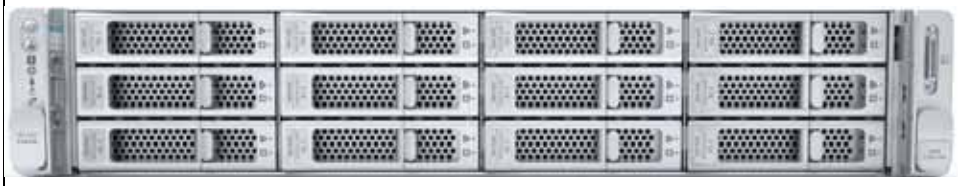
This product has been discontinued

Spec Sheet

# Cisco UCS C240 M6 LFF Rack Server

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

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




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**PUBLICATION HISTORY**

REV C.12 MAY 07, 2026

# CONTENTS


**OVERVIEW . . . . . 3**
**DETAILED VIEWS . . . . . 4**
Chassis Front View . . . . . 4
Chassis Rear View . . . . . 5
**BASE SERVER STANDARD CAPABILITIES and FEATURES . . . . . 7**
**CONFIGURING the SERVER . . . . . 10**
STEP 1 VERIFY SERVER SKU . . . . . 11
STEP 2 SELECT RISER CARDS (REQUIRED) . . . . . 12
STEP 3 SELECT CPU(s) . . . . . 13
STEP 4 SELECT MEMORY . . . . . 17
Memory Configurations, Features, and Modes . . . . . 19
STEP 5 SELECT DRIVE CONTROLLERS . . . . . 24
Cisco M6 12G SAS RAID Controller with 4 GB FBWC . . . . . 24
Cisco M6 12G SAS HBA . . . . . 24
RAID Volumes and Groups . . . . . 24
STEP 6 SELECT DRIVES . . . . . 27
Intel® Virtual RAID on CPU (Intel® VROC) . . . . . 33
STEP 7 SELECT OPTION CARD(s) . . . . . 34
**ORDER OPTIONAL PCIE OPTION CARD ACCESSORIES . . . . . 37**
STEP 8 ORDER GPU CARDS (OPTIONAL) . . . . . 38
. . . . . 38
GPU Ready Configuration . . . . . 38
STEP 9 ORDER POWER SUPPLY . . . . . 40
STEP 10 SELECT INPUT POWER CORD(s) . . . . . 42
STEP 11 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM . 46
STEP 12 MANAGEMENT CONFIGURATION (OPTIONAL) . . . . . 47
STEP 13 SELECT SERVER BOOT MODE (OPTIONAL) . . . . . 48
STEP 14 ORDER SECURITY DEVICES (OPTIONAL) . . . . . 49
STEP 15 SELECT LOCKING SECURITY BEZEL (OPTIONAL) . . . . . 50
STEP 16 ORDER M.2 SATA SSD (OPTIONAL) . . . . . 51
STEP 17 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE . . . . . 53
STEP 18 SELECT OPERATING SYSTEM MEDIA KIT . . . . . 56
STEP 19 SELECT SERVICE AND SUPPORT PIDS . . . . . 57
Unified Computing Warranty, No Contract . . . . . 57
Smart Net Total Care (SNTC) for Cisco UCS . . . . . 57
Smart Net Total Care for Cisco UCS Onsite Troubleshooting Service . . . . . 59
Solution Support (SSPT) for UCS . . . . . 60
Solution Support for Service Providers . . . . . 61
Smart Net Total Care for UCS Hardware Only Service . . . . . 61
Partner Support Service for UCS . . . . . 62
PSS for UCS Hardware Only . . . . . 63
Distributor Support Service . . . . . 64
Unified Computing Combined Support Service . . . . . 65
UCS Drive Retention Service . . . . . 66
Local Language Technical Support for UCS . . . . . 66
**SUPPLEMENTAL MATERIAL . . . . . 67**
Block Diagram . . . . . 67
Serial Port Details . . . . . 68
KVM CABLE . . . . . 68

# CONTENTS


Chassis . . . . . 69
Risers . . . . . 71
Riser Card Configuration and Options . . . . . 73
Memory Support for 3rd Generation Intel® Xeon® Scalable Processors (Ice Lake) . . . . . 76
**SPARE PARTS . . . . . 77**
**UPGRADING or REPLACING CPUs . . . . . 93**
**UPGRADING or REPLACING MEMORY . . . . . 94**
**DISCONTINUED EOL PRODUCTS . . . . . 95**
**TECHNICAL SPECIFICATIONS . . . . . 101**
Dimensions and Weight . . . . . 101
Power Specifications . . . . . 102
Extended Operating Temperature Hardware Configuration Limits . . . . . 106
Environmental Specifications . . . . . 107

