DATA SHEET

CISCO MEDIA CONVERGENCE SERVER 7845-H1

PRODUCT OVERVIEW

The Cisco® MCS 7845-H1 Media Convergence Server is a high availability server platform for Cisco Unified Communications solutions. An integral part of a complete, scalable architecture for a new generation of high-quality IP voice solutions that run on enterprise data networks, the Cisco MCS 7845-H1 delivers the high performance and availability demanded by today's enterprise networks and is easy to deploy and highly cost-effective. At only 2 rack units (2RU) high, the Cisco MCS 7845-H1 packs tremendous power in a low-profile chassis that minimizes rack space. The Cisco MCS 7845-H1 runs a variety of Cisco IP Communications applications, such as Cisco CallManager.

The following points are an outline of the features of Cisco MCS 7845-H1:

- Two Intel Xeon 3.4 (or higher) GHz processors, an 800 MHz front side bus (FSB) and 2 MB of Layer 2 cache
- PC2-3200R 4-GB 400-MHz Double Data Rate 2 (DDR2) memory with online spare capabilities
- Integrated Ultra320 Smart Array 6i Redundant Array of Independent Disks (RAID) Controller with 64-MB read cache plus 128-MB battery-backed write cache
- Dual-port Gigabit Ethernet controller (embedded)
- Quick-deployment third-party rail kit
- Support for Integrated Lights Out (iLO) server management
- Support for up to six 1-inch Ultra320 Small Computer System Interface (SCSI) hot-plug hard drives
- Hot-plug redundant power supplies
- Hot-plug redundant fans

SUPPORTED APPLICATIONS

The Cisco MCS 7845-H1 can run any of the following Cisco Systems® applications:

- Cisco Unified CallManager—Up to 7500 IP phones per server
- Cisco Conference Connection—Up to 180 conference ports
- Cisco Emergency Reporter—Up to 30,000 IP phones per server
- Cisco Unified Presence Server
- Cisco Unified Intelligent Contact Management Enterprise
- Cisco Unified Intelligent Contact Management Hosted
- Cisco Unified Contact Center Enterprise
- Cisco Unified Contact Center Hosted
- Cisco Unified Contact Center Express

- Cisco IP Interoperability and Collaboration System (IPICS)

- Cisco Unified IP Interactive Voice Response (IVR)

- Cisco Unified Customer Voice Portal

- Cisco MeetingPlace® conferencing solution—Supports Cisco MeetingPlace systems with up to 1152 concurrent voiceconferencing licenses running the following software: Cisco MeetingPlace for Outlook, Cisco MeetingPlace for Notes, Cisco MeetingPlace Web Conferencing (up to 200 concurrent Webconferencing licenses per server), Cisco MeetingPlace Directory Integration Application (dedicated MCS 7845-H1 for >200 concurrent voiceconferencing licenses), Cisco MeetingPlace Video Integration, Cisco MeetingPlace H.323/Session Initiation Protocol (SIP) Gateway Software, and Cisco MeetingPlace Simple Mail Transfer Protocol (SMTP) E-Mail Gateway

- Cisco Unified IP Queue Manager

- Cisco Unity® Unified Messaging—Up to 72 ports and up to 3000 on-box (voicemail) or 7500 off-box (voicemail or unified messaging) mailboxes

KEY FEATURES AND BENEFITS

Performance

The Cisco MCS 7845-H1 is a robust, highly available server platform designed to support today's unified communications applications. It uses an Integrated Smart Array 6i Controller with a 64-MB cache to provide onboard RAID support without using one of the peripheral controller-interconnect (PCI)-X slots on the server. The Cisco MCS 7845-H1 occupies only 2RU of space while providing the features most requested in a high-availability server platform. At product introduction, the Cisco MCS 7845-H1 ships with two Intel Xeon 3.4-GHz processors and the processor speed will be increased as Intel retires the 3.4-GHz processor and introduces new processors.

