



# Cisco Compute Hyperconverged with vSAN

## HCIVS225C M8 All-NVMe vSAN ReadyNode

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/HCI-c-series-rack-servers/datasheet-listing.html>

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## OVERVIEW

VMware vSAN Express Storage Architecture (ESA) is a software-defined storage solution that runs natively as part of ESXi hypervisor. It aggregates local storage from multiple hosts to create a shared storage pool for virtual machines that can then be accessed by all hosts in the vSAN cluster.

Cisco Compute Hyperconverged with vSAN solutions are purpose-built platforms that unify compute, storage, and networking into a single, software-defined infrastructure. Cisco and VMware by Broadcom have partnered to deliver a robust, scalable, and high-performance hyperconverged infrastructure (HCI) solution for modern workloads.

VMware vSAN Ready Node is a pre-configured, tested, and jointly certified by Broadcom and Cisco to deliver enterprise-grade storage performance and reliability for IT customers. When deployed on Cisco UCS® servers qualified as vSAN Ready Nodes customers can confidently build a robust hyperconverged infrastructure stack that maximizes hardware utilization, simplifies operations, and scales linearly with business growth.

The Cisco Compute Hyperconverged HCIVS225C M8 All-NVMe vSAN ReadyNodes. The server features a 1U form factor, single-socket design, with the AMD EPYC™ CPUs. The server offers the following:

### CPU:

- Single-socket 5th Gen. AMD EPYC™ CPUs with up to 160 cores per processor or

### Memory:

- 12 x 256GB DDR5-6400 DIMMs, in a single-socket configuration with 5th Gen. AMD EPYC™ processors
- Up to 3 TB of capacity

Figure 1 Cisco Compute Hyperconverged HCIVS225C M8 All-NVMe vSAN ReadyNode

### Front View



### Rear View (three half-height riser card version)



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

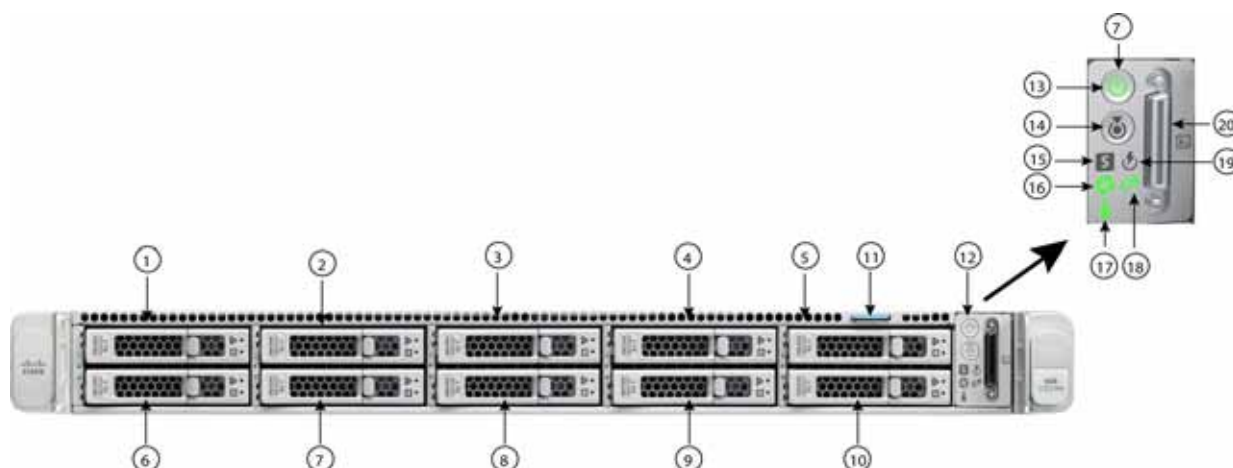


## DETAILED VIEWS

### Detailed Chassis Front View

*Figure 2* shows the detailed front view of the Cisco Compute Hyperconverged HCIVS225C M8 All-NVMe vSAN ReadyNode

Figure 2 Detailed Chassis Front View



1 - 10	Drive bays 1 - 10 support only NVMe PCIe drives	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)
15	System status LED	-	-

## Detailed Chassis Rear Views

*Figure 3* shows the details of the rear panel for the Server with one rear half-height PCIe riser.

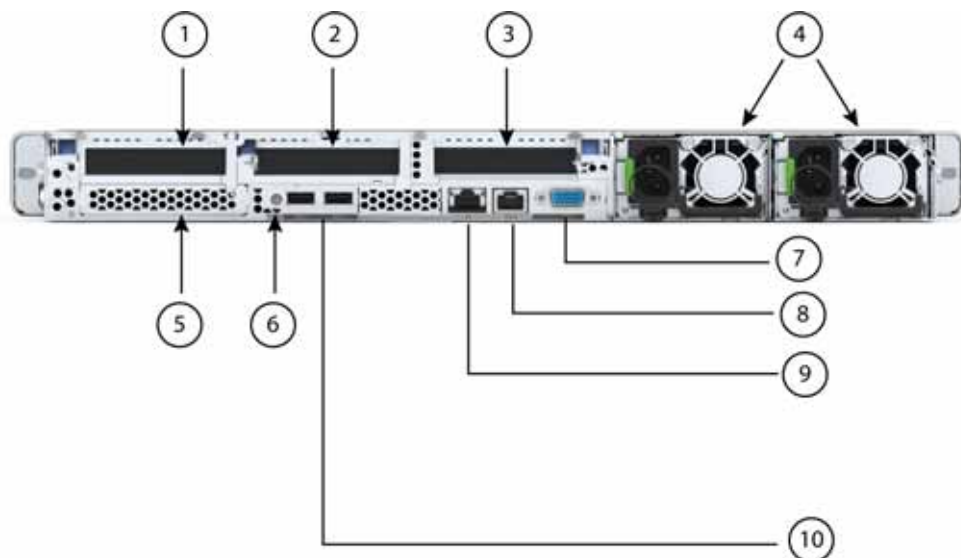
*Figure 4* shows the details of the rear panel for the Server with two rear full-height PCIe risers.

