



Cisco UCS C4200 Series Rack Server Chassis with UCS C125 M5 Rack Server Node

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OVERVIEW

The Cisco UCS C4200 Series Rack Server Chassis is a modular, dense rack server chassis that supports up to four UCS C125 M5 Rack Server Nodes, optimized for use in environments requiring dense compute form factor and high core densities such as scale-out/compute intensive, general service provider, and bare-metal applications.

The Cisco UCS C4200 chassis is a modular architecture consisting of the following modules:

- **Base Chassis:** 24 SFF drive bays segmented into four groups of six direct attach drives (one group per node slot), four rear slots supporting C125 M5 server node, four redundant hot-pluggable fans, two 2400W AC high-line redundant power supplies, and a rail mounting kit.
- **Server Node:** Each C125 M5 has two sockets supporting the AMD EPYC 7001 (Naples) and AMD EPYC 2 7002 (Rome) Processors up to 180W TDP, 16 DIMM slots for 2666 MHz DDR4 DIMMs (Naples) or 3200 MHz DDR4 DIMMs (Rome) and capacity points up to 64GB, up to 2 half-height/half-length PCI Express (PCIe) 3.0 slots, and optional M.2/SD module. The C125 supports either SAS RAID via a PCIe 12G SAS storage controller card, disk arrays via PCIe 12G SAS HBA, or SATA direct from the AMD EPYC CPU.

The node also includes a dedicated internal LAN mezzanine slot based on the OCP 2.0 standard supporting networking speeds up to 100Gbps. Additionally installation of a 4th generation Cisco PCIe Virtual Interface Card (VIC) can be added in the x16 PCIe 3.0 slot. An NVIDIA T4 GPU (graphics processing unit) is also supported.

The Cisco UCS C4200 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.

Figure 1 Cisco UCS C4200 Storage Server

Front View



Rear View

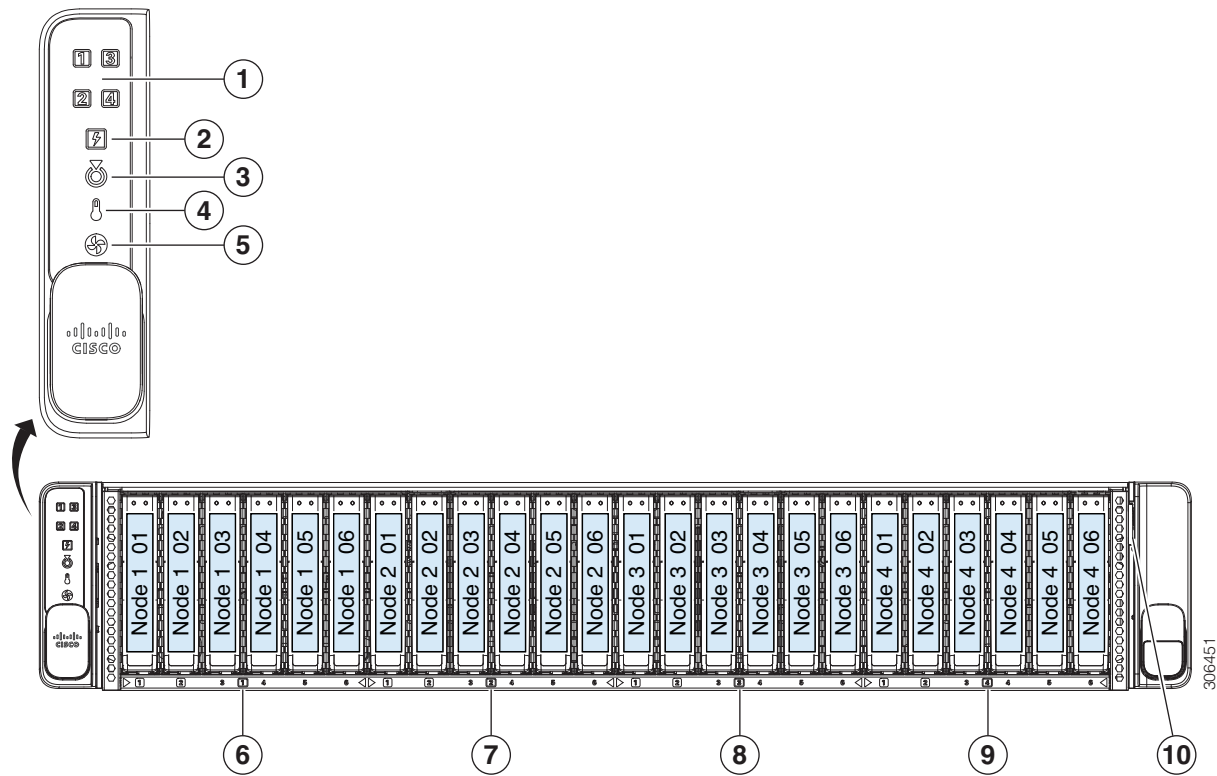


DETAILED VIEWS

Chassis Front View

Figure 2 shows the Cisco UCS C4200.

Figure 2 Chassis Front View

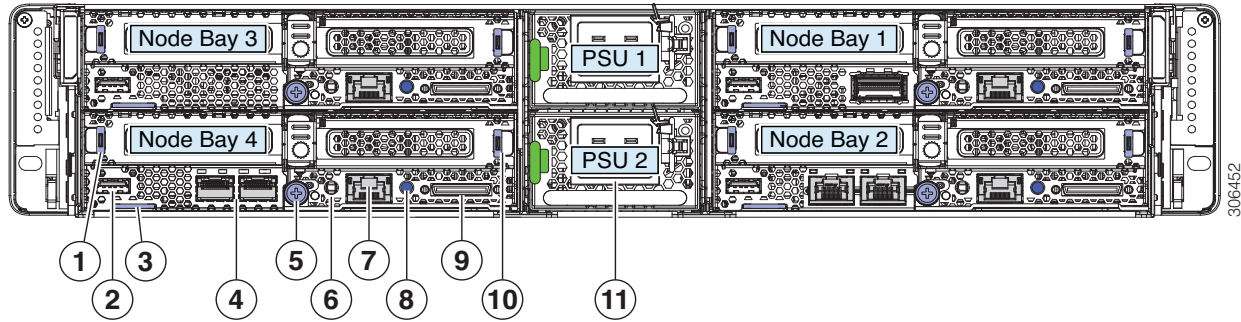


| | | | |
|---|---|----|----------------------------------|
| 1 | Node Health LEDs | 6 | Node 1-controlled drive bays 1–6 |
| 2 | Power Supply Status LED | 7 | Node 2-controlled drive bays 1–6 |
| 3 | Locator beacon LED Activating the locator beacon of any installed compute node activates this chassis locator beacon | 8 | Node 3-controlled drive bays 1–6 |
| 4 | Temperature status LED | 9 | Node 4-controlled drive bays 1–6 |
| 5 | Fan status LED | 10 | Pull-out asset tag |

Chassis Rear View

Figure 4 shows the external features of the rear of the C4200 chassis with four C125 M5 server node (EPYC CPUs) installed.

Figure 3 Chassis Rear View



| | | | |
|---|--|----|--|
| 1 | PCIe riser 1 handle (one each node) | 7 | Node 1 Gb Ethernet dedicated management port (one each node) |
| 2 | Node USB 3.0 port (one each node) | 8 | Node locator button/LED (one each node) |
| 3 | Node pull-out asset tag (one each node) | 9 | Node KVM local debug console port (one each node) Used with KVM cable that provides one DB-15 VGA, one DB-9 serial, and two USB 2.0 connectors. |
| 4 | Node OCP adapter card Ethernet LAN ports (one each node, if this optional adapter card is installed) Depending on which adapter card is installed, these ports can be either: <ul style="list-style-type: none"> ■ Dual 10 Gb Base-T (RJ-45 connectors) ■ Dual 10/25 Gb SFP28 | 10 | PCIe slots (two horizontal slots each node) <ul style="list-style-type: none"> ■ Node PCIe riser 1/slot 1 (on left) (half-height, half length, x8 slot) ■ Node PCIe riser 2/slot 2 (on right) (half-height, half length, x16 slot) |
| 5 | Node securing thumbscrew and release lever (one each node) | 11 | Chassis power supplies (two, redundant 1+1) |
| 6 | Node Power button/Power status LED (one each node) | – | |

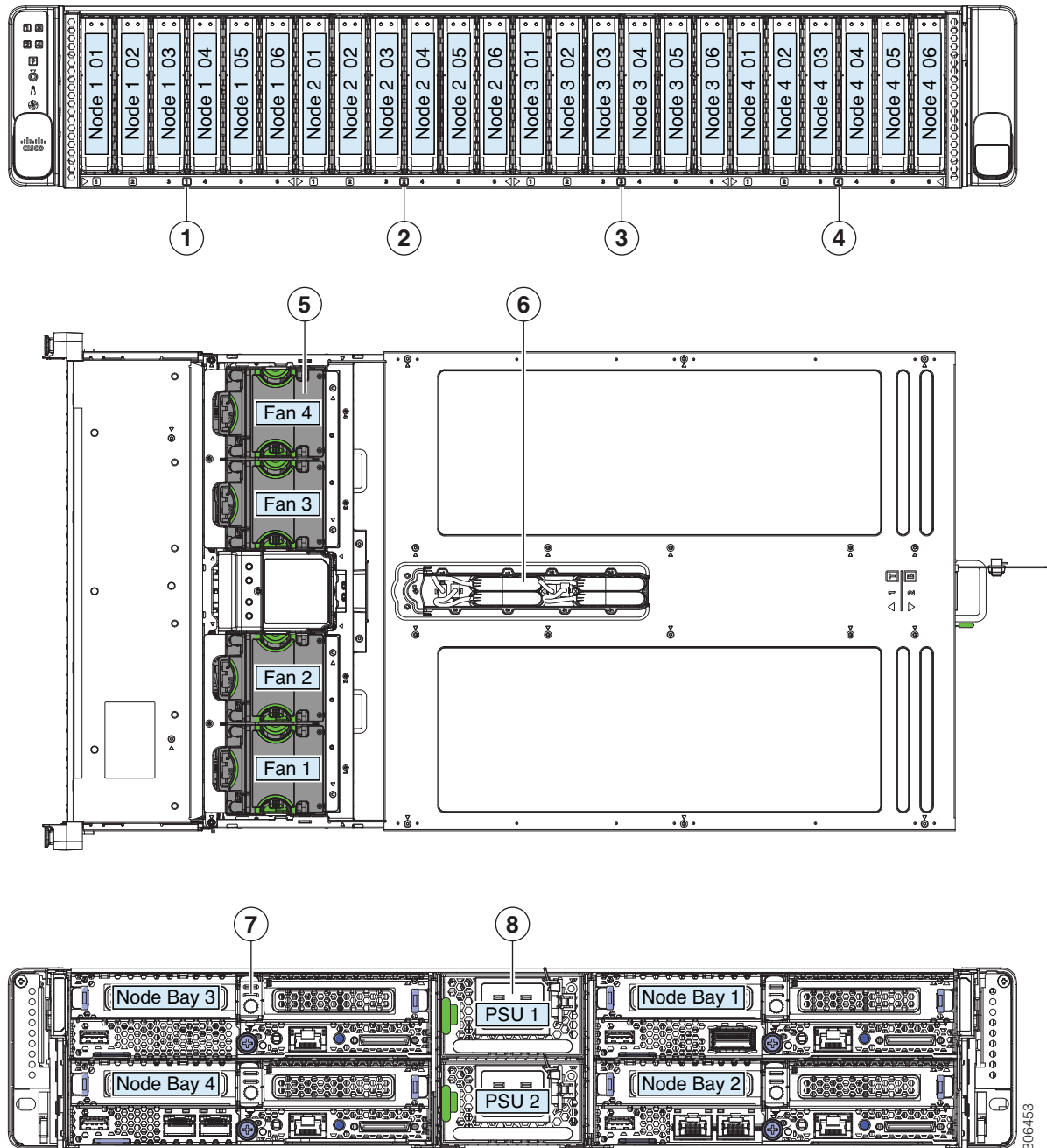
Serviceable Components in the Chassis

The figure in this topic shows the locations of the serviceable components in the chassis.

