Chapter 7: Video and Broadband Cable

This chapter provides only a subset of Cisco products and part numbers.

Video and Broadband Cable At-a-Glance

Product	Features	Page
VIDEO		
Cisco Digital Media Suite ***NEW UPDATES***	· Comprehensive offering of webcasting and video sharing, digital signage, and business IPTV applications that can help transform how organizations learn, grow, communicate, and collaborate · Support from the broad Cisco partner ecosystem of deployment, solution-development, and content-creation partners helps ensure a successful digital media implementation	7–2
Cisco Digital Media Encoders ***NEW UPDATES***	· Integrated components of the Cisco Digital Media Suite for Cisco Show and Share · Provides live and on-demand streaming digital media across an IP network · Cisco Digital Media Encoder 1100 is a portable encoder, and Cisco Digital Media Encoder 2200 is a multiprocessor, studio-quality audio and video encoding appliance	7–3
Cisco Digital Media Manager ***NEW UPDATES***	· Integrated component of the Cisco Digital Media Suite for webcasting and video sharing, digital signage, and business IPTV applications · Web-based application allows content authors to easily manage and publish content to the Cisco Show and Share, Cisco Digital Signs, or other endpoints	7–4
Cisco Digital Media Players ***NEW UPDATES***	· Highly reliable, IP-based hardware endpoints that enable digital signage and business IPTV through the ability to play high-definition live and on-demand video, motion graphics, Web, and dynamic content on digital displays	7–5
Cisco LCD Professional Series Displays ***NEW UPDATES***	· Large-format professional-quality displays ideally suited for digital signage and business IPTV solutions · 32-, 40- and 52-inch models and offer full 1080p resolution	7–7
Cisco Show and Share ***NEW UPDATES***	· Integrated component of the Cisco Digital Media Suite for webcasting and video sharing · Provides the ability to create live and on-demand video content and define who can watch specific content · Offers viewer collaboration tools such as commenting, rating, and word tagging; and it provides comprehensive access reporting.	7–8
Cisco Unified Communications	For product information on Cisco's Unified Communication products, refer to Chapter 4, "Collaboration."	See 4–1
Cisco TelePresence	For product information on Cisco's TelePresence products, refer to Chapter 4, "Collaboration."	See 4–1
Cisco WebEx	For product information on Cisco's WebEx products, refer to Chapter 4, "Collaboration."	See 4–1
Cisco Physical Security	For product information on Cisco Video Surveillance products, refer to Chapter 5, "Security."	See 5–1
MEDIA EXPERIENCE & ANALYTICS		
Cisco Media Experience Engine (MXE) 3000	· Media-processing platform that allows users to adapt and customize content for different video experiences · Media files can easily be shared between digital signage, desktop video, mobile devices, and other applications · Deployed as a standalone device or used to complement a Cisco Digital Media System (DMS) deployment by extending the reach of media users to create content once to be played on all DMS applications as well as mobile devices	7–10
Cisco Media Experience Engine (MXE) 3500 ***NEW PRODUCT***	· Advanced media processing appliance that re-purposes live video to be played back on a variety of endpoints · Cisco Media Experience Engine 3500 has limited availability. Please check website for availability restrictions	7–12
Cisco Media Experience Engine (MXE) 5600 ***NEW PRODUCT***	· Purpose-built, highly scalable modular media processing system that combines advanced media processing features with high-definition interoperability for Cisco TelePresence and video conferencing endpoints	7–14
Cisco Pulse ***NEW PRODUCT***	· Automatically discovers pertinent work experience and valuable content spread across the enterprise and integrates seamlessly with all communications and conferencing tools · Built as an open platform, but tightly integrated with Cisco's technology architectures, Cisco Pulse delivers rich team and customer experiences in a click, allowing workforces to be more competitive, responsive, and productive	7–16
BROADBAND CABLE		

Cisco uBR7225 Series Universal Broadband Router ***NEW UPDATES***	• Low-cost entry and midlevel cable modem termination system (CMTS), offering cable operators, multiunit businesses, and Internet service providers (ISPs) an excellent and cost-effective platform for the delivery of high-speed data, voice, and video services	7–17
Cisco uBR7246VXR Universal Broadband Router ***NEW UPDATES***	• Modular, standards-based communications-grade Cable Modem Termination System (CMTS) integrated router is ideal for high-growth broadband cable deployments	7–18
Cisco uBR10012 Universal Broadband Router	• Delivers the services, performance, scale, and carrier-class reliability that large cable operators and Internet service providers (ISPs) demand	7–19
Cisco uBR3x10 RF Switch	• Delivers the services, performance, scale, and carrier-class reliability that large cable operators and Internet service providers (ISPs) demand	7–21
SERVICES		
Cisco Services Realize the full business value of your technology investments faster with intelligent, personalized services from Cisco and our partners.		7–22
FOR MORE INFORMATION		

Product Ordering
To place an order, visit: http://www.cisco.com/en/US/ordering/index.shtml.

End-of-Life and End-of-Sale
Please visit the end-of-life and end-of-sale website for a complete and up-to-date listing of products that are no longer being sold or supported, what replacement products are available, and information about product support.
http://www.cisco.com/en/US/products/prod_end_of_life.html

NOTE: This chapter provides only a subset of Cisco products and part numbers. For the most up-to-date and comprehensive information, refer to the Cisco website at http://www.cisco.com, the Cisco ordering website at http://www.cisco.com/en/US/ordering/index.shtml, or reference the URL listed in the "For More Information" section of each product.

Cisco Digital Media Suite

The Cisco Digital Media Suite (DMS) is a comprehensive offering of webcasting and video sharing, digital signage, and business IPTV applications that can help transform how organizations learn, grow, communicate, and collaborate. Support from the broad Cisco partner ecosystem of deployment, solution-development, and content-creation partners helps ensure a successful digital media implementation.

Digital Signage: Cisco Digital Signs

Cisco Digital Signage provides scalable, centralized management and publishing of high-quality content to networked, on-premise digital signage displays

Built on the power of the Cisco Digital Media Suite, Cisco Digital Signage leverages the same hardware and management platform as and can interoperate with Cisco Cast, or can operate as a standalone application.

To provide assistance in content strategy and creation, Cisco offers these content development services.

Cisco Digital Media Creative Services (DMCS), with a focus on strategy, helps customers and partners design, create, and transform content for digital signage. DMCS helps deliver the optimum visual experience through a three-part process:

- Creative brief
- Content strategy
- Content design

The Cisco Academy of Digital Signage (ADS) is a global qualification program that trains media professionals to create and optimize media content for digital signage so that businesses may quick-start digital signage deployments. ADS provides a hands-on, practical approach to content design based on the established creative strategy. For more information visit: http://www.cisco.com/go/dms/ads.

Business IPTV: Cisco Cast

Cisco Cast is an interactive application that enables organizations to deliver on-demand video and broadcast live TV channels over an IP network to digital displays.

On-screen menus and program guides give users access to Cisco Cast content, and organizations can customize lineups and create their own content libraries. Users can navigate through channel menus and select from on-demand content with a remote control or other remote devices.

Built on the power of the Cisco Digital Media Suite, Cisco Cast leverages the same hardware and management platform as and can interoperate with Cisco Digital Signs, or can operate as a standalone application.

Webcasting and Video Sharing: Cisco Show and Share

Built on the power of the Cisco Digital Media Suite, Cisco Show and Share provides the ability to create live and on-demand video content and define who can watch specific content. It offers viewer collaboration tools such as commenting, rating, and word tagging, and it provides comprehensive access reporting.

Key Features and Benefits

- Communicate richly and effectively with targeted customers, investors, partners, and media. In addition, they can deliver crucial information and training to employees, suppliers, and partners.
- Target consumers with tailored content directly to their desktop on digital signage or mobile devices.

- Offer live and on-demand events and content to geographically dispersed audiences.

The Cisco Digital Media Suite provides applications and solutions for a variety of industries, including financial services, retail, education, and healthcare.

Integrated Components of the Cisco Digital Media Suite

The Cisco Digital Media Suite includes:

- Creation with Cisco Digital Media Encoders (DMEs)
- Management with the Cisco Digital Media Manager (DMM)
- Content publishing to the Cisco Digital Media Players (DMPs)
- Access through the Cisco Show and Share
- Display with the Cisco LCD Professional Series Displays

In addition to the products in the DMS product line, the Cisco Media Experience Engine (MXE) allows users to further extend the reach of their media content. As a complimentary solution to your DMS deployment, the MXE enables any-to-any media transformation in the network, enabling users to create content once to be played on all DMS applications as well as mobile devices.

For More Information

http://www.cisco.com/go/dmcs

Cisco Digital Media Encoders

Cisco Digital Media Encoders provide live and on-demand streaming digital media across an IP network. Organizations can schedule and manage live events from multiple encoders from a single administration interface. The encoders can be locally managed or remotely managed through the Cisco Digital Media Manager. The Cisco Digital Media Encoder can be used as a standalone encoder or as an integrated component of the overall Cisco Digital Media Suite for Cisco Show and Share.

The studio-level (Cisco DME 2200) and portable (Cisco DME 1100) encoders provide live and on-demand streaming digital media across an IP network in a variety of encoding formats, inputs, and monitoring functions.

