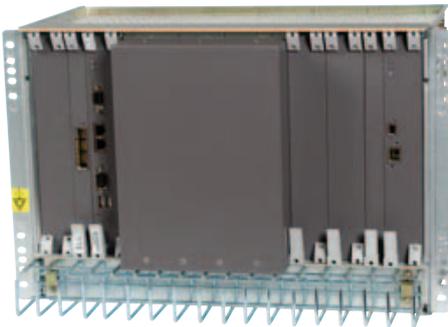


ERICSSON MX-ONE™ TELEPHONY SYSTEM

Telephony Server 2.0, Media Gateway 2.0
and Media Gateway Classic 2.0



The Ericsson MX-ONE™ Telephony System is a server-based IP-PBX, based on the Linux operating system—an open source operating system capable of running real-time applications such as telephony.

This version is designed as a standalone IP PBX system. Using Ericsson's distributed architecture, the MX-ONE™ Telephony System can be clustered with up to 10 servers, thus allowing scalability for up to 7,000 users per distributed single system. Additional clusters may be networked over IP to allow virtually unlimited scalability in a large network environment.

The MX-ONE™ Telephony System offers the following features:

- Support for IP terminals (phones and clients),
- Digital trunk interfaces to public networks (PSTN, PLMN)
- IP networking or circuit-switched QSIG connectivity to other MX-ONE™ MD110 voice networks.

The MX-ONE™ Telephony System consists of modules called LIMs. Each LIM is composed of a Telephony Server and a Media Gateway, or a Media Gateway Classic. In the case of the Media Gateway Classic, the Telephony Server is embedded on a board hosted by the Media Gateway chassis.

It is centrally managed by the MX-ONE™ Manager, an Active Directory-based management suite, and is combined with Ericsson MX-ONE™ Communication Organizer, offering IP-based operator functionality and PC/Web-based call control applications. It also provides integration with IT back-office applications, such as MS Outlook and Lotus Notes.

The Ericsson MX-ONE™ Messaging application suite, also introduced as a component of the MX-ONE™ Version 2 portfolio, offers complete voicemail and unified messaging (voice/fax/e-mail) services. The suite includes integration with MS Outlook, Lotus Notes and Novell GroupWise. Additionally, the MX-ONE™ Telephony System can be combined with the Ericsson Solidus eCare™ 4.1 Multi-Media Contact Center application suite for top-of-the-line customer care services.

Typical deployment scenarios include expanding voice networks with new (Greenfield) sites, replacing (forklifting) older PBXs in the network, or when standardizing communication equipment with a server-based solution.

The MX-ONE™ Telephony System comes pre-packaged with 100/200 Advance telephony user licenses. Extra user licenses can be added in increments of one user up to a maximum of 700 users per server. A maximum of 7,000 users in a distributed configuration is available with this software release. If purchased with the 19" chassis, the user licenses can be any combination of IP, analog, digital and Mobile Extension extensions.

MX-ONE™ Telephony Server 2.0

The Telephony Server 2.0 application handles the call control logic of the telephony application—such as for dialing plans, number conversions, call set-up and tear-down—with the same business-class telephony services currently available on the Ericsson MD110.

The server appliance hardware on which the Telephony Server application runs is in a pre-configured HP ProLiant rack-mountable server. The server has the following minimum configuration:

- Intel® Xeon G4P processor running at 3.4 GHz; 1024 MB RAM; 72 GB HDD, with redundancy options for duplicated CPU
- RAID1 hot-plug disk drives; redundant fans; and duplicated power supply

The Linux operating system, as well as the Telephony Server 2.0 application software, is installed and pre-configured in this release.

MX-ONE™ Media Gateway 2.0

Media Gateway 2.0 offers the necessary telephony interfaces for packet data networks (LANs), as well as for public (PSTN/PLMN) and private (via QSIG) circuit-switched networks.

