Spec Sheet

# Cisco Compute Hyperconverged with vSAN

## HCIVS225C M8 All-NVMe vSAN ReadyNode

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**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 are 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. Refer to *BASE SERVER STANDARD CAPABILITIES and FEATURES, page 7*.

**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)

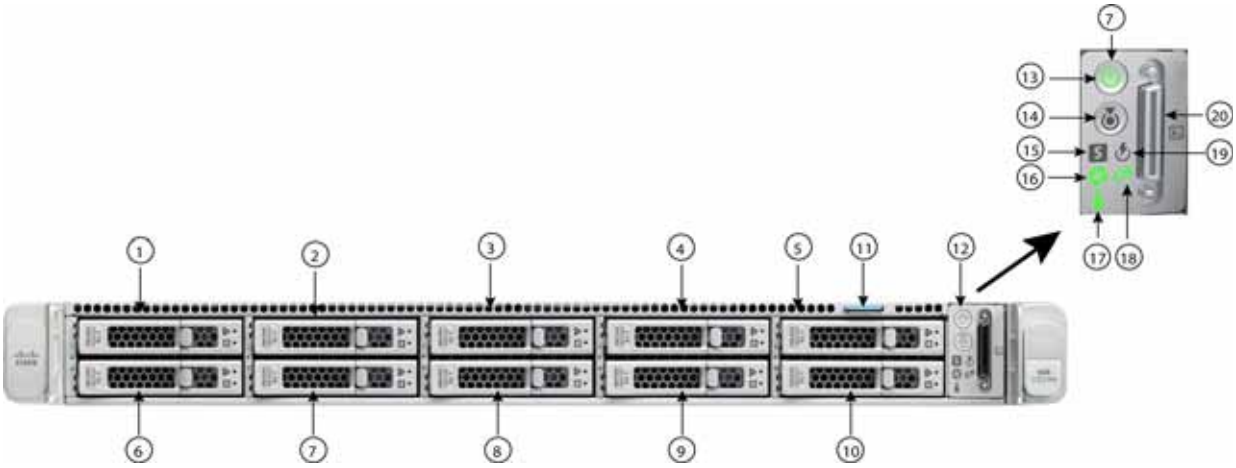


# DETAILED VIEWS

## Detailed Chassis Front View

*Figure 2* shows the detailed front view of the Cisco Compute Hyperconverged HCIVS225C M8 AII-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

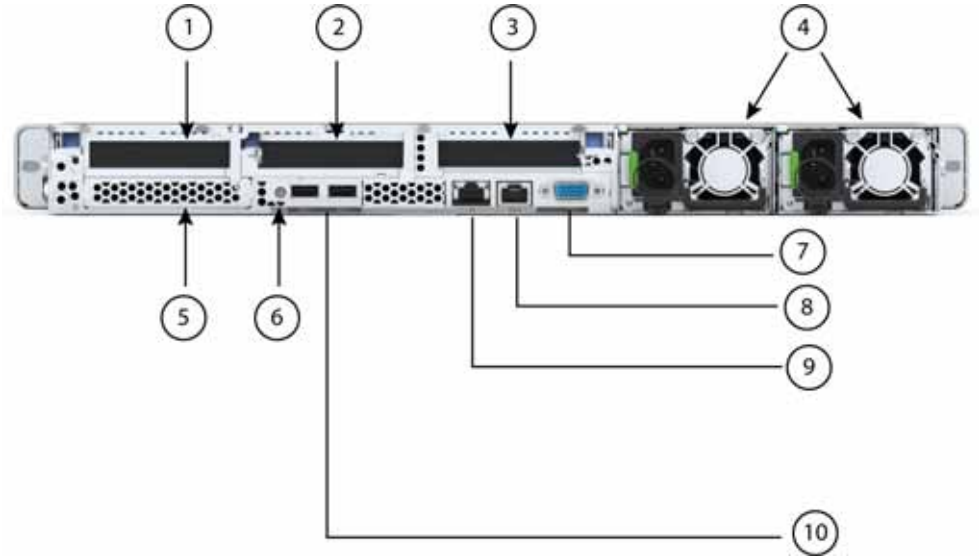
*Figure 3* shows the details of the rear panel for the Server with one rear half-height PCIe riser.