# OVERVIEW

The UCS C240 M6 LFF server extends the capabilities of Cisco's Unified Computing System portfolio in a 2U form factor with the addition of the 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake), 16 DIMM slots per CPU for 3200-MHz DDR4 DIMMs with DIMM capacity points up to 128 GB. The maximum memory capacity for 2 CPUs is listed here:

- 4 TB: 32 x 128 GB DDR4 DIMMs, or
- 10 TB: 16 x 128 GB DDR4 DIMMs and 16 x 512 GB Intel® Optane™ Persistent Memory Modules (PMem).

The server accommodates up to 12 front facing SAS-only LFF drives, up to 4 mid-plane SAS-only LFF drives, and up to 4 rear-facing SFF drives (SAS or SATA or NVMe).

The server is equipped with two rear storage risers (2 drive slots each) and one rear PCIe riser (3 PCIe slots). The server also provides a riser slot for a 12G SAS RAID controller with SuperCap for write cache backup, or for a SAS HBA. The chassis is equipped with six fans and two power supplies.

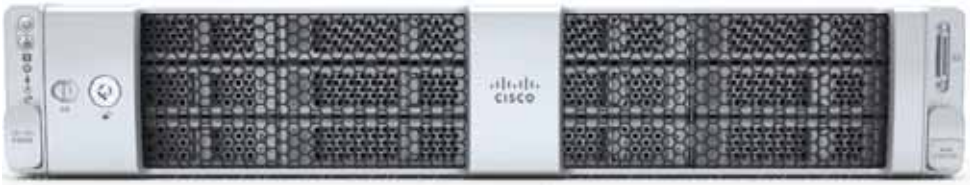
The C240 M6 LFF server includes a dedicated modular LAN on motherboard (mLOM) slot for installation of a Cisco Virtual Interface Card (VIC) or third-party network interface card (NIC) without consuming a PCI slot, in addition to 2 x 10 Intel x550 10Gbase-T embedded (on the motherboard) LOM ports.

The Cisco UCS C240 M6 server can be used standalone, or as part of the Cisco Unified Computing System, which unifies computing, networking, management, virtualization, and storage access into a single integrated architecture enabling end-to-end server visibility, management, and control in both bare metal and virtualized environments.

**NOTE:** All options listed in the Spec Sheet are compatible with Intersight Managed Mode, UCSM Managed Mode, and Standalone configurations. To see the most recent list of components that are supported in Intersight Managed Mode, see Supported Systems.