For components inside a compute node, see the service note for your compute node: Cisco UCS C125 M5 Rack Server Node for Cisco UCS C4200 Rack Server Chassis Service Note.

https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/hw/C125/install/C125.html

Figure 4 Cisco UCS C4200 Chassis Serviceable Component Locations



DETAILED VIEWS

| | | | |
|---|--|---|--|
| 1 | Front-loading drives Node 1-controlled drive bays 1–6 | 5 | Cooling fan modules (four) |
| 2 | Front-loading drives Node 2-controlled drive bays 1–6 | 6 | Supercap units (RAID backup) Each supercap unit backs up one RAID controller in the corresponding node (numbered 1–4) |
| 3 | Front-loading drives Node 3-controlled drive bays 1–6 | 7 | Compute node (up to four) |
| 4 | Front-loading drives Node 4-controlled drive bays 1–6 | 8 | Power supplies (two, redundant 1+1) |

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 12](#).

Table 1 Capabilities and Features

| Capability/Feature | Description |
|---------------------------------|--|
| Chassis | Two rack-unit (2RU) chassis |
| Central Processor | The chassis supports two to four removable UCS C125 M5 nodes, each with two CPUs. With four nodes, the system can total up to eight CPUs from the AMD EPYC 7001 Series (Naples) or AMD EPYC 2 7002 Series (Rome) up to 180W TDP. |
| GPU (graphics processing unit): | Up to two NVIDIA T4 GPUs are supported in a single C4200 chassis (one NVIDIA T4 in one C125 - two C125s maximum). |
| Memory | The chassis supports two to four removable UCS C125 M5 nodes, each with two CPUs. Each CPU supports up to eight DIMMs. With four nodes, the system can have a total up to 64 DIMMs. |
| Multi-bit error protection | Multi-bit error protection is supported |
| Baseboard management | Each UCS C125 M5 node has a BMC, running Cisco Integrated Management Controller (Cisco IMC) firmware. Depending on your settings, Cisco IMC can be accessed on each node through its 1-Gb dedicated management port or an adapter card. |
| Network and management I/O | The network and management I/O ports for this chassis are on the removable compute nodes. Each compute node has these connectors accessible from the rear of the chassis: <ul style="list-style-type: none"> ■ One 10/100/1000 Ethernet dedicated management port (RJ-45 connector) ■ One keyboard/video/mouse (KVM) console connector that is used with a KVM cable, which provides two USB 2.0, one DB-15 VGA, and one DB-9 serial connector. ■ One USB 3.0 port ■ Optional OCP adapter-card Ethernet LAN ports. Depending on which adapter is installed, these ports can be: <ul style="list-style-type: none"> • Dual 10 Gb BASE-T (RJ-45 connectors) • Dual 10/25 Gb SFP28 |
| Power | Two power supplies, redundant as 1+1: <ul style="list-style-type: none"> ■ AC power supplies 2400 W AC each Do not mix power supply types or wattages in the server. |
| ACPI | The advanced configuration and power interface (ACPI) 4.0 standard is supported. |
| Cooling | Four hot-swappable fan modules for front-to-rear cooling. |
| PCIe I/O | Each removable compute node has two PCIe risers for horizontal installation of PCIe cards such as a RAID controller or Cisco Virtual Interface Card (VIC). |
| InfiniBand | The OCP and PCIe bus slots in the compute nodes support the InfiniBand architecture. Check the Cisco HCL for more information. |

| Capability/Feature | Description |
|----------------------|--|
| Storage, front-panel | The chassis can hold up to 24 front-loading, 2.5-inch drives. |
| Storage, internal | Each of the four removable compute nodes can control six of the front drives. Each of the four compute nodes have these internal storage options: <ul style="list-style-type: none"> ■ Mini-storage module socket, optionally with either: <ul style="list-style-type: none"> • SD card carrier. Supports up to two SD cards • M.2 SSD carrier. Supports two SATA M.2 SSDs ■ One micro-SD card socket. |
| Storage management | Each of the four compute nodes support one RAID controller card. Each node can control six of the front-panel drives. |
| RAID supercap backup | Up to four supercap units are supported one for the RAID controller card in each node. The supercap units have numbered bays and numbered cable connectors in the top of the chassis, corresponding to each numbered compute node. |
| Integrated video | Integrated VGA video in each compute node. The DB-15 VGA connector is on the KVM cable that can be used with the KVM connector on each node. |

CONFIGURING the SERVER

Follow these steps to configure the Cisco UCS C4200 Storage Server:

- *STEP 1 VERIFY SERVER CHASSIS SKU, page 13*
- *STEP 2 SELECT SERVER NODE, page 14*
- *STEP 3 SELECT CPU(s), page 15*
- *STEP 4 SELECT MEMORY, page 17*
- *STEP 5 SELECT RAID CONTROLLERS, page 18*
- *STEP 6 SELECT HARD DISK DRIVES (HDDs) or SOLID STATE DRIVES (SSDs), page 20*
- *STEP 7 SELECT PCIe OPTION CARD(s), page 22*
- *STEP 8 ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES, page 26*
- *STEP 10 ORDER SD CARD MODULE (OPTIONAL), page 31*
- *STEP 11 ORDER MICRO-SD CARD MODULE (OPTIONAL), page 32*
- *STEP 12 ORDER OPTIONAL USB 3.0 DRIVE, page 33*
- *STEP 13 ORDER SECURITY DEVICES (OPTIONAL), page 34*
- *STEP 14 SELECT LOCKING SECURITY BEZEL (OPTIONAL), page 35*
- *STEP 15 SELECT POWER SUPPLY, page 36*
- *STEP 16 SELECT POWER CORD(s), page 37*
- *STEP 17 SELECT TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM, page 38*
- *STEP 18 SELECT A KVM CABLE (OPTIONAL), page 39*
- *STEP 19 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE, page 40*
- *STEP 20 SELECT OPERATING SYSTEM MEDIA KIT, page 42*
- *STEP 21 SELECT SERVICE and SUPPORT LEVEL, page 43*
- *OPTIONAL STEP - ORDER RACK(s), page 49*
- *OPTIONAL STEP - ORDER PDU, page 50*

STEP 1 VERIFY SERVER CHASSIS SKU

Select the base server product ID (PID) from [Table 2](#).

Table 2 PID of the Cisco UCS C4200 Base Server Chassis

| Product ID (PID) | Description |
|------------------|---|
| UCSC-C4200-SFF | Cisco UCS C4200 Rack Server Chassis, one rail kit, and bezel. |

The Cisco UCS C4200 Multi-node Server:

- Does not include internal storage drives, power supplies, or compute nodes (no CPU, memory, or Storage controller).



NOTE:

- Use the steps on the following pages to configure the server with the components that you want to include.
 - The C4200 will support a minimum of two up to a maximum of four C125 M5 server nodes
-

STEP 2 SELECT SERVER NODE

UCS C125 M5 Rack Server Node (with AMD EPYC 7001 (Naples) and AMD EPYC 2 (Rome) CPUs)

This server node is configurable. The base PID of the C125 M5 node is shown [Table 3](#).

Table 3 C125 A1 Server Node Base PID

| Product ID (PID) | Description |
|------------------|--|
| UCSC-C125 | UCS C125 M5 Rack Server Node based on AMD EPYC CPUs |
| UCSC-C125-U | UCS C125 M5 Rack Server Node Standalone Configurable Spare |



NOTE:

- The C4200 will support a minimum of two up to a maximum of four C125 M5 server nodes

STEP 3 SELECT CPU(s)

Use the following tables to choose options for the C125 M5 rack server node. The C125 M5 supports dual and single socket configurations up to 180W TDP.

Choose two CPUs from [Table 4](#).

Table 4 Dual Socket CPUs

| Product ID (PID) ¹ | Description ² |
|-------------------------------|--|
| UCS-CPU-A7702 | AMD 2.0GHz 7702 180W 64C/256MB Cache DDR4 3200MHz ³ |
| UCS-CPU-A7552 | AMD 2.2GHz 7552 180W 48C/192MB Cache DDR4 3200MHz ³ |
| UCS-CPU-A7532 | AMD 2.4GHz 7532 180W 32C/256MB Cache DDR4 3200MHz ³ |
| UCS-CPU-A7352 | AMD 2.3GHz 7352 155W 24C/128MB Cache DDR4 3200MHz ³ |
| UCS-CPU-7601 | 2.2 GHz 7601 180W 32C/64MB Cache DDR4 2666MHz |
| UCS-CPU-7551 | 2.0 GHz 7551 180W 32C/64MB Cache DDR4 2666MHz |
| UCS-CPU-7451 | 2.3 GHz 7451 180W 24C/64MB Cache DDR4 2666MHz |
| UCS-CPU-7501 | 2.0 GHz 7501 155W/170W 32C/64MB Cache DDR4 2400/2666MHz |
| UCS-CPU-7401 | 2.0 GHz 7401 155W/170W 24C/64MB Cache DDR4 2400/2666MHz |
| UCS-CPU-7351 | 2.4 GHz 7351 155W/170W 16C/64MB Cache DDR4 2400/2666MHz |
| UCS-CPU-7301 | 2.2 GHz 7301 155W/170W 16C/64MB Cache DDR4 2400/2666MHz |
| UCS-CPU-7281 | 2.1 GHz 7281 155W/170W 16C 32MB Cache DDR4 2400/2666MHz |
| UCS-CPU-7261 | 2.5 GHz 7261 155W/170W 8C/64MB Cache DDR4 2400/2666MHz |
| UCS-CPU-7251 | 2.0 GHz 7251 120W 8C/32MB Cache DDR4 2400MHz |

Notes:

1. Use the following table to choose a non-upgradeable single socket only configuration for the UCS C125 M5 server node. These PIDs cannot be used with a second processor, if your customer wants to upgrade to a second processor in the future it is recommended to use one the PIDs in [Table 4](#)
2. Selecting a single socket configuration will disable NVMe drive support. A second processor is required for NVMe
3. Orderability targeting August 2020

- Choose one CPUs from [Table 5](#).

Table 5 Single Socket CPUs

| Product ID (PID) | Description |
|------------------|---|
| UCS-CPU-7551P | 2.0 GHz 7551 180W 32C/64MB Cache DDR4 2666MHz |
| UCS-CPU-7401P | 2.0 GHz 7401 155W/170W 24C/64MB Cache DDR4 2400/2666MHz |
| UCS-CPU-7351P | 2.4 GHz 7351 155W/170W 16C/64MB Cache DDR4 2400/2666MHz |

STEP 4 SELECT MEMORY

- Choose 4, 8, 16 DIMMs from [Table 6](#).

Table 6 DIMMs

| Product ID (PID) | PID Description |
|-------------------|--|
| UCS-MR-X16G1RW | 16GB RDIMM SRx4 3200 (8Gb) |
| UCS-MR-X32G2RW | 32GB RDIMM DRx4 3200 (8Gb) |
| UCS-MR-X64G2RW | 64GB RDIMM DRx4 3200 (16Gb) |
| UCS-ML-128G4RW | 128GB LRDIMM QRx4 3200 (16Gb) |
| UCS-MR-X16G1RS-H | 16GB DDR4-2666-MHz RDIMM/PC4-21300/single rank/x4/1.2v |
| UCS-MR-X32G2RS-H | 32GB DDR4-2666-MHz RDIMM/PC4-21300/dual rank/x4/1.2v |
| UCS-MR-X64G4RS-H | 64GB DDR4-2666-MHz RDIMM/PC4-21300/quad rank/x4/1.2v |
| UCS-MR-X64G2RT-HS | 64GB DDR4-2933-MHz RDIMM/2Rx4/1.2v |



NOTE:

- The AMD EPYC 7001/7002 CPUs features a high performance 8-channel memory controller. It is recommended to always populate every DIMM slot for best system performance, however if fewer DIMMs are desired a minimum of 4 DIMMs per CPU is generally recommended.
- Unbalanced memory configurations should be avoided.