*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)**

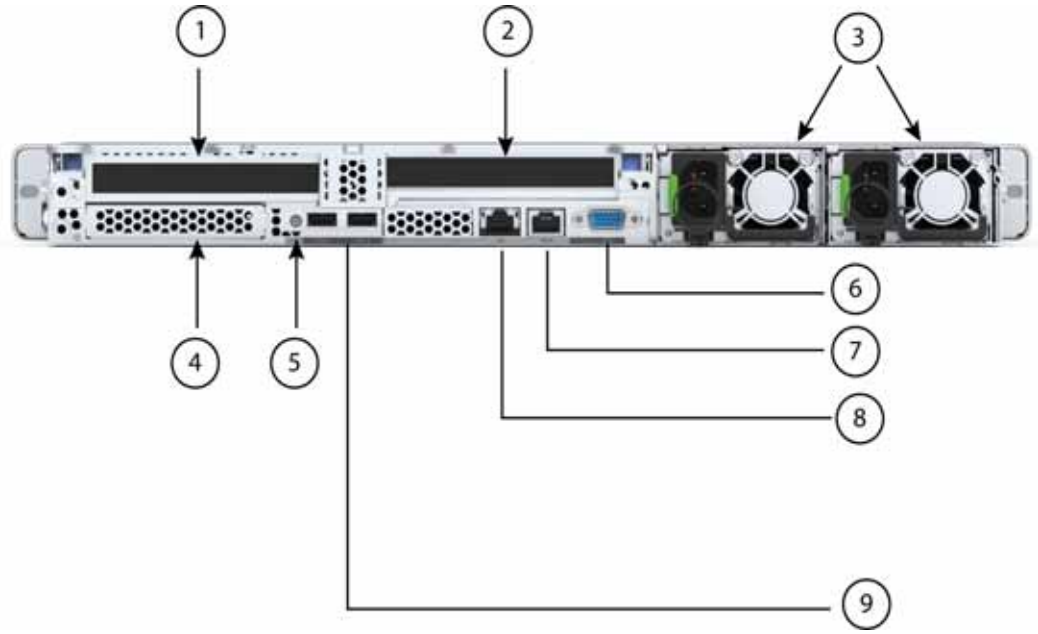



| | | | |
|---|---|---|---|
| **1** | There are two half height riser 1 options:<br>**Riser 1A PCIe Gen4**<br>■ Supports one PCIe slot (slot 1)<br>■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU<br>**Riser 1B PCIe Gen5**<br>■ Supports one PCIe slot (slot 1)<br>■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU | **6** | System ID pushbutton/LED |
| **2** | There are two half height riser 2 options:<br>**Riser 2A PCIe Gen4 x16**<br>■ Supports one PCIe slot (slot 2)<br>■ Slot 2 is half-height, 3/4 length, x16, Single Wide GPU<br>**Riser 2B PCIe Gen5 x16**<br>■ Supports one PCIe slot (slot 2)<br>■ Slot 2 is half-height, 3/4 length, x16, Single Wide GPU | **7** | VGA display port (DB15 connector) |

| | | | |
|---|---|---|---|
| **3** | There is one half height riser 3 option:<br>**Riser 3A PCIe Gen4 x16**<br>■ Supports one PCIe slot (slot 3)<br>■ 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 | **10** | USB 3.0 ports (two) |

## Two Full-Height Risers

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




| | | | |
|---|---|---|---|
| **1** | **Riser 1C PCIe Gen5**<br>■ Supports one PCIe slot (slot 1)<br>■ Slot 1 is full-height, 3/4 length, x16,NCSI, Single Wide GPU | **6** | VGA display port (DB15 connector) |
| **2** | **Riser 3C PCIe Gen5 x16**<br>■ Supports one PCIe slot (slot 3)<br>■ Slot 3 is Full-height, 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 | **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 | ■ One rack unit (1RU) chassis |
| CPU | ■ Single-Socket Configuration<br>■ Supports one AMD EPYC™ 9005 Series processor |
| Memory | ■ 12 slots for registered DIMMs (RDIMMs) |
| Multi-bit Error Protection | ■ This server supports multi-bit error protection. |
| Video | The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller:<br>■ Integrated 2D graphics core with hardware acceleration<br>■ Embedded DDR memory interface supports up to 512 MB of addressable memory (8 MB is allocated by default to video memory)<br>■ Supports display resolutions up to 1920 x 1200 16bpp @ 60Hz<br>■ High-speed integrated 24-bit RAMDAC<br>■ Single lane PCI-Express host interface running at Gen 1 speed |
| Power subsystem | Up to two of the following hot-swappable power supplies:<br>■ 1050 W (DC)<br>■ 1200 W (AC)<br>■ 1600 W (AC)<br>■ 2300 W (AC)<br>One power supply is mandatory; one more can be added for 1 + 1 redundancy. |
| Expansion slots | ■ Half-height riser slots (select up to three)<br>• Riser 1A PCIe Gen4 x16 HH<br>• Riser 1B PCIe Gen5 x16 HH<br>• Riser 2A PCIe Gen4 x16 HH<br>• Riser 2B PCIe Gen5 x16 HH<br>• Riser 3A PCIe Gen4 x16 HH<br>■ Full-height riser slots (select up to two)<br>• Riser 1C PCIe Gen5 x16 FH<br>• Riser 3C PCIe Gen5 x16 FH |