## Three Half-Height Risers



**NOTE:** Gen4 and Gen5 risers cannot be mixed.

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

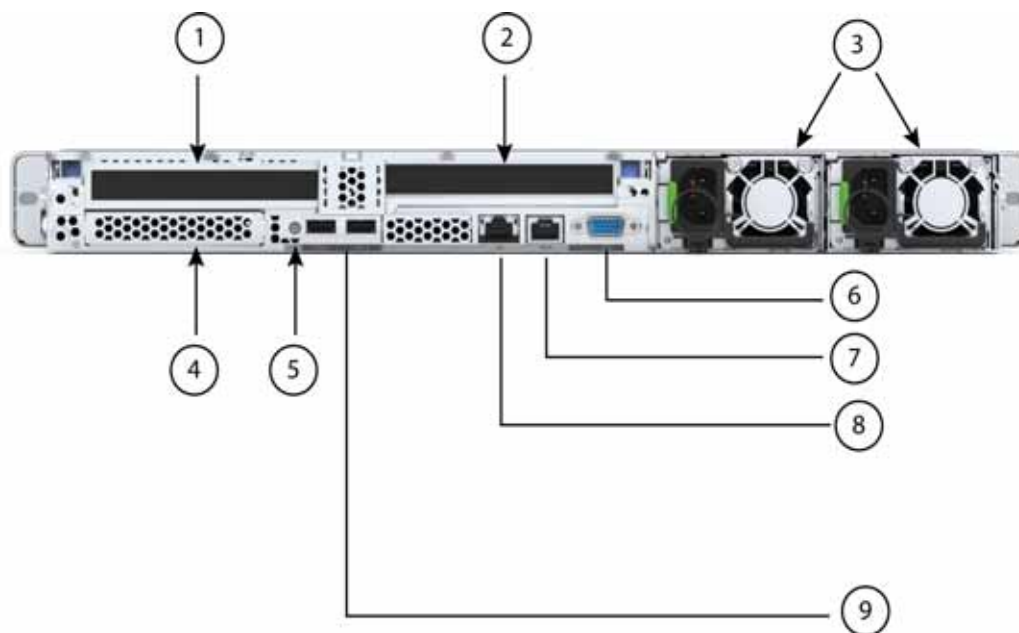


1	<p>There are two half height riser 1 options:</p> <p><b>Riser 1A PCIe Gen4</b></p> <ul style="list-style-type: none"> <li>■ Supports one PCIe slot (slot 1)</li> <li>■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU</li> </ul> <p><b>Riser 1B PCIe Gen5</b></p> <ul style="list-style-type: none"> <li>■ Supports one PCIe slot (slot 1)</li> <li>■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU</li> </ul>	6	System ID pushbutton/LED
2	<p>There are two half height riser 2 options:</p> <p><b>Riser 2A PCIe Gen4 x16</b></p> <ul style="list-style-type: none"> <li>■ Supports one PCIe slot (slot 2)</li> <li>■ Slot 2 is half-height, 3/4 length, x16, Single Wide GPU</li> </ul> <p><b>Riser 2B PCIe Gen5 x16</b></p> <ul style="list-style-type: none"> <li>■ Supports one PCIe slot (slot 2)</li> <li>■ Slot 2 is half-height, 3/4 length, x16, Single Wide GPU</li> </ul>	7	VGA display port (DB15 connector)

3	There is one half height riser 3 option: <b>Riser 3A PCIe Gen4 x16</b> <ul style="list-style-type: none"><li>■ Supports one PCIe slot (slot 3)</li><li>■ Slot 3 is half-height, 3/4 length, x16, NCSI, Single Wide GPU</li></ul>	8	COM port (RJ45 connector)
4	Power supplies (two, redundant as 1+1)	9	1GBE dedicated Ethernet management port
5	Modular LAN on motherboard (mLOM)/OCP 3.0 slot	10	USB 3.0 ports (two)

## Two Full-Height Risers

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



1	<b>Riser 1C PCIe Gen5</b> <ul style="list-style-type: none"> <li>■ Supports one PCIe slot (slot 1)</li> <li>■ Slot 1 is full-height, 3/4 length, x16, NCSI, Single Wide GPU</li> </ul>	6	VGA display port (DB15 connector)
2	<b>Riser 3C PCIe Gen5 x16</b> <ul style="list-style-type: none"> <li>■ Supports one PCIe slot (slot 3)</li> <li>■ Slot 3 is Full-height, 3/4 length, x16, NCSI, Single Wide GPU</li> </ul>	7	COM port (RJ45 connector)
3	Power supplies (two, redundant as 1+1)	8	1GBE 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, processors, drives, or amount of memory) are provided in [CONFIGURING the SERVER, page 11](#).

**Table 1 Capabilities and Features**

Capability/Feature	Description
Chassis	<ul style="list-style-type: none"> <li>■ One rack unit (1RU) chassis</li> </ul>
CPU	<ul style="list-style-type: none"> <li>■ Single-Socket Configuration</li> <li>■ Supports one AMD EPYC™ 9005 Series processor</li> </ul>
Memory	<ul style="list-style-type: none"> <li>■ 12 slots for registered DIMMs (RDIMMs)</li> </ul>
Multi-bit Error Protection	<ul style="list-style-type: none"> <li>■ This server supports multi-bit error protection.</li> </ul>
Video	<p>The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller:</p> <ul style="list-style-type: none"> <li>■ Integrated 2D graphics core with hardware acceleration</li> <li>■ Embedded DDR memory interface supports up to 512 MB of addressable memory (8 MB is allocated by default to video memory)</li> <li>■ Supports display resolutions up to 1920 x 1200 16bpp @ 60Hz</li> <li>■ High-speed integrated 24-bit RAMDAC</li> <li>■ Single lane PCI-Express host interface running at Gen 1 speed</li> </ul>
Power subsystem	<p>Up to two of the following hot-swappable power supplies:</p> <ul style="list-style-type: none"> <li>■ 1050 W (DC)</li> <li>■ 1200 W (AC)</li> <li>■ 1600 W (AC)</li> <li>■ 2300 W (AC)</li> </ul> <p>One power supply is mandatory; one more can be added for 1 + 1 redundancy.</p>
Expansion slots	<ul style="list-style-type: none"> <li>■ Half-height riser slots (select up to three) <ul style="list-style-type: none"> <li>• Riser 1A PCIe Gen4 x16 HH</li> <li>• Riser 1B PCIe Gen5 x16 HH</li> <li>• Riser 2A PCIe Gen4 x16 HH</li> <li>• Riser 2B PCIe Gen5 x16 HH</li> <li>• Riser 3A PCIe Gen4 x16 HH</li> </ul> </li> <li>■ Full-height riser slots (select up to two) <ul style="list-style-type: none"> <li>• Riser 1C PCIe Gen5 x16 FH</li> <li>• Riser 3C PCIe Gen5 x16 FH</li> </ul> </li> </ul>

Table 1 Capabilities and Features *(continued)*

Capability/Feature	Description
Interfaces	<ul style="list-style-type: none"> <li>■ Rear panel <ul style="list-style-type: none"> <li>• One 1Gbase-T RJ-45 management port</li> <li>• One RS-232 serial port (RJ45 connector)</li> <li>• One DB15 VGA connector</li> <li>• Two USB 3.0 port connectors</li> <li>• One flexible modular LAN on motherboard (mLOM)/OCP 3.0 slot that can accommodate various interface cards</li> </ul> </li> <li>■ Front panel <ul style="list-style-type: none"> <li>• One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector)</li> </ul> </li> </ul>
Internal storage devices	<p><b>Drive storage:</b></p> <p>Drives are installed into front-panel drive bays, which provide hot-swappable access for NVMe drives.</p> <ul style="list-style-type: none"> <li>■ Two to ten 2.5-inch direct-attach NVMe SSDs only.</li> </ul> <p><b>Other storage:</b></p> <ul style="list-style-type: none"> <li>■ A mini-storage module connector on the motherboard supports a boot-optimized RAID controller carrier that holds two SATA M.2 SSDs.</li> </ul>
PCIe	<ul style="list-style-type: none"> <li>■ Up to 3 PCIe 4.0 slots or up to 2 PCIe 5.0 slots and 1 dedicated mLOM/OCP 3.0 slot</li> </ul>
Integrated management processor	<ul style="list-style-type: none"> <li>■ Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware.</li> <li>■ Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port or a Cisco virtual interface card (VIC).</li> <li>■ CIMC manages certain components within the server, such as the Cisco 12G SAS HBA.</li> </ul>
Front Panel	<ul style="list-style-type: none"> <li>■ A front panel controller provides status indications and control buttons</li> </ul>
ACPI	<ul style="list-style-type: none"> <li>■ This server supports the advanced configuration and power interface (ACPI) version 6.5</li> </ul>
Fans	<ul style="list-style-type: none"> <li>■ Eight hot-swappable fans for front-to-rear cooling</li> </ul>
Infiniband	<ul style="list-style-type: none"> <li>■ The InfiniBand architecture is supported by the PCI slots.</li> </ul>
CIMC	<ul style="list-style-type: none"> <li>■ Cisco Integrated Management Controller 4.3 (6) or later</li> </ul>

## CONFIGURING the SERVER

Follow these steps to configure the Cisco Compute Hyperconverged HCIVS225C M8 All-NVMe vSAN ReadyNode:

- [\*STEP 1 VERIFY SERVER SKU, page 12\*](#)
- [\*STEP 2 AI INTENT \(OPTIONAL\), page 13\*](#)
- [\*STEP 3 SELECT MANAGEMENT MODE \(REQUIRED\), page 14\*](#)
- [\*STEP 4 SELECT RISERS, page 15\*](#)
- [\*STEP 5 SELECT CPU\(s\), page 16\*](#)
- [\*STEP 6 SELECT MEMORY \(REQUIRED\), page 18\*](#)
- [\*STEP 7 SELECT DRIVES \(REQUIRED\), page 20\*](#)
- [\*STEP 8 SELECT OPTION CARD\(s\), page 22\*](#)
- [\*STEP 9 ORDER GPU CARDS \(OPTIONAL\), page 25\*](#)
- [\*STEP 10 ORDER POWER SUPPLY, page 26\*](#)
- [\*STEP 11 SELECT INPUT POWER CORD\(s\), page 27\*](#)
- [\*STEP 12 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM, page 31\*](#)
- [\*STEP 13 ORDER SECURITY DEVICES \(OPTIONAL\), page 32\*](#)
- [\*STEP 14 SELECT LOCKING SECURITY BEZEL \(OPTIONAL\), page 33\*](#)

## STEP 1 VERIFY SERVER SKU

Top level ordering product ID (PID) is shown in [Table 2](#)

Table 2 Top level ordering PID (major line bundle)

Product ID (PID)	Description
HCI-M8-VSAN-MLB	Cisco Compute Hyperconverged M8 with vSAN MLB

Select server product ID (PID) from [Table 3](#).



**CAUTION:** This products may not be purchased outside of the approved bundles. (must be ordered under the MLB)

Table 3 PID of The Base Server

Product ID (PID)	Description
HCIVS225C-M8SN	Cisco Compute Hyperconverged HCI 225cM8 NVMe vSAN Node

The Cisco Compute Hyperconverged HCIVS225C M8 All-NVMe vSAN ReadyNode:

- Includes a 10-drive backplane
- Does not include power supply, CPU, memory DIMMs, solid-state drives (SSDs), NVMe drives, SD cards, 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 AI INTENT (OPTIONAL)

### Select AI Intent

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The available AI Intent options are listed in [Table 4](#).

Table 4 AI Intent

Product ID (PID)	Description
COMPUTE-AI	Compute Artificial Intelligence Use Case
COMPUTE-OTHER	Compute Other Use Case

## STEP 3 SELECT MANAGEMENT MODE (REQUIRED)

The available management modes are listed in [Table 5](#).

Table 5 Management Modes

Product ID (PID)	Description
IMM-MANAGED	Deployment mode for UCS FI connected Servers in IMM mode
UMM-MANAGED	Deployment mode for UCS FI connected Servers in UCSM mode
ISM-MANAGED	Deployment mode for C Series Servers in Standalone mode



**NOTE:** Cisco UCS M8 servers are the last generation to support UCS Manager (UCSM). Any customers choosing to use UCSM with M8 servers should proactively plan to transition to IMM by 2027.

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## STEP 4 SELECT RISERS

The riser PIDs are listed in [Table 6](#).



### CAUTION:

- Full-height risers cannot be mixed with half-height risers.

Table 6 PIDs of the Risers and Riser Blanks

Product ID (PID)	Description
<b>Riser 1 Option</b>	
UCSC-RIS1A-225M8	UCS C-Series M8 1U Riser 1A PCIe Gen4 x16 HH <ul style="list-style-type: none"> <li>■ Half-height riser 1</li> <li>■ One x16 PCIe Gen4 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length</li> </ul>
UCSC-RIS1B-225M8	UCS C-Series M8 1U Riser 1B PCIe Gen5 x16 HH <ul style="list-style-type: none"> <li>■ Half-height riser 1</li> <li>■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length</li> </ul>
UCSC-RIS1C-225M8	UCS C-Series M8 1U Riser 1C PCIe Gen5 x16 FH <ul style="list-style-type: none"> <li>■ Full-height riser 1</li> <li>■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length</li> </ul>
<b>Riser 2 Option</b>	
UCSC-RIS2A-225M8	UCS C-Series M8 1U Riser 2A PCIe Gen4 x16 HH <ul style="list-style-type: none"> <li>■ Half-height riser 2</li> <li>■ One x16 PCIe Gen4 riser, standard PCIe, half-height, 3/4 length</li> </ul>
UCSC-RIS2B-225M8	UCS C-Series M8 1U Riser 2B PCIe Gen5 x16 HH <ul style="list-style-type: none"> <li>■ Half-height riser 2</li> <li>■ One x16 PCIe Gen5 riser, standard PCIe, half-height, 3/4 length</li> </ul>
<b>Riser 3 Option</b>	
UCSC-RIS3A-225M8	UCS C-Series M8 1U Riser 3A PCIe Gen4 x16 HH <ul style="list-style-type: none"> <li>■ Half-height riser 3</li> <li>■ One x16 PCIe Gen4 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length</li> </ul>
UCSC-RIS3C-225M8	UCS C-Series M8 1U Riser 3C PCIe Gen5 x16 FH <ul style="list-style-type: none"> <li>■ Full-height riser 3</li> <li>■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length</li> </ul>
<b>Accessories/spare included along with selected risers:</b> <ul style="list-style-type: none"> <li>■ UCSC-FBRS2-C225M8 for riser 2 and UCSC-FBRS-C220-D riser filler blank for riser 3 is auto included, if riser 2 or riser 3 are not selected. UCSC-FBRSF-225M8 is auto included if only one full height riser is selected</li> </ul>	

## STEP 5 SELECT CPU(s)

- 5th Gen. AMD EPYC™ processors highlights are:
  - CPU-to-CPU communication using Infinity Fabric Interconnect
  - Cache size of up to 512 MB
  - Up to 160 cores
  - Power: Up to 400Watts

### Select CPUs

- The available 5th Gen. AMD EPYC™ processors are listed in [Table 7](#).



**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).

Table 7 Available 5th Gen. AMD EPYC™ CPUs

Product ID (PID)	Maximum Socket	Core	CPU Base Frequency	CPU Boost Frequency	Default TDP	Cache Size	Highest DDR5 DIMM Clock
	(S)	(C)	(GHz)	(GHz)	(W)	(MB)	(MT/s) <sup>1</sup>
5th Gen EPYC 9005 Series Processors							
UCS-CPU-A9845	1S	160	2.10	3.70	390	320	6000
UCS-CPU-A9825	1S	144	2.20	3.70	390	384	6000
UCS-CPU-A9745	1S	128	2.40	3.70	400	256	6000
UCS-CPU-A9655	1S	96	2.60	4.50	400	384	6000
UCS-CPU-A9645	1S	96	2.30	3.70	320	256	6000
UCS-CPU-A9565	1S	72	3.15	4.30	400	384	6000
UCS-CPU-A9555	1S	64	3.20	4.40	360	256	6000
UCS-CPU-A9535	1S	64	2.40	4.30	300	256	6000
UCS-CPU-A9455	1S	48	3.15	4.40	300	256	6000
UCS-CPU-A9365	1S	36	3.40	4.30	300	192	6000
UCS-CPU-A9355	1S	32	3.55	4.40	280	256	6000
UCS-CPU-A9335	1S	32	3.00	4.40	210	128	6000
UCS-CPU-A9255	1S	24	3.20	4.30	200	128	6000
UCS-CPU-A9135	1S	16	3.65	4.30	200	64	6000
UCS-CPU-A9115	1S	16	2.60	4.10	125	64	6000
UCS-CPU-A9015	1S	8	3.60	4.10	125	64	6000
UCS-CPU-A9575F	1S	64	3.30	5.00	400	256	6000
UCS-CPU-A9475F	1S	48	3.65	4.80	400	256	6000



Table 7 Available 5th Gen. AMD EPYC™ CPUs

Product ID (PID)	Maximum Socket	Core	CPU Base Frequency	CPU Boost Frequency	Default TDP	Cache Size	Highest DDR5 DIMM Clock
	(S)	(C)	(GHz)	(GHz)	(W)	(MB)	(MT/s) <sup>1</sup>
UCS-CPU-A9375F	1S	32	3.80	4.80	320	256	6000
UCS-CPU-A9275F	1S	24	4.10	4.80	320	256	6000
UCS-CPU-A9175F	1S	16	4.20	5.00	320	512	6000
UCS-CPU-A9655P	1S	96	2.60	4.50	400	384	6000
UCS-CPU-A9555P	1S	64	3.20	4.40	360	256	6000
UCS-CPU-A9455P	1S	48	3.15	4.40	300	256	6000
UCS-CPU-A9355P	1S	32	3.55	4.40	280	256	6000

## Notes:

1. If higher or lower speed DIMMs are selected than what is shown in [Table 9 on page 19](#) for a given CPU speed, the DIMMs will be clocked at the lowest common denominator of CPU clock and DIMM clock.