STEP 5 SELECT RAID CONTROLLERS

RAID Controller Options

Embedded SATA AHCI Controller

The default configuration is embedded SATA AHCI Controller from the EPYC CPU (CPU0) which features no RAID support and supports only SATA HDDs and enterprise value SSDs. A maximum of 6 SATA drives are supported with embedded SATA Controller. When the Embedded SATA controller is used, the PCIe riser 1 slot can be used with other PCIe add-on-cards.

- Choose a storage controller from [Table 7](#)

Table 7 RAID Controller

| Product ID (PID) | PID Description |
|-------------------|---------------------------|
| UCSC-RAID-C125KIT | UCS C125 9460-8i RAID kit |
| UCSC-HBA-C125KIT | UCS C125 9400-8i HBA kit |



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

Table 8 Hardware Controller Options

| Product ID (PID) | PID Description |
|--|--|
| Controllers for Internal Drives | |
| Note that if the following Cisco 12G SAS RAID PCIe controller is selected, it is factory-installed in the Riser 1 PCIe slot. | |
| UCSC-RAID-C125KIT | UCS C125 9460-8i RAID kit |
| UCSC-HBA-C125KIT | UCS C125 9400-8i HBA kit |
| RAID Configuration Options (not available for embedded SATA controller) | |
| R2XX-SRAID0 | Enable Single Disk Raid 0 Setting |
| R2XX-RAID0 | Factory preconfigured RAID striping option Enable RAID 0 Setting. Requires a minimum of one hard drive. |
| R2XX-RAID1 | Factory preconfigured RAID mirroring option Enable RAID 1 Setting. Requires exactly two drives with the same size, speed, capacity. |
| R2XX-RAID5 | Factory preconfigured RAID option Enable RAID 5 Setting. Requires a minimum of three drives of the same size, speed, capacity. |
| R2XX-RAID6 | Factory preconfigured RAID option Enable RAID 6 Setting. Requires a minimum of four drives of the same size, speed, capacity. |

Table 8 Hardware Controller Options (*continued*)

| Product ID (PID) | PID Description |
|------------------|---|
| R2XX-RAID10 | Factory preconfigured RAID option Enable RAID 10 Setting. Requires a minimum of four drives of the same size, speed, capacity. |

STEP 6 SELECT HARD DISK DRIVES (HDDs) or SOLID STATE DRIVES (SSDs)

The standard disk drive features are:

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

Select front-facing Drives

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

Table 9 Available Additional HDDs and SSDs

| Product ID (PID) | PID Description | Drive Type | Capacity |
|--|---|------------|----------|
| HDDs | | | |
| UCS-HD600G10KJ4 | Cisco UCS C4200 600GB 12Gbps 10K HDD | SAS-3 | 600GB |
| UCS-HD12TB10KJ4 | Cisco UCS C4200 1.2TB 12Gbps 10K HDD | SAS-3 | 1.2TB |
| UCS-HD18TB10KJ4 | Cisco UCS C4200 1.8TB 12Gbps 10K HDD (4K) | SAS-3 | 1.8TB |
| UCS-HD24TB10KJ4 | Cisco UCS C4200 2.4TB 12Gbps 10K HDD (4K) | SAS-3 | 2.4TB |
| SSDs | | | |
| Self-Encrypted Drives (SED)¹ | | | |
| UCS-SD400GBHMK9 | Cisco UCS C4200 400GB 12Gbps SSD SED | SAS | 400GB |
| UCS-SD800GBHMK9 | Cisco UCS C4200 800GB 12Gbps SSD SED | SAS | 800GB |
| UCS-SD16TBHMK9 | Cisco UCS C4200 1.6TB 12Gbps SSD SED | SAS | 1.6TB |
| Enterprise Performance 3X Read | | | |
| UCS-SD400G123X-EP | Cisco UCS C4200 400GB 12Gbps SSD | SAS-3 | 400GB |
| UCS-SD800G123X-EP | Cisco UCS C4200 800GB 12Gbps SSD | SAS-3 | 800GB |
| UCS-SD16T123X-EP | Cisco UCS C4200 1.6TB 12Gbps SSD | SAS-3 | 1.6TB |
| UCS-SD32T123X-EP | Cisco UCS C4200 3.2TB 12Gbps SSD | SAS-3 | 3.2TB |
| Enterprise Value 1X Read | | | |
| UCS-SD960G61X-EV | 960GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 960GB |
| UCS-SD19T61X-EV | 1.9TB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 1.9TB |
| UCS-SD38T61X-EV | 3.8TB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 3.8TB |
| UCS-SD120GM1X-EV | Cisco UCS C4200 120GB 6Gbps SSD | SATA | 120GB |
| UCS-SD240GM1X-EV | Cisco UCS C4200 240GB 6Gbps SSD | SATA | 240GB |
| UCS-SD480GM1X-EV | Cisco UCS C4200 480GB 6Gbps SSD | SATA | 480GB |
| UCS-SD16TM1X-EV | Cisco UCS C4200 1.6TB 6Gbps SSD | SATA | 1.6TB |

Table 9 Available Additional HDDs and SSDs

| Product ID (PID) | PID Description | Drive Type | Capacity |
|-------------------|--|------------|----------|
| UCS-SD76TM1X-EV | Cisco UCS C4200 7.6TB 6Gbps SSD | SATA | 7.6TB |
| NVMe ² | | | |
| UCSC-NVMEHW-H800 | Cisco UCS C4200 U.2 800GB HGST SN200 | NVMe | 800GB |
| UCSC-NVMEHW-H1600 | Cisco UCS C4200 U.2 1.6TB HGST SN200 | NVMe | 1.6TB |
| UCSC-NVMEHW-H3200 | Cisco UCS C4200 U.2 3.2TB HGST SN200 | NVMe | 3.2TB |
| UCSC-NVMEHW-H6400 | Cisco UCS C4200 U.2 6.4TB HGST SN200 | NVMe | 6.4TB |
| UCSC-NVME2H-I1000 | Cisco 2.5" U.2 1,0 TB Intel P4510 NVMe High Perf. Value Endu | NVMe | 1.0 TB |
| UCSC-NVME2H-I4000 | Cisco 2.5" U.2 4.0TB Intel P4510 NVMe High Perf. Value Endu | NVMe | 4.0 TB |
| UCSC-NVME2H-I1600 | Cisco 2.5" U.2 1.6TB Intel P4610 NVMe High Perf. High Endu | NVMe | 1,6 TB |
| UCSC-NVME2H-I3200 | Cisco 2.5" U.2 3.2TB Intel P4610 NVMe High Perf. High Endu | NVMe | 3.2 TB |

NOTE: 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.

Notes:

1. For all self-encrypting drives (SED), standalone Management (CIMC) and UCSM is supported for configuring and managing local keys. SED drives can be managed with local and remote key management (third-party key management).
2. Two CPUs must be installed in order to include any number of SFF NVMe SSDs. If you choose one or two SFF NVMe drives, drive slots 1 and 2 are reserved for these drives (see [Figure 9 on page 54](#) for drive slot numbering)



NOTE:

- To Add Individual Drives, use the HDD or SSD Tab in CCW

STEP 7 SELECT PCIe OPTION CARD(s)

The standard PCIe card offerings are:

- OCP LAN Module (OCP)
- Fiber channel
- PCIe Virtual Interface Cards (VICs)
- GPU

Select PCIe Option Cards

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

Table 10 Available PCIe Option Cards ¹

| Product ID (PID) | PID Description | Form Factor | Electrical Slot |
|-------------------------------------|---|-------------|-----------------|
| OCP mezzanine | | | |
| 10 Gb | | | |
| UCSC-OCP-QD10GC | Dual Port QL41132HORJ-CI-BK 10Gbase-T OCP 1.0 | OCP | N/A |
| 25 Gb | | | |
| UCSC-OCP-QD25GF | Qlogic QL41232HOCU Dual Port 25G SFP28 OCP 1.0 | OCP | N/A |
| UCSC-O-ID25GF | Intel XXV710DA2OCP1 2x25/10GbE OCP 2.0 | OCP | N/A |
| 100 Gb | | | |
| UCSC-O-M5S100GF | MELLANOX MCX545B-ECAN 1x100Gb QSFP28 IB/ENET OCP2.0 NIC | OCP | N/A |
| NICs (Networking interface Card) | | | |
| 10 Gb | | | |
| UCSC-PCIE-IQ10GF | Intel X710 Quad Port 10G SFP+ NIC | HHHL | x 8 |
| UCSC-PCIE-QD10GC | QLogic dual-port 10GBase-T QL41162HLRJ-11-SP | HHHL | x 8 |
| 25 Gb | | | |
| UCSC-PCIE-QD25GF | QLogic dual-port 25G SFP QL41212HLCU-CI-BK | HHHL | x 8 |
| UCSC-PCIE-ID25GF | Intel XXV710-DA2 2x25GbE SFP+ PCIe NIC | HHHL | x 8 |
| UCSC-P-M5D25GF | Mellanox MCX512A-ACAT dual port 10/25G SFP28 NIC | HHHL | x 8 |
| Fiber channel/HBA | | | |
| UCSC-PCIE-QD16GF | Qlogic QLE2692 2x16Gb Gen 6 FC HBA | HHHL | x 8 |
| PCIe Virtual Interface Cards (VICs) | | | |
| 25Gb | | | |
| UCSC-PCIE-C25Q-04 | Cisco UCS VIC 1455 Quad Port 10/25G SFP28 CNA PCIE | HHHL | x 16 |

Table 10 Available PCIe Option Cards (*continued*)¹

| Product ID (PID) | PID Description | Form Factor | Electrical Slot |
|-------------------|---|-------------|-----------------|
| 100Gb | | | |
| UCSC-PCIE-C100-04 | Cisco VIC 1495 Dual Port 100G QSFP28 CNA PCIe | HHHL | x 16 |
| GPU | | | |
| UCSC-GPU-T4-16 | NVIDIA T4 PCIe 75W 16GB | HHHL | |

Notes:

1. Refer to the Cisco HCL (Hardware Compatibility List) for additional card support including InfiniBand

NOTE:

- Maximum of 1 NVIDIA T4 GPU per C125. Maximum of 2 C125 each with T4 in one C4200 chassis.
- 2 additional C125s (without T4) are allowed in the same C4200 chassis for a total 4xC125: 2xC125xT4 and 2xC125
- Cisco VIC 1495 supports 40/100G.
- Other optics available that support 40G.
- Note that QSFP-40/100-SRBD supported at 100G only.
- For list of supported cables and optics with VIC 1495 refer to the [VIC 1400 series data sheet](#).
- Mixing 1300 and 1400 series VIC and MLOMs configurations is not supported.

PCIe Card Configuration with 2 CPU

Below table helps in finding the right slot for the selected PCIe cards.

