw holes in the rack. If the small holes do not line up with the rack holes, you must raise or lower the brackets to the next rack hole.

---

## 5 Ground the Chassis

**Warning**

---

**This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024**

---

You must connect the chassis to a reliable earth ground; the ground wire must be installed in accordance with local electrical safety standards.

- For NEC-compliant grounding, use size 14 AWG (2 mm) or larger copper wire and an appropriate user-supplied ring terminal with an inner diameter of 1/4 inch (5 to 7 mm).

**Note**

---

The Cisco Unified 500 Series is not NEBS-compliant.

---



**Warning**

**This equipment needs to be grounded. Use a green and yellow 14 AWG ground wire to connect the host to earth ground during normal use. Statement 190**

To connect the chassis to a reliable earth ground, perform the following steps.

- Step 1** Strip one end of the ground wire to the length required for the ground lug or terminal.
- For the ground lug, approximately 0.75 in. (20 mm)
  - For user-provided ring terminal, as required
- Step 2** Crimp the ground wire to the ground lug or ring terminal, using a crimp tool of the appropriate size.
- Step 3** Attach the ground lug or ring terminal to the chassis as shown in [Figure 11](#) and [Figure 12](#). Tighten the screws to a torque of 8-10 in-lb (0.9-1.1 N-m).

**Figure 11 Attaching the Ground to Chassis (8- and 16-User Model)**

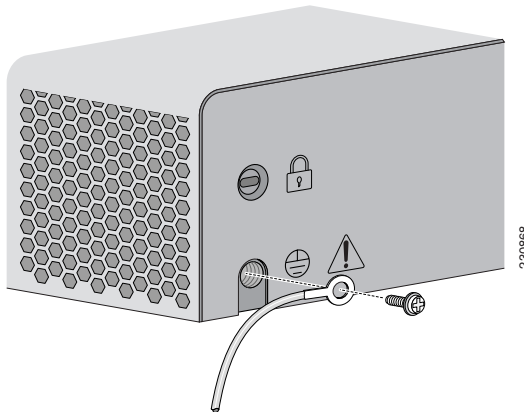
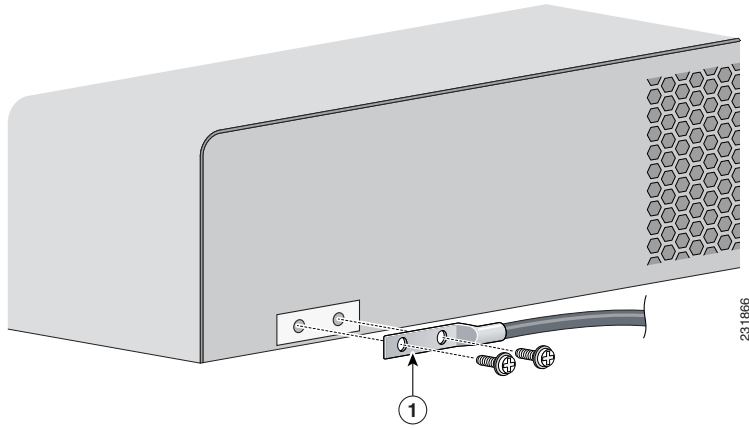


Figure 12 Attaching the Ground to Chassis (24-, 32-, and 48-User Model)



---

1 Grounding lug

---

**Step 4** Connect the other end of the ground wire to a known reliable earth ground point. If there is any doubt as to the reliability of the ground point, contact a licensed electrician for assistance.

---

## 6 Connect Power

  
**Warning**

---

**Only trained and qualified personnel should be allowed to install, replace, or service this equipment.** Statement 1030

---

  
**Warning**

---

**The ISDN connection is regarded as a source of voltage that should be inaccessible to user contact. Do not attempt to tamper with or open any public telephone operator (PTO)-provided equipment or connection hardware. Any hardwired connection (other than by a nonremovable, connect-one-time-only plug) must be made only by PTO staff or suitably trained engineers.** Statement 23

---

**Warning**

---

**Do not work on the system or connect or disconnect cables during periods of lightning activity.** Statement 1001

---

To connect the power supply to the Cisco Unified 500 Series, perform the following steps:

- 
- Step 1** Connect the AC power cord to the the power supply.
  - Step 2** Connect the power interface cable to the power connector port on the back of the Cisco Unified 500 Series.
- 

