

Cisco UCS C225 M6 SFF Rack Server

A printed version of this document is only a copy and not necessarily the latest version. Refer to the following link for the latest released version:

<https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/datasheet-listing.html>



CONTENTS

OVERVIEW	5
DETAILED VIEWS	7
Detailed Chassis Front View	7
Detailed Chassis Rear Views	8
BASE SERVER STANDARD CAPABILITIES and FEATURES	11
CONFIGURING the SERVER	15
STEP 1 VERIFY SERVER SKU	16
STEP 2 SELECT RISERS	17
STEP 3 SELECT CPU(s)	18
STEP 4 SELECT MEMORY	21
STEP 5 SELECT DRIVE CONTROLLERS	26
Cisco 12G RAID Controller	26
Cisco 12G SAS HBA	26
RAID Volumes and Groups	26
STEP 6 SELECT DRIVES	29
STEP 7 SELECT OPTION CARD(s)	32
STEP 8 ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES	34
STEP 9 ORDER GPU CARDS (OPTIONAL)	38
STEP 10 ORDER POWER SUPPLY	39
STEP 11 SELECT INPUT POWER CORD(s)	41
STEP 12 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM	45
STEP 13 SELECT MANAGEMENT CONFIGURATION (OPTIONAL)	46
STEP 14 SELECT SERVER BOOT MODE (OPTIONAL)	47
STEP 15 ORDER SECURITY DEVICES (OPTIONAL)	48
STEP 16 SELECT LOCKING SECURITY BEZEL (OPTIONAL)	49
STEP 17 ORDER M.2 SATA SSDs (OPTIONAL)	50
STEP 18 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE	52
STEP 19 SELECT OPERATING SYSTEM MEDIA KIT	57
STEP 20 SELECT SERVICE and SUPPORT LEVEL	58
Unified Computing Warranty, No Contract	58
Smart Net Total Care (SNTC) for Cisco UCS	58
Smart Net Total Care for Cisco UCS Onsite Troubleshooting Service	60
Solution Support (SSTP) for UCS	61
Solution Support for Service Providers	62
Smart Net Total Care for UCS Hardware Only Service	63
Partner Support Service for UCS	64
PSS for UCS Hardware Only	65
Distributor Support Service (DSS)	66
Unified Computing Combined Support Service	67
UCS Drive Retention Service	68
Local Language Technical Support for UCS	68
SUPPLEMENTAL MATERIAL	69
Chassis	69
Risers	72
Memory Support for AMD Rome and Milan CPUs	75
Serial Port Details	76
KVM Cable	77
SPARE PARTS	78
REPLACING CPUs and HEATSINKS	87

CONTENTS

- UPGRADING or REPLACING MEMORY 88**
- TECHNICAL SPECIFICATIONS 90**
 - Dimensions and Weight 90
 - Power Specifications 91
 - Environmental Specifications 95
 - Extended Operating Temperature Hardware Configuration Limits 96
 - Compliance Requirements 97

CONTENTS

OVERVIEW

The UCS C225 M6 SFF server extends the capabilities of Cisco's Unified Computing System portfolio in a 1U form factor with the addition of the AMD CPUs, 16 DIMM slots per CPU for 3200-MHz DDR4 DIMMs with DIMM capacity points up to 256 GB. The maximum memory capacity for 2 CPUs is 8 TB (for 32 x 256 GB DDR4 DIMMs¹).

There are several front drive and rear riser configurations:

Front Drives

- Option 1: Up to 10 SAS/SATA/NVMe drives (up to 4 of the drives can be NVMe)
- Option 2: Up to 10 NVME drives (all drives are NVMe)

Rear PCIe Risers

- One to three half-height PCIe risers, or
- One to two full-height PCIe risers

The server provides an internal slot for one of the following:

- Cisco 12G RAID controller with cache backup to control SAS/SATA drives, or
- Cisco 12G SAS pass-through HBA to control SAS/SATA drives

**NOTE:**

PCIe drives are controlled directly from CPU1

The UCS C225 M6 server has a single 1 GbE management port. A modular LAN on motherboard (mLOM)/OCP 3.0 module provides up to two 100 GbE ports. A connector on the front of the chassis provides KVM functionality.

The Cisco UCS C225 M6 server can be used standalone, or as part of the Cisco Unified Computing System, which unifies computing, networking, management, virtualization, and storage access into a single integrated architecture, enabling end-to-end server visibility, management, and control in both bare metal and virtualized environments.

See [Figure 1 on page 6](#) for front and rear views of the UCS C225 M6 server.

Notes . . .

1. 256 GB DIMMs will be available in Q4 of 2021

Figure 1 Cisco UCS C225 M6 SFF Rack Server

Front View



Rear View (one half-height riser card version)



Rear View (three half-height riser card version)



Rear View (two full-height riser card version - shown with riser blanks installed)

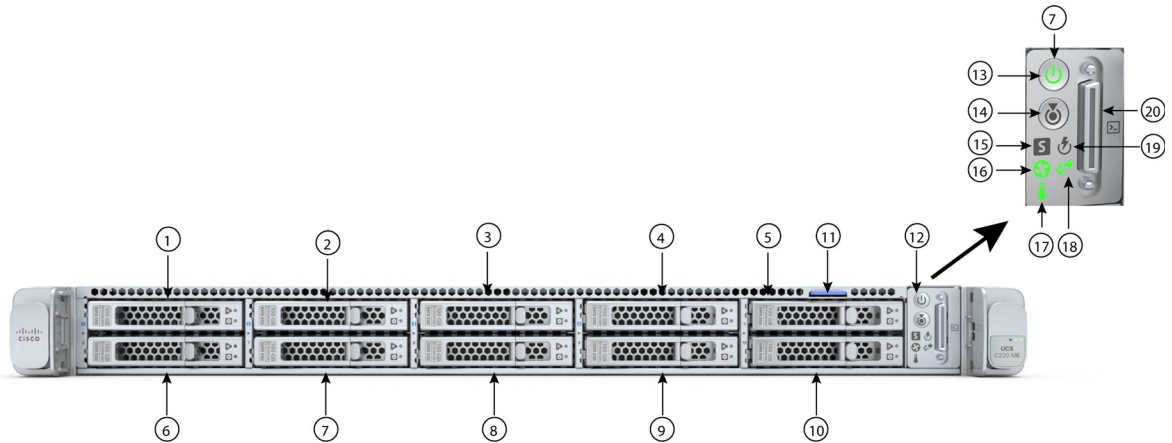


DETAILED VIEWS

Detailed Chassis Front View

Figure 2 shows the detailed front view of the Cisco UCS C225 M6 SFF Rack Server.

Figure 2 Detailed Chassis Front View



1 - 4	<p>Option 1</p> <ul style="list-style-type: none"> ■ Drive bays 1 - 4 support SAS/SATA hard drives and solid state drives (SSDs) or NVME PCIe drives.^{1, 2} <p>Option 2</p> <ul style="list-style-type: none"> ■ Drive bays 1 - 4 support only NVME PCIe drives. 	15	System status LED
5 - 10	<p>Option 1</p> <ul style="list-style-type: none"> ■ Drive bays 5 - 10 support SAS/SATA hard drives and solid state drives (SSDs) only <p>Option 2</p> <ul style="list-style-type: none"> ■ Drive bays 5 - 10 support NVME PCIe drives only. 	16	Fan status LED
11	Asset tag location	17	Temperature status LED
12	Control panel	18	Network link activity LED
13	Power button/power status LED	19	Power supply status LED
14	Unit Identification button/LED	20	KVM connector (used with KVM cable that provides two USB 2.0, one VGA, and one serial connector)

Notes:

1. You can mix and match in drive bays 1 - 4. For example, slots 1 and 2 can hold NVMe drives and slots 3 and 4 can hold SAS/SATA HDDs or SSDs.
2. If NVMe drives are selected, you must also select 2 CPUs.

Detailed Chassis Rear Views

Figure 3 shows the details of the rear panel for the UCS C225 M6 with one rear half-height PCIe riser.

Figure 4 shows the details of the rear panel for the UCS C225 M6 with three rear half-height PCIe risers.

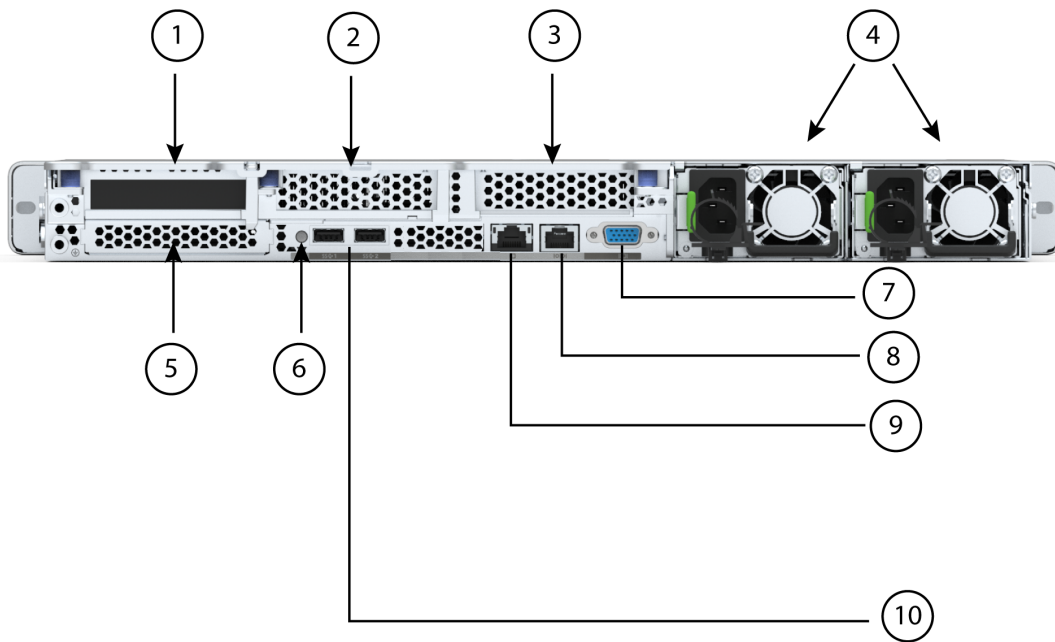
Figure 5 shows the details of the rear panel for the UCS C225 M6 with two rear full-height PCIe risers.

One Half-Height Riser



NOTE: By default, 1-CPU servers come with only one half-height riser 1 installed. 2-CPU servers support all three risers.

Figure 3 Chassis Rear View (one half-height, 3/4 length PCIe riser)



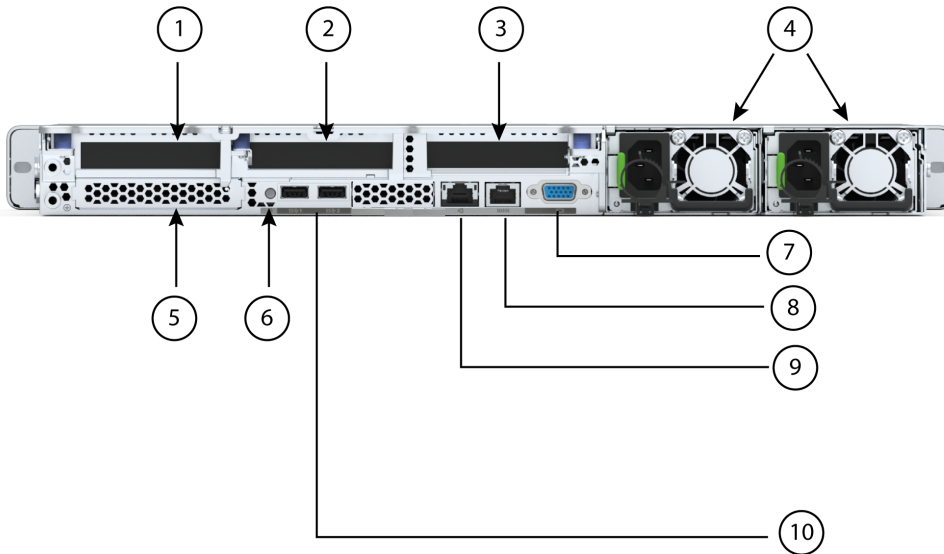
1	Riser 1 (CPU1 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot ■ Slot is half-height, 3/4 length, x16 	6	System ID pushbutton/LED
2	Riser 2 blanking panel	7	VGA display port (DB15 connector)
3	Riser 3 blanking panel	8	COM port (RJ45 connector)
4	Power supplies (two, redundant as 1+1)	9	1 GbE dedicated Ethernet management port
5	Modular LAN on motherboard (mLOM)/OCP 3.0 slot	10	USB 3.0 ports (two)

Three Half-Height Risers



NOTE: 1-CPU or 2-CPU servers support all three half-height risers.

Figure 4 Chassis Rear View (three half-height, 3/4 length PCIe risers)



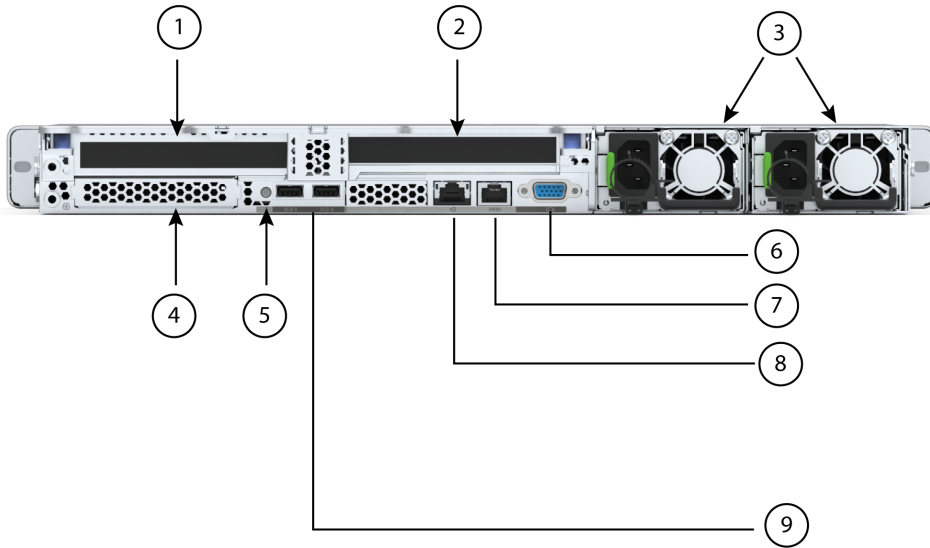
1	Riser 1 (CPU1 control) <ul style="list-style-type: none"> Supports one PCIe slot Slot is half-height, 3/4 length, x16 	6	System ID pushbutton/LED
2	Riser 2 (CPU1 control) <ul style="list-style-type: none"> Supports one PCIe slot Slot is half-height, 3/4 length, x8 	7	VGA display port (DB15 connector)
3	Riser 3 (CPU1 control) <ul style="list-style-type: none"> Supports one PCIe slot Slot is half-height, 3/4 length, x16 	8	COM port (RJ45 connector)
4	Power supplies (two, redundant as 1+1)	9	1 GbE dedicated Ethernet management port
5	Modular LAN on motherboard (mLOM)/OCP 3.0 slot	10	USB 3.0 ports (two)

Two Full-Height Risers



NOTE: 1-CPU or 2-CPU servers support both full-height risers.

Figure 5 Chassis Rear View (two full-height, 3/4-length PCIe risers)



1	Riser 1 (CPU1 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot ■ Slot is full-height, 3/4 length, x16 	6	VGA display port (DB15 connector)
2	Riser 2 (CPU1 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot ■ Slot is full-height, 3/4 length, x16 	7	COM port (RJ45 connector)
3	Power supplies (two, redundant as 1+1)	8	1 GbE dedicated Ethernet management port
4	Modular LAN on motherboard (mLOM)/OCP 3.0 slot	9	USB 3.0 ports (two)
5	System ID pushbutton/LED	-	-

BASE SERVER STANDARD CAPABILITIES and FEATURES

Table 1 lists the capabilities and features of the base server. Details about how to configure the server for a particular feature or capability (for example, number of processors, disk drives, or amount of memory) are provided in *CONFIGURING the SERVER, page 15*.

Table 1 Capabilities and Features

Capability/Feature	Description
Chassis	One rack unit (1RU) chassis
CPU	One or two AMD Milan and Rome CPUs ¹
Memory	32 slots for registered DIMMs (RDIMMs) or load-reduced DIMMs (LRDIMMs)
Multi-bit Error Protection	This server supports multi-bit error protection.
Video	<p>The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller:</p> <ul style="list-style-type: none"> ■ Integrated 2D graphics core with hardware acceleration ■ Embedded DDR memory interface supports up to 512 MB of addressable memory (8 MB is allocated by default to video memory) ■ Supports display resolutions up to 1920 x 1200 16bpp @ 60Hz ■ High-speed integrated 24-bit RAMDAC ■ Single lane PCI-Express host interface running at Gen 1 speed
Power subsystem	<p>Up to two of the following hot-swappable power supplies:</p> <ul style="list-style-type: none"> ■ 1050 W (AC) ■ 1050 W (DC) ■ 1600 W (AC) ■ 2300 W (AC) <p>One power supply is mandatory; one more can be added for 1 + 1 redundancy.</p>
Front Panel	A front panel controller provides status indications and control buttons
ACPI	This server supports the advanced configuration and power interface (ACPI) 4.0 standard.
Fans	Eight hot-swappable fans for front-to-rear cooling
Infiniband	The InfiniBand architecture is supported by the PCI slots.

Table 1 Capabilities and Features (continued)

Capability/Feature	Description
Expansion slots	<p>Three half-height riser slots</p> <ul style="list-style-type: none"> ■ Riser 1 (controlled by CPU 1): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), half-height, 3/4 length ■ Riser 2 (controlled by CPU 1): <ul style="list-style-type: none"> • One x8 PCIe Gen4 Slot, half-height, 3/4 length ■ Riser 3 (controlled by CPU 1): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), half-height, 3/4 length <p>Two full-height riser slots</p> <ul style="list-style-type: none"> ■ Riser 1 (controlled by CPU 1): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), full-height, 3/4 length ■ Riser 2² (controlled by CPU 1): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), full-height, 3/4 length
Interfaces	<ul style="list-style-type: none"> ■ Rear panel <ul style="list-style-type: none"> • One 1Gbase-T RJ-45 management port • One RS-232 serial port (RJ45 connector) • One DB15 VGA connector • Two USB 3.0 port connectors • One flexible modular LAN on motherboard (mLOM)/OCP 3.0 slot that can accommodate various interface cards ■ Front panel <ul style="list-style-type: none"> • One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector)

Table 1 Capabilities and Features (continued)

Capability/Feature	Description
Internal storage devices	<p>Drive storage:</p> <p>Drives are installed into front-panel drive bays, which provide hot-swappable access for SAS/SATA or NVMe drives. The server is orderable in two different versions:</p> <ul style="list-style-type: none"> ■ UCSC-C225-M6S (option 1): <ul style="list-style-type: none"> • Up to 10 SFF SAS/SATA hard drives (HDDs) or SAS/SATA solid state drives (SSDs). • Optionally, up to four SFF NVMe PCIe SSDs (replacing SAS/SATA drives). These drives must be placed in front drive bays 1, 2, 3, and 4 only and are controlled from CPU 1. The rest of the bays (5 - 10) can be populated with SAS/SATA SSDs or HDDs. ■ UCSC-C225-M6N (option 2): <ul style="list-style-type: none"> • Up to 10 SFF NVMe PCIe SSDs only. All drives are controlled from CPU1. Only one CPU is required when choosing NVMe SSDs. <p>Other storage:</p> <ul style="list-style-type: none"> ■ A mini-storage module connector on the motherboard supports a boot-optimized RAID controller carrier that holds two SATA M.2 SSDs. Mixing different capacity SATA M.2 SSDs is not supported.
Integrated management processor	<p>Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware.</p> <p>Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port or a Cisco virtual interface card (VIC).</p> <p>CIMC manages certain components within the server, such as the Cisco 12G SAS HBA.</p>

Table 1 Capabilities and Features (continued)

Capability/Feature	Description
Storage controllers	<p>The Cisco 12G SAS RAID controller or Cisco 12G SAS HBA plugs into a dedicated slot. Only one of these at a time can be used at a time.</p> <ul style="list-style-type: none"> ■ Cisco 12G SAS RAID controller <ul style="list-style-type: none"> • RAID support (RAID 0, 1, 5, 6, 10, 50, 60, SRAID0, and JBOD mode) • Supports up to 10 internal SAS/SATA drives • Plugs into drive backplane ■ Cisco 12G SAS HBA <ul style="list-style-type: none"> • No RAID support • JBOD/Pass-through Mode support • Supports up to 10 SAS/SATA internal drives • Plugs into drive backplane
Modular LAN on Motherboard (mLOM)/OCP ³ 3.0 slot	<p>The dedicated mLOM/OCP 3.0 slot on the motherboard can flexibly accommodate the following cards:</p> <ul style="list-style-type: none"> ■ Cisco Virtual Interface Cards ■ OCP 3.0 network interface card (UCSC-O-ID10GC)
Intersight	Intersight provides server management capabilities
CIMC	Cisco Integrated Management Controller 4.2(1) or later

Notes:

1. If NVMe drives are selected, you must also select 2 CPUs.
2. There are three PCIe riser connectors on the motherboard: they are labeled Riser 1, Riser 2, and Riser 3. If the server is configured with three half-height risers, Riser 1 plugs into Riser 1 connector, Riser 2 plugs into Riser 2 connector, and Riser 3 plugs into Riser 3 connector. If the server is configured with two full-height connectors, Riser 1 plugs into Riser 1 connector and Riser 2 plugs into Riser 3 connector. See [Risers, page 72](#) for more details.
3. Open Compute Project

CONFIGURING the SERVER

Follow these steps to configure the Cisco UCS C225 M6 SFF Rack Server:

- *STEP 1 VERIFY SERVER SKU, page 16*
- *STEP 2 SELECT RISERS, page 17*
- *STEP 3 SELECT CPU(s), page 18*
- *STEP 4 SELECT MEMORY, page 21*
- *STEP 5 SELECT DRIVE CONTROLLERS, page 26*
- *STEP 6 SELECT DRIVES, page 29*
- *STEP 7 SELECT OPTION CARD(s), page 32*
- *STEP 8 ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES, page 34*
- *STEP 9 ORDER GPU CARDS (OPTIONAL), page 38*
- *STEP 10 ORDER POWER SUPPLY, page 39*
- *STEP 11 SELECT INPUT POWER CORD(s), page 41*
- *STEP 12 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM, page 45*
- *STEP 13 SELECT MANAGEMENT CONFIGURATION (OPTIONAL), page 46*
- *STEP 14 SELECT SERVER BOOT MODE (OPTIONAL), page 47*
- *STEP 15 ORDER SECURITY DEVICES (OPTIONAL), page 48*
- *STEP 16 SELECT LOCKING SECURITY BEZEL (OPTIONAL), page 49*
- *STEP 17 ORDER M.2 SATA SSDs (OPTIONAL), page 50*
- *STEP 18 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE, page 52*
- *STEP 19 SELECT OPERATING SYSTEM MEDIA KIT, page 57*
- *STEP 20 SELECT SERVICE and SUPPORT LEVEL, page 58*

STEP 1 VERIFY SERVER SKU

Verify the product ID (PID) of the server as shown in [Table 2](#).