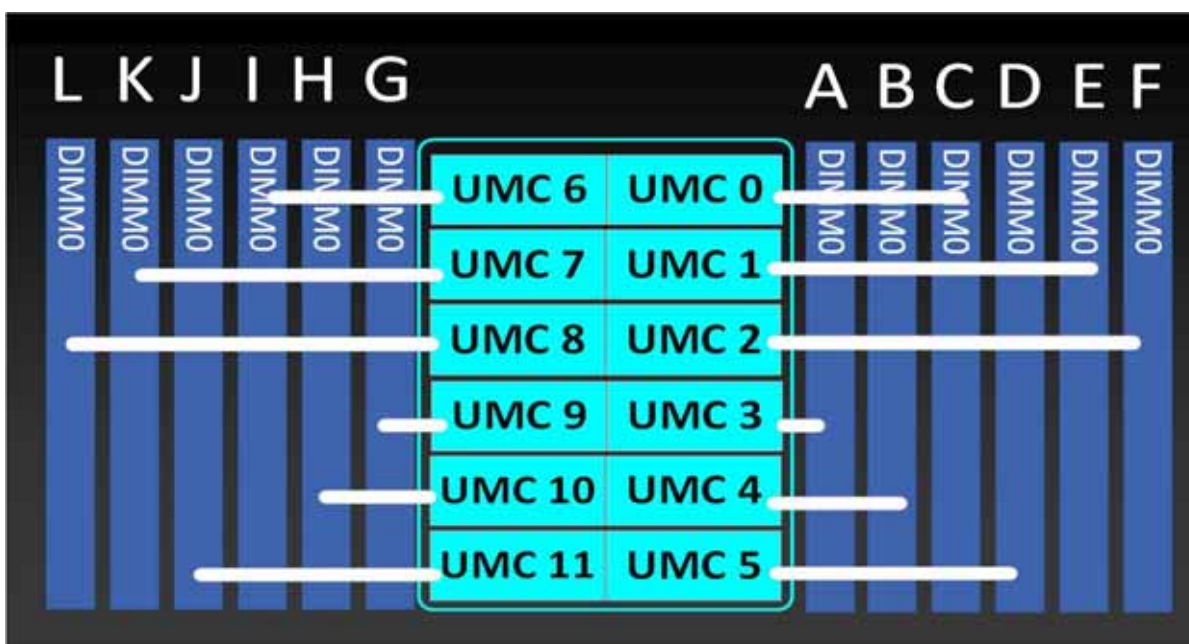
## STEP 6 SELECT MEMORY (REQUIRED)

The [Table 8](#) below describes the main memory DIMM features supported on Cisco UCS C225 M8 rack server.

Table 8 C225 M8 Main Memory Features

Memory DIMM server technologies	Description
DDR5 memory clock speed	5th Gen. AMD EPYC™ CPUs: Up to 6000 MT/s 1DPC
Operational voltage	1.1 Volts
DRAM fab density	16Gb, 24Gb, and 32Gb
DRAM DIMM type	RDIMM (Registered DDR5 DIMM)
Memory DIMM organization	Twelve memory DIMM channels per CPU; 1 DIMM per channel only
Maximum number of DRAM DIMM per server	Up to 12 (1-Socket)
DRAM DIMM Densities and Ranks	16GB 1Rx8, 32GB 1Rx4, 48GB 1Rx4, 64GB 2Rx4, 96GB 2Rx4, 128GB 4Rx4, 128GB (32Gb) 2Rx4, 256GB 8Rx4
Maximum system capacity (DRAM DIMMs only)	3TB (12x256GB)

Figure 5 12-Channel Memory Organization



## Select DIMMs

The supported memory DIMMs are listed in [Table 9](#).

**NOTE:**

- When paired with 5th Gen. AMD EPYC™ CPUs, all memory DIMMs must be Cisco DDR5-6400 memory PIDs, although the memory will operate at the maximum speed of the 5th Gen. AMD EPYC™ CPUs memory controller, up to 6000 MT/s.



**CAUTION:** On HCIVS225 M8, when 256GB DIMMs are configured in the C225 server, ambient temperature is limited to a maximum of 30°C.

Table 9 Available DDR5 DIMMs for 5th Gen. AMD EPYC™ CPUs

Product ID (PID)	PID Description	Ranks/DIMM
DDR5-6400 MT/s PIDs list <sup>1</sup>		
UCS-MR256G4RG5	256GB DDR5-6400 RDIMM 4Rx4 (32Gb)	4
UCS-MR128G2RG5	128GB DDR5-6400 RDIMM 2Rx4 (32Gb)	2
UCS-MRX96G2RF5	96GB DDR5-6400 RDIMM 2Rx4 (24Gb)	2
UCS-MRX64G2RE5	64GB DDR5-6400 RDIMM 2Rx4 (16Gb)	2
UCS-MRX48G1RF5	48GB DDR5-6400 RDIMM 1Rx4 (24Gb)	1
UCS-MRX32G1RE5	32GB DDR5-6400 RDIMM 1Rx4 (16Gb)	1
UCS-MRX16G1RE5	16GB DDR5-6400 RDIMM 1Rx8 (16Gb)	1
DIMM Blank <sup>2</sup>		
UCS-DIMM-BLK	UCS DIMM Blank	

**Notes:**

1. If higher or lower speed DIMMs are selected than for a given CPU speed, the DIMMs will be clocked at the lowest common denominator of CPU clock and DIMM clock. check the [Table 7](#) column “Highest DDR5 DIMM Clock Support”
2. Any empty DIMM slot must be populated with a DIMM blank to maintain proper cooling airflow.

## Memory configurations and mixing rules

- System speed is dependent on the CPU DIMM speed support. [Available 5th Gen. AMD EPYC™ CPUs, page 16](#) for DIMM speeds.
- For full details on supported memory configurations see the [M8 Memory Guide](#).

## STEP 7 SELECT DRIVES (REQUIRED)

The standard drive features are:

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

### Select Drives

The available NVMe SSDs drives are listed in [Table 10](#)



**CAUTION:** Cisco uses solid state drives (SSDs) from a number of vendors. All solid state drives (SSDs) 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 (SSDs) that have exceeded any maximum usage specifications set by Cisco or the manufacturer, as determined solely by Cisco.