**Table 1 Capabilities and Features** *(continued)*

| Capability/Feature | Description |
|---|---|
| Interfaces | ■ Rear panel<br>• One 1Gbase-T RJ-45 management port<br>• One RS-232 serial port (RJ45 connector)<br>• One DB15 VGA connector<br>• Two USB 3.0 port connectors<br>• One flexible modular LAN on motherboard (mLOM)/OCP 3.0 slot that can accommodate various interface cards<br>■ Front panel<br>• One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector) |
| Internal storage devices | **Drive storage:**<br>Drives are installed into front-panel drive bays, which provide hot-swappable access for NVMe drives.<br>■ Two to ten 2.5-inch direct-attach NVMe SSDs only.<br>**Other storage:**<br>■ A mini-storage module connector on the motherboard supports a boot-optimized RAID controller carrier that holds two SATA M.2 SSDs. |
| PCIe | ■ Up to 3 PCIe 4.0 slots or up to 2 PCIe 5.0 slots and 1 dedicated mLOM/OCP 3.0 slot |
| Integrated management processor | ■ Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware.<br>■ Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port or a Cisco virtual interface card (VIC).<br>■ CIMC manages certain components within the server, such as the Cisco 12G SAS HBA. |
| Front Panel | ■ A front panel controller provides status indications and control buttons |
| ACPI | ■ This server supports the advanced configuration and power interface (ACPI) version 6.5 |
| Fans | ■ Eight hot-swappable fans for front-to-rear cooling |
| Infiniband | ■ The InfiniBand architecture is supported by the PCI slots. |
| CIMC | ■ Cisco Integrated Management Controller 4.3 (6) or later |

# 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 MANAGMENT 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

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 MANAGMENT 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.

## 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 |
|---|---|
| **Riser 1 Option** | |
| UCSC-RIS1A-225M8 | UCS C-Series M8 1U Riser 1A PCIe **Gen4** x16 HH<br>■ Half-height riser 1<br>■ One x16 PCIe Gen4 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length |
| UCSC-RIS1B-225M8 | UCS C-Series M8 1U Riser 1B PCIe **Gen5** x16 HH<br>■ Half-height riser 1<br>■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length |
| UCSC-RIS1C-225M8 | UCS C-Series M8 1U Riser 1C PCIe **Gen5** x16 FH<br>■ Full-height riser 1<br>■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length |
| **Riser 2 Option** | |
| UCSC-RIS2A-225M8 | UCS C-Series M8 1U Riser 2A PCIe **Gen4** x16 HH<br>■ Half-height riser 2<br>■ One x16 PCIe Gen4 riser, standard PCIe, half-height, 3/4 length |
| UCSC-RIS2B-225M8 | UCS C-Series M8 1U Riser 2B PCIe **Gen5** x16 HH<br>■ Half-height riser 2<br>■ One x16 PCIe Gen5 riser, standard PCIe, half-height, 3/4 length |
| **Riser 3 Option** | |
| UCSC-RIS3A-225M8 | UCS C-Series M8 1U Riser 3A PCIe **Gen4** x16 HH<br>■ Half-height riser 3<br>■ One x16 PCIe Gen4 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length |
| UCSC-RIS3C-225M8 | UCS C-Series M8 1U Riser 3C PCIe **Gen5** x16 FH<br>■ Full-height riser 3<br>■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length |
| **Accessories/spare included along with selected risers:**<br>■ 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 | |

# 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 28º C [82.4º 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)[1] |
| **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)[1] |
| 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.