Table 2 PID of the C225 M6 SFF Rack Base Server

Product ID (PID)	Description
UCS-M6-MLB	UCS M6 Rack, Blade, Chassis MLB This major line bundle (MLB) consists of the Server Node (UCSC-C245-M6SX6) with software PIDs. Use this PID to begin a new configuration.
UCSC-C225-M6S ¹	Up to 10 SFF front drives with no CPU, memory, HDD, PCIe cards, or power supply. All drives can be SAS/SATA HDDS or SSDs or optionally any of bays 1, 2, 3 and 4 can be NVMe PCIe SSDs and the rest (bays 5 through 10) can be SAS/SATA HDDs or SSDs.
UCSC-C225-M6N ¹	Up to 10 SFF front drives (NVMe PCIe SSDs only) with no CPU, memory, HDD, PCIe cards, or power supply

Notes:

1. This product may not be purchased outside of the approved bundles (must be ordered under the MLB)

The Cisco UCS C225 M6 SFF server does not include power supply, CPU, DIMM memory, hard disk drives (HDDs), solid-state drives (SSDs), NVMe drives, riser 1, riser 2, riser 3, tool-less rail kit, or option cards.



NOTE: Use the steps on the following pages to configure the server with the components that you want to include.

STEP 2 SELECT RISERS

The riser PIDs are listed in [Table 2](#). Full-height risers cannot be mixed with half-height risers.

Table 3 PIDs of the Risers and Riser Blanks

Product ID (PID)	Description
Included by default (no PID)	Half-height riser 1 (controlled by CPU1) <ul style="list-style-type: none"> ■ Riser 1: One x16 PCIe Gen4 riser, supports Cisco VIC, half-height, 3/4 length
UCSC-R2R3-C220M6	Kit containing two half-height risers (risers 2 and 3): <ul style="list-style-type: none"> ■ Riser 2: One x8 PCIe Gen4 riser, half-height, 3/4 length ■ Riser 3: One x16 PCIe Gen4 riser, supports Cisco VIC, half-height, 3/4 length
UCSC-GPURKIT-C220	Kit containing a GPU mounting bracket and the following risers (risers 1 and 2): <ul style="list-style-type: none"> ■ Riser 1: One x16 PCIe Gen4 riser, supports Cisco VIC, full-height, 3/4 length ■ Riser 2: One x16 PCIe Gen4 riser, supports Cisco VIC, full-height, 3/4 length
UCSC-FBRS-C220 M6	Riser 2 and Riser 3 blank panels

- If you do not order any risers, the system defaults to automatically include the one half-height riser shown in the table.
- If you order PID UCSC-R2R3-C220M6, the system includes three half-height risers (riser 1, riser 2, and riser 3).
- If you order PID UCSC-GPURKIT-C220, the system includes two full-height risers (riser 1 and riser 2)

Approved Configurations

- (1) Half-height riser 1 only (controlled from CPU1). This is the default and is automatically included.
- (2) Half-height risers 1, 2, and 3 only. All risers are controlled from CPU1.
- (3) Full-height risers 1 and 2 only. All risers are controlled from CPU1.

STEP 3 SELECT CPU(s)

The standard CPU features are:

- AMD® Rome® and Milan® family CPUs
- CPU to CPU communication using Infinity Fabric Interconnect
- Cache size of up to 256 MB
- Up to 64 cores

Select CPUs

The available CPUs are listed in [Table 4](#)

Table 4 Available CPUs

Product ID (PID) ¹	Clock Freq (GHz)	Power (W)	Cache Size (MB)	Cores	Highest DDR4 DIMM Clock Support (MHz) ²
Milan Processors					
UCS-CPU-A7763	2.45	280	256	64	3200
UCS-CPU-A7713	2.0	225	256	64	3200
UCS-CPU-A7713P	2.0	225	256	64	3200
UCS-CPU-A7662	2.0	225	256	64	3200
UCS-CPU-A7543	2.8	225	256	32	3200
UCS-CPU-A7543P	2.8	225	256	32	3200
UCS-CPU-A7413	2.65	180	128	24	3200
UCS-CPU-A7443P	2.85	200	128	24	3200
UCS-CPU-A7313P	3.0	155	128	16	3200
UCS-CPU-A72F3	3.7	180	256	8	3200
Rome Processors					
UCS-CPU-A7272	2.9	120	64	12	3200
UCS-CPU-A7302	3.0	155	128	16	3200
UCS-CPU-A7352	2.3	155	128	24	3200
UCS-CPU-A7502P	2.5	180	128	32	3200

Notes:

1. Any CPU PID ending in “P” cannot be used in a 2-CPU system. They can only be used in a 1-CPU system.
2. If higher or lower speed DIMMs are selected than what is shown in [Table 5 on page 21](#) for a given CPU speed, the DIMMs will be clocked at the lowest common denominator of CPU clock and DIMM clock.



CAUTION: For systems configured with processors operating above 28° C [82.4° F], a fan fault or executing workloads with extensive use of heavy instructions sets may assert thermal and/or performance faults with an associated event recorded in the System Event Log (SEL).

Approved Configurations

(1) For the UCSC-C225-M6S:

- For 1-CPU systems, select one CPU from [Table 4 on page 18](#). The server is shipped by default with riser 1 only.
- For 2-CPU systems, select two identical CPUs from [Table 4 on page 18](#). The server is shipped with half-height risers 1, 2, and 3 by default.

(2) For the UCSC-C225-M6N:

- You must select two identical CPUs listed in [Table 4 on page 18](#)



NOTE: You cannot have two CPUs ending in a “P” suffix in a two-CPU configuration.



NOTE: If you configure a server with one CPU with a “P” suffix, you cannot later upgrade to a 2-CPU system with two of these CPUs.

Caveats

- The selection of 1 or 2 CPUs depends on the desired server functionality. See the following sections:
 - [STEP 4 SELECT MEMORY, page 21](#)
 - [STEP 5 SELECT DRIVE CONTROLLERS, page 26](#)
 - [STEP 6 SELECT DRIVES, page 29](#)
 - [STEP 7 SELECT OPTION CARD\(s\), page 32](#)

STEP 4 SELECT MEMORY

The available memory for the C245 M6 SFF is as follows:

- Clock speed: 3200 MHz
- Ranks per DIMM: 1, 2, 4, or 8
- Operational voltage: 1.2 V
- Registered ECC DDR4 DIMMS (RDIMMs) or Load-reduced DIMMs (LRDIMMs).

Memory is organized with eight memory channels per CPU, with one or two DIMMs per channel (DPC).

Select DIMMs

The supported memory DIMMs are listed in [Table 5](#).

Table 5 Available DDR4 DIMMs

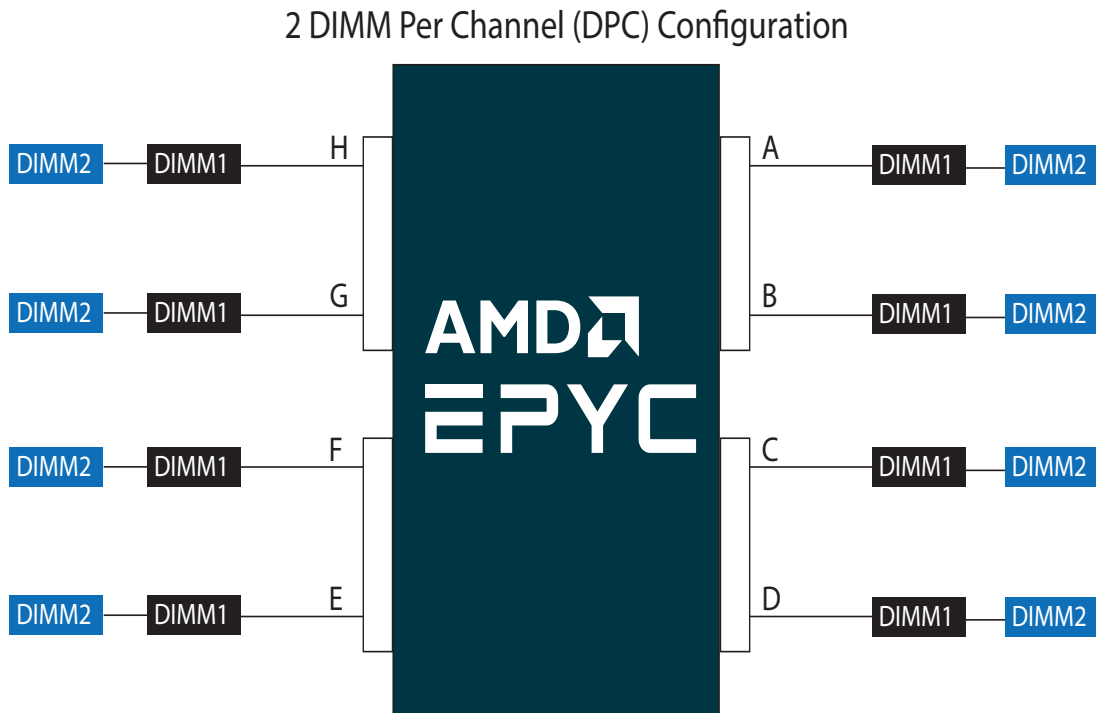
Product ID (PID)	PID Description	Voltage	Ranks /DIMM
3200-MHz DIMMs			
UCS-MR-X16G1RW	16 GB RDIMM SRx4 3200 (8Gb)	1.2 V	1
UCS-MR-X32G2RW	32 GB RDIMM DRx4 3200 (8Gb)	1.2 V	2
UCS-MR-X64G2RW	64 GB RDIMM DRx4 3200 (16Gb)	1.2 V	2
UCS-ML-128G4RW	128 GB LRDIMM QRx4 3200 (16Gb) (non-3DS)	1.2 V	4
UCS-ML-256G8RW ¹	256 GB LRDIMM 8Rx4 3200 (16Gb) (3DS)	1.2 V	8
DIMM Blank²			
UCS-DIMM-BLK	UCS DIMM Blank		

Notes:

1. 256 GB LRDIMMs are three-dimensional stacking (3DS) technology and are available in Q4 of CY 2021
2. Any empty DIM M slot must be populated with a DIMM blank to maintain proper cooling airflow.

Figure 6 is the supported 8-channel configuration, with one or two DPC.

Figure 6 8-Channel Memory Organization



Note: Blue DIMM sockets are farthest from CPU and black DIMM sockets are closest to CPU

Approved Configurations

(1) One CPU (CPU1) population

- Select 1, 2, 4, 6, 8, 10, 12, 14, or 16 DIMMs.
- 1, 2, 4 configuration is only allowed if eight channels cannot be populated, and only with processors that have 128MB L3 or less.

The DIMMs will be placed by the factory as shown in the following table.

#DIMMs	CPU 1 DIMM Placement in Channels (for identically ranked DIMMs)
1	C2
2	(C2, D2)
4	(C2, D2); (G2, H2)
6	(C2, D2); (G2, H2); (A2, E2)
8	(C2, D2); (G2, H2); (A2, E2); (B2, F2)
10	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1)
12	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1)
14	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1); (C1, F1)
16	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1); (C1, F1); (A1, H1)

(2) Two CPU (CPU1 and CPU2) population

- Select 1, 2, 4, 6, 8, 10, 12, 14, or 16 DIMMs per CPU.
- 1, 2, 4, configuration only allowed per CPU (2, 4, 8 for two CPU), if eight channels cannot be populated, and only with processors that have 128MB L3 or less.
- DIMMs for both CPUs must be configured identically.

The DIMMs will be placed by the factory as shown in the following tables.

#DIMMs per CPU	CPU 1 DIMM Placement in Channels (for identically ranked DIMMs)	CPU 2 DIMM Placement in Channels (for identically ranked DIMMs)
1	C2	C2
2	(C2, D2)	(C2, D2)
4	(C2, D2); (G2, H2)	(C2, D2); (G2, H2)
6	(C2, D2); (G2, H2); (A2, E2)	(C2, D2); (G2, H2); (A2, E2)
8	(C2, D2); (G2, H2); (A2, E2); (B2, F2)	(C2, D2); (G2, H2); (A2, E2); (B2, F2)
10	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1)	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1)
12	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1)	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1)

14	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1); (C1, F1)	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1); (C1, F1)
16	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1); (C1, F1); (A1, H1)	(C2, D2); (G2, H2); (A2, E2); (B2, F2); (D1, E1); (B1, G1); (C1, F1); (A1, H1)



NOTE: System performance is optimized when the DIMM type and quantity are equal for both CPUs, and when all channels are filled equally across the CPUs in the server.

Table 6 on page 24 and *Table 7 on page 24* give the maximum DRAM speeds for various DIMM populations.

Table 6 Memory Speed for 1 DIMM Per Channel (1 DPC)

DIMM Type	DIMM Population DIMM0	Maximum DRAM Frequency (MHz)
RDIMM	One rank	3200
	Two ranks	3200
LRDIMM	Four ranks	3200
	Eight ranks	3200
3DS	Four ranks	3200
	Eight ranks	3200

Table 7 Memory Speed for 2 DIMMs Per Channel (2DPC)

DIMM Type	DIMM Population		Maximum DRAM Frequency (MHz)
	DIMM0	DIMM1	
RDIMM	-	One rank	3200
	One rank	One rank	2933
	-	Two rank	3200
	One rank	Two rank	2933
	Two rank	Two rank	2933
LRDIMM	-	Four ranks	3200
	Four ranks	Four ranks	2933
	-	Eight ranks	3200
	Eight ranks	Eight ranks	2933
3DS	-	Four ranks	2933
	Four ranks	Four ranks	2666
	-	Eight ranks	2933
	Eight ranks	Eight ranks	2666

DIMM Rules

■ DIMM Mixing:

- LRDIMMs cannot be mixed with RDIMMs.
- RDIMMs can be mixed with RDIMMs, and LRDIMMs can be mixed with LRDIMMs, but mixing of non-3DS and 3DS LRDIMMs is not allowed in the same channel, across different channels, or across different sockets.



NOTE: The 128 GB LRDIMM is non-3DS and the 256 GB LRDIMM is 3DS so these two LRDIMMs cannot be mixed.

- Memory mixing is supported only on 32GB and 64GB DIMMs. It is recommended to populate all the memory slots when mixing memory.
- General Population Order Guidelines
 - For best performance, populate all eight memory channels for each CPU socket, with every channel having the same capacity.
 - Populate open channels before populating two DIMMs on a given channel.
 - In 2 DPC configurations where only one DIMM is populated on a channel, populate the DIMM socket physically farthest away from the processor.
 - Balance memory capacity per channel pair on a given CPU.
 - Balance memory capacity per CPU socket in a two-socket system.
 - DIMMs within the same channel must be of the same base DIMM module type (all RDIMM, LRDIMM, or 3DS).
 - DIMMs within the same channel must be of the same DRAM density.
 - All memory channels operate at the same frequency. The system will use the highest common supported frequency when populated with different speed DIMMs. The highest common supported speed is the rated speed of the slowest DIMM in the system while also applying the population speed limits for the configuration (1 of 1, 1 of 2, 2 of 2).

STEP 5 SELECT DRIVE CONTROLLERS

The following list summarizes how drives are controlled on the server:

- SAS/SATA drives are controlled through a Cisco 12G RAID controller, or
- SAS/SATA drives are controlled through a Cisco 12G SAS HBA
- PCIe drives are controlled directly from the CPUs

Cisco 12G RAID Controller

The Cisco 12G RAID controller supports up to 10 SAS or SATA drives operating at 3 Gbs, 6 Gbs, and 12 Gbs. It includes a SuperCap for a 4 GB flash-back write cache (FBWC) and supports RAID RAID 0, 1, 5, 6, 10, 50, 60, SRAID0, and JBOD mode). The RAID controller plugs directly into a dedicated slot.



NOTE: 64 RAID groups (virtual drives) are supported with this RAID controller.i

Cisco 12G SAS HBA

The Cisco 12G SAS HBA supports up to 10 SAS or SATA drives operating at 3 Gbs, 6 Gbs, and 12Gbs. It supports JBOD or pass-through mode (not RAID) and plugs directly into a dedicated slot.

RAID Volumes and Groups

When creating each RAID volume, follow these guidelines:

- Use the same capacity for each drive in each RAID volume
- For the Cisco 12G SAS RAID controller, use either all SAS HDDs, or all SAS SSDs, or all SATA SSDs in each RAID volume

Select RAID Controller Options

Table 8 Hardware Controller Options

Product ID (PID)	PID Description
Controllers for Internal Drives	
Note that if the following Cisco 12G RAID SAS RAID controller or Cisco 12G SAS Tri-Mode HBA controller is selected, it is factory-installed in a dedicated slot.	
UCSC-RAID-220M6	Cisco 12G SAS RAID controller with SuperCap and 4GB FBWC <ul style="list-style-type: none"> ■ Supports up to 10 internal SAS HDDs and SAS/SATA SSDs. ■ Supports RAID 0, 1, 5, 6, 10, 50, 60, SRAID0, and JBOD mode. Supports mixed RAID and JBOD mode. ■ For all self-encrypting drives (SED), standalone Management (CIMC) is supported for configuring and managing local keys. For now, SED drives are managed with local key management only. Third-party key management will be supported (KMIP compliant).
UCSC-SAS-220M6	Cisco 12G SAS HBA <ul style="list-style-type: none"> ■ Supports up to 10 internal SAS HDDs and SAS/SATA SSDs ■ Supports JBOD or pass-through mode
Supercap	
UCS-SCAP-M6	M6 Supercap for write cache backup
RAID Configuration Options (not available for Cisco 12G SAS Tri Mode HBA or embedded software RAID)	
R2XX-SRAID0	Enable single disk RAID 0 Setting.
R2XX-RAID0	Factory preconfigured RAID striping option Enable RAID 0 Setting. Requires a minimum of one hard drive.
R2XX-RAID1	Factory preconfigured RAID mirroring option Enable RAID 1 Setting. Requires exactly two drives with the same size, speed, capacity.
R2XX-RAID5	Factory preconfigured RAID option Enable RAID 5 Setting. Requires a minimum of three drives of the same size, speed, capacity.
R2XX-RAID6	Factory preconfigured RAID option Enable RAID 6 Setting. Requires a minimum of four drives of the same size, speed, capacity.
R2XX-RAID10	Factory preconfigured RAID option Enable RAID 10 Setting. Requires a even number of drives (minimum of four drives) of the same size, speed, capacity.

Approved Configurations

- The Cisco 12G RAID HBA supports up to 10 internal SAS/SATA SSDs or HDDs with up to RAID 0, 1, 10, 5, 6, 50, 60 and JBOD mode support.
- The Cisco 12G SAS HBA supports up to 10 internal drives with JBOD support.

STEP 6 SELECT DRIVES

The standard disk drive features are:

- 2.5-inch small form factor
- Hot-pluggable
- Drives come mounted in sleds

Select Drives

The available drives are listed in [Table 9](#).