Key Features and Benefits

The Cisco Digital Media Encoder 1100 offers the following features:

- Designed for both professionals and novices, the rugged-design, lightweight encoder is ideal for outdoor venues, classrooms, and conference rooms because it can extend Webcasting "outside of the studio".
- Lightweight, single channel
- Encoding of video live for live network distribution
- Local management; or remote management through the Cisco Digital Media Manager

The Cisco Digital Media Encoder 2200 offers the following features:

- Designed for advanced users who require multiple audio and video input options and a variety of encoding formats and functions.
- Studio-level, duel channel— a good choice for the corporate office or data center
- Live encoding/transcoding of media from analog and digital sources into standard formats (WMV, FLV, H.264, and so on.)
- Local management via an embedded LCD; or remote management through the Cisco Digital Media Manager

Specifications

Feature	Cisco Digital Media Encoder 1100	Cisco Digital Media Encoder 2200
Supported live streaming formats	Microsoft Windows Media 9 MPEG-4/H.264	Microsoft Windows Media 9 MPEG-4/H.264 Product parameter—Supported live-streaming formats for the DMM Live Event Manager (PC only) Specification—Microsoft Windows Media
Supported on-demand formats	Adobe Flash (.flv) Microsoft Windows Media MPEG-4/H.264	Adobe Flash (.flv) Microsoft Windows Media MPEG-4/H.264
Video inputs	Composite; S-Video	2 composite; 2 S-Video; 2 SDI (SMPTE - 259M) Video with embedded audio inputs (AES/EBU)
Audio inputs	1 balanced stereo (XLR3) Unbalanced stereo (RCA)	2 balanced stereo (XLR); 2 Unbalanced stereo (RCA); 2 digital audio (AES/EBU) inputs through SDI inputs
Ethernet ports	1 GB; 10/100 Mb	2 10/100/1000 Mbps
Hard disk space	100 GB	100 GB
RAM	1 GB	4 GB

Processor	Single 21.19-Ghz Intel Core 2 Duo CPU	Dual AMD Opteron Quad Core, 2.2 GHz
Additional ports	2 USB 2.0 and VGA monitor	2 USB 2.0 and VGA monitor
Dimensions (H x W x D)	4.5 x 7.75 x 12 in. (11.43 x 19.67 x 30.48 cm)	3.5 x 19 x 23 in. (8.89 x 48.26 x 58.42 cm)
Weight	7.5 lb. (3.41 kg)	48.62 lb. (19.05 kg)
Power	110-220V; 50-60 Hz	110-220V; 50-60 Hz

Selected Part Numbers and Ordering Information

DMS-DME-1100	Cisco Digital Media Encoder 1100
DMS-DME-2200	Cisco Digital Media Encoder 2200

For More Information

http://www.cisco.com/go/dms

Cisco Digital Media Manager

The Cisco Digital Media Manager allows content authors to manage, schedule, and publish compelling digital media for live or on-demand playback across digital signage displays for Cisco Digital Signs and Cisco Cast, and to the Cisco Show and Share for social video. An integrated part of the Cisco Digital Media Suite, the web-based Cisco Digital Media Manager is the single, central management application for all Cisco Digital Media Suite products.

Content managers can:

- Manage content assets and create playlists for Cisco Digital Signs and Cisco Show and Share
- Schedule instant and future content deployments and playback schedules for Cisco Digital Signs, Cisco Cast, and Cisco Show and Share
- Report on playback schedules for Cisco Digital Signs and on video usage for Cisco Show and Share
- Manage Q&A for live Cisco Show and Share broadcasts
- Synchronize slides for both live and video on demand events

Content designers can:

- Customize signage screen layouts and zones for Cisco Digital Signs
- Customize and brand Cisco Cast, skins and menus
- Customize and brand the Cisco Show and Share interface

IT users can:

- Manage user accounts for role-based access control, and configure user-specific content restrictions for Cisco Show and Share users via LDAP/Active Directory
- Configure and manage Cisco Digital Media Encoders for Cisco Show and Share
- Remotely configure, manage, and monitor digital signage networks
- Manage event-based alerts and server appliances

Specifications

Features	**Cisco Digital Media Manager**
Product compatibility	Compatible with Cisco Application and Content Networking System (ACNS), the Cisco Wide Area Application Services (WAAS) Network Module, Cisco Show and Share and the Cisco Show and Share Reports tool, Cisco Digital Media Players, and Cisco Digital Media Encoders
Programming interface	Web-based management
Requirements	**Cisco Digital Media Manager Client**
Browser	Microsoft Windows — Internet Explorer 7.0 or later, Mozilla 1.8 or later recommended, or Firefox 3.0 required; Apple Macintosh—Safari 2.0 minimum; Safari 2.0 or Firefox 1.5 through 3.0 recommended

Selected Part Numbers and Ordering Information

Part Number	**Product Name**	**Required or Optional**
SVR-DMM52K9	Cisco Digital Media Manager	Required
MCS-7835H3-DMS	Cisco MCS 7835-H3 Server Appliance	Required
DMM-SIGNSM52-K9	Cisco Digital Signs Module	Required for Cisco Digital Signs implementations
DMM-DVM52_K9	Cisco Show and Share Module	Required for Cisco Show and Share implementations
DMM-CAST52-K9	Cisco Cast Module	Required for Cisco Cast implementations
DMM-LEM52-K9	Cisco Show and Share Live Event Module	Optional

DMM-SNMP52-K9	Cisco DMM SNMP Module	Optional
Software Upgrades and Add-Ons		
DMM-DVM52-K9=	DMM Show and Share Module V5.2 Perpetual Software License, Spare	
DMM-SIGNSM52-K9=	DMM Digital Signs Module V5.2 Perpetual Software License, Spare	
DMM-LEM52-K9=	DMM Show and Share Module Live Event Module Perpetual Software License	
DMM-SNMP52-K9=	Digital Media Manager Ver. 5.2 SNMP Module Perpetual Software License	
DMM51-U52-K9	Cisco Digital Media Manager V5.2. Upgrade from V5.0	
DMP-SW52-U-K9	Digital Media Player V5-V5.2 Perpetual Software License	
DV-WKGP-U52-K9	Show and Share Module 5.2. Upgrade from V5.0 - Workgroup	
DV-ENT-U52-K9	Show and Share Module 5.2. Upgrade from V5.0-Enterprise	
DMP-FL-10=	Cisco Digital Media Manager, Feature License for Up To 10 DMPs	
DMP-FL-50=	Cisco Digital Media Manager, Feature License for Up To 50 DMPs	
DMP-FL-500=	Cisco Digital Media Manager, Feature License for Up To 500 DMPs	
DMP-FL-1000=	Cisco Digital Media Manager, Feature License for Up To 1000 DMPs	
Hardware Spares		
MCS-7835H3-DMS=	HW Only Server with 4GB RAM and 4 300GB HD	
WAVE-574-DMS=	HW Only Server with 4GB RAM and 2 500GB HD	

For More Information

http://www.cisco.com/go/dms

Cisco Digital Media Players

Cisco Digital Media Players (DMPs) are highly reliable, IP-based hardware endpoints that enable Cisco Digital Signs and Cisco Cast through the ability to play high-definition live and on-demand video, motion graphics, Web, and dynamic content on digital displays. The DMP hardware options include support for standard-definition and high-definition MPEG-2 and MPEG-4/H.264, Flash, RSS, and other Web formats and dynamic data.

Using the Cisco Digital Media Suite's Cisco Digital Media Manager, organizations can flexibly and remotely publish centralized content over the Web to networked digital signs, Cisco Digital Media Players can be attached to virtually any on-premise digital signage display at any location, including branch-office banks, retail stores, break rooms, or lobbies, helping organizations reach their primary audiences anywhere, anytime.

Cisco Digital Media Players deliver flexible and real-time publishing; low ongoing operational costs and ease of use; speed of deployment; and leverage the scalability and power of the network.

The Cisco Digital Media Player 4305G includes such features as:

- Support for MPEG 1/2/4 Part 2 video in standard definition and high definition as well as graphics, Web content, Adobe Flash 7 or less, animation, mp3 audio, and tickers.
- 2-GB local storage for reliability and performance
- IP-enabled delivery of live broadcasting and on-demand video content
- Small form factor: 7.5 x 5 x 1.5 in. at 1 lb
- Low power consumption
- IP-enabled delivery of live broadcasting and on-demand video content

The Cisco Digital Media Player 4400G includes such features as:

- Support for MPEG 1/2/4 Part 10 video in standard definition and high definition as well as graphics, Web content, and Adobe Flash 9 animation, Windows Media 9 and VC-1, mp3 audio, and tickers.
- 4-GB local storage for reliability and performance
- Touchscreen technology support
- 802.11 B/G wireless network support
- Small form factor: 10 x 8 x 2 in.; weighs 4.5 lb.
- Low power consumption
- IP-enabled delivery of live broadcasting and on-demand video content

Integrated with the Cisco Digital Media Manager, the Cisco Digital Media Players provide:

- Remote management of display (on and off, volume, contrast, and brightness)
- Full-screen video playback or "on-screen zoning" of multiple content types on a single display
- Customizable onscreen presentation templates and playlists