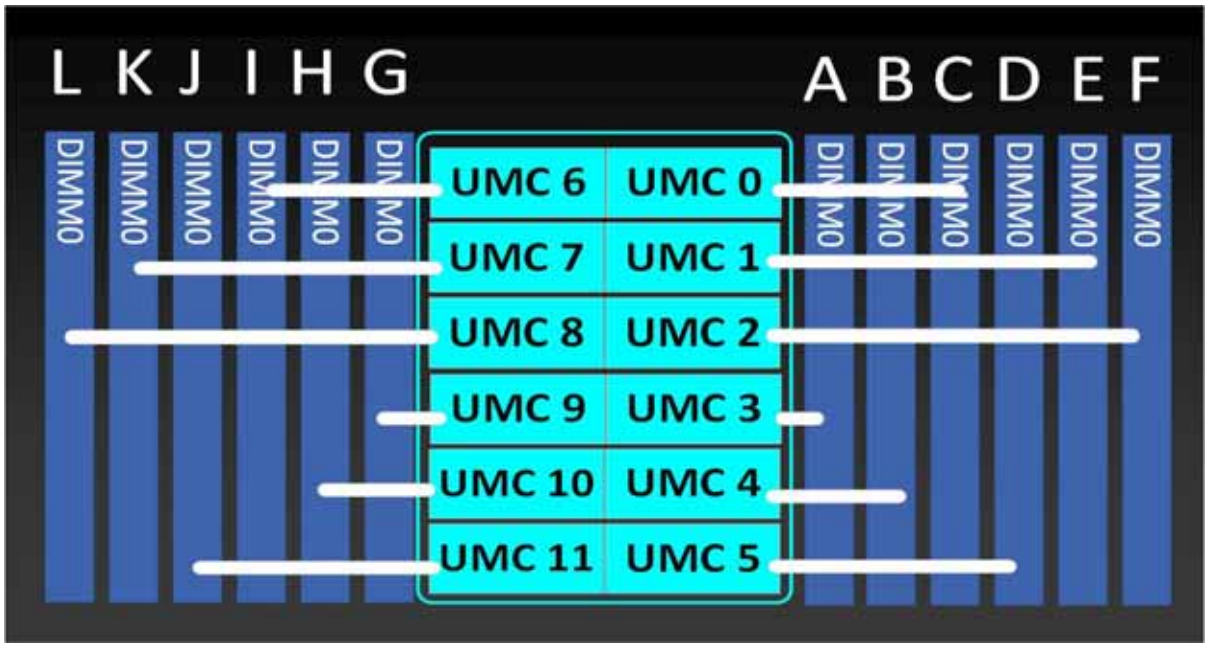
## STEP 6 SELECT MEMORY (REQUIRED)

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[1]** | | |
| 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-MRX32G1RE5 | 32GB DDR5-6400 RDIMM 1Rx4 (16Gb) | 1 |
| UCS-MRX32G2RE5 | 32GB DDR5-6400 RDIMM 2Rx8 (16Gb) | 2 |
| UCS-MRX16G1RE5 | 16GB DDR5-6400 RDIMM 1Rx8 (16Gb) | 1 |
| **DIMM Blank[2]** | | |
| 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 Drives**

| Product ID (PID) | PID Description | Drive Type | Capacity | Memory Tier Support |
|---|---|---|---|---|
| **Capacity Drive** | | | | |
| UCS-NVMEG4-M1536D | 15.3TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe | NVMe | 15.3 TB | No |
| UCS-NVMEG4-M6400D | 6.4TB 2.5in U.3 15mm Micron P7450 Hg Perf Hg End NVMe (3X) | NVMe | 6.4 TB | Yes |
| UCS-NVB1T9M2V | 1.9TB 2.5in U.3 15mm Micron 7500 Hg Perf Med End 1X NVMe | NVMe | 1.9 TB | No |
| UCS-NVB3T2M2P | 3.2TB 2.5in U.3 15mm Micron 7500 Hg Perf Hg End 3X NVMe | NVMe | 3.2 TB | Yes |
| UCS-NVB3T8M2V | 3.8TB 2.5in U.3 15mm Micron 7500 Hg Perf Med End 1X NVMe | NVMe | 3.8 TB | No |
| UCS-NVB7T6M2V | 7.6TB 2.5in U.3 15mm Micron 7500 Hg Perf Med End 1X NVMe | NVMe | 7.6 TB | No |
| UCS-NVB1T6M2P | 1.6TB 2.5in U.3 15mm Micron 7500 Hg Perf Hg End 3X NVMe | NVMe | 1.6 TB | Yes |
| UCS-NVB12T8M2P | 12.8TB 2.5in U.3 15mm Micron 7500 Hg Perf Hg End 3X NVMe | NVMe | 12.8 TB | Yes |
| **Boot Drive** | | | | |
| UCS-M2-480G-D | 480GB M.2 SATA SSD | SATA | 480GB | |
| UCS-M2-960G-D | 960GB M.2 SATA Micron G2 SSD | SATA | 960GB | |
| UCS-M2480OA1V | 480GB M.2 Boot Solidigm S4520 SATA 1X SSD | SATA | 480GB | |
| **M.2 Raid controller (Internal)** | | | | |
| UCS-M2-HWRAID-D | 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
- Host Bus Adapters (HBAs)

