

Cisco Digital Media System: Cisco Digital Media Encoder 2000

The Cisco® Digital Media System (DMS) enables organizations to create, manage, and access compelling digital media to easily connect customers, employees, partners, or students—anywhere, anytime. The Cisco Digital Media System is a flexible and comprehensive solution for publishing dynamic content to both on-premise digital signage displays and the desktop.

The Cisco Digital Media Encoder (DME) 2000 is an integrated component of the Cisco Digital Media System for Cisco Desktop Video.

Cisco Digital Media Encoder 2000

The Cisco Digital Media Encoder 2000 (Figure 1) is a multiprocessor, studio-quality audio and video encoding appliance that provides live and on-demand streaming digital media across an IP network.

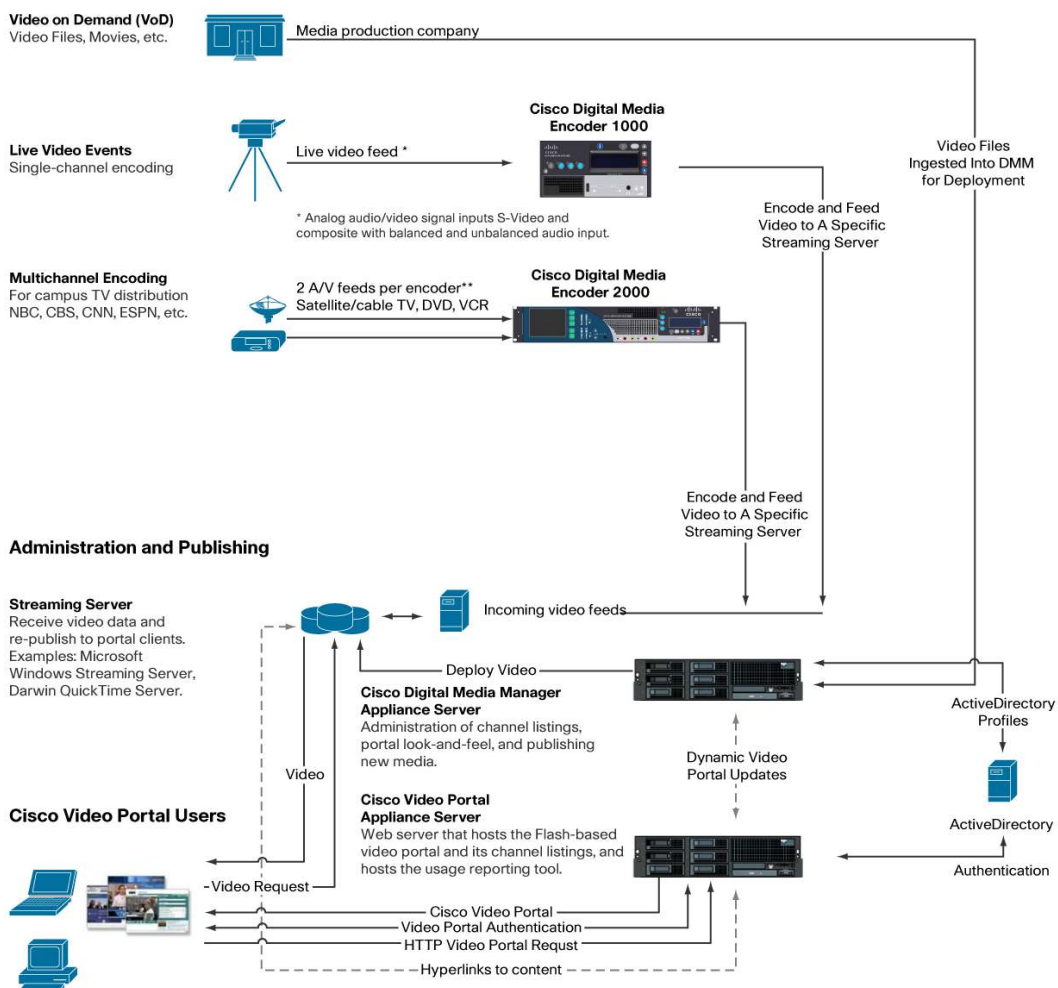
The Cisco Digital Media Encoder 2000 is designed for sophisticated users who require multiple audio and video input options, a variety of encoding formats and functions, and high-bandwidth encoding. A color display and audio output monitors mounted on the front panel provide visual video and audio encoding monitoring. You can manage the encoder locally through the embedded LCD or remotely through the Cisco Digital Media Manager, another component of the Cisco Digital Media System. Its multiprocessor power and variety of input options make this encoder the choice for users, including corporate offices or data centers that need sophisticated creation of compelling digital media content.