Media Gateway offers the following features:

- Digital signal processors (DSP) to convert non-IP voice signals to IP and vice versa (codecs)
- DTMF tone generators and receivers
- Eight T1/E1 network interfaces and four POTS analog terminal interfaces to connect G3 fax machines or emergency phones

MX-ONE™ Media Gateway Classic

The Media Gateway Classic, a 19" rackable chassis, offers the necessary telephony interfaces and DSP resources for voice gateway calls to packet data networks (LANs), as well as for legacy subscriber lines, such as analog and digital terminals. It also provides T1/E1 trunk access to public (PSTN/PLMN) and private (via E1-QSIG) circuit-switched networks. This new chassis integrates perfectly into today's IT infrastructures and has a smaller footprint than traditional voice systems.

In this configuration, the MX-ONE™ Telephony Server 2.0 is supplied as a card—the Embedded Server Unit—that fits directly into the chassis, eliminating the need for a separate server in the 19" rack. The classic chassis can hold any combination of digital and analog terminals for up to a total of 480 legacy subscribers per chassis.

MX-ONE™ Telephony Server - Embedded Server Unit (ESU)

The Embedded Server Unit is an IA-32-based server board embedded in the Media Gateway Classic with the following configuration: Intel® Pentium-M processor running at 1.4 GHz; 512 MB RAM; 20 GB HDD. The ESU performs exactly the same functions and runs exactly the same software as the Telephony Server.

Major enhancements introduced with this MX-ONE™ Telephony System release

- Scalability: From 1 to 10 nodes with a maximum of 7,000 users
- Full support for Solidus eCare 4.1 Contact Center Suite
- Full support for Mobile Extension
- Support for the IP-based Operator Assistant
- Enhanced feature support for IP terminals, including boss/secretary monitoring and multiple directory numbers with name selector (MNS) key system emulation
- Calling line identification display is supported on the analog interface
- Support for T1 ISDN PRI
- Enhanced emergency call handling (e.g. E911/112)
- Enhanced support of legacy interfaces (see MX-ONE™ Media Gateway Classic)
- Tightly integrated with a full suite of end-user and management applications

Benefits

The MX-ONE™ Telephony System enables customers to smoothly migrate towards a converged IP and mobile infrastructure. Adding a new IP-PBX node in a network is a future-proof investment, allowing cost reductions and seamless integration between sites using Voice-over-IP (VoIP).

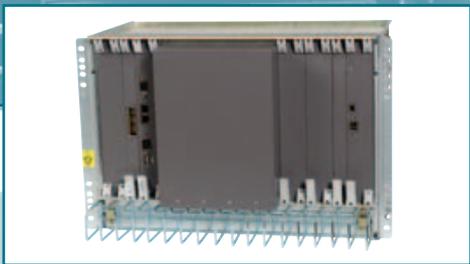
This approach offers a variety of cost-efficient functions when using IP phones (lower administration costs for moves and changes) and Ericsson Mobile Extensions (control of mobile phone costs and added telephony functionality for mobile workers). Cost-efficient networking is attained by reducing telecom costs using toll bypass with Ericsson IP networking. Additionally, the Linux-based server approach combined with the 19-inch building practice enables easy integration into existing IT environments.

Ask your Ericsson certified sales partner for a return on investment calculation.

Increased productivity

- Seamless mobility with hot desking on either mobile devices or IP devices (free seating, Ericsson Dialog IP telephones, Ericsson Mobile Extension, Personal Assistant PC)
- Allows for branch office integration with remote IP extensions giving the same look, feel and functionality as main office, as well as reducing training for staff.
- Provides a smooth migration path to next-generation solutions with no disruptions or risks to existing business.
- Future-proof investment with pure IP solution running on open-based platforms.

The MX-ONE™ Manager, MX-ONE™ Communication Organizer and MX-ONE™ Messaging applications are designed for tight interaction with today's IT applications. This enables full convergence of voice and data into the IT environment. It provides advantages from both the IT management and back-office application integration perspectives. This not only simplifies management of IT environments, but also helps to reduce the total cost of ownership.



