



Cisco Unified CallManager Express 4.0

Cisco® Unified CallManager Express provides call processing for Cisco IP phones for small office or branch office environments. It enables the large portfolio of Cisco Integrated Services routers to deliver IP telephony features that are commonly used by business users to meet the voice and video communications requirements of the small or medium-sized office. Cisco Unified CallManager Express enables the deployment of a cost-effective, highly reliable communications system using a single Cisco Integrated Services Router using Cisco IOS® Software.

The Cisco Unified Communications system of voice and IP communications products and applications enables organizations to communicate more effectively—helping them to streamline business processes, reach the right resource the first time, and impact the top and bottom line. The Cisco Unified Communications portfolio is a key part of the Cisco Business Communications Solution—an integrated solution for organizations of all sizes which also includes network infrastructure, security, and network management products, wireless connectivity, and a lifecycle services approach, along with flexible deployment and outsourced management options, end-user and partner financing packages, and third-party communications applications.

Customers can now scale IP telephony to a small or medium-sized site with a system that is very simple to deploy, administer, and maintain. Cisco Unified CallManager Express is best suited for customers who are looking for an integrated, reliable, feature-rich telephony system up to 240 users.

KEY FEATURES AND BENEFITS

IP telephony is currently undergoing tremendous growth, accelerated by access to value-added features and applications only IP telephony can provide to the end user. Additionally, the cost benefits of converging data, voice, and video onto a single network are adding to the rapid acceptance of this technology. Because it is integrated into a router, Cisco Unified CallManager Express enhances the advantages of convergence by offering the following unique benefits:

- **Cost-effective operations through a single, integrated voice-and-data platform for all branch office needs**—Highly reliable routers, including the Cisco 2800 and 3800 series Integrated Services Router platforms, provide robust quality of service (QoS), network security, encryption, firewall, and network modules that deliver content networking and enhanced VPN services to address branch and small-office business needs. The system delivers integrated IP telephony, voice mail, and automated attendant functionality, which allows customers to deploy one device to address all their business needs. This simplifies management, maintenance, and operations, and delivers a lower total cost of ownership (TCO).
- **Sophisticated key system and PBX capabilities**—Small offices have different workflows and require specialized features to support their work practices. Cisco Unified CallManager Express delivers a robust set of telephony features for the small office, and delivers unique value-added capabilities through Extensible Markup Language (XML) that enhance the productivity of the end user and of the business, that cannot be delivered by traditional systems.
- **Interoperability with Cisco Unified CallManager**—Customers can deploy Cisco Unified CallManager at larger sites and deploy Cisco Unified CallManager Express at branch office locations where local call processing is required. Using H.323 or SIP trunking calls can be routed over the WAN with calling party name and number information, plus compressed voice for better WAN bandwidth utilization.

- **Investment protection and ease of upgrade to centralized call-processing systems**—Through a simple software configuration change on the router, a system with Cisco Unified CallManager Express can be converted to a highly available survivable telephony gateway for a remote site in a centralized Cisco Unified CallManager deployment architecture. This flexibility helps ensure full investment protection to successful businesses that might outgrow the system capacity.
- **Remote maintenance and troubleshooting**—Customers can use the industry-standard Cisco IOS Software command-line interface (CLI) or user-friendly graphical user interface (GUI) to configure and administer Cisco Unified CallManager Express.

Cisco Unified CallManager Express allows a Cisco Integrated Services Router to provide call processing for locally attached IP and analog phones. All the necessary files and configurations for IP phones are stored internally on the router providing a single platform solution. In addition, the solution offers a robust set of public switched telephone network (PSTN) interfaces, a wide selection of WAN interfaces, integrated voice mail and automated attendant, and a full phone portfolio. Cisco IOS Software offers industry-leading voice features designed for IP-based telephony systems, such as H.323 and Session Initiation Protocol (SIP) signaling, advanced QoS, and interworking with an H.323 gatekeeper or SIP Proxy Server, all available for use with Cisco Unified CallManager Express deployments. In addition, integrated functions such as channel service unit/digital service unit (CSU/DSU) and Network Termination 1 (NT1) devices are available with digital PSTN interface cards to provide flexible and robust voice services.

