Cisco Media Experience Engine (MXE) 5600 Software Version 1.3

Product Overview

The Cisco® Media Transformation category, which includes the Cisco Media Experience Engine Family of products, is a new class of devices designed to expand the reach and usefulness of video as a collaboration and communications tool. As a part of the Cisco any-to-any vision for network-based media processing, the Cisco Media Experience Engine Family provides a suite of media adaptation and customization features that allow Cisco and our partners and systems integrators to develop a broad range of media-oriented applications for interactive media, streaming media, and video on-demand.

The Cisco Media Experience Engine (MXE) 5600 is a modular media-processing platform that combines advanced media-processing features with high performance and scalability to extend the reach of collaboration.

The Cisco Media Processing Platform Software Release 1.3 for the Cisco MXE 5600 offers an extensive feature set for developing and deploying new enterprise-class rich-media communications and collaboration services. Compliant with industry standards for both media formats and network signaling, the Cisco Media Processing Platform Software integrates with enterprise communications infrastructure to address today's enterprise requirements for video-enabled collaboration across a diversity of endpoints and applications. Capitalizing on the high performance and hardware scalability of the Cisco MXE 5600, the software allows deployments to scale to meet the needs of even the largest organizations.

- The software performs real-time media conversion from a broad range of input formats into the formats required by a diversity of destination endpoints, including Cisco TelePresence™, video conferencing, and unified communication platforms.
- In addition to two-way live interactive media transformation, the Cisco MXE Media Processing Platform Software also addresses content sharing by allowing users to easily share content such as PowerPoint presentations, across different video endpoints.
- In tandem with Cisco TelePresence™ Content Server (TCS), the Cisco MXE Media Processing Platform Software allows users to easily record and stream live meetings between a diverse set of endpoints.
- Its software converts codec, bit rate, frame rate, resolution, and aspect ratios, and performs intelligent scaling to maintain high quality regardless of input or output devices.
- Industry-standard interfaces for media transport, call signaling, and network management ease integration with existing applications and infrastructure.
- The modular software design capitalizes on the Cisco Media Experience Engine (MXE) 5600 series hardware design to provide for flexible, scalable configurations while maintaining high performance.
- The extensible architecture allows future enhancements and evolution to support new features and hardware.

Features and Benefits

Any-to-Any

- Support for diverse video conferencing endpoints:

  The Cisco MXE Media Processing Platform Software seamlessly connects Cisco TelePresence™ systems with a variety of desktop-based video conferencing units, which include standard-definition-based systems. The Cisco MXE Media Processing Platform Software optimizes the users' viewing experience by upscaling the videos from SD-based video endpoints.

- Integration with unified communication platforms:

  UC platforms such as IP phones and Webex are incorporating video as the key collaboration tool. The Cisco Media Experience Engine (MXE) 5600 helps these video-enabled UC platforms connect to Cisco TelePresence™ and video conferencing environments.

- Content sharing across diverse endpoints:

  Video collaboration can be further extended by sharing the contents such as PowerPoint presentations. Sharing this content across diverse set of video endpoints can be challenging between non-compatible systems. With the Cisco MXE Media Processing Platform Software, users can share presentation contents across multiple devices.

- Third party integration

  Most large organizations deal with heterogeneous telepresence and video conferencing endpoints, which commonly results in several islands of communications due to incompatibility issues. The Cisco MXE Media Processing Platform Software bridges the gap between these islands by allowing the Cisco TelePresence™ systems to connect easily across diverse set of third party video conferencing systems.

Flexibility

- Support for broad range of codecs and formats: The Cisco MXE Media Processing Platform Software supports a broad range of media codecs (video, audio, and encapsulation formats), allowing real-time conversion among different standards, depending on the use case and the requirements of the source and destination endpoints.
- Automatic detection of endpoint capabilities: In many cases, the Cisco MXE Media Processing software can determine the media requirements (format, codec, bit rate, frame rate, etc.) of a given endpoint, without the user having to manually specify this information. In case a user wants to configure more granular control of bandwidth the Cisco MXE Media Processing Platform Software also supports asymmetric transmit rates at both session and stream levels
- Network-accessible from anywhere: As a network-based system, the capabilities provided by the Cisco Media Processing Platform Software can be accessed by endpoints and applications anywhere in the network.
- Adaptability to many applications: The Cisco MXE Media Processing Platform Software support for interactive multimedia and signaling standards allows you to use the system in a broad range of applications and use cases.