Table 9 Available Hot-Pluggable Sled-Mounted Drives
UCSC-C220-M6S (10-drive system) and UCSC-C220-M6N (10-drive NVMe only system)

Product ID (PID)	PID Description	Drive Type	Capacity
HDDs			
HDDs (15K RPM)			
UCS-HD900G15K12N	900 GB 12G SAS 15K RPM SFF HDD	SAS	900 GB
UCS-HD300G15K12N	300 GB 12G SAS 15K RPM SFF HDD	SAS	300 GB
UCS-HD600G15K12N	600 GB 12G SAS 15K RPM SFF HDD	SAS	600 GB
HDDs (10K RPM)			
UCS-HD300G10K12N	300 GB 12G SAS 10K RPM SFF HDD	SAS	300 GB
UCS-HD600G10K12N	600 GB 12G SAS 10K RPM SFF HDD	SAS	600 GB
UCS-HD12TB10K12N	1.2 TB 12G SAS 10K RPM SFF HDD	SAS	1.2 TB
UCS-HD18TB10K4KN ¹	1.8 TB 12G SAS 10K RPM SFF HDD (4K)	SAS	1.8 TB
UCS-HD24TB10K4KN ¹	2.4 TB 12G SAS 10K RPM SFF HDD (4K)	SAS	2.4 TB
Enterprise Performance SAS/SATA SSDs (High endurance, supports up to 10X or 3X DWPD (drive writes per day))²			
UCS-SD19T63X-EP	1.9 TB 2.5in Enterprise performance 6GSATA SSD(3X endurance)	SATA	1.9 TB
UCS-SD960G63X-EP	960 GB 2.5in Enterprise performance 6GSATA SSD(3X endurance)	SATA	960 GB
UCS-SD480G63X-EP	480 GB 2.5in Enterprise Performance 6GSATA SSD(3X endurance)	SATA	480 GB
UCS-SD19TM3X-EP	1.9 B 2.5in Enterprise performance 6GSATA SSD(3X endurance)	SATA	1.9 TB
UCS-SD480GM3X-EP	480 GB 2.5in Enterprise Performance 6GSATA SSD(3X endurance)	SATA	480 GB
UCS-SD960GM3X-EP	960 GB 2.5in Enterprise performance 6GSATA SSD(3X endurance)	SATA	960 GB
UCS-SD800GK3X-EP	800 GB 2.5in Enterprise Performance 12G SAS SSD(3X endurance)	SAS	800 GB
UCS-SD16TK3X-EP	1.6 TB 2.5in Enterprise Performance 12G SAS SSD(3X endurance)	SAS	1.6 TB
UCS-SD32TK3X-EP	3.2 TB 2.5in Enterprise Performance 12G SAS SSD(3X endurance)	SAS	3.2 TB

Table 9 Available Hot-Pluggable Sled-Mounted Drives (continued)
UCSC-C220-M6S (10-drive system) and UCSC-C220-M6N (10-drive NVMe only system)

Product ID (PID)	PID Description	Drive Type	Capacity
Enterprise Value SAS/SATA SSDs (Low endurance, supports up to 1X DWPD (drive writes per day))³			
UCS-SD38T611X-EV	3.8 TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	3.8 TB
UCS-SD960G611X-EV	960 GB 2.5 inch Enterprise Value 6G SATA SSD	SATA	960 GB
UCS-SD480G611X-EV	480 GB 2.5 inch Enterprise Value 6G SATA SSD	SATA	480 GB
UCS-SD960G61X-EV	960 GB 2.5 inch Enterprise Value 6G SATA SSD	SATA	960 GB
UCS-SD19T61X-EV	1.9 TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	1.9 TB
UCS-SD38T61X-EV	3.8 TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	3.8 TB
UCS-SD120GM1X-EV	120 GB 2.5 inch Enterprise Value 6G SATA SSD	SATA	120 GB
UCS-SD240GM1X-EV	240 GB 2.5 inch Enterprise Value 6G SATA SSD	SATA	240 GB
UCS-SD480GM1X-EV	480 GB 2.5 inch Enterprise Value 6G SATA SSD	SATA	480 GB
UCS-SD960GM1X-EV	960 GB 2.5 inch Enterprise Value 6G SATA SSD	SATA	960 GB
UCS-SD16TM1X-EV	1.6 TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	1.6 TB
UCS-SD19TM1X-EV	1.9 TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	1.9 TB
UCS-SD38TM1X-EV	3.8 TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	3.8 TB
UCS-SD76TM1X-EV	7.6T B 2.5 inch Enterprise Value 6G SATA SSD	SATA	7.6 TB
UCS-SD960GK1X-EV	960 GB 2.5 inch Enterprise Value 12G SAS SSD	SAS	960 GB
UCS-SD19TK1X-EV	1.9 TB 2.5 inch Enterprise Value 12G SAS SSD	SAS	1.9 TB
UCS-SD38TK1X-EV	3.8 TB 2.5 inch Enterprise Value 12G SAS SSD	SAS	3.8 TB
UCS-SD76TK1X-EV	7.6 TB 2.5 inch Enterprise Value 12G SAS SSD	SAS	7.6 TB
UCS-SD15TK1X-EV	15.3 TB 2.5 inch Enterprise Value 12G SAS SSD	SAS	15.3 TB
UCS-SD76T61X-EV	7.6 TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	7.6 TB
Self-Encrypted Drives (SED)			
UCS-HD18T10NK9	1.8TB 12G SAS 10K RPM SFF HDD (4K format, SED)	SED	1.8 TB
UCS-HD12T10NK9	1.2 TB 12G SAS 10K RPM SFF HDD (SED)	SED	1.2 TB
UCS-HD600G15NK9	600GB 12G SAS 15K RPM SFF HDD (SED)	SED	600 GB
UCS-SD38TBEM2NK9	3.8TB Enterprise value SATA SSD (1X, SED)	SED	3.8 TB
UCS-SD960GBM2NK9	960GB Enterprise value SATA SSD (1X, SED)	SED	960 GB
UCS-SD76TBEM2NK9	7.6TB Enterprise value SATA SSD (1X, SED)	SED	7.6 TB
PCIe/NVMe SFF (2.5-inch) drives²			
UCSC-NVMEXPB-I375	375GB 2.5in Intel Optane NVMe Extreme Performance SSD	NVMe	375 GB
UCSC-NVMEXP-I750	750GB 2.5in Intel Optane NVMe Extreme Perf.	NVMe	750 GB
UCS-NVMEI4-I1920	1.9TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance	NVMe	1.9 TB
UCS-NVMEI4-I3840	3.8TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance	NVMe	3.8 TB
UCS-NVMEI4-I7680	7.6TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance	NVMe	7.6 TB
UCS-NVMEI4-I1600	1.6TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance	NVMe	1.6 TB
UCS-NVMEI4-I3200	3.2TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance	NVMe	3.2 TB
UCS-NVMEI4-I6400	6.4TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance	NVMe	6.4 TB

Table 9 Available Hot-Pluggable Sled-Mounted Drives (continued)
UCSC-C220-M6S (10-drive system) and UCSC-C220-M6N (10-drive NVMe only system)

Product ID (PID)	PID Description	Drive Type	Capacity
UCS-NVMEM6-W1600	1.6TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance	NVMe	1.6 TB
UCS-NVMEM6-W3200	3.2TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance	NVMe	3.2 TB
UCS-NVMEM6-W6400	6.4TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance	NVMe	6.4 TB
UCS-NVMEM6-W7680	7.6TB 2.5in U.2 WD SN840 NVMe Extreme Perf. Value Endurance	NVMe	7.6 TB
UCS-NVMEM6-W15300	15.3TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance	NVMe	15.3 TB

NOTE: Cisco uses solid state drives from a number of vendors. All solid state drives are subject to physical write limits and have varying maximum usage limitation specifications set by the manufacturer. Cisco will not replace any solid state drives that have exceeded any maximum usage specifications set by Cisco or the manufacturer, as determined solely by Cisco.

Notes:

- Operating Systems that support 4k sector size drives are as follows:
 - CentOS 7.9/8.2/8.3 (and later)
 - Windows Server 2016/2019 (and later)
 - Red Hat Enterprise Linux 7.9/8.2 (and later)
 - SUSE Linux Enterprise Server 15.2 (and later)
 - ESXi 6.7 U3/7.0 U2 (and later)
 - See this link for operating system guidance: <https://ucshcltool.cloudapps.cisco.com/public/>
 - UEFI Mode must be used when booting from 4K sector size drives (legacy mode is not supported).
 - Ensure that 4K sector size and 512 byte sector size drives are not mixed in the same RAID volume.
- Targeted for write centric IO applications. Supports endurance of 10 or 3 DWPD (drive writes per day). Target applications are caching, online transaction processing (OLTP), data warehousing, and virtual desktop infrastructure (VDI).
- Targeted for read centric IO applications. Supports endurance of 1 DWPD (drive write per day). Target applications are boot, streaming media, and collaboration.



NOTE: When configuring front facing drives with NVMe drives, you must order an NVMe cable (PID = CBL-FNVME-220M6) along with the drives.

Caveats

- SFF NVMe drives are connected directly to CPU1 and not managed by any drive controller.
- You can mix HDDs and SSDs as long as you keep all HDDs in their own RAID volume and all SSDs in their own RAID volume.
- You can mix SAS HDDs and SAS/SATA SSDs when using the Cisco 12G SAS RAID controller or Cisco 12G SAS HBA.
- SFF NVMe drives are bootable in UEFI mode only.
- SED drives can be mixed with the non-SED drives in [Table 9 on page 29](#).

STEP 7 SELECT OPTION CARD(s)

The standard PCIe card offerings are:

- Modular LAN on Motherboard (mLOM)
- Virtual Interface Cards (VICs)
- Network Interface Cards (NICs)
- Open Compute Project (OCP) 3.0 NIC
- Host Bus Adapters (HBAs)

Select Option Cards

The available option cards are listed in [Table 10](#).

Table 10 Available PCIe Option Cards

Product ID (PID)	PID Description	Location	Card Size ¹
Modular LAN on Motherboard (mLOM)			
UCSC-M-V25-04	Cisco UCS VIC 1467 quad port 10/25G SFP28 mLOM	mLOM	HHHL, SS
UCSC-M-V100-04	Cisco UCS VIC 1477 dual port 40/100G QSFP28 mLOM	mLOM	HHHL, SS
Virtual Interface Card (VICs)			
UCSC-PCIE-C100-04	Cisco UCS VIC 1495 Dual Port 40/100G QSFP28 CNA PCIe	Riser 1, 2, or 3	HHHL, SS
UCSC-PCIE-C25Q-04	Cisco UCS VIC 1455 quad port 10/25G SFP28 PCIe	Riser 1, 2, or 3	HHHL, SS
Network Interface Cards (NICs)			
1 Gb NICs			
UCSC-PCIE-IRJ45	Intel i350 quad-port 1G copper PCIe	Riser 1, 2, or 3	HHHL, SS
10 Gb NICs			
UCSC-PCIE-ID10GF	Intel X710-DA2 Dual Port 10Gb SFP+ NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-ID10GC	Cisco-Intel X710T2LG 2x10 GbE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-O-ID10GC ²	Intel X710T2LOCPV3G1L 2x10GBase-T OCP3 NIC	mLOM/OCP 3.0 slot	-
25 Gb NICs			
UCSC-P-I8D25GF	Cisco-Intel E810XXVDA2 2x25/10 GbE SFP28 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-M5D25GF	Mellanox MCX512A-ACAT dual port 10/25G SFP28 NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-I8Q25GF ³	Cisco-Intel E810XXVDA4L 4x25/10 GbE SFP28 PCIe NIC	Riser 1, 2, or 3	FHHL, SS
100 Gb NICs			
UCSC-P-M5D100GF	Mellanox CX-5 MCX516A-CDAT 2x100GbE QSFP PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-I8D100GF	Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC	Riser 1, 2, or 3	HHHL, SS

Table 10 Available PCIe Option Cards (*continued*)

Product ID (PID)	PID Description	Location	Card Size ¹
SmartNICs⁴			
NXN-K3P-2X	Nexus X25 2-port SFP28 SmartNIC, KU3P FPGA	Riser 1, 2, or 3	HHHL, SS
NXN-V5P-8X-9GB	Nexus 2-port QSFP28 SmartNIC+, VU5P FPGA, 9GB DDR	Riser 1, 2, or 3	HHHL, SS
NXN-V9P-16X-9GB	Nexus 2-port QSFP-DD SmartNIC+, VU9P FPGA, 9GB DDR	Riser 1, 2, or 3	HHHL, SS
NXN-K35-8X	Nexus X40 2-port QSFP+ SmartNIC, KU035 FPGA	Riser 1, 2, or 3	HHHL, SS
NXN-K35-2X	Nexus X10 2-port SFP+ SmartNIC, KU035 FPGA	Riser 1, 2, or 3	HHHL, SS
NXN-K3P-2X-4GB	Nexus X25 2-port SFP28 SmartNIC, KU3P FPGA, 4GB DDR	Riser 1, 2, or 3	HHHL, SS
NXN-GM	Nexus PTP Grand Master NIC	Riser 1, 2, or 3	HHHL, SS
NXN-HPT	Nexus High-Precision Timestamping NIC	Riser 1, 2, or 3	HHHL, SS
Host Bus Adapters (HBAs)			
UCSC-PCIE-QD16GF	Qlogic QLE2692 dual-port 16G FC HBA	Riser 1, 2, or 3	HHHL, SS
UCSC-PCIE-BD16GF	Emulex LPe31002 dual port 16G FC HBA	Riser 1, 2, or 3	HHHL, SS

Notes:

1. HHHL = half-height, half-length; SS = single-slot; DS = double-slot
2. The UCSC-O-ID10GC is an OCP 3.0 adapter and fits in mLOM/OCP 3.0 slot using a special mechanical connector add-on. See the following link for installation instructions:
https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m6/install/c225m6.html
3. If selected, HX-GPURKIT-C220 must be selected
4. See [Table 15 on page 37](#) for compatible SmartNIC power cables.

Approved Configurations

- You can select up to three of the PCIe option cards for a three-riser system (Riser 1, Riser 2, and Riser 3 installed).

Caveats

- Two plug-in PCIe VIC cards can be installed in 2-CPU systems, using risers 1 and 2. In addition, you can order an mLOM VIC card, which is installed in the mLOM/OCP 3.0 slot at the rear of the chassis and thus have three VIC cards in operation at the same time. See [Table 10 on page 32](#) for the selection of plug-in and mLOM VIC cards. See also [Table 1 on page 11](#).
- To help ensure that your operating system is compatible with the card you have selected, or to see additional cards that have been qualified to work with the UCS C225 M6 server, but are not sold on the Cisco pricelist, check the Hardware Compatibility List at this URL:
http://www.cisco.com/en/US/products/ps10477/prod_technical_reference_list.html

STEP 8 ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES

- For list of supported optics and cables for VIC 1455, VIC 1467, VIC 1495 and VIC 1477, refer to the VIC 1300 and VIC 1400 series data sheets at the following links:
- <https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-b-series-blade-servers/datasheet-listing.html>
 - <https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/datasheet-c78-741130.html>
 - <https://www.cisco.com/c/en/us/products/interfaces-modules/ucs-virtual-interface-card-1387/index.html>
 - <https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/datasheet-c78-734727.html>

Select

- NIC Interoperability with Cisco Cables/Optics (*Table 11 on page 34 through Table 13 on page 36*).
- NIC Interoperability with Intel Cables/Optics (*Table 14 on page 37*).
- SmartNIC Interoperability with Cisco Cables/Optics (*Table 15 on page 37*)

Table 11 10G NIC Interoperability with Cisco Cables/Optics

Cisco Product ID (PID)	UCSC-PCIE-ID10GF	UCSC-PCIE-IQ10GF	UCSC-P-ID10GC
Cisco Direct Attach Cables (DAC)			
SFP-H10GB-CU1M	✓	✓	
SFP-H10GB-CU3M	✓	✓	
SFP-H10GB-CU5M	✓	✓	
SFP-H10GB-ACU7M	✓	✓	
SFP-H10GB-ACU10M	✓	✓	
SFP-10G-AOC1M	✓	✓	
SFP-10G-AOC2M	✓	✓	
SFP-10G-AOC3M	✓	✓	
SFP-10G-AOC5M	✓	✓	
SFP-10G-AOC7M	✓	✓	
SFP-10G-AOC10M	✓	✓	
UTP/RJ45			✓

Table 11 10G NIC Interoperability with Cisco Cables/Optics (continued)

Cisco Product ID (PID)	UCSC-PCIE-ID10GF	UCSC-PCIE-IQ10GF	UCSC-P-ID10GC
Cisco Optical Transceivers			
SFP-10G-SR	✓	✓	
SFP-10G-SR-S	✓	✓	
SFP-10G-LR	✓	✓	
SFP-10G-LR-S	✓	✓	
GLC-SX-MMD	✓	✓	

Table 12 25G NIC Interoperability with Cisco Cables/Optics

Cisco Product ID (PID)	UCSC-P-M5D25GF	UCSC-P-I8Q25GF	UCSC-P-I8D25GF
Cisco Direct Attach Cables (DAC)			
SFP-H10GB-CU1M	✓	✓	✓
SFP-H10GB-CU3M	✓	✓	✓
SFP-H10GB-CU4M	✓		
SFP-H10GB-CU5M	✓	✓	✓
SFP-H10GB-ACU7M	✓		
SFP-H10GB-ACU10M	✓		
SFP-10G-AOC7M		✓	✓
SFP-10G-AOC10M	✓		
SFP-H25G-AOC10M	✓	✓	✓
SFP-25G-AOC5M	✓		
SFP-25G-AOC7M	✓		
QSFP-4SFP25G-CU2M		✓	✓
SFP-H25G-CU1M	✓	✓	✓
SFP-H25G-CU2M	✓	✓	✓
SFP-H25G-CU2.5M	✓		
SFP-H25G-CU3M	✓	✓	✓
SFP-H25G-CU4M	✓		
SFP-H25G-CU5M	✓	✓	✓
Cisco Optical Transceivers			
SFP-10G-SR	✓	✓	✓
SFP-10G-SR-S		✓	✓
SFP-10G-LR	✓	✓	✓
SFP-25G-SR-S	✓	✓	✓

Table 12 25G NIC Interoperability with Cisco Cables/Optics (continued)

Cisco Product ID (PID)	UCSC-P-M5D25GF	UCSC-P-I8Q25GF	UCSC-P-I8D25GF
SFP-10/25G-LR-S	✓	✓	✓
SFP-10/25G-CSR-S		✓	✓

Table 13 100G NIC Interoperability with Cisco Cables/Optics

Cisco Product ID (PID)	UCSC-P-M5D100GF	UCSC-P-I8D100GF
Cisco Direct Attach Cables (DAC)		
QSFP-100G-AOC5M	✓	
QSFP-100G-AOC7M	✓	✓
QSFP-100G-AOC10M	✓	✓
QSFP-4SFP25G-CU2M		✓
QSFP-100G-CU3M	✓	
QSFP-100G-CU5M	✓	✓
Cisco Optical Transceivers		
QSFP-100G-LR4-S	✓	
QSFP-100G-SR4-S	✓	✓
QSFP-40/100-SRBD	✓	✓

Table 14 Intel NIC Interoperability with Intel Cables/Optics

Intel Product ID (PID)	UCSC-PCIE-ID10GF
Intel Direct Attach Cables (DACs)	
XDACBL1M	✓
XDACBL3M	✓
XDACBL5M	✓
Intel Optical Transceivers	
E10GSFPSR	✓
E10GSFPLR	✓

Table 15 SmartNIC Interoperability with Cisco Cables/Optics

Cisco SmartNIC Product ID (PID)	SmartNIC Cables	
	NXN-V5P-PWR-220	NXN-V9P-PWR-220
NXN-V5P-8X-9GB	✓	
NXN-V9P-16X-9GB		✓

The information in the preceding tables was compiled from testing conducted by Cisco Transceiver Module Group (TMG) and vendors. The latest compatibility with optical modules and DACs can be found at <https://tmgmatrix.cisco.com/>.

Refer to the these links for additional connectivity options.

Intel:	Mellanox:
Product Guide	Firmware Release Notes
Speed White Paper	

STEP 9 ORDER GPU CARDS (OPTIONAL)

Select GPU Options

The available GPU PCIe options are listed in [Table 16](#).

Table 16 Available PCIe GPU Cards¹

Product ID (PID)	PID Description	Card Size	Maximum cards Per node
UCSC-GPU-T4-16	NVIDIA T4 PCIE 75W 16GB	HHHL, single-wide	3

Notes:

1. Refer to the following link for more details:

https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m6/install/c225m6.html



NOTE:

- All GPU cards must be procured from Cisco as there is a unique SBIOS ID required by CIMC.

Caveats

- GPUs cannot be mixed.
- A GPU can be installed in either full-height PCIe riser 1 or 2 (or both).

STEP 10 ORDER POWER SUPPLY

Power supplies share a common electrical and physical design that allows for hot-plug and tool-less installation into M6 C-series servers. Each power supply is certified for high-efficiency operation and offers multiple power output options. This allows users to “right-size” based on server configuration, which improves power efficiency, lowers overall energy costs and avoids stranded capacity in the data center. Use the power calculator at the following link to determine the needed power based on the options chosen (CPUs, drives, memory, and so on):

<http://ucspowercalc.cisco.com>

Table 17 Power Supply

Product ID (PID)	PID Description
UCSC-PSU1-1050W	1050W AC power supply for C-Series servers
UCSC-PSUV2-1050DC	1050W DC power supply for C-Series servers
UCSC-PSU1-1600W	1600W AC power supply for C-Series servers
UCSC-PSU-2300W ¹	2300W Power supply for C-series servers

Notes:

1. The 2300 W power supply uses a different power connector than the rest of the power supplies, so you must use different power cables to connect it. See [Table 18 on page 41](#) and [Table 19 on page 44](#).