High Availability

High availability on the Cisco MCS 7845-H1 is achieved through the following mechanisms:

- Redundant hot-swap 575W power supplies

- Redundant hot-swap fans

- Hot-swap SCSI hard drives configured using RAID 1

Serviceability

System Health LEDs

The Cisco MCS 7845-H1 provides system health LEDs and unit identification lights on the front and back of the server to make pinpointing system problems easier than ever. When an internal component fails, this indication is made on an internal component LED (amber) and on the front panel of the Cisco MCS 7845-H1. If the item is serviceable without removing the server hood, as in the case of a redundant power supply, the external health LED illuminates. If the item is serviceable by removing the hood, as in the case of a fan failure, the internal health LED illuminates. If no failures have occurred, the system health LEDs are green. If a failure has occurred but a redundant feature has enabled the system to continue running, the LED is amber. If the failure is critical and has caused the system to shut down, the LED is red.

Integrated Lights Out

The Integrated Lights Out (iLO) Standard is included on the motherboard. Combining essential management functions and diagnostics with basic lights-out functions as standard components of the server, iLO is available at no charge. iLO Standard offers maximum security, availability, and control over business-critical servers without the need to visit the systems physically.

- iLO Standard provides fundamental server control and monitoring by integrating essential lights-out technology directly into the Cisco MCS 7845-H1 architecture.

- Essential lights-out features include remote power control, text-based console, logs, status, and alert forwarding.

- The easy-to-use, dedicated lights-out LAN port is accessible through a browser interface.

- iLO Standard saves a valuable PCI slot for additional functions and reduces installation and setup time.

- iLO Standard eliminates the need for an external power adapter or any other internal or external cables.

- iLO Standard provides a rich suite of security features, including Secure Sockets Layer (SSL).

- iLO Standard provides a scalable solution by allowing group administration of iLO processors.

Redundant ROM

In the Cisco MCS 7845-H1, the ROM is divided into two logical sections. When the system boots, the primary ROM section is executed and used in server operation. During a ROM flash, the backup section is flashed. When the flash is fully completed, the backup section becomes the primary. If the flash does not complete safely, potentially because of power interruption, the backup is available to boot the system. In the situation in which both images are valid, the user can select which image to use at boot time.

Tape Drive Support

The Cisco MCS 7845-H1 can support an optional 36-72/universal-serial-bus (USB) external Digital Audio Tape (DAT) drive (part number DAT-USB-EXT-72=) or an optional USB rack-mount DAT drive (part number DAT-USB-RM-72=). This tape drive connects through one of the 4 USB 2.0 ports provided by the Cisco MCS 7845-H1 server.

PRODUCT SPECIFICATIONS

Table 1 gives product specifications.

Table 1. Product Specifications

Processor at Product Introduction	
Processor (CPU)	Xeon DP
Processor internal clock speed	3400 MHz (or higher)
Level 2 cache	2048 KB
Maximum processors	2
Processors installed	2
Basic input/output system (BIOS) type	Flash

Memory	
Memory maximum	12 GB
Memory bus clock	400 MHz
Memory technology	PC2-3200R 400-MHz DDR2 synchronous dynamic RAM (SDRAM)
Multibit error mitigation	Advanced error correction code (AECC)
Total RAM slots	6
Memory installed	4 GB (4x1 GB dual in-line memory modules [DIMMs])
RAID Controller	
Controller model	HP Integrated Smart Array 6i Controller
Interface	PCI-X 133-MHz, 64-bit
Cache	64 MB
Battery-backed write cache	Yes—128 MB
RAID levels supported	0, 1, 1+0, and 5
SCSI protocols supported	Ultra2, Ultra3, and Ultra 320
SCSI peak data-transfer rate	320 MB per channel
Maximum quantity hard disk drives	6
SCSI ports (external/internal)	0/2
Hard Disk Capacities	
Hot-swappable bays	6
Hard disk interface type	Ultra320 SCSI
Maximum hard drive capacity	880.8 GB with six 146.8-GB internal disks
Hard Disk—72 GB	
Hard disk installed	Four 72 GB (2xRAID 1) drive—all product IDs of server
Hard disk route processor module (RPM)	15,000
Hard disk average seek time	3.8 ms

