Spec Sheet

Cisco UCS C220 M8 SFF Rack Server

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



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OVERVIEW

The Cisco UCS C220 M8 SFF Rack Server extends the capabilities of Cisco's Unified Computing System portfolio in a 1U form factor with the Intel® Xeon® 6 Scalable Processors, 16 DIMM slots per CPU for DDR5-6400 Memory DIMMs with DIMM capacity points up to 128GB.

The Cisco UCS C220 M8 SFF Rack Server harnesses the power of the latest Intel® Xeon® Scalable Processors and offers the following:

CPU: Up to 2x Intel® Xeon® 6 Scalable Processors with up to 86 cores per processor.

Memory: Up to 8TB with 32 x 256GB DDR5-6400 DIMMs, in a 2-socket configuration with Intel® Xeon® 6 Scalable Processors.

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

- Cisco 24G Tri-mode RAID controller with cache backup to control SAS/SATA/NVMe drives **or**
- Cisco 24G Tri-mode Pass-through HBA to control SAS/SATA/NVMe

mLOM: The UCS C220 M8 SFF Rack Server has a single integrated 1GBE management port. A modular LAN on motherboard (mLOM)/OCP 3.0 slot provides various connectivity options from 10GbE to 200GbE.

The Cisco UCS C220 M8 SFF Rack 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 2*** for front and rear views of the UCS C220 M8 SFF Rack Server.

Figure 1 Cisco UCS C220 M8 SFF Rack Server

Front View



Rear View (three half-height riser card version)



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

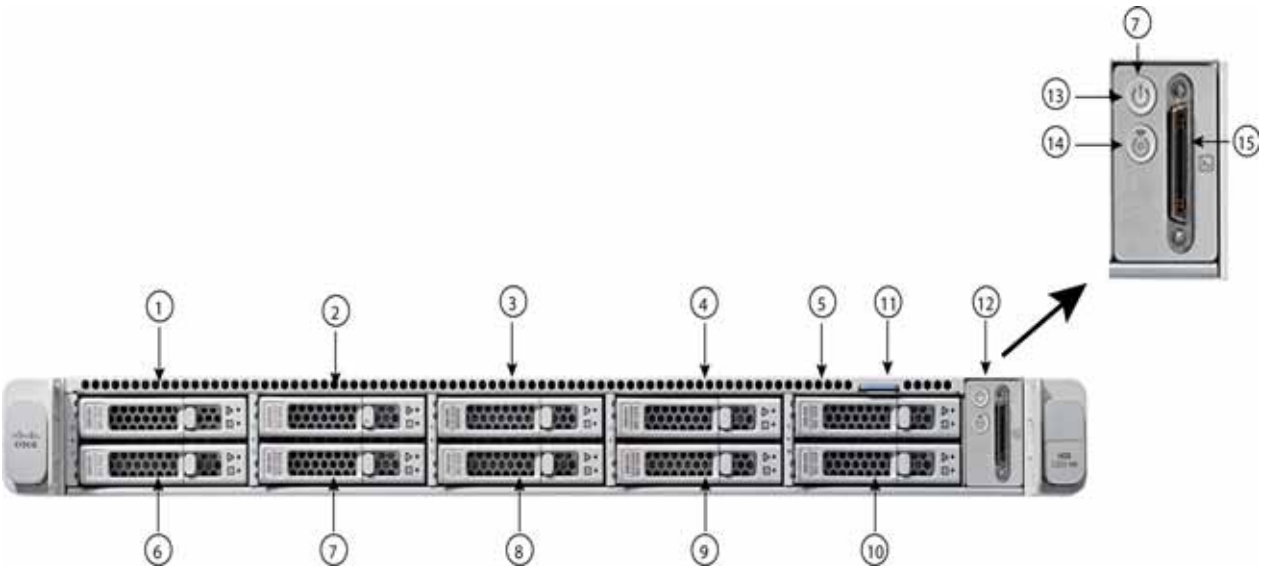


DETAILED VIEWS

Detailed Chassis Front View

Figure 2 shows the detailed front view of the server

Figure 2 Detailed Chassis Front View



1 - 4, 6 - 9	Drive bays 1 – 4, 6 - 9 support SAS/SATA hard drives and solid state drives (SSDs), U.3 NVMe with the tri-mode controller or direct attach NVMe.	13	Power button/power status LED
5,10	Drive bays 5 and 10 support only SAS/SATA HDDs or solid state drives (SSDs), SSDs, or U.3 NVMe with the tri-mode controller and does not support direct attach NVMe.	14	Unit Identification button/LED
11	Asset tag location	15	KVM connector (used with KVM cable that provides two USB 2.0, one VGA, and one serial connector)
12	Control panel	-	-

Detailed Chassis Rear Views

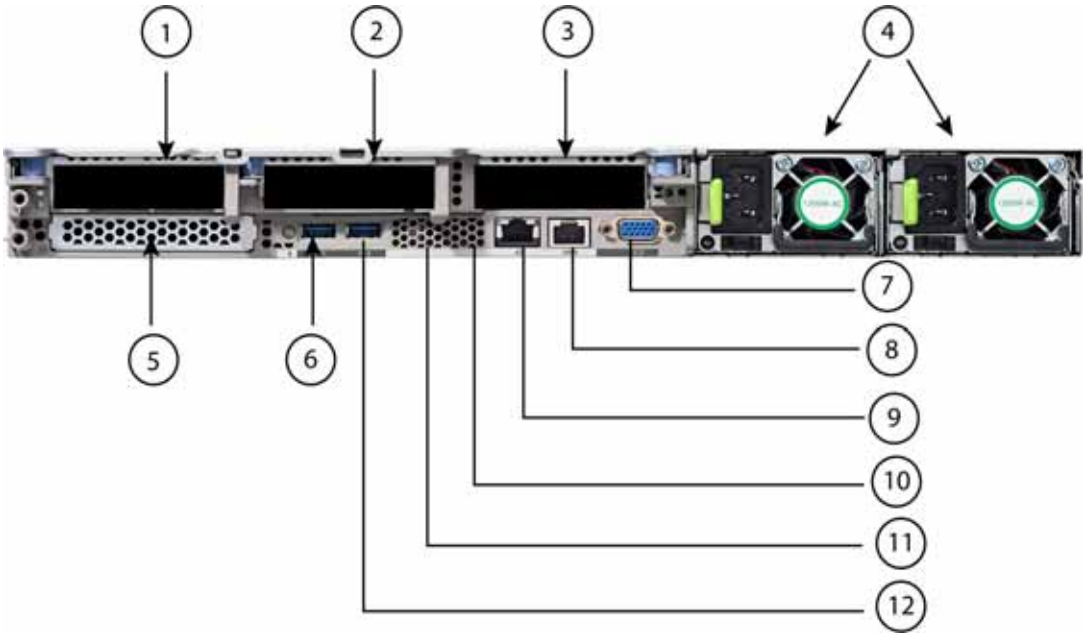
Figure 3 shows the details of the rear panel for the UCS C220 M8 with three rear half-height PCIe risers.

Figure 4 shows the details of the rear panel for the UCS C220 M8 with two rear full-height PCIe risers.

Three Half-Height Risers

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

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

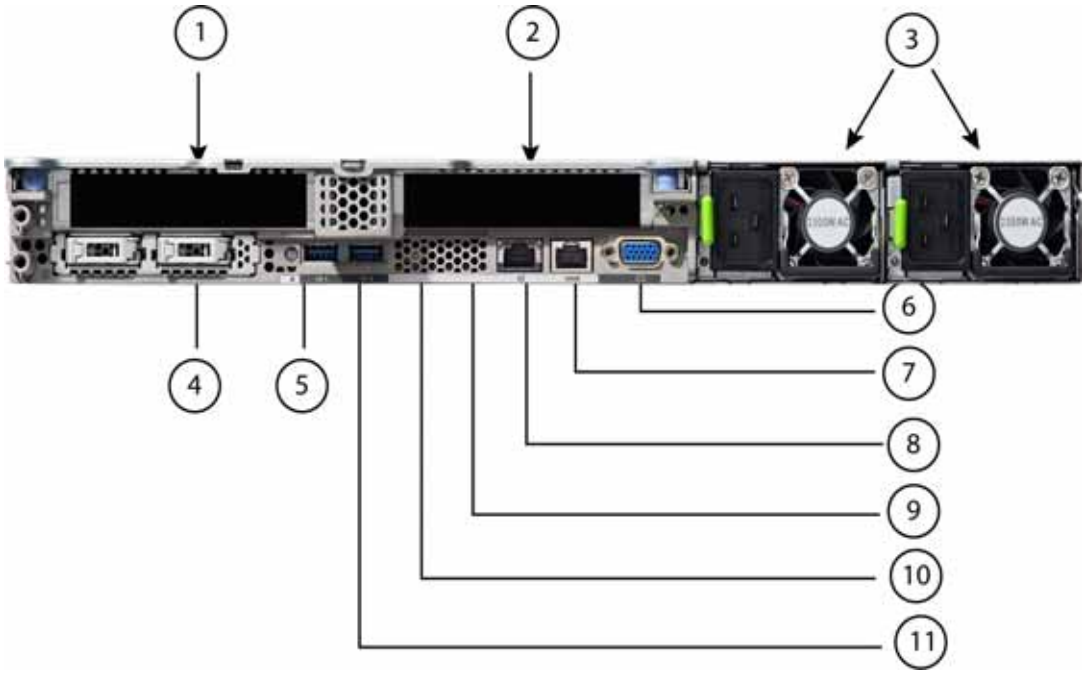


1	**Riser 1A PCIe Gen5 (CPU1 control)** ■ Supports one PCIe slot (slot 1) ■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU	**6**	System ID pushbutton/LED
2	**Riser 2A PCIe Gen5 x16 (CPU1 control)** ■ Supports one PCIe slot (slot 2) ■ Slot 2 is half-height, 3/4 length, x16, Single Wide GPU	**7**	VGA display port (DB15 connector)
3	**Riser 3A PCIe Gen5 x16 (CPU2 control)** ■ Supports one PCIe slot (slot 3) ■ Slot 3 is half-height, 3/4 length, x16, NCSI, Single Wide GPU	**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 or hot-swappable M.2 module (drive bays 241 and 242).	**10**	USB 3.0 ports (two)

Two Full-Height Risers

NOTE: 1-CPU servers support only full-height riser 1 while 2-CPU servers support both full-height risers.

