



A Quick Guide to
CallManager
Express Solutions



Registered
Partner

CallManager Express

Converging voice and data over the same network with a Cisco IP Communications solution can make a wealth of applications available to your business resulting in increased productivity. The power of the Internet will be harnessed in your business communications.

Cisco CallManager Express delivers powerful call management capabilities for up to 240 extensions. Call processing is delivered as a software service running on a Cisco router. This allows a business to realise amazing value, as a single device can provide a small to medium sized business with telephony, VPN, Firewall and IDS services.

Services such as Virtual Private Networking grant secure access for your employees to network data and services from remote locations, dramatically

increasing productivity. Firewall and IDS services protect your network from attacks that can cause disruption and downtime.

With multiple services delivered on a single platform, the initial outlay on infrastructure is reduced. Additionally, management of the platform is performed through a single web-based graphical user interface, allowing moves, adds and changes to be made simply from office or remote locations. This combination allows the complexity of initial configuration and ongoing management and therefore Total Cost of Ownership (TCO) to be reduced.



CallManager Express Core Features

System Features <ul style="list-style-type: none">• Call Conferencing• Paging• Intercom• Call Transfer<ul style="list-style-type: none">- Consultative- Blind• Call Forwarding<ul style="list-style-type: none">- Busy- No Answer- All Calls• Call Hold• Call Retrieve• Call Pickup on Hold calls• Call Waiting• Tone on Hold for internal calls• Tone on Transfer for internal calls• Music on Hold for external calls• Music on Transfer for external calls• Music on Hold• Music on Hold Live Feed-external source• Distinctive Ringing (internal call versus external call)• International Language Support<ul style="list-style-type: none">- German- French- Italian- Spanish• System Speed Dial via XML Service• Directory services using XML• Date and Time Synchronisation with Network Time Protocol (NTP)	System Features (continued) <ul style="list-style-type: none">• Web based GUI (Graphical User Interface) for moves; adds and changes• GUI Customisation capabilities• IVR Automated Attendant• Class of Restriction to restrict calling capabilities• Inline Power for IP Phones• Standards based Call Transfer and Call Forwarding (H450.2 and H450.3)• Computer Telephony Integration (CTI) support with Telephony API (TAPI) Lite Interface• Call Detail Record (CDR) generation via RADIUS• Interworking with Cisco Gatekeepers• Hook flash pass through to a central office for analogue phones Voice mail Features <ul style="list-style-type: none">• Integration with Unity Voicemail• Integration with Unity Express<ul style="list-style-type: none">- AIM Card version provides 8 hours of storage- Network module version provides 100 hours of storage- Third party voicemail applications such as Stonevoice	Phone Features <ul style="list-style-type: none">• Single Line and Multi-Line IP Phones• IP Conference Station• Fax Machine• XML Services on Phones• Max 240 phones per system• 6 Line appearances per 7960 phone• On-hook dialling• Local Directory lookup• Speed Dial• Last number redial• Idle URL- Push messages on to 7940 and 7960 phones• Attendant console functionality using 7960 and 7914 units• Configurable ring types• Message Waiting Indicator (MDI) Trunk Features <ul style="list-style-type: none">• DID/DOD• BRI/PRI support for all Switch types that IOS supports• Caller Identification<ul style="list-style-type: none">- Display- Blocking- Caller Name Display- Automatic Number Identification• Analogue Foreign Exchange Office (FXO), DID• Digital Trunk T1/E1• WAN Links:<ul style="list-style-type: none">- Frame Relay- ATM• Multi-Link Point-To-Point Protocol (MLPPP)• Digital Subscriber Line (DSL)
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CallManager Express Components



Cisco 2801 CCME Router

- CallManager Express Feature Set
- Supports up to 24 Phones
- Optional Voicemail (Unity, Unity Express-AIM only or StoneVoice)
- Support for AIMs, WICs, VWICs and VICs
- Integrated Dual 10/100 Fast Ethernet Ports
- 2 HWIC slots
- Additional Security Services available (VPN Services, IOS Firewall and Encryption)



Cisco 2811 CCME Router

- CallManager Express Feature Set
- Support for up to 36 Phones
- Optional Voicemail (Unity, Unity Express or StoneVoice)
- Support for AIMs, NMs, WICs, VWICs and VICs
- Two Integrated 10/100 Fast Ethernet Ports
- 4 HWIC Slots
- Additional Security Services available (VPN Services, IOS Firewall and Encryption)



Cisco 2821 CCME Router

- CallManager Express Feature Set
- Support for up to 48 Phones
- Optional Voicemail (Unity, Unity Express or StoneVoice)
- Support for AIMs, NMs, WICs, VWICs and VICs
- Two Integrated 10/100/1000 Ethernet Ports
- 4 HWIC Slots
- Additional Security Services available (VPN Services, IOS Firewall and Encryption)



