CISCO SYSTEMS

Data Sheet

CISCO MCS 7835-I1

The Cisco® Media Convergence Server 7835-I1 (MCS 7835-I1) is a high availability server platform for Cisco IP 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 7835-I1 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 7835-I1 packs tremendous power in a low-profile chassis that minimizes rack space; it offers the following features.

The following points are an outline of the features of the Cisco MCS 7835-I1:

- Intel Xeon 3.4 or higher GHz processor, an 800-MHz front side bus (FSB) and 2MB of Layer 2 cache
- PC2-3200R 2-GB 400-MHz Double Data Rate 2 (DDR2) memory (must be installed in pairs)
- IBM ServeRAID 7k Redundant Array of Independent Disks (RAID) Controller with 256MB memory and battery backed caching
- Dual port Gigabit Ethernet controller (embedded)
- Quick deployment third party rail kit
- 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
- IBM LightPath Diagnostics to assist in identifying failed components

SUPPORTED APPLICATIONS

The Cisco MCS 7835-I1 can run any of the following Cisco Systems® applications:

- Cisco Unified CallManager—Up to 2500 IP phones per server
- Cisco Emergency Responder—Up to 20,000 IP phones
- 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 Unified IP Interactive Voice Response (IP IVR)
- Cisco MeetingPlace® conferencing solution—Supports Cisco MeetingPlace systems with up to 480 concurrent voice conferencing licenses running the following software: Cisco MeetingPlace for Outlook, Cisco MeetingPlace for Notes, Cisco MeetingPlace Instant Messaging (dedicated server), Cisco MeetingPlace Web Conferencing (up to 50 concurrent Web conferencing licenses per server; Cisco MCS 7845-H1/I1 for > 50 concurrent Web conferencing licenses), Cisco MeetingPlace Directory Integration Application (dedicated server for > 200 concurrent voice conferencing licenses), Cisco MeetingPlace Video Integration, Cisco MeetingPlace H.323/Session Initiation Protocol (SIP) Gateway Software, Cisco MeetingPlace Simple Mail Transfer Protocol (SMTP) E-mail Gateway Software
- Cisco Unified MeetingPlace Express

- Cisco Personal Assistant—Up to 2500 users per server
- Cisco Unified IP Queue Manager
- Cisco Unity™ Unified Messaging—Up to 48 ports and up to 2000 mailboxes.

KEY FEATURES AND BENEFITS

Performance

The Cisco® MCS 7835-I1 is a robust, highly available server platform designed to support today's unified communications applications. It includes such innovations as variable speed fan support, NetBAY cabling support, and Light Path Diagnostics and Chipkill memory support. The Cisco MCS 7835-I1 occupies only 2RU rack space while providing the features most requested in a high availability server platform. At product introduction, the product will ship with an Intel Xeon 3.4GHz processor and the processor speed will be increased as Intel replaces the 3.4GHz processor and introduces new processors that will be supported by the Cisco MCS 7835-I1 chassis.

High Availability

High availability on the Cisco MCS 7835-I1 is achieved through the following mechanisms:

- Redundant hot-swap 625W power supplies
- Hot-swap SCSI hard drives configured using RAID 1
- Redundant hot-swap fans

Memory

The Cisco MCS 7835-I1 supports up to 16GB of DDR2 memory. The increased processor performance coupled with DDR2 memory allows customers to retrieve and process information quickly and efficiently. DDR memory executes twice the number of operations per cycle than traditional synchronous dynamic RAM (SDRAM) memory, effectively doubling the data exchange rate between memory and processors.

Variable Speed Fan Support

The Cisco MCS 7835-I1 includes variable speed fans to reduce operating noise. Through the use of temperature sensors within the server, the speed of the fans is adjusted to maintain the proper cooling reducing the noise generated by the fans by operating them only when required and at a speed based upon the cooling requirements.

Advanced Connectivity Technology

The Cisco MCS 7835-I1 supports IBM's new NetBAY Advanced Connectivity Technology products that help reduce Keyboard/Video/Mouse (KVM) costs by linking administrators' chain systems together with Category 5 cable. In addition to reducing overall costs, Advanced Connectivity Technology reduces bulk cable clutter, making servers accessible and serviceable in the rack.