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



1	**Riser 1B PCIe Gen5 (CPU1 control)** ■ Supports one PCIe slot (slot 1) ■ Slot 1 is full-height, 3/4 length, x16,NCSI, Single Wide GPU	**6**	VGA display port (DB15 connector)
2	**Riser 3B PCIe Gen5 x16 (CPU2 control)** ■ Supports one PCIe slot (slot 3) ■ Slot 3 is Full-eight, 3/4 length, x16, NCSI, Single Wide GPU	**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 or hot-swappable M.2 module (drive bays 241 and 242).	**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 10*.

Table 1 Capabilities and Features

Capability/Feature	Description
Chassis	One rack unit (1RU) chassis
CPU	■ One or two Intel® Xeon® 6 Scalable Processors ■ Each CPU has 8 channels with up to 2 DIMMs per channel, for up to 16 DIMMs per CPU ■ UPI Links: Up to 3 at 24GT/s
Memory	■ 32 total DDR5-6400 MT/s DIMM slots with Intel® Xeon® 6 Scalable Processors (16 per CPU)
Video	The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller: ■ 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	Up to two of the following hot-swappable power supplies: ■ 1050W (DC) ■ 1200W (AC) ■ 1600 W (AC) ■ 2300 W (AC) One power supply is mandatory; one more can be added for 1 + 1 redundancy.
Front Panel	A front panel controller provides status indications and control buttons
ACPI	This server supports the advanced configuration and power interface (ACPI) 6.2 standard.
Fans	Eight hot-swappable fans for front-to-rear cooling
Expansion slots	■ Half-height riser slots (select up to three) • Riser 1A PCIe Gen5 x16 HH • Riser 2A PCIe Gen5 x16 HH • Riser 3A PCIe Gen5 x16 HH (CPU2 Control) ■ Full-height riser slots (select up to two) • Riser 1B PCIe Gen5 x16 FH • Riser 3B PCIe Gen5 x16 FH (CPU2 Control)

Table 1 Capabilities and Features *(continued)*

Capability/Feature	Description
Interfaces	■ Rear panel • 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 • One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector)
Integrated management processor	Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware. Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port. Cisco virtual interface card (VIC). CIMC manages certain components within the server, such as the Cisco 12G SAS HBA.
Internal storage devices	**Drive storage:** ■ Up to 10 SFF SAS/SATA hard drives (HDDs) or SAS/SATA/NVMe solid state drives (SSDs). ■ Optionally, up to eight direct-attach SFF NVMe PCIe SSDs. These drives must be placed in front drive bays 1-4 (controlled from CPU 2) and 6-9 (controlled from CPU 1), can be mixed with SAS/SATA drives The rest of the bays (5 and 10) can be populated with SAS/SATA/NVMe SSDs or HDDs with RAID/HBA controller. **Note:** Drives are installed into front-panel drive bays, which provide hot-swappable access for SAS/SATA or NVMe drives. **Other storage:** ■ A Boot Optimized RAID Controller supports • Up to two internal SATA M.2 SSDs, or • Up to two rear-accessible hot-swappable SATA M.2 SSDs ■ 8GB FlexMMC utility storage for staging of firmware and other user data. 8GB FlexMMC storage is built into the motherboard on M8.
Storage controllers	**Internal storage controllers:** ■ 24G Tri-Mode M1 HBA for 16 Drives ■ 24G Tri-Mode M1 RAID Controller w/4GB FBWC 16Drv w/1U Brkt
Modular LAN on Motherboard (mLOM)/ Open Compute Project (OCP) 3.0 slot	The dedicated mLOM/Open Compute Project (OCP) 3.0 slot on the motherboard can flexibly accommodate the following cards: ■ Cisco Virtual Interface Cards ■ Open Compute Project (OCP) 3.0 network interface card

Table 1 Capabilities and Features *(continued)*

Capability/Feature	Description
Fabric Interconnect	■ Compatible with the Cisco UCS 6400, 6500, 6600 Series and UCSX-S9108-100G fabric interconnects. ■ In addition to direct-connect of rack-server to the Fabric Interconnect, the rack-server can also connect via the “Nexus 93180YC-FX3 FEX” for having up to 160 servers behind a pair of Fabric Interconnect.
CIMC	Cisco Integrated Management Controller 4.3 (6) or later
Intersight	Intersight provides server management capabilities
Firmware standards	UEFI Spec 2.9 ACPI 6.5 SMBIOS Ver 3.7

CONFIGURING the SERVER

Follow these steps to configure the Cisco UCS C220 M8 SFF Rack Server:

- *STEP 1 SELECT SERVER SKU, page 11*
- *STEP 2 SELECT MANAGMENT MODE (REQUIRED), page 12*
- *STEP 3 SELECT RISERS (REQUIRED), page 13*
- *STEP 4 SELECT CPU(s) (REQUIRED), page 14*
- *STEP 5 SELECT MEMORY (REQUIRED), page 17*
- *STEP 6 SELECT DRIVE CONTROLLERS (OPTIONAL), page 20*
- *STEP 7 SELECT DRIVES (OPTIONAL), page 22*
- *STEP 8 SELECT OPTION CARD(s) (OPTIONAL), page 25*
- *STEP 9 ORDER GPU CARDS (OPTIONAL), page 29*
- *STEP 10 ORDER M.2 BOOT RAID CONTROLLER and SATA SSDs (OPTIONAL), page 30*
- *STEP 11 ORDER POWER SUPPLY (REQUIRED), page 32*
- *STEP 12 SELECT INPUT POWER CORD(s) (REQUIRED), page 33*
- *STEP 13 ORDER TOOL-LESS RAIL KIT (REQUIRED) AND REVERSIBLE CABLE MANAGEMENT ARM (OPTIONAL), page 37*
- *STEP 14 SELECT MANAGEMENT CONFIGURATION (OPTIONAL), page 38*
- *STEP 15 ORDER SECURITY DEVICES (REQUIRED), page 39*
- *STEP 16 SELECT LOCKING SECURITY BEZEL (OPTIONAL), page 40*
- *STEP 17 SELECT OPERATING SYSTEM, page 41*
- *STEP 18 CISCO INTERSIGHT, page 44*
- *SUPPLEMENTAL MATERIAL, page 46*

STEP 1 SELECT SERVER SKU

Top level ordering product ID (PID) is shown in *Table 2*.

Table 2 Top Level Major Line Bundle ordering PIDs (MLB)

Product ID (PID)	Description
UCS-M8-MLB	UCS M8 RACK MLB This major line bundle (MLB) consists of the Rack Server (UCSC-C220-M8S or UCSC-C220-M8E3S) with software PIDs. Use this PID to begin a new configuration.

Select one product ID (PID) as shown in *Table 3*.



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

Table 3 PID of the Rack Base Server

Product ID (PID)	Description
UCSC-C220-M8S	■ Small form-factor (SFF) drives, with 10-drive backplane. ■ Front facing drive bays 1-10 support 2.5in SAS/SATA/NVMe SSDs depending on controller type installed. ■ Optionally, front-loading drive bays 1-4 and 6-9 support 2.5-inch direct-attach NVMe SSDs and the rest can be SAS/SATA HDDs or SSDs.

The Cisco UCS C220 M8 SFF Rack Server:

- Includes a 10 SFF drive backplane.
- Does not include power supply, CPU, memory, hard disk drives (HDDs), solid-state drives (SSDs), NVMe drives, SD cards, riser 1, riser 2, riser 3, tool-less rail kit, or PCIe cards.
- Use the steps on the following pages to configure the server with the components that you want to include.

STEP 2 SELECT MANAGMENT MODE (REQUIRED)

The available management modes are listed in ***Table 4***.

Table 4 Management Mode

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

STEP 3 SELECT RISERS (REQUIRED)

The riser PIDs are listed in ***Table 5***.



CAUTION: Full-height risers cannot be mixed with half-height risers

Table 5 PIDs of the Risers and Riser Blanks

Product ID (PID)	Description
Riser 1 Option	
UCSC-RIS1A-220M8	UCS C220 M8 Riser 1A PCIe Gen5 x16 HH ■ Half-height riser 1 (controlled by **CPU 1**) ■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length
UCSC-RIS1B-220M8	UCS C220 M8 Riser 1B PCIe Gen5 x16 FH ■ Full-height riser 1 (controlled by **CPU 1**) ■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length
Riser 2 Option	
UCSC-RIS2A-220M8	UCS C220 M8 Riser 2A PCIe Gen5 x16 HH ■ Half-height riser 2 (controlled by **CPU 1**) ■ One x16 PCIe Gen5 riser, standard PCIe, half-height, 3/4 length
Riser 3 Option	
UCSC-RIS3A-220M8	UCS C220 M8 Riser 3A PCIe Gen5 x16 HH (CPU2) ■ Half-height riser 3 (controlled by **CPU 2**) ■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length
UCSC-RIS3B-220M8	UCS C220 M8 Riser 3B PCIe Gen5 x16 FH (CPU2) ■ Full-height riser 3 (controlled by **CPU 2**) ■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length
Accessories/spare included along with selected risers: ■ UCSC-FBRSF-220M8 is auto included if only one full height riser is selected ■ UCSC-FBRS2-C220M7 and UCSC-FBRS-C220-D are auto included if only Riser 1A is selected ■ UCSC-FBRS-C220-D is auto included if only Riser 1A and 2A are selected	

Approved Configurations

(1) Half-height riser 1A, 2A, and 3A only. riser 1A and 2A are controlled from CPU1 and Riser 3 is controlled from CPU2.

(2) Full-height risers 1B and 3B only. Riser 1B is controlled from CPU1 and riser 3B is controlled from CPU2.