Cisco 2851 CCME Router

- CallManager Express Feature Set
- Support for up to 96 Phones
- Optional Voicemail (Unity, Unity Express or StoneVoice)
- Support for AIMs, NMs, WICs, VWICs and VICs
- Two Integrated 10/100/1000 Ethernet Ports
- 4 HWIC Slots
- Additional Security Services available (VPN Services, IOS Firewall and Encryption)



Cisco 3825 CCME Router

- CallManager Express Feature Set
- Support for up to 168 Phones
- Optional Voicemail (Unity, Unity Express or StoneVoice)
- Support for AIMs, NMs, WICs, VWICs and VICs
- Integrated GE Ports with Copper and Fibre support
- 4 HWIC Slots
- Additional Security Services available (VPN Services, IOS Firewall and Encryption)



Cisco 3845 CCME Router

- CallManager Express Feature Set
- Support for up to 240 Phones
- Optional Voicemail (Unity, Unity Express or StoneVoice)
- Support for AIMs, NMs, WICs, VWICs and VICs
- Integrated GE Ports with Copper and Fibre support
- 4 HWIC Slots
- Additional Security Services available (VPN Services, IOS Firewall and Encryption)



HWIC Power over Ethernet switches 4 and 9 port units

The 4 and 9-port Cisco® EtherSwitch® 10/100 high-speed WAN interface cards (HWICs), supported in the Cisco 2800 and Cisco 3800 series integrated services routers, offer small-to-large-size businesses and enterprise branch office customers the option to integrate switching and routing in one device.

This combination offers ease of configuration, deployment, and management while using the powerful characteristics of Cisco routing and Cisco Catalyst® switching features.



Cisco 3560 24 and 48 Port PoE Switches

The Cisco® Catalyst® 3560 Series is a line of fixed-configuration, enterprise-class switches that include IEEE 802.3af and Cisco pre-standard Power over Ethernet (PoE) functionality in Fast Ethernet and Gigabit Ethernet configurations.

The Cisco Catalyst 3560 is an ideal access layer switch for small enterprise LAN access or branch-office environments, combining both 10/100/1000 and PoE configurations for maximum productivity and investment protection while enabling the deployment of new applications such as IP telephony, wireless access and video surveillance.



ATA 186 and 188

The Cisco Analog Telephone Adaptor (ATA) products are standards-based communication devices that deliver true, next-generation voice-over-IP (VoIP) terminations to businesses and residences worldwide.

The Cisco ATA 186 supports two voice ports, each with its own independent telephone number, and a single 10BaseT Ethernet port.

The Cisco ATA 188 supports two voice ports, each with its own independent telephone number, and two 10/100BaseT Ethernet ports.

PSTN Connection

Part code	Description
VVIC-1MFT-E1=	1 port ISDN PRI card
VVIC-2MFT-E1=	2 port ISDN PRI card
NM-HDV-1E1-30	Single port ISDN PRI module
NM-HDV-2E1-60	Dual port ISDN PRI module
NM-HDV2-1T1/E1	Single port ISDN PRI module
NM-HDV2-2T1/E1	Dual port ISDN PRI module
VIC2-2BRI-NT/TE=	2 port ISDN-2 card

Analogue Device Connection

Part code	Description
VIC2-2FXS=	2 port Fax, Modem or Analogue phone card
VIC-4FXS/DID	4 port Fax, Modem or Analogue phone card
NM-HDA-4FXS	4 port Fax, Modem or Analogue phone module
VIC2-2FXO=	2 port PBX or Analogue Phone Line card
VIC2-4FXO=	4 port PBX or Analogue Phone Line card
VIC2-2E/M=	2 port PBX connection card

Cisco IP Phone Range

7905 IP Phone



- Pixel-based display
- Four soft keys and Scroll bar
- Menu key used to retrieve voicemail and display missed, outgoing and incoming calls
- Hold key
- Volume-control
- Hearing-aid-compatible handset
- Message Waiting Indicator
- XML Applications can be delivered to the display.

7912 IP Phone



- Pixel-based display
- Four soft keys and Scroll bar
- Menu key used to retrieve voicemail and display missed, outgoing and incoming calls
- Hold key
- Volume-control
- Hearing-aid-compatible handset
- Message Waiting Indicator
- XML Applications can be delivered to the display
- Integrated Ethernet Switch

7940 IP Phone



- Pixel-based display
- Four soft keys and Scroll bar
- Menu key used to retrieve voicemail and display missed, outgoing and incoming calls
- Hold key
- Volume-control
- Hearing-aid-compatible handset
- Message Waiting Indicator
- XML Applications can be delivered to the display.