NOTE: In a server with two power supplies, both power supplies must be identical.

Caveats

- For 1050 W AC PSUs:
 - For 1-CPU systems, the minimum quantity of PSUs is 1
 - For 2-CPU systems, the minimum quantity of PSUs is 2
 - For 2-CPU systems where each CPU is >165W and with 2 GPUs, this PSU cannot be used
- For 1050 W DC PSUs:
 - For 1-CPU systems, the minimum quantity of PSUs is 1
 - For 2-CPU systems, the minimum quantity of PSUs is 2
 - For 2-CPU systems where each CPU is >165W and with 2 GPUs, this PSU cannot be used
- For 1600 W AC PSUs:
 - For 2-CPU systems where each CPU is >165W and with 2 GPUs, the minimum quantity of PSUs is 2
- For 2300 W AC PSUs, 1 or 2 PSUs can be selected

STEP 11 SELECT INPUT POWER CORD(S)

Using [Table 18](#) and [Table 19](#), select the appropriate AC power cords. You can select a minimum of no power cords and a maximum of two. If you select the option R2XX-DMYMPWRCORD, no power cord is shipped with the server.



NOTE: [Table 18](#) lists the power cords for servers that use power supplies less than 2300 W. [Table 19](#) lists the power cords for servers that use 2300 W power supplies. Note that the power cords for 2300 W power supplies use a C19 connector so they only fit the 2300 W power supply connector.

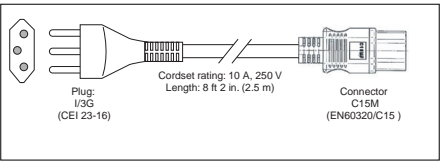
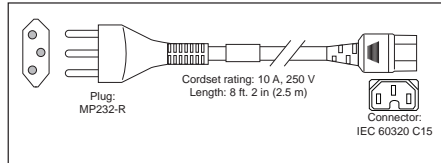
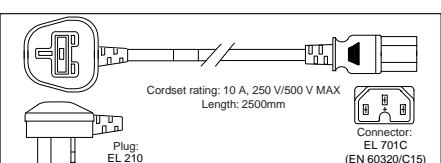
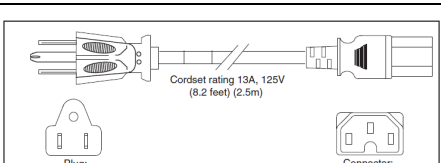
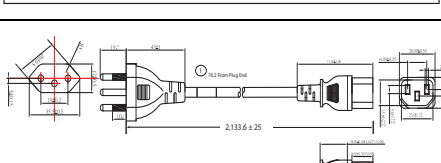
Table 18 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
R2XX-DMYMPWRCORD	No power cord (dummy PID to allow for a no power cord option)	Not applicable
CAB-48DC-40A-8AWG	C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A	<p>Figure 1-3 CAB-48DC-40A-8AWG, DC Power Cord (3.5 m)</p>
CAB-N5K6A-NA	Power Cord, 200/240V 6A, North America	<p>Plug: NEMA 6-15P Cordset rating: 10 A, 250 V Length: 8.2 ft Connector: IEC60320/C13</p>
CAB-AC-L620-C13	AC Power Cord, NEMA L6-20 - C13, 2M/6.5ft	<p>① 3" From Plug End 79±2</p>
CAB-C13-CBN	CABASY,WIRE,JUMPER CORD, 27" L, C13/C14, 10A/250V	<p>685 MM ± 25 MM 75MM ± 10MM PLUG TYPE: S335A (EC 332-2-2) CONNECTION: 10A/250V (EC 330 B149) CONNECTOR TYPE: H03E</p>
CAB-C13-C14-2M	CABASY,WIRE,JUMPER CORD, PWR, 2 Meter, C13/C14,10A/250V	<p>① 3" From Plug End 2,000</p>

Table 18 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
CAB-C13-C14-AC	CORD,PWR,JMP,IEC60320/C14,IEC60320/C13, 3.0M	
CAB-250V-10A-AR	Power Cord, 250V, 10A, Argentina	
CAB-9K10A-AU	Power Cord, 250VAC 10A 3112 Plug, Australia	
CAB-250V-10A-CN	AC Power Cord - 250V, 10A - PRC	
CAB-9K10A-EU	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	
CAB-250V-10A-ID	Power Cord, 250V, 10A, India	
CAB-C13-C14-3M-IN	Power Cord Jumper, C13-C14 Connectors, 3 Meter Length, India	Image not available
CAB-C13-C14-IN	Power Cord Jumper,C13-C14 Connectors,1.4 Meter Length, India	Image not available
CAB-250V-10A-IS	Power Cord, SFS, 250V, 10A, Israel	

Table 18 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
CAB-9K10A-IT	Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy	 <p>Plug: 13G (CEI 23-16)</p> <p>Cordset rating: 10 A, 250 V Length: 8 ft 2 in. (2.5 m)</p> <p>Connector: C15M (EN60320/C15)</p>
CAB-9K10A-SW	Power Cord, 250VAC 10A MP232 Plug, Switzerland	 <p>Plug: MP232-R</p> <p>Cordset rating: 10 A, 250 V Length: 8 ft. 2 in (2.5 m)</p> <p>Connector: IEC 60320 C15</p>
CAB-9K10A-UK	Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK	 <p>Cordset rating: 10 A, 250 V/500 V MAX Length: 2500mm</p> <p>Plug: EL 210 (BS 1363A) 13 AMP fuse</p> <p>Connector: EL 701 C (EN 60320/C15)</p>
CAB-9K12A-NA ¹	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	 <p>Cordset rating: 13A, 125V (8.2 feet) (2.5m)</p> <p>Plug: NEMA 5-15P</p> <p>Connector: IEC60320/C15</p>
CAB-250V-10A-BR	Power Cord - 250V, 10A - Brazil	
CAB-C13-C14-2M-JP	Power Cord C13-C14, 2M/6.5ft Japan PSE mark	Image not available
CAB-9K10A-KOR ¹	Power Cord, 125VAC 13A KSC8305 Plug, Korea	Image not available
CAB-ACTW	AC Power Cord (Taiwan), C13, EL 302, 2.3M	Image not available
CAB-JPN-3PIN	Japan, 90-125VAC 12A NEMA 5-15 Plug, 2.4m	Image not available

Notes:

1. This power cord is rated to 125V and only supported for PSU rated at 1050W or less

Table 19 Available Power Cords (for servers with 2300 W PSUs)

Product ID (PID)	PID Description	Images
CAB-C19-CBN	Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors	Not applicable
CAB-S132-C19-ISRL	S132 to IEC-C19 14ft Israeli	Image not available
CAB-IR2073-C19-AR	IRSM 2073 to IEC-C19 14ft Argen	Image not available
CAB-BS1363-C19-UK	BS-1363 to IEC-C19 14ft UK	Image not available
CAB-SABS-C19-IND	SABS 164-1 to IEC-C19 India	Image not available
CAB-C2316-C19-IT	CEI 23-16 to IEC-C19 14ft Italy	Image not available
CAB-L520P-C19-US	NEMA L5-20 to IEC-C19 6ft US	Image not available
CAB-US515P-C19-US	NEMA 5-15 to IEC-C19 13ft US	Image not available
CAB-US520-C19-US	NEMA 5-20 to IEC-C19 14ft US	Image not available
CAB-US620P-C19-US	NEMA 6-20 to IEC-C19 13ft US	Image not available
CAB-C19-C20-IND	Power Cord C19-C20 India	Image not available
UCSB-CABL-C19-BRZ	NBR 14136 to C19 AC 14FT POWER CORD, BRAZIL	Image not available
CAB-9K16A-BRZ	Power Cord 250VAC 16A, Brazil, Src Plug EL224-C19	Image not available
CAB-ACS-16	AC Power Cord (Swiss) 16A	Image not available
CAB-AC-16A-AUS	Power Cord, 250VAC, 16A, Australia C19	Image not available
CAB-C19-C20-3M-JP	Power Cord C19-C20, 3M/10ft Japan PSE mark	Image not available
CAB-AC-C19-TW	Power Cord, 250 V, 16A, C19, Taiwan	Image not available
CAB-AC-C6K-TWLK	Power Cord, 250Vac 16A, twist lock NEMA L6-20 plug, US	Image not available
CAB-AC-2500W-EU	Power Cord, 250Vac 16A, Europe	Image not available
CAB-AC-2500W-INTL	Power Cord, 250Vac 16A, INTL	Image not available
CAB-9K16A-KOR	Power Cord 250VAC 16A, Korea, Src Plug	Image not available
CAB-AC-2500W-ISRL	Power Cord,250VAC,16A,Israel	Image not available
CAB-AC16A-CH	16A AC Power Cord For China	Image not available
R2XX-DMYPWRCORD	No power cord option	Image not available

STEP 12 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM

Select a Tool-less Rail Kit

Select a tool-less rail kit from [Table 20](#).

Table 20 Tool-less Rail Kit Options

Product ID (PID)	PID Description
UCSC-RAIL-M6	Ball Bearing Rail Kit for C220 and C240 M6 rack servers

Select an Optional Reversible Cable Management Arm

The reversible cable management arm mounts on either the right or left slide rails at the rear of the server and is used for cable management. Use [Table 21](#) to order a cable management arm.

Table 21 Cable Management Arm

Product ID (PID)	PID Description
UCSC-CMA-C220M6	Reversible CMA for C220 M6 ball bearing rail kit

For more information about the tool-less rail kit and cable management arm, see the *Cisco UCS C225 M6 Installation and Service Guide* at this URL:

https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m6/install/c225m6.html



NOTE: If you plan to rackmount your UCS C225 M6 server, you must order a tool-less rail kit. The same rail kits and CMAs are used for M5 and M6 servers.

STEP 13 SELECT MANAGEMENT CONFIGURATION (OPTIONAL)

By default, the C225 M6 server NIC mode is configured to be Shared LOM Extended. This NIC mode allows any LOM port or adapter card port to be used to access the Cisco Integrated Management Controller (CIMC). The Cisco VIC card must be installed in a slot with NCSI support.

To change the default NIC mode to Cisco Card Mode, select the UCSC-CCARD-01 PID shown in [Table 22](#). In this mode, you can assign an IP address to the CIMC using DHCP and from there you can fully automate your deployment.

For more details on all the NIC mode settings, see

https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/hw/C480M5/install/C480M5/C480M5_chapter_010.html#concept_srj_vsr_fz

Table 22 Management Configuration Ordering Information

Product ID (PID)	PID Description
UCSC-CCARD-01	Cisco Card Mode BIOS setting for C-Series Servers

STEP 14 SELECT SERVER BOOT MODE (OPTIONAL)

By default, the C225 M6 SFF server ships with UEFI as the default boot mode. To have a server shipped with the Legacy BIOS mode (which was standard on M4 and previous generation servers), select the Legacy BIOS PID from [Table 23](#).

Table 23 Server Boot Mode Ordering Information

Product ID (PID)	PID Description
UCSC-LBIOS-01	Legacy Boot Mode BIOS setting for C-Series Servers

STEP 15 ORDER SECURITY DEVICES (OPTIONAL)

A Trusted Platform Module (TPM) is a computer chip (microcontroller) that can securely store artifacts used to authenticate the platform (server). These artifacts can include passwords, certificates, or encryption keys. A TPM can also be used to store platform measurements that help ensure that the platform remains trustworthy. Authentication (ensuring that the platform can prove that it is what it claims to be) and attestation (a process helping to prove that a platform is trustworthy and has not been breached) are necessary steps to ensure safer computing in all environments.

A chassis intrusion switch gives a notification of any unauthorized mechanical access into the server.

The security device ordering information is listed in [Table 24](#).

Table 24 Security Devices

Product ID (PID)	PID Description
UCSX-TPM2-002B-C	Trusted Platform Module 2.0 for UCS servers
UCSC-INT-SW02	Chassis Intrusion Switch
UCSX-TPM-OPT-OUT	OPT OUT, TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified ¹

Notes:

1. Please note that Microsoft certification requires a TPM 2.0 for bare-metal or guest VM deployments. Opt-out of the TPM 2.0 voids the Microsoft certification



NOTE:

- The TPM module used in this system conforms to TPM v2.0, as defined by the Trusted Computing Group (TCG). It is also SPI-based.
- TPM installation is supported after-factory. However, a TPM installs with a one-way screw and cannot be replaced, upgraded, or moved to another server. If a server with a TPM is returned, the replacement server must be ordered with a new TPM.

STEP 16 SELECT LOCKING SECURITY BEZEL (OPTIONAL)

An optional locking bezel can be mounted to the front of the chassis to prevent unauthorized access to the drives.

Select the locking bezel from [Table 25](#).

Table 25 Locking Bezel Option

Product ID (PID)	Description
UCSC-BZL-C220M5	C225 M5 Security Bezel

STEP 17 ORDER M.2 SATA SSDs (OPTIONAL)

Order two matching M.2 SATA SSDs along with a boot-optimized RAID controller. See [Figure 8 on page 70](#) for the location of the connector on the motherboard. This connector accepts the boot-optimized RAID controller (see [Table 27](#)). Each boot-optimized RAID controller can accommodate two SATA M.2 SSDs shown in [Table 26](#).



NOTE: It is recommended that M.2 SATA SSDs be used as boot-only devices.

Table 26 M.2 SATA SSDs

Product ID (PID)	PID Description
UCS-M2-240GB	240 GB M.2 SATA SSD
UCS-M2-960GB	960 GB M.2 SATA SSD

Order the UCS-M2-HWRAID Boot-Optimized RAID controller from [Table 27](#) for hardware RAID across the two SATA M.2 drives. The Boot-Optimized RAID controller plugs into a connector on the motherboard and holds 2 M.2 SATA drives.



NOTE: The Boot-Optimized RAID controller supports VMWare, Windows and Linux Operating Systems

Table 27 Mini Storage Carrier/Boot-Optimized RAID Controller

Product ID (PID)	PID Description
UCS-M2-HWRAID	Cisco Boot optimized M.2 RAID controller (holds 2 M.2 SATA SSDs)

**NOTE:**

- The UCS-M2-HWRAID boot-optimized RAID controller supports RAID 1 and JBOD mode
 - The UCS-M2-HWRAID controller is available only with 240 GB and 960 GB M.2 SSDs.
 - CIMC is supported for configuring of volumes and monitoring of the controller and installed SATA M.2 drives
 - The minimum version of Cisco IMC and Cisco UCS Manager that supports this controller is 4.2(1) and later. The name of the controller in the software is MSTOR-RAID
 - The SATA M.2 drives can boot in UEFI mode only. Legacy boot mode is not supported
 - Hot-plug replacement is not supported. The server must be powered off.
 - The boot-optimized RAID controller is not supported when the server is used as a compute node in HyperFlex configurations
-

Caveats

- Order two identical M.2 SATA SSDs for the boot-optimized RAID controller. You cannot mix M.2 SATA SSD capacities.

STEP 18 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE



NOTE: See this link for operating system guidance:
<https://ucshcltool.cloudapps.cisco.com/public/>

Select

- OEM Software ([Table 28](#))
- Operating System ([Table 29](#))
- NVIDIA GPU Licenses ([Table 30 on page 55](#))

Table 28 OEM Software

Product ID (PID)	PID Description
VMware vCenter	
VMW-VCS-STD-1A	VMware vCenter 6 Server Standard, 1 yr support required
VMW-VCS-STD-3A	VMware vCenter 6 Server Standard, 3 yr support required
VMW-VCS-STD-5A	VMware vCenter 6 Server Standard, 5 yr support required
VMW-VCS-FND-1A	VMware vCenter 6 Server Foundation (4 Host), 1 yr supp reqd
VMW-VCS-FND-3A	VMware vCenter 6 Server Foundation (4 Host), 3 yr supp reqd
VMW-VCS-FND-5A	VMware vCenter 6 Server Foundation (4 Host), 5 yr supp reqd

Table 29 Operating System

Product ID (PID)	PID Description
Microsoft Windows Server	
MSWS-19-DC16C	Windows Server 2019 Data Center (16 Cores/Unlimited VMs)
MSWS-19-DC16C-NS	Windows Server 2019 DC (16 Cores/Unlim VMs) - No Cisco SVC
MSWS-19-ST16C	Windows Server 2019 Standard (16 Cores/2 VMs)
MSWS-19-ST16C-NS	Windows Server 2019 Standard (16 Cores/2 VMs) - No Cisco SVC
Red Hat	
RHEL-2S2V-1A	Red Hat Enterprise Linux (1-2 CPU,1-2 VN); 1-Yr Support Req

Table 29 Operating System (continued)

Product ID (PID)	PID Description
RHEL-2S2V-3A	Red Hat Enterprise Linux (1-2 CPU,1-2 VN); 3-Yr Support Req
RHEL-2S2V-5A	Red Hat Enterprise Linux (1-2 CPU,1-2 VN); 5-Yr Support Req
RHEL-VDC-2SUV-1A	RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 1 Yr Supp Req
RHEL-VDC-2SUV-3A	RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 3 Yr Supp Req
RHEL-VDC-2SUV-5A	RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 5 Yr Supp Req
Red Hat Ent Linux/ High Avail/ Res Strg/ Scal	
RHEL-2S2V-1S	Red Hat Enterprise Linux (1-2 CPU,1-2 VN); Prem 1-Yr SnS
RHEL-2S2V-3S	Red Hat Enterprise Linux (1-2 CPU,1-2 VN); Prem 3-Yr SnS
RHEL-2S-HA-1S	RHEL High Availability (1-2 CPU); Premium 1-yr SnS
RHEL-2S-HA-3S	RHEL High Availability (1-2 CPU); Premium 3-yr SnS
RHEL-2S-RS-1S	RHEL Resilient Storage (1-2 CPU); Premium 1-yr SnS
RHEL-2S-RS-3S	RHEL Resilient Storage (1-2 CPU); Premium 3-yr SnS
RHEL-2S-SFS-1S	RHEL Scalable File System (1-2 CPU); Premium 1-yr SnS
RHEL-2S-SFS-3S	RHEL Scalable File System (1-2 CPU); Premium 3-yr SnS
RHEL-VDC-2SUV-1S	RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 1 Yr SnS Reqd
RHEL-VDC-2SUV-3S	RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 3 Yr SnS Reqd
Red Hat SAP	
RHEL-SAP-2S2V-1S	RHEL for SAP Apps (1-2 CPU, 1-2 VN); Prem 1-Yr SnS
RHEL-SAP-2S2V-3S	RHEL for SAP Apps (1-2 CPU, 1-2 VN); Prem 3-Yr SnS
VMware	
VMW-VSP-STD-1A	VMware vSphere 6 Standard (1 CPU), 1-yr, Support Required
VMW-VSP-STD-3A	VMware vSphere 6 Standard (1 CPU), 3-yr, Support Required
VMW-VSP-STD-5A	VMware vSphere 6 Standard (1 CPU), 5-yr, Support Required
VMW-VSP-EPL-3A	VMware vSphere 6 Ent Plus (1 CPU), 3-yr, Support Required
VMW-VSP-EPL-1A	VMware vSphere 6 Ent Plus (1 CPU), 1-yr, Support Required
VMW-VSP-EPL-5A	VMware vSphere 6 Ent Plus (1 CPU), 5-yr, Support Required
SUSE	
SLES-2S2V-1A	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 1-Yr Support Req
SLES-2SUV-1A	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 1-Yr Support Req

Table 29 Operating System (continued)

Product ID (PID)	PID Description
SLES-2S2V-3A	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 3-Yr Support Req
SLES-2SUV-3A	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 3-Yr Support Req
SLES-2S2V-5A	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 5-Yr Support Req
SLES-2SUV-5A	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 5-Yr Support Req
SLES-2S2V-1S	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 1-Yr SnS
SLES-2SUV-1S	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 1-Yr SnS
SLES-2S2V-3S	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 3-Yr SnS
SLES-2SUV-3S	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 3-Yr SnS
SLES-2S2V-5S	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 5-Yr SnS
SLES-2SUV-5S	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 5-Yr SnS
SLES-2S-HA-1S	SUSE Linux High Availability Ext (1-2 CPU); 1yr SnS
SLES-2S-HA-3S	SUSE Linux High Availability Ext (1-2 CPU); 3yr SnS
SLES-2S-HA-5S	SUSE Linux High Availability Ext (1-2 CPU); 5yr SnS
SLES-2S-GC-1S	SUSE Linux GEO Clustering for HA (1-2 CPU); 1yr Sns
SLES-2S-GC-3S	SUSE Linux GEO Clustering for HA (1-2 CPU); 3yr SnS
SLES-2S-GC-5S	SUSE Linux GEO Clustering for HA (1-2 CPU); 5yr SnS
SLES-2S-LP-1S	SUSE Linux Live Patching Add-on (1-2 CPU); 1yr SnS Required
SLES-2S-LP-3S	SUSE Linux Live Patching Add-on (1-2 CPU); 3yr SnS Required
SLES-2S-LP-1A	SUSE Linux Live Patching Add-on (1-2 CPU); 1yr Support Req
SLES-2S-LP-3A	SUSE Linux Live Patching Add-on (1-2 CPU); 3yr Support Req
SLES and SAP	
SLES-SAP-2S2V-1A	SLES for SAP Apps (1-2 CPU, 1-2 VM); 1-Yr Support Reqd
SLES-SAP-2SUV-1A	SLES for SAP Apps (1-2 CPU, Unl VM); 1-Yr Support Reqd
SLES-SAP-2S2V-3A	SLES for SAP Apps (1-2 CPU, 1-2 VM); 3-Yr Support Reqd
SLES-SAP-2SUV-3A	SLES for SAP Apps (1-2 CPU, Unl VM); 3-Yr Support Reqd
SLES-SAP-2S2V-5A	SLES for SAP Apps (1-2 CPU, 1-2 VM); 5-Yr Support Reqd
SLES-SAP-2SUV-5A	SLES for SAP Apps (1-2 CPU, Unl VM); 5-Yr Support Reqd
SLES-SAP-2S2V-1S	SLES for SAP Apps (1-2 CPU, 1-2 VM); Priority 1-Yr SnS
SLES-SAP-2SUV-1S	SLES for SAP Apps (1-2 CPU, Unl VM); Priority 1-Yr SnS