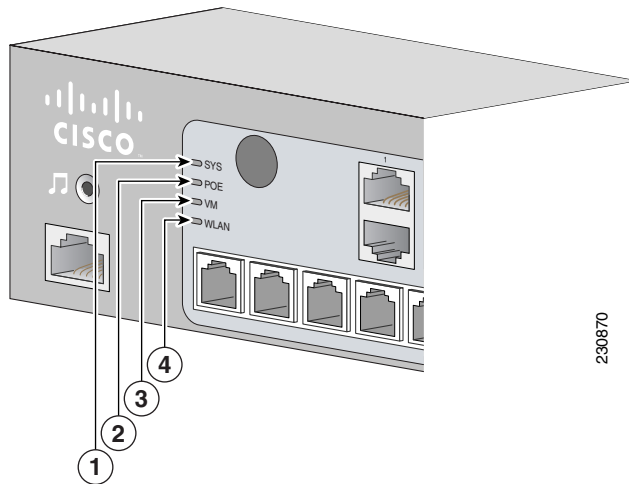
## 7 Power Up the System

To power up the Cisco Unified 500 Series, perform the following steps:

- 
- Step 1** Verify that the AC power cord is connected to the power supply.
  - Step 2** There is no external Power On/Off switch on the power supply. To power up the power supply and the Cisco Unified 500 Series, connect the power cord plug to a grounded AC outlet.

**Step 3** Verify the LED indicators on the front panel of the Cisco Unified 500 Series, as required. See [Figure 13](#).

**Figure 13** Cisco Unified 500 Series: LEDs



230870

1	SYS	Solid green	Online
2	POE	Solid green	Connected
3	VM	Solid green	Online
4	WLAN	Blinking green	Connected

## 8 Create Initial Software Configuration

To use the Cisco Configuration Assistant to create and save the initial software configuration, perform the following steps:

**Step 1** If necessary, install the Cisco Configuration Assistant on a PC to be used to manage the configuration of the Cisco Unified 500 Series system. For information, see the *Getting Started with Cisco Configuration Assistant* document at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the Cisco Unified 500 Series.

- Step 2** Launch the Cisco Configuration Assistant. For information, see the *Getting Started with Cisco Configuration Assistant* document at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the Cisco Unified 500 Series
- Step 3** Using an RJ-45-to-RJ-45 Ethernet cable, connect the Ethernet port of the PC on which the Cisco Configuration Assistant is installed to a PoE port on the front panel of the Cisco Unified 500 Series.
- Step 4** Use the Cisco Configuration Assistant to perform the following tasks. For information, see online help.
- Connect to a New Community.
  - Accept the default values to create the initial configuration.



---

**Note** If you are installing a single-site key system configuration, change the Voice System Type setting from PBX to Key System Configuration.

---

- Save the configuration.

- Step 5** Confirm that the Cisco Unified 500 Series appears in the Topology View.
- 

## What to Do Next

The following tasks can be performed in any order:

- To install a Cisco Catalyst Express 520 switch, see the “[Install a Cisco Catalyst Express 520 for a Cisco Unified 500 Series](#)” section on page 32.
- To connect the Cisco Unified 500 Series to a WAN, PSTN, or ISDN or to connect devices such as wireless access options, phones, and PCs, see the “[Connect Interfaces and Devices](#)” section on page 39.
- To add and configure locales and languages other than US English on the Cisco Unified 500 Series and for voice mail prompts, see the “[Configure Localization Support](#)” section on page 46.
- To modify the software configuration to personalize the Cisco Unified 500 Series with site-specific values for basic and advanced telephony features, see the “[Modify the Software Configuration](#)” section on page 42

## 9 Install a Cisco Catalyst Express 520 for a Cisco Unified 500 Series

Before you install the switch, review the information in the *Release Notes for the Catalyst Express 520 Switches* on Cisco.com.

Before you power on or install the switch, review the safety information in the “[Warning Definitions](#)” section on page 32 and the “[Installation Guidelines](#)” section on page 36.

The warnings in this chapter are translated into different languages in the *Regulatory Compliance and Safety Information for the Catalyst Express 520 Switches* document on Cisco.com.

This section contains basic installation information including the following:

- [Warning Definitions](#), page 32
- [Installation Guidelines](#), page 36
- [Desktop Installation](#), page 37
- [Connect Switch to a Cisco Unified 500 Series](#), page 38
- [Add Switch to Community](#), page 38

### Warning Definitions

These warnings are translated into different languages in the *Regulatory Compliance and Safety Information for the Catalyst Express 520 Switches* document that ships with the switch. Review these warnings before you power on or install the switch.