7960 IP Phone



- Large Pixel-based display
- Message, Directories, Settings, Services and help buttons
- 2 port Ethernet switch
- Dedicated headset port
- Adjustable footstand
- 24+ Ring tones
- 6 line feature buttons, Expandable Line capability (7914)
- 4 dynamic soft keys
- XML and Web Applications can be delivered to the display
- Speakerphone on/off, Volume and mute buttons
- Hearing Aid Compatible
- Message Waiting Indicator

7914 Expansion module for the 7960G



- Adds 14 line or speed dial buttons to the 7960
- Large LCD screen
- Buttons are programmable and illuminate
 - Off/dark - Line Available
 - Green - Line in use by you
 - Amber - Line Ringing
 - Red - Line in use by someone else
 - Flashing Green - You are holding a call
 - Flashing Red - Someone else is holding a call

7970 IP phone



- Large back lit, high resolution colour touch screen display
- Message, Directories, Settings, Services, Display and Help buttons
- 2 port Ethernet switch
- Dedicated headset port
- Adjustable footstand
- 24+ Ring tones
- 8 line feature buttons
- 5 dynamic soft keys
- XML and Web Applications can be delivered to the display
- Speakerphone on/off, Volume and mute buttons
- Hearing Aid Compatible
- Message Waiting Indicator

7920 Wireless Phone



- Pixel-based display
- Two soft keys, Four-way rocker switch
- Hold key and Mute key, Volume-control, Menu key
- Multi-line appearance (six extensions/speed dials)
- Calling name and number display
- Three-way calling (conference), Pre-dialling before sending, Redial, Call hold/resume
- Call mute, Call pick-up/Group pick-up, Call Forward, Call Transfer, Call Waiting
- "You Have Voice Mail" message on display

STONEVOICE



SoftSwitch Answering Machine - SSAM

SSAM is a Unified Messaging solution built to integrate and extend the functionalities of Cisco Systems™ CallManager Express (CCME) and CallManager. With SSAM users have got better access to and control over their communications. SSAM collects phone messages when user is not able to answer the call and allows users a way to access and manage messages from anywhere, at any time, regardless of access device or media type.

IVR Manager - CCME Auto Attendant

IVR Manager is a completely Web Based Automated Attendant based on IOS TCL IVR to provide any kind of IVR behaviours through TCL Scripts. It's able to manage operators and menu parameters configurations, file audio selections and schedule any kind of behaviours (day, night, break, holidays).

BILLY - Call Detail Recording Application

BILLY is a reporting tool which collects the Call Detail Records (CDR) generated by an IP Telephony solution based on Cisco Systems™ CallManager Express (CCME).

BILLY allows collecting and filtering of Call Detail Records generated by CCME. With Billy it's possible to create and schedule reports in order to analyze and monitor the company telephony traffic.

SPEEDY - Directory Manager

SPEEDY is a service which enables the creation of customisable directories, extending the functionality of Cisco Systems™ CallManager Express (CCME).

Speedy allows users to add/delete/modify public and personal directories through a Web interface and/or directly through XML on the IP phones (actually 7940-7960).

Queue Manager

Queue Manager is a powerful tool for adding queuing capabilities to operators on IP Telephony implementations based on Cisco Systems™ CallManager Express (CCME). Through a web interface it is possible to define different queues, composed by a certain number of operators. It is easily possible to customize audio prompts for calls on hold, busy or no-answer on every queue and define call distribution policies based on random or priority.

StoneFax

StoneFax delivers a complete IP fax server solution, allowing users to send and receive faxes directly from any email client or through a dedicated web interface.

StoneFax is easy to use and is integrated with any e-mail server using standard SMTP/POP3 protocols without forcing specific infrastructure requirements.

CONCERTO - Music on Hold Server

CONCERTO is an application that allows choosing any kind of audio file as a Music On Hold for an IP Telephony solution based on Cisco Systems™ CallManager Express (CCME).

CONCERTO provides an external IP audio streaming to the ITS which is used as Music On Hold; multiple audio formats are available so the source file could be .wav, .mp3 or even an audio track of Compact Disk inserted in the CD-Rom driver.

Unity Express

Cisco Unity Express supports the Cisco IP Communications Express solution, which also includes Cisco CallManager Express, by providing voice mail and automated attendant services specifically designed for the small and medium branch office environment. With Cisco Unity Express, users can easily and conveniently manage their voice messages and greetings with intuitive telephone prompts and a straightforward Graphical User Interface that allows simple administration.

Unity

Cisco Unity is a powerful Unified Communications solution that provides advanced, convergence-based communication services on a platform that offers the utmost in reliability, scalability, and performance.

Cisco Unity integrates with the desktop applications -- such as Microsoft Outlook and Lotus Notes -- that you use everyday to improve communications, boost productivity, and enhance customer service capabilities across your organisation. With Cisco Unity, you can listen to your e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine - increasing organizational productivity while improving customer service and responsiveness.

