Cisco Unified Communications 500 Series for Small Business

Cisco® Unified Communications Solutions unify voice, video, data, and mobile applications on fixed and mobile networks, delivering a media-rich collaboration experience across business, government agency, and institutional workspaces. These applications use the network as the platform to enhance comparative advantage by accelerating decision time and reducing transaction time. The security, resilience, and scalability of the network enable users in any workspace to easily connect anywhere, anytime, and anyplace, using any media, device or operating system. Cisco Unified Communications is part of a comprehensive solution that includes network infrastructure, security, wireless, management applications, lifecycle services, flexible deployment and outsourced management options, and third-party applications.

For small businesses wanting to reach, serve, and retain customers, Cisco introduces the Cisco Smart Business Communications System, a new, affordable system that makes anytime, anywhere highly secure access to information possible, thereby facilitating more effective and efficient ways of communicating with customers and employees.

Product Overview

Cisco Unified Communications 500 Series for Small Business, a critical part of the Cisco Smart Business Communications System, is a unified communications appliance for small businesses that provides voice, data, voicemail, Automated Attendant, video, security, and wireless capabilities while integrating with existing desktop applications such as calendar, e-mail, and customer relationship management (CRM) programs. This easy-to-manage platform uses business-class, proven unified communications technologies to support up to 50 users, and supports flexible deployment models based on your needs—a wide array of IP phones, public switched telephone network (PSTN) interfaces, and Internet connectivity (Figure 1).

Figure 1.   Cisco Unified Communications 500 Series—8/16 User Configuration

Figure 2.   Cisco Unified Communications 500 Series—32/48 User Configuration

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Core components of the Cisco Unified Communications 500 Series include:

- Cisco Unified IP phones, including wireless handsets and Session Initiation Protocol (SIP) phones
- Cisco Unified Communications Manager Express for call processing
- Cisco Unity® Express for voice messaging and Automated Attendant
- Support for Cisco Unified CallConnectors for integration with Windows PC applications
- LAN switching: Integrated Power over Ethernet (PoE) switch, and ability to expand through Cisco Catalyst® Express 520 Series Switches
- Firewall and VPN capabilities
- Optional integrated wireless LAN (WLAN) capability on some models or external access points and Cisco Wireless LAN Controller Modules
- Cisco Configuration Assistant for GUI-based customization of the solution
- Optional remote system monitoring capabilities

Cisco Unified IP Phones

Cisco provides a complete range of Cisco Unified IP phones and communications devices designed to take full advantage of converged voice and data networks, and these devices offer the convenience and user friendliness found in business phones. Cisco Unified IP phones can help improve productivity by meeting the needs of different users throughout your organization.

The Cisco Unified IP phone portfolio provides the following:

- IP phones with LCD displays, including dynamic soft keys for call features and functions
- Support for information services, including Extensible Markup Language (XML) capabilities to extend IP phone systems to give IP phone users access to a variety of information such as stock quotes, employee directories, and Web-based content

Cisco Unified IP phones lead the IP communications device market and provide a complete IP phone system portfolio with ease of use, excellent audio quality, increased accessibility for people with disabilities, ergonomic physical design, advanced services, and features.

The IP phone portfolio includes options for use from wherever you are: the company lobby, the manufacturing floor, the executive suite, at home, on the road, or in a branch office (Figure 3).

Figure 3.   Cisco Unified IP Phone Portfolio

Cisco Unified Communications Manager Express

Cisco Unified Communications Manager Express is a Cisco IOS® Software solution embedded in the Cisco Unified Communications 500 Series appliance that provides call processing for Cisco Unified IP phones. Simple to deploy, administer, and maintain, Cisco Unified Communications Express is a reliable, feature-rich telephony solution.

Cisco Unity Express

Embedded Cisco Unity Express helps enable voicemail, desktop messaging, and Automated-Attendant services for increased customer service and rich employee communications experience.

Cisco Unified CallConnectors for Windows PC Applications

The Cisco Unified Communications 500 Series integrates with common Windows desktop applications to give small business owners access to productivity gains once available only to large businesses. With Cisco Unified CallConnectors, you can integrate your Cisco Unified IP phones with common applications, including Microsoft Outlook, Internet Explorer, Microsoft Dynamics CRM, or Salesforce.com CRM.