**Warning**

---

### **IMPORTANT SAFETY INSTRUCTIONS**

**This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning statement to locate its translation in the translated safety warnings that accompanied this device.**

**Note: Save these instructions.**

**Note: This documentation is to be used in conjunction with the specific product installation guide that shipped with the product. Please refer to the Installation Guide, Configuration Guide, or other enclosed additional documentation for further details.** Statement 1071

---



**Warning**

---

**This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.** Statement 39



**Warning**

---

**To prevent the switch from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 113°F (45°C). To prevent airflow restriction, allow at least 3 inches (7.6 cm) of clearance around the ventilation openings.** Statement 17B



**Warning**

---

**Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.** Statement 43



**Warning**

---

**Do not stack the chassis on any other equipment. If the chassis falls, it can cause severe bodily injury and equipment damage.** Statement 48



**Warning**

---

**Ethernet cables must be shielded when used in a central office environment.**  
Statement 171



**Warning**

---

**Do not work on the system or connect or disconnect cables during periods of lightning activity.** Statement 1001



**Warning**

---

**Read the installation instructions before connecting the system to the power source.** Statement 1004



**Warning**

---

**Class 1 laser product.** Statement 1008



**Warning**

---

**The plug-socket combination must be accessible at all times, because it serves as the main disconnecting device.** Statement 1019



**Warning**

---

**This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.** Statement 1024



**Warning**

---

**Only trained and qualified personnel should be allowed to install, replace, or service this equipment.** Statement 1030



**Warning**

---

**Ultimate disposal of this product should be handled according to all national laws and regulations.** Statement 1040



---

**Warning**

**For connections outside the building where the equipment is installed, the following ports must be connected through an approved network termination unit with integral circuit protection: 10/100/1000 Ethernet.** Statement 1044



---

**Warning**

**When installing or replacing the unit, the ground connection must always be made first and disconnected last.** Statement 1046



---

**Warning**

**Voltages that present a shock hazard may exist on Power over Ethernet (PoE) circuits if interconnections are made using uninsulated exposed metal contacts, conductors, or terminals. Avoid using such interconnection methods, unless the exposed metal parts are located within a restricted access location and users and service people who are authorized within the restricted access location are made aware of the hazard. A restricted access area can be accessed only through the use of a special tool, lock and key or other means of security.** Statement 1072



---

**Warning**

**No user-serviceable parts inside. Do not open.** Statement 1073



---

**Warning**

**Installation of the equipment must comply with local and national electrical codes.** Statement 1074

---

The following statement is applicable only in Scandinavian countries.



**Warning**

---

**This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security.** Statement 1017

---

## Installation Guidelines

When deciding where to place the Cisco Catalyst Express 520 switch, be sure to observe these requirements:

- Altitude at the installation site is not greater than 10,000 feet (3,049 meters).
- Humidity around the switch does not exceed 85 percent.
- Temperature around the unit does not exceed 113°F (45°C).



**Note**

---

If the switch is installed in a closed environment or in a multirack assembly, the temperature around it might be greater than normal room temperature.

---

- The heat sinks and the bottom of the Cisco Catalyst Express 520 switch might be hot to the touch if the switch is operating at its maximum temperature 113°F (45°C) and is in an environment that exceeds normal room temperature (such as a closet, a cabinet, or a closed or multirack assembly).
- Do not place any items on the top of the switch.
- Airflow around the switch and through the vents is unrestricted.



**Note**

---

We strongly recommend that you allow at least 3 in. (7.6 cm) of clearance around the ventilation openings to prevent airflow restriction and overheating.

---

- Do not stack switches or place switches side-by-side unless they are separated on all sides by at least 3 inches (7.6 cm) of clearance from each other.
- Clearance at front and back panels is such that
  - Airflow around the switch and through the vents is unrestricted.
  - Front-panel LEDs can be easily read.

- Access to ports is sufficient for unrestricted cabling.
- AC power cord can reach from the AC power outlet to the connector on the switch back panel.
- Cabling is away from sources of electrical noise, such as radios, power lines, and fluorescent lighting fixtures.
- Cabling is safely away from other devices that might damage the cables.

## Desktop Installation

When installing a Cisco Catalyst Express 520 on a desktop, table, or shelf, observe the following precautions:



### Warning

---

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

---



### Caution

---

To prevent damage to the chassis, never attempt to lift or tilt the chassis by the plastic panel on the front. Always hold the chassis by the metal body.

---



### Caution

---

Your installation must allow unrestricted airflow for cooling. For placing the unit on a desktop, keep at least 1 inch (2.54 cm) of clear space beside the cooling inlet and exhaust vents.

---



### Caution

---

Do not place any items that weigh more than 10 lb (4.5 kg) on top of the switch.

---

To install the switch on a desktop, table, or shelf, perform the following steps:

- 
- Step 1** Locate the adhesive strip with the rubber feet in the accessory kit.
- Step 2** Place the unit upside-down on a flat surface. Attach the four rubber pads to the recessed areas on the bottom of the unit. Turn the unit right-side up and place the unit on a flat surface near an AC power source.

We strongly recommend that you attach the rubber feet to help prevent airflow restriction and overheating.