Table 11 PCIe Card Configuration with 2 CPU

| PCIe Card Type | Primary Slot | Secondary Slot | Alternate Slot |
|-----------------------------------|---------------|----------------|----------------|
| Cisco 12G Modular RAID controller | Midplane Slot | None | |
| Cisco 12G 9460-8i Raid controller | 10 | None | |
| PCIe Switch card | 10 | None | |
| Cisco x16 VIC (Cisco VIC 1385) | 1 | 2 | 8, 5 |
| Nvidia and AMD GPUs | 2 | 8 | 10, 1 |
| Other 16x PCIe I/O card | 8 | 10 | 2, 1 |
| Other 8x PCIe I/O card | 9 | 5 | 8, 2, 10, 1 |
| Cisco x16 VIC | 1 | 2 | 8 |

**NOTE:**

- Slot 1 only if no VIC present
- When no VIC presents in the configuration, GPU primary slot could be 1
- First VIC has the highest priority, then GPUs, then others.
- Primary Slots are first priorities
- Secondary slots are for additional card of the same type, follow the order listed
- Alternate slots can be used but may be with reduced functionality

UCS VIC Transceiver and Cable Support Matrix

The supported transceivers are listed in [Table 12](#)

Table 12 Cisco UCS VIC Transceiver and Cable Support Matrix

| Product ID (PID) | Description |
|---|--|
| SFP+ 10-Gbps Transceivers | |
| SFP-10G-SR | 10GBASE-SR, 850 nm, MMF, 300m |
| SFP-10G-SR-S | 10GBASE-SR, 850 nm, MMF, 300m, S-Class |
| SFP-10G-LR | 10GBASE-LR, 1310 nm, SMF, 10 km |
| SFP-10G-LR-S | 10GBASE-LR, 1310 nm, SMF, 10 km, S-Class |
| QSFP+ 25-Gbps Transceivers | |
| SFP-25G-SR-S | 25GBASE-SR SFP+, 850nm, MMF, 300m, S-Class |
| SFP+ 10-Gbps Cables with Integrated Transceivers | |
| SFP-H10GB-CU1M | 10GBASE-CU SFP+ cable 1M |
| SFP-H10GB-CU2M | 10GBASE-CU SFP+ cable 2M |
| SFP-H10GB-CU3M | 10GBASE-CU SFP+ cable 3M |
| SFP-H10GB-CU5M | 10GBASE-CU SFP+ cable 5M |
| SFP-H10GB-ACU7M | 10GBASE-CU SFP+ cable 7M |
| SFP-H10GB-ACU10M | 10GBASE-CU SFP+ cable 10M |
| SFP-10G-AOC1M | 10GBASE Active Optical SFP+ cable, 1M |
| SFP-10G-AOC2M | 10GBASE Active Optical SFP+ cable, 2M |
| SFP-10G-AOC3M | 10GBASE Active Optical SFP+ cable, 3M |
| SFP-10G-AOC5M | 10GBASE Active Optical SFP+ cable, 5M |

Table 12 Cisco UCS VIC Transceiver and Cable Support Matrix

| | |
|--|--|
| SFP-10G-AOC7M | 10GBASE Active Optical SFP+ cable, 7M |
| SFP-10G-AOC10M | 10GBASE Active Optical SFP+ cable, 10M |
| SFP28 25-Gbps Cables with Integrated Transceivers | |
| SFP-H25G-CU1M | 25GBASE-CU SFP28 cable 1M |
| SFP-H25G-CU2M | 25GBASE-CU SFP28 cable 2M |
| SFP-H25G-CU3M | 25GBASE-CU SFP28 cable 3M |
| SFP-H25G-CU5M | 25GBASE-CU SFP28 cable 5M |
| QSFP 40-Gbps Cables | |
| QSFP-4x10G-AC7M | 40GBASE-CR4 QSFP+ to 4x10GBASE-CU SFP+ direct-attach breakout cable, 7M |
| QSFP-4x10G-AC10M | 40GBASE-CR4 QSFP+ to 4x10GBASE-CU SFP+ direct-attach breakout cable, 10M |
| QSFP-4SFP10G-CU1M | 40GBASE-CR4 QSFP+ to 4x10GBASE-CU SFP+ passive direct-attach cable, 1M |
| QSFP-4SFP10G-CU3M | 40GBASE-CR4 QSFP+ to 4x10GBASE-CU SFP+ passive direct-attach cable, 3M |
| QSFP-4SFP10G-CU5M | 40GBASE-CR4 QSFP+ to 4x10GBASE-CU SFP+ passive direct-attach cable, 5M |
| QSFP-4X10G-AOC1M | 40GBASE-active optical QSFP to 4xSFP+ active optical breakout cable, 1M |
| QSFP-4X10G-AOC2M | 40GBASE-active optical QSFP to 4xSFP+ active optical breakout cable, 2M |
| QSFP-4X10G-AOC3M | 40GBASE-active optical QSFP to 4xSFP+ active optical breakout cable, 3M |
| QSFP-4X10G-AOC5M | 40GBASE-active optical QSFP to 4xSFP+ active optical breakout cable, 5M |
| QSFP-4X10G-AOC7M | 40GBASE-active optical QSFP to 4xSFP+ active optical breakout cable, 7M |
| QSFP-4X10G-AOC10M | 40GBASE-active optical QSFP to 4xSFP+ active optical breakout cable, 10M |
| QSFP 100-Gbps Cables | |
| QSFP-4SFP25G-CU1M | 100GBASE QSFP to 4xSFP25G passive copper splitter cable, 1M |
| QSFP-4SFP25G-CU2M | 100GBASE QSFP to 4xSFP25G passive copper splitter cable, 2M |
| QSFP-4SFP25G-CU3M | 100GBASE QSFP to 4xSFP25G passive copper splitter cable, 3M |



NOTE: Supported transceivers and cables for Cisco VIC cards. For the supported list of transceivers and cables for QLogic OCP cards please refer to the QLogic 41000 Series interoperability matrix on the Marvell | Cavium website for more information

STEP 8 ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES

- For list of supported optics and cables for VIC 1455, VIC 1457, VIC 1495 and VIC 1497 refer to VIC 1400 series data sheet at the following links:
 - <https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/datasheet-c78-741130.html>
 - <https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/datasheet-c78-734727.html>

Select

- NIC Interoperability with Cisco Cables/Optics. (Table 12.0 to 12.0.C)

Table 13.0 10G NIC Interoperability with Cables/Optics

| Cisco Product ID (PID) | UCSC-PCIE-IQ10GC |
|----------------------------------|------------------|
| Cisco Direct Attach Cables (DAC) | |
| UTP/RJ45 | ✓ |

Table 13.0.a 25G NIC Interoperability with Cables/Optics

| Cisco Product ID (PID) | UCSC-O-ID25GF | UCSC-OCQ-QD25GF | UCSC-PCIE-ID25GF |
|----------------------------------|---------------|-----------------|------------------|
| Cisco Direct Attach Cables (DAC) | | | |
| SFP-H10GB-CU1M | ✓ | | ✓ |
| SFP-H10GB-CU3M | ✓ | | ✓ |
| SFP-H10GB-CU5M | ✓ | | ✓ |
| SFP-H10GB-ACU7M | | | ✓ |
| SFP-H10GB-ACU10M | | | ✓ |
| SFP-10G-AOC1M | | | ✓ |
| SFP-10G-AOC2M | | | ✓ |
| SFP-10G-AOC3M | | | ✓ |
| SFP-10G-AOC5M | | | ✓ |
| SFP-10G-AOC7M | | | ✓ |
| SFP-25G-AOC10M | ✓ | | ✓ |
| QSFP-4SFP25G-CU3M | | | ✓ |
| SFP-H25G-CU1M | ✓ | | ✓ |
| SFP-H25G-CU2M | ✓ | | ✓ |

Table 13.0.a 25G NIC Interoperability with Cables/Optics

| Cisco Product ID (PID) | UCSC-O-ID25GF | UCSC-OCQ-QD25GF | UCSC-PCIE-ID25GF |
|----------------------------|---------------|-----------------|------------------|
| SFP-H25G-CU3M | ✓ | | ✓ |
| SFP-H25G-CU5M | ✓ | | ✓ |
| SFP-25G-AOC1M | | | ✓ |
| SFP-25G-AOC2M | | | ✓ |
| SFP-25G-AOC3M | | | ✓ |
| SFP-25G-AOC4M | | | ✓ |
| SFP-25G-AOC5M | | | ✓ |
| SFP-25G-AOC7M | | | ✓ |
| QSFP-100G-AOC10M | ✓ | | |
| QSFP-100G-CU5M | ✓ | | |
| Cisco Optical Transceivers | | | |
| SFP-10G-SR | ✓ | | ✓ |
| SFP-10G-SR-S | | | ✓ |
| SFP-10G-LR | ✓ | | ✓ |
| SFP-10G-LR-S | | | ✓ |
| SFP-25G-SR-S | ✓ | | ✓ |
| SFP-10/25G-LR-S | ✓ | | ✓ |
| QSFP-100G-SR4-S | ✓ | | |

Table 13.0.c 100G NIC Interoperability with Cables/Optics

| Cisco Product ID (PID) | UCSC-P-M5S100GF |
|----------------------------------|-----------------|
| Cisco Direct Attach Cables (DAC) | |
| QSFP-100G-AOC5M | ✓ |
| QSFP-100G-AOC7M | ✓ |
| QSFP-100G-CU3M | ✓ |
| QSFP-100G-CU5M | ✓ |
| Cisco Optical Transceivers | |

Table 13.0.c 100G NIC Interoperability with Cables/Optics

| | |
|------------------|---|
| QSFP-100G-LR4-S | ✓ |
| QSFP-100G-SR4-S | ✓ |
| QSFP-40/100-SRBD | ✓ |

- a. *: Compiled from testing conducted by Cisco TMG and Vendors.
b. Refer to the these links for additional Connectivity Options.

| Intel: | Marvell/Qlogic: | Mellanox: |
|-----------------------------------|--|--|
| Product Guide | 41000 series Interoperability Matrix | Firmware Release Notes |
| Speed White Paper | 45000 series Interoperability Matrix | |

STEP 9 ORDER M.2 SATA SSDs (OPTIONAL)

Order one or two matching M.2 SATA SSDs (see [Table 14](#)) along with a mini storage carrier or a boot-optimized RAID controller (see [Table 15](#)).



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

Each mini storage carrier or boot-optimized RAID controller can accommodate up to two SATA M.2 SSDs shown in [Table 14](#).

Table 14 M.2 SATA SSDs

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

Table 15 Mini Storage Carrier/Boot-Optimized RAID Controller

| Product ID (PID) | PID Description |
|------------------|--|
| UCS-MSTOR-M2 | Mini Storage Carrier for M.2 SATA (holds up to 2 M.2 SATA SSDs) |
| UCS-M2-HWRAID | Cisco Boot optimized M.2 RAID controller (holds up to 2 M.2 SATA SSDs) |



NOTE:

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

- Order either the Mini Storage carrier or the Boot-Optimized RAID controller from [Table 15](#).
 - Choose the UCS-MSTOR-M2 mini storage carrier for controlling the M.2 SATA drives with no RAID control.

- Choose the UCS-M2-HWRAID Boot-Optimized RAID controller for hardware RAID across the two internal SATA M.2 drives. The Boot-Optimized RAID controller holds up to 2 matching M.2 SATA drives.
- Order up to two matching M.2 SATA SSDs from [Table 14](#).



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

Caveats

- You cannot mix M.2 SATA SSDs with SD cards.
- Order either one or two identical M.2 SATA SSDs for the mini-storage carrier or boot-optimized RAID controller. You cannot mix M.2 SATA SSD capacities.
 - When ordering two M.2 SATA drives with embedded software RAID, the maximum number of internal SATA drives supported is six. To support greater than six internal drives, a Cisco 12G Raid Controller or a Cisco 12G SAS HBA must be ordered

STEP 10 ORDER SD CARD MODULE (OPTIONAL)

Order SD cards. There are two locations, SD1 and SD2.

Table 16 128 GB Secure Digital (SD) Card

| Product ID (PID) | PID Description |
|------------------|--------------------------------|
| UCS-SD-128G | 128 GB SD Card for UCS Servers |
| UCS-SD-64G-S | 64 GB SD Card for UCS Servers |
| UCS-SD-32G-S | 32 GB SD Card for UCS Servers |

Caveats

- Install either one or two SD cards
- Do not mix SD card sizes
- You cannot mix SD cards with an internal M.2 SATA SSDs (see [ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES](#)).

STEP 11 ORDER MICRO-SD CARD MODULE (OPTIONAL)

Order one or two matching capacity M.2 SATA SSDs as desired.

Table 17 32 GB Secure Digital (SD) Card

| Product ID (PID) | PID Description |
|------------------|------------------------------------|
| UCS-MSD-32G | 32GB Micro-SD Card for UCS servers |

Caveats

- Install either one or two M.2 SATA SSDs.
- You cannot mix M.2 SATA SSDs with SD (see [ORDER SD CARD MODULE \(OPTIONAL\)](#)).

STEP 12 ORDER OPTIONAL USB 3.0 DRIVE

You can order one optional USB 3.0 drive.

The USB drive ordering information is listed in [Table 18](#)

Table 18 USB 3.0 Drive

| Product ID (PID) | PID Description |
|--------------------|-----------------------------------|
| UCS-USBFLSHB-16GB= | UCS Servers 16 GB Flash USB Drive |

See [Figure 6 on page 51](#) for the location of the USB connector

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 20](#).

Choose an optional Trusted Platform Module (TPM) from [Table 19](#).