**Figure 1 Cisco UCS C240 M6 LFF Rack Server (12 front LFF drives, 4 mid-plane LFF drives, 4 rear SFF drives)**

**Front View (with bezel)**



**Front View (no bezel)**



**Rear View**

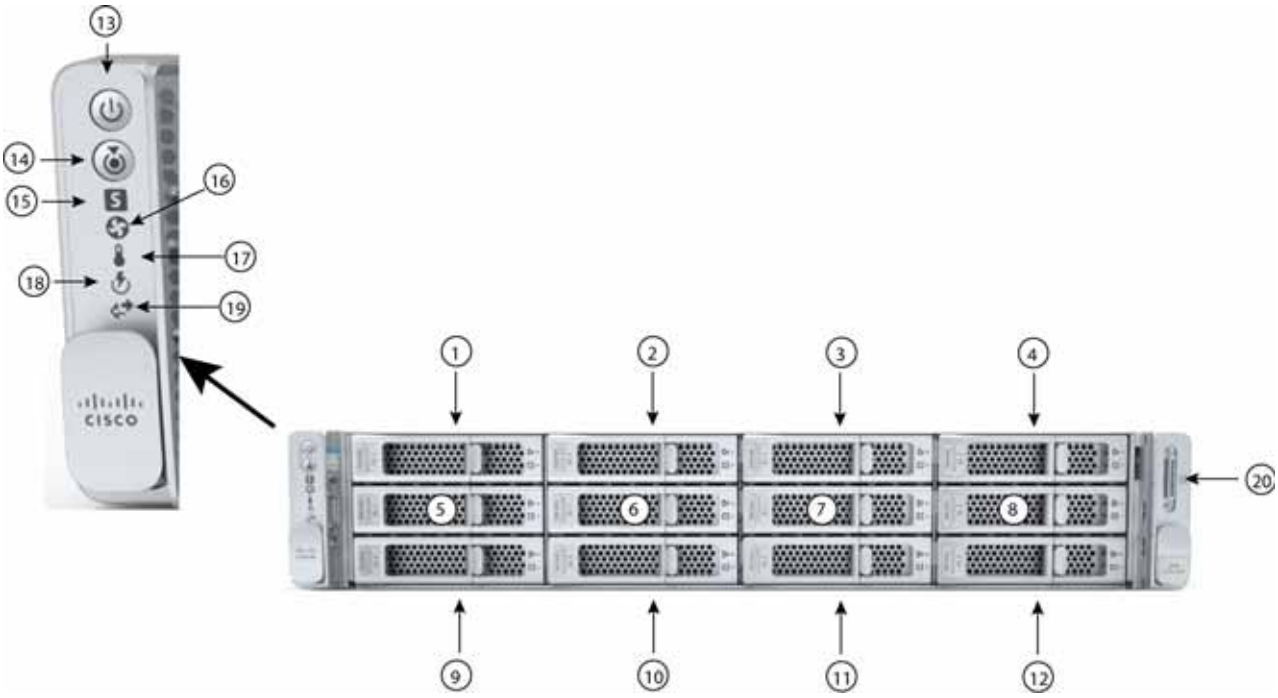


# DETAILED VIEWS

## Chassis Front View

*Figure 2* shows the 12-drive Cisco UCS C240 M6 LFF Rack Server. This server supports 12 3.5-inch (LFF) SAS-only front drives, four 3.5-inch SAS-only drives in the midplane drive cage, and two or four 2.5-inch (SFF) NVME/SAS/SATA rear drives in risers.

**Figure 2 Chassis Front View**



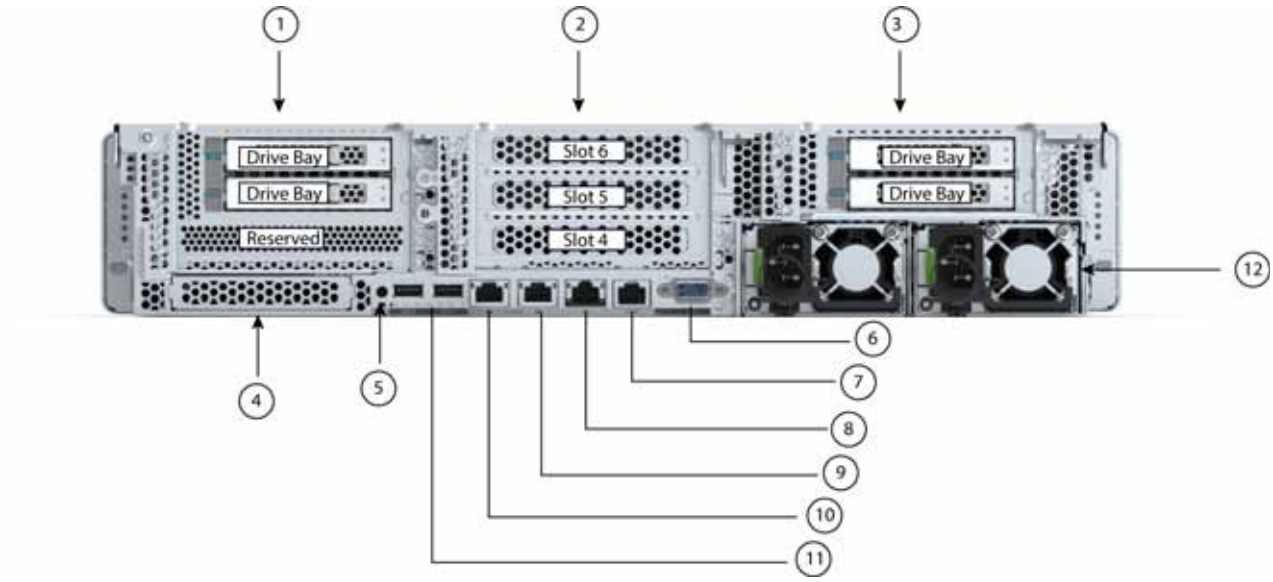

| | | | |
|---|---|---|---|
| **1 - 12** | Drive bays 1–12 support 3.5-inch SAS-only hard disk drives (HDDs). | **17** | Temperature status LED |
| **13** | Power button/Power status LED | **18** | Power supply status LED |
| **14** | Unit Identification button/LED | **19** | Network link activity LED |
| **15** | System status LED | **20** | KVM connector<br>(used with KVM cable that provides two USB 2.0 connectors, one VGA connector, and one serial connector) |
| **16** | Fan status LED | **-** | - |

For more information about the KVM cable connection, see *KVM CABLE, page 68*.