## 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[1] |
|---|---|---|---|
| **Modular LAN on Motherboard (mLOM)/OCP** | | | |
| 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 | - |
| **Virtual Interface Card (VICs)** | | | |
| 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 |
| **Network Interface Cards (NICs)** | | | |
| **10 GbE NICs** | | | |
| UCSC-PCIEID10GF-D | Intel X710 dual-port 10G SFP+ | Riser 1, 2, or 3 | HHHL, SS |
| UCSC-PCIEIQ10GF-D | Intel X710 quad-port 10G SFP+ NIC | Riser 1, 2, or 3 | HHHL, SS |
| **25 GbE NICs** | | | |
| 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 |
| **100 GbE NICs** | | | |
| UCSC-P-I8D100GF-D | Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC | Riser 1, 2, or 3 | HHHL, SS |

**Table 11 Available Option Cards** *(continued)*

| Product ID (PID) | PID Description | Location | Card Size[1] |
|---|---|---|---|
| UCSC-P-MCD100GF-D | Cisco-MLNX MCX623106AC-CDAT 2x100GbE QSFP56 PCIe NIC | Riser 1, 2, or 3 | HHHL, SS |
| 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 |
| **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 |

**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:** |
| --- |
| **Product Guide** |
| **Speed White Paper** |

# 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[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 | Gen 4 & Gen 5 Half Height and Full Hight 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 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 13 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[1] | 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 |
| 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)**

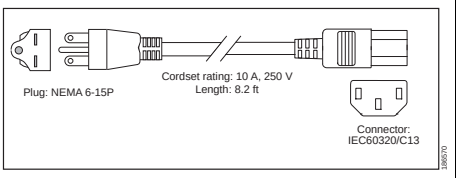
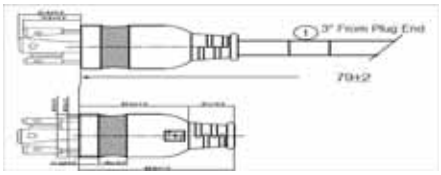
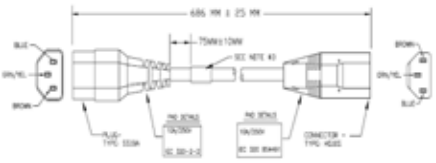
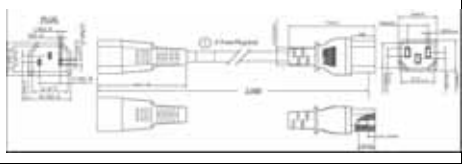
| Product ID (PID) | PID Description | Images |
|---|---|---|
| NO-POWER-CORD | ECO friendly green option, no power cable will be shipped | |
| R2XX-DMYMPWRCORD | No power cord (dummy PID to allow for a no power cord option) | Not applicable |
| CAB-48DC-40A-8AWG | C-Series -48VDC PSU Power Cord, 3.5M,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

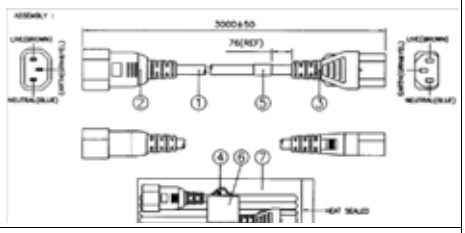
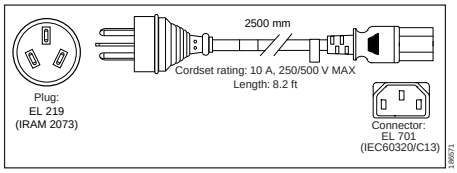
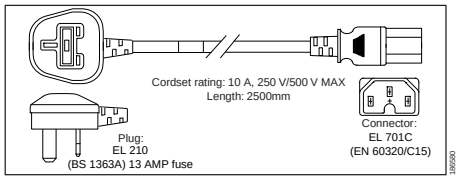
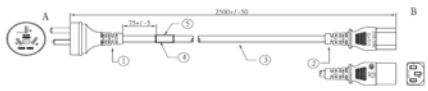
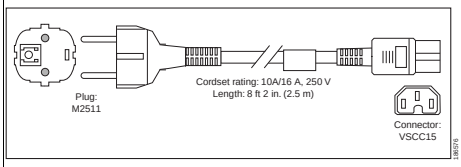
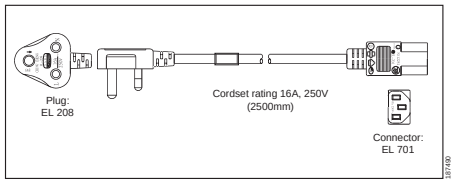
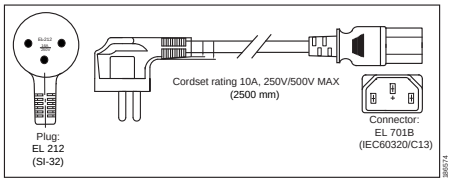
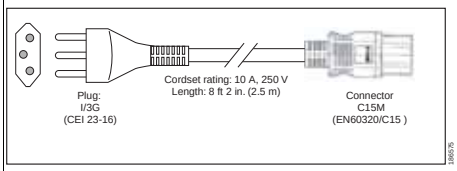
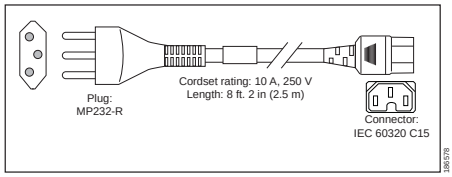
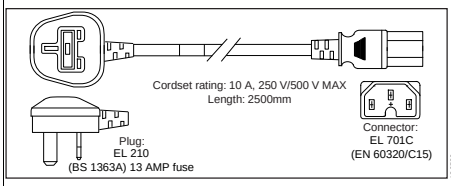
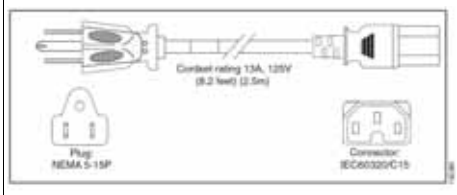
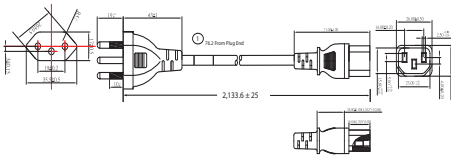
| Product ID (PID) | PID Description | Images |
|---|---|---|
| CAB-C13-C14-AC | CORD,PWR,JMP,IEC60320/C14,IEC60320/C13, 3.0M |  |
| CAB-250V-10A-AR | Power Cord, 250V, 10A, Argentina |  |
| CAB-9K10A-AU | Power Cord, 250VAC 10A 3112 Plug, Australia |  |
| CAB-250V-10A-CN | AC Power Cord - 250V, 10A - 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[1] | 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[1] | Power Cord, 125VAC 13A KSC8305 Plug, Korea | Image not available |
| CAB-ACTW | AC Power Cord (Taiwan), C13, EL 302, 2.3M | Image not available |
| CAB-JPN-3PIN | Japan, 90-125VAC 12A NEMA 5-15 Plug, 2.4m | Image not available |

