Cisco MCS 7845-I2 Unified Communications Manager Appliance

Cisco Unified Communications Solutions unify voice, video, data, and mobile applications on fixed and mobile networks enabling easy collaboration every time from any workspace.

Product Overview

The Cisco MCS 7845-I2 Unified Communications Manager Appliance is a high-availability server platform for Cisco Unified Communications Manager and an integral part of a complete, scalable architecture for a new generation of high-quality unified communications solutions for enterprise data networks. It delivers the high performance and availability that today's enterprise networks demand — and is easy to deploy and highly cost-effective. The server appliance is preinstalled with an operating system and Cisco Unified Communications Manager (formerly known as Cisco Unified CallManager). It is fully operational upon startup, requiring entry of just a few configuration variables such as IP address and domain. At just 2 rack units (2RU) high, the Cisco MCS 7845-I2 Unified Communications Manager Appliance offers tremendous power in a low-profile chassis that minimizes rack space. The appliance supports up to 7500 Cisco Unified IP Phones per appliance and 30,000 Cisco Unified IP Phones per cluster.

Key Features and Benefits

Performance

The Cisco MCS 7845-I2 Unified Communications Manager Appliance 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, Light Path Diagnostics, and Chipkill memory support. The appliance occupies only 2RU of space while providing the features most requested in a high-availability server platform.

High Availability

High availability on the Cisco MCS 7845-I2 Unified Communications Manager Appliance is achieved through the following mechanisms:

- Redundant hot-swap power supplies
- Hot-swap Serial Attached SCSI (SAS) hard drives configured using Redundant Array of Independent Disks (RAID) 1
- Redundant hot-swap fans

Memory

The Cisco MCS 7845-I2 Unified Communications Manager Appliance supports up to 48 GB of double-data-rate 2 (DDR2) memory. The increased processor performance coupled with DDR memory allows for quick, efficient retrieval and processing of information. 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 7845-I2 Unified Communications Manager Appliance includes variable-speed fans to reduce operating noise. You can adjust the speed of the fans to maintain the proper cooling by using temperature sensors within the server, 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 7845-I2 Unified Communications Manager Appliance 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 7845-I2 Unified Communications Manager Appliance is equipped with Light Path Diagnostics, which provide a central information LED panel (visible without removing the cover) and individual LED lights throughout the system on items such as 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 a specific failing component, helping reduce downtime and service costs. Availability is increased, because nontechnical 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 can 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 7845-I2 Unified Communications Manager Appliance 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 consuming power higher than maximum rating
- Power supply 1 failure
- Power supply 2 failure
- Error on voltage regulator module
- Failure of one or both processors
- Hardware configuration error
- Memory error
- Nonmaskable interrupt
- Error on the system board
- Service processor failure
- Error on adapter on PCI-X slots A, B, or C
- Hard-disk error
- Fan failure or slow operation

- System temperature exceeded maximum rating
- Soft error
- RAID controller error

Remote Management

The RSA II SlimLine adds accelerated graphics and delivers advanced control and monitoring features to manage your Cisco MCS 7845-I2 Unified Communications Manager Appliance at virtually any time, from virtually any place. You can add the adapter card to the server through a connector that connects to the planar. This adapter facilitates easy console redirection with text and graphics, and keyboard and mouse (operating system must support universal-serial-bus [USB]) support over the system management LAN connections. With video compression now built into the adapter hardware, it is designed to allow the greater screen sizes and refresh rates that are becoming standard in the marketplace. This feature allows you to display server activities from power-on to full operation remotely, with remote user interaction at virtually any time. The embedded Web server provides remote control from any standard Web browser. No additional software is required on the remote administrator's workstation. For those users who are accustomed to a command-line interface (CLI), administrators can also use the provided CLI from a Telnet session to perform some of the functions that they can perform from the Web server. The Remote Supervisor Adapter II SlimLine provides remote management and control of the system independent of the server status, in many cases even if the server is powered off or otherwise disabled.

DAT Tape Support

The Cisco MCS 7845-I2 can support an optional 36/72-GB USB external Digital Audio Tape (DAT) drive (part number DAT-USB-EXT-72=) or an optional USB rack-mount 36/72-GB 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-I2 Unified Communications Manager Appliance server.

Product Specifications

Tables 1 through 7 list the appliance configurations.