## Chassis Rear View

*Figure 3* shows the external features of the rear panel.

**Figure 3 Chassis Rear View**




| | | | |
|---|---|---|---|
| **1** | There is one Riser 1 option:<br>Riser 1B (CPU1 control)<br>■ Slot 1 is reserved for a drive controller<br>■ Supports two drives<br>• Slot 2 (drive bay 102), x4<br>• Slot 3 (drive bay 101), x4<br>• When using a hardware RAID controller card or SAS HBA in the server, SAS/SATA HDDs or SSDs are supported in the rear bays.<br>• NVMe PCIe SSDs are supported in the rear bays without need for a RAID controller.<br>See *SPARE PARTS, page 77* for details. | **7** | COM port (RJ45 connector) |
| **2** | Riser 2A (CPU2 control)<br>Supports three PCIe slots:<br>■ Slot 4 is full-height, 3/4 length, x8<br>■ Slot 5 is full-height, full-length, x16<br>■ Slot 6 is full-height, full length, x8 | **8** | 1 GbE dedicated Ethernet management port |

| | | | |
|---|---|---|---|
| **3** | There is one Riser 3 option:<br>Riser 3B (CPU2 control)<br>■ Supports two drives<br>• Slot 7 (drive bay 104), x4<br>• Slot 8 (drive bay 103), x4<br>• When using a hardware RAID controller card or SAS HBA in the server, SAS/SATA HDDs or SSDs are supported in the rear bays.<br>• NVMe PCIe SSDs are supported in the rear bays without need for a RAID controller.<br>See ***SPARE PARTS, page 77*** for details. | **9 -10** | Dual 1/10 GbE Ethernet ports (LAN1, LAN2)<br>LAN1 is left connector,<br>LAN2 is right connector |
| **4** | Modular LAN-on-motherboard (mLOM) card slot (x16) | **11** | USB 3.0 ports (two) |
| **5** | System ID pushbutton/LED | **12** | Power supplies (two) |
| **6** | VGA display port (DB15 connector) | **-** | - |

# BASE SERVER STANDARD CAPABILITIES and FEATURES

*Table 1* lists the capabilities and features of the base server. Details about how to configure the server for a particular feature or capability (for example, number of processors, disk drives, or amount of memory) are provided in *CONFIGURING the SERVER, page 10*.

**Table 1 Capabilities and Features**

| Capability/Feature | Description |
|---|---|
| Chassis | Two rack unit (2RU) chassis |
| CPU | One or two Intel® Xeon® Ice Lake® processor family CPUs[1] |
| Chipset | Intel® C621A series chipset |
| Memory | 32 slots for registered DIMMs (RDIMMs) or load-reduced DIMMs (LRDIMMs) and support for Intel® Optane™ Persistent Memory Modules (PMem) |
| 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>■ DDR2/3 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 (AC)<br>■ 1050 W (DC)<br>■ 1600 W (AC)<br>■ 2300 W (AC)<br>One power supply is mandatory; one more can be added for 1 + 1 redundancy. |
| Front Panel | A front panel controller provides status indications and control buttons |
| ACPI | This server supports the advanced configuration and power interface (ACPI) 6.2 standard. |
| Fans | ■ Six hot-swappable fans for front-to-rear cooling |
| Infiniband | The InfiniBand architecture is supported by the PCIe slots. |
| Expansion slots | ■ Riser 1B (1 PCIe slot reserved for a drive controller and 2 HDD slots)<br>■ Riser 2A (3 PCIe slots)<br>■ Riser 3B (2 HDD slots)<br>For more details on riser 1, riser 2, and riser 3, see *Riser Card Configuration and Options, page 73*. |