**Notes:**

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

**Table 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

**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[1] |
| 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**

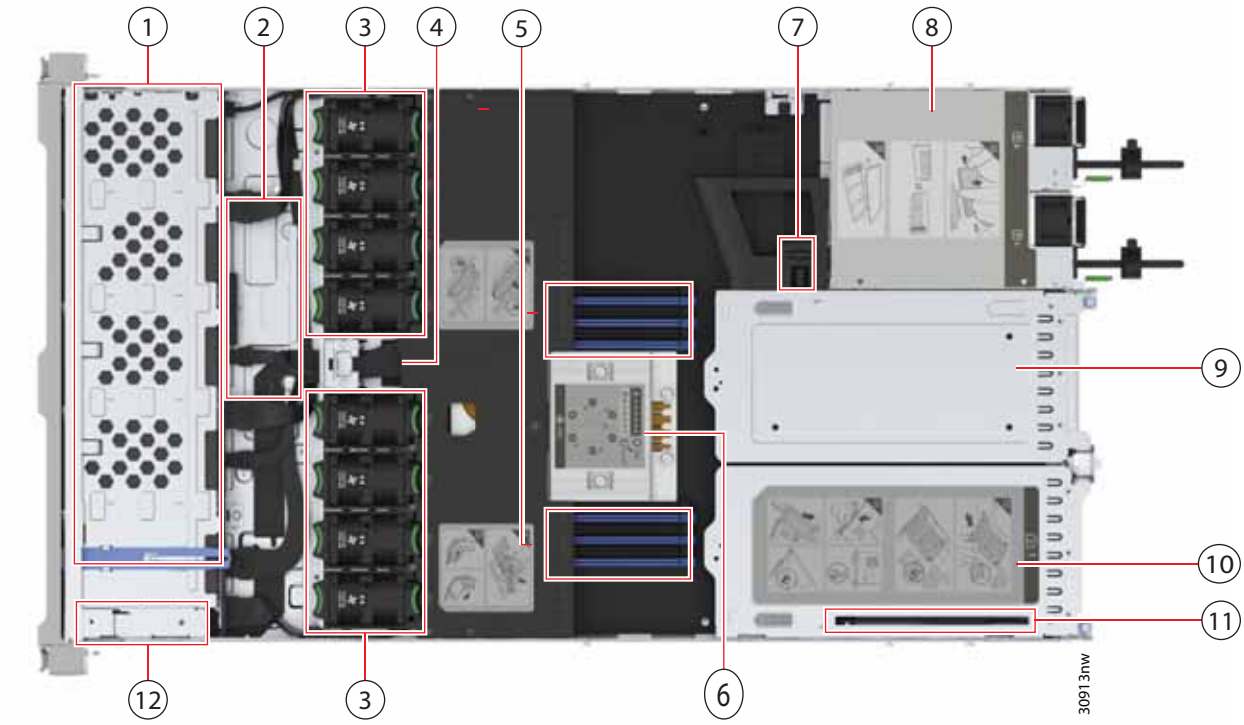
| Product ID (PID) | Description |
|---|---|
| UCSC-BZL-C220-D | Security Bezel |