STEP 4 SELECT CPU(s) (REQUIRED)

The standard CPU features are:

- Up to 86 cores
- Cache size of up to 336 MB
- Power: Up to 350 Watts
- UPI Links: Up to 3 at 24GT/s

Select CPUs



CAUTION:

- Normal operating temperature is limited to 35° C [95° F], and is lowered to 28° C [82.4° F], with a fan fault.
- When CPU>330W TDP installed, normal operating temperature is 30°C [86°F], lowered to 23°C [73°F] with a fan fault

Table 6 Available Intel® Xeon® 6 Scalable CPUs

Product ID (PID)	Segment/ Workload	Maximum Socket (S)	Cores (C)	Clock Freq (GHz)	Power (W)	Cache Size (MB)	Highest DDR5 DIMM Clock (MT/s)
UCS-CPU-I6787P	Performance	2S	86	2.00	350	336	6400
UCS-CPU-I6781P[1]	Single Socket	1S	80	2.00	350	336	6400
UCS-CPU-I6767P	Performance	2S	64	2.40	350	336	6400
UCS-CPU-I6761P[1]	Single Socket	1S	64	2.50	350	336	6400
UCS-CPU-I6760P	Mainline	2S	64	2.20	330	320	6400
UCS-CPU-I6747P	Performance	2S	48	2.70	330	288	6400
UCS-CPU-I6741P[1]	Single Socket	1S	48	2.50	300	288	6400
UCS-CPU-I6740P	Mainline	2S	48	2.10	270	288	6400
UCS-CPU-I6736P	Performance	2S	36	2.00	205	144	6400
UCS-CPU-I6745P	Performance	2S	32	3.10	300	336	6400
UCS-CPU-I6737P	Performance	2S	32	2.90	270	144	6400
UCS-CPU-I6731P[1]	Single Socket	1S	32	2.50	245	144	6400
UCS-CPU-I6730P	Performance	2S	32	2.50	250	288	6400
UCS-CPU-I6530P	Mainline	2S	32	2.30	225	144	6400
UCS-CPU-I6728P	Socket scalable	2S	24	2.70	210	144	6400
UCS-CPU-I6527P	Performance	2S	24	3.00	255	144	6400

Table 6 Available Intel® Xeon® 6 Scalable CPUs

Product ID (PID)	Segment/ Workload	Maximum Socket (S)	Cores (C)	Clock Freq (GHz)	Power (W)	Cache Size (MB)	Highest DDR5 DIMM Clock (MT/s)
UCS-CPU-I6521P[1]	Single Socket	1S	24	2.60	225	144	6400
UCS-CPU-I6520P	Mainline	2S	24	2.40	210	144	6400
UCS-CPU-I6511P[1]	Single Socket	1S	16	2.50	150	72	6400
UCS-CPU-I6724P	Performance	2S	16	3.60	210	72	6400
UCS-CPU-I6517P	Performance	2S	16	3.20	190	72	6400
UCS-CPU-I6515P	Mainline	2S	16	2.30	150	72	6400
UCS-CPU-I6505P	Mainline	2S	12	2.20	150	48	6400
UCS-CPU-I6714P	Performance	2S	8	4.00	165	48	6400
UCS-CPU-I6507P	Performance	2S	8	3.50	150	48	6400

Accessories/spare included with CPU configuration:

- UCSC-HSLP-C220M8

NOTE: if you are adding a second CPU later, you may need to order accessories spares with it.

Notes:

1. Single Socket only CPUs

Table 7 CPU PID Decoder

Identifier#1	Identifier#2	Identifier#3	Identifier#4	Identifier#5	Identifier#6	Identifier#7
Cisco Product Family UCS	**CPU supplier** **I:** Intel	**CPU Generation** **6:** 6th Generation	**SKU Tier** **5:** GNR-SP Mid Tier **7:** GNR-SP High Tier	**CPU SKU (2 digits)** **Examples:** 20, 34, 48 See detailed SKUs stack from supplier **11, 21, 31, 41, 61, 81:** single-socket	**Core Architecture** **P:** P-Core	**Option/Spare CPU** **Blank:** Option **=:** Spare

Supported Configurations

- For 1-CPU systems, the server can support up to:
  - two half-height risers 1 and 2, or
  - one full-height riser 1
- For 2-CPU systems, the server can support up to:
  - three half-height risers 1, 2, and 3, or
  - two full-height risers 1 and 2,
  - 2 CPUs are required if more than 4 direct-attach NVMe drives are selected

The selection of 1 or 2 CPUs depends on the desired server functionality. See the following sections:

- ***STEP 5 SELECT MEMORY (REQUIRED), page 17***
- ***STEP 6 SELECT DRIVE CONTROLLERS (OPTIONAL), page 20***
- ***STEP 7 SELECT DRIVES (OPTIONAL), page 22***
- ***STEP 8 SELECT OPTION CARD(s) (OPTIONAL), page 25***

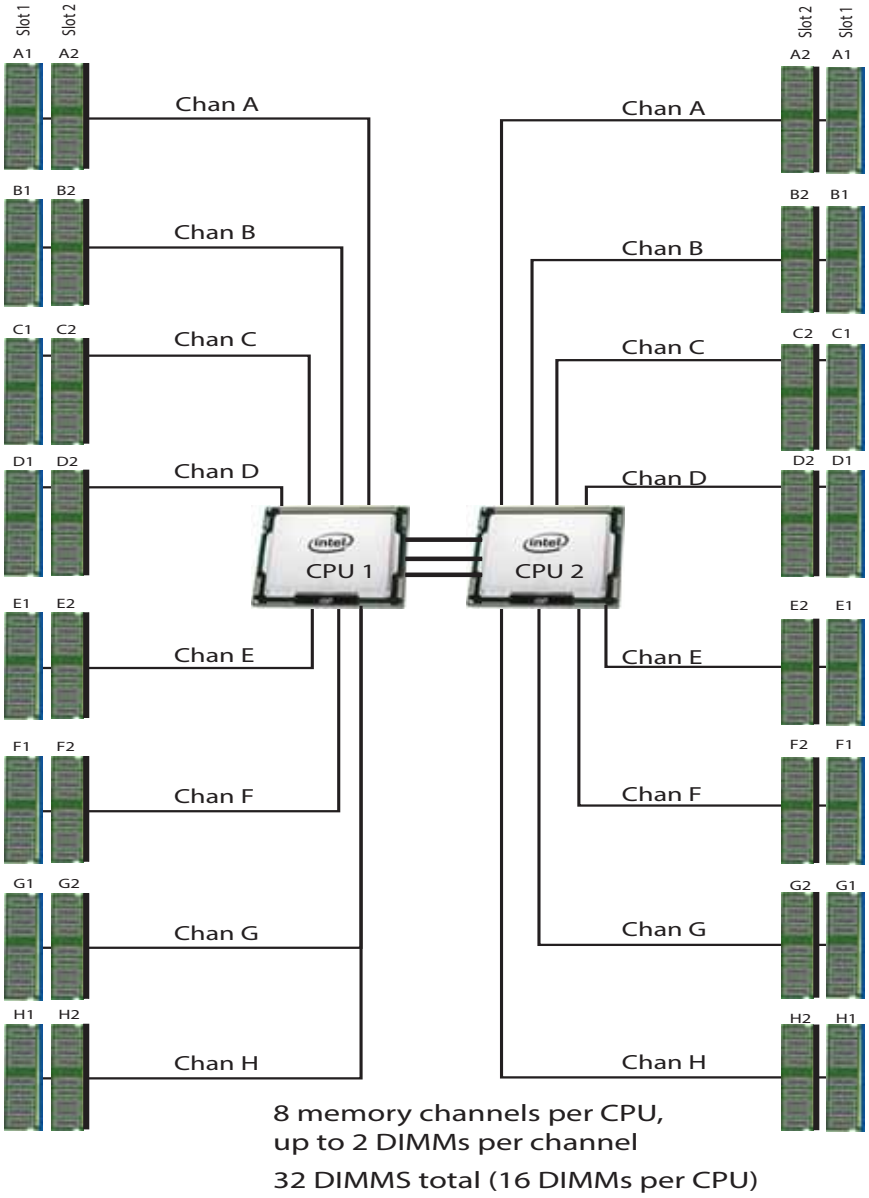
STEP 5 SELECT MEMORY (REQUIRED)

The ***Table 8*** below describes the main memory DIMM features supported on the server.

Table 8 Server Main Memory Features

Memory server technologies	Description
	DIMM
Intel® Xeon® CPU generation	Intel® Xeon® 6 CPUs
DDR5 memory clock speed	Up to 6400 MT/s 1DPC; Up to 5200 MT/s 2DPC
Operational voltage	1.1 Volts
DRAM fab density	16Gb, 24Gb and 32Gb
Memory type	RDIMM (Registered DDR5 DIMM)
Memory DRAM DIMM organization	Eight memory DIMM channels per CPU; up to 2 DIMMs Per Channel
Maximum number of DRAM DIMM per server	32 (2-Socket)
DRAM DIMM Densities and Ranks	16GB 1Rx8, 32GB 1Rx4, 32GB 2Rx8, 64GB 2Rx4, 96GB 2Rx4, 128GB 2Rx4, 256GB 4Rx4
Maximum system memory capacity	8TB (32x256GB)

Figure 5 Cisco UCS 220 M8 Memory Organization



Select DIMMs and Memory Mirroring

Select the memory configuration and whether or not you want the memory mirroring option. The available memory DIMMs and mirroring option are listed in ***Table 9***.



NOTE: When memory mirroring is enabled, the memory subsystem simultaneously writes identical data to two channels. If a memory read from one of the channels returns incorrect data due to an uncorrectable memory error, the system automatically retrieves the data from the other channel. A transient or soft error in one channel does not affect the mirrored data, and operation continues unless there is a simultaneous error in exactly the same location on a DIMM and its mirrored DIMM. Memory mirroring reduces the amount of memory available to the operating system by 50% because only one of the two populated channels provides data.



CAUTION: On C220 M8, when 256GB DIMMs are configured in the server, ambient temperature is limited to a maximum of 30°C.