Table 29 Operating System (continued)

Product ID (PID)	PID Description
SLES-SAP-2S2V-3S	SLES for SAP Apps (1-2 CPU, 1-2 VM); Priority 3-Yr SnS
SLES-SAP-2SUV-3S	SLES for SAP Apps (1-2 CPU, Unl VM); Priority 3-Yr SnS
SLES-SAP-2S2V-5S	SLES for SAP Apps (1-2 CPU, 1-2 VM); Priority 5-Yr SnS
SLES-SAP-2SUV-5S	SLES for SAP Apps (1-2 CPU, Unl VM); Priority 5-Yr SnS

Table 30 NVIDIA GPU Licenses

Product ID (PID)	PID Description
NV-VCS-1YR	NVIDIA vCompute Server Subscription - 1 GPU - 1 Year
NV-VCS-3YR	NVIDIA vCompute Server Subscription - 1 GPU - 3 Year
NV-VCS-5YR	NVIDIA vCompute Server Subscription - 1 GPU - 5 Year
NV-GRDWK-1-5S	Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 5Yr SUMS Req
NV-GRDVA-1-5S	GRID Perpetual Lic - NVIDIA VDI APPs 1CCU; 5Yr SUMS Reqd
NV-GRDPC-1-5S	GRID Perpetual Lic - NVIDIA VDI PC 1CCU; 5Yr SUMS Reqd
NV-GRD-EDP-5S	EDU - Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 5Yr SUMS Reqd
NV-GRID-WKP-5YR	NVIDIA Quadro Production SUMS - vDWS 1CCU - 5 Year
NV-GRID-VAP-5YR	NVIDIA GRID Production SUMS - VDI Apps 1CCU - 5 Year
NV-GRID-PCP-5YR	NVIDIA GRID Production SUMS - VDI PC 1CCU - 5 Year
NV-GRID-EDP-5YR	EDU - NVIDIA Quadro vDWS Production SUMS - 1CCU - 5 Year
NV-GRID-WKS-1YR	NVIDIA Quadro SW Subscription - vDWS 1CCU - 1 Year
NV-GRID-WKS-3YR	NVIDIA Quadro SW Subscription - vDWS 1CCU - 3 Year
NV-GRID-WKS-4YR	NVIDIA Quadro SW Subscription - vDWS 1CCU - 4 Year
NV-GRID-WKS-5YR	NVIDIA Quadro SW Subscription - vDWS 1CCU - 5 Year
NV-GRID-PCS-1YR	NVIDIA GRID Software Subscription - VDI PC 1CCU - 1 Year
NV-GRID-PCS-3YR	NVIDIA GRID Software Subscription - VDI PC 1CCU - 3 Year
NV-GRID-PCS-4YR	NVIDIA GRID Software Subscription - VDI PC 1CCU - 4 Year
NV-GRID-PCS-5YR	NVIDIA GRID Software Subscription - VDI PC 1CCU - 5 Year
NV-GRID-VAS-1YR	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 1 Year
NV-GRID-VAS-3YR	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 3 Year

Table 30 NVIDIA GPU Licenses (continued)

Product ID (PID)	PID Description
NV-GRID-VAS-4YR	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 4 Year
NV-GRID-VAS-5YR	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 5 Year
NV-GRID-EDS-1YR	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 1 Year
NV-GRID-EDS-3YR	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 3 Year
NV-GRID-EDS-4YR	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 4 Year
NV-GRID-EDS-5YR	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 5 Year

STEP 19 SELECT OPERATING SYSTEM MEDIA KIT

Select the optional operating system media listed in [Table 31](#).

Table 31 OS Media

Product ID (PID)	PID Description
MSWS-19-ST16C-RM	Windows Server 2019 Stan (16 Cores/2 VMs) Rec Media DVD Only
MSWS-19-DC16C-RM	Windows Server 2019 DC (16Cores/Unlim VM) Rec Media DVD Only

STEP 20 SELECT SERVICE and SUPPORT LEVEL

A variety of service options are available, as described in this section.

Unified Computing Warranty, No Contract

If you have noncritical implementations and choose to have no service contract, the following coverage is supplied:

- Three-year parts coverage.
- Next business day (NBD) parts replacement eight hours a day, five days a week.
- 90-day software warranty on media.
- Ongoing downloads of BIOS, drivers, and firmware updates.
- UCSM updates for systems with Unified Computing System Manager. These updates include minor enhancements and bug fixes that are designed to maintain the compliance of UCSM with published specifications, release notes, and industry standards.

Smart Net Total Care (SNTC) for Cisco UCS

For support of the entire Unified Computing System, Cisco offers the Cisco Smart Net Total Care (SNTC) for UCS Service. This service provides expert software and hardware support to help sustain performance and high availability of the unified computing environment. Access to Cisco Technical Assistance Center (TAC) is provided around the clock, from anywhere in the world.

For systems that include Unified Computing System Manager, the support service includes downloads of UCSM upgrades. The Cisco Smart Net Total Care for UCS Service includes flexible hardware replacement options, including replacement in as little as two hours. There is also access to Cisco's extensive online technical resources to help maintain optimal efficiency and uptime of the unified computing environment. For more information please refer to the following url:

<http://www.cisco.com/c/en/us/services/technical/smart-net-total-care.html?stickynav=1>

You can choose a desired service listed in *Table 32*.

Table 32 Cisco SNTC for UCS Service (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-PREM-UCSMC22	C2P	Yes	SNTC 24X7X20S
CON-UCSD8-UCSMC22	UCSD8	Yes	UC SUPP DR 24X7X20S*
CON-C2PL-UCSMC22	C2PL	Yes	LL 24X7X20S**
CON-OSP-UCSMC22	C4P	Yes	SNTC 24X7X40S
CON-UCSD7-UCSMC22	UCSD7	Yes	UCS DR 24X7X40S*

Table 32 Cisco SNTC for UCS Service (PID UCSC-C225-M6S) (continued)

Service SKU	Service Level GSP	On Site?	Description
CON-C4PL-UCSMC22	C4PL	Yes	LL 24X7X40S**
CON-USD7L-UCSMC22	USD7L	Yes	LLUCS HW DR 24X7X40S***
CON-OSE-UCSMC22	C4S	Yes	SNTC 8X5X40S
CON-UCSD6-UCSMC22	UCSD6	Yes	UC SUPP DR 8X5X40S*
CON-SNCO-UCSMC22	SNCO	Yes	SNTC 8x7xNCDOS****
CON-OS-UCSMC22	CS	Yes	SNTC 8X5XNBDOS
CON-UCSD5-UCSMC22	UCSD5	Yes	UCS DR 8X5XNBDOS*
CON-S2P-UCSMC22	S2P	No	SNTC 24X7X2
CON-S2PL-UCSMC22	S2PL	No	LL 24X7X2**
CON-SNTP-UCSMC22	SNTP	No	SNTC 24X7X4
CON-SNTPL-UCSMC22	SNTPL	No	LL 24X7X4**
CON-SNTE-UCSMC22	SNTE	No	SNTC 8X5X4
CON-SNC-UCSMC22	SNC	No	SNTC 8x7xNCD
CON-SNT-UCSMC22	SNT	No	SNTC 8X5XNBD
CON-SW-UCSMC22	SW	No	SNTC NO RMA
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-UCSD8-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-UCSD8-UCSC2C22)			
Note: For PID UCSC-C225-M6N-CH, select Service SKU with UCSCHC22 suffix (Example: CON-UCSD8-UCSCHC22)			
*Includes Drive Retention (see below for full description)			
**Includes Local Language Support (see below for full description) – Only available in China and Japan			
***Includes Local Language Support and Drive Retention – Only available in China and Japan			

Smart Net Total Care for Cisco UCS Onsite Troubleshooting Service

An enhanced offer over traditional Smart Net Total Care which provides onsite troubleshooting expertise to aid in the diagnostics and isolation of hardware issue within our customers' Cisco Unified Computing System (UCS) environment. It is delivered by a Cisco Certified field engineer (FE) in collaboration with remote TAC engineer and Virtual Internetworking Support Engineer (VISE). You can choose a desired service listed in [Table 33](#).

Table 33 SNTC for UCS Onsite Troubleshooting Service (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-OSPT-UCSMC22	OSPT	Yes	24X7X40S Trblshtg
CON-OSPTD-UCSMC22	OSPTD	Yes	24X7X40S TrblshtgDR*
CON-OSPTL-UCSMC22	OSPTL	Yes	24X7X40S TrblshtgLL**
CON-OPTLD-UCSMC22	OPTLD	Yes	24X7X40S TrblshtgLLD***
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-OSTP-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-OSPT-UCSC2C22)			
Note: For PID UCSC-C225-M6N-CH, select Service SKU with UCCHC22 suffix (Example: CON-OSPT-UCCHC22)			
*Includes Drive Retention (see below for full description)			
**Includes Local Language Support (see below for full description) – Only available in China and Japan			
***Includes Local Language Support and Drive Retention – Only available in China and Japan			

Solution Support (SSTP) for UCS

Solution Support includes both Cisco product support and solution-level support, resolving complex issues in multivendor environments, on average, 43% more quickly than product support alone. Solution Support is a critical element in data center administration, to help rapidly resolve any issue encountered, while maintaining performance, reliability, and return on investment.

This service centralizes support across your multivendor Cisco environment for both our products and solution partner products you've deployed in your ecosystem. Whether there is an issue with a Cisco or solution partner product, just call us. Our experts are the primary point of contact and own the case from first call to resolution. For more information please refer to the following URL:

<http://www.cisco.com/c/en/us/services/technical/solution-support.html?stickynav=1>

You can choose a desired service listed in [Table 34](#).

Table 34 Solution Support for UCS Service (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-SSC2P-UCSMC22	SSC2P	Yes	SOLN SUPP 24X7X2OS
CON-SSC4P-UCSMC22	SSC4P	Yes	SOLN SUPP 24X7X4OS
CON-SSC4S-UCSMC22	SSC4S	Yes	SOLN SUPP 8X5X4OS
CON-SSCS-UCSMC22	SSCS	Yes	SOLN SUPP 8X5XNBDOS
CON-SSDR7-UCSMC22	SSDR7	Yes	SSPT DR 24X7X4OS*
CON-SSDR5-UCSMC22	SSDR5	Yes	SSPT DR 8X5XNBDOS*
CON-SSS2P-UCSMC22	SSS2P	No	SOLN SUPP 24X7X2
CON-SSSNP-UCSMC22	SSSNP	No	SOLN SUPP 24X7X4
CON-SSSNE-UCSMC22	SSSNE	No	SOLN SUPP 8X5X4
CON-SSSNC-UCSMC22	SSSNC	No	SOLN SUPP NCD
CON-SSSNT-UCSMC22	SSSNT	No	SOLN SUPP 8X5XNBD
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-SSC4P-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-SSC4P-UCSC2C22)			
Note: For PID UCSC-C225-M6N-CH, select Service SKU with UCSCHC22 suffix (Example: CON-SSC4P-UCSCHC22)			
*Includes Drive Retention (see below for full description)			

Solution Support for Service Providers

You can choose a desired service listed in [Table 35](#).

Table 35 Solution Support for UCS Service (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
SP-SSC2P-UCSCMC22	SPSSC2P	Yes	SP SOLN SUPP 24X7X2OS
SP-SSC4P-UCSCMC22	SPSSC4P	Yes	SP SOLN SUPP 24X7X4OS
SP-SSC4S-UCSCMC22	SPSSC4S	Yes	SP SOLN SUPP 8X5X4OS
SP-SSCS-UCSCMC22	SPSSCS	Yes	SP SOLN SUPP 8X5XNBDOS
SP-SSS2P-UCSCMC22	SPSSS2P	Yes	SP SOLN SUPP 24X7X2
SP-SSS4P-UCSCMC22	SPSSS4P	Yes	SP SOLN SUPP 24X7X4
SP-SSSNE-UCSCMC22	SPSSSNE	No	SP SOLN SUPP 8X5X4
SP-SSSNT-UCSCMC22	SPSSSNT	No	SP SOLN SUPP 8X5XNBD
SP-SSSPB-UCSCMC22	SPSSSPB	No	SP SOLN SUPP NO HW RPL
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-SPSSC4P-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-SPSSC4P-UCSC2C22)			
Note: For PID UCSC-C225-M6N-CH, select Service SKU with UCSCHC22 suffix (Example: CON-SPSSC4P-UCSCHC22)			

Smart Net Total Care for UCS Hardware Only Service

For faster parts replacement than is provided with the standard Cisco Unified Computing System warranty, Cisco offers the Cisco Smart Net Total Care for UCS Hardware Only Service. You can choose from two levels of advanced onsite parts replacement coverage in as little as four hours. Smart Net Total Care for UCS Hardware Only Service provides remote access any time to Cisco support professionals who can determine if a return materials authorization (RMA) is required. You can choose a desired service listed in [Table 36](#).

Table 36 SNTC for UCS Hardware Only Service (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-UCW7-UCSMC22	UCW7	Yes	UCS HW 24X7X40S
CON-UCWD7-UCSMC22	UCWD7	Yes	UCS HW+DR 24X7X40S*
CON-UCW7L-UCSMC22	UCW7L	Yes	LL UCS 24X7X40S**
CON-UWD7L-UCSMC22	UWD7L	Yes	LL UCS DR 24X7X40S***
CON-UCW5-UCSMC22	UCW5	Yes	UCS HW 8X5XNBDOS
CON-UCWD5-UCSMC22	UCWD5	Yes	UCS HW+DR 8X5XNBDOS*
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-UCW7-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-UCW7-UCSC2C22)			
*Includes Drive Retention (see below for full description)			
**Includes Local Language Support (see below for full description) – Only available in China and Japan			
***Includes Local Language Support and Drive Retention – Only available in China and Japan			

Partner Support Service for UCS

Cisco Partner Support Service (PSS) is a Cisco Collaborative Services service offering that is designed for partners to deliver their own branded support and managed services to enterprise customers. Cisco PSS provides partners with access to Cisco's support infrastructure and assets to help them:

- Expand their service portfolios to support the most complex network environments
- Lower delivery costs
- Deliver services that increase customer loyalty

PSS options enable eligible Cisco partners to develop and consistently deliver high-value technical support that capitalizes on Cisco intellectual assets. This helps partners to realize higher margins and expand their practice. PSS is available to all Cisco PSS partners. The two Partner Unified Computing Support Options include:

- Partner Support Service for UCS
- Partner Support Service for UCS Hardware Only

PSS for UCS provides hardware and software support, including triage support for third party software, backed by Cisco technical resources and level three support. You can choose a desired service listed in [Table 37](#).

Table 37 PSS for UCS (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-PSJ8-UCSMC22	PSJ8	Yes	UCS PSS 24X7X2 OS
CON-PSJ7-UCSMC22	PSJ7	Yes	UCS PSS 24X7X4 OS
CON-PSJD7-UCSMC22	PSJD7	Yes	UCS PSS 24X7X4 DR*
CON-PSJ6-UCSMC22	PSJ6	Yes	UCS PSS 8X5X4 OS
CON-PSJD6-UCSMC22	PSJD6	Yes	UCS PSS 8X5X4 DR*
CON-PSJ4-UCSMC22	PSJ4	No	UCS SUPP PSS 24X7X2
CON-PSJ3-UCSMC22	PSJ3	No	UCS SUPP PSS 24X7X4
CON-PSJ2-UCSMC22	PSJ2	No	UCS SUPP PSS 8X5X4
CON-PSJ1-UCSMC22	PSJ1	No	UCS SUPP PSS 8X5XNBD
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-PSJ7-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-PSJ7-UCSC2C22)			
*Includes Drive Retention (see below for full description)			

PSS for UCS Hardware Only

PSS for UCS Hardware Only provides customers with replacement parts in as little as two hours and provides remote access any time to Partner Support professionals who can determine if a return materials authorization (RMA) is required. You can choose a desired service listed in [Table 38](#).

Table 38 PSS for UCS Hardware Only (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-PSW7-UCSMC22	PSW7	Yes	UCS W PSS 24X7X4 OS
CON-PSWD7-UCSMC22	PSWD7	Yes	UCS W PSS 24X7X4 DR*
CON-PSW6-UCSMC22	PSW6	Yes	UCS W PSS 8X5X4 OS
CON-PSWD6-UCSMC22	PSWD6	Yes	UCS W PSS 8X5X4 DR*
CON-PSW4-UCSMC22	PSW4	No	UCS W PL PSS 24X7X2
CON-PSW3-UCSMC22	PSW3	No	UCS W PL PSS 24X7X4
CON-PSW2-UCSMC22	PSW2	No	UCS W PL PSS 8X5X4
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-PSW7-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-PSW7-UCSC2C22)			
Note: For PID UCSC-C225-M6N-CH, select Service SKU with UCSCHC22 suffix (Example: CON-PSW7-UCSCHC22)			
*Includes Drive Retention (see below for full description)			

Distributor Support Service (DSS)

You can choose a desired service listed in [Table 39](#).

Table 39 PSS for UCS Hardware Only (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-DSCO-UCSCMC22	DSCO	Yes	DSS CORE 24X7X20S
CON-DSO-UCSCMC22	DSO	Yes	DSS CORE 24X7X4
CON-DSNO-UCSCMC22	DSNO	Yes	DSS CORE 8X5XNBDOS
CON-DSCC-UCSCMC22	DSCC	No	DSS CORE 24X7X2
CON-DCP-UCSCMC22	DCP	No	DSS CORE 24X7X4
CON-DSE-UCSCMC22	DSE	No	DSS CORE 8X5X4
CON-DSN-UCSCMC22	DSN	No	DSS CORE 8X5XNBD
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-DSO-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-DSO-UCSC2C22)			
Note: For PID UCSC-C225-M6N-CH, select Service SKU with UCSCHC22 suffix (Example: CON-DSO-UCSCHC22)			

Unified Computing Combined Support Service

Combined Services makes it easier to purchase and manage required services under one contract. SNTC services for UCS help increase the availability of your vital data center infrastructure and realize the most value from your unified computing investment. The more benefits you realize from the Cisco Unified Computing System (Cisco UCS), the more important the technology becomes to your business. These services allow you to:

- Optimize the uptime, performance, and efficiency of your UCS
- Protect your vital business applications by rapidly identifying and addressing issues
- Strengthen in-house expertise through knowledge transfer and mentoring
- Improve operational efficiency by allowing UCS experts to augment your internal staff resources
- Enhance business agility by diagnosing potential issues before they affect your operations

You can choose a desired service listed in [Table 40](#).

Table 40 Combined Support Service for UCS (PID UCSC-C225-M6S)

Service SKU	Service Level GSP	On Site?	Description
CON-NCF2P-UCSMC22	NCF2P	Yes	CMB SVC 24X7X2OS
CON-NCF4P-UCSMC22	NCF4P	Yes	CMB SVC 24X7X4OS
CON-NCF4S-UCSMC22	NCF4S	Yes	CMB SVC 8X5X4OS
CON-NCFC5-UCSMC22	NCFC5	Yes	CMB SVC 8X5XNBDOS
CON-NCF2-UCSMC22	NCF2	No	CMB SVC 24X7X2
CON-NCFP-UCSMC22	NCFP	No	CMB SVC 24X7X4
CON-NCFE-UCSMC22	NCFE	No	CMB SVC 8X5X4
CON-NCFT-UCSMC22	NCFT	No	CMB SVC 8X5XNBD
CON-NCFW-UCSMC22	NCFW	No	CMB SVC SW
Note: For PID UCSC-C225-M6S-CH, select Service SKU with UC6SCC22 suffix (Example: CON-NCF4P-UC6SCC22)			
Note: For PID UCSC-C225-M6N, select Service SKU with UCSC2C22 suffix (Example: CON-NCF4P-UCSC2C22)			
Note: For PID UCSC-C225-M6N-CH, select Service SKU with UCSCHC22 suffix (Example: CON-NCF4P-UCSCHC22)			

UCS Drive Retention Service

With the Cisco Unified Computing Drive Retention Service, you can obtain a new disk drive in exchange for a faulty drive without returning the faulty drive.

Sophisticated data recovery techniques have made classified, proprietary, and confidential information vulnerable, even on malfunctioning disk drives. The Drive Retention service enables you to retain your drives and ensures that the sensitive data on those drives is not compromised, which reduces the risk of any potential liabilities. This service also enables you to comply with regulatory, local, and federal requirements.

If your company has a need to control confidential, classified, sensitive, or proprietary data, you might want to consider one of the Drive Retention Services listed in the above tables (where available).



NOTE: Cisco does not offer a certified drive destruction service as part of this service.

Local Language Technical Support for UCS

Where available, and subject to an additional fee, local language support for calls on all assigned severity levels may be available for specific product(s) - see tables above.