LAN Switching and Routing

The Cisco Unified Communications 500 Series has an integrated, managed Ethernet switch that provides 8 ports of 10/100 PoE optimized for integration with the Cisco Smart Business Communications System. Additionally, the system capacity can be expanded by connecting the recommended Cisco Catalyst Express 520 Series Switch. Providing 8 to 24 additional ports of 10/100 PoE, the Cisco Catalyst Express 520 Series Switch ships with a predefined software configuration to work immediately with the Cisco Unified Communications 500 Series for Small Business. The Cisco Unified Communications 500 Series supports static routing and routing between VLANs and the built-in interfaces.

Firewall for Network Security

Security is a fundamental element of any network, and Cisco products play an important role in embedding security at the customer's access edge. The Cisco IOS Firewall is a stateful-inspection firewall available with the Cisco Unified Communications 500 Series. Built from market-leading Cisco PIX® Firewall technologies, Cisco IOS Firewall is a base feature on the Cisco Unified Communications 500 Series platform; it is ideal for protecting the WAN entry point into the network.

Virtual Private Networking

VPNs carry private data over a public network and extend remote access to users over a shared infrastructure. Maintaining the same security and management policies as private networks, VPNs are the most cost-effective means of establishing point-to-point connection between remote users and a central network. VPNs have been the fastest-growing form of network connectivity, and Cisco takes this approach to a new level by making VPN functions an integral part of the Cisco Unified Communications System. The Cisco Unified Communications 500 Series includes built-in hardware-based encryption acceleration that offloads IP Security (IPsec), Advanced Encryption Standard (AES), Data Encryption Standard (DES), and Triple DES (3DES) encryption and VPN processes to provide increased VPN throughput on the Cisco Unified Communications 500 Series platform.

Wireless Mobility Services

The 8- and 16-user models of the Cisco Unified Communications 500 Series support an optional integrated WLAN access point for secure WLAN connectivity. As part of the Cisco Smart Business Communications System, the Cisco Unified 500 Series also supports external access points—the Cisco 521 Wireless Express Access Point—and for best-in-class wireless mobility the Cisco 526 Wireless Express Mobility Controller can be added to create a unified system of access points. Small businesses can easily extend access to data applications as well as WLAN telephony. Wireless services allow greater mobility for employees, partners, and customers, resulting in increased productivity. Note: The 32- and 48-user models of the Cisco Unified Communications 500 Series do not support an optional integrated WLAN access point. These models can use the Cisco 521 Wireless Express Access Point and the Cisco 526 Wireless Express Mobility Controller to enable WLAN functions.

Cisco Configuration Assistant

The Cisco Configuration Assistant, a PC-based, intuitive GUI configuration tool, is an integral component of the Cisco Smart Business Communications System. With a focus on ease of use, the Cisco Configuration Assistant simplifies configuration of multiple technologies—unified communications, switching, routing, security, and wireless. Cisco Configuration Assistant simplifies telephony configuration and provides follow-up support to facilitate easy modification. Features include an interactive topology view, front-panel views of devices, and drag-and-drop Cisco IOS Software upgrades (Figure 4).

Figure 4.   Cisco Configuration Assistant Configuration Tool
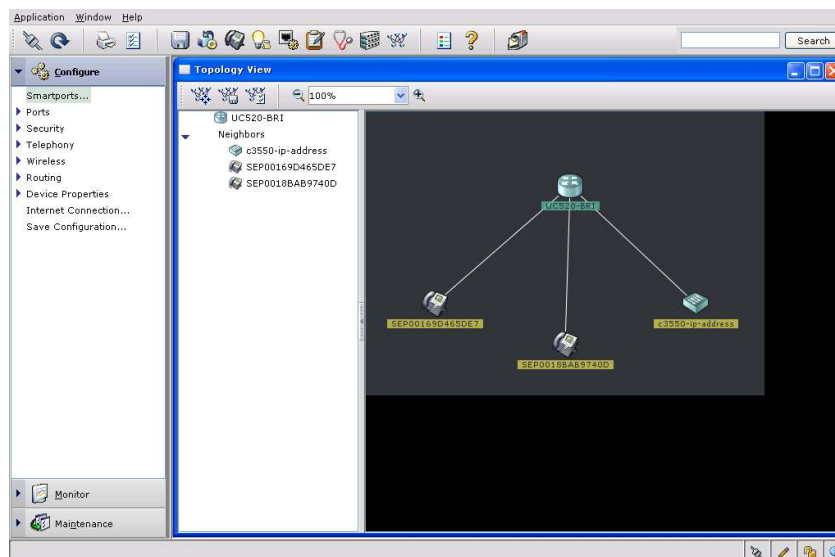
Architecture Features and Benefits

The Cisco Unified Communications 500 Series integrates voice, data, video, security, wireless, and management into one platform. It brings unified communications to small businesses and organizations by providing a simplified, affordable solution that is easy to configure, deploy, and manage. By combining call control, messaging, and mobility into one device, the Cisco Unified Communications 500 Series eliminates the added costs of multiple servers and provides a solution that is easy to set up and manage at a lower price point.