Table 19 TPM

| Product ID (PID) | PID Description |
|------------------|--|
| UCSX-TPM2-002-C | Trusted Platform Module 2.0 for UCS servers |
| UCSX-TPM2-002B-C | Trusted Platform Module2.0 UCS servers(FIPS 140-2 Compliant) |



NOTE:

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

STEP 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 [Table 20](#)

Table 20 C4200 Locking Security Bezel

| Product ID (PID) | PID Description |
|------------------|---|
| UCSC-BZL-C240M5 | Locking Security Bezel for 2U C-series rack servers |

STEP 15 SELECT POWER SUPPLY

The Cisco UCS C4200 accommodates two power supplies. Two power supplies are mandatory.

Use [Table 21](#) to order the power supplies.

Table 21 Power Supply

| Product ID (PID) | PID Description |
|------------------|-----------------------------------|
| UCSC-PSU3-2400W | UCS C4200 2400W Power Supply Unit |

STEP 16 SELECT POWER CORD(s)

Each power supply in the server has a power cord. Standard power cords or jumper power cords are available for connection to the server. The shorter jumper power cords, for use in racks, are available as an optional alternative to the standard power cords.

Using [Table 22](#), 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.

Table 22 Available Power Cords

| Product ID (PID) | PID Description | Images |
|-------------------|---|----------------------|
| R2XX-DMYMPWRCORD | No power cord (dummy PID to allow for a no power cord option) | Not applicable |
| CAB-AC-2500W-EU | Power Cord, 250Vac 16A, Europe | Images not available |
| CAB-AC-2500W-INT | Power Cord, 250Vac 16A, INTL | Images not available |
| CAB-C19-CBN | Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors | Images not available |
| CAB-AC-C6K-TWLK | Power Cord, 250Vac 16A, twist lock NEMA L6-20 plug, US | Images not available |
| CAB-AC-2500W-US1 | Power Cord, 250Vac 16A, straight blade NEMA 6-20 plug, US | Images not available |
| CAB-AC-16A-AUS | Power Cord, 250VAC, 16A, Australia C19 | Images not available |
| CAB-AC16A-CH | 16A AC Power Cord For China | Images not available |
| CAB-AC-2500W-ISRL | Power Cord,250VAC,16A,Israel | Images not available |
| CAB-S132-C19-ISRL | S132 to IEC-C19 14ft Israeli | Images not available |
| CAB-ACS-16 | AC Power Cord (Swiss) 16A | Images not available |
| CAB-IR2073-C19-AR | IRSM 2073 to IEC-C19 14ft Argen | Images not available |
| CAB-BS1363-C19-UK | BS-1363 to IEC-C19 14ft UK | Images not available |
| CAB-SABS-C19-IND | SABS 164-1 to IEC-C19 India | Images not available |
| CAB-C2316-C19-IT | CEI 23-16 to IEC-C19 14ft Italy | Images not available |
| CAB-9K16A-BRZ | Power Cord 250VAC 16A, Brazil, Src Plug EL224-C19 | Images not available |
| CAB-C19-C20-3M-JP | Power Cord C19-C20, 3M/10ft Japan PSE mark | Images not available |
| CAB-L520P-C19-US | NEMA L5-20 to IEC-C19 6ft US | Images not available |
| CAB-US620P-C19-US | NEMA 6-20 to IEC-C19 13ft US | Images not available |
| CAB-9K16A-KOR | Power Cord 250VAC 16A, Korea, Src Plug | Images not available |
| CAB-C19-C20-IND | Power Cord C19-C20 India | Images not available |

STEP 17 SELECT TOOL-LESS RAIL KIT AND 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 24](#) to order a cable management arm.

Select a Tool-less Rail Kit

Select a tool-less rail kit from [Table 23](#).

Table 23 Tool-less Rail Kit Options

| Product ID (PID) | PID Description |
|------------------|--|
| UCSC-RAILF-M4 | Friction Rail Kit for C220 M4 and C220 M5 Servers |
| UCSC-RAILB-M4 | Ball Bearing Rail Kit for C220 and C240 M4/M5 Rack Servers |

Table 24 Cable Management Arm

| Product ID (PID) | PID Description |
|------------------|--|
| UCSC-CMAF-C4200 | Reversible CMA for C4200 ball bearing rail kit |

STEP 18 SELECT A KVM CABLE (OPTIONAL)

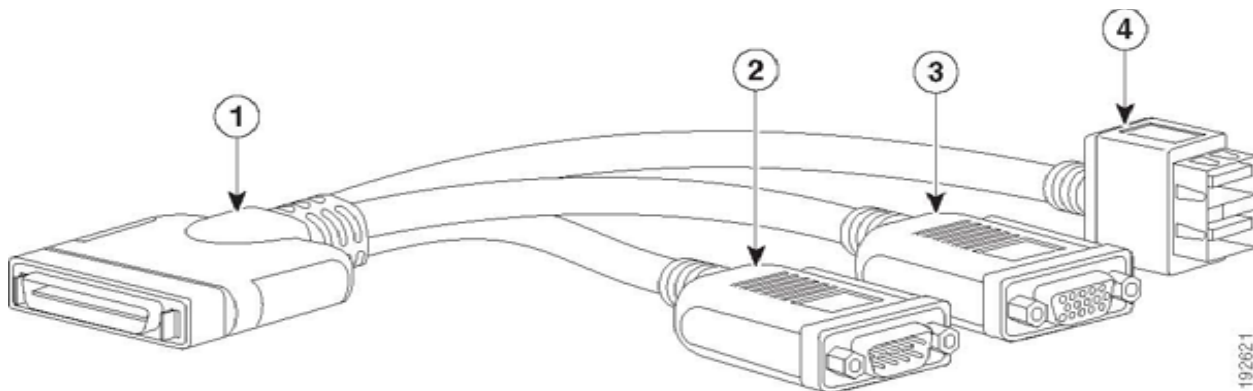
The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB 2.0 ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

The KVM cable ordering information is listed in [Table 25](#).

Table 25 KVM Cable

| Product ID (PID) | PID Description |
|------------------|-----------------------------------|
| N20-BKVM= | KVM cable for server console port |

Figure 5 KVM Cable



| | | | |
|---|-----------------------------------|---|---|
| 1 | Connector (to server front panel) | 3 | VGA connector (for a monitor) |
| 2 | DB-9 serial connector | 4 | Two-port USB 2.0 connector (for a mouse and keyboard) |

STEP 19 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE

Several operating systems and value-added software programs are available. Select as desired from [Table 26](#).

Table 26 Operating System

| Product ID (PID) | PID Description |
|--|--|
| Microsoft Windows Server | |
| MSWS-19-DC16C | Windows Server 2019 Data Center (16 Cores/Unlimited VMs) |
| MSWS-19-DC16C-NS | Windows Server 2019 DC (16 Cores/Unlim VMs) - No Cisco SVC |
| MSWS-19-ST16C | Windows Server 2019 Standard (16 Cores/2 VMs) |
| MSWS-19-ST16C-NS | Windows Server 2019 Standard (16 Cores/2 VMs) - No Cisco SVC |
| Red Hat | |
| RHEL-2S2V-1A | Red Hat Enterprise Linux (1-2 CPU,1-2 VN); 1-Yr Support Req |
| RHEL-2S2V-3A | Red Hat Enterprise Linux (1-2 CPU,1-2 VN); 3-Yr Support Req |
| RHEL-2S2V-5A | Red Hat Enterprise Linux (1-2 CPU,1-2 VN); 5-Yr Support Req |
| RHEL-VDC-2SUV-1A | RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 1 Yr Supp Req |
| RHEL-VDC-2SUV-3A | RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 3 Yr Supp Req |
| RHEL-VDC-2SUV-5A | RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 5 Yr Supp Req |
| Red Hat Ent Linux/ High Avail/ Res Strg/ Scal | |
| RHEL-2S2V-1S | Red Hat Enterprise Linux (1-2 CPU,1-2 VN); Prem 1-Yr SnS |
| RHEL-2S2V-3S | Red Hat Enterprise Linux (1-2 CPU,1-2 VN); Prem 3-Yr SnS |
| RHEL-2S-HA-1S | RHEL High Availability (1-2 CPU); Premium 1-yr SnS |
| RHEL-2S-HA-3S | RHEL High Availability (1-2 CPU); Premium 3-yr SnS |
| RHEL-2S-RS-1S | RHEL Resilent Storage (1-2 CPU); Premium 1-yr SnS |
| RHEL-2S-RS-3S | RHEL Resilent Storage (1-2 CPU); Premium 3-yr SnS |
| RHEL-2S-SFS-1S | RHEL Scalable File System (1-2 CPU); Premium 1-yr SnS |
| RHEL-2S-SFS-3S | RHEL Scalable File System (1-2 CPU); Premium 3-yr SnS |
| RHEL-VDC-2SUV-1S | RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 1 Yr SnS Reqd |
| RHEL-VDC-2SUV-3S | RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 3 Yr SnS Reqd |
| VMware | |
| VMW-VSP-STD-1A | VMware vSphere 6 Standard (1 CPU), 1-yr, Support Required |

Table 26 (continued) Operating System

| Product ID (PID) | PID Description |
|------------------|--|
| VMW-VSP-STD-3A | VMware vSphere 6 Standard (1 CPU), 3-yr, Support Required |
| VMW-VSP-STD-5A | VMware vSphere 6 Standard (1 CPU), 5-yr, Support Required |
| VMW-VSP-EPL-3A | VMware vSphere 6 Ent Plus (1 CPU), 3-yr, Support Required |
| VMW-VSP-EPL-1A | VMware vSphere 6 Ent Plus (1 CPU), 1-yr, Support Required |
| VMW-VSP-EPL-5A | VMware vSphere 6 Ent Plus (1 CPU), 5-yr, Support Required |
| SUSE | |
| SLES-2S2V-1A | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 1-Yr Support Req |
| SLES-2SUV-1A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 1-Yr Support Req |
| SLES-2S2V-3A | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 3-Yr Support Req |
| SLES-2SUV-3A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 3-Yr Support Req |
| SLES-2S2V-5A | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 5-Yr Support Req |
| SLES-2SUV-5A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 5-Yr Support Req |
| SLES-2S2V-1S | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 1-Yr SnS |
| SLES-2SUV-1S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 1-Yr SnS |
| SLES-2S2V-3S | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 3-Yr SnS |
| SLES-2SUV-3S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 3-Yr SnS |
| SLES-2S2V-5S | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 5-Yr SnS |
| SLES-2SUV-5S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 5-Yr SnS |
| SLES-2S-HA-1S | SUSE Linux High Availability Ext (1-2 CPU); 1yr SnS |
| SLES-2S-HA-3S | SUSE Linux High Availability Ext (1-2 CPU); 3yr SnS |
| SLES-2S-HA-5S | SUSE Linux High Availability Ext (1-2 CPU); 5yr SnS |
| SLES-2S-GC-1S | SUSE Linux GEO Clustering for HA (1-2 CPU); 1yr Sns |
| SLES-2S-GC-3S | SUSE Linux GEO Clustering for HA (1-2 CPU); 3yr SnS |
| SLES-2S-GC-5S | SUSE Linux GEO Clustering for HA (1-2 CPU); 5yr SnS |
| SLES-2S-LP-1S | SUSE Linux Live Patching Add-on (1-2 CPU); 1yr SnS Required |
| SLES-2S-LP-3S | SUSE Linux Live Patching Add-on (1-2 CPU); 3yr SnS Required |
| SLES-2S-LP-1A | SUSE Linux Live Patching Add-on (1-2 CPU); 1yr Support Req |
| SLES-2S-LP-3A | SUSE Linux Live Patching Add-on (1-2 CPU); 3yr Support Req |

STEP 20 SELECT OPERATING SYSTEM MEDIA KIT

Select the optional operating system media listed in [Table 27](#).

Table 27 OS Media

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

STEP 21 SELECT SERVICE and SUPPORT LEVEL

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

Unified Computing Warranty, No Contract

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

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

Smart Net Total Care (SNTC) for UCS

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

For systems that include Unified Computing System Manager, the support service includes downloads of UCSM upgrades. The Cisco Smart Net Total Care for UCS Service includes flexible hardware replacement options, including replacement in as little as two hours. There is also access to Cisco's extensive online technical resources to help maintain optimal efficiency and uptime of the unified computing environment. For more information please refer to the following url: <http://www.cisco.com/c/en/us/services/technical/smart-net-total-care.html?stickynav=1>

You can choose a desired service listed in [Table 28](#).