Table 9 Memory Options for UCS M8 servers with Intel® Xeon® 6th Gen. CPUs

Product ID (PID)	PID Description	Ranks/DIMM
DDR5-6400 MT/s Cisco Memory PIDs list		
UCS-MRX16G1RE5	16GB RDIMM 1Rx8 1.1Volts (16Gb)	1
UCS-MRX32G1RE5	32GB RDIMM 1Rx4 1.1Volts (16Gb)	1
UCS-MRX32G2RE5	32GB RDIMM 2Rx8 1.1Volts (16Gb)	2
UCS-MRX64G2RE5	64GB RDIMM 2Rx4 1.1Volts (16Gb)	2
UCS-MRX96G2RF5	96GB RDIMM 2Rx4 1.1Volts (24Gb)	2
UCS-MR128G2RG5	128GB RDIMM 2Rx4 1.1Volts (32Gb)	2
UCS-MR256G4RG5	256GB RDIMM 4Rx4 1.1Volts (32Gb)	4
Memory Mirroring Option		
N01-MMIRRORD	Memory mirroring option	
Accessories/spare included with Memory configuration: ■ UCS-DDR5-BLK[1] is auto included for the unselected DIMMs slots		

Notes:

1. Any empty DIMM slot must be populated with a DIMM blank to maintain proper cooling airflow.

Memory configurations and mixing rules

- **Golden Rule:** Memory on every CPU socket shall be configured identically.
- For full details on supported memory configurations, count rules, population rules and mixing rules see the **Intel M8 Memory guide**

STEP 6 SELECT DRIVE CONTROLLERS (OPTIONAL)

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

- Up to 10 SAS/SATA/U.3 NVMe drives are controlled through a Cisco 24G Tri-Mode M1 RAID Controller
- Up to 10 SAS/SATA/U.3 NVMe drives are controlled through a Cisco 24G Tri-Mode M1 HBA

NOTE:

- **UCSC-RAID-M1L16**: 64 virtual drives (VDs) per controller, with up to 64 virtual drives (VDs) per disk group. OOB limited to 8 virtual drives (VDs) per disk group.
- If the Raid controllers are selected, it is factory-installed in a dedicated slot.
- For NVMe Hardware RAID, only U.3 NVMes are supported

Table 10 Hardware Controller Options

Product ID (PID)	PID Description
Controllers for Internal Drives	
UCSC-RAID-M1L16[1,2]	24G Tri-Mode M1 RAID Controller w/4GB FBWC 16Drv w/1U Brkt ■ This RAID controller supports up to 10, 2.5in (SFF) SAS/SATA HDD, SAS/SATA SSD, and U.3 NVMe operating at 3Gbps, 6Gbps, 12Gbps and 24Gbps. It includes a SuperCap and a 4GB flash-back write cache (FBWC). ■ Supports RAID0, 1, 5, 6, 10, 50, 60, and JBOD mode and supports mixed RAID and JBOD mode. ■ The RAID controller plugs directly into a dedicated slot. ■ For all self-encrypting drives (SED), standalone Management (CIMC/UCSM) 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). **Note:** When these RAID controllers are ordered as spares, the supercap and supercap cable are included. Please be aware that additional SAS cables, NVMe cables, and other mounting accessories may be required depending on your specific server configuration
UCSC-HBA-M1L16	24G Tri-Mode M1 HBA for 16 Drives ■ This Tri-mode HBA supports up to 10 SAS HDDs and SAS/SATA/U.3 NVMe operating at 3Gbps, 6Gbps, 12Gbps and 24Gbps. ■ No RAID support ■ Supports JBOD or pass-through mode ■ The 24G Tri-mode HBA plugs directly into a dedicated slot.

Table 10 Hardware Controller Options *(continued)*

Product ID (PID)	PID Description
Accessories/spare included with drive controller: ■ CBL-RAID-220M8 and UCSC-HPBKT-22XM7 are included with the selection of UCSC-RAID-M1L16 or UCSC-HBA-M1L16 drive controller. **NOTE:** If you are adding drive controller later as spare, you may need to order cables/supercap/super cables and controllers bracket with it.	

Notes:

1. U.3 NVMe drives selected with this Tri-mode RAID controller will be set to RAID attached as the factory default. The U.3 drives in slots 1-4, 6-9 can however operate in U.2 mode, directly attached to the CPU. This mode can be changed from the Cisco IMC if desired.
2. When ordering this Tri-mode RAID controller, please note that mixing SAS/SATA and NVMe drives in a single RAID volume is not supported. Virtual drives can only be created with drives of the same type



CAUTION: All RAID options require drives of same sector size and media type. The smallest drive capacity will be used to calculate the RAID volume size.

STEP 7 SELECT DRIVES (OPTIONAL)

The standard disk drive features are:

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

Select Drives

The available SAS and SATA SSDs/HDDs and NVMe drives are listed in ***Table 11***



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 11 Available SAS/SATA SSD and HDDs

Product ID (PID)	PID Description	Drive Type	Capacity
HDDs			
HDDs (10K RPM)			
UCS-HDB1T2GS10K2N	1.2TB 2.5in 12G SAS 10K RPM 512n HDD	SAS	1.2 TB
UCS-HDB2T4GS10K4K	2.4TB 2.5in 12G SAS 10K RPM 4K HDD	SAS	2.4 TB
UCS-HDB300GS10K2N	300GB 2.5in 12G SAS 10K RPM 512n HDD	SAS	300 GB
UCS-HDB600GS10K2N	600GB 2.5in 12G SAS 10K RPM 512n HDD	SAS	600 GB
Enterprise Performance SAS/SATA SSDs (High endurance, supports up to 10X or 3X DWPD (drive writes per day))			
SATA			
UCS-SD19TBM3XEP-D	1.9TB 2.5in Enter Perf 6G SATA Micron G2 SSD (3X)	SATA	1.9 TB
UCS-SD960GBM3XEPD	960GB 2.5in Enter Perf 6G SATA Micron G2 SSD (3X)	SATA	960 GB
UCS-SD480GBM3XEPD	480GB 2.5in Enter Perf 6G SATA Micron G2 SSD (3X)	SATA	480 GB
UCS-SDB1T9OA1P	1.9TB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD	SATA	1.9 TB
UCS-SDB3T8OA1P	3.8TB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD	SATA	3.8 TB
UCS-SDB960OA1P	960GB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD	SATA	960 GB
UCS-SDB480OA1P	480GB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD	SATA	480 GB
SAS			
UCS-SD32TKA3XEP-D	3.2TB 2.5in Enter Perf 24G SAS Kioxia G2 SSD (3X)	SAS	3.2 TB
UCS-SD16TKA3XEP-D	1.6TB 2.5in Enter Perf 24G SAS Kioxia G2 SSD (3X)	SAS	1.6 TB
Enterprise Value SAS/SATA SSDs (Low endurance, supports up to 1X DWPD (drive writes per day))			
SATA			
UCS-SD76TBM1XEV-D	7.6TB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	7.6 TB
UCS-SD38TBM1XEV-D	3.8TB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	3.8 TB

Table 11 Available SAS/SATA SSD and HDDs *(continued)*

Product ID (PID)	PID Description	Drive Type	Capacity
UCS-SD19TBM1XEV-D	1.9TB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	1.9 TB
UCS-SD960GBM1XEVD	960GB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	960 GB
UCS-SD480GBM1XEVD	480 GB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	480 GB
UCS-SD240GBM1XEVD	240GB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	240 GB
UCS-SDB7T6SA1VD	7.6TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD	SATA	7.6 TB
UCS-SDB3T8SA1VD	3.8TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD	SATA	3.8 TB
UCS-SDB1T9SA1VD	1.9TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD	SATA	1.9 TB
UCS-SDB960SA1VD	960GB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD	SATA	960 GB
UCS-SDB3T8OA1V	3.8TB 2.5in 15mm Solidigm S4520 Enter Value 6G SATA 1X SSD	SATA	3.8 TB
UCS-SDB960OA1V	960GB 2.5in 15mm Solidigm S4520 Enter Value 6G SATA 1X SSD	SATA	960 GB
SAS			
UCS-SD15TKA1XEV-D	15.3TB 2.5in Enter Value 24G SAS Kioxia G2 SSD	SAS	15.3 TB
UCS-SD76TKA1XEV-D	7.6TB 2.5in Enter Value 24G SAS Kioxia G2 SSD	SAS	7.6 TB
UCS-SD38TKA1XEV-D	3.8TB 2.5in Enter Value 24G SAS Kioxia G2 SSD	SAS	3.8 TB
UCS-SD19TKA1XEV-D	1.9TB 2.5in Enter Value 24G SAS Kioxia G2 SSD	SAS	1.9 TB
Self-Encrypted Drives (SED) (1X or 3X)			
SATA			
UCS-SD960GM2NK9-D	960GB 2.5in Enter Value 6G SATA Micron G2 SSD (SED)	SATA	960 GB
SAS			
UCS-SD76TBKANK9-D	7.6TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (SED-FIPS)	SAS	7.6 TB
UCS-SD38TBKANK9-D	3.8TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (SED-FIPS)	SAS	3.8 TB
UCS-SD16TBKANK9-D	1.6TB 2.5in Enter Perf 12G SAS Kioxia G2 SSD (3X SED-FIPS)	SAS	1.6 TB
PCIe/NVMe SFF (2.5-inch) SFF drives			
UCS-NVMEG4-M1536D	15.3TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	U.3	15.3 TB
UCS-NVMEG4-M6400D	6.4TB 2.5in U.3 15mm P7450 Hg Perf Hg End NVMe (3X)	U.3	6.4 TB
UCS-NVMEG4-M1600D	1.6TB 2.5in U.3 15mm P7450 Hg Perf Hg End NVMe (3X)	U.3	1.6 TB
UCS-NVB3T8M2V9[1]	3.8TB 2.5in U.3 15mm Micron 7500 HgPerf MedEnd 1X NVMe FIPS	U.3	3.8 TB
UCS-NVB1T9M2V9[1]	1.9TB 2.5in U.3 15mm Micron 7500 HgPerf MedEnd 1X NVMe FIPS	U.3	1.9 TB
UCS-NVB7T6M2V9[1]	7.6TB 2.5in U.3 15mm Micron 7500 HgPerf MedEnd 1X NVMe FIPS	U.3	7.6 TB
UCS-NVB15T3M2V9[1]	15.3TB 2.5in U.3 15mm Micron 7500 HgPerf MedEnd 1X NVMe FIPS	U.3	15.3 TB
UCS-NVB960M2V	960GB 2.5in U.3 15mm Micron 7500 Hg Perf Med End 1X NVMe	U.3	960 GB
UCS-NVB1T9M2V	1.9TB 2.5in U.3 15mm Micron 7500 Hg Perf Med End 1X NVMe	U.3	1.9 TB
UCS-NVB3T2M2P	3.2TB 2.5in U.3 15mm Micron 7500 Hg Perf Hg End 3X NVMe	U.3	3.2 TB
UCS-NVB3T8M2V	3.8TB 2.5in U.3 15mm Micron 7500 Hg Perf Med End 1X NVMe	U.3	3.8 TB
UCS-NVB7T6M2V	7.6TB 2.5in U.3 15mm Micron 7500 Hg Perf Med End 1X NVMe	U.3	7.6 TB
UCS-NVB1T6M2P	1.6TB 2.5in U.3 15mm Micron 7500 Hg Perf Hg End 3X NVMe	U.3	1.6 TB
UCS-NVB61T4M3L	61.4TB 2.5" U.2 15mm Micron 6550 HgPerf EcoEnd G4/5 <1X NVMe	U.2	61.4 TB

Table 11 Available SAS/SATA SSD and HDDs *(continued)*

Product ID (PID)	PID Description	Drive Type	Capacity
Accessories/spare included with drives : ■ UCSC-BBLKD-M7 is included for the not selected front storage device. ■ CBL-NVME-C220M8-P1 and CBL-NVME-220M8-P3 are auto included with selection of NVMe drives in the server **NOTE:** If you are adding drive later as spare, you may need to order cables with it.			