# SUPPLEMENTAL MATERIAL

## Chassis

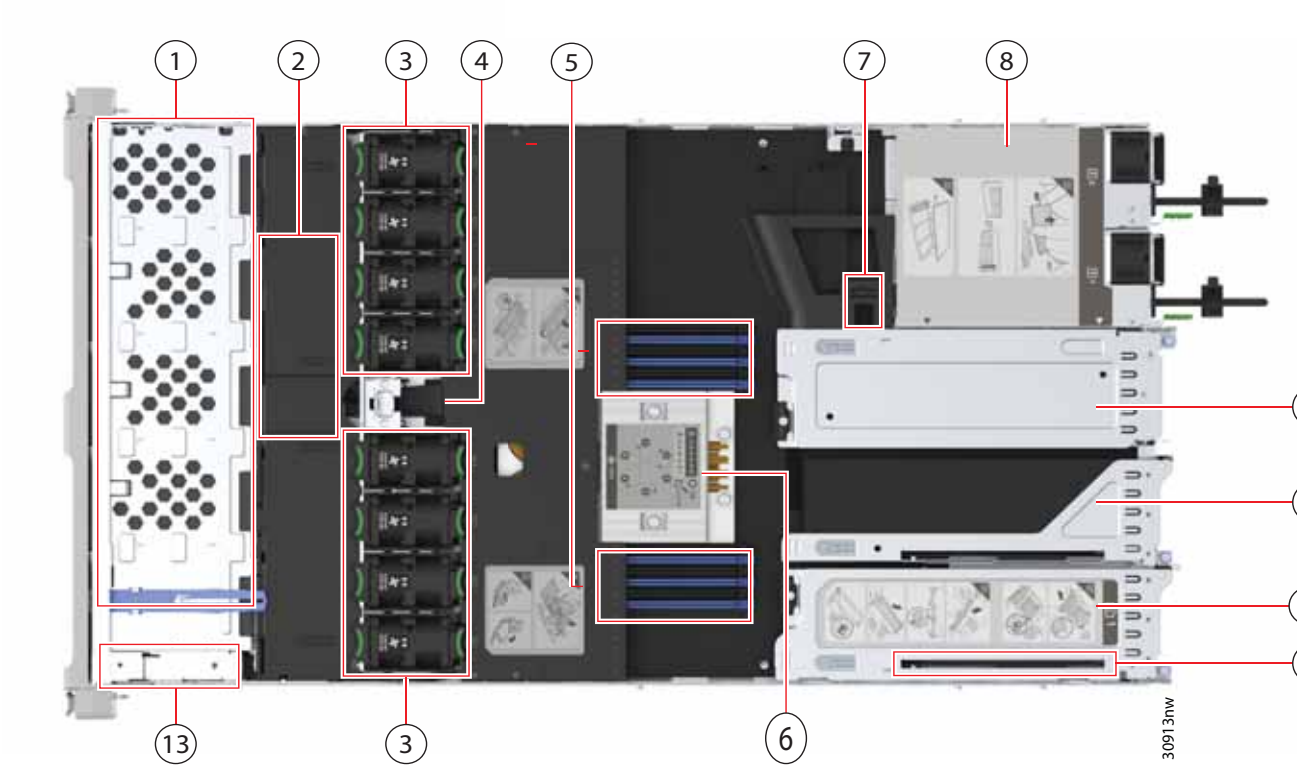
*Figure 6* and *Figure 7* shows the Internal views of the server chassis with the top cover removed.