For a complete listing of available services for Cisco Unified Computing System, see the following URL:

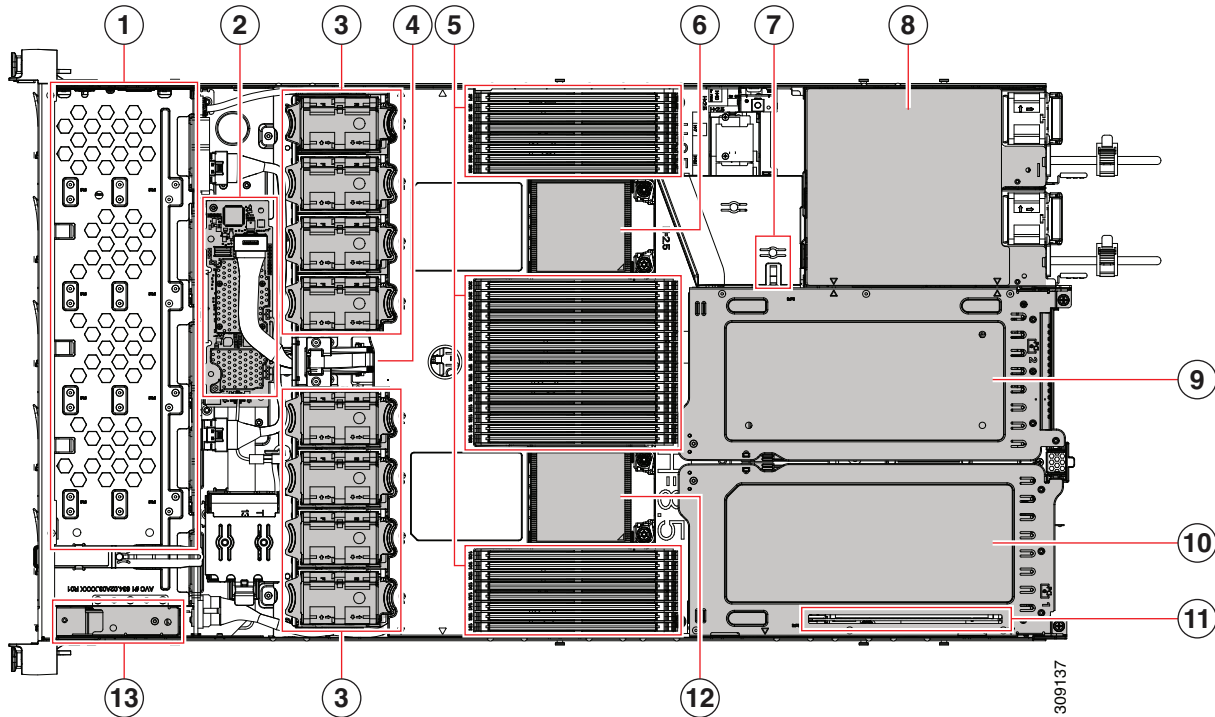
http://www.cisco.com/en/US/products/ps10312/serv_group_home.html

SUPPLEMENTAL MATERIAL

Chassis

Internal views of the C220 M6 chassis with the top cover removed are shown in [Figure 7](#) and [Figure 8 on page 70](#).

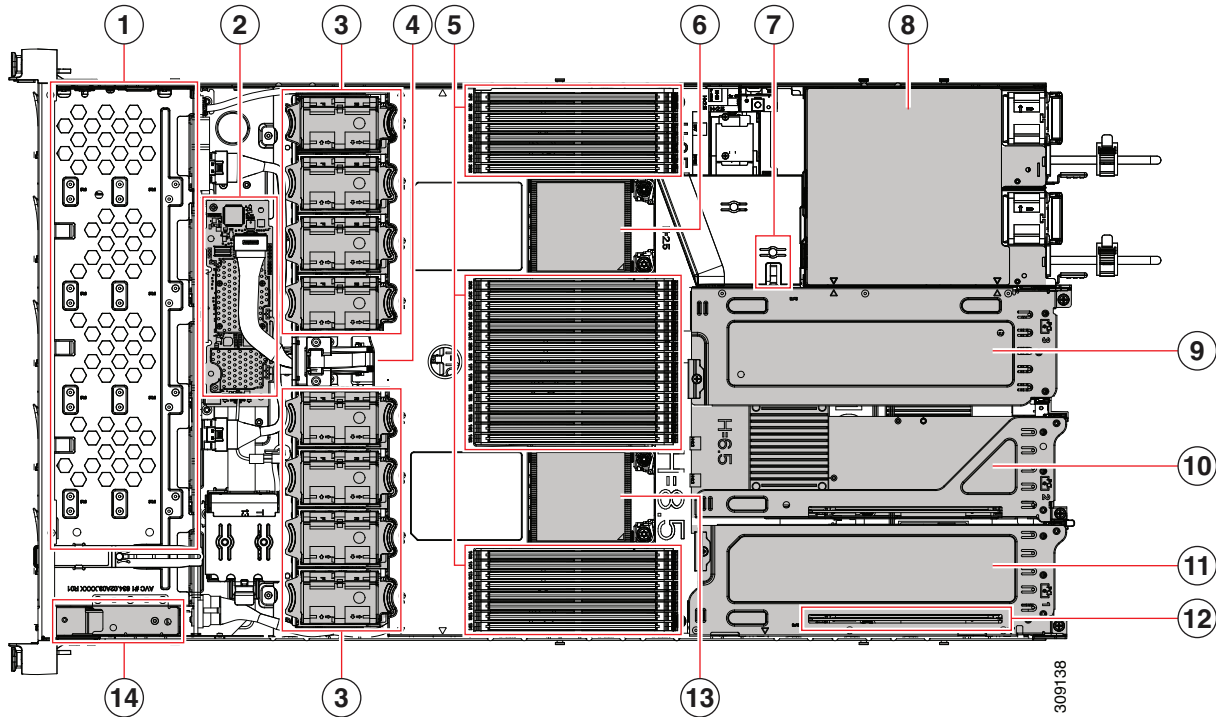
Figure 7 C220 M6 SFF With Top Cover Off (full-height, full-width PCIe cards)



1	Front-loading drive bays	2	M6 modular RAID card
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 32 total, 16 per CPU CPUs are arranged in groups of eight sockets above the top CPU and below the bottom CPU, and 16 sockets between the CPUs.	6	Motherboard CPU2 socket
7	M.2 module connector, supporting a boot-optimized RAID controller, which has connectors for two SATA M.2 SSDs.	8	Two power supplies
9	PCIe riser 2 Accepts 1 full height, full width PCIe riser card	10	PCIe riser 1 Accepts 1 full height, full width PCIe riser card

11	Modular LOM (mLOM)/OCP 3.0 card bay on chassis floor(x16 PCIe lane) Connector shown, but the card bay sits below PCIe riser slot 1.	12	Motherboard CPU1 socket
13	Front Panel Controller board	-	

Figure 8 C220 M6 SFF With Top Cover Off (full-height, half-width PCIe cards)



1	Front-loading drive bays	2	M6 modular RAID card
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 32 total, 16 per CPU CPUs are arranged in groups of eight sockets above the top CPU and below the bottom CPU, and 16 sockets between the CPUs.	6	Motherboard CPU2 socket
7	M.2 module connector, supporting a boot-optimized RAID controller, which has connectors for two SATA M.2 SSDs.	8	Two power supplies
9	PCIe riser 3 Accepts 1 half height, half width PCIe riser card	10	PCIe riser 2 Accepts 1 half height, half width PCIe riser card

11	PCIe riser slot 1 Accepts 1 half height, half width PCIe riser card	12	Modular LOM (mLOM)/OCP 3.0 card bay on chassis floor(x16 PCIe lane) Connector shown, but the card bay sits below PCIe riser slot 1.
13	Motherboard CPU1 socket	14	Front Panel Controller board

Risers

Figure 9 shows the locations of the PCIe riser connectors on the C225 M6 SFF motherboard. The allowed configurations are:

- Half-height risers in riser 1, 2, and 3 connectors (see **Figure 10**), or
- Full-height risers in riser 1 and 3 connectors (see **Figure 11**).

Figure 9 C225 M6 SFF Riser Connector Locations
C225 M6 SFF Motherboard

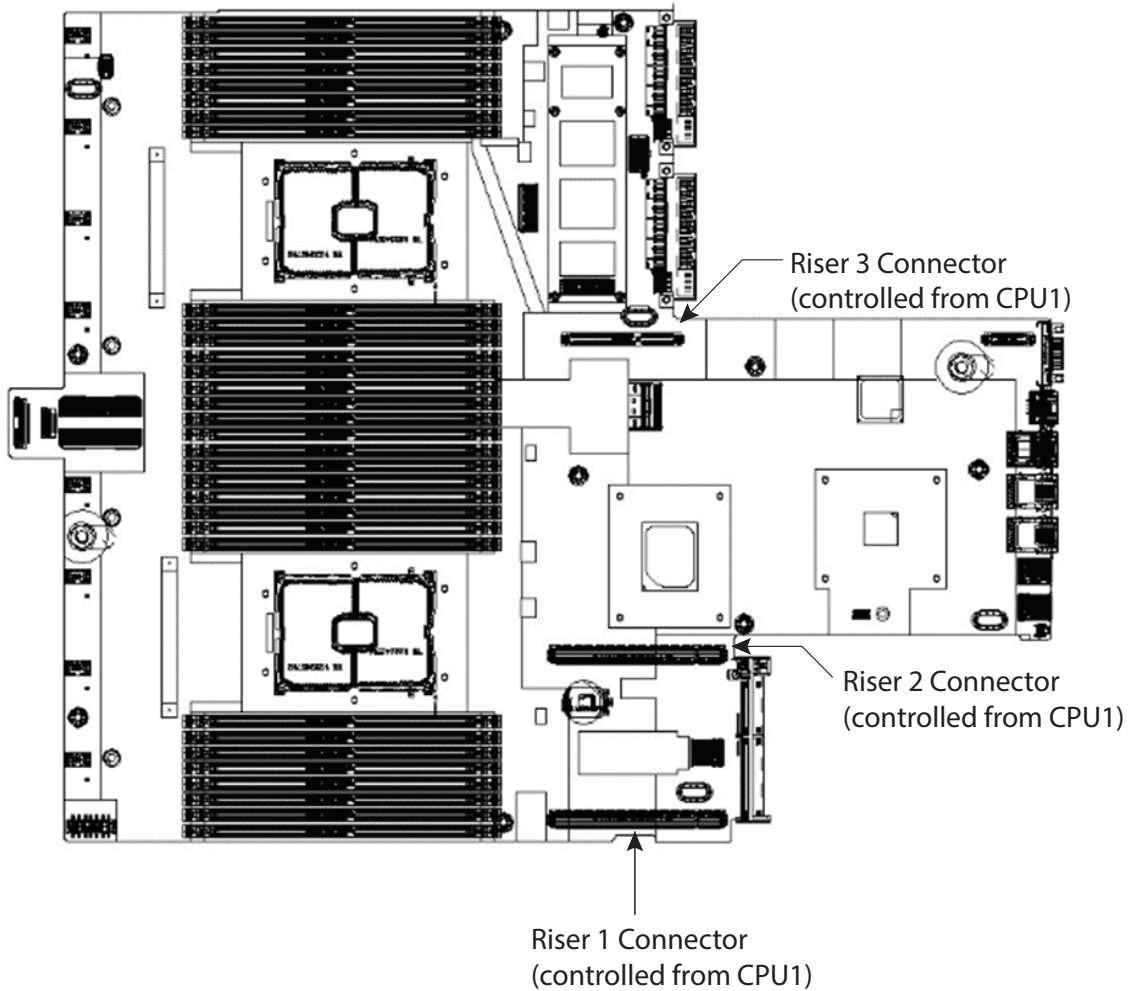


Figure 10 shows three half-height risers plugged into their respective connectors.

Figure 10 C225 M6 SFF With Three Half-Height Risers Plugged In
C225 M6 SFF Motherboard

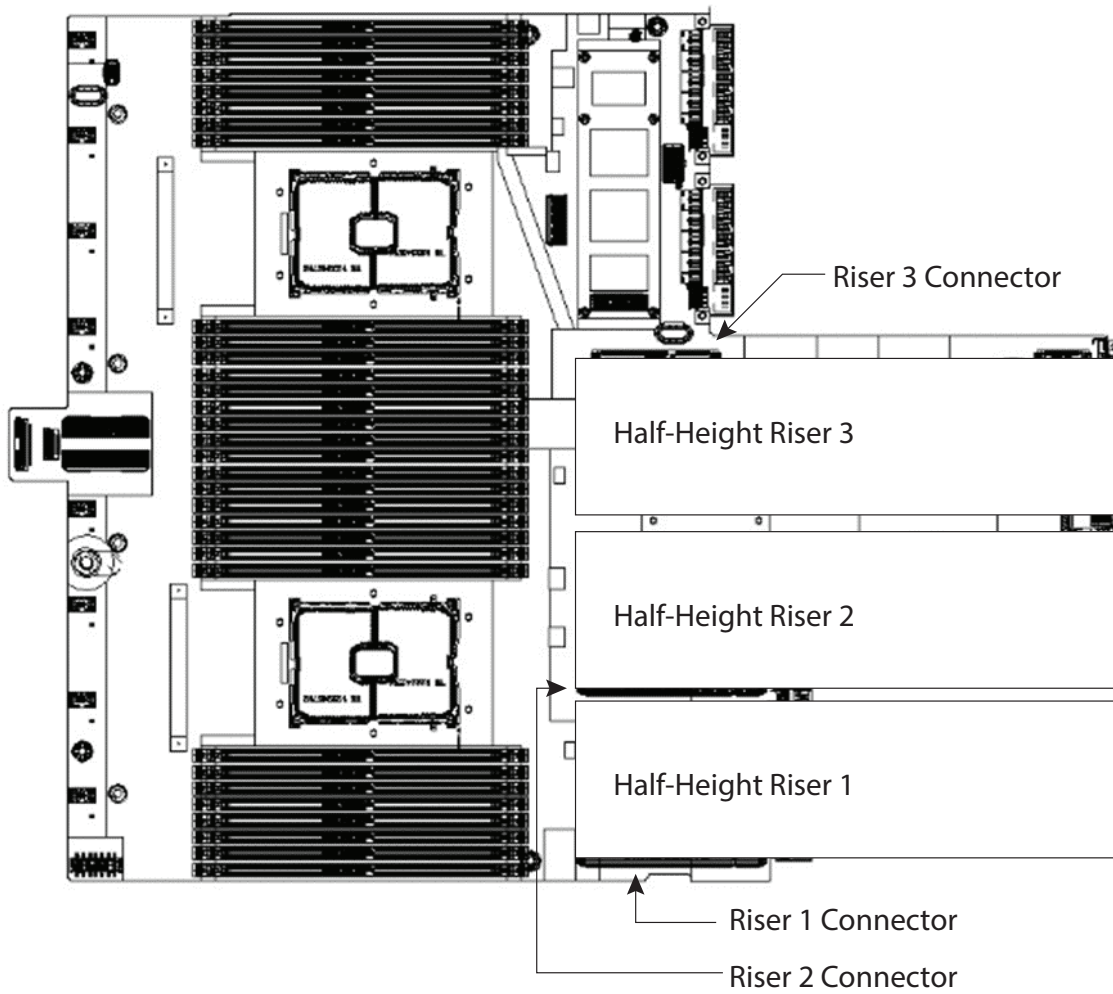
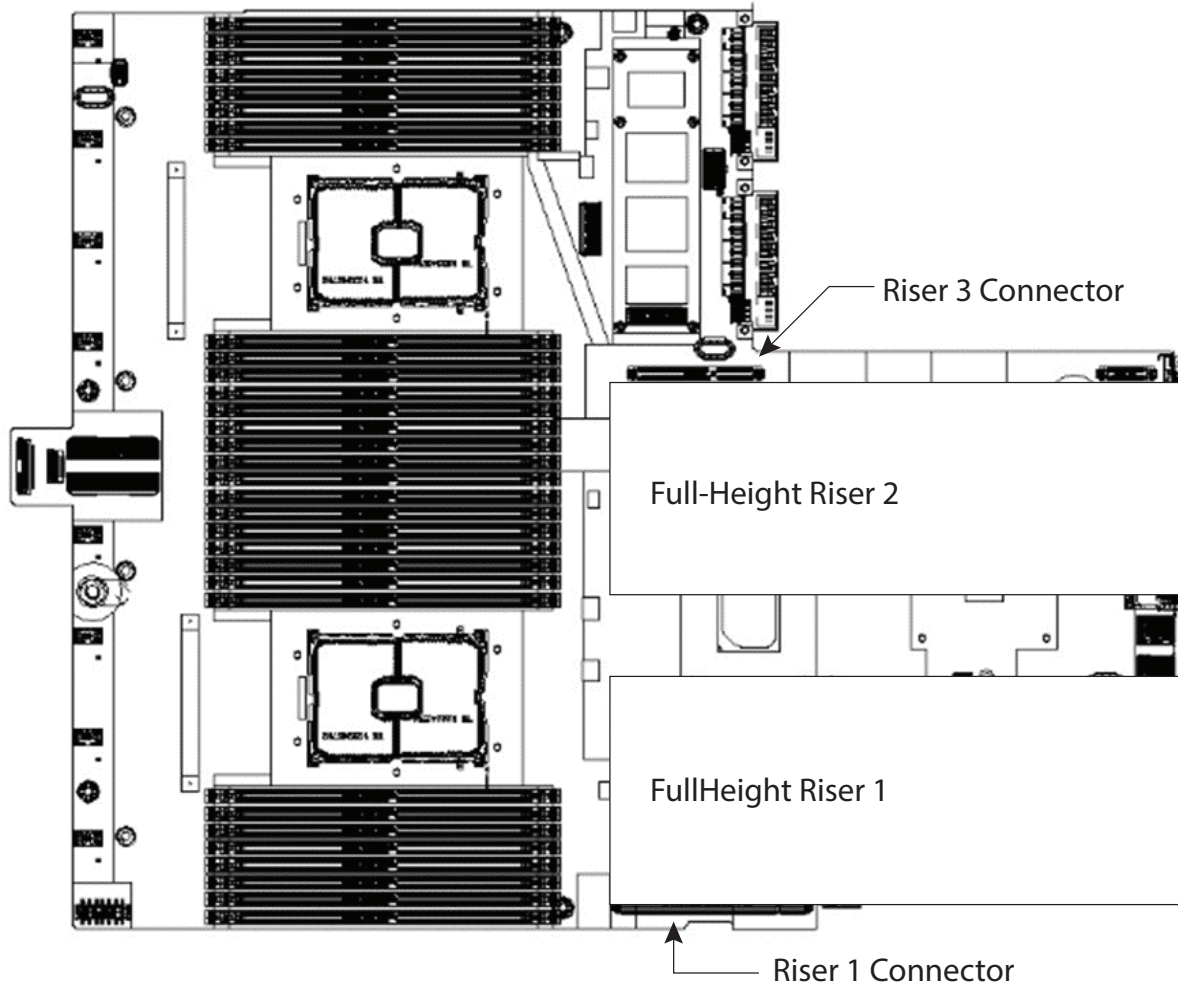


Figure 11 shows two full-height risers plugged in. Note that riser 1 is plugged into the riser 1 connector and riser 2 is plugged into the riser 3 connector. Riser 2 connector is not used.

Figure 11 C225 M6 SFF With Two Full-Height Risers Plugged In
C225 M6 SFF Motherboard



Memory Support for AMD Rome and Milan CPUs

Each CPU has 16 DIMM sockets and supports a maximum memory capacity of 4 GB using 16 x 256 GB DRAMs.

The CPUs support the DRAMs shown in [Table 41](#).

Table 41 Supported DRAMs

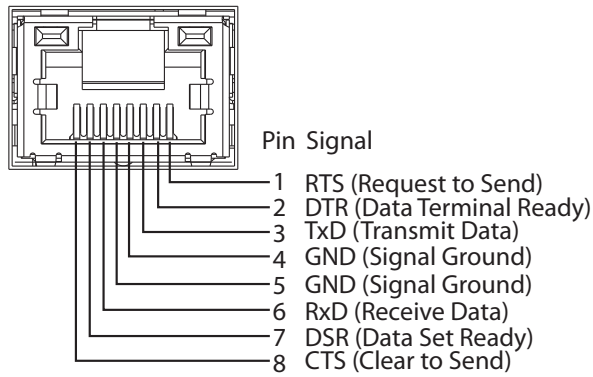
DRAM Type	Ranks	Capacity
RDIMM	1 (SR)	16 GB or 32 GB
RDIMM	2 (DR)	32 GB or 64 GB
LRDIMM	4 (QR)	128 GB (non-3DS)
LRDIMM	8 (8R)	256 GB (3DS)

Serial Port Details

The pinout details of the rear RJ-45 serial port connector are shown in [Figure 12](#).