Notes:

1. Micron 7500 SED-FIPS cannot be used for boot in direct attach mode. They can be used for boot via RAID controller.

Caveats

- Unless tri-mode controller is selected, U.3 NVMe drives are connected directly to CPU 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.
- SED drives can be mixed with the non-SED drives in ***Table 11 on page 22***.
- SFF NVMe drives are bootable in UEFI mode only.

STEP 8 SELECT OPTION CARD(s) (OPTIONAL)

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

The standard PCIe card offerings are:

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

Select Option Cards

The available option cards are listed in ***Table 12***.

Table 12 Available PCIe Option Cards

Product ID (PID)	PID Description	Location	Card Size[1]
Modular LAN on Motherboard (mLOM)[2]			
UCSC-M-V5Q50GV2-D	Cisco VIC 15427 4x 10/25/50G mLOM C-Series w/Secure Boot	mLOM	HHHL, SS
UCSC-M-V5D200GV2D	Cisco VIC 15237 2x 40/100/200G mLOM C-Series w/Secure Boot	mLOM	HHHL, SS
Open Compute Project (OCP)[3]			
UCSC-O-ID10GC-D	Intel X710T2LOCPV3G1L 2x10GbE RJ45 OCP3.0 NIC	OCP	SFF
UCSC-O-N6CD25GFO	NVIDIA OEM MCX631432AC-ADAB CX6Lx 2x25G SFP28 x8 OCP NIC	OCP	SFF
UCSC-O-N6CD100GFO	NVIDIA OEM MCX623436AC-CDAB CX6Dx 2x100G QSFP56 x16 OCP NIC	OCP	SFF
Virtual Interface Cards (VICs)[2]			
UCSC-P-V5Q50G-D	Cisco VIC 15425 4x 10/25/50G PCIe C-Series w/Secure Boot	Riser 1 or 3	HHHL, SS
UCSC-P-V5D200G-D	Cisco VIC 15235 2x 40/100/200G PCIe C-Series w/Secure Boot	Riser 1 or 3	HHHL, SS
Network Interface Cards (NICs)			
1GbE NICs			
UCSC-P-IQ1GC	Cisco-Intel I710-T4L 4x1GBASE-T NIC	Riser 1, 2, or 3	HHHL, SS
10GbE NICs			
UCSC-P-ID10GC-D	Cisco-Intel X710T2LG 2x10GBE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-IQ10GC-D	Cisco-Intel X710T4LG 4x10GBE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
25GbE NICs			
UCSC-P-I8D25GF-D	Cisco-Intel E810XXVDA2 2x25/10GBE SFP28 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-N6D25GFO	NVIDIA OEM MCX631102AS-ADAT CX6Lx 2x25GbE SFP28 x8 PCIe NIC	Riser 1, 2, or 3	HHHL, SS

Table 12 Available PCIe Option Cards *(continued)*

Product ID (PID)	PID Description	Location	Card Size[1]
UCSC-P-N7Q25GF	CX713104AS-ADAT: 4x25GbE SFP56 Gen4x16, PCIe NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-I8Q25GF-D	Cisco-Intel E810XXVDA4L 4x25/10 GbE SFP28 PCIe NIC	Riser 3	FHHL, SS
UCSC-P-N7Q25GFO	NVIDIA OEM CX713104AS-ADAT: 4x25GbE SFP56 Gen4x16, PCIe NIC	Riser 1, 2, or 3	HHHL, SS
100GbE NICs			
UCSC-P-M6CD100GFO	NVIDIA OEM MCX623106AC-CDAT, 2x100 GbE QSFP56 PCIe Crypto	Riser 1, 2, or 3	HHHL, SS
UCSC-P-M6DD100GFO	NVIDIA OEM MCX623106AS-CDAT, 2x100 GbE QSFP56 PCIe No Crypto	Riser 1, 2, or 3	HHHL, SS
UCSC-P-I8D100GF-D	Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC	Riser 1, 2, or 3	HHHL, SS
200GbE NICs			
UCSC-P-N7D200GF	MCX755106AS-HEAT:CX-7 2x200GbE QSFP112 PCIe Gen5x16, VPI NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-N7D200GF	MCX755106AS-HEAT:CX-7 2x200GbE QSFP112 PCIe Gen5x16, VPI NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-N7D200GFO	NVIDIA OEM MCX755106AS-HEAT 2x200GbE QSFP112 PCIe Gen5 NIC	Riser 1, 2, or 3	HHHL, SS
UCSC-P-N3220L	Nvidia OEM BlueField-3 B3220L SuperNIC 2x200G	Riser 3	FHHL, SS
UCSC-P-NC3220L	Nvidia Crypto B3220L SuperNIC 2x200GbE/IB QSFP112 Gen5 FHHL	Riser 3	FHHL, SS
Host Bus Adapters (HBAs)			
UCSC-P-Q6D32GF-D	Cisco-QLogic QLE2772 2x32GFC Gen 6 Enhanced PCIe HBA	Riser 1, 2, or 3	HHHL, SS
UCSC-P-B7D32GF-D	Cisco-Emulex LPe35002-M2-2x32GFC Gen 7 PCIe HBA	Riser 1, 2, or 3	HHHL, SS
UCSC-PCIEBD16GF-D	Emulex LPe31002 dual port 16G FC HBA	Riser 1, 2, or 3	HHHL, SS
UCSC-P-Q7D64GF	Cisco-QLogic QLE2872, 2x64GFC Gen 7 PCIe HBA	Riser 1, 2, or 3	HHHL, SS
Accessories/spare included with PCI Card. ■ UCSC-OCP3-KIT-D is included along with the selection Open Compute Project (OCP) card			

Notes:

1. HHHL = half-height, half-length; FHHL = full-height, half-length; SS = single-slot; DS = double-slot. SFF = small form factor.
2. 50G speed on the 4-port and 200G speed on the 2-port are only supported on standalone servers with supported cables. Please refer to the **VIC 15000 series datasheet** for supported switches and cables.
3. For installation in the mLOM slot, you can order either an mLOM VIC, or the OCP NIC - but not both. If ordering the OCP NIC, the OCP Mechanical Kit (UCSC-OCP3-KIT) must also be installed in order to mount OCP NIC in the mLOM slot.
4. This Virtual Interface Cards incorporate VIC Secure Boot technology.

Approved Configurations

(1) 1-CPU Systems

- You can select up to two of the PCIe option cards listed in ***Table 12*** to be installed in Riser 1 and Riser 2. Riser 1 and Riser 2 is controlled by CPU 1. Risers 3 cannot be installed in a 1-CPU system.

(2) 2-CPU Systems

- You can select up to two of the PCIe option cards listed in ***Table 12*** for a two-riser system and up to three of the PCIe option cards for a three-riser system. Risers 1 and 2 are controlled by CPU and riser 3 is controlled by CPU 2.

Caveats

- For 1-CPU systems:
  - Half Height Riser 1 and Riser 2 is supported. Full Height Riser 1 is supported
  - Only a single plug-in PCIe VIC card is supported and must be installed in Riser 1. However, in addition to the one PCIe VIC card, you can also choose to install an mLOM/OCP 3.0 card in the mLOM slot at the rear of the chassis.
- For 2-CPU systems:
  - All risers (Risers 1, 2, and 3) are supported
  - Two plug-in PCIe VIC cards can be installed in 2-CPU systems. VICs can be placed in Riser 1 or 3 only in half height riser combination. For full height riser, you can use either Riser 1 or 3 for the VICs. In addition, you can order an mLOM/OCP 3.0 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 12 on page 25*** for the selection of plug-in and mLOM VIC cards.
- 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 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
- For installation in the mLOM slot, you can order either an mLOM VIC, or the OCP NIC - but not both. If ordering the OCP NIC, the OCP Mechanical Kit (UCSC-OCP3-KIT) must also be installed in order to mount OCP NIC in the mLOM 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:
Product Guide
Speed White Paper

STEP 9 ORDER GPU CARDS (OPTIONAL)

Select GPU Options

The available GPU PCIe options are listed in ***Table 13***.

Table 13 Available PCIe GPU Cards[1]

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	All Risers

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.
- Refer to ***Cisco UCS C220 M8 Installation Guide*** for the more information.

STEP 10 ORDER M.2 BOOT RAID CONTROLLER and SATA SSDs (OPTIONAL)

- Order Cisco boot optimized M.2 RAID controller from ***Table 14***. The boot optimized RAID controller plugs into a connector on the motherboard and holds up to two M.2 SATA drives.