- Step 3** There is no external power On/Off switch on this switch. To power on the switch, connect one end of the AC power cord that ships with the switch to the AC power connector on the switch, and connect the other end of the power cord to a grounded AC power outlet.
- Step 4** When the switch powers on, it automatically begins the POST, a series of tests that verifies that the switch functions properly. If the SYSTEM LED does not blink green and then turn to solid green, or if it turns amber, contact your Cisco representative or reseller.
- Step 5** After the Cisco Catalyst Express 520 switch successfully completes POST, disconnect the power cord from the AC outlet and connect the switch to the Cisco Unified 500 Series.
- 

For detailed instructions on using the Cisco Catalyst Express 520 switch, see the *User Guide for the Catalyst Express 520 Switches* at the following URL:

[http://www.cisco.com/en/US/products/ps7238/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps7238/tsd_products_support_series_home.html)

## Connect Switch to a Cisco Unified 500 Series

To connect the switch to a Cisco Unified 500 Series, perform the following steps:

---

- Step 1** Connect one end of a straight-through, twisted four-pair Category 5 cable with RJ-45 connectors to the 1000BASE-FX port on the front panel of the Cisco Catalyst Express 520.
- Step 2** Connect the other end of the cable to the Expansion port on the front panel of the Cisco Unified 500 Series.
- Step 3** Connect the power cord for the switch to a grounded AC power outlet. When the the switch powers on, it automatically begins the POST, a series of tests that verifies that the switch functions properly. Wait until the 1000BASE-X port on the switch is solid green. The solid green port LED indicates a successful connection between the two devices. If the LED is not solid green:
- Make sure that the cable is not faulty. If it is, replace it with a tested good cable.
  - Make sure the Cisco Unified 500 Series is powered up.
- 

## Add Switch to Community

In order to alter the initial configuration of the switch, you must add the switch to a community in Cisco Configuration Assistant. To add the switch to the community for this Cisco Unified 500 Series, perform the following steps.

## Prerequisites

- Pentium III-based IBM PC or compatible computer with 512 MB DRAM (1 GB DRAM recommended), minimum screen resolution of 1024x768, and Windows XP (Service Pack 1 or later) or Windows 2000 (Service Pack 3 or later) installed.

- 
- Step 1** If necessary, install the Cisco Configuration Assistant on a PC to be used to manage the configuration of the Cisco Unified 500 Series system. For installation information, see the *Getting Started with Cisco Configuration Assistant* document at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the product.
- Step 2** If necessary, use an RJ45-to-RJ45 Ethernet cable to connect the Ethernet port of the PC on which the Cisco Configuration Assistant is installed to a PoE port on the front panel of the Cisco Unified 500 Series to which this switch is connected.
- Step 3** Launch the Cisco Configuration Assistant. For information, see the *Getting Started with Cisco Configuration Assistant* document at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the product.
- Step 4** Use Cisco Configuration Assistant to perform the following tasks. For information, see online help.
- a. Verify that the switch you just installed appears on the Topology View page.
  - b. Add the Cisco Catalyst Express 520 switch to the Community for this Cisco Unified 500 Series. For information, see online help.
- 

# 10 Connect Interfaces and Devices

This section contains the following topics:

- [Connect Interfaces, page 40](#)
- [Connect Devices, page 40](#)



### Note

These steps are typically performed while deploying the Cisco Unified 500 Series system at your customer's site.

---

## Connect Interfaces

To connect a Cisco Unified 500 Series to a WAN, PSTN, and ISDN, perform the following steps in any order:

- 
- Step 1** For connecting to a cable or DSL modem: Connect an RJ-45 cable to the WLAN port on the front panel of the Cisco Unified 500 Series. Connect the other end of the cable to the cable or DSL modem.
  - Step 2** For connecting to an ISDN line: Connect an RJ-45 cable to one of the BRI or T1/E1 PRI ports on the front panel of the Cisco Unified 500 Series and connect the other end of the cable to a PC or hub or to a ISDN wall jack.
  - Step 3** For connecting to a PSTN: Connect an RJ-11 cable to one of the FXO ports on the front panel of the Cisco Unified 500 Series and connect the other end of the cable to a PSTN line or a station interface on a PBX.
- 

## Connect Devices

To connect wireless access points, Cisco Unified IP phones, and other devices to a Cisco Unified 500 Series or a Cisco Catalyst Express 520 switch, perform the following steps in any order:

- 
- Step 1** Install and connect Cisco Unified IP phones to the PoE ports on the front panel of the Cisco Unified 500 Series and if installed, to PoE ports on front of the switch.



### Note

The PoE ports on the Cisco Unified 500 Series provide up to 15.4 W of power to connected Cisco prestandard and IEEE 802.3af-compliant powered devices, with a maximum of 80W total on the eight PoE ports.

The PoE ports on the Catalyst Express 520 provide up to 15.4 W of power to connected Cisco prestandard and IEEE 802.3af-compliant powered devices if the switch detects that there is no power on the circuit. On a per-port basis, you can control whether the PoE port automatically provides power when a powered device is connected by using the Cisco Configuration Assistant. By default, the setting is Auto.