High Performance and Scalability

- Real-time video processing: Using the state-of-the-art digital-signal-processing (DSP) technologies of the Cisco MXE 5000 series hardware, the Cisco MXE Media Processing Platform Software performs real-time processing of media, introducing negligible latency and thereby maintaining the quality of your experience even in live two-way communications and collaboration use cases.
- Network bandwidth optimization: The Cisco MXE Media Processing Platform Software can convert high-bandwidth media to lower-bit rate formats, conserving network resources while maintaining high quality.
- The Cisco MXE Media Processing Platform Software supports up to three Media Processing Modules that can handle 45 concurrent calls (90 ports)

Standards Compliance

- Support for broad range of media formats: The media-processing capabilities of the software support a broad range of media codecs and formats, complying with industry standards to simplify interoperability with a range of systems and endpoints.
- Session Initiation Protocol (SIP) signaling: SIP signaling allows you to use the Cisco MXE 5600 to extend your existing communications infrastructure (for example, Cisco Unified Communications Manager) to support new video-enabled collaboration capabilities.

Manageability

- The operations, administration, and management (OA&M) subsystem supports the core fault, configuration, accounting, performance, and security (FCAPS) management functions.
- Easy-to-use command-line interface (CLI): The Cisco MXE Media Processing Platform Software provides a CLI to ease the process of configuring, deploying, and upgrading Cisco MXE 5000 series systems.
- Simple Network Management Protocol (SNMP) management: Support for SNMP v3, v2, and v1 and a range of standard and Cisco product specific MIBs allow you to manage the Cisco MXE 5000 series systems with the existing network management infrastructure.
- Cisco Discovery Protocol: The Cisco MXE Media Processing Platform Software advertises its capabilities on the network with Cisco Discovery Protocol, streamlining system configuration tasks.

Security

- Secure administrator access is through the Secure Shell (SSH) Protocol; administrators can access information about user management and access profiles. Real-Time Control Protocol (RTCP) (Transport Layer Security [TLS]) control information, HTTP traffic (HTTPS), and SIP signaling (TLS) are all encrypted

Note: Product features are subject to change. An updated data sheet showing actual features will be released after first customer shipment.

Product Specifications

Table 1 lists the product specifications for the Cisco MXE 5600 Media Processing Platform Software Release 1.3.

Table 1. Product Specifications*

Supported Standards	Description
Media Codecs	
H.264 base profile	Industry-standard video codec, high quality at low bit rates, commonly used in video conferencing
H.264 enhanced	As implemented by Cisco TelePresence™ conferencing systems
Resolutions	180p, 360p, w288p, w448p, w576p, CIF, 4CIF, 720p
Advanced Audio Codec (AAC) LD	Industry-standard low-bit rate audio codec; very low delay
G.711 (a- and mu-law)	Telephony-standard audio codec
G.722	Low-bit-rate, high-quality audio codec
Transport Protocols	
RTP (RFC 3550)	Real-Time Transport Protocol: Standard video transport protocol
HTTP/HTTPS (RFCs 2616 and 2818)	Hypertext Transport Protocol (Secure)
TLS (RFC 5246)	Transport Layer Security
Signaling and Control Protocols	
SIP (RFC 3261)	Call-control signaling protocol for control of rich-media sessions
RTCP (RFC 3550)	Real-Time Control Protocol for media control

*Specifications subject to change

Supported Hardware Components

- Cisco MXE 5600 8-slot chassis
- Cisco MXE 5600 Network Processing Module
- Cisco MXE 5600 Media Processing Module
- Cisco MXE 5600 Shelf Manager Module

Licensing

Cisco MXE 5600 Media Processing Platform Software Release 1.3 supports licensing of capacity to meet customers' specific requirements. The capacity of the Cisco MXE 5600 is licensed in increments of 10 HD (720p) full-duplex ports (up to 30 HD full-duplex ports per media processing module).

Cisco MXE 5600 Media Processing Platform Software Release 1.3 also supports feature licensing. The first such separately licensed feature supports interoperability between Cisco TelePresence™ systems and other video conferencing endpoints.

Warranty Information

For warranty information about Cisco MXE 5600 Media Processing Platform Software Release 1.3, visit the Product Warranties page at Cisco.com.

Ordering Information

The Cisco Media Experience Engine (MXE) 5600 is currently orderable.

Cisco Services

Cisco and our partners provide a broad portfolio of intelligent, personalized services and support that can help you realize the full value of your video investment, increase business agility and network availability. This portfolio of services drives business transformation through a network-based collaboration platform that enables business to collaborate anywhere, anytime. For more information about these services, visit: http://www.cisco.com/go/services.

For More Information

For more information about the Cisco MXE 5600, visit http://www.cisco.com/go/mxe or contact your local Cisco account representative.

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Printed in USA C78-565194-03 08/11