Figure 1. Cisco Digital Media Encoder 2000



The Cisco Digital Media Encoder 2000 provides a variety of composite and digital audio and video connections as well as two 10-/100-/1000-Mb Ethernet connections. The power of the multiple processors and the variety of video and audio inputs make this encoder the choice for creating both live and on-demand streaming content as well as a platform for content conversion or transcoding.

You can use the Cisco Digital Media Encoder 2000 as a standalone encoder or integrate it with the overall Cisco Digital Media System (Figure 2). The Cisco Digital Media Manager includes functions to set up and control Cisco Digital Media Encoders; schedule live streaming events; and publish both on-demand and live streaming content to viewers anywhere on your IP network.

Figure 2. Cisco Digital Media System**Digital Media Encoding**

For optimal network performance and end-user delivery of digital media, you can connect the Cisco Digital Media Encoder 2000 to a variety of streaming systems, including the Cisco Application and Content Networking System (ACNS). Cisco ACNS provides both live unicast and multicast streaming services and on-demand access in which digital media files are cached locally for retrieval and viewed over the WAN at LAN speeds (Figure 3).

Figure 3. Cisco Digital Media Encoder 2000 and Cisco ACNS**Digital Media Encoding**

Video on Demand (VoD)
Video Files, Movies, etc.



Media production company

Live Video Events
Single-channel encoding



Live video feed

Multichannel Encoding
For campus TV distribution
NBC, CBS, CNN, ESPN, etc.



Cisco Digital Media Encoder 1000



Cisco Digital Media Encoder 2000



Video and Digital Signage
Files Ingested Into
DMM for Deployment.

VP Encode Feed

VP Encode Feed

Administration and Publishing

**Cisco Digital Media Manager
Appliance Server**



Deployed Content



**Cisco Video Portal
Appliance Server**

Web and
Streaming Server

Content for Pre-position



Root Cisco WAE
Receive video data and distribute to various
edge WAE servers that serve data to users.

CDM



Content Distribution Manager
ACNS central management tool

ACNS
Administration



Root WAE

WAN

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Cisco Video Portal Users

Edge Cisco WAE
Receive video and re-publish data
to nearby portal clients.

Edge WAE

Redirected-VP Authentication

WCCP/HTTP
Redirection



HTTP Video Portal Request

Video Portal Authentication

Cisco Video Portal

Video Request

Video

More information about Cisco ACNS is available at: <http://www.cisco.com/go/acns>.

Key Features and Benefits

Table 1 gives features and benefits of the Cisco Digital Media Encoder 2000.

Table 1. Features and Benefits of Cisco Digital Media Encoder 2000

Feature	Benefit
Multiple processors	Provide highest-quality streaming from multiple inputs.
Multiple video and audio inputs	Accept video and audio input from a large variety of cameras and other sources.
Video and audio monitors on the front panel	Visually monitor encoding functions.
Integration with the Cisco Digital Media System	Easily schedule and manage live events from multiple encoders from the web-based Cisco Digital Media Manager.

Product Specifications

Table 2 gives specifications of the Cisco Digital Media Encoder 2000.