Table 1 summarizes the features and benefits of the Cisco Unified Communications 500 Series.

Table 1.   Platform Features and Benefits

Feature	Benefit
Solution packaging	The solution offers various fixed configurations, eliminating the guesswork from configuration.
	Each configuration is equipped with the appropriate number of feature licenses for call processing, voicemail, and Cisco Unified IP phones, simplifying the product structure.
	A modular slot is available in most of the configurations, allowing expansion of the system with additional PSTN or analog station interfaces.
	The appropriate number of fixed digital signal processors (DSPs) is packaged with each configuration.
Default system configuration	Although packaged to support various deployment configurations, the solution comes with a Cisco Smart Assist predefined configuration from the factory, allowing for rapid deployment of the product in the field:
	• Preassigned phone extensions
	• Dial plan
	• Voice and data VLANs
	• Firewall settings
	With the appropriate licensed base platform, expanding the system is easy; simply connect the companion Cisco Catalyst Express 520 Switch and connect phones to the new PoE Ethernet ports.

Integrated voicemail and Automated Attendant	Voice messaging raises the level of professionalism, productivity, and customer service available to small business customers with built-in Automated-Attendant and advanced voicemail capabilities. With Professional Automated Attendant, all calls can be handled efficiently and reliably 24 hours a day. Callers can dial by extension number of the group or person they are trying to reach or use the Dial-by-Name feature when they do not know a specific extension. Voicemail extends your organization's productivity by allowing employees to access messages at any time from any telephone. Both internal and external calls to a busy or unattended phone are forwarded to the user's voicemail box and are greeted with the user's personalized greeting. Integrated messaging allows you to check your voicemail using Internet Mail Access Protocol (IMAP) email clients, including Microsoft Outlook, Outlook Express, or Lotus Notes. You can also access voicemail features using the XML display on Cisco Unified IP phones.
Ethernet connectivity with quality of service (QoS)	Ethernet connectivity is provided for IP phones or wireless access points by PoE ports that provide connectivity speeds for up to 100BASE-T Ethernet technology without the need for additional power modules. Most Cisco Unified IP phones include a 10/100 switch with QoS to provide PC desktop connectivity to the network. Optimized QoS is provided for IP phone and desktop configurations. The QoS level helps ensure that voice over IP (VoIP) traffic takes precedence. Voice and data traffic have separate VLANs. Port security limits unauthorized access to the network.
Power failover	A power failover feature on the base configuration allows access to the PSTN line if a power outage occurs. When power is lost, the first foreign exchange office (FXO) PSTN trunk is directly connected to foreign exchange station (FXS) analog port, allowing for calls to be placed and received.
Recorded announcements for callers: Music on Hold (MOH)	The process for providing customized MOH announcements is simplified with a dedicated MOH port, allowing small-business owners to play recorded announcements to their callers by simply plugging the audio source into the provided 3.5-mm mini-jack. You can use wave files stored on flash memory. MOH is an audio stream that is played to PSTN and VoIP G.711 or G.729 callers who are placed on hold, reassuring the callers that they are still connected to the called party.
Deployment options	Depending on the configuration, the Cisco Unified Communications 500 Series can be deployed as a desktop unit, wall-mounted, or installed in a standard 19-inch (48.26-cm) rack with an optional rack-mount kit.

Cisco Unified Communications Features

IP telephony is currently experiencing tremendous growth, accelerated by access to value-added features and applications that only IP telephony can provide to the end user. Additionally, the cost benefits of converging data, voice, and video on a single network are adding to the rapid acceptance of this technology. Because it is integrated into a single system, Cisco Unified Communications 500 Series for Small Business enhances the advantages of convergence by offering the following benefits:

- Cost-effective operations through a single, integrated voice-and-data platform for all small-office needs: This highly reliable platform provides robust QoS and the right level of security, encryption, and firewall to deliver enhanced VPN services to meet small-business needs. The system delivers integrated IP telephony, voicemail, and Automated-Attendant functions, allowing you to deploy one device to address all your business needs—thereby simplifying management, maintenance, and operations and delivering a lower total cost of ownership (TCO).