Specifications

Feature	Cisco Digital Media Player 4305G	Cisco Digital Media Player 4400G
Supported protocols	FTP and secure FTP (SFTP); HTTP and HTTPS; User Datagram Protocol (UDP); Real-Time Transport Protocol (RTP) over Real-Time Streaming Transport Protocol (RTSP)	FTP and secure FTP (SFTP); HTTP and HTTPS; User Datagram Protocol (UDP); Real-Time Transport Protocol (RTP) over Real-Time Streaming Transport Protocol (RTSP)
Video containers	MPEG Transport Stream (TS, TP, TRP, M2T, M2TS, and MTS)	MPEG Transport Stream (TS, TP, TRP, M2T, M2TS, and MTS); ASF; WMV
Video codecs	Video MPEG 1; Video MPEG 2: Main Profile at High Level; Video MPEG 4 part 2: Advanced Simple Profile at Level 5; Aspect ratio: 4:3 and 16:9; HD (up to 1080 at 16:9) progressive and interlace video resolution; Video data rate up to 82 Mbps; Overall delay 1–3 sec Note: Please consult other Cisco documentation or your Cisco representative for exact audio codec, video codec, resolution, bit rate, and encapsulation combinations.	Video MPEG 1; Video MPEG 2: Main Profile at High Level; Video MPEG 4 part 10 Baseline and Main profiles; Video Windows Media 9 and VC-1 VoD only; Aspect ratio: 4:3 and 16:9; HD (up to 1080P at 16:9) progressive and interlace video resolution; Video data rate up to 28 Mbps; Overall delay 1–3 sec Note: Please consult other Cisco documentation or your Cisco representative for exact audio codec, video codec, resolution, bit rate, and encapsulation combinations.
Audio codecs	Audio MPEG 1 Layers 1 and 2; mp3; MPEG 4 AAC Low Complexity; AC-3; Audio data rate: 64–320 kbps Note: Please consult other Cisco documentation or your Cisco representative for exact audio codec, video codec, resolution, bit rate, and encapsulation combinations.	Audio MPEG 1 Layers 1 and 2; mp3; MPEG 4 AAC Low Complexity; AC-3; Audio data rate: 64–320 kbps Note: Please consult other Cisco documentation or your Cisco representative for exact audio codec, video codec, resolution, bit rate, and encapsulation combinations.
Remote control	Transmitter Type and Maximum Supported Distance—Infrared (IR), 15 ft.	Transmitter Type and Maximum Supported Distance—Infrared (IR), 15 ft.
Flash memory	32 MB for OS; 2 GB for internal storage	4GB CF-card with endurance of 1,000,000 Write/Erase Cycles for OS and application storage
Physical connectors	Ethernet copper 10/100 BASE-T, RCA Video, S-Video, RCA Audio Left, RCA Audio Right, HDMI, and RS-232 and USB Cable Type* and Maximum Supported Length—Composite/RCA cable, 10 ft.; HDMI 1.1**, 16 ft.; S-Video, 10ft. * Cable quality can be a factor **An HDMI extender product can be used to extend the cable to 150 ft.	Ethernet copper 10/100 BASE-T, RCA Video, S-Video, Mini 3.5 mm Stereo Audio Jack, HDMI, and RS-232 and USB Cable Type* and Maximum Supported Length; Composite/RCA cable, 10 ft.; HDMI 1.1**, 16 ft.; S-Video, 10ft.; USB 2.0 (2), 15 ft.; SPDIF, 10 ft. * Cable quality can be a factor **An HDMI extender product can be used to extend the cable to 150 ft.
Wireless connectivity		Wireless Radio: 802.11 B/G; Security protocols: WPA, WPA2, EAP+FST, and WEP
Touchscreen support		Vendor: 3M Supported Systems: Touchscreen Sensor and Systems: 3M Micro Touch; ClearTek II touch sensor; 3M MicroTouch System SCT3250CX; 3M Micro Touch Sensor SCT7650; 3M MicroTouch System SCT3250SX; 3M Micro Touch Capacitive TouchSense System; 3M MicroTouch DST touch system Display Systems: 3M Micro Touch Display M1500SS (15 in.); 3M MicroTouch Display M1700SS (17 in.); 3M MicroTouch CT150 15-in. LCD Touch Monitor; 3M MicroTouch ChassisTouch 17 in. LCD Touch Monitor Vendor: ELO Supported Systems: All Acoustic Pulse Recognition systems Vendor: Zytronics Supported Systems: Zybrid Screen systems Vendor: General Touch Supported Systems: All systems supported by the ST6001S controller
Power	Input voltage—5V Input current—3 ADC Power consumption—Peak: 12W; average: 5W	Input voltage:—12V Input current—3 ADC Power consumption—Peak: 30W; average: 15W

Environmental	Operating temperature—41ºF to 122ºF (5 to 50ûC; Passed 500-hour test of the uninterrupted video playback in 125.6ºF (52ºC) dry-heat environment Humidity—20 to 80% noncondensing	Operating temperature—41ºF to 104ºF (5 to 50ºC); Passed 500-hour test of the uninterrupted video playback in 125.6ºF (52ºC) dry-heat environment Humidity—20 to 80% noncondensing
Functional	Video in—MPEG 1, MPEG 2, and MPEG 4 part 2 Audio in: Transport stream: Up to 6 audio packet IDs (part numbers) in transport stream Video out: Analog video (composite, S-Video); Digital video (HDMI) Audio out: Analog unbalanced audio (mono and stereo); MPEG 1 Layer 2: Selected; packet IDs in transport stream (1 of 6); MPEG 4 AAC and AC-3—Selected elementary audio (1 of 6)	Video in: MPEG 1, MPEG 2, and MPEG 4 part 10, Windows Media 9, and VC-1 Audio in: Transport stream: Up to 6 audio packet IDs (part numbers) in transport stream; mp3 Video out: Analog video (composite, S-Video); Digital video (HDMI 1:1) Audio out: Analog unbalanced audio (mono and stereo); MPEG 1 Layer 2: Selected; packet IDs in transport stream (1 of 6); MPEG 4 AAC and AC-3; Selected elementary audio (1 of 6)

Selected Part Numbers and Ordering Information

DMP-4305G-52-K9	Cisco Digital Media Player 4305G (Note: Includes Cables Accessory Kit)
DMP-SW52-K9	Digital Signage User Lic. for DMP 4305G
DMP-RM-K9=	Cisco Digital Media Player Remote Spare
DMP-SW52-U-K9	Digital Media Player V5-V5.1 Perptl. SW Upgrade
DMP-ACC-KIT	Cisco Digital Media Player 4305G, Cables Accessory Kit, Spare. (Note: A Cables Accessory Kit is already included with the Cisco Digital Media Player 4305G. This Spare Kit is an additional cost.)
DMP-RM-K9=	Cisco Digital Media Player Remote Spare
DMP-4400G-52-K9	Cisco Digital Media Player 4400G (Note: Includes Cables Accessory Kit)
DMP-SW52-K9	Digital Signage User Lic. for DMP 4400G
DMP-RM-K9=	Cisco Digital Media Player Remote Spare
DMP-SW52-U-K9	Digital Media Player V5-V5.1 Perptl. SW Upgrade
DMP4400-ACC-KIT	Cisco Digital Media Player 4400G, Cables Accessory Kit, Spare. (Note: A Cables Accessory Kit is already included with the Cisco Digital Media Player 4305G. This Spare Kit is an additional cost.)
DMP-RM-K9=	Cisco Digital Media Player Remote Spare

For More Information

http://www.cisco.com/go/dms

Cisco LCD Professional Series Displays

Cisco LCD Professional Series Displays form an integral part of the overall Cisco Digital Media Suite (DMS) suite of products. Offering a complete end-to-end solution for digital signage and business IPTV, these displays are available in 32-, 40- and 52-inch models and offer full 1080p resolution.

Cisco LCD Professional Series Displays offer:

- An end-to-end Cisco solution
- Centralized, remote management through the Cisco Digital Media Manager (on and off, volume, contrast, and brightness)
- Cisco support and service offerings

Specifications

Feature	Cisco LCD 100L Pro 32N	Cisco LCD 110 Pro 52S	Cisco LCD 100 Pro 40N
Diagonal Size	32 inches	52 inches	40 inches
Native Resolution	1366 x 768 (WXGA) 1920 x 1080 (HDMI)	1080p (1920*1080)	1080p (1920*1080)
Resolutions Supported	180p, 1080i, 720p	180p, 1080i, 720p	180p, 1080i, 720p
Brightness	500 cd/m2	700 cd/m2	470 cd/m2
Contrast Ratio	3000:1 (Dynamic Contrast Ratio)	2000:1	3000:1

Viewing Angle (H/V)	178/178 degrees	178/178 degrees	178/178 degrees
Response Time (G-to-G)	8 ms	8 ms	8 ms
Video Inputs	HDMI, VGA, and DVI (composite, component, and S-video also exist)	CVBS/Component/HDMI	HDMI
Power Supply	AC 100 - 240 V, 50/60 Hz	AC 100 - 240 V~ (+/- 10%), 50/60 Hz	AC 100 - 240 V~ (+/- 10%), 50/60 Hz
VESA Mount	200 x 200 mm	800*400 mm	600*400 mm
Weight (Set/Package)	31.7/39.2 Kg	36.8/47 Kg	19.0/22.5 Kg
Dimension	31.61 x 19.41 x 3.93 mm	713 x 1211 x 1371 mm	582.0 x 971 x 118.5 mm
Bezel Width	40 mm	22 mm	40 mm

Selected Part Numbers and Ordering Information

LCD-110-PRO-52S	Cisco LCD 52" Display, 1080p, Bezel S, w/Remote Control
LCD-100-PRO-STD	Leg Stand for Displays (Note: Optional)
LCD-100-PRO-40N	Cisco LCD 40" Display, 1080p, Bezel N, w/Remote Control
LCD-100L-PRO-32N	Cisco LCD L-Series 32" Display, 1080p, Bezel N, w/Remote Control

For More Information

http://www.cisco.com/go/dms

Cisco Show and Share

An integrated component of the Cisco Digital Media Suite for webcasting and video sharing, Cisco Show and Share helps organizations create secure video communities to share ideas and expertise, optimize global video collaboration, and personalize the connection between customers, employees, and students with user-generated content. Cisco Show and Share provides the ability to create live and on-demand video content and define who can watch specific content, it offers viewer collaboration tools such as commenting, rating, and word tagging, and it provides comprehensive access reporting.