NOTE:

- The Cisco boot optimized M.2 RAID controller supports RAID 1 and JBOD mode
- The Cisco boot optimized M.2 RAID controller is available only with 240GB, 480GB, and 960GB M.2 SSDs.
- CIMC is supported for configuring of volumes and monitoring of the controller and installed SATA M.2 drives
- The SATA M.2 drives can boot in UEFI mode only. Legacy boot mode is not supported
- Up to 1 Boot-Optimized RAID Controller is supported per system

Table 14 Boot-Optimized RAID Controller

Product ID (PID)	PID Description	Controller Type	Hot- Swappable
UCS-M2-HWRAID2[1]	Cisco Boot optimized M.2 Raid controller for SATA drives	Internal	No
UCSC-M2RM-M8[2]	UCS C220/240 M8 Rear Hot-plug M.2 module (MLOM)	MLOM Slot	Yes

Notes:

1. UCS-M2-HWRAID2 plugs into a connector on the motherboard and holds up to two M.2 SATA drives. Hot-plug replacement of the M.2 drives is not supported with UCS-M2-HWRAID2. The server must be powered off. UCSC-M2I-220M8 is auto included with UCS-M2-HWRAID2. If you are adding M.2 RAID controller as spare, you may need to order accessories with it.
2. UCSC-M2RM-M8 is installed in the mLOM location. If UCSC-M2RM-M8 is selected, mLOM/OCP card cannot be used. Hot-plug replacement of the M.2 drives is supported with UCSC-M2RM-M8. CBL-M2RM-220M8 is auto included with UCSC-M2RM-M8. If you are adding M.2 RAID controller as spare, you may need to order accessories with it.

- Order one or two matching M.2 SATA SSDs from ***Table 15*** along with a boot-optimized RAID controller (see ***Table 14***). Each boot-optimized RAID controller can accommodate up to two SATA M.2 SSDs.

NOTE:

- 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.

Table 15 M.2 SATA SSDs

Product ID (PID)	PID Description
UCS-M2-240G-D	240GB M.2 SATA Micron G2 SSD
UCS-M2-480G-D	480GB M.2 SATA SSD
UCS-M2-960G-D	960GB M.2 SATA Micron G2 SSD
UCS-M2240OA1V	240GB M.2 Boot Solidigm S4520 SATA 1X SSD
UCS-M2480OA1V	480GB M.2 Boot Solidigm S4520 SATA 1X SSD

STEP 11 ORDER POWER SUPPLY (REQUIRED)

Power supplies share a common electrical and physical design that allows for hot-plug and tool-less installation into M8 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



WARNING:

- Starting 1st 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 16 Power Supply

Product ID (PID)	PID Description
PSU (Input High Line 210VAC)	
UCSC-PSU1-1200W-D	1200W Titanium power supply for C-Series Servers
UCSC-PSUV21050D-D	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
PSU (Input Low Line 110VAC)	
UCSC-PSU1-1200W-D	1200W Titanium power supply for C-Series Servers **Titanium**
UCSC-PSU1-2300W-D	2300W Power supply for C-series servers **Titanium**



NOTE:

- In a server with two power supplies, both power supplies must be identical.
- Refer to ***Power Specifications, page 50*** section for the full details on the each power supply.

STEP 12 SELECT INPUT POWER CORD(s) (REQUIRED)

Using ***Table 17*** and ***Table 18***, 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 17*** lists the power cords for servers that use power supplies less than 2300 W. ***Table 18*** 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 17 Available Power Cords (for server PSUs less than 2300 W)

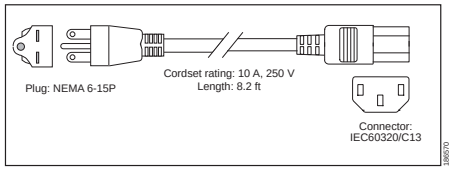
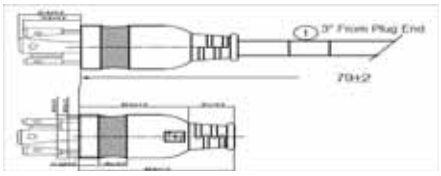
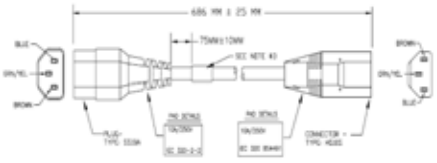
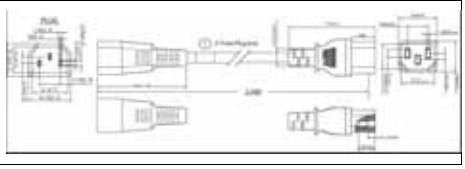
Product ID (PID)	PID Description	Images
NO-POWER-CORD	ECO friendly green option, no power cable will be shipped	
CAB-48DC40A8AWG-D	C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A	
CAB-N5K6A-NA	Power Cord, 200/240V 6A, North America	
CAB-AC-L620-C13-D	AC Power Cord, NEMA L6-20 - C13, 2M/6.5ft	
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 17 Available Power Cords (for server PSUs less than 2300 W)

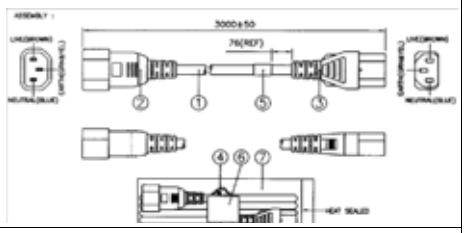
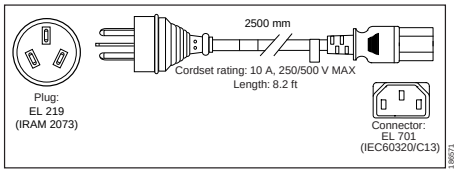
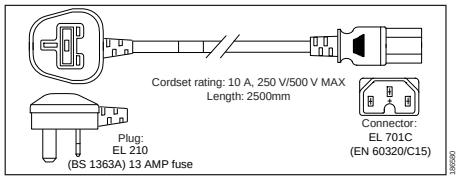
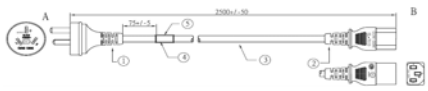
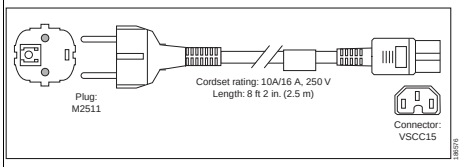
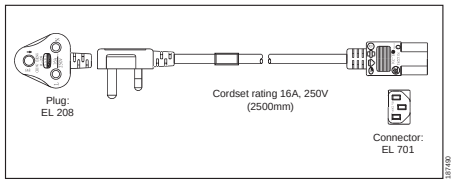
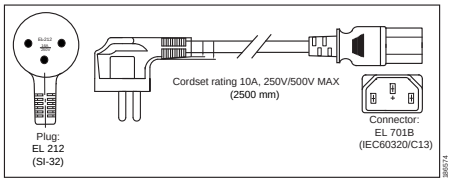
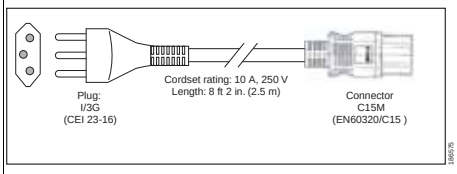
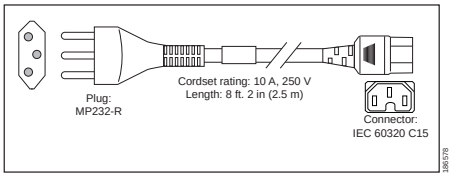
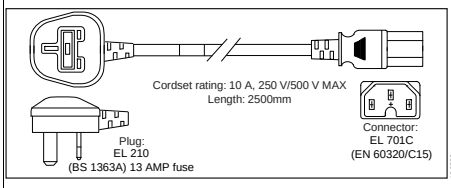
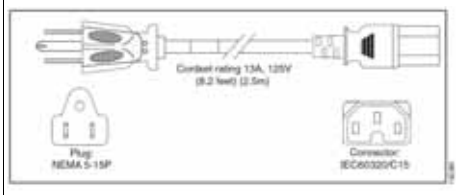
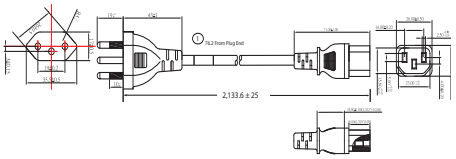
Product ID (PID)	PID Description	Images
CAB-C13-C14-AC	CORD,PWR,JMP,IEC60320/C14,IEC60320/C13, 3.0M	
CAB-250V-10A-AR	Power Cord, 250V, 10A, Argentina	
CAB-9K10A-AU	Power Cord, 250VAC 10A 3112 Plug, Australia	
CAB-250V-10A-CN	AC Power Cord - 250V, 10A - PRC	
CAB-9K10A-EU	Power Cord, 250VAC 10A CEE 7/7 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 17 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[1]	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	
CAB-250V-10A-BR	Power Cord - 250V, 10A - Brazil	
CAB-C19-C20-IND-D	Power Cord C19-C20 India	Image not available
CAB-C19C203M-JP-D	Power Cord C19-C20, 3M/10ft Japan PSE mark	Image not available
CAB-C13C142M-JP-D	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
CAB-48DC40A-INT-D	C-Series -48VDC PSU PWR Cord, 3.5M, 3 Wire, 8AWG, 40A (INT)	Image not available
CAB-48DC-40A-AS-D	C-Series -48VDC PSU PWR Cord, 3.5M, 3Wire, 8AWG, 40A (AS/NZ)	Image not available

Notes:

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

Table 18 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-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-9K16A-BRZ	Power Cord 250VAC 16A, Brazil, Src Plug EL224-C19	Image not available
CAB-9K16A-KOR	Power Cord 250VAC 16A, Korea, Src Plug	Image not available
CAB-AC-16A-AUS	Power Cord, 250VAC, 16A, Australia C19	Image not available
CAB-AC-2500W-EU	Power Cord, 250Vac 16A, Europe	Image not available
CAB-C14C19-10A-EU	Power Cord C14-C19 10A EU	Image not available
CAB-AC-2500W-INT	Power Cord, 250Vac 16A, INTL	Image not available
CAB-AC-2500W-ISRL	Power Cord,250VAC,16A,Israel	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-AC16A-CH	16A AC Power Cord For China	Image not available
CAB-ACS-16	AC Power Cord (Swiss) 16A	Image not available
NO-POWER-CORD	ECO friendly green option, no power cable will be shipped	Image not available

STEP 13 ORDER TOOL-LESS RAIL KIT (REQUIRED) AND REVERSIBLE CABLE MANAGEMENT ARM (OPTIONAL)

- Tool-less Rail Kit:

Select a tool-less rail kit (or no rail kit) from ***Table 19***.