Serviceability

Light Path Diagnostics

The Cisco MCS 7835-I1 is equipped with Light Path Diagnostics which provides a central information LED panel (visible without removing the cover) and individual LED lights throughout the system on items like memory dual in-line memory modules (DIMMs), peripheral component interconnect (PCI) slots, power supplies and CPUs. IT can quickly view system status and service personnel can pinpoint the specific failing component, helping reducing downtime and service costs. Availability increases because non-technical personnel can report error conditions without removing the top cover and exposing vital components to further risk. If the system error LED on the front of the server is on, one or more LEDs inside the server or on the power supply will be on. These LEDs will help identify and locate problems with some server components. By following the path of lights, you can quickly identify the type of system error that occurred. The Cisco MCS 7835-I1 is designed so that any LEDs that are

illuminated remain illuminated when the server shuts down as long as the AC power source is good and the power supply can provide +5 VDC to the server.

Light Path Diagnostics provide indication of failures for the following conditions:

- One or both power supplies are consuming power higher than maximum rating
- Power Supply 1 failure
- Power Supply 2 failure
- Error on Voltage Regulator Module
- One or both processors failed
- Hardware configuration error occurred
- Memory error
- Non-maskable interrupt occurred
- Error occurred on the system board
- Service processor failure
- Error occurred on adapter in PCI-X slots A, B, or C
- Hard disk error occurred
- Fan failure or slow operation
- System temperature exceeded maximum rating
- Soft error occurred
- RAID controller error occurred

Enhanced Predictive Failure Analysis

The Cisco MCS 7835-I1 supports Enhanced Predictive Failure Analysis (PFA) on hot swap fans, power supplies, processors, and memory and voltage regulator modules. Through diagnostics the Cisco MCS 7835-I1 anticipates failures in these devices and generates an alert, which allows IT to quickly replace the components before a failure actually occurs. An example of PFA is its ability to monitor variations in electrical input/output to the power supplies and cooling fans.

36/72GB DAT Tape Support

The Cisco MCS 7835-I1 can support an optional 36/72GB universal serial bus (USB) external Digital Audio Tape (DAT) DAT drive (part number DAT-USB-EXT-72=) or an optional USB rack-mount DAT drive (part number DAT-UDB-RM-72=). This tape drive connects through one of the 4 USB 2.0 ports provided by the Cisco MCS 7835-I1 server.

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	1
Basic input/output system (BIOS) type	Flash

Memory	
Memory maximum	16GB (using 2GB DIMMs)
Memory bus clock	400 MHz
Memory technology	PC2-3200R 400MHz DDR2 SDRAM
	Two-way interleaved memory for improved performance (memory must be installed in pairs)
Multibit error mitigation	Chipkill
Total RAM slots	8
Memory Installed	2GB (2x1GB DIMMs)
RAID Controller	
Controller model	IBM mezzanine ServeRAID-7k controller
Interface	PCI-X 133 MHz, 64-bit
Cache	256 MB
Battery backed write caching	Yes
RAID levels supported	0, 1, 5, 10, 50, 5EE
SCSI protocols supported	Ultra 320
SCSI peak data transfer rate	320 MB per channel
Maximum drives	14 per channel
SCSI ports (external/internal)	0/2
Hard Disk	
Hard disk installed	Two 72 GB (RAID 1)
Hard disk RPM	15,000
Hard disk average seek time	3.6 ms
Hot-swappable bays	6
Hard disk interface type	Ultra320 SCSI
Maximum hard drive capacity	880.8 GB with six 146.8-GB internal disks
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) Categories 3, 4, or 5 unshielded twisted-pair (UTP) (2 or 4 pair) up to 328 feet (100 meters)
100BASE-TX cable support	EIA Category 5 UTP (2 pair) up to 328 feet (100 meters)
1000BASE-T cable support	EIA Category 6 UTP (recommended), 5E UTP, 5 UTP up to 328 feet (100 meters)
Interfaces	
Serial ports	1 RS-232D
Parallel ports	0
USB 2.0	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 IBM RSA2 Ethernet port
	(customer use only supported for Cisco Unity servers)
External SCSI ports	1 Ultra320

Security

- Power-on password
- Privileged access password to server setup
- Unattended boot mode allows keyboard to be locked to all entries except the password
- Selectable boot sequence

Industry Standard Compliance

- Advanced configuration and power interface (ACPI) 2.0 Compliant
- PCI 2.3 Compliant
- PCI-X specification v1.0a
- International Organization for Standardization (ISO) 9241, Part 3
- MPS 1.4
- Microsoft Logo certifications

Equipment Approvals and Safety

- Federal Communication Commission (FCC)—Verified to comply with Part 15 of the FCC Rules, Class A
- Canada Information Collection and Evaluation Standard (ICES)-003, issue 3, Class A
- Underwriters Laboratories 1950
- CSA C22.2 No. 950
- NOM-018