Table 10 Available U.3 NVMe drives

Product ID (PID)	PID Description	Drive Type	Capacity
<b>Capacity Drive</b>			
UCS-NVMEG4-M1600D	1.6TB 2.5in U.3 15mm P7450 Hg Perf Hg End NVMe (3X)	NVMe	1.6 TB
UCS-NVMEG4-M1920D	1.9TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	NVMe	1.9 TB
UCS-NVMEG4-M3840D	3.8TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	NVMe	3.8 TB
UCS-NVMEG4-M7680D	7.6TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	NVMe	7.6 TB
UCS-NVMEG4-M1536D	15.3TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	NVMe	15.3 TB
UCS-NVMEG4-M3200D	3.2TB 2.5in U.3 15mm Micron P7450 Hg Perf Hg End NVMe (3X)	NVMe	3.2 TB
UCS-NVMEG4-M6400D	6.4TB 2.5in U.3 15mm Micron P7450 Hg Perf Hg End NVMe (3X)	NVMe	6.4 TB
<b>Boot Drive</b>			
HCI-M2-480G	480GB M.2 SATA SSD	SATA	480GB
HCI-M2480OA1V	480GB M.2 Boot Solidigm S4520 SATA 1X SSD	SATA	480GB
<b>M.2 Raid controller (Internal)</b>			
HCI-M2-HWRAID2	Cisco Boot optimized M.2 Raid controller for SATA drives		

## Approved Configurations

---

- Two to ten capacity drives
- Two boot drives with M.2 Raid controller



### NOTE:

- Dual M.2 SATA SSD with the HW RAID controller is the only supported boot configuration for this solution.
  - It is recommended that M.2 SATA SSDs be used as boot-only devices.
  - Order one or two identical M.2 SATA SSDs for the boot optimized RAID controller
  - You cannot mix M.2 SATA SSD capacities.
  - The SATA M.2 drives can boot in UEFI mode only. Legacy boot mode is not supported.
  - CIMC is supported for configuring of volumes and monitoring of the controller and installed SATA M.2 drives
-

## STEP 8 SELECT OPTION CARD(s)

For up-to-date server compatibility, please check the Hardware and Software compatibility list (HCL) at <https://ucshcltool.cloudapps.cisco.com/public/>.

The standard card offerings are:

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

### Select Option Cards

The available option cards are listed in [Table 11](#).

Table 11 Available Option Cards

Product ID (PID)	PID Description	Location	Card Size <sup>1</sup>
<b>Modular LAN on Motherboard (mLOM)/OCP</b>			
UCSC-M-V5Q50GV2-D	Cisco UCS VIC 15427 Quad Port CNA MLOM with Secure Boot	mLOM	HHHL, SS
UCSC-M-V5D200GV2D	Cisco VIC 15237 2x 40/100/200G mLOM C-Series w/Secure Boot	mLOM	HHHL, SS
UCSC-O-N6CD100GFD	Cisco-NVDA MCX623436AC-CDAB CX6Dx 2x100G QSFP56 x16 OCP NIC	mLOM/OCP 3.0 slot	-
UCSC-O-N6CD25GFD	Cisco-NVDA MCX631432AC-ADAB CX6Lx 2x25G SFP28 x8 OCP NIC	mLOM/OCP 3.0 slot	-
<b>Virtual Interface Card (VICs)</b>			
UCSC-P-V5Q50G-D	Cisco UCS VIC 15425 Quad Port 10/25/50G CNA PCIE	Riser 1 or 2	HHHL, SS
UCSC-P-V5D200G-D	Cisco UCS VIC 15235 Dual Port 40/100/200G CNA PCIE	Riser 1 or 2	HHHL, SS
<b>Network Interface Cards (NICs)</b>			
<b>1 GbE NICs</b>			
UCSC-P-IQ1GC	Cisco-Intel I710-T4L 4x1GBASE-T NIC	Riser 1, 2, or 3	HHHL, SS
<b>10 GbE NICs</b>			
UCSC-P-ID10GC-D	Cisco-Intel X710T2LG 2x10 GbE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-IQ10GC-D	Cisco-Intel X710T4LG 4x10 GbE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
<b>25 GbE NICs</b>			
UCSC-P-I8D25GF-D	Cisco-Intel E810XXVDA2 2x25/10 GbE SFP28 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-I8Q25GF-D	Cisco-Intel E810XXVDA4L 4x25/10 GbE SFP28 PCIe NIC	Riser 1 or 3	FHHL, SS
UCSC-P-N7Q25GF	MCX713104AS-ADAT: CX-7 4x25GbE SFP56 PCIe Gen4x16, VPI NIC	Riser 1, 2, or 3	HHHL, SS
<b>100 GbE NICs</b>			

Table 11 Available Option Cards (*continued*)

Product ID (PID)	PID Description	Location	Card Size <sup>1</sup>
UCSC-P-MDD100GF-D	Cisco-MLNX MCX623106AS-CDAT 2x100GbE QSFP56 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-MCD100GF-D	Cisco-MLNX MCX623106AC-CDAT 2x100GbE QSFP56 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
<b>200 GbE NICs</b>			
UCSC-P-N7D200GF	MCX755106AS-HEAT:CX-7 2x200GbE QSFP112 PCIe Gen5x16, VPI NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-N3220L	Nvidia OEM BlueField-3 B3220L SuperNIC 2x200G	Riser 1 or 3	FHHL, SS

## Notes:

1. HHHL = half-height, half-length; HHHL = half-height, half-length; SS = single-slot; DS = double-slot

## ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES

- At the time of first launch, the 3rd Party Ethernet adapters were tested for interoperability with an initial selection of Optical Modules and Cables. Please check the Product Briefs for this initial list of interoperable optics and cables at <https://www.cisco.com/c/en/us/products/servers-unified-computing/third-party-adapters-listing.html>.
- For list of supported optics and cables for VIC 15428 and VIC 15238, refer to the VIC 15000 series data sheet at <https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/ucs-vic-15000-series-ds.html>
- Cisco Transceiver Module Group (TMG) conducts tests with Cisco optics and cables and publishes the results in the TMG Compatibility Matrix. 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:
<a href="#">Product Guide</a>
<a href="#">Speed White Paper</a>



## STEP 9 ORDER GPU CARDS (OPTIONAL)

### Select GPU Options

The available GPU PCIe options are listed in [Table 12](#).

Table 12 Available PCIe GPU Cards<sup>1</sup>

Product ID (PID)	PID Description	Card Size	Maximum cards Per node	Riser Compatibility
UCSC-GPU-L4	NVIDIA L4:70W, 24GB, 1-slot HHHL GPU	HHHL, single-wide	3	Gen 4 & Gen 5 Half Height and Full Height Riser

Notes:

1. Refer to [installation guide](#) for the more details.



**NOTE:**

- All GPU cards must be procured from Cisco as there is a unique SBIOS ID required by CIMC and UCSM
- GPUs cannot be mixed.

## 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 offer multiple power output options. This allows users to “right-size” based on server configuration, which improves power efficiency, lower overall energy costs and avoid stranded capacity in the data center. Use the power calculator at the following link to determine the needed power based on the options chosen (CPU, drives, memory, and so on):

<http://ucspowercalc.cisco.com>



### WARNING:

- Starting 1<sup>st</sup> January 2024, only Titanium rated PSUs are allowed to be shipped to European Union (EU), European Economic Area (EEA), United Kingdom (UK), Switzerland and other countries that adopted Lot 9 Regulation.
- DC PSUs are not impacted by Lot 9 Regulation and are EU/UK Lot 9 compliant

Table 13 Power Supply

Product ID (PID)	PID Description
<b>PSU (Input High Line 210VAC)</b>	
UCSC-PSU1-1200W-D	1200W Titanium power supply for C-Series Servers
UCSC-PSUV21050D-D <sup>1</sup>	Cisco UCS 1050W -48V DC Power Supply for Rack Server
UCSC-PSU1-1600W-D	UCS 1600W AC PSU Platinum (Not EU/UK Lot 9 Compliant)
UCSC-PSU1-2300W-D	Cisco UCS 2300W AC Power Supply for Rack Servers Titanium
<b>PSU (Input Low Line 110VAC)</b>	
UCSC-PSU1-1200W-D	1200W Titanium power supply for C-Series Servers
UCSC-PSU1-1600W-D	UCS 1600W AC PSU Platinum (Not EU/UK Lot 9 Compliant)
UCSC-PSU1-2300W-D	Cisco UCS 2300W AC Power Supply for Rack Servers Titanium