---

The back panel of the Cisco Unified IP phone might have more than one RJ-45 connector. Use the LAN-to-phone connector to connect the phone to the Cisco Unified 500 Series. See the *Unified IP Phones 7900 Series Install and Upgrade Guide* for your IP phone at [http://www.cisco.com/en/US/products/hw/phones/ps379/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/hw/phones/ps379/prod_installation_guides_list.html).



- Step 2** For connecting to a fax: Connect an RJ-11 cable to one of the FXS ports on the front panel of the Cisco Unified 500 Series. Connect the other end of the cable to a fax unit.
- Step 3** For analog lines only: Connect an RJ-11 cable to one of the FXS ports on the front panel of the Cisco Unified 500 Series. Connect the other end of the cable to an analog telephone service device such as a keyset or PBX.
- Step 4** Wireless access to the system can be provided as follows:
- (Requires factory-installed wireless option on the Cisco Unified 500 Series) To deploy a single integrated wireless access point, connect the antenna to the wireless port on the front panel of the Cisco Unified 500 Series.
  - To deploy up to three wireless access points in standalone mode, connect each Cisco AP521 to an available PoE port on the front panel of the switch.
  - To deploy advanced wireless options such as the Cisco Mobility Express Solution in Controller Mode, use the Cisco Configuration Assistant to configure the wireless controller. Then connect the wireless controller to an available PoE port on the front panel of the switch. For installation information, see the following URL:  
[http://www.cisco.com/en/US/products/ps7320/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps7320/tsd_products_support_series_home.html).
- Step 5** Use the Cisco Configuration Assistant to perform the following tasks. For information, see online help.
- Verify that the Topology View page includes the newly-installed hardware device.
  - Configure the options in the Secure Wireless window in Cisco Configuration Assistant as required.
  - Configure and assign user accounts to connected Cisco Unified IP phones in Cisco Configuration Assistant as required.
- 

## 11 Verify Communications

To verify communications, perform the following steps.

---

- Step 1** Test local phone operation. Make calls between phones that are connected to this Cisco Unified 500 Series.
- Step 2** Test the Internet links by accessing <http://www.cisco.com> from a PC that is connected to this Cisco Unified 500 Series.
- Step 3** Test the PSTN by placing a call from a Cisco Unified IP phone that is connected to this Cisco Unified 500 Series to a number in the local calling area.

- Step 4** Test the PSTN by using a cell phone to place a call to a Cisco Unified IP phone that is connected to this Cisco Unified 500 Series.
- Step 5** Test the AA and voice mail by using a cell phone to place a call to an unattended Cisco Unified IP phone that is connected to this Cisco Unified 500 Series.
- a. Listen for the AA greeting.
  - b. Press the extension number for the target phone and listen for the voice-mail greeting.
  - c. Leave a test message.
  - d. Go to the phone that you called. Verify that the [Message] indicator is lit.
  - e. Press the [Message] button on a phone and retrieve the voice-mail message.
- Step 6** If appropriate, repeat the previous steps using devices connected to the Cisco Catalyst Express 520.
- 

## 12 Modify the Software Configuration

This section contains the following topics:

- [Information About the Software Configuration, page 42](#)
- [Default Software Configuration, page 43](#)
- [System Management Tools, page 44](#)
- [Localization Support, page 46](#)
- [Configure Localization Support, page 46](#)
- [Install Cisco Configuration Assistant, page 48](#)
- [Log Into Cisco Unified CME and Cisco Unity Express GUI, page 49](#)
- [Log Into Cisco Unified CME Phone User Page, page 50](#)

### Information About the Software Configuration

This section contains the following topics:

- [Default Software Configuration, page 43](#)
- [System Management Tools, page 44](#)
- [Localization Support, page 46](#)

## Default Software Configuration

The default software configuration on a Cisco Unified 500 Series includes the following preconfigured parameters:

- Network and device parameters
- Internet connection (DHCP)
- Voice system features
- Firewall and NAT

Table 8 lists the default values for extensions in a Cisco Unified 500 Series system.

**Table 8**      *Extension Numbers in Default Configuration*

Description	Default Value in Software Configuration
Length of directory numbers	3
Pool of extension numbers to be created for analog ports (FXS)	301 to 304
First number in pool of extension numbers to be created. Starting with this directory number, remaining numbers are automatically configured in a contiguous manner.	201

Before deploying the system at the customer site, use the Cisco Configuration Assistant to create and save the initial configuration by accepting the default values. To stage a single-site key system configuration, change the Voice System Type setting from PBX (default) to Key System Configuration.