Cisco Show and Share fits into your organization's existing IP network and helps ensure that your video content is stored securely within your IT infrastructure. It supports established video formats including Windows Media, Flash, and the MPEG-4/H.264 standard for Video on Demand (VoD) files. The Windows Media format is supported for PC playback for live streams.

When an MXE 3500 is available on the network, Show and Share provides the ability to have all files that are uploaded by Show and Share automatically transcoded to an optimal window-size and bit rate via the Flash format. These files are automatically sent from the Show and Share server to the MXE 3500, where they are transcoded and then retrieved by Show and Share for editing and publishing.

Key Features and Benefits

- Creating
  - Capture of video directly with Cisco Show and Share—You do not need to install any special software on your PC or Macintosh. Cisco Show and Share works with Adobe Flash player to support a wide variety of built-in and USB-based cameras and microphones that you can use to capture video.
  - Assigned authors—Cisco Show and Share systems administrators can define by username those who can capture and upload content. Organizations can provide initial access to a small set of content authors and add additional authors as needed.
- Publishing
  - Content viewing security—Publishers can define "who can watch what" for each video for secure content viewing needs.
  - Optional viewer collaboration—Commenting, rating, and tagging. Publishers can choose per title what type of view collaboration functions are available, such as commenting, rating, and tagging.
- Browsing and search
  - Public and private categories—Viewers can browse both private and public categories based on their login credentials.
  - Keyword tags—Viewers can use popular keyword tags that are displayed to help them find content.
- Viewing and sharing
  - Video playback controls—Viewers have complete playback controls for on-demand content, including start and stop controls.
  - Commenting options—Authors can optionally provide the ability for viewers to leave multiparty comments and collaborate with other viewers with two levels of commentary; page comments can be created for general commentary and timeline comments can be placed at any point in the video timeline for topical discussions. Viewers can report abusive comment language, and systems administrators can search for and delete offensive comments.
- Live webcasting
  - Managed webcast—Live webcast authors can set up and produce real-time streaming webcasts for events such as executive presentations, conferences, teacher lectures, and so on.

- View questions—Viewers can optionally post text-based questions to the live webcast authors at any time during an event.

- Reporting
  - Systemwide reporting—Systems administrators have access to a wide variety of activity and content usage reports across the entire Cisco Show and Share content catalog, including: Sitewide traffic, page views, unique visitors, video content viewing activity, report options include date ranges, viewers, authors, and content titles.

For a full listing of product features, see the Cisco Show and Share data sheet at the following URL: http://www.cisco.com/en/US/prod/collateral/video/ps9339/ps6681/data_sheet_c78-565776.html.

Show and Share Reports is an integrated function within Cisco Show and Share that allows you to track the access and use of video content by end users. With this tool you can:

- Specify time periods—Run reports based on specific dates.
- Analyze content use—Access unique traffic metrics and repeat traffic metrics for each available video or as an aggregated total.
- Monitor referrals—Track top referring pages and links with the corresponding views they generate.
- Understand visitors—Acquire vital statistics about visitors, including operating system, browser, and media plug-in used.
- Receive viewer usage details—Identify what videos have been played by individual users and videos.

With the Cisco Show and Share Reports tool, Cisco Digital Media Suite (DMS) administrators and Cisco Show and Share authors can access a variety of usage information that can facilitate tracking content effectiveness and required user access as part of a larger training compliancy effort, and help shape future content development based on content trends.

Support and Compatibility

Cisco Show and Share will be available as an upgrade to current Cisco Video Portal customers. Cisco Show and Share is supported on the following Cisco server appliances:

- Cisco MCS 7835-H1
- Cisco MCS 7835-H2
- Cisco MCS 7825-H2
- Cisco MCS 7825-H3

Licensing

Cisco Show and Share is purchased as a perpetual license with no restrictions on the number of potential viewers.The application introduces new authoring capabilities that require enabling licenses for each system user defined as an author. The base Cisco Show and Share system has five preinstalled Author licenses. You can purchase additional licenses with various options, including:

- Cisco Show and Share Feature License for up to 10 Authors
- Cisco Show and Share Feature License for up to 50 Authors
- Cisco Show and Share Feature License for up to 500 Authors
- Cisco Show and Share Feature License for up to 1000 Authors

You can purchase additional licenses and install them after the initial implementation.

Specifications

Cisco Show and Share Viewer Requirements	
Browser software	• Windows • Internet Explorer 7.0 or 8.0 • Mozilla 3.5.3 required • Apple Macintosh (support only for Flash and MPEG4/Part 10 VOD files only. Windows Media format not currently supported with the Apple Macintosh). • Safari 3.1.2 • Safari 3.1.2 or Firefox 3.5.3 or later recommended
Adobe Flash plug-in	Adobe Flash v.9, upgrade 3 plug-in or later recommended, v. 10 recommended
Windows Media plug-in	Windows Media 9 or later (required if Windows Media content is offered)
Java Client	v. J1.6.0_13 or later
Minimum supported resolution	1024 x 768
Cisco Show and Share Content Format Support	
Windows Media	Content encoded in the Windows Media format through the Cisco Live Event Module or other third-party applications can be uploaded and viewed with Cisco Show and Share. This content is decoded and played by the Windows Media plug-in. Third-party applications are required to edit content encoded with the Windows Media format. Windows Media content is not currently supported with the Apple Macintosh.
Adobe Flash (.flv)	Content encoded in the Adobe Flash (.flv) format can be uploaded and viewed with Cisco Show and Share. This content is decoded and played by the Adobe Flash plug-in. The integrated Cisco Show and Share Video Editor can be used to edit uploaded Adobe Flash (.flv) content. Content created with the Cisco Show and Share Record a Video function is encoded in the Adobe Flash (.flv) format and is also editable with the Cisco Show and Share Video Editor.

MPEG4/Part 10 (also known as MPEG4/H.264)	Content encoded in the MPEG4/Part 10 format can be uploaded and viewed with Cisco Show and Share. This content is decoded and played by the Adobe Flash plug-in. Additional MPEG4 file support playable by the Adobe Flash player can be obtained at http://www.adobe.com. Third-party applications are required to edit content encoded with the MPEG4/Part 10.File types supported include .mp4, .m4v, and .mp4v.
Cisco Show and Share Server Appliance Options	
Workgroup	The Cisco Show and Share Workgroup server appliance supports up to 200 authors and is ideal for a variety of use cases that feature smaller workgroups within an organization.
Enterprise	The Cisco Show and Share Enterprise server appliance supports organizations that want to enable large numbers of authors to create and publish a variety of content that will be accessed organization wide.

Selected Part Numbers and Ordering Information

Part Number	Product Name	Required or Optional
Cisco Digital Media Manager Ordering Information		
SVR-DMM52K9	Cisco Digital Media Manager	Required
MCS-7835H3-DMS	Cisco MCS 7835-H3 Server Appliance	Required
DMM-LEM52-K9	Cisco Show and Share Live Event Module	Optional
DMM-SNMP52-K9	Cisco DMM SNMP Module	Optional
Cisco Show and Share Workgroup Ordering Information		
SVR-DMM52K9	Cisco Show and Share Workgroup	SVR-DMM52K9
WAVE-574-DMS	Cisco WAVE 574 Server Appliance	WAVE-574-DMS
DVR52-K9	Cisco Show and Share Reports	DVR52-K9
Cisco Show and Share Enterprise Ordering Information		
SVR-ENT-DV52K9	Cisco Show and Share Enterprise	SVR-ENT-DV52K9
MCS-7835H3-DMS	Cisco MCS 7835-H3 Server Appliance	MCS-7835H3-DMS
DVR52-K9	Cisco Show and Share Reports	DVR52-K9

For More Information

http://www.cisco.com/go/dms

Cisco Media Experience & Analytics (MXA)

Media Experience & Analytics (MXA)—Connecting people and information.

Media Experience & Analytics powers breakthrough experiences by connecting people and media across any device and application. As enterprises grow and become more geographically distributed, the need to effectively communicate across all boundaries—geography, organizational, or format (for example, video, documents, people)—is increasingly important.

MXA delivers:

- Any to any video communication and media transformation at scale and in real time;
- Media search and analytics services to unlock the business value of video; and
- An open platform to enable ecosystem and accelerate revenue growth

MXA delivers the benefits of embedding the intelligence for unfettered collaboration into the fabric of the network. Information in any form or format – person, video, documents – is discovered in real time and seamlessly shared across the enterprise.

Cisco Media Experience Engine 3000

The Cisco MXE 3000 Media Experience Engine is a media-processing device that allows you to create different media experiences that you can share across the network from any source to any video endpoint. This network-based appliance also provides postproduction capabilities such as video composition, authoring, watermarking, and text and image overlays.