- Sophisticated key system and private branch exchange (PBX) capabilities: Small businesses have different workflows and require specialized features to support their work practices. The Cisco Unified Communications 500 Series delivers a robust set of telephony features for the small office and delivers unique, value-added capabilities through XML. These capabilities, which cannot be delivered by traditional systems, enhance the productivity of the end user and the business.

- Remote maintenance and troubleshooting: You can use the industry-standard Cisco IOS Software command-line interface (CLI) or user-friendly GUI to configure and administer the Cisco Unified Communications 500 Series system.

The Cisco Unified Communications 500 Series appliance offers the feature set available with Cisco Unified Communications Manager Express 4.2 and Cisco Unity Express 2.3.

Table 2 summarizes the unified communications features.

Table 2. Cisco Unified Communications 500 Series for Small Business Features

Feature	Description
End-user phone features	• Multiline appearances on phone • Attendant console functions using Cisco Unified IP Phone Expansion Module 7914 or PC-based attendance console • Fast Transfer: Blind or consult • Busy Lamp Field • Silent ringing options • Automatic line selection for outbound calls • Call Forward on Busy, No Answer, and All • Call Forward All restriction control • Do Not Disturb (DND) • Feature ring with DND set • IP phone display of DND state • Dial-plan pattern load on SIP phones • Diversion of calls directly to voicemail • Customization of soft keys • Enable and disable Call Waiting notification per line • Call Waiting with overlay Directory Number • Call Waiting Ring • Dual line appearances per button • After-hours toll-bar override • Auto-answer with headset • European date formats • Hook flash passthrough across analog PSTN trunks • Idle URL: Periodically pushes messages or graphics on IP phones • Last Number Redial • Local Name Directory Lookup • On-Hook Dialing • Station Speed Dial with configuration changes from IP phone • System Speed Dial for 10,000 numbers • Silent and Feature Ring options • SIP-based Line-Side Subscribe, providing basic presence of phone status • Access features using soft keys or feature access codes • Remote teleworker IP phone support • Dynamic Hunt-Group Join or Leave • Support for fax machines on FXS ports using H.323, Skinny Client Control Protocol (SCCP), and SIP • XML application services on Cisco Unified IP phone displays • Station-to-station video telephony using Cisco Unified Video Advantage or Cisco Unified IP Phone 7985G endpoints

PSTN interfaces and features	• Analog FXO Loop and Ground Start
	• Basic Rate Interface (BRI) support for several switch types currently supported in Cisco IOS Software
	• T1/E1 for PSTN Connectivity
	• Caller ID name and number
	• Automatic Number Identification (ANI)
	• Direct inward dialing (DID)
	• Direct outward dialing
	• Dedicated trunk mapping to phone button
	• H.323 trunks with H.450 support
	• H450.12 automatic detection of H.450 support for remote H.323 endpoints
	• H.323-to-H.323 Hairpin Call Routing for non-H.450-compliant H.323 endpoints
	• SIP trunks and RFC 2833 support
	• Transcoding G.711 and G.729a
System calling features	• Account codes and call detail record (CDR) field entry
	• Callback Busy Subscriber Camp-On
	• Per-phone call coverage rules
	• Call Hold and Retrieve
	• Call Park: Personal and directed
	• Call Park Recall
	• Call Park Assign to Extension
	• Call Pickup Directed
	• Call Pickup Local Group
	• Call Pickup Explicit Group
	• Call Transfer: Consultative and blind
	• Call Waiting
	• Eight-party impromptu conferencing
	• Computer telephony integration (CTI) with Microsoft Dynamics CRM, Outlook, or Salesforce.com CRM using Cisco IOS Software Telephony Services Provider (TSP)
	• Directory services using XML
	• Hunt groups: Sequential, circular, and longest idle
	• Hunt-group dynamic log in and log out
	• Hunt-groups statistics: Daily and hourly
	• Intercom
	• Meet-Me Conferencing
	• MOH: Internal or external source
	• Night Service Bell or Call Forwarding
	• Overlay extensions for enhanced call coverage
	• Called-name display for overlay extensions
	• Paging: Internal through IP phones or to external system
	• Per-call caller ID blocking
	• Secondary dial tone
	• Additional system speed-dial option through XML service
	• Time-of-day and day-of-week call blocking
	• Customizable called-name display
	• Basic automatic call distributor (B-ACD) (three queues) with Automated Attendant and call statistics
	• Display of number of calls in queue on IP phone
	• Agent log in and log out of B-ACD hunt group
	• Secure voice IP phone certificate authentication and provisioning plus secure device signaling using Transport Layer Security (TLS)
	• For additional information about Cisco Unified Communications Manager Express features, please visit http://www.cisco.com/go/ccme.