Hard Disk—144 GB	
Hard disk installed	Two 144-GB (RAID 1) drive—Cisco MCS 7845-H1-ECS1 only in addition to the four 72-GB (2xRAID 1) drives
Hard disk RPM	15,000
Hard disk average seek time	5.8 ms
Network Connectivity	
Ethernet network interface card (NIC)	Dual onboard 10/100/1000
Ethernet connectors	Two RJ-45 connectors on rear of server
10BASE-T cable support	Electronic Industries Alliance (EIA) Category 3, 4, or 5 unshielded twisted-pair (UTP) (2 or 4 pair) up to 328 feet (100m)
100BASE-TX cable support	EIA Category 5 UTP (2 pair) up to 328 feet (100m)
1000BASE-T cable support	EIA Category 6 UTP (recommended), 5E UTP, and 5 UTP (2 pair) up to 328 feet (100m)
Interfaces	
Serial ports	1 RS-232D
Parallel ports	0
USB 2.0 ports	3 (1 at front and 2 at rear of chassis)
Keyboard ports	1 PS/2
Mouse ports	1 PS/2
Audio ports	None
System management ports	RJ-45 for HP iLO dedicated Ethernet port
External SCSI ports	1 Ultra320
Security	

- Power-on password
- Keyboard password
- Selectable boot device
- Diskette drive control
- QuickLock, network server mode
- Serial interface control
- Administrator's password
- Disk configuration lock

Industry Standard Compliance	
• Advanced Configuration and Power Interface (ACPI) 2.0 compliant	
• PCI 2.2 compliant	
• Wake On LAN (WOL) support	
• Microsoft Logo certifications	
• USB 2.0 Support	
Expansion Options	
PCI-X non-hot plug 133 MHz/64-bit slots	1
PCI-X non-hot plug 100 MHz/64-bit slots	2
Power	
Maximum input power	735W
Steady state output power	575W
Auto-ranging AC mains input	Yes
Power Factor Correction (PFC)	Yes
Maximum hot-swap power supplies	2
Hot-swap power supplies installed	2
Mains input frequency range	47-63 Hz
Operational input voltage ranges	• 90-132 VAC minimum • 200-264 VAC maximum
Input current range	• 7.5A (at 100 VAC nominal) • 3.8A (at 240 VAC nominal)
Environmental	
Air temperature—server on	50.0 to 95.0°F (10 to 35°C)
Air temperature—server off	−40.0 to 158°F (−40 to 70°C)
Humidity—server on	10 to 90%
Humidity—server off	5 to 95%
BTU rating (maximum configuration)	2508 BTU per hour
Sound emissions idle	7.4 bel
Sound emissions maximum	7.4 bel
Bystander sound pressure idle	58 dBa

Bystander sound pressure operating	58 dBa
Cooling system	8 fans installed
Dimensions	
Form factor	Rack-mount 2RU
Rack-mounting	Included for standard third-party rack
Weight—maximum	60 lb (27.22 kg)
Weight—no drives	47.18 lb (20.41 kg)
Height	3.38 in. (8.59 cm)
Width	17.54 in. (44.54 cm)
Depth	26.01 in. (66.07 cm)

ORDERING INFORMATION

To place an order, visit the [Cisco Ordering Home Page](#).

Table 2. Ordering Information

Product Name	Part Number
Cisco CallManager 3.3	CALLMANAGER-3.3
Cisco Unified CallManager 4.0	CALLMANAGER-4.0
Cisco Unified CallManager 4.1	CALLMANAGER-4.1
Cisco Unified CallManager 4.2	CALLMANAGER-4.2
Cisco Emergency Responder	Refer to [Cisco Emergency Responder Data Sheet](#)
Cisco Unified Presence Server	Refer to [Cisco Unified Presence Server Data Sheet](#)
Cisco Unified Intelligent Contact Management Enterprise	ICME-HOSTED
Cisco Unified Intelligent Contact Management Enterprise	ICME-HOSTED
Cisco Unified Intelligent Contact Management Hosted	HOSTED-BUNDLE
Cisco Unified Contact Center Enterprise	IPCE-BUNDLE