Key Features and Benefits

- "Any Media-to-Any Device" Experience
  - The Cisco MXE 3000 uses market-leading technology to rapidly and reliably repurpose media assets for different media applications. With unparalleled reliability, it automatically ingests content from any source file, preprocesses it for optimal online viewing quality and experience, simultaneously encodes it into any number of web formats, and delivers finished files to servers or content-delivery networks for viewing.
- Automated workflow

  - The Cisco MXE 3000 automates the critical workflow components for producing video-on-demand (VoD) content and scales in output capacity to provide the first automated enterprise-grade VoD production solution. The Cisco MXE 3000 supports precanned templates that you can apply to transcoding jobs, thereby significantly streamlining the operational overhead traditionally associated with media processing.
- Postproduction capabilities
  - The graphics capabilities of the Cisco MXE 3000 synchronizes video and metadata with graphic templates during transcoding to produce dynamic multilayered titles, branded graphics, subtitles, captions, and animations. Overlays are suitable for both small- and large-screen applications.
- Integration with Cisco Digital Media Suite
  - The Cisco MXE 3000 works transparently with a host of media applications. For example, content produced by the Cisco MXE 3000 integrates with the Cisco Digital Media Suite (DMS) solution, allowing you to upload and distribute processed content to a variety of endpoints using Cisco Show and Share.
- Easily deployed appliance—This high-performance, self-contained solution reduces operating overhead for installation and routine maintenance.
- Support for most popular web and mobile formats—Industry's widest array of formats is constantly updated, so your media reaches the broadest possible audience.
- High-performance batch encoding—The Cisco MXE 3000 dramatically reduces the time to produce time-sensitive media.
- Optimized high-quality preprocessing—Proprietary preprocessing architecture creates stunning output quality.
- Unified, automated workflow—The profile system boosts production reliability and output consistency; it simultaneously encodes into all popular formats and data rates.
- Production system integration—The Cisco MXE 3000 ingests content from Mac- and Windows-based postproduction systems, broadcast servers, or asset-management systems.
- Cisco MXE 3000 Folder Attendant—Folder Attendant automates file and metadata submission for any system.
- Metadata preservation—The solution carries valuable metadata through the production process for simplified media labeling, categorization, archive, and search.
- Extensible to custom environment—Application programming interfaces (APIs) let you extend automation to other parts of your unique workflow.
- Transparent integration with Cisco DMS—You can view processed media on Cisco Show and Share, and you can systematically catalogue video content libraries to improve search capabilities.
- Advanced graphics overlays
  - Automated workflow for creating on-demand graphics replaces manual, nonlinear editor-based graphics production, freeing systems and personnel for other tasks.
  - You can target overlay content to specific audiences for branding and advertising.
  - The solution scales to provide automated graphics capability to new and existing Cisco MXE systems.
  - Extensible features and capabilities are easily added to existing Cisco MXE deployments.
  - You can produce multiple brands of programs that share identical video and metadata simultaneously, saving both time and money.

Specifications

Supported input formats	Editing systems—Avid; Final Cut Pro; Adobe Premiere AVI; DVD VoB files; QuickTime: All supported formats; MPEG-1: Elementary Stream, System Stream, and Layer II; Audio MPEG-2: Elementary, Program, and Transport Stream; and PCM Audio, Layer II Audio, and AC3 Audio; MPEG-4: Third-Generation Partnership Project (3GPP) and 3GPP2; AVI: All supported formats; DirectShow: All supported formats; WAV; Windows Media; VC-1; H.264
Supported output formats	Windows Media: V7, V8, V9, MPEG-4V3, and ISO-MPEG4-V1; Windows Media Audio: V2, V7, V8, ACELPnet, RealVideo10, RealVideo 9, RealVideo 8, RealAudio 10, and RealAudio 8; QuickTime: All supported codecs; MPEG-4; on2 Flash 8; MP3; WAV
Preprocessing and media preparation	• Video: Blur, bumpers and trailers, color space conversion, contrast enhancement, cropping, de-interlacing and interlacing, fade in, and fade out • In and out trimming: Field frame control, gamma correction, hue rotation, inverse telecine, noise reduction, saturation, support for 16 x 9 and other aspect ratios, add and remove letter boxing and curtaining, temporal smoothing, video frame rate conversion and resizing with antialias filtering watermarking, automated, and thumbnail extraction
Workflow automation	• Job submission • Profile building: An automated system that allows you to quickly apply customized processing settings to new jobs • Monitoring: A summary screen that provides insight into the status of queued jobs • Automated Folder Attendant: A program that facilitates integration between external systems and the Cisco MXE 3000 platform
System features	• Auto job restart • File distribution • Status notification
Environmental Operating Ranges	
Temperature	50 to 95°F (10 to 35°C)
Relative humidity	10 to 90% relative humidity (RH), 82.4°F (28°C) maximum wet bulb temperature, noncondensing

Altitude	10,000 ft (3000m); this value may be limited by the type and number of options installed; maximum allowable altitude change rate is 1500 ft/min (457m/min)
Shock	2 Gs
Vibration	Random vibration at 0.000075 G^2/Hz, 10 to 300 Hz, (0.15 Gs nominal)
Acoustic noise	40 dBA
Nonoperating Ranges	
Temperature	-40 to 158°F (-40 to 70°C)
Relative humidity	5 to 95% RH, 101.7°F (38.7°C) maximum wet bulb temperature, noncondensing
Altitude	30,000 ft (9000m) maximum allowable altitude change rate: 1500 ft/min (457m/min)
Shock	15 Gs
Vibration	Random vibration at 0.0005 G^2/Hz, 10 to 500 Hz, (0.5 Gs nominal)
Acoustic noise	40 dBA
Power Input (per power supply)	
Range line voltage	90 to 264 VAC
Normal line voltage	110 to 240 VAC
Current	6A (110V); 3A (220V)
Frequency	47 to 63 Hz
Range line voltage	90 to 264 VAC
Normal line voltage	110 to 240 VAC
Output (per power supply)	
Steady state	400W (at 100 VAC and 200 VAC)
Maximum peak	400W (at 100 VAC and 200 VAC)
Maximum heat dissipation	1836 BTU/hr (at 100 VAC); 1706 BTU/hr (at 200 VAC)
Physical Specification	
Form factor	1 rack unit (1RU) - Rack-mount
Dimensions (H x W x D)	1.70 x 17.64 x 26.85 in. (4.32 x 44.80 x 68.19 cm)
Weight	33.50 lb (15.20 kg)
Interfaces	
Ethernet	Dual 10/100/1000
USB	4, total
Regulatory and Standards Compliance	
Safety	UL 60950-1, 1st Edition, 2006-07-07 Part1, CSA C22.2 No.60950-1-03, 1st Edition, 2006-07 Part1
Electromagnetic Compliance (EMC)	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; and GB9254

Selected Part Numbers and Ordering Information

MXE-3000	Cisco MXE 3000 Media Experience Engine Appliance (hardware only)
MXE-3000-LIC	Cisco MXE 3000 Media Experience Engine Software Version 2.0 (software only)

For More Information

http://www.cisco.com/go/mxe

Cisco Media Experience Engine 3500

The Cisco Media Experience Engine (MXE) 3500 is an easily deployed appliance that integrates transparently into the network to deliver a rich set of media-processing capabilities. Designed as a core component of the Cisco Media-Ready Network, the Cisco MXE 3500 provides:

- Comprehensive live and video on demand (VoD)-based transcoding services that allow you to share video content across your network to virtually any type of endpoint
- Innovative postproduction features that transform ordinary video content into stunning studio-quality output
- Cutting-edge speech-to-text transcription services
- Innovative collaboration with other applications delivered by the Cisco suite of media products

The result is a powerful media-processing platform that allows IT administrators to significantly streamline operating costs associated with live media streaming, media production, and distribution.

Key Features and Benefits

- The Cisco MXE 3500 uses market-leading technology to rapidly and reliably repurpose media assets for different media applications. With exceptional reliability, it automatically ingests content from any source file, preprocesses it for optimal online viewing quality and experience, simultaneously encodes it into any number of video formats, and delivers finished files to servers or content-delivery networks for viewing.
- The Cisco MXE 3500 automates the critical workflow components for producing VoD content and scales in output capacity to provide the first automated enterprise-grade VoD production solution. It also supports live transcoding services to enable reliable repurposing of live enterprise TV streams.
- The graphics capabilities of the Cisco MXE 3500 synchronize video and metadata with graphic templates during transcoding to produce dynamic multilayered titles, branded graphics, subtitles, captions, and animations. Overlays are suitable for both small- and large-screen applications. You can apply these graphics to both file-based and live processing jobs.
- The Cisco MXE 3500 delivers innovative voice-recognition technologies to enable speech-to-text services that input speech and convert audio tracks of a video to text that can be layered on to the video as a caption.
- You can integrate the Cisco MXE 3500 transparently with other Cisco media applications. For example, you can upload and distribute both file-based and live content to a variety of endpoints using the Cisco Show and Share application to integrate content produced by the Cisco MXE 3500 with the Cisco Digital Media Suite (DMS).
- The Cisco MXE 3500 also interoperates with the Cisco TelePresence Recording Server to extend the reach of Cisco TelePresence recordings. In addition, the Cisco MXE can process high-definition (HD) video captured by Flip cameras in just a single step.