Voice messaging	• Integrated voicemail and Automated-Attendant solution using Cisco Unity Express
	• Complete yet concise telephony user interface (TUI) tutorial: Takes the user step by step through the mailbox setup process, minimizing the need for administrator assistance, saving time and money
	• Full range of commonly used voicemail features
	• Comprehensive voicemail feature set: Replying, forwarding, saving messages; message tagging for privacy or urgency; alternate greetings; pause, fast forward, and rewind; and envelope information
	• Networking: Voice Profile for Internet Mail (VPIM) protocol to communicate with other Cisco messaging platforms
	• Distribution lists and broadcast messages
	• Public and private distribution list function and broadcast messaging capability
	• General-delivery mailboxes (GDMs)
	• Multiple GDM voicemail boxes for designated team members
	• Ability for subscribers to recover a message if it is inadvertently deleted
	• Ability to share the user interface, menu structure, and commands with other Cisco voice messaging products
	• Personal operator: Configurable alternate telephone number (per voice mailbox) for "zero out" option
	• Voicemail access using IMAP integration with Microsoft Outlook, Outlook Express, or Lotus Notes
	• Cisco Unified IP phone voicemail and mailbox settings access using Cisco Unity Express VoiceView Express XML application
	• For additional information about voicemail features, please visit http://www.cisco.com/go/cue.
Automated Attendant	• Up to five Automated-Attendants per system
	• Standard dial-by-name and dial-by-extension Automated Attendant
	• Holiday schedules and calendar
	• Business-hours schedule
	• Script editor: Graphical scripting tool that creates customized Automated-Attendant menu flows
	• Support for time-of-day and day-of-week routing
	• Unlimited menu items and unlimited nesting
	• Administration through telephony
	• Ability to record Automated-Attendant prompts from phone or computer
	• Capability to create and manage broadcast messages
	• Ability to record spoken names for remote users
	• Emergency alternate greeting: Alerts callers to temporary schedule changes due to snow, holidays, etc.
	• For additional information about Automated-Attendant features, please visit http://www.cisco.com/go/cue.
Configuration and management	• Preconfigured to allow for connection of phones and PSTN lines to start using system upon startup
	• Automatic assignment of extensions and voicemail boxes for phones for ease of deployment and future phone additions
	• Extension assigner that allows replacement of phones using simple, easy-to-follow voice prompts
	• Windows GUI-based Cisco Configuration Assistant for complete system setup; customization and management included
	• Simple Network Management Protocol (SNMP) support with Cisco Unified Operations Manager or third-party management consoles
	• For additional information about Cisco Configuration Assistant, please visit http://www.cisco.com/go/configassist. For additional information about Cisco Monitor Director and Cisco Monitor Manager, please visit http://www.cisco.com/go/sbnm.

Firewall: Features and Benefits

Security is a fundamental part of the Cisco Unified Communications 500 Series. Table 3 summarizes the security features.

Table 3.   Secure Networking Features and Benefits

Feature	Benefit
Cisco IOS Firewall	Sophisticated security and policy enforcement provides features such as stateful, application-based filtering (context-based access control [CBAC]), per-user authentication and authorization, real-time alerts, and transparent firewall.
Cisco Easy VPN Remote and Server support	The Cisco Unified Communications 500 Series eases administration and management of point-to-point VPNs by actively pushing new security policies from a single headend to remote sites.
Standard 802.1x support on integrated switching	Standard 802.1x applications require valid access credentials that make unauthorized access to protected information resources and deployment of unsecured wireless access points more difficult.
Network Address Translation (NAT)	NAT simplifies and reduces costs associated with global IP address allocation and management. Only a single registered IP address is required to support all users on an entire LAN infrastructure.

Wireless Support Features and Benefits

The 8- and 16-user models of the Cisco Unified Communications 500 Series support an optional integrated WLAN access point for secure WLAN connectivity. The Cisco Unified Communications 500 Series also supports external Cisco 521 Wireless Access Points, and the Cisco 526 Wireless Express Mobility Controller as part of the Mobility Express offering. For additional information about Mobility Express, please visit http://www.cisco.com/go/mobilityexpress. Table 4 summarizes wireless features.