Product Name	Part Number
Cisco Unified Contact Center Hosted	HOSTED-BUNDLE
Cisco Unified Contact Center Express	• IPCX-40-STANDARD • IPCX-40-ENHANCED • IPCX-40-PREMIUM • UCCX-45-STANDARD • UCCX-45-ENHANCED • UCCX-45-PREMIUM
Cisco Unified IP IVR	IPIVR-3.5=
Cisco IPICS	CIS-IPICS-K9
Cisco Unified Customer Voice Portal	ISN-APSSVRLIC
Cisco Unified MeetingPlace conferencing solution	Refer to Cisco Unified MeetingPlace Data Sheet
Cisco Unified IP Queue Manager	IPQM-3.5=
Cisco Unity Unified Messaging	UNITY-BUNDLE
Cisco IPICS Server Bundle for Operations Center	IPICS-7845H1-K9

SERVER SPARES

To order spare servers, refer to Table 3.

Table 3. Ordering Information for Spare Servers by Application

Application	Spare Part Number
Cisco Unified CallManager	MCS-7845-H1-IPC1
Cisco Emergency Responder	MCS-7845-H1-IPC1
Cisco Unified Presence Server	MCS-7845-H1-IPC1
Cisco Unified Contact Center Express	MCS-7845-H1-CC1
Cisco Unified IP IVR	MCS-7845-H1-CC1
Cisco Unified Intelligent Contact Management Enterprise	MCS-7845-H1-CC1
Cisco Unified Intelligent Contact Management Hosted	MCS-7845-H1-CC1
Cisco Unified Contact Center Enterprise	MCS-7845-H1-CC1

Application	Spare Part Number
Cisco Unified Contact Center Hosted	MCS-7845-H1-CC1
Cisco Unified Contact Center Express	MCS-7845-H1-CC1
Cisco IPICS Server	MCS-7845-H1-S31
Cisco Unified Customer Voice Portal	MCS-7845-H1-CC1
Cisco Unified MeetingPlace conferencing solution	MCS-7845-H1-RC1
Cisco Unified IP Queue Manager	MCS-7845-H1-CC1
Cisco Unity Unified Messaging	MCS-7845-H1-ECS1 (on-box voicemail only) (4x72-GB and 2x144-GB hard disk configuration) MCS-7845-H1-ECS2 (off-box unified messaging or voicemail) (4x72-GB hard disk configuration)

FIELD-REPLACEABLE SPARES

To order spare parts for the servers, refer to Table 4.

Table 4. Ordering Information for Server Spare Parts

Spare Part Number	Description
Spare 1024-MB SDRAMM DIMM for Cisco MCS 7845-H1	MEM-7845-H1-1GB=
Spare 72-GB Ultra 320 hot-plug SCSI drive for Cisco MCS 7845-H1	HDD-7845-H1-72=
Spare 144-GB Ultra 320 hot-plug SCSI drive for Cisco MCS 7845-H1	HDD-7845-H1-144=
Spare 575W power supply for Cisco MCS 7845-H1	PWR-7845-H1=
Spare fan for Cisco MCS 7845-H1	FAN-7845-H1=

IDENTIFYING CPU SPEED OF SERVER

As the Cisco MCS 7845-H1 matures, the processor speeds will be changed as Intel replaces slower processors. Table 5 provides the Cisco manufacturing part number shown on the chassis to help identify the processor speed of any individual server.

Table 5. Manufacturing Part Numbers by Processor Speed

Processor	Manufacturing Part Number Located on Server	Introduction
Intel Xeon 3.4GHz	74-3192-03	Initial production of server—MCS-7845-H1-ECS1
Intel Xeon 3.4GHz	74-3717-01	Initial production of server— • MCS-7845-H1-CC1 • MCS-7845-H1-ECS2 • MCS-7845-H1-IPC1
Intel Xeon 3.4GHz	74-3717-02	Revised server using 3.4-GHz Xeon with 2-MB of Layer 2 cache— • MCS-7845-H1-CC1 • MCS-7845-H1-ECS2 • MCS-7845-H1-IPC1

SERVICE AND SUPPORT

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you to protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, refer to Cisco Technical Support Services or Cisco Advanced Services.

WARRANTY INFORMATION

Cisco offers a one-year limited hardware warranty on Cisco media convergence servers. For terms and conditions of this warranty, refer to http://www.cisco.com/univercd/cc/td/doc/es_inpck/1y1cen__.htm.

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