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

Specifications

Supported input formats	Editing systems—Avid; Final Cut Pro; Adobe Premiere AVI; DVD VoB (Video over Broadband) files; QuickTime: All supported formats; MPEG-1: Elementary Stream, System Stream, and Layer II Audio; MPEG-2: Elementary, Program, and Transport Stream; PCM Audio; Layer II Audio; and AC3 Audio; MPEG-4: 3GPP and 3GPP2; AVI: Limited supported formats; DirectShow: All supported formats, WAV, Windows Media, VC-1, and H.264; Live input formats: MPEG2ts; Speech-to-text audio formats: wav, mp3, mp4, H264, and QuickTime
Supported output formats	• Windows Media: V7, V8, V9, MPEG-4V3, and ISO-MPEG4-V1 • Windows Media Audio: V2/V7/V8, ACELP.net, RealVideo10, RealVideo 9, RealVideo 8, and RealAudio 10 • RealAudio 8 QuickTime: All supported codecs, MPEG-4, On2 Flash 8, MP3, and WAV • Live output formats: WMV, FLV, and Real Media • Speech-to-text output formats: Text-only transcripts, text with time stamps transcripts, and XML
Preprocessing and media preparation	• Video: Blur, bumpers, and trailers; color space conversion; contrast enhancement; cropping; de-interlacing and interlacing; fade-in; and fade-out • In/out trimming: Field frame control, gamma correction, hue rotation, inverse telecine, noise reduction, saturation, support for 16 x 9 and other aspect ratios, add and remove letter boxing and curtaining, temporal smoothing, video frame-rate conversion and resizing with anti-alias filtering watermarking, automated thumbnail extraction, and speech-to-text captioning
Workflow automation	• Job submission: - Profile building: An automated system that allows you to quickly apply customized processing settings to new jobs - Monitoring: A summary screen that provides insight into the status of queued jobs - Automated Folder Attendant: A program that facilitates integration between external systems and the Cisco MXE 3500 platform
Dimensions and Environmental Operating Ranges	
Physical dimensions (H x W x D)	(1 rack unit [1RU]) 1.7 x 16.9 x 27.8 in. (4.3 X 42.9 X 70.6)cm
Operating temperature	50 to 95°F (10 to 35°C)
Nonoperating temperature	-40 to 149°F (-40 to 65°C)
Operating humidity	5 to 93% noncondensing
Nonoperating humidity	5 to 93% noncondensing
Operating altitude	0 to 10,000 ft (0 to 3,000m); maximum ambient temperature decreases by 1°C per 300m) (984 ft)
Nonoperating altitude	40,000 ft (12,000m)

Regulatory and Standards Compliance	
Safety	UL 60950-1 No. 21CFR1040; CAN/CSA-C22.2 No. 60950-1; NOM-NYCE; NOM-10-SCFI-10993; IRAM IEC60950-1; CB IEC60950-1; EN 60950-1; IEC 60950-1; GOST IEC60950-1; SASO SABS/CB IEC6095-1; CCC*/CB GB4943-1995; CNS14336; CB IEC60950-1; AS/NZS 60950-1; GB4943
EMC: Emissions	47CFR Part 15 (CFR 47) Class A; AS/NZS CISPR22 Class A; CISPR2 2 Class A; EN55022 Class A; ICES003 Class A; VCCI Class A; EN61000-3-2; EN61000-3-3; KN22 Class A; CNS13438 Class A
EMC: Immunity	• EN50082-1; EN61000-6-1; EN55024; CISPR24; EN300386; KN 61000-4 Series

Selected Part Numbers and Ordering Information

MXE-3500-K9	Cisco MXE 3500 Media Experience Engine Appliance (hardware only)
MXE-3500-3.0LIC-K9	Cisco MXE 3500 Media Experience Engine Software Version 3.0 (software only)
Optional Software Add-Ons	
MXE-3500-GR-LIC	Graphics
MXE-3500-STT-LIC	Speech to Text
MXE-3500-LIV-LIC	Live Ingest
MXE-3500-LIC-BUN	Graphics, Speech to Text & Live Bundle
MXE-3500-RM-LIC	Resource Manager
MXE-3500-RN-LIC	Resource Node

The MXE 3500 has limited availability and a New Product Hold (NPH) process has been implemented. The details of the NPH process are as follows:

- MPBU and WW Channels have implemented a New Product Hold on MXE products
- NPH is an instrument for MPBU to understand orders and focus resources appropriately on target markets
- NPH was chosen over ATP or Restricted Specialization programs to reduce sales cycles while ensuring successful deployments
- NPH does **not** signal quality or supply chain issues
- NPH will be released when orderability assurance and supportability requirements are met

For More Information

http://www.cisco.com/go/mxe

Cisco Media Experience Engine 5600

The Cisco Media Processing 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.

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 1.0 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.
- It 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 extensible architecture allows future enhancements and evolution to support new features and hardware.
- The modular software design capitalizes on the Cisco MXE 5000 series hardware design to provide for flexible, scalable configurations while maintaining high performance.

The first release of the Cisco MXE 5600 software has been optimized for interoperation of Cisco TelePresence conferencing with other high- and standard-definition (HD and SD, respectively) video conferencing endpoints. The Cisco MXE 5600 enables interoperability while optimizing the audio and video quality and improving the overall user experience.

Key Features and Benefits

- 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.
  - Video processing goes beyond basic transcoding to include conversion of bit rates, frame rates, sampling rates, resolutions, aspect ratios, and scaling.
  - Automatic detection of endpoint capabilities: In many cases, the Cisco MXE Media Processing Platform 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.
  - Network-accessible from anywhere: As a network-based system, the capabilities provided by the Cisco MXE 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 a rich set of media 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.
- 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.

Specifications

Note: Product features and specifications are subject to change.

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 application
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

Selected Part Numbers and Ordering Information

The MXE 5600 has limited availability. Please check the website for latest orderability information.

For More Information

http://www.cisco.com/go/mxe

Cisco Pulse

Cisco Pulse delivers a powerful new way to harness the collective expertise of your workforce, making it quick and easy for employees to find the people and information they need to get their work done.

Unlike traditional directories and expert locators that require manual updates and quickly go stagnant, Cisco Pulse automatically tags pertinent content as it traverses the network to discover hidden know-how your employees can opt to share.

Cisco Pulse will help your workforce become more competitive, responsive, and productive by making it easy to find available experts, form dynamic teams, share valuable information, and navigate rich media.

Highlights include:

- Quickly find relevant people and valued information
- See who is available and collaborate with colleagues in a click
- Automatically capture organizational know-how by tagging content as it traverses the network
- Automatically navigate rich media to the spoken word
- Embed Cisco Pulse capabilities in existing applications

Key Features and Benefits

- Automatic expert identification—The Cisco Pulse solution takes the manual labor out of building a directory of experts in your company. Rather than burdening employees with an extra task.
- Improved communication—Cisco Pulse capabilities integrate transparently with existing directories and productivity solutions.
- Improved productivity—Discover in real time the best people and most valuable documents and rich media shared across the organization.
- Integrated into the tools we use—Pulse is based on an open platform methodology and is inserted into the path of all information at the network level and is presented in the existing workflow of the user communities

Specifications

Note: Product features are subject to change.

Supported Standards	Description
Supported Northbound APIs	OpenSocial Web Services, Javascript, and OpenSearch APIs enable integration into many applications including Cisco Quad, Microsoft Sharepoint, and Salesforce.com

Selected Part Numbers and Ordering Information

Product and Part Number	Directory Edition	Text Edition	Rich-Media Edition
Pulse Connect— MCS7845I3-K9-PULSE Software Option— PULSE-CN-K9-R10	1	1	1
Pulse Collect— MCS7845I3-K9-PULSE Software Option— PULSE-CLRM-K9-R10		1 or more	1 or more
Pulse User Licenses— L-PULSE-PAK= License Option— L-LIC-PULSE-DIR	# users		
Pulse User Licenses— L-PULSE-PAK= License Option— L-LIC-PULSE-TX		# users	
Pulse User Licenses— L-PULSE-PAK= License Option— L-LIC-PULSE-RM			# users

As of Q4FY10, Cisco Pulse has limited availability and a New Product Hold (NPH) process has been implemented. The details of the NPH process is as follows:

- MXABU and WW Channels have implemented a New Product Hold on Cisco Pulse products
- NPH is an instrument for MXABU to understand orders and focus resources appropriately on target markets
- NPH was chosen over ATP or Restricted Specialization programs to reduce sales cycles while ensuring successful deployments
- NPH does **not** signal quality or supply chain issues
- NPH will be released when orderability assurance and supportability requirements are met

For More Information

http://www.cisco.com/go/pulse

Cisco uBR7225VXR Universal Broadband Router

The Cisco uBR7225VXR is a low-cost entry to midlevel CMTS in a 2RU modular chassis, offering cable operators, multiunit businesses, and Internet service providers (ISPs) an excellent and cost-effective platform for the delivery of high-speed data, voice, and video services. This CMTS platform requires exceptionally low capital investment and minimal setup time, and it supports up to 5000 subscribers. The Cisco uBR7225VXR Universal Broadband Router is a service-enabling, communications-grade CMTS that offers high reliability, modular scalability, and significant investment protection. UBR7225VXR can be easily upgraded to DOCSIS3.0 with the latest UBR-MC88V line card.

Ideal for Companies That Need These Features

Cisco uBR7225VXR

- Low entry-level pricing
- Modularity for capacity growth and minimal setup time
- A higher-capacity platform without the need for the additional capacity of the Cisco uBR10012 or the larger form factor of the Cisco uBR7246VXR

Key Features and Benefits

- The Cisco uBR7225 Universal Broadband Router supports PacketCable 1.1, DOCSIS 1.1, Euro-DOCSIS 2.0, and PacketCable Multimedia, increasing return on investment for converged services and speeding deployment of advanced IP services.
- Upgrade path to DOCSIS3.0 through the use of 8x8 line card
- The new low-cost line cards (part numbers UBR-E-28U and UBR-E-16U) lead to lower capital expenditures.
- This low-cost entry-level CMTS makes efficient use of capital expenditures while maintaining modularity for capacity growth.
- The Cisco uBR7225 provides up to 4 downstream and 16 upstream ports in a 2RU form factor.
- The router provides DOCSIS, Euro-DOCSIS, and J-DOCSIS support on one line card for operational savings and lower capital expenditures.