Table 28 Cisco SNTC for UCS Service (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|--------------------|-------------------|----------|-------------------------|
| CON-PREM-C4200SFF | C2P | Yes | SNTC 24X7X20S |
| CON-UCSD8-C4200SFF | UCSD8 | Yes | UC SUPP DR 24X7X20S* |
| CON-OSP-C4200SFF | C4P | Yes | SNTC 24X7X40S |
| CON-UCSD7-C4200SFF | UCSD7 | Yes | UCS DR 24X7X40S* |
| CON-C4PL-C4200SFF | C4PL | Yes | LL 24X7X40S** |
| CON-USD7L-C4200SFF | USD7L | Yes | LLUCS HW DR 24X7X40S*** |
| CON-OSE-C4200SFF | C4S | Yes | SNTC 8X5X40S |
| CON-UCSD6-C4200SFF | UCSD6 | Yes | UC SUPP DR 8X5X40S* |
| CON-SNCO-C4200SFF | SNCO | Yes | SNTC 8x7xNCDOS**** |

Table 28 Cisco SNTC for UCS Service (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|--------------------|-------------------|----------|-------------------|
| CON-OS-C4200SFF | CS | Yes | SNTC 8X5XNBDOS |
| CON-UCSD5-C4200SFF | UCSD5 | Yes | UCS DR 8X5XNBDOS* |
| CON-S2P-C4200SFF | S2P | No | SNTC 24X7X2 |
| CON-SNTP-C4200SFF | SNTP | No | SNTC 24X7X4 |
| CON-SNTPL-C4200SFF | SNTPL | No | LL 24X7X4** |
| CON-SNTE-C4200SFF | SNTE | No | SNTC 8X5X4 |
| CON-SNC-C4200SFF | SNC | No | SNTC 8x7xNCD**** |
| CON-SNT-C4200SFF | SNT | No | SNTC 8X5XNBD |
| CON-SW-C4200SFF | SW | No | SNTC NO RMA |

*Includes Drive Retention (see below for full description)

**Includes Local Language Support (see below for full description) - Only available in China and Japan

***Includes Local Language Support and Drive Retention - Only available in China and Japan

****Available in China Only

Smart Net Total Care for Cisco UCS Onsite Troubleshooting Service

An enhanced offer over traditional Smart Net Total Care which provides onsite-troubleshooting expertise to aid in the diagnostics and isolation of hardware issue within our customers' Cisco Unified Computing System (UCS) environment. It is delivered by a Cisco Certified field engineer (FE) in collaboration with remote TAC engineer and Virtual Internet working Support Engineer (VISE). You can choose a desired service listed in [Table 29](#)

Table 29 SNTC for Cisco UCS Onsite Troubleshooting Service (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|--------------------|-------------------|----------|----------------------|
| CON-OSPT-C4200SFF | OSPT | Yes | 24X7X4OS Trblshtg |
| CON-OSPTD-C4200SFF | OSPTD | Yes | 24X7X4OS TrblshtgDR* |

*Includes Drive Retention (see below for full description)

Solution Support for UCS

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

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

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

You can choose a desired service listed in [Table 30](#)

Table 30 Solution Support for UCS Service (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|--|-------------------|----------|---------------------|
| CON-SSC2P-C4200SFF | SSC2P | Yes | SOLN SUPP 24X7X2OS |
| CON-SSC4P-C4200SFF | SSC4P | Yes | SOLN SUPP 24X7X4OS |
| CON-SSC4S-C4200SFF | SSC4S | Yes | SOLN SUPP 8X5X4OS |
| CON-SSCS-C4200SFF | SSCS | Yes | SOLN SUPP 8X5XNBDOS |
| CON-SSDR7-C4200SFF | SSDR7 | Yes | SSPT DR 24X7X4OS* |
| CON-SSDR5-C4200SFF | SSDR5 | Yes | SSPT DR 8X5XNBDOS* |
| CON-SSS2P-C4200SFF | SSS2P | No | SOLN SUPP 24X7X2 |
| CON-SSSNP-C4200SFF | SSSNP | No | SOLN SUPP 24X7X4 |
| CON-SSSNE-C4200SFF | SSSNE | No | SOLN SUPP 8X5X4 |
| CON-SSSNC-C4200SFF | SSSNC | No | SOLN SUPP NCD** |
| CON-SSSNT-C4200SFF | SSSNT | No | SOLN SUPP 8X5XNBD |
| Includes Drive Retention (see below for description) | | | |
| **Available in China only | | | |

Smart Net Total Care for UCS Hardware Only Service

For faster parts replacement than is provided with the standard Cisco Unified Computing System warranty, Cisco offers the Cisco Smart Net Total Care for UCS Hardware Only Service. You can choose from two levels of advanced onsite parts replacement coverage in as little as four hours. Smart Net Total Care for UCS Hardware Only Service provides remote access any time to Cisco

support professionals who can determine if a return materials authorization (RMA) is required. You can choose a desired service listed in [Table 31](#)

Table 31 SNTC for UCS Hardware Only Service (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|---|-------------------|----------|----------------------|
| CON-UCW7-C4200SFF | UCW7 | Yes | UCS HW 24X7X40S |
| CON-UCWD7-C4200SFF | UCWD7 | Yes | UCS HW+DR 24X7X40S* |
| CON-UCW5-C4200SFF | UCW5 | Yes | UCS HW 8X5XNBDOS |
| CON-UCWD5-C4200SFF | UCWD5 | Yes | UCS HW+DR 8X5XNBDOS* |
| *Includes Drive Retention (see below for description) | | | |

Partner Support Service for UCS

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

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

PSS options enable eligible Cisco partners to develop and consistently deliver high-value technical support that capitalizes on Cisco intellectual assets. This helps partners to realize higher margins and expand their practice.

PSS is available to all Cisco PSS partners.

The two Partner Unified Computing Support Options include:

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

PSS for UCS provides hardware and software support, including triage support for third party software, backed by Cisco technical resources and level three support. You can choose a desired service listed in [Table 32](#).

Table 32 PSS for UCS (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|--------------------|-------------------|----------|--------------------|
| CON-PSJ8-C4200SFF | PSJ8 | Yes | UCS PSS 24X7X2 OS |
| CON-PSJ7-C4200SFF | PSJ7 | Yes | UCS PSS 24X7X4 OS |
| CON-PSJD7-C4200SFF | PSJD7 | Yes | UCS PSS 24X7X4 DR* |

Table 32 PSS for UCS (PID UCSC-C4200-SFF)

| | | | |
|--------------------|-------|-----|----------------------|
| CON-PSJ6-C4200SFF | PSJ6 | Yes | UCS PSS 8X5X4 OS |
| CON-PSJD6-C4200SFF | PSJD6 | Yes | UCS PSS 8X5X4 DR* |
| CON-PSJ4-C4200SFF | PSJ4 | No | UCS SUPP PSS 24X7X2 |
| CON-PSJ3-C4200SFF | PSJ3 | No | UCS SUPP PSS 24X7X4 |
| CON-PSJ2-C4200SFF | PSJ2 | No | UCS SUPP PSS 8X5X4 |
| CON-PSJ1-C4200SFF | PSJ1 | No | UCS SUPP PSS 8X5XNBD |

*Includes Drive Retention (see below for description)

PSS for UCS Hardware Only

PSS for UCS Hardware Only provides customers with replacement parts in as little as two hours and provides remote access any time to Partner Support professionals who can determine if a return materials authorization (RMA) is required. You can choose a desired service listed in [Table 33](#)

Table 33 PSS for UCS Hardware Only (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|--------------------|-------------------|----------|----------------------|
| CON-PSW7-C4200SFF | PSW7 | Yes | UCS W PSS 24X7X4 OS |
| CON-PSWD7-C4200SFF | PSWD7 | Yes | UCS W PSS 24X7X4 DR* |
| CON-PSW6-C4200SFF | PSW6 | Yes | UCS W PSS 8X5X4 OS |
| CON-PSWD6-C4200SFF | PSWD6 | Yes | UCS W PSS 8X5X4 DR* |
| CON-PSW4-C4200SFF | PSW4 | No | UCS W PL PSS 24X7X2 |
| CON-PSW3-C4200SFF | PSW3 | No | UCS W PL PSS 24X7X4 |
| CON-PSW2-C4200SFF | PSW2 | No | UCS W PL PSS 8X5X4 |

*Includes Drive Retention (see below for description)

Unified Computing Combined Support Service

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

- Optimize the uptime, performance, and efficiency of your UCS
- Protect your vital business applications by rapidly identifying and addressing issues
- Strengthen in-house expertise through knowledge transfer and mentoring

- Improve operational efficiency by allowing UCS experts to augment your internal staff resources
- Enhance business agility by diagnosing potential issues before they affect your operations,

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

Table 34 Combined Support Service for UCS (PID UCSC-C4200-SFF)

| Service SKU | Service Level GSP | On Site? | Description |
|--------------------|-------------------|----------|-------------------|
| CON-NCF2P-C4200SFF | NCF2P | Yes | CMB SVC 24X7X2OS |
| CON-NCF4P-C4200SFF | NCF4P | Yes | CMB SVC 24X7X4OS |
| CON-NCF4S-C4200SFF | NCF4S | Yes | CMB SVC 8X5X4OS |
| CON-NCFCS-C4200SFF | NCFCS | Yes | CMB SVC 8X5XNBDOS |
| CON-NCF2-C4200SFF | NCF2 | No | CMB SVC 24X7X2 |
| CON-NCFP-C4200SFF | NCFP | No | CMB SVC 24X7X4 |
| CON-NCFE-C4200SFF | NCFE | No | CMB SVC 8X5X4 |
| CON-NCFT-C4200SFF | NCFT | No | CMB SVC 8X5XNBD |
| CON-NCFW-C4200SFF | NCFW | No | CMB SVC SW |

UCS Drive Retention Service

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

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

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



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

Local Language Technical Support for UCS

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

For a complete listing of available services for Cisco Unified Computing System, see this URL: http://www.cisco.com/en/US/products/ps10312/serv_group_home.html

OPTIONAL STEP - ORDER RACK(S)

The optional R42612 rack is available from Cisco for the C-Series servers, including the C4200 server. This rack is a standard 19-inch rack and can be ordered with a variety of options, as listed in [Table 35](#). Racks are shipped separately from the C4200 server.

Table 35 Racks and Rack Options

| Product ID (PID) | PID Description |
|------------------|---|
| RACK2-UCS | <p>Cisco R42612 expansion rack, no side panels.</p> <p>This type of rack is used for multiple-rack deployments.</p> |
| RACK2-UCS2 | <p>Cisco R42612 static (standard) rack, with side panels.</p> <p>This type of rack is used for single-rack and end of row deployments. Side panels are needed for racks at the ends of multiple-rack deployments. For example, when configuring a row of 5 racks, order 1 standard rack plus 4 expansion racks. Apply the side panels from the standard rack to the racks at each end of the row.</p> |
| RACK-BLANK-001 | <p>Blanking panels (qty 12), 1U, plastic, toolless.</p> <p>Recommended to ensure proper airflow. Fill all empty RU spaces in the front of the rack. Because each blanking panel PID includes 12 panels, use the following calculation: $42RU - \text{occupied RU} = \text{available RU}$. Divide available RU by 12 to determine PID order quantity.</p> |
| RACK-CBLMGT-001 | <p>Cable mgt D rings (qty 10), metal.</p> <p>Use the D rings to bundle system cables to ensure proper airflow.</p> |
| RACK-CBLMGT-003 | <p>Brush strip (qty 1), 1 U.</p> <p>The brush strip promotes proper airflow while allowing cables to be passed from the front to the rear of the rack.</p> |
| RACK-CBLMGT-011 | <p>Cable mgt straps (qty 10), Velcro.</p> <p>Use the Velcro straps to bundle system cables to ensure proper airflow.</p> |
| RACK-FASTEN-001 | <p>Mounting screws (qty 100), M6.</p> <p>The rack ships with nuts and screws, but extras may be ordered.</p> |
| RACK-FASTEN-002 | <p>Cage nuts (qty 50), M6.</p> <p>The rack ships with nuts and screws, but extras may be ordered.</p> |
| RACK2-JOIN-001 | <p>Rack joining kit.</p> <p>Use the kit to connect adjacent racks within a row. Order 1 unit less than the number of racks in the row.</p> |
| RACK2-GRND-001 | Cisco R42612 grounding kit |

For more information about the R42612 rack, see [DIMM Population Rules, page 55](#).