Figure 12 Serial Port (Female RJ-45 Connector) Pinout

Serial Port (RJ-45 Female Connector)



KVM Cable

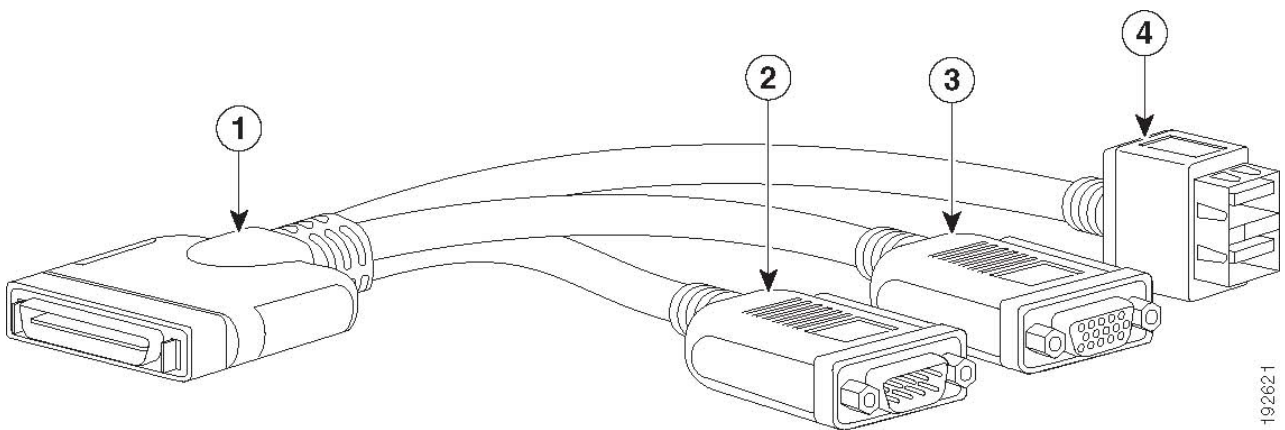
The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

The KVM cable ordering information is listed in [Table 42](#).

Table 42 KVM Cable

Product ID (PID)	PID Description
N20-BKVM	KVM cable for UCS Server console port

Figure 13 KVM Cable



1	Connector (to server front panel)	3	VGA connector (for a monitor)
2	DB-9 serial connector	4	Two-port USB connector (for a mouse and keyboard)

SPARE PARTS

This section lists the upgrade and service-related parts for the UCS C225 M6 server. Some of these parts are configured with every server.



NOTE: Some spare parts you order may also require accessories for full functionality. For example, drives or RAID controllers may need accompanying cables. CPUs may need heatsinks, thermal paste, and installation tools. The spares and their accessory parts are listed in [Table 43](#).

Table 43 Spare Parts

Product ID (PID)	PID Description
KVM Cable	
N20-BKVM=	KVM local IO cable for UCS servers console port
CPUs	
<p>Note: When ordering spare CPUs, check the CPU Accessories section of this table for additional parts you may need.</p>	
UCS-CPU-A7763=	2.45
UCS-CPU-A7543=	2.8
UCS-CPU-A7413=	2.65
UCS-CPU-A7713P=	2.0
UCS-CPU-A7313P=	3.0
UCS-CPU-A7543P=	2.8
UCS-CPU-A7443P=	2.85
UCS-CPU-A72F3=	3.7
UCS-CPU-A7713=	2.0
UCS-CPU-A7272=	2.9
UCS-CPU-A7302=	3.0
UCS-CPU-A7352=	2.3
UCS-CPU-A7502P=	2.5
UCS-CPU-A7662=	2.0
CPU Accessories	
UCSC-HSHP-225M6=	Heatsink 1U SFF M6 PCIe SKU
UCS-CPU-TIM=	Single CPU thermal interface material syringe for M5 server HS seal ¹
UCSX-HSCK=	UCS Processor Heat Sink Cleaning Kit (when replacing a CPU) ²
UCS-CPUAT=	CPU Assembly Tool for M5 Servers
UCS-M5-CPU-CAR=	UCS M5 CPU Carrier
Memory	
UCS-MR-X16G1RW=	16 GB RDIMM SRx4 3200 (8Gb)
UCS-MR-X32G2RW=Heatsink 1U SFF M6 PCIe SKU	32 GB RDIMM DRx4 3200 (8Gb)
UCS-MR-X64G2RW=	64 GB RDIMM DRx4 3200 (16Gb)

Table 43 Spare Parts (continued)


Product ID (PID)	PID Description
UCS-ML-128G4RW=	128 GB LRDIMM QRx4 3200 (16Gb)
UCS-ML-256G8RW=	256 GB LRDIMM 8Rx4 3200 (16Gb)
UCS-DIMM-BLK=	UCS DIMM Blanking Panel - C480M5
Drives	
HDDs	
 <p>Note: When ordering additional NVMe front drives, you may need to order a cable to connect from the drive to the motherboard. See the Drive Cables section in this table.</p>	
HDDs (15K RPM)	
UCS-HD900G15K12N=	900 GB 12G SAS 15K RPM SFF HDD
UCS-HD300G15K12N=	300 GB 12G SAS 15K RPM SFF HDD
UCS-HD600G15K12N=	600 GB 12G SAS 15K RPM SFF HDD
HDDs (10K RPM)	
UCS-HD300G10K12N=	300 GB 12G SAS 10K RPM SFF HDD
UCS-HD600G10K12N=	600 GB 12G SAS 10K RPM SFF HDD
UCS-HD12TB10K12N=	1.2 TB 12G SAS 10K RPM SFF HDD
UCS-HD18TB10K4KN=	1.8 TB 12G SAS 10K RPM SFF HDD (4K)
UCS-HD24TB10K4KN=	2.4 TB 12G SAS 10K RPM SFF HDD (4K)
Enterprise Performance SAS/SATA SSDs (High endurance, supports up to 10X or 3X DWPD (drive writes per day))	
UCS-SD19T63X-EP=	1.9 TB 2.5in Enterprise performance 6GSATA SSD(3X endurance)
UCS-SD960G63X-EP=	960 GB 2.5in Enterprise performance 6GSATA SSD(3X endurance)
UCS-SD480G63X-EP=	480 GB 2.5in Enterprise Performance 6GSATA SSD(3X endurance)
UCS-SD19TM3X-EP=	1.9 B 2.5in Enterprise performance 6GSATA SSD(3X endurance)
UCS-SD480GM3X-EP=	480 GB 2.5in Enterprise Performance 6GSATA SSD(3X endurance)
UCS-SD960GM3X-EP=	960 GB 2.5in Enterprise performance 6GSATA SSD(3X endurance)
UCS-SD800GK3X-EP=	800 GB 2.5in Enterprise Performance 12G SAS SSD(3X endurance)
UCS-SD16TK3X-EP=	1.6 TB 2.5in Enterprise Performance 12G SAS SSD(3X endurance)
UCS-SD32TK3X-EP=	3.2 TB 2.5in Enterprise Performance 12G SAS SSD(3X endurance)
Enterprise Value SAS/SATA SSDs (Low endurance, supports up to 1X DWPD (drive writes per day))	
UCS-SD38T61X-EV=	3.8 TB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD960G61X-EV=	960 GB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD480G61X-EV=	480 GB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD960G61X-EV=	960 GB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD19T61X-EV=	1.9 TB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD38T61X-EV=	3.8 TB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD120GM1X-EV=	120 GB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD240GM1X-EV=	240 GB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD480GM1X-EV=	480 GB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD960GM1X-EV=	960 GB 2.5 inch Enterprise Value 6G SATA SSD

Table 43 Spare Parts (continued)

Product ID (PID)	PID Description
UCS-SD16TM1X-EV=	1.6 TB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD19TM1X-EV=	1.9 TB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD38TM1X-EV=	3.8 TB 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD76TM1X-EV=	7.6T B 2.5 inch Enterprise Value 6G SATA SSD
UCS-SD960GK1X-EV=	960 GB 2.5 inch Enterprise Value 12G SAS SSD
UCS-SD19TK1X-EV=	1.9 TB 2.5 inch Enterprise Value 12G SAS SSD
UCS-SD38TK1X-EV=	3.8 TB 2.5 inch Enterprise Value 12G SAS SSD
UCS-SD76TK1X-EV=	7.6 TB 2.5 inch Enterprise Value 12G SAS SSD
UCS-SD15TK1X-EV=	15.3 TB 2.5 inch Enterprise Value 12G SAS SSD
UCS-SD76T61X-EV=	7.6 TB 2.5 inch Enterprise Value 6G SATA SSD
Self-Encrypted Drives (SED)	
UCS-HD18T10NK9=	1.8TB 12G SAS 10K RPM SFF HDD (4K format, SED)
UCS-HD12T10NK9=	1.2 TB 12G SAS 10K RPM SFF HDD (SED)
UCS-HD600G15NK9=	600GB 12G SAS 15K RPM SFF HDD (SED)
UCS-SD800GBKNK9=	800GB Enterprise Performance SAS SSD (3X FWPD, SED)
UCS-SD960GBKNK9=	960GB Enterprise Value SAS SSD (1X FWPD, SED)
UCS-SD38TBKNK9=	3.8TB Enterprise Value SAS SSD (1X FWPD, SED)
UCS-SD960GBM2NK9=	960GB Enterprise value SATA SSD (1X, SED)
UCS-SD38TBEM2NK9=	3.8TB Enterprise value SATA SSD (1X, SED)
UCS-SD76TBEM2NK9=	7.6TB Enterprise value SATA SSD (1X, SED)
PCIe/NVMe SFF (2.5-inch) drives²	
UCSC-NVMEXPB-I375=	375GB 2.5in Intel Optane NVMe Extreme Performance SSD
UCSC-NVMEXP-I750=	750GB 2.5in Intel Optane NVMe Extreme Perf.
UCS-NVMEI4-I1920=	1.9TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance
UCS-NVMEI4-I3840=	3.8TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance
UCS-NVMEI4-I7680=	7.6TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance
UCS-NVMEI4-I1600=	1.6TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance
UCS-NVMEI4-I3200=	3.2TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance
UCS-NVMEI4-I6400=	6.4TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance
UCS-NVMEM6-W1600=	1.6TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance
UCS-NVMEM6-W3200=	3.2TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance
UCS-NVMEM6-W6400=	6.4TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance
UCS-NVMEM6-W7680=	7.6TB 2.5in U.2 WD SN840 NVMe Extreme Perf. Value Endurance
UCS-NVMEM6-W15300=	15.3TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance
M.2 SATA SSDs	
UCS-M2-240GB=	240 GB M.2 SATA SSD
UCS-M2-960GB=	960 GB M.2 SATA SSD
Drive Blanking Panel	
UCSC-BBLKD-S2=	C-Series M5 SFF drive blanking panel

Table 43 Spare Parts (continued)




Product ID (PID)	PID Description
Drive Cables	
CBL-FNVME-220M6=  Note: Order this cable if you are adding a front NVMe drive	C220M6 1U x4 Front NVMe cable
RAID Controllers	
 Note: When ordering additional RAID controllers, you may need to order a cable to connect from the RAID controller to the motherboard. See the RAID Controller Cables section in this table.	
UCSC-RAID-220M6=	Cisco 12G RAID Tri Mode HBA up to 16 drvs 1U w/1U Brkt (PB)
UCSC-SAS-220M6=	Cisco 12G SAS Tri Mode HBA up to 16 drvs 1U w/1U Brkt (PR)
UCS-M2-HWRAID=	Cisco Boot optimized M.2 RAID controller (holds 2 M.2 SATA SSDs)
RAID Controller Cables	
CBL-SAS-C225M6=  Note: Order this cable if you are adding a SAS Controller UCSC-SAS-220M6 or RAID Controller UCSC-RAID-220M6	CABLE, MB to SAS/RAID controller and HDD BKPLN
Supercap	
UCS-SCAP-M6=	M6 SuperCap
CBL-SCAP-C220M6=	C220M6 1U Super Cap cable
Modular LAN on Motherboard (mLOM)	
UCSC-M-V25-04=	Cisco UCS VIC 1467 quad port 10/25G SFP28 mLOM
UCSC-M-V100-04=	Cisco UCS VIC 1477 dual port 40/100G QSFP28 mLOM
Virtual Interface Card (VICs)	
UCSC-PCIE-C100-04=	Cisco UCS VIC 1495 Dual Port 40/100G QSFP28 CNA PCIe
UCSC-PCIE-C25Q-04=	Cisco UCS VIC 1455 quad port 10/25G SFP28 PCIe
Network Interface Cards (NICs)	
1 Gb NICs	
UCSC-PCIE-IRJ45=	Intel i350 quad-port 1G copper PCIe
10 Gb NICs	
UCSC-PCIE-ID10GF=	Intel X710-DA2 Dual Port 10Gb SFP+ NIC
UCSC-P-ID10GC=	Cisco-Intel X710T2LG 2x10 GbE RJ45 PCIe NIC
UCSC-O-ID10GC=	Intel X710T2LOCPV3G1L 2x10GBase-T OCP3 NIC
25 Gb NICs	
UCSC-P-I8D25GF=	Cisco-Intel E810XXVDA2 2x25/10 GbE SFP28 PCIe NIC
UCSC-P-M5D25GF=	Mellanox MCX512A-ACAT dual port 10/25G SFP28 NIC
UCSC-P-I8Q25GF=	Cisco-Intel E810XXVDA4L 4x25/10 GbE SFP28 PCIe NIC

Table 43 Spare Parts (continued)

Product ID (PID)	PID Description
100 Gb NICs	
UCSC-P-M5D100GF=	Mellanox CX-5 MCX516A-CDAT 2x100GbE QSFP PCIe NIC
UCSC-P-I8D100GF=	Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC
Host Bus Adapters (HBAs)	
UCSC-PCIE-QD16GF=	Qlogic QLE2692 dual-port 16G FC HBA
UCSC-PCIE-BD16GF=	Emulex LPe31002 dual port 16G FC HBA
GPU PCIe Card	
UCSC-GPU-A10=	TESLA A4, PASSIVE, 150 W, 24GB
GPU Cables	
Power Supplies	
UCSC-PSU1-1050W=	1050W AC power supply for C-Series servers
UCSC-PSUV2-1050DC=	1050W DC power supply for C-Series servers
UCSC-PSU1-1600W=	1600W AC power supply for C-Series servers
UCSC-PSU-W2300=	2300W Power supply for C-series servers
Power Supply Blanking Panel	
UCSC-PSU-M5BLK=	Power Supply Blanking Panel for M5 servers
Power Cables	
CAB-48DC-40A-8AWG=	C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A
CAB-N5K6A-NA=	Power Cord, 200/240V 6A, North America
CAB-AC-L620-C13=	AC Power Cord, NEMA L6-20 - C13, 2M/6.5ft
CAB-C13-CBN=	CABASY,WIRE,JUMPER CORD, 27" L, C13/C14, 10A/250V
CAB-C13-C14-2M=	CABASY,WIRE,JUMPER CORD, PWR, 2 Meter, C13/C14,10A/250V
CAB-C13-C14-AC=	CORD,PWR,JMP,IEC60320/C14,IEC6 0320/C13, 3.0M
CAB-250V-10A-AR=	Power Cord, 250V, 10A, Argentina
CAB-9K10A-AU=	Power Cord, 250VAC 10A 3112 Plug, Australia
CAB-250V-10A-CN=	AC Power Cord - 250V, 10A - PRC
CAB-9K10A-EU=	Power Cord, 250VAC 10A CEE 7/7 Plug, EU
CAB-250V-10A-ID=	Power Cord, 250V, 10A, India
CAB-C13-C14-3M-IN=	Power Cord Jumper, C13-C14 Connectors, 3 Meter Length, India
CAB-C13-C14-IN=	Power Cord Jumper,C13-C14 Connectors,1.4 Meter Length, India
CAB-250V-10A-IS=	Power Cord, SFS, 250V, 10A, Israel
CAB-9K10A-IT=	Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy
CAB-9K10A-SW=	Power Cord, 250VAC 10A MP232 Plug, Switzerland
CAB-9K10A-UK=	Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK
CAB-9K12A-NA=	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America
CAB-250V-10A-BR=	Power Cord - 250V, 10A - Brazil
CAB-C13-C14-2M-JP=	Power Cord C13-C14, 2M/6.5ft Japan PSE mark
CAB-9K10A-KOR=	Power Cord, 125VAC 13A KSC8305 Plug, Korea

Table 43 Spare Parts (continued)

Product ID (PID)	PID Description
CAB-ACTW=	AC Power Cord (Taiwan), C13, EL 302, 2.3M
CAB-JPN-3PIN=	Japan, 90-125VAC 12A NEMA 5-15 Plug, 2.4m
CAB-C19-CBN=	Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors
CAB-S132-C19-ISRL=	S132 to IEC-C19 14ft Israeli
CAB-IR2073-C19-AR=	IRSM 2073 to IEC-C19 14ft Argen
CAB-BS1363-C19-UK=	BS-1363 to IEC-C19 14ft UK
CAB-SABS-C19-IND=	SABS 164-1 to IEC-C19 India
CAB-C2316-C19-IT=	CEI 23-16 to IEC-C19 14ft Italy
CAB-L520P-C19-US=	NEMA L5-20 to IEC-C19 6ft US
CAB-US515P-C19-US=	NEMA 5-15 to IEC-C19 13ft US
CAB-US520-C19-US=	NEMA 5-20 to IEC-C19 14ft US
CAB-US620P-C19-US=	NEMA 6-20 to IEC-C19 13ft US
CAB-C19-C20-IND=	Power Cord C19-C20 India
UCSB-CABL-C19-BRZ=	NBR 14136 to C19 AC 14FT POWER CORD, BRAZIL
CAB-9K16A-BRZ=	Power Cord 250VAC 16A, Brazil, Src Plug EL224-C19
CAB-ACS-16=	AC Power Cord (Swiss) 16A
CAB-AC-16A-AUS=	Power Cord, 250VAC, 16A, Australia C19
CAB-C19-C20-3M-JP=	Power Cord C19-C20, 3M/10ft Japan PSE mark
CAB-AC-C19-TW=	Power Cord, 250 V, 16A, C19, Taiwan
CAB-AC-C6K-TWLK=	Power Cord, 250Vac 16A, twist lock NEMA L6-20 plug, US
CAB-AC-2500W-EU=	Power Cord, 250Vac 16A, Europe
CAB-AC-2500W-INT=	Power Cord, 250Vac 16A, INTL
CAB-9K16A-KOR=	Power Cord 250VAC 16A, Korea, Src Plug
CAB-AC-2500W-ISRL=	Power Cord,250VAC,16A,Israel
CAB-AC16A-CH=	16A AC Power Cord For China
R2XX-DMYMPWRCORD=	No power cord option
Rail Kit and CMA	
UCSC-RAIL-M6=	Ball Bearing Rail Kit for C220 & C240 M6 rack servers
UCSC-CMA-C220M6=	Reversible CMA for C220 M6 ball bearing rail kit
UCSC-RAIL-NONE=	NO RAIL KIT OPTION
TPM	
UCSX-TPM2-002B-C=	Trusted Platform Module 2.0 for UCS servers
UCSC-INT-SW02=	Chassis Intrusion Switch
Bezel	
UCSC-BZL-C220M5=	C220 M5 Security Bezel
Software/Firmware	
Windows Server Recovery Media	
MSWS-19-ST16C-RM=	Windows Server 2019 Stan (16 Cores/2 VMs) Rec Media DVD Only
MSWS-19-DC16C-RM=	Windows Server 2019 DC (16Cores/Unlim VM) Rec Media DVD Only

Table 43 Spare Parts (continued)

Product ID (PID)	PID Description
RHEL SAP	
RHEL-SAPSP-3S=	RHEL SAP Solutions Premium - 3 Years
RHEL-SAPSS-3S=	RHEL SAP Solutions Standard - 3 Years
RHEL-SAPSP-R-1S=	Renew RHEL SAP Solutions Premium - 1 Year
RHEL-SAPSS-R-1S=	Renew RHEL SAP Solutions Standard - 1 Year
RHEL-SAPSP-R-3S=	Renew RHEL SAP Solutions Premium - 3 Years
RHEL-SAPSS-R-3S=	Renew RHEL SAP Solutions Standard - 3 Years
VMware vSphere	
VMW-VSP-STD-1A=	VMware vSphere 7 Std (1 CPU, 32 Core) 1-yr, Support Required
VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Required
VMW-VSP-STD-5A=	VMware vSphere 7 Std (1 CPU, 32 Core) 5-yr, Support Required
VMW-VSP-EPL-1A=	VMware vSphere 7 Ent Plus (1 CPU, 32 Core) 1Yr, Support Reqd
VMW-VSP-EPL-3A=	VMware vSphere 7 Ent Plus (1 CPU, 32 Core) 3Yr, Support Reqd
VMW-VSP-EPL-5A=	VMware vSphere 7 Ent Plus (1 CPU, 32 Core) 5Yr, Support Reqd
VMW-VSP-STD-1S=	VMware vSphere 7 Std (1 CPU, 32 Core), 1-yr VMware SnS Reqd
VMW-VSP-STD-3S=	VMware vSphere 7 Std (1 CPU, 32 Core), 3-yr VMware SnS Reqd
VMW-VSP-STD-1YR	VMware vSphere 7 Std SnS - 1 Year (reports to PID VMW-VSP-STD-1S=)
VMW-VSP-STD-3YR	VMware vSphere 7 Std SnS - 3 Year (reports to PID VMW-VSP-STD-3S=)
VMW-VSP-EPL-1S=	VMware vSphere 7 EntPlus (1 CPU 32 Core) 1Yr VMware SnS Reqd
VMW-VSP-EPL-3S=	VMware vSphere 7 EntPlus (1 CPU 32 Core) 3Yr VMware SnS Reqd
VMW-VSP-EPL-1YR	VMware vSphere 7 Enterprise Plus SnS - 1 Year (reports to PID VMW-VSP-EPL-1S=)
VMW-VSP-EPL-3YR	VMware vSphere 7 Enterprise Plus SnS - 3 Year (reports to PID VMW-VSP-EPL-3S=)
VMware vCenter	
VMW-VCS-STD-1A=	VMware vCenter 7 Server Standard, 1 yr support required
VMW-VCS-STD-3A=	VMware vCenter 7 Server Standard, 3 yr support required
VMW-VCS-STD-5A=	VMware vCenter 7 Server Standard, 5 yr support required
VMW-VCS-STD-1S=	VMware vCenter 7 Server Standard, 1-yr VMware SnS Reqd
VMW-VCS-STD-3S=	VMware vCenter 7 Server Standard, 3-yr VMware SnS Reqd
VMW-VCS-STD-1YR	VMware vCenter 6 Server Standard SnS - 1 Year (reports to PID VMW-VCS-STD-1S=)
VMW-VCS-STD-3YR	VMware vCenter 6 Server Standard SnS - 3 Year (reports to PID VMW-VCS-STD-3S=)
VMW-VCS-FND-1A=	VMware vCenter Server 7 Foundation (4 Host), 1 yr supp reqd
VMW-VCS-FND-3A=	VMware vCenter Server 7 Foundation (4 Host), 3 yr supp reqd
VMW-VCS-FND-5A=	VMware vCenter Server 7 Foundation (4 Host), 5 yr supp reqd
VMW-VCS-FND-1S=	VMware vCenter Server 7 Foundation (4 Host), 1yr VM SnS Reqd
VMW-VCS-FND-3S=	VMware vCenter Server 7 Foundation (4 Host), 3yr VM SnS Reqd
VMW-VCS-FND-1YR	VMware vCenter Server 6 Foundation (4 Host) SnS - 1 Year (reports to PID VMW-VCS-FND-1S=)