Microsoft CRM Integration using Cisco CRM Communications Connector

Cisco CRM Communications Connector (CCC) for Cisco CME is an application that integrates Microsoft CRM (a customer relationship management database and application) with Cisco CallManager Express systems. Cisco CRM Communications Connector for Cisco CME improves customer service by providing the following functionality for Cisco CME systems:

Customer-record lookup from a caller ID that is displayed for a call.

Inbound and outbound call-duration tracking. Click-to-dial capability.

Cisco CRM Communications Connector uses the standard Microsoft telephony API (TAPI), which in turn utilises the underlying Cisco IOS TAPI service provider (TSP) to communicate with the call routing server. Cisco CRM Communications Connector uses a client/server model. The client provides an interface for TAPI and for the user. The server provides an interface to the Microsoft CRM server. When the Cisco CCC client requests interaction with the Microsoft CRM server, Cisco CRM Communications Connector server components perform the interaction. The client has no direct knowledge of Microsoft CRM objects.



Headset Range

Plantronics has been helping people communicate more easily and effectively for over 40 years. People appreciate the superior sound quality, all-day comfort and reliability that set our headsets apart. In Contact Centres and busy offices around the world, Plantronics has defined the standards in sound quality, using the very latest technologies.

Arc Express

A fast, informed way of managing calls. Information is presented only when necessary dramatically reducing call answer time. Allows the operator to route callers quickly using high-speed searches. Features include:

- Call answer, disconnect from client
- Call queuing on CLID, DNIS with prioritisation. Multiple queues
- Call hold
- Busy destination detection
- Busy Lamp Field / status detect

NET6 XML Application Integration

Display any information on any addressable IP device in your customers network, significantly increasing the value of the IP phone

Off the shelf applications include:

- Visual voicemail
- Zone Paging



Kirk Telecom- DECT Systems

KIRK solutions are modular, GAP compliant solutions. All KIRK solutions consist of a KIRK Wireless Server and KIRK Handsets. The solutions are customized to the individual customer needs by adding KIRK Base Stations and/or KIRK Repeaters.

The range of KIRK Handsets furthermore assures that the needs of the individual employee within an organisation are met; the employees simply choose the handset that best serves their needs.

There is therefore a KIRK solution - and a KIRK Handset - for all customers, whether it be a small retail business with five employees or a large hospital with several hundred employees.



IP Blue

IP Blue provides customers with powerful ways to extend the benefits of IP Telephony beyond the desktop with our award-winning suite of softphone products.

Our products enable you to leverage your hardware investment and create an extensive array of efficient, functional and highly mobile IP telephony applications.

IP Blue Soft phones are recognised globally as the leading Enterprise Class Softphones available on the market today. Our softphone products are certified by Cisco as compatible for use with Cisco CallManager/CallManager Express.

About L3n

L3n specializes in Internet Protocol (IP) technologies, Internet/IP products and IP network design. We have in-depth expertise in Internet communications and associated technologies. Our directors have over 60 years of senior network management experience and have designed and operated the world's largest public IP and X.25 networks for organisations such as UUNET, British Telecom, CompuServe, The Ministry of Defence, PIPEX, and Oxford University.

L3n tailors quality service-based solutions for businesses ranging from five person enterprises through to multi-national 'blue chip' companies. The majority of our new business comes from referrals from existing customers.

L3n Deliver

Consultancy and design

Following an initial (free) network review, our consultants will work with you to provide a cost effective solution that addresses your business needs. Our engineers have broad experience and have implemented solutions from the smallest SME or satellite office LAN, to nationwide carrier networks.

Implementation

Consultancy and theory are fine - but businesses need solutions. L3n has a successful track record in the delivery of turnkey solutions for businesses of all sizes.

Monitoring and Management

Your network is mission critical. Your business is probably not 9-5. Not all companies have the in-house capability to monitor and respond to network problems 24*7. L3n has a range of solutions to complement your internal support processes and staff.

Troubleshooting

Unfortunately networks occasionally have problems. Whilst some problems are obvious, others are intermittent and unpredictable. In fact, without appropriate diagnostic tools, some problems can be impossible to eliminate. L3n has both the equipment and engineers to get to your site quickly, diagnose the problem and recommend remedial action.

L3n Manage

L3n can provide standard or bespoke management packages to suit your requirements. These packages can be use in conjunction with L3n Monitor to provide real network peace of mind.

Packages include :-

- Working hours and 24*7 support with remote diagnostics and telephone support
- Working hours and 24*7 response to monitoring alarms (availability, packet loss, jitter, delay)
- Onsite callout with guaranteed response times
- Hardware sparing and replacement
- Regular pro-active consultancy and housekeeping meetings

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