Table 4.   Wireless Features and Benefits

Feature	Benefit
WLAN connectivity	The 802.11b/g integrated access point (available only on the 8- and 16-user Cisco Unified Communications 500 Series models) can be used to provide integrated WLAN connectivity to mobile clients—voice and data—resulting in mobility and enhanced productivity for users. The integrated 802.11b/g access point in the Cisco Unified Communications 500 Series supports up to 54-Mbps connections. Cordless WLAN IP phones allow users to be mobile and more productive.
Enhanced security	Enhanced security is provided with support for Wi-Fi Protected Access (WPA and WPA2), including authentication with 802.1x and Cisco LEAP, Protected Extensible Authentication Protocol (PEAP), dynamic Wired Equivalent Privacy (WEP), or static WEP. WLAN VLANs and 802.1q/e are also supported; these features prioritize voice and video traffic with queuing. Employee and guest WLAN access is through separate VLANs.

Summary

The Cisco Unified Communications 500 Series for Small Business is a simple, smart, and affordable solution designed specifically for growing businesses with 8 to 50 employees per site. It integrates industry-leading, business-class, proven unified communications technologies (voice, data, video, security, and wireless) into one platform and facilitates integration with commonly used desktop applications such as Microsoft Outlook and Outlook Express, IBM Lotus Notes, and CRM software. Functions include Automated Attendant and voicemail, PSTN and Internet connectivity, and analog phone and fax machine support. A wide array of IP phones are supported by PoE ports. The Cisco Unified Communications 500 Series solution also provides the capability to network the office for voice, video, and data networking and allows business owners and employees to be securely connected to the office while they are traveling or working from their home offices.

Product Hardware Specifications

Table 5 lists the Cisco Unified Communications 500 Series chassis specifications.

Table 5. Specifications of Cisco Unified Communications 500 Series

Cisco Unified Communications 500 Series	Cisco Unified Communications 520 System (8- and 16-user configuration)	Cisco Unified Communications 520 System (32- and 48-user configuration)
Packaging Type	**Desktop or wall-mount**	**Rack-mount**
Product Architecture		
DRAM	• Cisco IOS Software: 256 MB • Voice messaging: 512 MB	
Compact Flash memory	• Cisco IOS Software: 64 MB (optional) • Voice messaging: 1 GB; USB or Compact Flash	
Onboard Ethernet ports	• Eight 10-/100-Mbps LAN • One 10/100 WAN uplink • One 10/100 Ethernet expansion port	
Voice expansion slots	1 voice interface card (VIC) slot to support Cisco VIC modules for voice and fax, providing support for up to 4 additional voice and fax sessions	
MOH	Single 3.5-mm audio port	
Integrated hardware-based encryption	Yes	
Integrated inline PoE ports	8 built-in PoE ports	
FXS and DID ports	4 FXS or DID ports	
PSTN interfaces (FXO, BRI or T1/E1)	4 to 12 FXO ports or 2 to 6 BRI ports (VIC slot can be used to add interfaces in some configurations) Fixed 48-user configuration is also available with integrated T1/E1 interface Accessory T1/E1 VWIC interface card: Available for use in the 8-, 16-, and 32-user UC500 models (VIC slot can be used to add this T1/E1 interface card)	
Console port (up to 115.2 kbps)	1	
Voicemail ports	2 to 6 ports for voicemail and Automated Attendant	
Deployment Options	Desktop, wall-mount, and rack-mount (rack-mount requires an optional rack-mount bracket)	19-in. (48.26-cm) rack-mount
Power Requirements		
Power supply	External	Internal
AC input voltage	100 to 240 VAC	100 to 240 VAC
AC input frequency	50 to 60 Hz	50 to 60 Hz
AC input current	4 to 2A (100 to 240V)	3 to 1.5A (100 to 240V)
AC input surge current	50 to 100A (100 to 240V)	30 to 60A (100 to 240V)
Maximum inline power distribution	80W	80W
Power dissipation: AC without IP phone support	80W 90W (including external adapter)	95W
Power dissipation: AC with IP phone support for IP phones	175W 190W (including external adapter)	200W
Environmental Specifications		
Operating temperature	32 to 104℉ (0 to 40℃)	32 to 104℉ (0 to 40℃)
Operating humidity	10 to 85% noncondensing operating; 5 to 95 noncondensing, nonoperating	
Nonoperating temperature	4 to 149℉ (–20 to 65℃)	4 to 149℉ (–20 to 65℃)
Operation altitude	• 104℉ (40℃) at sea level • 87.8℉ (31℃) at 6,000 ft (1800m) • 77℉ (25℃) at 10,000 ft (3000m) • 34.7℉ (1.5℃) per 1,000 ft	• 104℉ (40℃) at sea level • 87.8℉ (31℃) at 6,000 ft (1800m) • 77 ℉ (25℃) at 10,000 ft (3000m) • 34.7℉ (1.5℃) per 1,000 ft
Dimensions (H x W x D)	2.625 x 10.5 x 11.05 in. (6.67 x 26.67 x 28.07 cm)	3.5 x 17.5 x 14 in. (8.89 x 44.45 x 35.56 cm)