#### Notes:

1. If chosen, you must select from the available DC Power Cord PIDs.



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

## STEP 11 SELECT INPUT POWER CORD(s)

Using [Table 14](#) and [Table 15](#), 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 14](#) lists the power cords for servers that use power supplies less than 2300 W. [Table 15](#) 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 14 Available Power Cords (for server PSUs less than 2300 W)

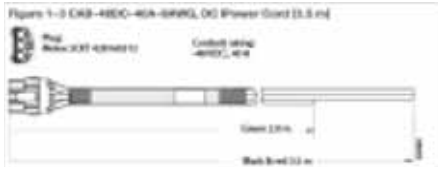
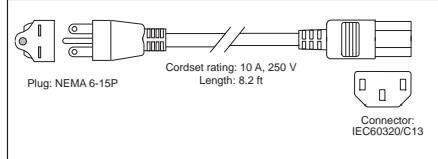
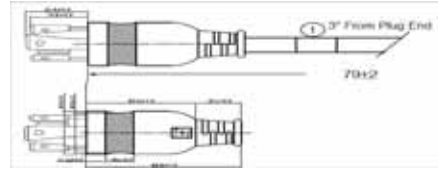
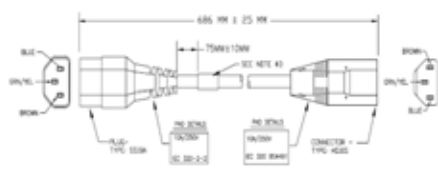
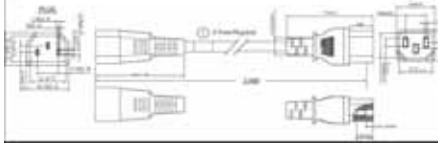
Product ID (PID)	PID Description	Images
NO-POWER-CORD	ECO friendly green option, no power cable will be shipped	
R2XX-DMYMPWRCORD	No power cord (dummy PID to allow for a no power cord option)	Not applicable
CAB-48DC-40A-8AWG	C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A	
CAB-N5K6A-NA	Power 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	

Table 14 Available Power Cords (for server PSUs less than 2300 W)

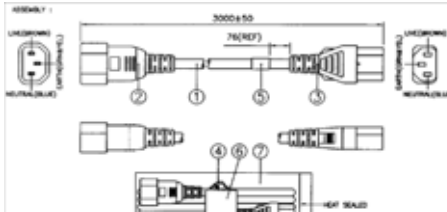
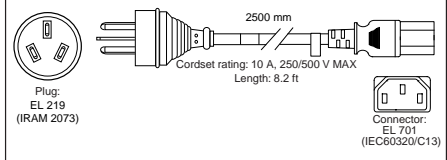
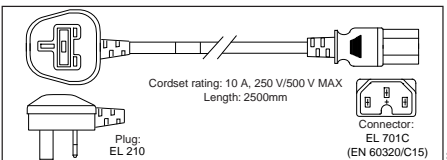
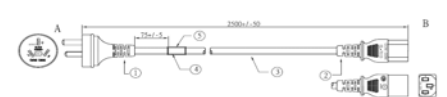
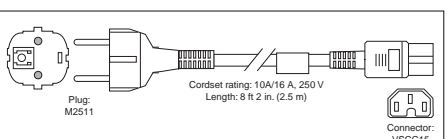
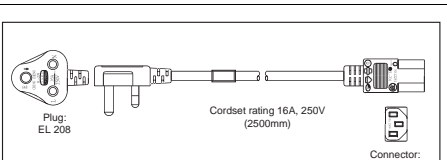
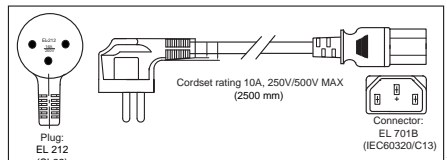
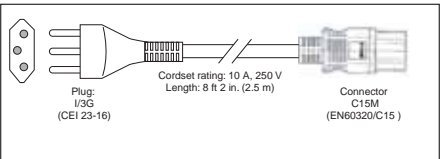
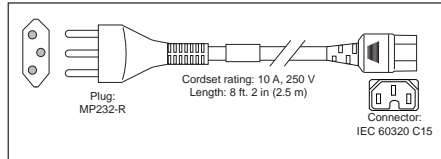
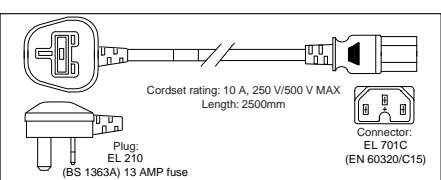
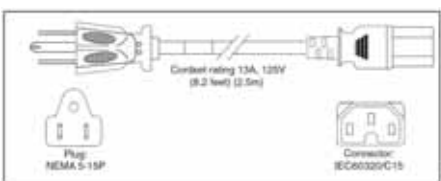
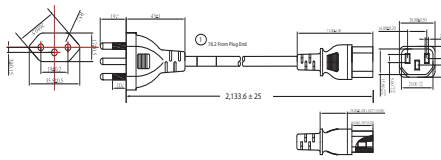
Product ID (PID)	PID Description	Images
CAB-C13-C14-AC	CORD,PWR,JMP,IEC60320/C14,IEC60320/C13, 3.0M	
CAB-250V-10A-AR	Power Cord, 250V, 10A, Argentina	
CAB-9K10A-AU	Power Cord, 250VAC 10A 3112 Plug, Australia	
CAB-250V-10A-CN	AC Power Cord - 250V, 10A - PRC	
CAB-9K10A-EU	Power Cord, 250VAC 10A CEE 7/7 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 14 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	
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 <sup>1</sup>	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	Image not available
CAB-9K10A-KOR <sup>1</sup>	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 15 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-C14C19-10A-EU	Power Cord C14-C19 10A EU	Image is 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

## 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 (or no rail kit) from [Table 16](#).

Table 16 Tool-less Rail Kit Options

Product ID (PID)	PID Description
UCSC-RAIL-D	Ball Bearing Rail Kit for M8 rack servers
UCSC-RAIL-NONE-D	No rail kit option



**NOTE:** Cisco recommends a minimum quantity of 1 Rail Kit.

### 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 17](#) to order a cable management arm.

Table 17 Cable Management Arm

Product ID (PID)	PID Description
UCSC-CMA-C220-D	Reversible CMA for M8 ball bearing rail kit

For more information about the tool-less rail kit and cable management arm, see the *Cisco UCS C225 M8 Installation and Service Guide* at this URL:

[https://www.cisco.com/content/en/us/td/docs/unified\\_computing/ucs/c/hw/c225m8/install/c225m8.html](https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c225m8/install/c225m8.html)



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

## STEP 13 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 18](#)



### 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.

Table 18 Security Devices

Product ID (PID)	PID Description
UCS-TPM2-002D-D	Trusted Platform Module 2.0 FIPS 140-2 and Windows 22 compliant for AMD M8 servers
UCSX-TPM-OPT-OUT-D	OPT OUT, TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified <sup>1</sup>
UCSC-INT-SW02-D	M8 Chassis Intrusion Switch