| Capability/Feature | Description |
|---|---|
| Internal storage devices | ■ Large Form Factor (LFF) drives with 12-drive backplane. The server can hold up to:<br>• 12 LFF 3.5 inch front-facing SAS-only LFF hard drives (HDDs).<br>• Optionally up to four mid-plane SAS-only LFF HDDs<br>• Optionally, up to four SFF 2.5-inch, rear-facing SAS/SATA HDDs/SSDs or up to four rear-facing SFF NVMe PCIe SSDs.<br>■ A mini-storage module connector on the motherboard supports a boot-optimized RAID controller carrier that holds up to two SATA M.2 SSDs. Mixing different capacity SATA M.2 SSDs is not supported.<br>■ 8GB FlexMMC utility storage for staging of firmware and other user data. 8GB FlexMMC storage is built into the motherboard on M6 |
| I/O Interfaces | ■ Rear panel<br>• One 1Gbase-T RJ-45 management port<br>• Two 10Gbase-T LOM ports<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) 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) |
| Storage controllers | The 12G RAID HBA or 12G SAS HBA plugs into slot 1 (bottom slot) of riser 1B.<br>■ Cisco M6 12G SAS RAID Controller with 4GB FBWC<br>• RAID support (RAID 0, 1, 5, 6, 10) and SRAID0<br>• Supports up to 32 internal SAS/SATA drives<br>• Plugs into drive slot 1 of riser 1B<br>■ Cisco M6 12G SAS HBA<br>• No RAID support<br>• JBOD/Pass-through Mode support<br>• Supports up to 32 SAS/SATA internal drives<br>• Plugs into slot 1 of riser 1B |
| Modular LAN on Motherboard (mLOM) slot | The dedicated mLOM slot on the motherboard can flexibly accommodate the following cards:<br>■ Cisco Virtual Interface Cards |

| Capability/Feature | Description |
|---|---|
| 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, the 1GE/10GE OCP/mLOM ports, or a Cisco virtual interface card (VIC).<br>CIMC manages certain components within the server, such as the Cisco 12G SAS HBA. |
| Fabric Interconnect | ■ Compatible with the Cisco UCS 6454, 64108, 6536, and 6664<br>■ In addition to direct-connect of rack-server to the Fabric Interconnect, the rack-server can also connect via the “Nexus 93180YC-FX3 FEX” for having up to 160 servers behind a pair of Fabric Interconnect. |
| Intersight | Intersight provides server management capabilities |
| CIMC | Cisco Integrated Management Controller 4.2(1) or later |

**Notes:**

1. If NVMe drives are selected, you must also select 2 CPUs.

# CONFIGURING the SERVER

Follow these steps to configure the Cisco UCS C240 M6 LFF Rack Server:


- *STEP 1 VERIFY SERVER SKU, page 11*
- *STEP 2 SELECT RISER CARDS (REQUIRED), page 12*
- *STEP 3 SELECT CPU(s), page 13*
- *STEP 4 SELECT MEMORY, page 17*
- *STEP 5 SELECT DRIVE CONTROLLERS, page 24*
- *STEP 6 SELECT DRIVES, page 27*
- *STEP 7 SELECT OPTION CARD(s), page 34*
- *ORDER OPTIONAL PCIE OPTION CARD ACCESSORIES, page 37*
- *STEP 8 ORDER GPU CARDS (OPTIONAL), page 38*
- *STEP 9 ORDER POWER SUPPLY, page 40*
- *STEP 10 SELECT INPUT POWER CORD(s), page 42*
- *STEP 11 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM, page 46*
- *STEP 12 MANAGEMENT CONFIGURATION (OPTIONAL), page 47*
- *STEP 13 SELECT SERVER BOOT MODE (OPTIONAL), page 48*
- *STEP 14 ORDER SECURITY DEVICES (OPTIONAL), page 49*
- *STEP 15 SELECT LOCKING SECURITY BEZEL (OPTIONAL), page 50*
- *STEP 16 ORDER M.2 SATA SSD (OPTIONAL), page 51*
- *STEP 17 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE, page 53*
- *STEP 18 SELECT OPERATING SYSTEM MEDIA KIT, page 56*
- *STEP 19 SELECT SERVICE AND SUPPORT PIDS, page 57*

## STEP 1 VERIFY SERVER SKU

Select one server product ID (PID) from ***Table 2***.

**Table 2 PID of the C240 M6 LFF Rack Base Server**

| Product ID (PID) | Description |
|---|---|
| UCS-M6-MLB | UCS M6 Rack, Blade, Chassis MLB<br>This major line bundle (MLB) consists of the Rack Server (UCSC-C240-M6S, UCSC-C240-M6S, UCSC-C240-M6N, or UCSC-C240-M6SN) with software PIDs. Use this PID to begin a new configuration. |
| UCSC-C240-M6L[1] | Large form-factor (LFF) drives, with 12-drive backplane.<br>■ Front-loading drive bays 1—12 support 3.5-inch SAS-only LFF HDDs.<br>■ Optionally, four 3.5” midplane SAS-only LFF HDDs<br>■ Optionally, four rear-loading drive bays support up to four 2.5 inch SAS/SATA/NVMe drives. |

**Notes:**

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

The Cisco UCS C240 M6 LFF server:

- Does not include power supply, CPU, memory (DIMMs or PMem), hard disk drives (HDDs), solid-state drives (SSDs), boot drives, SD cards, risers, tool-less rail kit, or PCIe cards.