Table 43 Spare Parts (continued)

Product ID (PID)	PID Description
VMW-VCS-FND-3YR	VMware vCenter Server 6 Foundation (4 Host) SnS - 3 Year (reports to PID VMW-VCS-FND-3S=)
VMware vSphere Upgrades	
VMW-VSS2VSP-1A=	Upgrade: vSphere 7 Std to vSphere 7 Ent Plus (1 yr Supp Req)
VMW-VSS2VSP-3A=	Upgrade: vSphere 7 Std to vSphere 7 Ent Plus (1 yr Supp Req)
NVIDIA GPU Licenses	
NV-VCS-1YR=	NVIDIA vCompute Server Subscription - 1 GPU - 1 Year
NV-VCS-3YR=	NVIDIA vCompute Server Subscription - 1 GPU - 3 Year
NV-VCS-5YR=	NVIDIA vCompute Server Subscription - 1 GPU - 5 Year
NV-VCS-R-1Y=	Renew NVIDIA vCompute Server Subscription - 1 GPU - 1 Year
NV-VCS-R-3Y=	Renew NVIDIA vCompute Server Subscription - 1 GPU - 3 Year
NV-VCS-R-5Y=	Renew NVIDIA vCompute Server Subscription - 1 GPU - 5 Year
NV-GRDWK-1-5S=	Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 5Yr SUMS Req
NV-GRDVA-1-5S=	GRID Perpetual Lic - NVIDIA VDI APPS 1CCU; 5Yr SUMS Reqd
NV-GRDPC-1-5S=	GRID Perpetual Lic - NVIDIA VDI PC 1CCU; 5Yr SUMS Reqd
NV-GRD-EDP-5S=	EDU - Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 5Yr SUMS Reqd
NV-GRID-WKP-5YR=	NVIDIA Quadro Production SUMS - vDWS 1CCU - 5 Year
NV-GRID-VAP-5YR=	NVIDIA GRID Production SUMS - VDI Apps 1CCU - 5 Year
NV-GRID-PCP-5YR=	NVIDIA GRID Production SUMS - VDI PC 1CCU - 5 Year
NV-GRID-EDP-5YR=	EDU - NVIDIA Quadro vDWS Production SUMS - 1CCU - 5 Year
NV-GRID-WKS-1YR=	NVIDIA Quadro SW Subscription - vDWS 1CCU - 1 Year
NV-GRID-WKS-3YR=	NVIDIA Quadro SW Subscription - vDWS 1CCU - 3 Year
NV-GRID-WKS-4YR=	NVIDIA Quadro SW Subscription - vDWS 1CCU - 4 Year
NV-GRID-WKS-5YR=	NVIDIA Quadro SW Subscription - vDWS 1CCU - 5 Year
NV-GRID-PCS-1YR=	NVIDIA GRID Software Subscription - VDI PC 1CCU - 1 Year
NV-GRID-PCS-3YR=	NVIDIA GRID Software Subscription - VDI PC 1CCU - 3 Year
NV-GRID-PCS-4YR=	NVIDIA GRID Software Subscription - VDI PC 1CCU - 4 Year
NV-GRID-PCS-5YR=	NVIDIA GRID Software Subscription - VDI PC 1CCU - 5 Year
NV-GRID-VAS-1YR=	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 1 Year
NV-GRID-VAS-3YR=	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 3 Year
NV-GRID-VAS-4YR=	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 4 Year
NV-GRID-VAS-5YR=	NVIDIA GRID Software Subscription - VDI Apps 1CCU - 5 Year
NV-GRID-EDS-1YR=	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 1 Year
NV-GRID-EDS-3YR=	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 3 Year
NV-GRID-EDS-4YR=	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 4 Year
NV-GRID-EDS-5YR=	EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 5 Year
NV-GRID-VAP-R-4Y=	Renew NVIDIA GRID vApps SUMS 1CCU 4 Year
NV-GRID-PCP-R-4Y=	Renew NVIDIA GRID vPC SUMS 1CCU 4 Year
NV-QUAD-WKP-R-4Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU 4 Year

Table 43 Spare Parts (continued)

Product ID (PID)	PID Description
NV-QUAD-WKPE-R-4Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 4 Year
NV-QUAD-WKS-R-1Y=	Renew NVIDIA Quadro vDWS Subscr 1CCU 1 Year
NV-QUAD-WKS-R-3Y=	Renew NVIDIA Quadro vDWS Subscr 1CCU 3 Year
NV-QUAD-WKS-R-4Y=	Renew NVIDIA Quadro vDWS Subscr 1CCU 4 Year
NV-QUAD-WKS-R-5Y=	Renew NVIDIA Quadro vDWS Subscr 1CCU 5 Year
NV-QUAD-WKSE-R-1Y=	Renew NVIDIA Quadro vDWS Subscr 1CCU EDU 1 Year
NV-QUAD-WKSE-R-3Y=	Renew NVIDIA Quadro vDWS Subscr 1CCU EDU 3 Year
NV-QUAD-WKSE-R-4Y=	Renew NVIDIA Quadro vDWS Subscr 1CCU EDU 4 Year
NV-GRID-VAS-R-1Y=	Renew NVIDIA GRID vApps Subscr 1CCU 1 Year
NV-GRID-VAS-R-3Y=	Renew NVIDIA GRID vApps Subscr 1CCU 3 Year
NV-GRID-VAS-R-4Y=	Renew NVIDIA GRID vApps Subscr 1CCU 4 Year
NV-GRID-VAS-R-5Y=	Renew NVIDIA GRID vApps Subscr 1CCU 5 Year
NV-GRID-PCS-R-1Y=	Renew NVIDIA GRID vPC Subscr 1CCU 1 Year
NV-GRID-PCS-R-3Y=	Renew NVIDIA GRID vPC Subscr 1CCU 3 Year
NV-GRID-PCS-R-4Y=	Renew NVIDIA GRID vPC Subscr 1CCU 4 Year
NV-GRID-PCS-R-5Y=	Renew NVIDIA GRID vPC Subscr 1CCU 5 Year
NV-QUAD-WKP-R-1Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU 1 Year
NV-QUAD-WKP-R-3Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU 3 Year
NV-QUAD-WKP-R-5Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU 5 Year
NV-QUAD-WKPE-R-1Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 1 Year
NV-QUAD-WKPE-R-3Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 3 Year
NV-QUAD-WKPE-R-5Y=	Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 5 Year
NV-GRID-VAP-R-1Y=	Renew NVIDIA GRID vApps SUMS 1CCU 1 Year
NV-GRID-VAP-R-3Y=	Renew NVIDIA GRID vApps SUMS 1CCU 3 Year
NV-GRID-VAP-R-5Y=	Renew NVIDIA GRID vApps SUMS 1CCU 5 Year
NV-GRID-PCP-R-1Y=	Renew NVIDIA GRID vPC SUMS 1CCU 1 Year
NV-GRID-PCP-R-3Y=	Renew NVIDIA GRID vPC SUMS 1CCU 3 Year
NV-GRID-PCP-R-5Y=	Renew NVIDIA GRID vPC SUMS 1CCU 5 Year
NV-GRD-VA2WKP-5S=	Upgrade NVIDIA VDI APPS to Quadro vDWS 1CCU; 5Yr SUMS Reqd
NV-GRD-VA2PCP-5S=	Upgrade NVIDIA VDI APPs to vPC 1CCU; 5Yr SUMS Reqd
NV-GRD-VA2WKPE-5S=	Upgrade NVIDIA VDI to Quadro vDWS 1CCU; 5Yr SUMS Reqd
NV-GRD-PC2WKP-5S=	Upgrade NVIDIA vPC to Quadro vDWS 1CCU; 5Yr SUMS Reqd
NV-GRD-PC2WKPE-5S=	Upgrade NVIDIA vPC to Quadro vDWS 1CCU; 5Yr SUMS Reqd

Notes:

1. This part is included with the purchase of option or spare CPU or CPU processor kits.

Please refer to “Cisco UCS C225 M6 Server Installation and Service Guide” for installation procedures. See this link:

https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m6/install/c225m6.html

REPLACING CPUs and HEATSINKS



NOTE: Before servicing any CPU, do the following:

- Decommission and power off the server.
- Slide the C225 M6 SFF server out from the rack.
- Remove the top cover.



CAUTION: CPUs and their sockets are fragile and must be handled with extreme care to avoid damaging pins. The CPUs must be installed with heatsinks and thermal interface material to ensure cooling. Failure to install a CPU correctly might result in damage to the server.



CAUTION: Always shut down the server before removing it from the chassis, as described in the procedures. Failure to shut down the server before removal results in the corresponding RAID supercap cache being discarded and other data might be lost.

To replace an existing CPU, follow these steps:

(1) Have the following tools and materials available for the procedure:

- T-20 Torx driver—Supplied with replacement CPU.
- Thermal interface material (TIM)—Syringe supplied with replacement CPU.

(2) Order the appropriate replacement CPU from [Table 4 on page 18](#)

(3) Carefully remove and replace the CPU and heatsink in accordance with the instructions found in “Cisco UCS C225 M6 Server Installation and Service Guide,” found at:

https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m6/install/c225m6.html

To add a new CPU, follow these steps:

(1) Have the following tools and materials available for the procedure:

- T-30 Torx driver—Supplied with new CPU.
- Thermal interface material (TIM)—Syringe supplied with replacement CPU.

(2) Order the appropriate new CPU from [Table 4 on page 18](#)

(3) Order one heat sink for each new CPU. Order PID UCSC-HSHP-245M6 unless you have installed a double-wide or A10 GPU. In that case, order PID UCSC-HSLP-245M6.

(4) Carefully install the CPU and heatsink in accordance with the instructions found in “Cisco UCS C240 M6 Server Installation and Service Guide,” found at:

https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m6/install/c225m6.html

UPGRADING or REPLACING MEMORY



NOTE: Before servicing any DIMM, do the following:

- Decommission and power off the server.
- Remove the top cover from the server
- Slide the server out the front of the chassis.

To add or replace DIMMs, follow these steps:

Step 1 Open both DIMM connector latches.

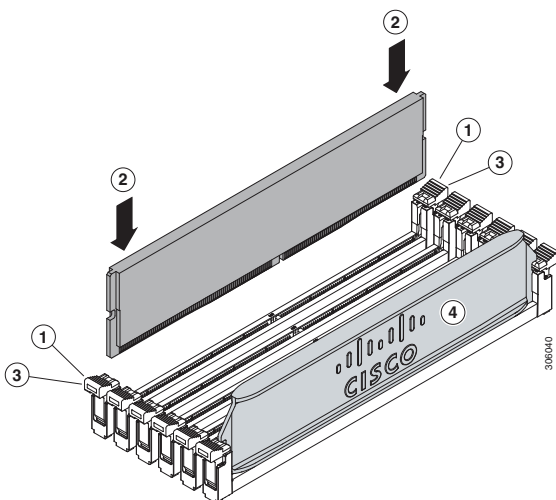
Step 2 Press evenly on both ends of the DIMM until it clicks into place in its slot

Note: Ensure that the notch in the DIMM aligns with the slot. If the notch is misaligned, it is possible to damage the DIMM, the slot, or both.

Step 3 Press the DIMM connector latches inward slightly to seat them fully.

Step 4 Populate all slots with a DIMM or DIMM blank. A slot cannot be empty.

Figure 14 Replacing Memory



For additional details on replacing or upgrading DIMMs, see “Cisco UCS C225 M6 Server Installation and Service Guide,” found at this link:

https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m6/install/c225m6.html

TECHNICAL SPECIFICATIONS

Dimensions and Weight

Table 44 UCS C225 M6 Dimensions and Weight

Parameter	Value
Height	1.70 in. (4.3 cm)
Width (including slam latches)	16.9 in. (42.9 cm)
Depth	30 in. (76.2 cm)
Front Clearance	3 in. (76 mm)
Side Clearance	1 in. (25 mm)
Rear Clearance	6 in. (152 mm)
Weight	
Weight with following options and no rail kit: 1 HDD, 1 CPU, 1 DIMM, and 1 1600 W power supply	22.32 lbs (10.1 kg)
Weight with following options and including rail kit: 1 HDD, 1 CPU, 1 DIMM, and 1 1600 W power supply	32.38 lbs (14.7 kg)
Weight with following options and no rail kit: 10 HDDs, 2 CPUs, 32 DIMMs, and 2 1600 W power supplies	32.38 lbs (14.7 kg)
Weight with following options and including rail kit: 10 HDDs, 2 CPUs, 32 DIMMs, and 2 1600 W power supplies	42.43 lbs (19.3 kg)

Power Specifications

The server is available with the following types of power supplies:

- 1050 W (AC) power supply (see [Table 45](#)).
- 1050 W V2 (DC) power supply (see [Table 46](#))
- 1600 W (AC) power supply (see [Table 47](#))
- 2300 W (AC) power supply (see [Table 48](#))

Table 45 UCS C220 M6 SFF Power Specifications (1050 W AC power supply)

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (V rms)	100 to 240			
Maximum Allowable Input Voltage Range (V rms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) ¹	800		1050	
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	9.2	7.6	5.8	5.2
Maximum Input at Nominal Input Voltage (W)	889	889	1167	1154
Maximum Input at Nominal Input Voltage (VA)	916	916	1203	1190
Minimum Rated Efficiency (%) ²	90	90	90	91
Minimum Rated Power Factor ²	0.97	0.97	0.97	0.97
Maximum Inrush Current (A peak)	15			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) ³	12			

Notes:

1. Maximum rated output is limited to 800W when operating at low-line input voltage (100-127V)
2. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at <http://www.80plus.org/> for certified values
3. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

Table 46 UCS C220 M6 SFF Power Specifications (1050 W V2 DC power supply)

Parameter	Specification
Input Connector	Molex 42820
Input Voltage Range (V rms)	-48
Maximum Allowable Input Voltage Range (V rms)	-40 to -72
Frequency Range (Hz)	NA
Maximum Allowable Frequency Range (Hz)	NA
Maximum Rated Output (W)	1050
Maximum Rated Standby Output (W)	36
Nominal Input Voltage (V rms)	-48
Nominal Input Current (A rms)	24
Maximum Input at Nominal Input Voltage (W)	1154
Maximum Input at Nominal Input Voltage (VA)	1154
Minimum Rated Efficiency (%) ¹	91
Minimum Rated Power Factor ¹	NA
Maximum Inrush Current (A peak)	15
Maximum Inrush Current (ms)	0.2
Minimum Ride-Through Time (ms) ²	5

Notes:

1. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at <http://www.80plus.org/> for certified values
2. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

Table 47 UCS C220 M6 1600 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (V rms)	200 to 240			
Maximum Allowable Input Voltage Range (V rms)	180 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) ¹	1600			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	NA	NA	8.8	7.9
Maximum Input at Nominal Input Voltage (W)	NA	NA	1778	1758
Maximum Input at Nominal Input Voltage (VA)	NA	NA	1833	1813
Minimum Rated Efficiency (%) ²	NA	NA	90	91
Minimum Rated Power Factor ²	NA	NA	0.97	0.97
Maximum Inrush Current (A peak)	30			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) ³	12			

Notes:

1. Maximum rated output is limited to 800W when operating at low-line input voltage (100-127V)
2. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at <http://www.80plus.org/> for certified values
3. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

Table 48 UCS C220 M6 2300 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C20			
Input Voltage Range (Vrms)	100 to 240			
Maximum Allowable Input Voltage Range (Vrms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) ¹	2300			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (Vrms)	100	120	208	230
Nominal Input Current (Arms)	13	11	12	10.8
Maximum Input at Nominal Input Voltage (W)	1338	1330	2490	2480
Maximum Input at Nominal Input Voltage (VA)	1351	1343	2515	2505
Minimum Rated Efficiency (%) ²	92	92	93	93
Minimum Rated Power Factor ²	0.99	0.99	0.97	0.97
Maximum Inrush Current (A peak)	30			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) ³	12			

Notes:

1. Maximum rated output is limited to 1200W when operating at low-line input voltage (100-127V)
2. This is the minimum rating required to achieve 80 PLUS Titanium certification, see test reports published at <http://www.80plus.org/> for certified values
3. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

For configuration-specific power specifications, use the Cisco UCS Power Calculator at this URL:

<http://ucspowercalc.cisco.com>

Environmental Specifications

The environmental specifications for the C225 M6 server are listed in [Table 49](#).

Table 49 UCS C225 M6 SFF Environmental Specifications

Parameter	Minimum
Operating Temperature	10° C to 35° C (50° F to 95° F) with no direct sunlight Maximum allowable operating temperature derated 1° C/300 m (1° F/547 ft) above 950 m (3117 ft)
Non-Operating Temperature	Below -40° C or above 65° C (below -40° F or above 149° F) Maximum rate of change (operating and non-operating) 20° C/hr (36° F/hr)
Extended Operating Temperature	5° C to 40° C (41° F to 104° F) with no direct sunlight Maximum allowable operating temperature derated 1° C/175 m (1° F/319 ft) above 950 m (3117 ft) 5° C to 45° C (41° F to 113° F) with no direct sunlight Maximum allowable operating temperature derated 1° C/125 m (1° F/228 ft) above 950 m (3117 ft) System performance may be impacted when operating in the extended operating temperature range. Operation above 40° C is limited to less than 1% of annual operating hours. Hardware configuration limits apply to extended operating temperature range.
Operating Relative Humidity	8% to 90% and 24° C (75° F) maximum dew-point temperature, non-condensing environment
Non-Operating Relative Humidity	Below 5% or above 95% and 33° C (91° F) maximum dew-point temperature, non-condensing environment
Operating Altitude	0 m to 3050 m (10,000 ft)
Non-Operating Altitude	Below 0 m or above 12,000 m (39,370 ft)
Sound Power level, Measure A-weighted per ISO7779 LWAd (Bels) Operation at 73° F (23° C)	5.8
Sound Pressure level, Measure A-weighted per ISO7779 LpAm (dBA) Operation at 73° F (23° C)	43

Extended Operating Temperature Hardware Configuration Limits

Table 50 Cisco UCS C225 M6 Extended Operating Temperature Hardware Configuration Limits

Platform ¹	ASHRAE A3 (5°C to 40°C) ²	ASHRAE A4 (5°C to 45°C) ³
Processors:	155W+	155W+ and 105W+ (4 or 6 Cores)
Memory:	LRDIMMs	LRDIMMs
Storage:	M.2 SATA SSDs NVMe SSDs	M.2 SATA SSDs NVMe SSDs
Peripherals:	PCIe NVMe SSDs GPUs	MRAID PCIe NVMe SSDs GPUs mLOMs VICs NICs HBAs

Notes:

1. Two PSUs are required and PSU failure is not supported
2. Non-Cisco UCS qualified peripherals and/or peripherals that consume more than 25W are not supported
3. High power or maximum power fan control policy must be applied

Compliance Requirements

The regulatory compliance requirements for C-Series servers are listed in [Table 51](#).

Table 51 UCS C-Series Regulatory Compliance Requirements

Parameter	Description
Regulatory Compliance	Products should comply with CE Markings per directives 2014/30/EU and 2014/35/EU
Safety	UL 60950-1 Second Edition CAN/CSA-C22.2 No. 60950-1 Second Edition EN 60950-1 Second Edition IEC 60950-1 Second Edition AS/NZS 60950-1 GB4943 2001
EMC - Emissions	47CFR Part 15 (CFR 47) Class A AS/NZS CISPR32 Class A CISPR32 Class A EN55032 Class A ICES003 Class A VCCI Class A EN61000-3-2 EN61000-3-3 KN32 Class A CNS13438 Class A
EMC - Immunity	EN55024 CISPR24 EN300386 KN35



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)