Capacity

CAPACITY OF MX-ONE™ Telephony System	Minimum configuration	Maximum per system
Number of total extensions	100	7,000
Number of IP extensions	100	5,000
Number of non-IP extensions (Media Gateway Classic)	32	4324
- Analog extensions in Media Gateway/Media Gateway Classic	4	4324
- Digital extensions in Media Gateway Classic	32	4320
Mobile extensions in Media Gateway	0	5,000
Number of trunk/tie-line channels (T1/E1)	23/30	1840/2400
E1 channels used in QSIG connection to Media Gateway	30	2400

Technical Data

DIMENSIONS	
Telephony Server	19" x 1 U
Media Gateway	19" x 1 U
Media Gateway Classic	19" x 7 U
POWER	
Telephony Server	100–240 V AC, 460 W
Media Gateway	100–240 V AC, 25 W
Media Gateway classic with ESU	48 V DC, 250–350 W
CAPACITY	
IP PBX modules (LIMs) per system	Up to 10 LIMs in a single system
IP extensions	Up to 5000 in a multi-LIM system with 10 servers
Analog extensions	Up to 4324 extensions per system (with Media Gateway Classic)
Digital extensions	Up to 4320 extensions per system (with Media Gateway Classic)
Mobile extensions	Up to 500 per LIM (Media Gateway) and 5000 per system
Public trunks	1–8 ISDN PRI E1(30B+D)/T1 (23+D) to PSTN and/or PLMN per Media Gateway/LIM
Gateway capacity per node	72 concurrent gateway channels per Media Gateway and 120 concurrent gateway channels per Media Gateway Classic

Technical data

INTERFACES (MEDIA GATEWAY)

LAN/WAN	2 fast Ethernet 10/100 Mbps (for IP extensions and trunks)
PSTN/PLMN	Primary Rate Access ISDN 30B+D ETSI or ISDN T1 (23+D) ANSI
Supported standards	H.323v2 and 4 IPv4 DHCP, HTTP, Telnet, TFTP, FTP, SSH
Supported voice codecs	G.711 a-law and μ -law G.729a/b with voice activity detection (silence suppression & comfort noise generation) G.723.1
Quality of service	Diffserv (RFC 2474) for trunks and extensions IEEE802.1 p/Q extension-side only. Compatible with cRTP header compression algorithms
Survivability	Automatic fallback to PSTN on WAN failure

FUNCTIONALITY (TELEPHONY SERVER SOFTWARE 2.0)

Operator	Communication Organizer Operator Assistant PC-based application.
Call accounting	CDR/SMDR records compatible with 3rd party accounting systems
Ericsson Dialog terminals	Dialog 4187 analog phone with CLI Dialog 4220, 4222, 4223 and 4225 Digital phones* Dialog 4420 and 4422 Office IP phones* Dialog 4425 Vision IP phone* *See terminal datasheets for functionality with MX-ONE™ Telephony System.
Compatibility	Full interoperability with MD110 BC12.1 via IP networking or QSIG++ networking. Full compatibility with EBG V3.1 Service Pack 6 for branch office survivability and local presence.
System management (Telephony System Release 2.0)	The telephony system is managed centrally by MX-ONE™ Manager Telephony System 2.0* as part of the MX-ONE™ Manager application suite * See MX-ONE™ Manager application datasheet for details on functions and features.

APPLICATIONS

Applications	Uses MX-ONE™ Messaging* for Voicemail, fax and unified messaging. Uses MX-ONE™ Communication Organizer 2.0* end-user applications (Personal Assistant, Operator Assistant) with Active Directory database. Personal Assistant 2.0 –softphone, web and smartphone client applications* Operator Assistant 2.0 –operator attendant application * Uses Solidus eCare 4.1* application suite for full-featured multimedia. Contact center services. *See application datasheets for complete feature description
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