Specifications

Compact Design suitable for rack-mount (2-RU) pr desktop installation	Dimensions of 3.5 x 17.32 x 21.8 in. (8.89 x 44.9 x 55.37 cm) (H x W x D) : 45 lb (20.4 kg) : Front, mid, and rear mountable in a 19 in. EIA standard rack : Depth fully loaded from the tip of cable management bracket to the tip of the UBR-NPE-G1 handle is 26.1 in. (66.29 cm)
Modulation	Downstream—64-QAM, 256-QAM : Upstream—QPSK 8-, 16-, 32-, 64-QAM
Downstream frequency range	DOCSIS—6 MHz Annex B, 70–1G MHz; Euro-DOCSIS—8 MHz Annex A, 70–1G MHz : J-DOCSIS—6 MHz Annex B extension, 70–860 MHz
Upstream frequency range	DOCSIS—6 MHz Annex B, 70–1G MHz; Euro-DOCSIS—8 MHz Annex A, 70–1G MHz : J-DOCSIS—6 MHz Annex B extension, 70–860 MHz
Compatible Cisco Network Processing Engines (NPEs)	The Cisco uBR7225VXR must contain one uBR7200-NPE-G2 (or uBR7200-NPE-G1) processor that must have at least 1 GB of DRAM (512 MB for uBR7200-NPE-G1); there is an upgrade option of a 2GB memory module that can be configured to be shipped with uBR7200-NPE-G2 to ensure best performance. FE/GE ports availability—3 GE ports (UBR-NPE-G2/G1). Cisco UBR-MC88V is only supported by UBR-NPE-G2.
Line cards with integrated upconverters/modulators (cable plant interfaces)	New Modular design Line cards supported: • UBR-MC88V Physical: • Occupies a single slot in the Cisco uBR7225VXR chassis • Maximum 2 line cards per uBR7225VXR chassis • Hot-swappable; no slot dependency • Dimensions (H x W x D): 1.4 x 15.154 x 11.531 in. (3.55 x 38.49 x 29.29 cm) Weight: • 6.06lbs (2.749 kg) Power consumption: • 90 watts (307 BTUs per hour) at 25°C • Integrated upconverter specifications • High-level output—+62 dBmV • Optimized for 64 and 256 quadrature amplitude modulation (QAM) • Software configurable from 52 to 62 dBmV output power in units of dBmV

Included AC power supply	Single or dual redundant power supplies • : 100 to 240 VAC input, 50/60 Hz frequency; 5.5 A maximum AC input current; 300W (maximum) output DC or 25 @ 11.28V; AC-input cable: 18-QEG4 3-wire cable with 3-lead IEC-320 receptacle on power supply end and country-dependent plug on power source end
Software Compatibility	The Cisco uBR7225VXR is supported in Cisco IOS Software Release 12.2SB, which includes PacketCable Multimedia Specification (PCMM), admission control, advanced-mode DOCSIS Set-Top Gateway (DSG), and Cisco Service Independent Intercept (SII) features.

For More Information

http://cisco.com/en/US/products/ps8474/index.html

Cisco uBR7246XVR Universal Broadband Router

The Cisco uBR7246VXR Universal Broadband Router, a member of the Cisco uBR7200 Series, provides a single, Layer 3 routing, multiservice, scalable platform that gives cable companies the ability to deliver IP data, voice, and video services to DOCSIS, Euro-DOCSIS, and PacketCable-compliant cable modems, set-top boxes, and multimedia terminal adapters. uBR7246VXR can be easily upgraded to DOCSIS with the latest uBR-MC88V line card.

Ideal for Companies That Need These Features

Cisco uBR7225VXR

- Flexible port expansion for multiservice deployment options
- Service support for up to 10,000 subscribers per chassis with 3.2 Gbps back plane (numbers are for reference only. Actual numbers for specific systems will vary depending on network/service loading, traffic, and other parameters.)
- Powerful processor and edge intelligence; field-proven and carrier-class reliability
- Support for multimedia services
- High tolerance to hybrid fiber coaxial (HFC) network and spectrum noise

Key Features and Benefits

- Modular design—1,000 to 10,000 subscribers supported based on different configurations
- High availability for low cost maintenance
- Advanced physical layer (PHY)
- Full DOCSIS3.0 and Euro-DOCSIS3.0 compliance; Euro-DOCSIS 2.0 (A-TDMA only); DOCSIS 1.1 qualified, and PacketCable 1.1 qualified; tComLabs qualified to Euro-DOCSIS 1.0, 1.1, and 2.0 (A-TDMA only) specifications; also supports Advanced Mode DSG.
- Powerful Layer 3 routing intelligence and sophistication
- Upgrade path to DOCSIS3.0 through the use of Cisco uBR-MC88V line card

Specifications

Number of Cable Line Card Slots	4
Supported Cable Line Cards (Cable Plant Interfaces)	uBR7200 Series MC28U Broadband Processing Engines; uBR7200 Series MC88V Broadband Processing Engines
Port Adapter Slots (LAN/WAN Interfaces)	2
Supported PA categories	Ethernet Serial, HSSI, ATM, POS, DPT
Power Supply Slots	2
Input/Output (I/O) controller	uBR7200-I/O-2FE/E, not required if uBR7200-NPE-G1 or uBR-NPE-G2 are installed in the system
I/O flash options for PCMCIA slots	Flash disk (48 MB); Flash disk (128 MB)
Network Processing Engines (NPE)	uBR7200-NPE-G2, UBR7200-NPE-G1
Add-on processor memory options	512 MB or 1 GB for uBR7200-NPE-G1 1 GB or 2 GB for uBR7200-NPE-G2
Router Bandwidth	3.2 Gbps

For More Information

http://www.cisco.com/en/US/products/hw/cable/ps2217/index.html

Cisco uBR10012 Universal Broadband Router

The Cisco uBR10012 Universal Broadband Router addresses the volume, capacity, and complexity of large cable headends or distribution hubs. The router delivers the highest level of service availability and capacity of any production cable modem termination system (CMTS) available today. It employs a mix of distributed, centralized, and parallel processing to facilitate consistently high, real-world performance. The Cisco uBR10012 is CableLabs qualified to PacketCable 1.1 and DOCSIS 2.0 specifications. The product is also qualified for EuroDOCSIS 2.0, and DOCSIS 3.0 Bronze specifications and full DOCSIS3.0 compliance.

The Cisco uBR10012 Universal Broadband Router powers the world's largest DOCSIS 3.0 downstream channel bonding install base, with more than 1 million revenue-generating subscribers and counting. The combination of the 20 downstream cards, 20 upstream RF cards, the 24 downstream channel bonding cards (wideband shared port adapter [SPA]), and the DOCSIS Timing Interface (DTI) card on the Cisco uBR10012, allows the deployment of DOCSIS 1.1 and 2.0 modems along with the new DOCSIS 3.0 modems for downstream channel bonding over low-cost video-on-demand (VoD) edge quadrature-amplitude-modulation (QAM) ports.

With new hardware support of the Cisco 10000 Performance Routing Engine 4 (PRE4) processor, the 10 Gigabit Ethernet WAN card, and the 6-wideband SPA carrier starting in January 2009, the Cisco uBR10012 Universal Broadband Router provides a maximum of 304 downstream ports per chassis to meet ever-increasing IP data, voice, and video bandwidth needs.

Ideal for Companies that Need These Features

Cisco uBR10012

- Large subscriber bases
- Edge routing or aggregation of DOCSIS traffic
- High-end throughput, capacity, and service handling
- Advanced multimedia service delivery
- Sophisticated Layer 3 routing intelligence
- Complex network interface configurations

Key Features and Benefits

- Powerful processing and throughput
- Five 9's availability
- Highest density and capacity—5,000 to 64,000 subscribers
- Scalable, real-world proven performance
- A-TDMA and DOCSIS 2.0 support
- S-CDMA and full DOCSIS3.0, EuroDOCSIS3.0 support
- Advanced intelligence features
- With UBR-MC20x20V line card, Cisco offers pay-as-you-grow flexibility with software licensing for downstream channels (0DS, 5DS, 10DS, 15DS, and 20DS SW licenses are offered

Specifications

Modular Slots	Flash—48 MB; System—128 MB
Supported Cards	Cisco MC5X20H Broadband Processing Engine (BPE), Cisco MC20X20H Broadband Processing Engine (BPE); Cisco 24-port Wideband Downstream Shared Port Adapter; Cisco 5-Port Gigabit Ethernet Shared Port Adapter; Cisco 1-Port 10GE LAN-PHY Shared Port Adapter, and Gigabit Ethernet Half-Height (HH-1GE) network uplink card
Processor Type	Parallel Express Forwarding (PXF)
Flash Memory	64 MB (default); 128 MB (maximum)
DRAM Memory	1 GB DRAM minimum
Software Supported	Cisco IOS Software Release 12.2(33)SCD recommended; Cisco IOS Software Release 12.2(33)SCC; Cisco IOS Software Release 12.3(9)BC minimum to support the Cisco PRE-2, Cisco IOS Software Release 12.3(13)BC minimum to support the Cisco Gigabit Ethernet Half-Height Line Card, Cisco IOS Software Release 12.3(17)BC2 minimum to support the Cisco MC5X20H BPE; Cisco IOS Software Release 12.2(33)SCB minimum to support the Cisco Performance Routing Engine 4, Cisco 10000 Series SPA Interface Processor-600, Cisco 5-Port Gigabit Ethernet Shared Port Adapter, and Cisco 1-Port 10GE LAN-PHY Shared Port Adapter.
Power Supply	DC, AC
Hot-Swappable	Yes
Backplane Capacity	51.2 Gbps
Dimensions (H x W x D)	31.25 x 17.2 x 22.75 in. (79.4 x 43.7 x 57.8 cm)—18 rack units (RU) Mounting: 19 in. rack mountable (front or rear), 2 units per 7 ft. rack Note: Mounting in 23 in. racks is possible with optional third-party hardware
Weight	235 lb. (106.6 kg) fully-configured chassis