Table 1.   Configuration of MCS7845I2-K9-CMA2

Component	Value
Preload	Cisco Unified Communications Manager 5.1
Processor	Dual Intel 5140 2.33-GHz 4M L2
Memory	4-GB (4 x 1-GB) PC2-5300
Hard disks	Four 72-GB SAS 2.5-in. hot-swap
Remote management	IBM RSA II Slimline

Table 2.   Configuration of MCS7845I2-K9-CMA2D

Component	Value
Preload	Cisco Unified Communications Manager 5.1
Processor	Dual Intel 5140 2.33-GHz 4M L2
Memory	4-GB (4 x 1-GB) PC2-5300
Hard disks	Four 146-GB SAS 2.5-in. hot-swap
Remote management	IBM RSA II Slimline

Table 3.   Configuration of MCS7845I2-K9-CMB1

Component	Value
Preload	Cisco Unified Communications Manager 6.0
Processor	Dual Intel 5140 2.33-GHz 4M L2
Memory	4-GB (4 x 1-GB) PC2-5300
Hard disks	Four 72-GB SAS 2.5-in. hot-swap
Remote management	IBM RSA II Slimline

Table 4.   Configuration of MCS7845I2-K9-CMB1D

Component	Value
Preload	Cisco Unified Communications Manager 6.0
Processor	Dual Intel 5140 2.33-GHz 4M L2
Memory	4-GB (4 x 1-GB) PC2-5300
Hard disks	Four 146-GB SAS 2.5-in. hot-swap
Remote management	IBM RSA II Slimline

Table 5.   Configuration of MCS7845I2-K9-CMB2

Component	Value
Preload	Cisco Unified Communications Manager 6.1
Processor	Dual Intel 5140 2.33-GHz 4M L2
Memory	4-GB (4 x 1-GB) PC2-5300
Hard disks	Four 72-GB SAS 2.5-in. hot-swap
Remote management	IBM RSA II Slimline

Table 6.   Configuration of MCS7845I2-K9-CMB2D

Component	Value
Preload	Cisco Unified Communications Manager 6.1
Processor	Dual Intel 5140 2.33-GHz 4M L2
Memory	4-GB (4 x 1-GB) PC2-5300
Hard disks	Four 146-GB SAS 2.5-in. hot-swap
Remote management	IBM RSA II Slimline

Table 7.   Configuration of MCS7845I2-K9-CMC2

Component	Value
Preload	Cisco Unified Communications Manager 7.1
Processor	Dual Intel 5140 2.33-GHz 4M L2
Memory	4-GB (4 x 1-GB) PC2-5300
Hard disks	Four 146-GB SAS 2.5-in. hot-swap
Remote management	IBM RSA II Slimline

Table 8 lists detailed product specifications for the Cisco MCS 7845-I2 Unified Communications Manager Appliance.

Table 8. Product Specifications

Processor at Product Introduction	
Maximum processors	2
Processors installed	2
Basic input/output system (BIOS) type	Flash memory
Memory	
Memory maximum	48 GB
Memory bus clock	667 MHz
Memory technology	PC2-5300 667-MHz DDR2 SDRAM
Multibit error mitigation	Chipkill
Total RAM slots	12
RAID Controller	
Controller model	IBM mezzanine ServeRAID-8k Controller
Interface	Connect to motherboard
Cache	256 MB
Battery-backed write caching	Yes
RAID levels supported	1
Maximum drives	14 per channel
Hard disk	
Hard-disk revolutions per minute (RPM)	10,000
Hard-disk average seek time	4 ms
Hard-disk interface type	SAS
Network Connectivity	
Network interface card (NIC)	Dual onboard 10/100/1000
Ethernet connectors	Two RJ-45 connectors on back 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 65 UTP (recommended), Category 5E UTP, or 5 UTP up to 328 ft (100m)
Interfaces	
Serial ports	1
Parallel ports	0
USB 2.0 ports	7
Keyboard ports	One of the USB ports (PS/2 ports are not provided)
Mouse ports	One of the USB ports (PS/2 ports are not provided)
Audio ports	None
System management ports	RJ-45 for IBM RSA2 dedicated Ethernet port
VGA ports	1 front and 1 back
Security	
• Power-on password • Privileged access password to server setup • Unattended boot mode, which 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 • Multiprotocol over ATM Server (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 133-MHz 64-bit slots	1
PCI-X non-hot plug 100-MHz 64-bit slots	2
Power	
Steady-state output power	835W
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 low range	• 90–137 VAC minimum • 180–265 VAC maximum
Input current (per power supply)	• 10.0A (100 VAC nominal) • 5.0A (200 VAC nominal)
Environmental	
Air temperature at 0 to 3000 ft (0 to 914m)	50 to 95°F (10 to 35°C)
Air temperature at 3000 to 7000 ft (914 to 2133m)	50 to 90°F (10 to 32°C)
Relative humidity	8 to 80%
BTU rating (maximum configuration)	2840 BTU per hour
Sound emissions maximum	6.6 bels
Dimensions	
Form factor	Rack-mount 2RU
Rack-mounting	Included for standard third-party rack
Weight: Maximum	65 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 order this product, visit the Cisco Ordering Home Page or visit
http://www.cisco.com/en/US/ordering/index.shtml and refer to Tables 9 and 10.