After deploying the system, use the Cisco Configuration Assistant to personalize the initial software configuration, as required:

- Change the default username and password for all devices.
- Change the default hostname for each device.
- Set the system time zone and time display for the Cisco Unified 500 Series.
- Designate the system message which appears on Cisco Unified IP phone screens. For example, change the system message to the customer business name.
- Set the number of digits for each Cisco phone extension.
- Configure Cisco phone features and intercom.
- Configure extensions or build a comma-separated values (.csv) file with names and extension numbers to import into the Cisco Configuration Assistant.

- Configure network settings for voice.

For more information about the Cisco Configuration Assistant, see the online help.

## System Management Tools

Table 9 summarizes tools that can be used for modify the software configuration on a Cisco Unified 500 Series before or while deploying the system or for performing routine, ongoing system maintenance.

**Table 9**      **System Management Tools**

Management Tool	Description	Related Information/Tasks/Procedures
<a href="#">Cisco Configuration Assistant, page 44</a>	Primary configuration application for installing and managing Cisco Unified 500 Series. Allows for administration of voice, networking, and security features.	See the <i>Getting Started with Cisco Configuration Assistant</i> at <a href="http://www.cisco.com/go/configassist">http://www.cisco.com/go/configassist</a> or on the CD-ROM that shipped with the product. For information about using this tool, see online help.
<a href="#">GUI for Cisco Unified CME and Cisco Unity Express, page 45</a>	Web-based application customer administrators to make routine additions and changes associated with employee turnover, such as adding or changing phones and voice mailboxes and managing automated attendant scripts.	<a href="#">Log Into Cisco Unified CME and Cisco Unity Express GUI, page 49</a> For information about using this tool, see online help.
<a href="#">Cisco Unified CME Phone User Page, page 45</a>	Web-based application for phone users to program a small set of features on their phones.	<a href="#">Log Into Cisco Unified CME Phone User Page, page 50</a> For information about using this tool, see online help.

## Cisco Configuration Assistant

The Cisco Configuration Assistant is installed on a PC or laptop that is connected to the Cisco Unified 500 Series by direct connection to a PoE port on the front panel of the platform, by connection to the LAN, or via VPN client.

Use the Cisco Configuration Assistant when staging a Cisco Unified 500 Series system to create and save the initial software configuration or to customize the software configuration for deploying the following system configurations at a customer site:

- Single-site key system—Change the Voice System Type setting from PBX (default) to Key System Configuration.
- Internet Service Provider requires a WAN configuration other than DHCP—Change the Internet Connection settings.
- SIP trunk—Change the Internet Connection settings. All required information to be entered is provided by the SIP Trunk Service Provider.
- Single integrated access point and multi-site wireless support—Configure Secure Wireless settings.

The Cisco Configuration Assistant can be used to personalize software configuration with site-specific values for the following parameters before or while deploying the system at your customer's site:

- Basic network configuration including NTP configuration, Trivial File Transfer Protocol (TFTP), and DHCP options
- Basic telephony features including user names, extension numbers, IP phone types and MAC addresses, PSTN parameters, basic voicemail, and dial peers for 911 and 9+ calls
- Advanced telephony features including paging, intercom, call park, hunt group, and calling line identification (caller ID) blocking

Before you can use the Configuration Assistant, the application must be installed on a PC or laptop to be connected to the Cisco Unified 500 Series. For information, see the *Getting Started with Cisco Configuration Assistant* at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the product.

## Cisco Unified CME Phone User Page

The Cisco Unified CME phone user page enables phone users to program a small set of features on their own phones, such as changing speed dial buttons, and to search the Cisco Unified CME directory. Each user must have a unique user name and password that is created by the office administrator.

For information about launching the Cisco Unified CME phone user page, see the “[Log Into Cisco Unified CME Phone User Page](#)” section on page 50.

## GUI for Cisco Unified CME and Cisco Unity Express

The Cisco Unified CME and Cisco Unity Express web-based GUI application enables office administrators to add and change phones, phone user accounts, and voicemail boxes, and to manage automatic attendant (AA) scripts.

For information about logging into this application, see the “[Log Into Cisco Unified CME and Cisco Unity Express GUI](#)” section on page 49.

## Localization Support

A brand new, out-of-the-box, Cisco Unified 500 Series is preloaded at the factory with U.S. English. Cisco Unified CME provides internal localization support for different languages and countries. User locales specify the language to use for text displays; network locales specify country-specific tones and cadences. Cisco Unity Express supports other languages for voice-mail prompts.



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**Note** Certain versions of voice mail can support only one language on the system at a time.

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For a list of restrictions and supported languages, see the appropriate Cisco Unified 500 Series Matrix at [http://www.cisco.com/en/US/products/ps7293/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps7293/prod_installation_guides_list.html).