### 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



## STEP 14 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 19](#).

Table 19 Locking Bezel Option

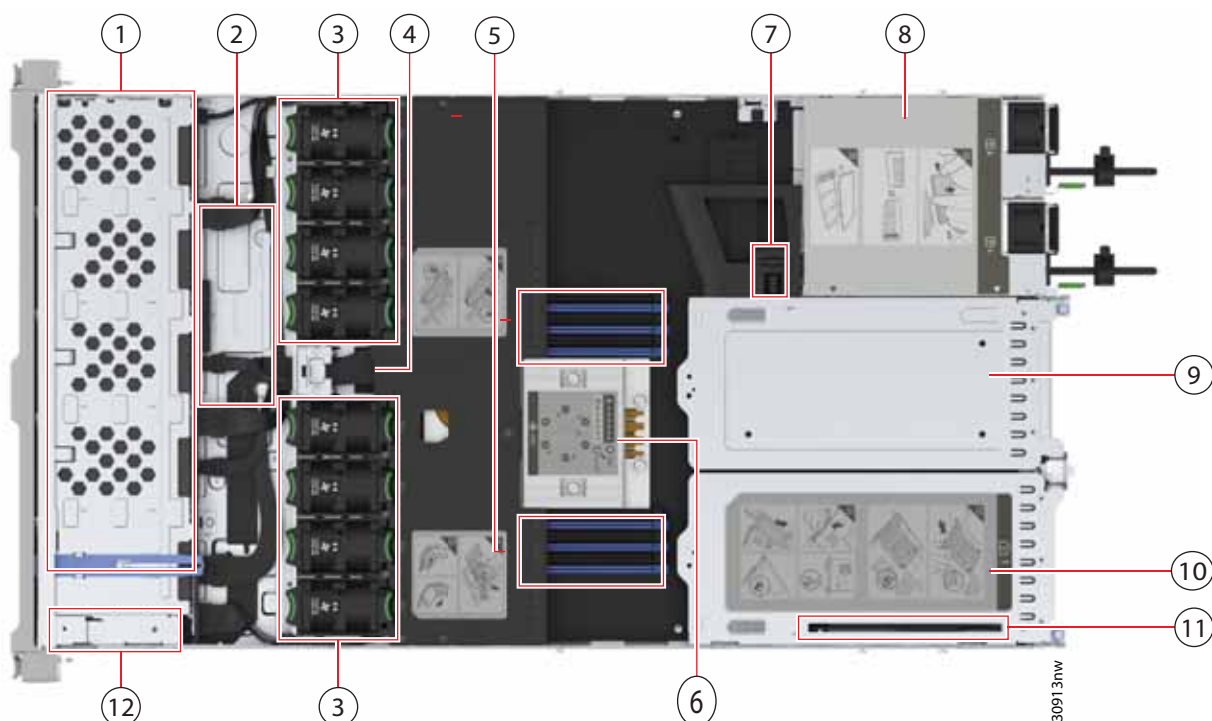
Product ID (PID)	Description
UCSC-BZL-C220-D	Security Bezel

## SUPPLEMENTAL MATERIAL

### Chassis

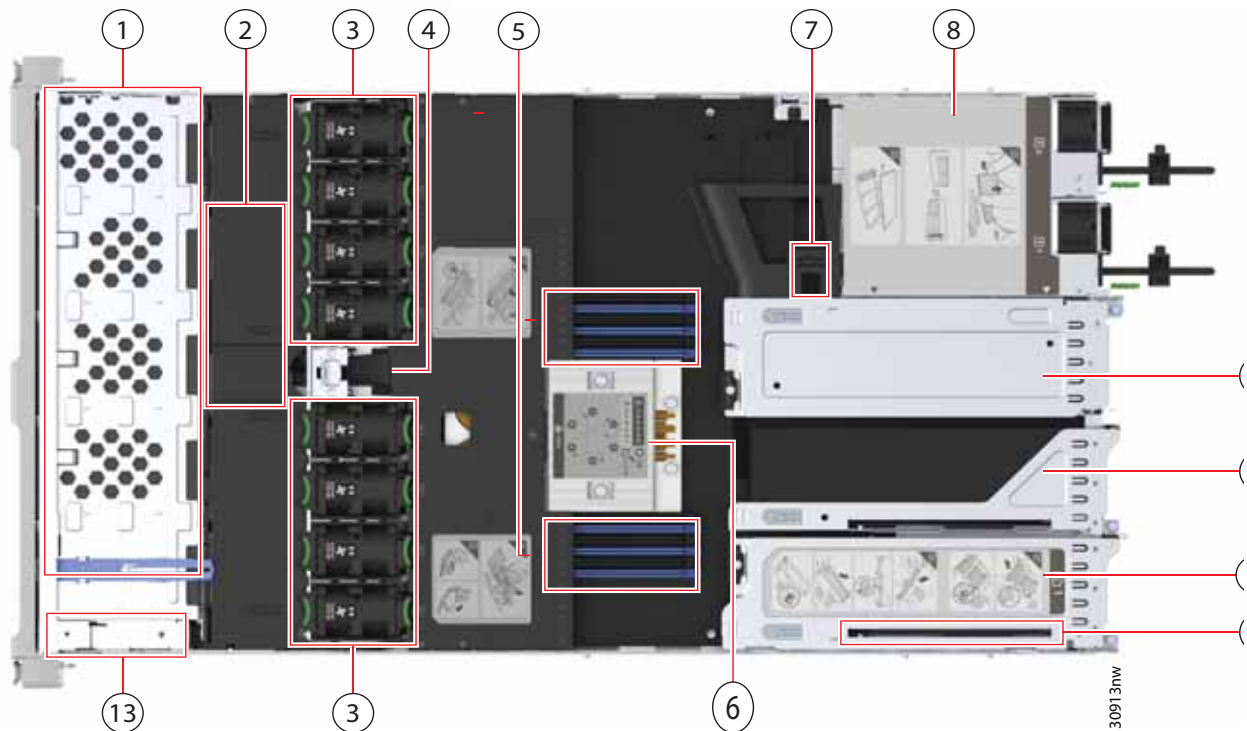
*Figure 6* and *Figure 7* shows the Internal views of the server chassis with the top cover removed.

Figure 6 Server With Top Cover Off (full-height, full-width PCIe cards)



1	Front-loading drive bays	2	M8 modular RAID card (or SATA Interposer)
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 12 total.	6	Motherboard CPU socket
7	M.2 module connector, supporting a boot-optimized RAID controller with connectors for up to two SATA M.2 SSDs.	8	Two power supplies
9	PCIe riser 3 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) card bay on chassis floor(x16 PCIe lane) Connector shown, but the card bay sits below PCIe riser 1.	12	Front Panel Controller board

Figure 7 Server With Top Cover Off (full-height, half-width PCIe cards)

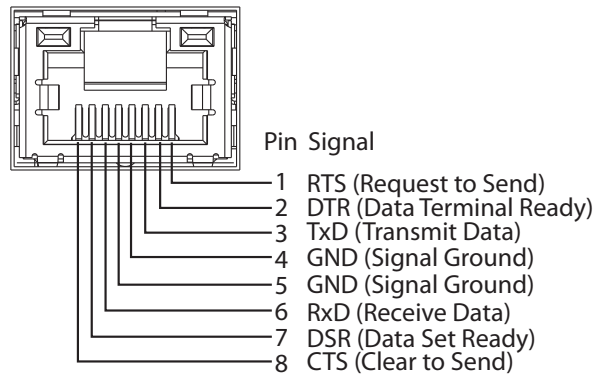


1	Front-loading drive bays	2	M8 modular RAID card (or SATA Interposer)
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 12 total.	6	Motherboard CPU socket
7	M.2 module connector, supporting a boot-optimized RAID controller with connectors for up to 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 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	Front Panel Controller board	-	-

Serial Port Details

The pinout details of the rear RJ-45 serial port connector are shown in [Figure 8](#).