Power supply dimensions (H x W x D)	1.7 x 4 x 7.5 in. (4.3 x 10.16 x 19.05 cm)	Internal power supply
Rack height	1.5 rack unit (RU)	2RUs
Weight (fully configured)	8 lb (3.63 kg)	14.5 lb (6.58 kg)
Power supply weight	3 lb (1.36 kg)	Internal
Noise level (minimum and maximum)	Normal operating temperature: <78℉ (25.6℃): 34 dBA –>78℉ (25.6℃) through <104℉ (40℃): 37 dBA –>104℉ (40℃): 42 dBA	Normal operating temperature: <90℉ (32.2℃): 44 dBA 53 dBA (at maximum fan speed)
Regulatory Compliance		
Safety	• IEC 60950-1 • AS/NZS 60950.1 • CAN/CSA-C22.2 No. 60950-1 • EN 60950-1 • UL 60950-1	
Immunity	• EN 55024 • EN 300-386 • EN 61000-6-2 • EN 50082-1 • EN 55024 (CISPR 24)	
EMC	• FCC Part 15, ICES-003 • EN55022, CISPR 22 • AS/NZS • CNS13438 • VCCI V-3 • EN 55024 • EN 300-386 • EN 61000-3-2 • EN 61000-3-3 • EN 50082-1 • EN 55024 (CISPR 24) • EN 61000-4-2 • EN 61000-4-3 • EN 61000-4-4 • EN 61000-4-5 • EN 61000-4-6 • EN 61000-4-8 • EN 61000-4-11 • EN 61000-6-2	
FIPS-2	• Not supported	

TELCOM**	• FXS/DID
	• TIA-968-A3
	• CS-03 Part I
	• ACIF S002
	• ACIF S003
	• ANZ PTC200
	• ISDN BRI S/T (voice and data BC)
	• TIA-968-A3
	• CS-03 Part VI
	• TBR3
	• ACIF S031
	• ANZ PTC200
	• MPMHAPT Japan Digital
	• FXO
	• TIA-968-A3
	• CS-03 Part I
	• TBR21
	• MPMHAPT Japan Analog
	• ACIF S002
	• ACIF S003
	• ACIF S004
	• ANZ PTC200
	• MOH interface
	• ACIF S038
	• ACIF S004
	• TIA-464C

Modular Support

Table 6 lists available modules and interface cards supported in the open slot.

Table 6.   Modules and Interface Cards Supported in the Open Slot

Module	Description
VIC-4FXS/DID	4-port VIC-FXS/DID
VIC2-2FXO	2-port VIC-FXO (universal)
VIC2-4FXO	4-port VIC-FXO (universal)
VIC2-2BRI-NT/TE	2-port VIC card-BRI (NT and TE)
VWIC2-1MFT-T1/E1	1-port VWIC-T1/E1 (PRI and CAS)

WLAN Specifications

Table 7 lists the WLAN specifications of the Cisco Unified Communications 500 Series.