IP Phone Support

While Cisco Unified CallManager Express is typically suitable for fewer than 200 users, a maximum of 240 IP phones can be supported across a choice of platforms. IP phone operation is similar to Cisco Unified CallManager, allowing for ease of user training if customers migrate to a Cisco Unified CallManager as they outgrow the Cisco Unified CallManager Express solution. The maximum numbers of phones supported on each platform with Cisco Unified CallManager Express 4.0 is listed in Table 1.

Table 1. IP Phone Support per Platform

Platform	Maximum Phones
Cisco IAD 2430 Series Integrated Access Devices	24
Cisco 2801 Integrated Services Router, 1760-V and 1751-V Access Routers	24
Cisco 2811 Integrated Services Router, 261xXM and 262xXM Series Access Routers	36
Cisco 2821 Integrated Services Router, 265xXM Access Router	48
Cisco 2691 Multiservice Access Router	72
Cisco 2851 Integrated Services Router	96
Cisco 3725 Multiservice Access Router	144
Cisco 3745 Multiservice Access Router	192
Cisco 3825 Integrated Services Router	168
Cisco 3845 Integrated Services Router	240

Figure 1. Cisco Unified IP Phone Family



Cisco Unified CallManager Express supports the Cisco Unified IP Phone models; 7971G-GE, 7970G, 7961G/GE, 7960G, 7941G/GE, 7940G, 7912G, 7911G, 7905G, 7902G, wireless phone 7920, expansion module 7914, IP Conference station 7936, and Cisco Unified Video Advantage video telephony offering. These intelligent Cisco Unified IP phones (Figure 1) support the following enhancements:

- Display based features with easy to use soft keys
- Customer choice of using SCCP or SIP protocol for commonly deployed IP phones
- Language localization and feature customization along with support for XML based applications
- Cisco IP phones support 802.3af or Cisco pre-standard Power over Ethernet from a Cisco Catalyst® switch, Cisco EtherSwitch® network modules or high-speed WAN interface cards available on the Cisco 2800, 3700, and 3800 series routers

Product Features

Cisco Unified CallManager Express provides a sophisticated set of key system and PBX telephony features especially designed for the small and medium business or branch location. It also provides several industry-unique features that are not available from other traditional telephony solutions. Currently, the following features (listed in Table 2) are available with Cisco Unified CallManager Express Version 4.0—consult Feature Navigator on <http://www.cisco.com> for the latest Cisco IOS version.