Figure 8      Serial Port (Female RJ-45 Connector) Pinout  
Serial Port (RJ-45 Female Connector)



KVM Cable

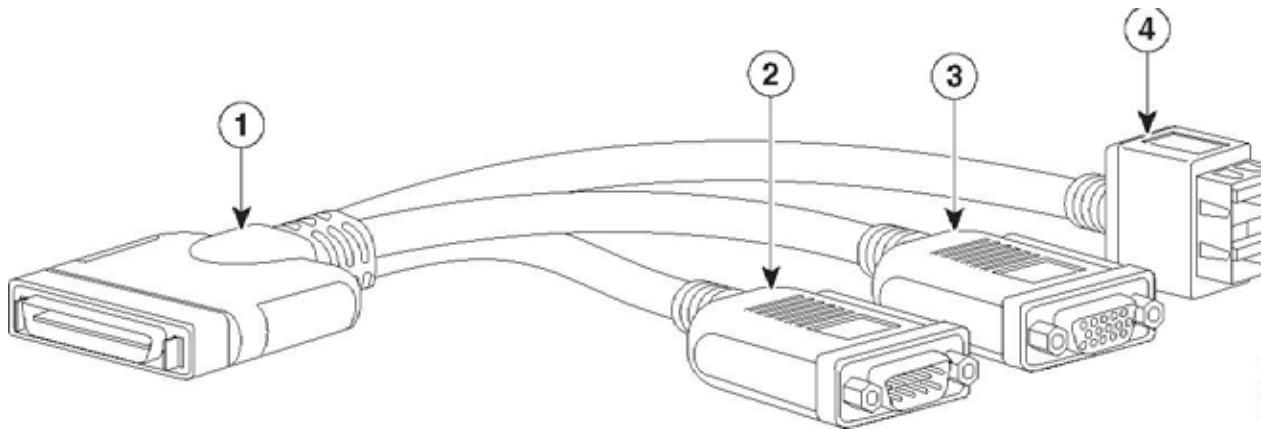
The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

The KVM cable ordering information is listed in [Table 20](#).

Table 20   KVM Cable

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

Figure 9      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)

## UPGRADING or REPLACING CPUs and Memory

- Refer to [Installation Guide](#) to upgrading or replacing the CPUs
- Refer to [Installation Guide](#) to upgrading or replacing the Memory

## TECHNICAL SPECIFICATIONS

### Dimensions and Weight

Table 21 Server 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)
Weight	
Weight with following options and no rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 3HH rear wall, 3HH riser cage1, 3HH riser cage2, 3HH riser cage3, Raid tray, BBU module (with holder)	15.05 kgs = 33.18 lbs (3HH SKU)
Weight with following options and no rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 2FH rear wall, 2FH riser cage1, 2FH riser cage2, Raid tray, BBU module (with holder)	15.1 kgs = 33.29 lbs (2FH SKU)
Weight with following options and including rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 3HH rear wall, 3HH riser cage1, 3HH riser cage2, 3HH riser cage3, Raid tray, BBU module (with holder)	18.8 kgs = 41.45 lbs (3HH SKU)
Weight with following options and including rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 2FH rear wall, 2FH riser cage1, 2FH riser cage2, Raid tray, BBU module (with holder),	18.85 kgs = 41.56 lbs (2FH SKU)

## Power Specifications

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

- 1050 W V2 (DC) power supply (see [Table 22](#))
- 1200 W (AC) power supply (see [Table 23](#))
- 1600 W (AC) power supply (see [Table 24](#))
- 2300 W (AC) power supply (see [Table 25](#))

**Table 22 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 (%) <sup>1</sup>	91
Minimum Rated Power Factor <sup>1</sup>	NA
Maximum Inrush Current (A peak)	15
Maximum Inrush Current (ms)	0.2
Minimum Ride-Through Time (ms) <sup>2</sup>	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 23 1200 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C14			
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) <sup>1</sup>	1100		1200	
Maximum Rated Standby Output (W)	48			
Nominal Input Voltage (Vrms)	100	120	208	230
Nominal Input Current (Arms)	12.97	10.62	6.47	5.84
Maximum Input at Nominal Input Voltage (W)	1300	1264	1343	1340
Maximum Input at Nominal Input Voltage (VA)	1300	1266	1345	1342
Minimum Rated Efficiency (%) <sup>2</sup>	90	90	91	91
Minimum Rated Power Factor <sup>2</sup>	0.97	0.97	0.97	0.97
Maximum Inrush Current (A peak)	20			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) <sup>3</sup>	12			

## Notes:

1. Maximum rated output is limited to 1100W 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



Table 24 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)	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 (%) <sup>1</sup>	NA	NA	90	91
Minimum Rated Power Factor <sup>2</sup>	NA	NA	0.97	0.97
Maximum Inrush Current (A peak)	30			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) <sup>2</sup>	12			

**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 25 Server 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) <sup>1</sup>	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 (%) <sup>2</sup>	92	92	93	93
Minimum Rated Power Factor <sup>2</sup>	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) <sup>3</sup>	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



**NOTE:** For configuration-specific power specifications, use the Cisco UCS Power Calculator at this URL: <http://ucspowercalc.cisco.com>

## Environmental Specifications

The environmental specifications for Cisco Compute Hyperconverged HCIVS225C M8 All-NVMe vSAN ReadyNode are listed in [Table 26](#).

**Table 26 Server Environmental Specifications**

Parameter	Minimum
Operating Temperature	<p>5°C to 35°C (supports ASHRAE Class A4 and/or Class A3 and/or Class A2).</p> <p>ASHRAE Class A3 will be generic test profile unless otherwise specified by product engineering.</p> <p>System shall continue to operate with a single fan failure (one failed impeller in dual impeller housings) across the ASHRAE recommended operating range of 18 °C to 27 °C. While undesired, increased power consumption and/or acoustic noise is permitted during a fan fail event.</p>
Non-Operating Temperature	Dry bulb temperature of -40°C to 65°C (-40°F to 149°F)
Operating Relative Humidity	8% to 90% relative humidity, non-condensing, with maximum wet bulb 28°C (82.4°F) within operational temperature range of 5°C to 50°C (41°F to 122°F)
Non-Operating Relative Humidity	5% to 93% relative humidity, non-condensing, with a maximum wet bulb temperature of 28°C across the 20°C to 40°C dry bulb range.
Maximum Operating Duration	Unlimited
Operating Altitude	A maximum elevation of 3050 meters (10,006 ft)
Non-Operating Altitude	An elevation of 0 to 12,000 meters (39,370 ft)
Sound Power level, Measure A-weighted per ISOHCIVS225C79 LWAd (Bels) Operation at 23°C (73°F)	<p>2RU: 5.8B</p> <p>Racked product: 6.8B</p>
Sound Pressure level, Measure A-weighted per ISOHCIVS225C79 LpAm (dBA) Operation at 23°C (73°F)	<p>2RU: 43dB</p> <p>Racked product: 55dB</p>

## Compliance Requirements

The regulatory compliance requirements for C-Series servers are listed in [Table 27](#)

**Table 27 Regulatory Compliance Requirements**

Parameter	Description
Regulatory Compliance	Products should comply with CE Markings per directives 2014/30/EU and 2014/35/EU
Safety	UL 60950-1/62368-1 CAN/CSA-C22.2 No. 60950-1/62368-1 IEC/EN 60950-1/62368-1 AS/NZS 62368.1 GB 4943.1-2022 CNS 15598-1:2020
EMC - Emissions	47CFR Part 15 (CFR 47) Class A AS/NZS CISPR32 Class A CISPR32 Class A EN55032 Class A ICES003 Class A VCCI-CISPR32 Class A EN61000-3-2 EN61000-3-3 KS C 9832 Class A EN 300386 Class A
EMC - Immunity	EN55035 EN55024 CISPR24/35 EN300386 KS C 9835 IEC/EN61000-6-1



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