OPTIONAL STEP - ORDER PDU

An optional power distribution unit (PDU) is available from Cisco for the C-Series rack servers, including the C4200 server. This PDU is available in a zero rack unit (RU) style or horizontal PDU style (see [Table 36](#)). For more information about the PDU, see [PDUs, page 60](#).

Table 36 Available PDUs

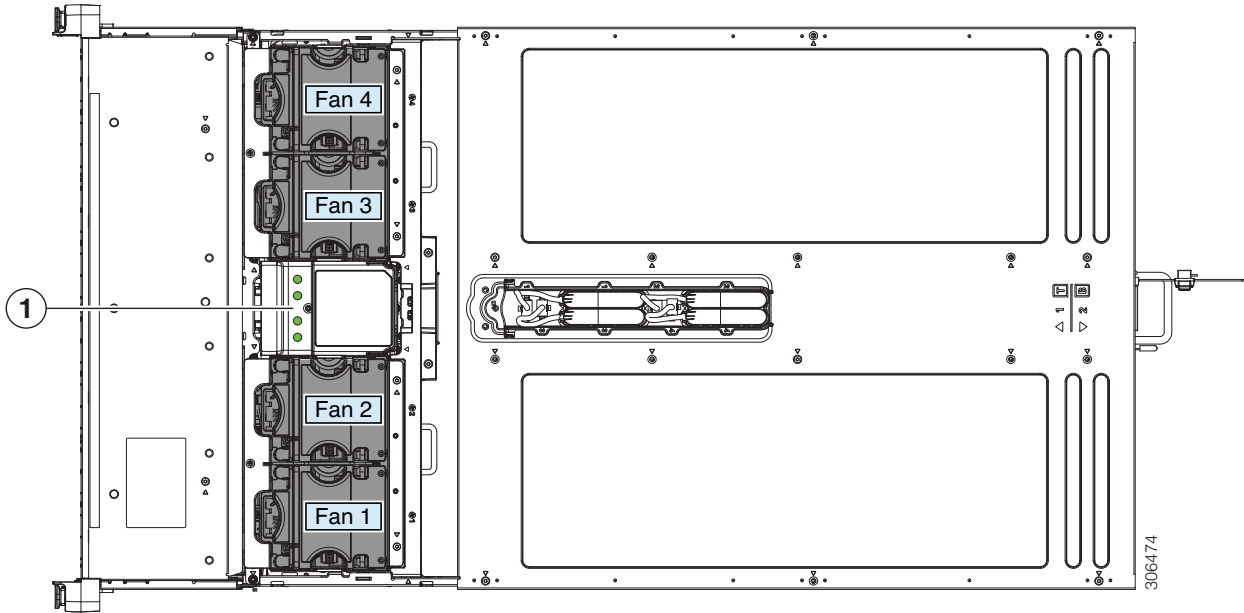
| Product ID (PID) | Description | Plug | Country |
|--|---|-------------------|---------------|
| Zero-RU PDUs | | | |
| RP208-30M1P-6-36 | 30 A, single-phase, vertical-mount PDU with 6 C19 and 36 C13 connectors | L6-30P | North America |
| RP208-30M3P-6-30 | 30 A, three-phase, vertical-mount PDU with 6 C19 and 30 C13 connectors | L15-30P | North America |
| RP208-60M3P-12-9 | 60 A, three-phase, vertical-mount PDU with 12 C19 and 9 C13 connectors | IEC60309 460P9 | North America |
| RP230-32M1P-6-36 | 32 A, single-phase, button-mount (rear and sides) PDU with 6 C19 and 36 C13 connectors | IEC60309 332P6 | International |
| RP230-32M3P-12-12 | 32 A, single-phase, button-mount (rear and sides) PDU with 12 C19 and 12 C13 connectors | IEC60309 532P6 | International |
| Horizontal PDUs (occupy RU space) | | | |
| RP208-30M1P-4-8 (1 RU space) | 30 A, single-phase, horizontal-mount PDU with 4 C19 and 8 C13 connectors | L6-30P | North America |
| RP208-60M3P-12 (2 RU spaces) | 48 A, three-phase, horizontal-mount PDU with 12 C19 connectors | L15-30P | North America |

SUPPLEMENTAL MATERIAL

CHASSIS

An internal view of the Cisco UCS C4200 rack server chassis with the top cover removed is shown in *Figure 6*.

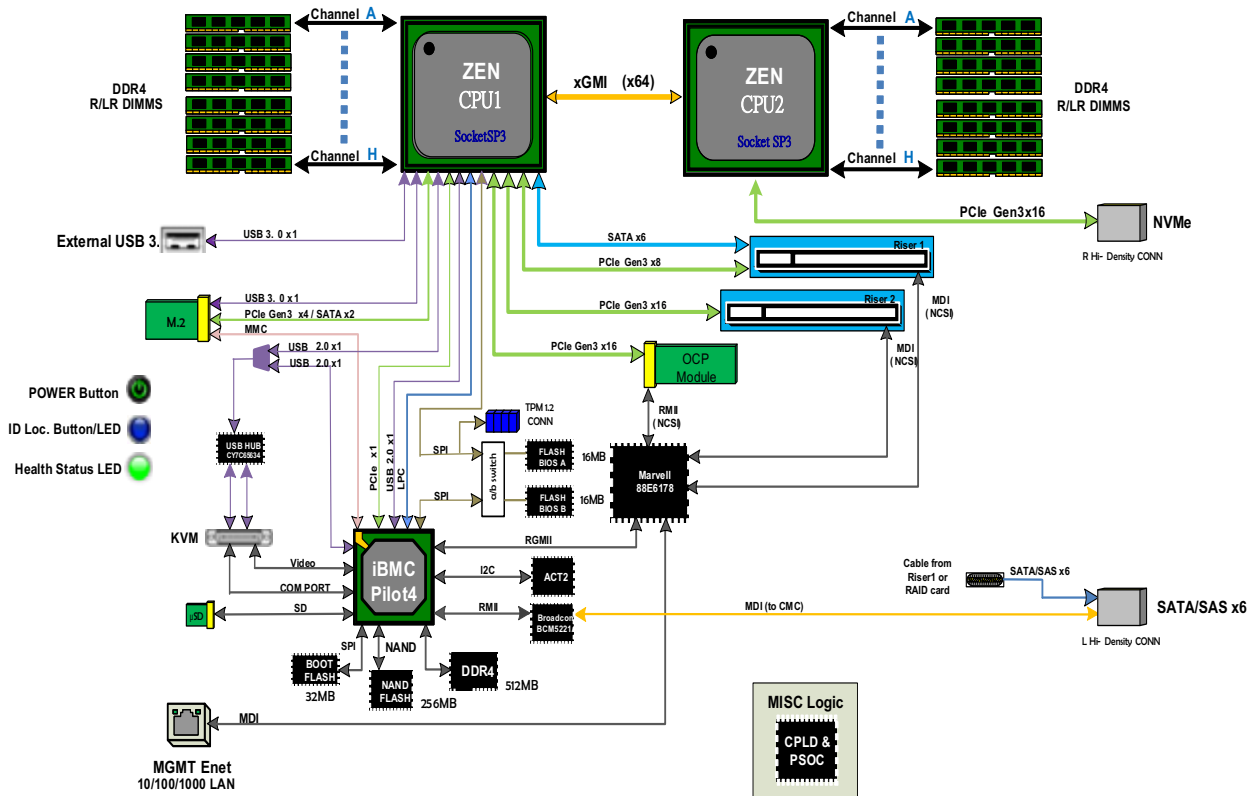
Figure 6 Cisco UCS C4200 With Top Cover Off



| | |
|---|---|
| 1 | <p>Fan module fault LEDs on fan tray (one LED for each fan module)</p> <ul style="list-style-type: none"> ■ Green-Fan is OK. ■ Amber-Fan has a fault or is not fully seated |
|---|---|

BLOCK DIAGRAM

Figure 7 UCS C125 M5 Block Diagram

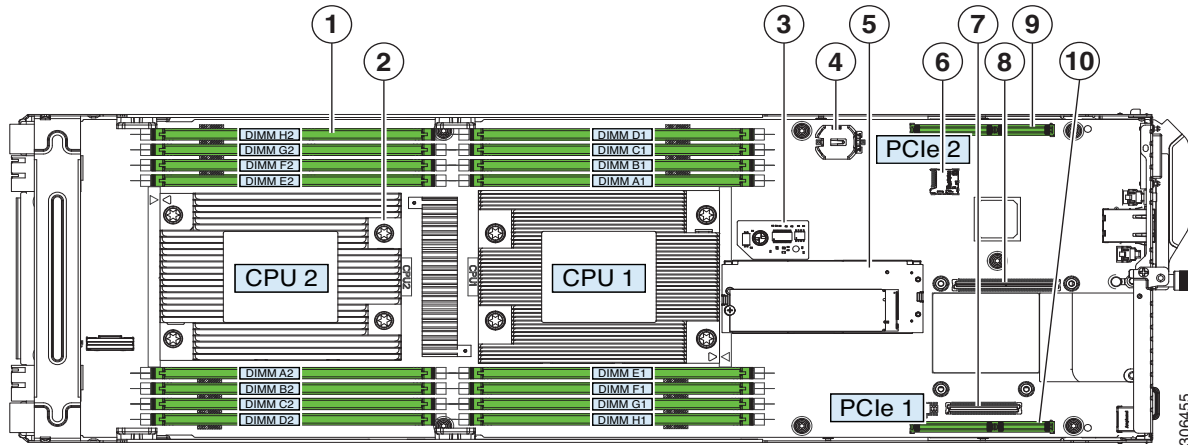


CPU and DIMMs

The following figure shows the CPU and DIMM socket placement on the C125 M5 motherboard.

- Each server node has 16 DIMM sockets total (8 for each CPU).
- DIMM sockets are organized as one DIMM per channel.