**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)<br>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<br>Accepts 1 full height, full width PCIe riser card | 10 | PCIe riser 1<br>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)**

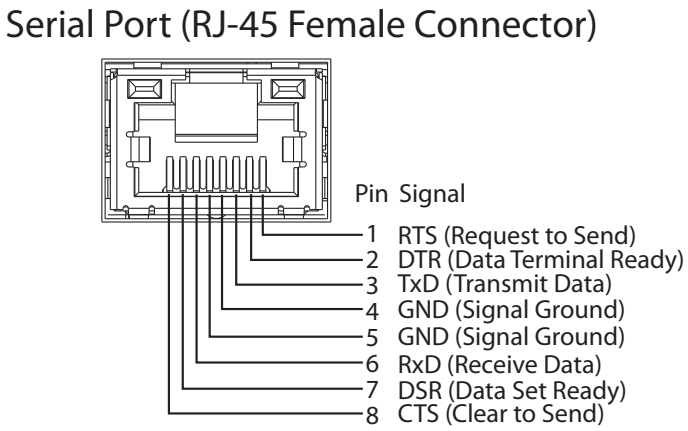



| | | | |
|---|---|---|---|
| 1 | Front-loading drive bays | 2 | M8 modular RAID card (or SATA Interposer) |
| 3 | Cooling fan modules (eight)<br>Each fan is hot-swappable | 4 | Supercap module mounting bracket |
| 5 | DIMM sockets on motherboard, 12 total. | 6 | Motherboard CPU socket |
| 7 | M.2 module 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<br>Accepts 1 half height, half width PCIe riser card | 10 | PCIe riser 2<br>Accepts 1 half height, half width PCIe riser card |
| 11 | PCIe riser 1<br>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**




## KVM Cable

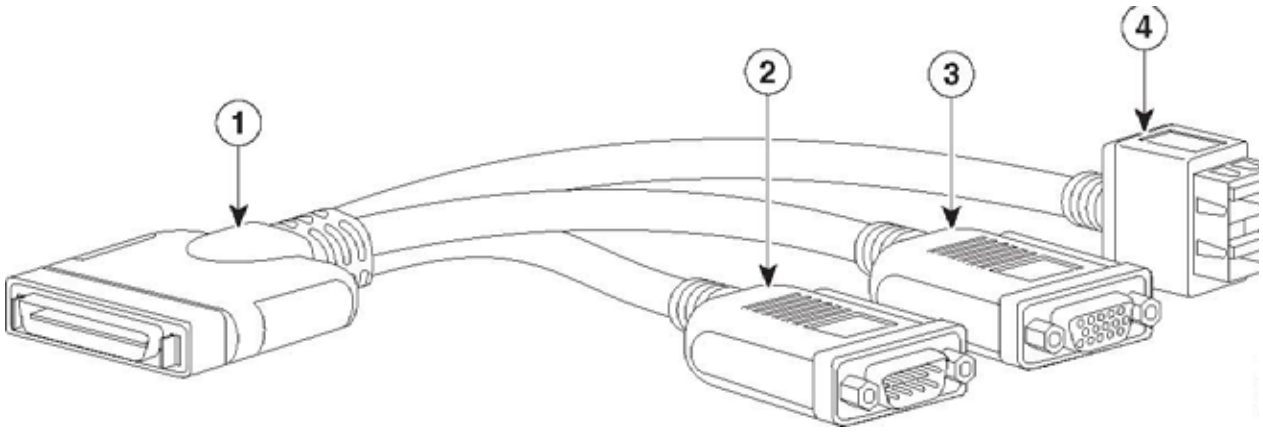
The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

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:<br>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:<br>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:<br>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:<br>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 (%)[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 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)[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 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 (%)[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 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)[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 Cisco Compute Hyperconverged HCIVS225C M8 All-NVMe vSAN ReadyNode are listed in *Table 26*.

**Table 26 Server Environmental Specifications**

| Parameter | Minimum |
|---|---|
| Operating Temperature | 5°C to 35°C (supports ASHRAE Class A4 and/or Class A3 and/or Class A2).<br>ASHRAE Class A3 will be generic test profile unless otherwise specified by product engineering.<br>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 ISOHCIVS225C79 LWAd (Bels) Operation at 23°C (73°F) | 2RU: 5.8B<br>Racked product: 6.8B |
| Sound Pressure level, Measure A-weighted per ISOHCIVS225C79 LpAm (dBA) Operation at 23°C (73°F) | 2RU: 43dB<br>Racked product: 55dB |

## 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<br>CAN/CSA-C22.2 No. 60950-1/62368-1<br>IEC/EN 60950-1/62368-1<br>AS/NZS 62368.1<br>GB 4943.1-2022<br>CNS 15598-1:2020 |
| EMC - Emissions | 47CFR Part 15 (CFR 47) Class A<br>AS/NZS CISPR32 Class A<br>CISPR32 Class A<br>EN55032 Class A<br>ICES003 Class A<br>VCCI-CISPR32 Class A<br>EN61000-3-2<br>EN61000-3-3<br>KS C 9832 Class A<br>EN 300386 Class A |
| EMC - Immunity | EN55035<br>EN55024<br>CISPR24/35<br>EN300386<br>KS C 9835<br>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 28 EOS**

| Product ID | Description | EOL/EOS link |
|---|---|---|
| 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-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 |


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