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

## STEP 2 SELECT RISER CARDS (REQUIRED)

The optional riser cards are listed in ***Table 3***. Riser card 1A/1B is on the left when viewed from the back of the server, Riser 2A is in the middle, and Riser 3B is on the right.

**Table 3 Riser PIDs**

| Product ID (PID) | Description |
|---|---|
| **PCIe Riser 1B (controlled with CPU1)** | |
| UCSC-RIS1B-240M6 | ■ Slot 1 is reserved for a drive controller<br>■ Supports two drives: slot 2 (drive bay 102) and slot 3 (drive bay 101):<br>• When using a hardware RAID controller card in the server, SAS/SATA/NVMe 2.5” universal drives are supported in the rear bays. |
| **PCIe Riser 2A (controlled with CPU2)** | |
| UCSC-RIS2A-240M6 | Supports three PCIe slots:<br>■ Slot 4 is full-height, 3/4 length, x8<br>■ Slot 5 is full-height, full-length, x16<br>■ Slot 6 is full-height, full length, x8 |
| **PCIe Riser 3B (controlled with CPU2)** | |
| UCSC-RIS3B-240M6 | ■ Two 2.5” drives, both x4<br>• Slot 7 (drive bay 104)<br>• Slot 8 (drive bay 103) |

**NOTE:**

- UCSC-RIS2A-240M6 and UCSC-RIS3B-240M6 auto includes when 2 CPUs are selected
- 
- Riser filler blank UCSC-FBRS2-C240M6 for riser 2 and UCSC-FBRS3-C240M6 for riser 3 is auto included, if riser 2 or riser 3 are not selected.
- For additional details on riser, see ***Riser Card Configuration and Options, page 73***.

## STEP 3 SELECT CPU(s)

The standard CPU features are:

- 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake)
- Intel® C621A series chipset
- Cache size of up to 60 MB
- Up to 40 cores

### Select CPUs

The available CPUs are listed in ***Table 4***. See ***Table 5 on page 14*** for CPU suffix notations

**Table 4 Available CPUs**

| Product ID (PID) | Clock Freq (GHz) | Power (W) | Cache Size (MB) | Cores | UPI[1] Links (GT/s) | Highest DDR4 DIMM Clock Support (MHz)[2] | PMem Support |
|---|---|---|---|---|---|---|---|
| **8000 Series Processors** | | | | | | | |
| UCS-CPU-I8380 | 2.3 | 270 | 60 | 40 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I8362 | 2.8 | 265 | 48 | 32 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I8360Y | 2.4 | 250 | 54 | 36 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I8358 | 2.6 | 250 | 48 | 32 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I8352Y | 2.2 | 205 | 48 | 32 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I8352V | 2.1 | 195 | 54 | 36 | 3 at 11.2 | 2933 | Yes |
| UCS-CPU-I8351N[3] | 2.4 | 225 | 54 | 36 | 0 | 2933 | Yes |
| **6000 Series Processors** | | | | | | | |
| UCS-CPU-I6348 | 2.6 | 235 | 42 | 28 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6346 | 3.1 | 205 | 36 | 16 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6342 | 2.8 | 230 | 36 | 24 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6338N | 2.2 | 185 | 48 | 32 | 3 at 11.2 | 2666 | Yes |
| UCS-CPU-I6338T | 2.1 | 165 | 36 | 24 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6338 | 2.0 | 205 | 48 | 32 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6336Y | 2.4 | 185 | 36 | 24 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6334 | 3.6 | 165 | 18 | 8 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6330N | 2.2 | 165 | 42 | 28 | 3 at 11.2 | 2666 | Yes |
| UCS-CPU-I6330 | 2.0 | 205 | 42 | 28 | 3 at 11.2 | 2933 | Yes |
| UCS-CPU-I6326 | 2.9 | 185 | 24 | 16 | 3 at 11.2 | 3200 | Yes |
| UCS-CPU-I6314U[4] | 2.3 | 205 | 48 | 32 | 0 | 3200 | Yes |
| UCS-CPU-I6312U[5] | 2.4 | 185 | 36 | 24 | 0 | 3200 | Yes |
| **5000 Series Processors** | | | | | | | |
| UCS-CPU-I5320T | 2.3 | 150 | 30 | 20 | 3 at 11.2 | 2933 | Yes |