Figure 8 C125 M5 Compute Node Internal Component Locations



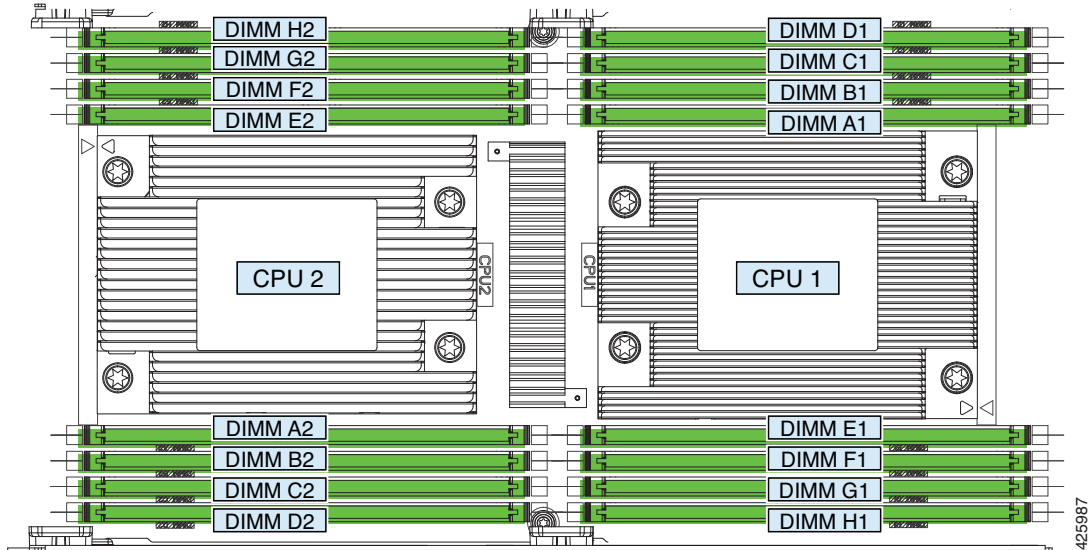
| | | | |
|---|---|----|--|
| 1 | DIMM sockets (each CPU supports 8 sockets, 16 total) | 6 | Micro-SD card socket on server board |
| 2 | AMD EPYC 7001 (Naples) or 2 AMD EPYC 7002 (Rome) series CPUs and heatsinks (one or two) The front and rear CPUs use different heatsinks | 7 | OCP adapter card socket A OCP adapter cards that require a x8 lane plug into only socket B. OCP cards that require a x16 lane plug in to both sockets A and B |
| 3 | Trusted platforms module (TPM) location on server board | 8 | OCP adapter card socket B OCP adapter cards that require a x8 lane plug into only socket B. OCP cards that require a x16 lane plug in to both sockets A and B |
| 4 | Real-time clock (RTC) battery CR2032 horizontal socket location on server board | 9 | Socket for PCIe riser 2/PCIe slot 2 (riser not shown in this view) Riser 2 plugs into a board socket to provide one horizontal PCIe slot (half-height half length, x16 slot) |
| 5 | Mini-storage module socket on server board supports either an SD card carrier with two slots for SD cards, or an M.2 SSD carrier with two slots for M.2 SATA SSDs | 10 | Socket for PCIe riser 1/PCIe slot 1 (riser not shown in this view) Riser 1 plugs into this socket to provide one horizontal PCIe slot (half-height half length, x8 slot) This is the required slot for a SAS RAID controller. The controller supports the six front-loading drives in the chassis that correspond to the node's position (group 1, 2, 3, or 4) Riser 1 also includes one x8 slimline connector for pass-through (JBOD) SATA drive control |

DIMM Sockets

The following figure shows the position of the DIMM sockets and how they are labeled on a C125 M5 motherboard. Each DIMM channel consist of one lettered slot (for example, CPU1 A1, B1, C1, or CPU2 A2, B2, C2, etc) for each CPU.

Figure 9 shows the memory slot physically placement.

Figure 9 DIMM and CPU Numbering



Memory Population Rules

- For optimal performance, spread DIMMs evenly across both CPUs and all channels. Populate the DIMM slots of each CPU identically.
- For optimal performance, populate DIMMs in the order shown in the following table, depending on the number of DIMMs per CPU.



NOTE: The table below lists recommended configurations.

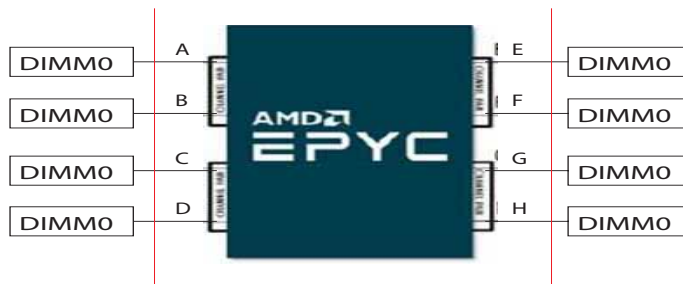
DIMM Population Rules

AMD EPYC™ processors are designed with an industry leading eight channels of DDR4 memory per processor. With more memory channels, applications will have fewer memory bottlenecks, and better performance for memory bound workloads. Though EPYC™ CPUs do not require a specific loading order for memory DIMMs, its advised to observe the following recommended population guidelines to obtain best performance:

Though a CPU can be populated with a single DIMM as a minimum configuration

- Full memory bandwidth requires one DIMM per channel (A-H) be populated to obtain best performance with bandwidth sensitive workloads
- At least one DIMM populated for each channel pair in the system (A,C,E,G) is minimally recommended for Naples.
- It is recommended to populate the memory in channel pairs for Rome. Both the channels in a channel pair should have the same total memory capacity.
- Four DIMM configuration (C,D,G,H) is minimally recommended for Rome (Conditionally Recommended only with EPYC processors that have 32 cores or less).
- In a dual CPU configuration, always balance memory capacity between them as described in [Table 37](#)

Figure 10 Memory Organization



DDR4 Speeds with 1 DIMM Per channel Populated
SR/DR RDIMM and RDIMM: 2666 MHz

Table 37 DIMM Population Order

| Number of DIMMs Per CPU | CPU 1 Slots (In a single-CPU node, populate only these slots) | CPU 2 Slots |
|---|--|--------------------------------|
| CDGH | | |
| 1 | A1 | A2 |
| 2 | A1, E1 | A2, E2 |
| 3 | A1, E1, C1 | A2, E2, C2 |
| 4 | A1, E1, C1, G1 | A2, E2, C2, G2 |
| 5 | A1, E1, C1, G1, B1 | A2, E2, C2, G2, B2 |
| 6 | A1, E1, C1, G1, B1, F1 | A2, E2, C2, G2, B2, F2 |
| 7 | A1, E1, C1, G1, B1, F1, D1 | A2, E2, C2, G2, B2, F2, D2 |
| 8 | A1, E1, C1, G1, B1, F1, D1, H1 | A2, E2, C2, G2, B2, F2, D2, H2 |
| Rome (AMD 7002 CPUs): DIMM Population order | | |
| Number of DIMMs per CPU | CPU 1 Slots (In a single-CPU node, populate only these slots) | CPU 2 slots |
| 1 | C1 | C2 |
| 2 | C1, D1 | C2, D2 |
| 3 | C1, D1, G1 | C2, D2, G2 |
| 4 | C1, D1, G1, H1 | C2, D2, G2, H2 |
| 5 | C1, D1, G1, H1, A1 | C2, D2, G2, H2, A2 |
| 6 | C1, D1, G1, H1, A1, B1 | C2, D2, G2, H2, A2, B2 |
| 7 | C1, D1, G1, H1, A1, B1, E1 | C2, D2, G2, H2, A2, B2, E2 |
| 8 | C1, D1, G1, H1, A1, B1, E1, F1 | C2, D2, G2, H2, A2, B2, E2, F2 |

Upgrade and Servicing-Related Parts

This section lists the upgrade and servicing-related parts you may need during the life of your server. Some of these parts are configured with every server, and some may be ordered when needed or may be ordered and kept on hand as spares for future use. See [Table 38](#)

Table 38 Upgrade and Servicing-related Parts for Cisco UCS C4200 Server

| Spare Product ID (PID) | Descriptions |
|------------------------|---|
| Base Chassis | |
| UCSC-C4200-SFF= | Cisco UCS C4200 Base Chassis FRU Spare |
| UCSC-BBLKD-S2= | Cisco UCS C4200 C-Series M5 SFF drive blanking panel spare |
| UCSC-NBLKD-C4200= | Cisco UCS C4200 Node Blank spare |
| UCSC-BZL-C240M5= | Cisco UCS C4200 Security Bezel for 2U M5 servers spare |
| UCSC-FAN-C4200= | Cisco UCS C4200 Fan Module (one) spare |
| UCSC-PSU3-2400W= | Cisco UCS C4200 2400W AC power supply spare |
| UCSC-HS-C125= | Cisco UCS C125 M5 Heat sink for UCS C125 Front CPU spare |
| UCSC-HS2-C125= | Cisco UCS C125 M5 Heat sink for UCS C125 Rear CPU |
| UCS-CPU-TIM= | Cisco UCS C125 M5 Single CPU thermal interface material syringe for M5 server HS seal |
| UCSX-HSCK= | Cisco UCS C125 M5 UCS Processor Heat Sink Cleaning Kit For Replacement of CPU |
| UCSC-SATA-C125= | Cisco UCS C125 M5 SATA Cable for Riser 1A |
| UCSC-SCAP-C125= | Cisco UCS C125 M5 SAS3 SuperCap Cable |
| UCS-MSTOR-SD= | Cisco UCS C125 M5 Mini Storage Carrier for SD (holds up to 2) |
| UCS-MSTOR-M2= | Cisco UCS C125 M5 Mini Storage Carrier for M.2 SATA/NVME (holds up to 2) |
| UCSC-OCP-1025G= | UCS C125 OCP 10G/25G SFP 28 adapter panel |
| UCSC-OCP-100G= | UCS C125 OCP 100G QSFP 28 adapter panel |



NOTE: The Node Blanking panel (UCSC-C4200-BLKP) must be installed if you remove a node from the Cisco UCS C4200 chassis. This panel is required to maintain proper system temperatures at safe operating levels, and to keep dust away from system components.

TECHNICAL SPECIFICATIONS

Dimensions and Weight

Table 39 Cisco UCS C4200 Dimensions and Weight

| Parameter | Value |
|---|---------------------|
| Height | 3.4 in (87.2 mm) |
| Width | 16.9 in (429.3 mm) |
| Depth | 32.60 in (827.6 mm) |
| Weight (maximum configuration without rail kit) | 95.8 lbs (43.5 kg) |

Power Specifications

The server is available with dual 2400 W (AC) power supplies. The power supply specifications is listed in [Table 40](#).

Table 40 Cisco UCS C4200 2400 W (AC) Power Supply Specifications

| Description | Specification |
|------------------------------|--|
| AC Input Voltage | Nominal range: 200-240 VAC (Range: 180-264 VAC) |
| AC Input Frequency | Nominal range: 50 to 60Hz (Range: 47-63 Hz) |
| Maximum AC Input current | 16 A at 200 VAC |
| Maximum inrush current | 35 A at 35° C |
| Maximum output power per PSU | 2400 W at 200-240 VAC |
| Power supply output voltage | 12 VDC |
| Power supply standby voltage | 12 VDC |
| Efficiency rating | Climate Savers Platinum Efficiency (80Plus Platinum certified) |
| Form factor | RSP2 |
| Input connector | IEC60320 C20 |

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

<http://ucspowercalc.cisco.com>.

Environmental Specifications

The power specifications for the Cisco UCS C4200 are listed in [Table 41](#).

Table 41 Cisco UCS C4200 Environmental Specifications

| Parameter | Minimum |
|--|---|
| Temperature, Operating | 41 to 95°F (5 to 35°C) Derate the maximum temperature by 1°C per every 305 meters of altitude above sea level. |
| Temperature, non-operating (when the server is stored or transported) | -40 to 149°F (-40 to 65°C) |
| Humidity (RH), operating | 10 to 90% |
| Humidity (RH), non-operating (when the server is stored or transported) | 5 to 93% |
| Altitude, operating | 0 to 10,000 feet |
| Altitude, non-operating (when the server is stored or transported) | 0 to 40,000 feet |
| Sound power level Measure A-weighted per ISO7779 LwAd (Bels) Operation at 73°F (23°C) | 5.5 |
| Sound pressure level Measure A-weighted per ISO7779 LpAm (dBA) Operation at 73°F (23°C) | 40 |

Compliance Requirements

The regulatory compliance requirements for The Cisco UCS C4200 are listed in [Table 42](#).

Table 42 Regulatory Compliance Requirements

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

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 the [Table 43](#) below to determine if still supported.

Table 43 EOL Products

| EOS option PID | Description | EOL bulletin link |
|---------------------------------|--|---|
| Microsoft Windows server | | |
| MSWS-16-ST16C | Windows Server 2016 Standard (16 Cores/2 VMs) | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |
| MSWS-16-ST24C | Windows Server 2016 Standard (24 Cores/2 VMs) | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |
| MSWS-16-ST16C-NS | Windows Server 2016 Standard (16 Cores/2 VMs) - No Cisco SVC | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |
| MSWS-16-ST24C-NS | Windows Server 2016 Standard (24 Cores/2 VMs) - No Cisco SVC | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |
| MSWS-16-DC16C | Windows Server 2016 Data Center (16 Cores/Unlimited VMs) | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |
| MSWS-16-DC24C | Windows Server 2016 Data Center (24 Cores/Unlimited VMs) | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |
| MSWS-16-DC16C-NS | Windows Server 2016 DC (16 Cores/Unlim VMs) - No Cisco SVC | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |
| MSWS-16-DC24C-NS | Windows Server 2016 DC (24 Cores/Unlim VMs) - No Cisco SVC | https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/eos-eol-notice-c51-743145.html |



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