Before customizing the software configuration for localization, locale files for Cisco Unified CME and a language pack for Cisco Unity Express must be downloaded from Cisco.com. For information about downloading localization files from Cisco.com, see the [Configure Localization Support, page 46](#).

## Configure Localization Support

This section contains the following tasks:

- [Download Locale Files for Cisco Unified CME from Cisco.com, page 46](#)
- [Download Language for Voice-Mail Prompts from Cisco.com, page 47](#)

## Download Locale Files for Cisco Unified CME from Cisco.com

Before using the Cisco Configuration Assistant to configure localization support for Cisco Unified CME on a Cisco Unified 500 Series, you must download user and network-locale files from Cisco.com.



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**Note** For a list of supported languages, see the appropriate Cisco Unified 500 Series Matrix at [http://www.cisco.com/en/US/products/ps7293/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps7293/prod_installation_guides_list.html).

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## Prerequisites

- The Cisco Configuration Assistant must be installed on a PC or laptop to be connected to the Cisco Unified 500 Series. For information, see the *Getting Started with Cisco Configuration Assistant* at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the product.

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- Step 1** Go to the Download Software site at <http://www.cisco.com/cgi-bin/tablebuild.pl/CME-Locale>. You must have an account on Cisco.com to access the Software Center. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.
- Step 2** Select the TAR file for the locale you want to install. Each TAR file contains locale files for a specific language and country and uses the following naming convention:  
CME-locale-*language\_country*-CMEversion  
For example, CME-locale-de\_DE-4.0.1-1.0 is German for Germany for Cisco Unified CME 4.0(1).
- Step 3** Download the TAR file to the PC on which the Cisco Configuration Assistant is installed. Each file contains all the firmware required for all phone types supported by that version of Cisco Unified CME.
- Step 4** Copy the files to the \Program Files\Cisco Configuration Assistant\appdata\phoneload folder on the PC or laptop on which the Cisco Configuration Assistant is installed.
- Step 5** Launch the Cisco Configuration Assistant. For information, see the *Getting Started with Cisco Configuration Assistant* document at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the product.
- Step 6** Using a RJ-45 to RJ-45 Ethernet cable, connect the Ethernet port of the PC on which the Cisco Configuration Assistant is installed to a PoE port on the front panel of the Cisco Unified 500 Series.
- Step 7** Use the Cisco Configuration Assistant to upload files from the PC to flash memory of the Cisco Unified 500 Series and to configure localization support for Cisco Unified CME. For information, see online help.
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## Download Language for Voice-Mail Prompts from Cisco.com

Before using the Cisco Configuration Assistant to configure localization support for Cisco Unity Express on a Cisco Unified 500 Series, you must download a language pack from Cisco.com.



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**Note** For a list of supported languages, see the appropriate Cisco Unified 500 Series Matrix at [http://www.cisco.com/en/US/products/ps7293/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps7293/prod_installation_guides_list.html).

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## Prerequisites

- The Cisco Configuration Assistant is installed on a PC or laptop to be connected to the Cisco Unified 500 Series. For information, see the *Getting Started with Cisco Configuration Assistant* at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the product.

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- Step 1** Go to the Download Software site at [http://www.cisco.com/en/US/products/ps7293/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps7293/tsd_products_support_series_home.html). You must have an account on Cisco.com to access the Software Center. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.
- Step 2** Select the language that you want to install. Each language pack contains files for a specific language and country and uses the following naming convention:  
`cue-vm-language_country-lang-pack.version.prt1`  
For example, `cue-vm-de_DE-lang-pack.2.3.2.prt1` is German for Germany for Cisco Unity Express 2.3.2.
- Step 3** Download the language pack to the `\Program Files\Cisco Configuration Assistant\appdata\phoneload` folder on the PC or laptop on which the Cisco Configuration Assistant is installed. Each pack contains all language data and prompt files associated with the associated version of Cisco Unity Express with Voice Mail feature application.
- Step 4** Launch the Cisco Configuration Assistant. For information, see the *Getting Started with Cisco Configuration Assistant* document at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with product.
- Step 5** Using a RJ-45 to RJ-45 Ethernet cable, connect the Ethernet port of the PC on which the Cisco Configuration Assistant is installed to a PoE port on the front panel of the Cisco Unified 500 Series.
- Step 6** Use the Cisco Configuration Assistant to configure a voice mail language. For information, see online help.
- 

## Install Cisco Configuration Assistant

To install Cisco Configuration Assistant on a PC to be used to customize the software configuration on a Cisco Unified 500 Series, perform the following steps.