**Table 4 Available CPUs**

| Product ID (PID) | Clock Freq (GHz) | Power (W) | Cache Size (MB) | Cores | UPI[1] Links (GT/s) | Highest DDR4 DIMM Clock Support (MHz)[2] | PMem Support |
|---|---|---|---|---|---|---|---|
| UCS-CPU-I5320 | 2.2 | 185 | 39 | 26 | 3 at 11.2 | 2933 | Yes |
| UCS-CPU-I5318N | 2.1 | 150 | 36 | 24 | 3 at 11.2 | 2666 | Yes |
| UCS-CPU-I5318Y | 2.1 | 165 | 36 | 24 | 3 at 11.2 | 2933 | Yes |
| UCS-CPU-I5317 | 3.0 | 150 | 18 | 12 | 3 at 11.2 | 2933 | Yes |
| UCS-CPU-I5315Y | 3.2 | 140 | 12 | 8 | 3 at 11.2 | 2933 | Yes |
| **4000 Series Processors** | | | | | | | |
| UCS-CPU-I4316 | 2.3 | 150 | 30 | 20 | 2 at 10.4 | 2666 | No |
| UCS-CPU-I4314 | 2.4 | 135 | 24 | 16 | 2 at 10.4 | 2666 | Yes |
| UCS-CPU-I4310T | 2.3 | 105 | 15 | 10 | 2 at 10.4 | 2666 | No |
| UCS-CPU-I4310 | 2.1 | 120 | 18 | 12 | 2 at 10.4 | 2666 | No |
| UCS-CPU-I4309Y | 2.8 | 105 | 12 | 8 | 2 at 10.4 | 2666 | No |

**Notes:**

1. UPI = Ultra Path Interconnect.
2. If higher or lower speed DIMMs are selected than what is shown in ***Table 6 on page 18*** for a given CPU speed, the DIMMs will be clocked at the lowest common denominator of CPU clock and DIMM clock.
3. The maximum number of UCS-CPU-I8351N CPUs is one
4. The maximum number of UCS-CPU-I6314U CPUs is one
5. The maximum number of UCS-CPU-I6312U CPUs is one

**Table 5 CPU Suffixes**

| CPU Suffix | Description | Features |
|---|---|---|
| N | Networking Optimized | Optimized for use in networking applications like L3 forwarding, 5G UPF, OVS DPDK, VPP FIB router, VPP IPsec, web server/NGINX, vEPC, vBNG, and vCMTS. SKUs have higher base frequency with lower TDPs to enable best performance/Watt |
| P | Cloud Optimized | SKU specifically designed for cloud IaaS environments to deliver higher frequencies at constrained TDPs |

**Table 5 CPU Suffixes**

| CPU Suffix | Description | Features |
|---|---|---|
| V | Cloud Optimized | SKUs specifically designed for cloud environments to deliver high rack density and maximize VM/cores per TCO$ |
| T | High T case | SKUs designed for Network Environment-Building System (NEBS) environments |
| U | 1-socket Optimized | Optimized for targeted platforms adequately served by the cores, memory bandwidth and IO capacity available from a single processor |
| S | Max SGX enclave size | Supports Max SGX enclave size (512GB) to enhance and protect the most sensitive portions of a workload or service |
| M | Media and AI optimized | Media, AI and HPC Segment Optimized for lower TDP & higher frequencies delivering better perf/w |
| Y | Speed Select – Performance Profile | Intel® Speed Select Technology provides the ability to set a guaranteed base frequency for a specific number of cores, and assign this performance profile to a specific application/workload to guarantee performance requirements. It also provides the ability to configure settings during runtime and provide additional frequency profile configuration opportunities. |



**CAUTION: For systems configured with 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake), operating above 25º C [77º F], a fan fault or executing workloads with extensive use of heavy instructions sets such as Intel® Advanced Vector Extensions 512 (Intel® AVX-512), may assert thermal and/or performance faults with an associated event recorded in the System Event Log (SEL).**

### Approved Configurations

**(1) DIMM only configurations:**

- Select one or two identical CPUs listed in ***Table 4 on page 13***

**(2) DIMM/PMem Mixed Configurations:**

- You must select two identical CPUs listed in ***Table 4 on page 13***

**(3) Configurations with NVMe PCIe drives:**

- You must select two identical CPUs listed in ***Table 4 on page 13***

**(4) One-CPU Configuration**

— Choose one CPU from any one of the rows of ***Table 4 Available CPUs, page 13***

**(5) Two-CPU Configuration**

— Choose two identical CPUs from any one of the rows of ***Table 4 Available CPUs, page 13***



**NOTE:**

- You cannot have two I8351N or two I6314U or I6312U CPUs in a two-CPU configuration.
- If you configure a server with one I8351N CPU or one I6314U CPU or one I6312U CPU you cannot later upgrade to a 2-CPU system with two of these CPUs.