Table 7.   WLAN Specifications

Feature	Description
WLAN hardware	• 802.11b/g
	• Automatic rate selection for 802.11b/g
	• RP-TNC connectors for field-replaceable external antennas (antenna options for extended coverage)
	• Antenna diversity
	• Indoor range: 1 Mbps at 320 ft (97.54m)
	• Wireless Ethernet Compatibility Alliance (WECA) interoperability
	• Default antenna gain: 2.2 dBi
WLAN software	• Options to maximize throughput or maximize range
	• Software-configurable transmit power
	• Wireless Multimedia (WMM) certification
	• Service Set Identifier (SSID) globalization

WLAN security	• 802.1X • 802.11e • WPA and AES (WPA2) • EAP authentication: Cisco LEAP, PEAP, and Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) • Static and dynamic WEP • Temporal Key Integrity Protocol Simple Security Network (TKIP/SSN) encryption • MAC authentication and filter • User database for survivable local authentication using LEAP and EAP-FAST • Configurable limit to the number of wireless clients • Configurable RADIUS accounting for wireless clients • Preshared keys (PSKs) • Workgroup Bridge Association
SSIDs and Service Set Identification List (SSIDL)	3
Wireless VLANs	3
Encrypted wireless VLANs	3
Multiple Basic SSIDs (MBSSIDs)	1

Localization

The Cisco Unified Communications 500 Series supports the localization available on Cisco Unified Communications Manager Express 4.2 and Cisco Unity Express 2.3. Table 8 summarizes the localization supported on the platform.

Table 8.   Localization Support

Language	Variation	Phone Prompts, Cadences, and Network Tones	Voicemail Prompts
English	United States	Y	Y
German		Y	Y
French	European	Y	Y
Spanish	European	Y	Y
Italian		Y	Y
Portuguese	Brazilian	N	Y
Spanish	Latin American	N	Y
Danish		Y	Y
English	British	Y	Y
Japanese		Y	Y
Spanish	Mexican	N	Y
French	Canadian	N	Y
Chinese	Mandarin	Y	Y
Korean		Y	Y

Note: Additional languages may be supported on Cisco Unified IP phones; for more information, visit http://www.cisco.com/go/ipc.

Availability

The Cisco Unified Communications 500 Series for Small Business is now available for order.

Ordering Information

To place an order, refer to Table 9 and the Cisco ordering homepage at:
http://wwwin.cisco.com/marketing/unified/resources/uc6_playbook.shtml.

Table 9.   Ordering Information

Part Number	Description
UC520-8U-4FXO-K9	• 8 User configuration with 4 PSTN trunks (FXO), 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for call control, voicemail and Cisco Unified IP Phones
UC520-8U-2BRI-K9	• 8 User configuration with 2 BRI trunks (BRI), 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for call control, voicemail and Cisco Unified IP Phones
UC520-16U-4FXO-K9	• 16 User configuration with 4 PSTN trunks (FXO), 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for call control, voicemail and Cisco Unified IP Phones **Note:** requires an eight (8) port Cisco Catalyst Express 520 switch
UC520-16U-2BRI-K9	• 16 User configuration with 2 BRI trunks (BRI), 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for call control, voicemail and Cisco Unified IP Phones **Note:** requires an eight (8) port Cisco Catalyst Express 520 switch
UC520-32U-8FXO-K9	• 32 User configuration with 8 PSTN trunks (FXO), 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for user configurations of call control, voicemail and Cisco Unified IP Phones **Note:** requires a twenty-four (24) port Cisco Catalyst Express 520 switch
UC520-32U-4BRI-K9	• 32 User configuration with 4 BRI trunks (BRI), 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for call control, voicemail and Cisco Unified IP Phones **Note:** requires a twenty-four (24) port Cisco Catalyst Express 520 switch
UC520-48U-12FXO-K9	• 48 User configuration with 12 PSTN trunks (FXO), 4 Analog ports (FXS), 8 PoE ports • Feature licenses for user configurations of call control, voicemail and Cisco Unified IP Phones **Note:** requires two twenty-four (24) port Cisco Catalyst Express 520 switch
UC520-48U-6BRI-K9	• 48 User configuration with 6 BRI trunks (BRI), 4 Analog ports (FXS), 8 PoE ports • Feature licenses for call control, voicemail and Cisco Unified IP Phones **Note:** requires two twenty-four (24) port Cisco Catalyst Express 520 switch
UC520-48U-T/E/F-K9	• 48 User configuration with a T1/E1 interface, 4 additional PSTN trunk ports (FXO), 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for user configurations of call control, voicemail and Cisco Unified IP Phones **Note:** requires two twenty-four (24) port Cisco Catalyst Express 520 switch
UC520-48U-T/E/B-K9	• 48 User configuration with a T1/E1 interface, 2 additional BRI trunk ports, 4 Analog ports (FXS), 8 PoE ports, 1 VIC slot for expansion • Feature licenses for user configurations of call control, voicemail and Cisco Unified IP Phones **Note:** requires two twenty-four (24) port Cisco Catalyst Express 520 switch

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