Selected Part Numbers and Ordering Information

Cisco uBR10012 Series Chassis Bundles	
U10012-1D5X20H-C	UBR10012 with PRE-2, DTCC and 1 MC5X20H card
U10012-1M5X20H-C	UBR10012 with PRE-2, TCC and 1 MC5x20 Cards
U10012-2M5X20H-HA	UBR10012 with 2 PRE-2, 2 TCC and 2 MC5x20 Cards
U10012-2D5X20H-HA	UBR10012 with 2 PRE-2, 2 DTCC and 2 MC5X20H cards
Cisco uBR10012 Series Pricing Bundles	
UBR10-P2TG	Bundle incl. 1 PRE2, 1 TCC+, 1 HH-1GE, 1 HH-CARRIER
UBR10-P2TG-HA	Bundle incl. 2 PRE2, 2 TCC+, 2 HH-1GE, 1 HH-CARRIER
UBR10-P2DTG	Bundle incl. 1 PRE2, 1 DTCC+, 1 HH-1GE, 1 HH-CARRIER
UBR10-P2DTG-HA	Bundle incl. 2 PRE2, 2 DTCC, 2 HH-1GE, 1 HH-CARRIER
UBR10-P2DT5G	Bundle incl. 1 PRE2, 1 DTCC+, 1 4-SPA SIP, 1 5x1 GE SPA
UBR10-P2DT5G-HA	Bundle incl. 2 PRE2, 2 DTCC, 2 4-SPA SIP, 2 5x1 GE WAN SPA
UBR10-P4DT5G	Bundle incl. 1 PRE4, 1 DTCC+, 1 4-SPA SIP, 1 5x1 GE WAN SPA
UBR10-P4DT5G-HA	Bundle incl. 2 PRE4, 2 DTCC, 2 4-SPA SIP, 2 5x1 GE WAN SPA
UBR10-P4DT10G	Bundle incl. 1 PRE4, 1 DTCC+, 1 4-SPA SIP, 1 1x10 GE WAN SPA
UBR10-P4DT10G-HA	Bundle incl. 2 PRE4, 2 DTCC, 2 4-SPA SIP, 2 1x10 GE WAN SPA
UBR-5G-SIP-D3SPA	UBR10K bundle, includes 1 5 GE SPA, 1 DS SPA, 1 SPA carrier
UBR-10G-SIP-D3SPA	UBR10K bundle, includes 1 10 GE SPA, 1 DS SPA, 1 SPA carrier
UBR-4MC20X20V-5D	4 for 3 Bundle for 5x20V. Must order with 10K chassis
UBR-4MC20X20V-20D	4 for 3 Bundle for 20x20V. Must order with 10K chassis
Cisco uBR10012 Series Line Cards	
SPA-24XDS-SFP=	24-port uBR10012 Wideband Downstream Shared Port Adapter
UBR10-2XDS-SIP	Cisco uBR10012 Wideband Downstream-only SPA Carrier Card
UBR10-2XDS-SIP=	Cisco uBR10012 Wideband Downstream-only SPA Carrier Card
SPA-24XDS-SFP	24-port uBR10012 Wideband Downstream Shared Port Adapter
UBR10-MC5X20H-D	uBR10K High-Performance Card, 5DS w/upx, 20US, Spec An
UBR10-MC5X20H-D=	uBR10K High-Performance Card, 5DS w/upx, 20US, Spec An
UBR10-4MC5X20H-D	4 UBR10-MC5X20H-D Line cards
UBR-MC20X20V-20D	Cisco 20x20V DOCSIS 3.0 Broadband Processing Engine — Base hardware + 20 downstream and 20 upstream license
UBR-MC20X20V-5D	Cisco 20x20V DOCSIS 3.0 Broadband Processing Engine — Base hardware + 5 downstream and 20 upstream license
UBR-MC20X20V-0D	Cisco 20x20V DOCSIS 3.0 Broadband Processing Engine — Base hardware + 0 downstream and 20 upstream license
L-UBR-SWLIC-5DS	+5 downstream upgrade license
L-UBR-SWLIC-15DS	+15 downstream upgrade license
L-UBR-SWLIC-20DS	+20 downstream upgrade license
L-UBR-SWLIC-5DS	+5 downstream upgrade license
10000-SIP-600	Cisco 10000 Series SPA Interface Processor-600
10000-SIP-600=	Cisco 10000 Series SPA Interface Processor-600
SPA-5X1GE-V2	Cisco 5-Port Gigabit Ethernet Shared Port Adapter
SPA-5X1GE-V2=	Cisco 5-Port Gigabit Ethernet Shared Port Adapter
SPA-1X10GE-L-V2	Cisco 1-Port 10GE LAN-PHY Shared Port Adapter
SPA-1X10GE-L-V2=	Cisco 1-Port 10GE LAN-PHY Shared Port Adapter
Cisco uBR10012 Series Processors	
ESR-PRE2/R	Performance Routing Engine, 1GB DRAM, 64MB Flash

ESR-PRE2=	Performance Routing Engine
ESR-PRE4	Performance Routing Engine 4
ESR-PRE4=	Performance Routing Engine 4
Cisco uBR10012 Series Coax Cables	
CAB-RFSW520QTIMF2	Quad-shield RF cable bundle, MC520 to HFC plant, 3m
CAB-RFSW520QTIMF2=	Spare quad-shield RF cable bundle, MC520 to HFC plant, 3m
CAB-RFSW520QTPMF2	RF cable bundle, MC520/RFSW to HFC plant, 3m, with UCH2
CAB-RFSW520QTPMF2=	Spare RF cable bundle, MC520/RFSW to HFC plant, 3m, with UCH2
CAB-RFSW520QTIMM2	Quad-shield RF cable bundle, MC520 to RF switch, 1m, with UCH2
CAB-RFSW520QTIMM2=	Spare quad-shield RF cable bundle, MC520 to RF switch, 1m, with UCH2

For More Information

http://www.cisco.com/en/US/products/hw/cable/ps2209/index.html

Cisco uBR 3x10 RF Switch

The Cisco uBR 3x10 RF Switch is an integral part of the Cisco uBR10012 High Availability solution. It offers a fully redundant system that helps cable operators exceed PacketCable system availability, minimize service disruptions, and simplify operations.

Ideal for Companies that Need These Features

Cisco uBR 3x10 RF

- Advanced services such as VoIP, DSG STB deployments, and highly available commercial services
- Carrier-class N+1 network and service architecture
- High-density high-availability service support
- Scalability to tens of thousands of subscribers

Key Features and Benefits

- N+1 redundancy
- Hot swap capability of all RF switch modules with no RF service disruption
- Support for DOCSIS and Euro-DOCSIS RF performance specifications
- Comprehensive set of high availability features
- Redundancy Readiness Verification, for proactive redundancy health monitoring and reporting
- Fully passive working path
- Position-sensing latching relays
- Unmatched port density and flexibility

Specifications

Input Power Requirements	AC:—100 to 240 VAC, 50 to 60 Hz, operating range: 90 to 254 VAC; DC—-48 to -60 VDC, operating range: 140.5 to -72 VDC, 200 mVpp ripple/noise
Unit Control	10BaseT Ethernet—SNMP; Switching time from active (working) to standby (protect)—150 mS maximum after SNMP command
Connectors	RF connectors—MCX; AC power—IEC320 type; DC power—Three terminal block; Ethernet—RJ-45; RS-232 Bus—9-pin male D
RF Requirements	Input/output impedance: 75 ohms; maximum RF input power: +15 dBm (63.75 dBmV); Switch type: Electro-mechanical, absorptive for working path, non-absorptive on the protect path; Switch setting time per switch module: 20 ms maximum; Downstream frequency range: 54 to 860 MHz; Typical downstream insertion loss: +/- 1.1 dB from CMTS to cable plant; +/- 2.1 dB from protect to cable plant; 5.5 dB from working to output; 8.0 dB from, protect to output Downstream insertion loss flatness: +/- 1.1 dB from CMTS to cable plant; +/- 2.1 dB from protect to cable plant Downstream output return loss: > 15.0dB at <450 MHz, > 12.0 dB at >= 450 MHz; Downstream input return loss: > 15.0 dB; Downstream isolation: > 60 dB from channel to channel in working mode; > 52 dB from CMTS to protect when in protect mode; Upstream frequency range: 5 to 70 MHz; Typical upstream insertion loss: 4.1 dB from cable plant to CMTS; 5.2 dB from cable plant to protect; Upstream insertion loss flatness: +/- 0.4 dB from cable plant to CMTS; +/- 0.6 dB from cable plant to protect; Upstream input return loss: > 16 dB; Upstream isolation: >60 dB from channel to channel in working mode: > 60 dB from CMTS to protect when in protect mode; Protect mode: CMTS return loss > 10 dB, cable plant return loss: > 10 dB
Reliability	41,000 MTBF @ +50C as calculated by BellCore 5, 80 percent confidence factor
Dimensions (H x W x D)	5.25 x 17.5 x 14.8 in. (13.335 x 44.45 x 37.592 cm)
Environmental	Operational temperature range—0 to +40C; Operating temperature range—-5 to +55C

Weight	36 lbs.

Selected Part Numbers and Ordering Information

Cisco RF Switch Series	
UBR-RFSW	N+1 RF Switch for CMTS Routers
Cisco RF Switch Series Cables	
CAB-RFSW520QTPMF2	Cisco RF cable bundle, MC520/RFSW to HFC plant, 3m, with UCH2
CAB-RFSW520QTPMF2=	Spare RF cable bundle, MC520/RFSW to HFC plant, 3m, with UCH2
CAB-RFSW520QTIMM2	Quad-shield RF cable bundle, MC520 to RF switch, 1m, with UCH2
CAB-RFSW520QTIMM2=	Spare quad-shield RF cable bundle, MC520 to RF switch, 1m, with UCH2

For More Information

http://www.cisco.com/en/US/products/hw/cable/ps2929/index.html

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Realize the full business value of your technology investments faster with intelligent, personalized services from Cisco and our partners.

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