Table 2. Cisco Unified CallManager Express 4.0 Features

Features	Description
Phone Features	Maximum 240 phones per system, up to 34 line appearances per phone, Attendant console functionality using 7914s, Fast Transfer-blind or consult, Busy Lamp, Silent Ringing options, Automatic line selection for outbound calls, Call Forward on Busy/No answer/All, Call Forward All Restriction Control, Do Not Disturb (DND), Feature ring with DND set, IP phone Display of DND State, Divert Calls direct to VM, Customization of softkeys, Enable/disable call-waiting notification per line, Call waiting with overlay DN, Call waiting ring, Dual line appearances per button, After-hours toll bar override, Auto-answer with headset, European date formats, Hook flash pass through across analog PSTN trunks, Idle URL-Periodically push messages or graphics on IP phones, Last number redial, Local directory lookup, On-hook dialing, Station speed dial with configuration changes from IP phone, 10,000 number System speed dial, Silent and feature ring options, Access features using softkeys or feature access codes, Remote Teleworker IP Phone support, dynamic hunt group join/leave. Support for analog phones using Cisco Analog Telephone Adapter (ATA) or VG 224 gateway in SCCP mode. Support of fax machines on FXS ports or ATA using H.323, SCCP or SIP. XML services on Cisco Unified IP phones. Station to Station Video with voice using Cisco Unified Video Advantage endpoints.
Trunk Features	Analog FXO (loop & ground start), DID, E&M, BRI/PRI support (NI2, 4ESS, 5ESS, EuroISDN, DMS100, DMS250, and several other switch types currently supported in Cisco IOS Software), Caller ID, Automatic number identification (ANI), calling name, Digital trunk support-(T1/E1), Direct inward dial, Direct outward dial, E1 R2 support, Dedicated trunk mapping to phone button, H.323 Trunks with H450 support, H450.12 Automatic Detection of H450 support for remote H323 endpoints, H.323 to H.323 Hairpin Call Routing for non-H.450 compliant H323 endpoints, Session Initiation Protocol (SIP) trunks and RFC2833 support, Transcoding G.711, G.729a, G.723. ECMA/ISO ISDN Q.SIG supplementary services of basic calls, Call forwarding (CFB, CFNA, CFU), Calling name/Line Identification (CLIP/CNIP), Connected Line/Name Identification (COLP/CONP), and Message Waiting/Message Center support.
System Features	Account Codes and Call Detail Record (CDR) field entry, Call Back 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, 3 way Conference, Computer Telephony Integration (CTI) with Microsoft CRM and Outlook using Cisco IOS Telephony Services Provider (TSP), Directory services using XML, Hunt Groups-Sequential, Circular, and Longest-idle, Hunt Group Dynamic login/logout, Hunt Groups statistics-daily and hourly, Intercom, Music on Hold (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 though IP Phones or to external system, Per-call caller ID blocking, Secondary dial tone, Standards-based Network Call Transfer and Call Forwarding through H450.2 and H450.3, additional System speed dial option through XML service, Time of Day, Day of Week, call blocking, Customizable called name display, Support of SRST Fallback Service phone auto registration, Basic ACD (3 queues) with Auto-Attendant and call statistics, display number of calls in queue on IP Phone, Agent login/logout of B-ACD hunt group. Secure Voice IP Phone Certificate Authentication and Provisioning via Cisco IOS CAPF plus Secure Device Signaling using Transport Layer Security (TLS).
Voice Mail Features	Integrated voice mail and auto-attendant solution with Cisco Unity Express, Integration with Cisco Unity voice mail/unified messaging, or third-party voice mail integration (H.323, SIP, or dual tone multifrequency [DTMF]).
International Localizations	Per phone localization up to five locals per system including; English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Norwegian, Swedish, Japanese Katakana and Russian.
Management Features	Automatic assignment of extensions to IP phones for easy phone additions, Single Web-based GUI for moves, adds, and changes for system and integrated voice-mail with three levels of GUI Admin; System administrator, Customer Administrator, and User. Centralized Network Management deployments using Cisco CNE Configuration Engine, Telephony-service setup and configuration using HTML Quick Configuration Tool, Simplified Network Management Protocol (SNMP) support with CiscoWorks IP Communications Operations Manager or third party management consoles.

SUMMARY

Cisco Unified CallManager Express delivers telephony features required by business users to meet the requirements of the small office or branch location. The Cisco Integrated Services Router offers high reliability and advanced applications including: IP telephony, VPN, firewall, encryption, dial access, Ethernet switching with Power over Ethernet, and content networking, within a single all in one platform, that is easy to deploy and maintain, resulting in a lower total cost of ownership (TCO).

As the business expands Cisco Unified CallManager Express can be easily migrated to a Cisco Unified CallManager large-scale IP telephony solution. All hardware and software used by this solution is fully compatible with Cisco Unified CallManager and Cisco Unified Survivable Remote Site Telephony (SRST), giving the customer investment protection.

SERVICE AND SUPPORT

Using the Cisco Lifecycle Services approach, Cisco Systems® and its partners offer a broad portfolio of end-to-end services. These services are based on proven methodologies for deploying, operating, and optimizing IP Communications solutions. Upfront planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operate services reduce the risk of communications downtime with expert technical support. Optimize services enhance solution performance for operational excellence. Cisco and its partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your business needs.

For more information about Cisco Services, see [Cisco Technical Support Services](#) or [Cisco Advanced Services](#).

FOR MORE INFORMATION

For more information about Cisco Unified CallManager Express, please visit <http://www.cisco.com/go/ccme>.

If you have questions send e-mail to access-ccme-cue@cisco.com.

**Corporate Headquarters**

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters

Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters

Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

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