NOTE:

- Cisco recommends a minimum quantity of 1 Rail Kit
- If you plan to rackmount your server, you must order a tool-less rail kit.

Table 19 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

- 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. Select an Optional Reversible Cable Management Arm from ***Table 20***.

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 M6 and M7 servers.

Table 20 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, check the ***Cisco UCS C220 M8 Installation Guide***.

STEP 14 SELECT MANAGEMENT CONFIGURATION (OPTIONAL)

By default, the 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.



NOTE:

- There are no LOM ports on the C220 and C240 M8 servers. Servers ordered without a VIC or OCP card will ship in Dedicated network mode, unless otherwise specified by a configurable SW PID **(UCSC-CCARD-01)**
- For full details on all the NIC mode settings, see

https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/hw/C220M8/install/b-c220-m8-installation-guide.html

Table 21 Management Configuration Ordering Information

Product ID (PID)	PID Description
UCSC-DLOM-01-D	Dedicated Mode BIOS setting for C-Series Servers ■ To change the default NIC mode to Dedicated NIC mode, select this card. ■ In Dedicated NIC mode, the CIMC can be accessed only through the dedicated management port. ■ See *Chassis Rear View (two full-height, 3/4-length PCIe risers), page 6* for the location of the management port
UCSC-CCARD-01-D	Cisco Card Mode BIOS setting for C-Series Servers ■ To change the default NIC mode to Cisco Card Mode, select this card. ■ If Cisco card selected, a VIC or MLOM must also be included in the configuration. if OCP card is included in the configuration, a VIC card must be selected. ■ In this mode, you can assign an IP address to the CIMC using DHCP and from there you can fully automate your deployment.

In addition, the optional software PIDs listed in *Table 24 on page 44* can be ordered for setting the server to operate in various modes.

STEP 15 ORDER SECURITY DEVICES (REQUIRED)

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 22***



NOTE:

- The TPM module used in this system conforms to TPM 2.0, 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 22 Security Devices

Product ID (PID)	PID Description
UCS-TPM-002D-D	TPM 2.0 TCG FIPS140-2 CC+ Cert M7 Intel MSW2022 Compliant
UCSX-TPM-OPT-OUT-D	OPT OUT, TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified[1]
UCSC-INT-SW02-D	C220 and C240 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 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 23***.

Table 23 Locking Bezel Option

Product ID (PID)	Description
UCSC-BZL-C220-D	C220 M8 Security Bezel

STEP 17 SELECT OPERATING SYSTEM



NOTE:

- See this link for operating system guidance: **https://ucshcltool.cloudapps.cisco.com/public/**

Table 24 Operating System

Product ID (PID)	PID Description
Microsoft Windows Server	
MSWS-25-ST16C	Windows Server 2025 Standard (16 Cores)
MSWS-25-ST16C-NS	Windows Server 2025 Standard (16 Cores) - No Cisco SVC
MSWS-25-ST24C	Windows Server 2025 Standard (24 Cores)
MSWS-25-ST24C-NS	Windows Server 2025 Standard (24 Cores) - No SVC
MSWS-25-DC16C	Windows Server 2025 Datacenter (16 Core)
MSWS-25-DC16C-NS	Windows Server 2025 DC (16 Cores) - No SVC
MSWS-25-DC24C	Windows Server 2025 Datacenter (24 Core)
MSWS-25-DC24C-NS	Windows Server 2025 Datacenter (24 Core) - No SVC
Red Hat	
RHEL-2S2V-1A	Red Hat Enterprise Linux (1-2 CPU,1-2 VN); 1-Yr Support Req
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 1Yr SnS Reqd
RHEL-2S2V-3S	Red Hat Enterprise Linux (1-2 CPU,1-2 VN); Prem 3Yr SnS Reqd
RHEL-2S-HA-1S	RHEL High Availability (1-2 CPU); Premium 1-yr SnS Reqd
RHEL-2S-HA-3S	RHEL High Availability (1-2 CPU); Premium 3-yr SnS Reqd
RHEL-2S-RS-1S	RHEL Resilent Storage (1-2 CPU); Premium 1-yr SnS Reqd
RHEL-2S-RS-3S	RHEL Resilent Storage (1-2 CPU); Premium 3-yr SnS Reqd
RHEL-VDC-2SUV-1S	RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 1 Yr SnS Reqd

Table 24 Operating System *(continued)*

Product ID (PID)	PID Description
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 Reqd
RHEL-SAP-2S2V-3S	RHEL for SAP Apps (1-2 CPU, 1-2 VN); Prem 3-Yr SnS Reqd
RHEL-SAPSP-3S	RHEL SAP Solutions Premium - 3 Years
RHEL-SAPSS-3S	RHEL SAP Solutions Standard - 3 Years
SUSE	
SLES-2S2V-1A	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 1-Yr Support Req
SLES-2S2V-3A	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 3-Yr Support Req
SLES-2S2V-5A	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 5-Yr Support Req
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-2SUVM-1A	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; 1Y Supp Req
SLES-2SUVM-3A	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; 3Y Supp Req
SLES-2SUVM-5A	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; 5Y Supp Req
SLES-2S2V-1S	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 1-Yr SnS
SLES-2S2V-3S	SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 3-Yr SnS
SLES-2S2V-5S	SUSE Linux Enterprise Svr (1-2 CPU,1-2 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-2SUVM-1S	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; Prio 1Y SnS
SLES-2SUVM-3S	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; Prio 3Y SnS
SLES-2SUVM-5S	SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; Prio 5Y SnS

Table 24 Operating System *(continued)*

Product ID (PID)	PID Description
SLES and SAP	
SLES-SAP-2S2V-1S	SLES for SAP Apps (1-2 CPU, 1-2 VM); Priority 1-Yr SnS
SLES-SAP-2S2V-3S	SLES for SAP Apps (1-2 CPU, 1-2 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-2S2V-1A	SLES for SAP Apps w/ HA (1-2 CPU, 1-2 VM); 1-Yr Support Reqd
SLES-SAP-2S2V-3A	SLES for SAP Apps w/ HA (1-2 CPU, 1-2 VM); 3-Yr Support Reqd
SLES-SAP-2S2V-5A	SLES for SAP Apps w/ HA (1-2 CPU, 1-2 VM); 5-Yr Support Reqd

STEP 18 CISCO INTERSIGHT

Cisco Intersight™ is a Software-as-a-Service (SaaS) hybrid cloud operations platform which delivers intelligent automation, observability, and optimization to customers for traditional and cloud-native applications and infrastructure.

Product ID (PID)	
DC-MGT-SAAS	Cisco Intersight SaaS

Select Cisco Intersight subscription option as desired from *Table 25*

Table 25 Cisco Intersight

Product ID (PID)	PID Description
Cisco Intersight 2.0 Infrastructure Services	
DC-MGT-IS-SAAS-ES[1]	Infrastructure Services SaaS/CVA - Essentials
DC-MGT-IS-SAAS-AD[1]	Infrastructure Services SaaS/CVA - Advantage
DC-MGT-IS-PVAPP-ES[1]	Infrastructure Services PVA - Essentials
DC-MGT-IS-PVAPP-AD[1]	Infrastructure Services PVA - Advantage
Add-Ons	
DC-MGT-IS-UCSD	UCS Director - 1 Server License (includes Network, Storage)
Cisco Intersight Workload Optimizer (IWO) - SaaS	
VM Instance	
DC-MGT-WO-SAAS-ES[1]	Cisco Intersight Workload Optimizer SaaS - Essentials
DC-MGT-WO-SAAS-AD[1]	Cisco Intersight Workload Optimizer SaaS - Advantage
DC-MGT-WO-SAAS-PR[1]	Cisco Intersight Workload Optimizer SaaS - Premier
VDI Instance	
DC-MGT-WOD-SAAS-ES[1]	Cisco Intersight Workload Optimizer SaaS VDI - Essentials
DC-MGT-WOD-SAAS-AD[1]	Cisco Intersight Workload Optimizer SaaS VDI - Advantage
DC-MGT-WOD-SAAS-PR[1]	Cisco Intersight Workload Optimizer SaaS VDI - Premier

Notes:

1. Smart account (SA) required

Select Cisco Intersight support option as desired from *Table 26*

Table 26 Cisco Intersight Support

Product ID (PID)	PID Description
Cisco Intersight Support	
SVS-SSTCS-DCMGMT[1]	Solution Support for DC Mgmnt
SVS-L1DCS-INTER[1]	CXL1 for INTERSIGHT
SVS-L2DCS-INTER[1]	CXL2 for INTERSIGHT
SVS-DCM-SUPT-BAS	Basic Support for DCM

Notes:

1. Smart account (SA) required



NOTE: An Intersight license is required for every server.

SUPPLEMENTAL MATERIAL

PCIe Port Assignment

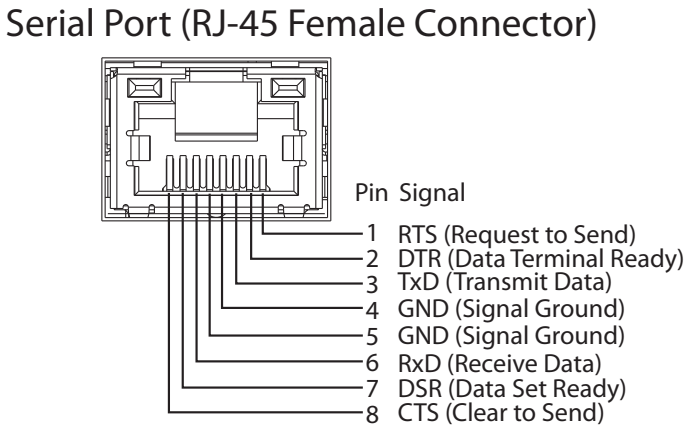
Slots	CPU1	CPU2
Riser 1 (1A/1B)	Gen5 x16	
Riser 2 (2A)	Gen5 x16	
Riser 3 (3A / 3B)		Gen5 x16
mLOM / OCP	Gen4 x16	
RAID/HBA	Gen4 x16	
SFF NVMe slots 1,2,6,7[1]		Gen4 x4 each
SFF NVMe slots 3,4,8,9[1]	Gen4 x4 each	
M.2 Boot RAID	Gen3 x2	

Notes:

1. NVMe Drives are connected directly to CPUs if not behind a Raid controller

Serial Port Details

Figure 6 Serial Port (Female RJ-45 Connector) Pinout



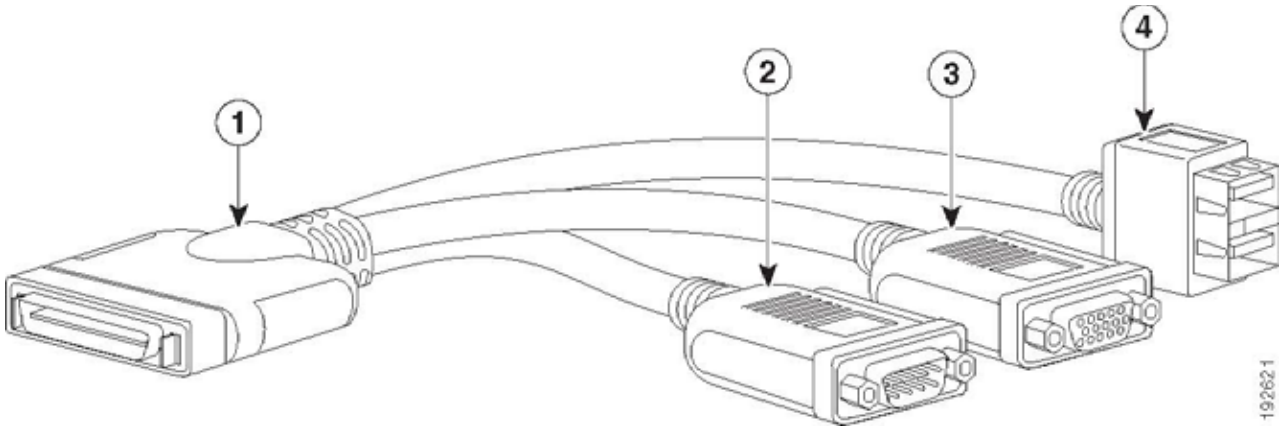
KVM Cable

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.

Table 27 KVM Cable

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

Figure 7 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 C220 M8 server. Some of these parts are configured with every server.

- Spare parts for the Cisco UCS C220 M8 server use the same Product IDs (PIDs) as the **regular components**, with the addition of an **equals sign (=) at the end** of the PID. For example, if the regular PID for a component is **UCS-CPU-I6760P**, its corresponding spare PID would be **UCS-CPU-I6760P=**
- Therefore, to find the full list of available spare parts and their descriptions, refer to the relevant sections for each component (e.g., Risers, CPUs, Memory, Drive Controllers, Drives, PCIe Cards, Power Supplies, etc.) and append an = to the listed PIDs.



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 28***.

However, the ***Table 28*** below lists the spare parts and their descriptions. These are different from the main components described in previous sections. This table is the complete list for all spare part IDs (they end with an '=' sign), as these specific spare parts are not listed individually in those earlier sections.

Table 28 Spare Parts

Product ID (PID)	PID Description
UCSC-HSLP-C220M8=	Heatsink for C220M8, C240M8L and C240M8 w/GPU
UCS-DDR5-BLK=	UCS DDR5 DIMM Blanks
UCSC-FBRS2-C220M7=	C220 M7 Riser2 HH Filler Blank
UCSC-FBRS-C220-D=	C220M7 HH Riser3 blank
UCSC-FBRSF-220M7=	C220 M7 Riser FH Filler Blank
UCSC-BBLKD-M7=	UCS C-Series M7 SFF drive blanking panel
UCSC-PSU-BLK-D=	Power Supply Blanking Panel for M7 / M8 servers
UCSC-M2IF-220M8=	UCS C220 M8 Internal M.2 Filler/Carrier
UCSC-M2I-220M8=	UCS C220 M8 internal M.2 module
CBL-M2RM-220M8=	C220M8 rear Hot-plug M.2 (MLOM/OCP) cable
CBL-RAID-220M8=	C220M8 Y cable MB P2 to RAID/HBA
CBL-NVME-220M8-P1=	C220M8SFF NVMe cable MB P1 to SFF BP (CPU1)
CBL-NVME-220M8-P3=	C220M8SFF NVMe cable MB P3 to SFF BP (CPU2)
UCSC-HPBKT-22XM7=	UCS C-Series M7 1U HP RAID Controller Bracket
UCSC-OCP3-KIT-D=	C2XX OCP 3.0 Interposer W/Mech Assy
UCSC-LPC25-1485-D=	Low profile bracket for VIC15425
UCSC-LPC40-1485-D=	Low profile bracket for VIC15235
UCSC-FAN-C220M8=	UCS C220M8 Fan

Table 28 Spare Parts

Product ID (PID)	PID Description
UCSC-SCAP-D=	M8 Super Cap

TECHNICAL SPECIFICATIONS

Dimensions and Weight

Table 29 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	
0*2.5" HDDs, 0*CPU(w/o HS), 0*DIMM, 1*2300W PSU, 2FH riser 1(w/o PCIe), 2FH riser 2(w/o PCIe), BBU+M.2 module, mLOM, Raid tray	14.22 kg = 31.35 lb
0*2.5" HDDs, 0*CPU(w/o HS), 0*DIMM, 1*2300W PSU, 2FH riser 1(w/o PCIe), 2FH riser 2(w/o PCIe), BBU+M.2 module, mLOM, Raid tray, **Rail kit**	17.98 kg = 39.64 lb
1*2.5" HDDs, 1*CPU(w/HS), 1*DIMM, 1*2300W PSU, 2FH riser 1(w/o PCIe), 2FH riser 2(w/o PCIe), BBU+M.2 module, mLOM, Raid tray	15.09 kg = 33.27 lb
1*2.5" HDDs, 1*CPU(w/HS), 1*DIMM, 1*2300W PSU, 2FH riser 1(w/o PCIe), 2FH riser 2(w/o PCIe), BBU+M.2 module, mLOM, Raid tray, **Rail kit**	18.85 kg = 41.56 lb
10*2.5" HDDs, 2*CPU(w/HS), 32*DIMM, 2*2300W PSU, 2FH riser 1(w/o PCIe), 2FH riser 2(w/o PCIe), BBU+M.2 module, mLOM, Raid tray	19.84 kg = 43.74 lb
10*2.5" HDDs, 2*CPU(w/HS), 32*DIMM, 2*2300W PSU, 2FH riser 1(w/o PCIe), 2FH riser 2(w/o PCIe), BBU+M.2 module, mLOM, Raid tray, **Rail kit**	23.60 kg = 52.03 lb

Power Specifications

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

- 1050W (DC) power supply (see ***Table 30***)
- 1200 W (AC) power supply (see ***Table 31***)
- 1600 W (AC) power supply (see ***Table 32***)
- 2300 W (AC) power supply (see ***Table 33***)

Table 30 1050W (DC) Power Supply Specifications

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 31 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)[1]	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 (%)[2]	90	90	91	91
Minimum Rated Power Factor[2]	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)[3]	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 32 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 (%)[1]	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)[2]	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 33 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



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 the server are listed in ***Table 34***.

Table 34 Environmental Specifications

Parameter	Minimum
Operating Temperature	5°C to 35°C (supports ASHRAE Class A4 and/or Class A3 and/or Class A2) ASHRAE Class A3 will be generic test profile unless otherwise specified by product engineering. 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.
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 ISO7779 LWAd (Bels) Operation at 23°C (73°F)	1RU: 5.5B 2RU: 5.8B Racked product: 6.8B
Sound Pressure level, Measure A-weighted per ISO7779 LpAm (dBA) Operation at 23°C (73°F)	1RU: 40dB 2RU: 43dB Racked product: 55dB

Extended Operating Temperature Hardware Configuration Limits

Table 35 C220 M8 Extended Operating Temperature Hardware Configuration Limits

Platform[1]	ASHRAE A3 (5ºC to 40ºC)[2]	ASHRAE A4 (5ºC to 45ºC)[3]
Processor	<=250W	<=250W
DIMMs	<= 128GB	<= 64GB
GPU	Not Supported	Not Supported
PCIe	PCIe Gen 4 devices only	Not Supported
Front Storage	SAS/SATA/NVMe (NVMe SSD up to 1.9TB)	SAS/SATA/NVMe (NVMe SSD up to 1.9TB)
M.2	SATA M.2 Supported with	Not Supported
PSUs	2x1600W PSUs in redundant mode	2x1600W PSUs in redundant mode
MLOM / OCP	4x25G MLOM only. No OCP support	4x25G MLOM only. No OCP support

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 36***.

Table 36 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 60950-1/62368-1 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

DISCONTINUED EOL PRODUCTS

Below is the list of parts were previously available for this product and are no longer sold. Please refer to the EOL Bulletin Links via table below to determine if still supported.

Table 37 EOS

Product ID	Description	EOL/EOS link
UCS-NVMEG4-M1920D	1.9TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-ucsx-hci-accessories-eol15818.html
UCS-NVMEG4-M3200D	3.2TB 2.5in U.3 15mm P7450 Hg Perf Hg End NVMe (3X)	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-ucsx-hci-accessories-eol15818.html
UCS-NVMEG4-M3840D	3.8TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-ucsx-hci-accessories-eol15818.html
UCS-NVMEG4-M960-D	960GB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-ucsx-hci-accessories-eol15818.html
UCSB-CABL-C19-BRZ	NBR 14136 to C19 AC 14FT POWER CORD, BRAZIL	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15715.html
UCS-NVMEG4-M1600D	1.6TB 2.5in U.3 15mm P7450 Hg Perf Hg End NVMe (3X)	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-ucsx-hci-accessories-eol15818.html
UCS-NVMEG4-M7680D	7.6TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15875.html
UCS-MRX48G1RF5	48GB DDR5-6400 RDIMM 1Rx4 (24Gb)	https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-ucsx-hci-accessories-eol15910.html
UCS-MCX32G2RE11	32GB DDR5 MRDIMM 8800 2Rx8 (16Gb)	-
UCS-MCX64G2RE11	64GB DDR5 MRDIMM 8800 2Rx4 (16Gb)	-
UCS-NVB1T9M2V9	1.9TB 2.5in U.3 15mm Micron 7500 HgPerf MedEnd 1X NVMe FIPS	Due to material contraint



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