Table 2. Product Specifications

Product Parameter	Specification
Supported live streaming formats	<ul style="list-style-type: none"> Windows Media MPEG-4/H.264
Supported on-demand formats	<ul style="list-style-type: none"> Flash (.flv) Windows Media MPEG-4/H.264
Video inputs	<ul style="list-style-type: none"> Two composite Two S-Video Two SDI (SMPTE-259M) video with embedded audio inputs (AES/EBU)
Video formats	<ul style="list-style-type: none"> National Television System Committee (NTSC): M, M-J Phase Alternation Line (PAL): B, D, H, I
Audio inputs	<ul style="list-style-type: none"> Two pair unbalanced stereo (RCA) Two pair balanced stereo (XLR) Two pair digital audio (AES/EBU) inputs through SDI inputs
Ethernet ports	Two 10/100/1000 Mbps
Available hard disk space	85 GB
RAM	1 Gb
Processor	Dual Core AMD Opteron, 1.81 GHz
Additional ports	Two USB 2.0 and VGA monitor
Physical dimensions	<ul style="list-style-type: none"> Size (H x W x D): 3.5 x 19 x 24 in. (8.89 x 48.26 x 60.96 cm) Weight: 42 lb (19.05 kg)
Standard form factor	2 rack unit (RU)
Operating temperature range	0 to 40°C (32 to 104°F)
Operating humidity range	Between 5 and 85% (noncondensing) at 40°C
Operating altitude range	0 to 10,000 ft (0 to 3,084m)
Power	<ul style="list-style-type: none"> 110 to 220 VAC 50 to 60 Hz 4 to 8A, load and input voltage dependent 510W power supply 1,740 BTU/hr
Mean time between failure (MTBF; estimated)	>100,000 hr

Usage Recommendations

The Cisco Digital Media Encoder 2000 is intended for use in encoding typical standard-definition (SD) Webcast quality live and on-demand streams. Table 3 gives recommended upper limits regarding encoder format settings and intended use for the Cisco Digital Media Encoder 2000. The recommended upper limits for window size and bit rate are based on a maximum of 75-percent CPU usage on the Cisco Digital Media Encoder 2000. The Cisco Digital Media Encoder 2000 is also compatible with the slide synchronization function of the Cisco Digital Media Manager Live Event Module.

Table 3. Usage Recommendations

Application	Encoder Type	Maximum Window Size	Maximum Bit Rate	Number of Simultaneous Output Streams
General Webcasting for live and on-demand content	Windows Media	640 x 480	2 Mbps	2; variable for smaller window sizes and lower bit rates
General Webcasting for live and on-demand content	MPEG-4/H.264	640 x 480	2 Mbps	2; variable for smaller window sizes and lower bit rates
Cisco Digital Media Manager Live Event Module (for use with slide synchronization for live events)	Windows Media	640 x 480	2 Mbps	2; variable for smaller window sizes and lower bit rates

Ordering Information

To place an order, visit the [Cisco Ordering Home Page](#) and refer to Table 4.

Table 4. Ordering Information

Product Name	Part Number
Cisco Digital Media Encoder 2000	DMS-DME-2000

Service and Support

Cisco and its partners provide a broad portfolio of end-to-end services and support that can help you improve network total cost of ownership, business agility, and network availability to increase the business value of your network and your return on investment. This portfolio is based on the Cisco Lifecycle Services approach, which defines activities needed, by technology and by network complexity, throughout the six phases of the network lifecycle: prepare, plan, design, implement, operate, and optimize.

Cisco Services in the prepare, plan, design, and implement phases of the network lifecycle help you successfully deploy a reliable, high-performance Cisco Digital Media System. Specific activities include:

- User feature and functionality requirements validation
- Architecture validation
- Network and operations readiness assessment
- Detailed design and implementation schedule development
- System acceptance test plan development
- Staffing plan development
- Installation, configuration, and integration support

Cisco Services in the operate phase help ensure that Cisco products operate efficiently and benefit from the most up-to-date system software. Cisco SMARTnet[®] and SMARTnet Onsite support provide registered access to Cisco.com for online technical assistance, access to the Cisco Technical Assistance Center (TAC), Cisco IOS[®] Software updates and upgrades, and Advance Replacement of failed hardware.

To learn more about Cisco Services for the Cisco Digital Media System, please contact your local Cisco account representative. For specific information about Cisco SMARTnet and SMARTnet Onsite support, visit:

http://www.cisco.com/en/US/products/svcs/ps3034/ps2827/ps2978/serv_group_home.html.

For More Information

For more information about the Cisco Digital Media Encoder 2000, visit:

<http://www.cisco.com/go/dms> or contact your local Cisco account representative.



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