Data Sheet

Cisco MCS 7845-H1 Unified CallManager Appliance

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The Cisco® Unified Communications system of voice and IP Communications products and applications helps organizations communicate more effectively—by helping them streamline business processes, reach the right resource the first time, and increase profitability. The Cisco Unified Communications portfolio is an important part of the Cisco Business Communications Solution—an integrated solution for organizations of all sizes that also includes network infrastructure, security, and network management products; wireless connectivity; and a lifecycle services approach—along with flexible deployment and outsourced management options, end-user and partner financing packages, and third-party communications applications.

PRODUCT OVERVIEW

The Cisco MCS 7845-H1 Unified CallManager Appliance is a high-availability server platform for Cisco Unified CallManager 5.0 and an integral part of a complete, scalable architecture for a new generation of high-quality IP Communications solutions for enterprise data networks. It delivers the high performance and availability that today's enterprise networks demand—and it is easy to deploy and highly cost-effective. The server appliance is preinstalled with an operating system and Cisco Unified CallManager 5.0. It is fully operational upon startup, requiring entry of just a few configuration items such as IP address and domain. At just 2 rack units (2RU) high, the Cisco MCS 7845-H1 offers tremendous power in a low-profile chassis that minimizes rack space. The appliance supports up to 7500 IP phones per appliance and 30,000 IP phones per cluster, and includes the following features and components:

- Two Intel Xeon 3.4-GHz or higher 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

KEY FEATURES AND BENEFITS

Performance

The Cisco MCS 7845-H1 is a robust, highly available server platform designed to support today's IP 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-component-interconnect (PCI)-X slots on the server. The appliance 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 includes 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 ease identification of system problems. When an internal component fails, this indication is made on an internal component LED (amber) and on the front panel of the appliance. If the item can be serviced without removing the server hood, as in the case of a redundant power supply, the external health LED illuminates. If the item can be serviced 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 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. It offers maximum security, availability, and control over business-critical servers without the need to visit the systems physically.

The iLO standard also 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.

The iLO standard provides the following additional features:

- It saves a valuable PCI slot for additional functions and reduces installation and setup time.
- It eliminates the need for an external power adapter or any other internal or external cables.
- It provides a rich suite of security features, including Secure Sockets Layer (SSL).
- It 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-GB 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 lists product specifications for the Cisco MCS 7845-H1 Unified CallManager Appliance.

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 (4 x 1-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 Ultra320
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	4 72 GB (2 x RAID 1)—all product IDs of server
Hard disk route processor module (RPM)	15,000
Hard disk average seek time	3.8 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	EIA Category 3, 4, or 5 unshielded twisted-pair (UTP) (2 or 4 pair) up to 328 ft (100m)
100BASE-TX cable support	EIA Category 5 UTP (2 pair) up to 328 ft (100m)
1000BASE-T cable support	EIA Category 6 UTP (recommended), 5E UTP, or 5 UTP (2 pair) up to 328 ft (100m)
Interfaces	
Serial ports	1 RS-232D
Parallel ports	0
Universal-serial-bus (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
Autoranging 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 order this product, visit the Cisco Ordering Home Page or visit http://www.cisco.com/en/US/ordering/index.shtml.

You may order the appliance in one of two ways. You can enter CALLMANAGER-5.0 into the Dynamic Configuration tool on Cisco.com and view a list of Cisco MCS Unified CallManager Appliances and their associated licenses. You can also order the components individually using the following product part numbers:

- MCS7845H1-K9-CM50
- LIC-CM5.0-K9-7845-H1=
- KEY-CCM-ADMIN-K9= (order a minimum quantity of 2)
- DAT-USB-EXT-72= (optional external USB DAT tape drive)
- DAT-USB-RM-72= (optional rack-mount USB DAT tape drive)
- DAT-USB-ADPT= (required if DAT-USB-EXT-72= or DAT-USB-RM-72= are used)
- LIC-CCM5.X-2500= (optional—order if you want another 2500 users per appliance)

APPLIANCE SPARES

To order spare appliances, refer to Table 2.

Table 2. Ordering Information for Spare Appliances

Application	Spare Part Number
Cisco Unified CallManager 5.0	MCS7845H1-K9-CM50

FIELD-REPLACEABLE SPARES

To order spare parts for the appliance, refer to Table 3.

Table 3. Ordering Information for Appliance Spare Parts

Spare Part Number	Description
Spare 72-GB Ultra320 hot-plug SCSI drive for Cisco MCS 7845-H1	HDD-7845-H1-72=
Spare 575W power supply for Cisco MCS 7845-H1	PWR-7845-H1=
Spare fan for Cisco MCS 7845-H1	FAN-7845-H1=
Spare external USB 36-/72-GB DAT drive	DAT-USB-EXT-72=
Spare rack-mount USB 36-/73-GB DAT drive	DAT-USB-RM-72=
PCI-to-USB DAT adapter	DAT-USB-ADPT= (required for DAT-USB-EXT-72= or DAT-USB-RM-72=)

IDENTIFYING CPU SPEED OF APPLIANCE

As the Cisco MCS 7845-H1 Unified CallManager Appliance matures, the processor speeds will be changed as Intel replaces slower processors. Table 4 provides the Cisco manufacturing part number shown on the chassis to help identify the processor speed of any individual appliance.

Table 4. Manufacturing Part Numbers by Processor Speed

Processor	Manufacturing Part Number Located on Server	Introduction

Intel Xeon 3.4 GHz	74-4388-01	Initial production of appliance
Intel Xeon 3.4 GHz	74-4388-02	Revised server with CPU containing 2-MB Layer 2 cache

CISCO UNIFIED COMMUNICATIONS SERVICES AND SUPPORT

Using the Cisco Lifecycle Services approach, Cisco Systems® and its partners offer a broad portfolio of end-to-end services to support the Cisco Unified Communications system. These services are based on proven methodologies for deploying, operating, and optimizing IP Communications solutions. Initial planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operate services reduce the risk of communications downtime with expert technical support. Optimize services enhance solution performance for operational excellence. Cisco and its partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your business needs.

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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