ou may order the appliance in one of two ways. You can enter UNIFIED-CM-7.1 or UNIFIED-CM-6.1into the Dynamic Configuration tool on Cisco.com and view a list of Cisco MCS Unified Communications Manager appliances and their associated licenses. You can also order the components individually using the following product part numbers:

- MCS7845I2-K9-CMC2 (preloaded with Cisco Unified Communications Manager 7.1)
- MCS7845I2-K9-CMC1 (preloaded with Cisco Unified Communications Manager 7.0)
- MCS7845I2-K9-CMB2D (preloaded with Cisco Unified Communications Manager 6.1)
- MCS7845I2-K9-CMB1D (preloaded with Cisco Unified Communications Manager 6.0)
- MCS7845I2-K9-CMA2D (preloaded with Cisco Unified Communications Manager 5.1)
- LIC-CM7.0-7845=
- LIC-CM6.1-7845=
- LIC-CM6.0-7845=
- LIC-CM5.1-7845=
- 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)
- LIC-CCM7.X-2500= (optional — order if you want another 2500 users per 7.x appliance)
- LIC-CCM6.X-2500= (optional — order if you want another 2500 users per 6.x appliance)
- LIC-CCM5.X-2500= (optional — order if you want another 2500 users per 5.x appliance)

Appliance Spares

To order spare appliances, refer to Table 9.

Table 9. Ordering Information for Spare Appliances

Application	Spare Part Number
Cisco Unified Communications Manager 7.1	MCS7845I2-K9-CMC2
Cisco Unified Communications Manager 7.0	MCS7845I2-K9-CMC1
Cisco Unified Communications Manager 6.1	MCS7845I2-K9-CMB2D
Cisco Unified Communications Manager 6.0	MCS7845I2-K9-CMB1D
Cisco Unified Communications Manager 5.1	MCS7845I2-K9-CMA2D

Field-Replaceable Spares

To order spare parts for the servers, refer to Table 10.

Table 10. Ordering Information for Server Spare Parts

Description	Spare Part Number
Spare 72.3-GB hot-plug SAS drive for Cisco MCS 7845-I2	HDD-7845-I2-72=
Spare 146-GB hot-plug SAS drive for Cisco MCS 7845-I2	HDD-7845-I2-146=
Spare 835W power supply for Cisco MCS 7845-I2	PWR-7845-I2=
Spare fan for Cisco MCS 7845-I2	FAN-7845-I2=
Spare Two 1024-MB SDRAM DIMM for Cisco MCS 7845-I2	MEM-7845-I2-2GB=
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=

Replacement Part Numbers

With the introduction of the new configurations using 146-GB disks in place of 72-GB disks, the orderability of the old configuration ended. Table 11 provides the replacement part numbers for those products that are no longer orderable.

Table 11. Replacement Part Numbers

Old Part Number	Replacement Part Number
MCS7845I2-K9-CMA2	MCS7845I2-K9-CMA2D
MCS7845I2-K9-CMB1	MCS7845I2-K9-CMB1D
MCS7845I2-K9-CMB2	MCS7845I2-K9-CMB2D

Warranty Information

Cisco offers a 1-year limited hardware warranty on Cisco media convergence servers. For terms and conditions of this warranty, visit:

http://www.cisco.com/univercd/cc/td/doc/es_inpck/1y1cen__.htm.

Cisco Unified Communications Services

Cisco Unified Communications Services allows you to accelerate cost savings and productivity gains associated with deploying a secure, resilient Cisco Unified Communications solution. Delivered by Cisco and our certified partners, our portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks. Our unique lifecycle approach to services enhances your technology experience to accelerate true business advantage.

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San Jose, CA

Asia Pacific Headquarters
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