Expansion Options	
PCI-X non-hot-plug 133MHz/64-bit slots	2 (Full-length, full-height—usable for Cisco Unity voice cards)
PCI-X non-hot-plug 100MHz/64-bit slots	2 (Low-profile, not usable for Cisco Unity voice cards)

Power	
Steady State Output Power	625W
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	47-63Hz
Operational input voltage ranges	• 90-137 VAC minimum • 180-265 VAC maximum
Input current (per power supply)	• 10.0A (100-127 VAC nominal) • 5.0A (200-240 VAC nominal)

Environmental	
Air temperature at 0 to 3000 ft (0 to 914 m)	50.0 to 95.0°F (10 to 35°C)
Air temperature at 3000 to 7000 ft (914 to 2133 m)	50.0 to 90°F (10 to 32°C)
Relative humidity	10 to 80 percent
British Thermal Unit (BTU) rating (maximum configuration)	2840 BTU per hour
Sound emissions maximum	6.6 BELS

Dimensions	
Form factor	Rack-mount 2U
Rack-mounting	Included for standard third-party rack

Weight—Maximum	62 lb (28.1 kg)
Weight—No drives	46.5 lb (21.1 kg)
Height	3.36 in. (8.54 cm)
Width	17.5 in. (44.36 cm)
Depth	27.5 in. (69.8 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 Unified Presence Server data sheet
Cisco Unified Presence Server	Refer to Cisco Unified Presence Server data sheet
Cisco Unified Intelligent Contact Management Enterprise	ICME-bundle
Cisco Unified Intelligent Contact Management Hosted	Hosted-bundle
Cisco Unified Contact Center Enterprise	IPCE-bundle
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 Unified MeetingPlace conferencing solution	Refer to Cisco Unified MeetingPlace data sheet
Cisco Unified MeetingPlace Express	MPE-1.1-SMALL MPE-1.1-MED
Cisco Personal Assistant	PASR-bundle
Cisco Unified IP Queue Manager	IPQM-3.5=
Cisco Unity Unified Messaging	Unity-bundle

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-7835-I1-IPC1
Cisco Emergency Responder	MCS-7835-I1-IPC1
Cisco Unified Presence Server	MCS-7835-I1-IPC1
Cisco Unified Intelligent Contact Management Enterprise	MCS-7835-I1-CC1
Cisco Unified Intelligent Contact Management Hosted	MCS-7835-I1-CC1
Cisco Unified Contact Center Enterprise	MCS-7835-I1-CC1
Cisco Unified Contact Center Hosted	MCS-7835-I1-CC1
Cisco Unified Contact Center Express	MCS-7835-I1-CC1
Cisco Unified IP IVR	MCS-7835-I1-CC1
Cisco Unified MeetingPlace conferencing solution	MCS-7835-I1-RC1
Cisco Unified MeetingPlace Express	MCS-7835-I1-RC1
Cisco Personal Assistant	MCS-7835-I1-IPC1
Cisco Unified IP Queue Manager	MCS-7835-I1-CC1
Cisco Unity Unified Messaging	MCS-7835-I1-ECS1

FIELD REPLACEABLE SPARES

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

Table 4. Ordering Information for Server Spare Parts

Description	Spare Part Number
Spare 1024MB SDRAMM DIMM for Cisco MCS 7835-I1	MEM-7835-I1-1GB=
Spare 72GB U320 hot-plug SCSI drive for Cisco MCS 7835-I1	HDD-7835-I1-72=
Spare 625W Power Supply for Cisco MCS 7835-I1	PWR-7835-I1=
Spare fan for Cisco MCS 7835-I1	FAN-7835-I1=

IDENTIFYING CPU SPEED OF SERVER

As the Cisco MCS 7835-I1 matures, the processor speeds will be changed as Intel replaces slower processors. Table 5 provides the Cisco manufacturing part number that will be shown on the chassis to help identify any processor speed of any individual server.

Table 5. Manufacturing Part Numbers by Processor Speed

Processor	Manufacturing Part Number Located on Server	Introduction
Intel Xeon 3.4 GHz	74-3692-01	Initial production of server
Intel Xeon 3.4 GHz	74-3692-02	Revised server using 3.4-GHz Xeon with 2MB of Layer 2 cache

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 the network for new applications to extend network intelligence and the power of your business. For more information about Cisco Services, see 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.

CISCO SYSTEMS

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