## Prerequisites

- Pentium III-based IBM PC or compatible computer with 512 MB DRAM (1 GB DRAM recommended) on which to install the Cisco Configuration Assistant is connected to the Cisco Unified 500 Series over the LAN or is connected to a PoE port on front of the Cisco Unified 500 Series. Additional PC-related requirements include:
  - Minimum screen resolution of 1024 x 768.
  - Windows XP (Service Pack 1 or later) or Windows 2000 (Service Pack 3 or later).
  - You must be a member of Administrators group under User Account settings for this PC.
- To download this application from Cisco.com, you must be able to access Cisco.com and you must have a valid Cisco.com account. You can also install this application from the CD-ROM that shipped with the product.



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**Note** To install the Cisco Configuration Assistant on a PC, see the *Getting Started with Cisco Configuration Assistant* document at <http://www.cisco.com/go/configassist> or on the CD-ROM that shipped with the product.

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## Log Into Cisco Unified CME and Cisco Unity Express GUI

To log into this tool as an Administrator for adding or changing phones or voice mailboxes, creating individual phone user accounts, and managing AA scripts, perform the following steps.

### Prerequisites

- PC running Microsoft Windows Microsoft Internet Explorer 6.0 or a later version.
- The Ethernet port of the PC is connected to a PoE port on the front panel of the Cisco Unified 500 Series or the Cisco Catalyst Express 520 switch, or to the switch port on the back of a Cisco Unified IP phone that is connected to a PoE port on the platform or switch and is active, using an RJ-45 to RJ-45 Ethernet cable.

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**Step 1** To log into Cisco Unified CME, enter the following URL in the browser window, where *ipaddr* is the IP address of your Cisco Unified 500 Series. Default IP address: 10.1.1.1.

`http://ipaddr/ccme.html`

To access CUE, enter the following URL in the browser window, where *ipaddr* is the IP address of CUE. Default IP address is: 10.1.10.1

`http://ipaddr`

**Step 2** When the Authentication window appears, enter the Administrator username and password. Default Administrator username: cisco. Default Administrator password: cisco. The home window appears. For information, see online help.

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## Log Into Cisco Unified CME Phone User Page

To log into the phone user page for configuring certain features on your own IP phone, such as speed dial and call forward, perform the following steps.

### Prerequisites

- You have a PC running Microsoft Windows with Microsoft Internet Explorer 6.0 or a later version.
  - The Ethernet port of the PC is connected to a PoE port on the front panel of the Cisco Unified 500 Series or the Cisco Catalyst Express 520 switch, or to the switch port on the back of a Cisco Unified IP phone that is connected to a PoE port on the platform or switch and is active, using an RJ-45 to RJ-45 Ethernet cable.
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**Step 1** Enter the following URL in the browser window, where *ipaddr* is the IP address of your Cisco Unified 500 Series. Default IP address: 10.1.1.1.

`http://ipaddr/ccme.html`

**Step 2** When the login screen appears, enter your username and password. User names and passwords for individual phone users are defined by the office administrator using the Cisco Unified CME and Cisco Unity Express GUI. The home window appears. For information, see online help.

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## 13 Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

## Additional References

The following section provides references related to the Cisco Unified Communications 500 Series for Small Business.

### Related Documents

Related Topic	Document Title
Cisco Smart Business Communications System	<i>Cisco Smart Business Communications System Setup</i> shipped with product or on CD-ROM shipped with product Product information on Cisco.com at <a href="http://www.cisco.com/go/sbcs">http://www.cisco.com/go/sbcs</a> .
Cisco Configuration Assistant	<i>Getting Started with Cisco Configuration Assistant</i> at <a href="http://www.cisco.com/go/configassist">http://www.cisco.com/go/configassist</a> or on CD-ROM shipped with product
Cisco Catalyst Express 520 switch	<i>Getting Started Guide for Cisco Catalyst Express 520</i> shipped with product or on CD-ROM shipped with product. <i>User Guide for Cisco Catalyst Express 520</i> at <a href="http://www.cisco.com/univercd/cc/td/doc/product/lan/catex520/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/lan/catex520/index.htm</a> or on CD-ROM shipped with product. <i>Release Notes for Cisco Catalyst Express 520</i> at <a href="http://www.cisco.com/univercd/cc/td/doc/product/lan/catex520/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/lan/catex520/index.htm</a> or on CD-ROM shipped with product.
Cisco Unity Express administrative and user documentation	Cisco Unified Communications 500 Series for Small Business supports Cisco Unity Express Version 2.3.4 and higher releases. <i>Cisco Unity Express Documentation, By Version</i> at <a href="http://www.cisco.com/en/US/docs/voice_ip_comm/unity_exp/roadmap/cuedocs.html">http://www.cisco.com/en/US/docs/voice_ip_comm/unity_exp/roadmap/cuedocs.html</a>
User documentation for Cisco Unified IP Phones	Quick Reference Cards and User Guides at <a href="http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/ip_phones/roadmap/cucme_phone_roadmap.html">http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/ip_phones/roadmap/cucme_phone_roadmap.html</a>



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