## Caveats

- The selection of 1 or 2 CPUs depends on the desired server functionality. See the following sections:
  - ***STEP 4 SELECT MEMORY, page 17*** (memory mirroring section)
  - ***STEP 5 SELECT DRIVE CONTROLLERS, page 24***
  - ***STEP 6 SELECT DRIVES, page 27***

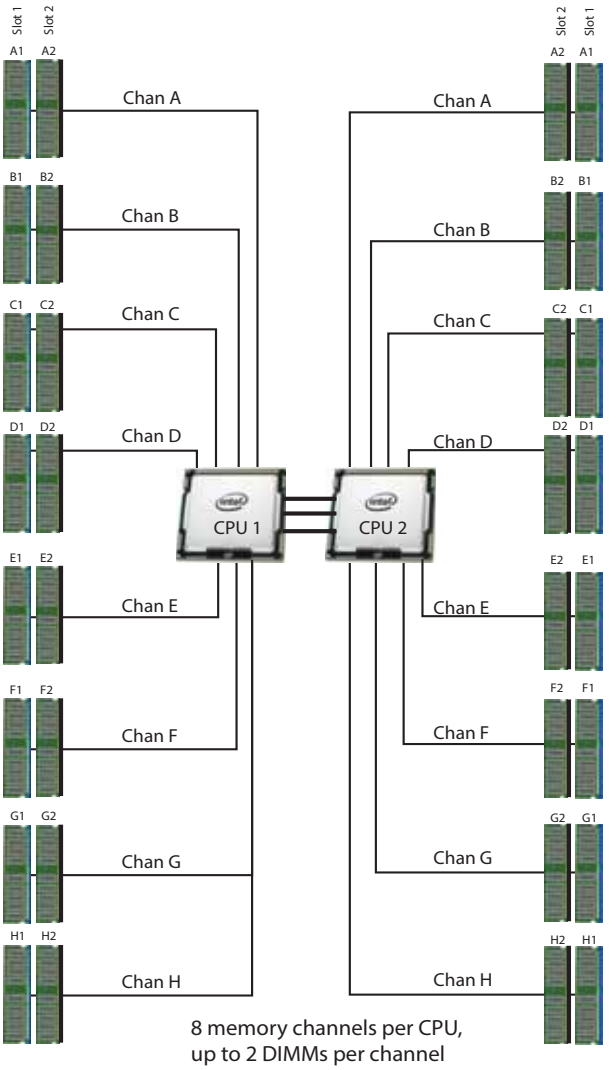
## STEP 4 SELECT MEMORY

The available memory main characteristics for the C240 M6 LFF are as follows:

- Clock speed: 3200 MHz
- Ranks per DIMM: 1, 2, 4, or 8
- Operational voltage: 1.2 V
- Registered ECC DDR4 DIMMS (RDIMMs), Load-reduced DIMMs (LRDIMMs), or Intel® Optane™ Persistent Memory Modules (PMem).

Memory is organized with eight memory channels per CPU, with up to two DIMMs per channel, as shown in ***Figure 4***.

**Figure 4 C240 M6 LFF Memory Organization**




8 memory channels per CPU,
up to 2 DIMMs per channel

32 DIMMS total (16 per CPU)
4 TB maximum memory (with 128GB DIMMs)

### DIMMs and Memory Mirroring

Select the memory configuration and whether or not you want the memory mirroring option. The available memory DIMMs and mirroring option are listed in ***Table 6***.



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

**Table 6 Available DDR4 DIMMs**

| Product ID (PID) | PID Description | Voltage | Ranks/DIMM |
|---|---|---|---|
| **3200-MHz DIMMs** | | | |
| UCS-MR-X16G1RW | 16 GB RDIMM SRx4 3200 (8Gb) | 1.2 V | 1 |
| UCS-MR-X32G1RW | 32 GB RDIMM SRx4 3200 (16Gb) | 1.2 V | 1 |
| UCS-MR-X32G2RW | 32 GB RDIMM DRx4 3200 (8Gb) | 1.2 V | 2 |
| UCS-MR-X64G2RW | 64 GB RDIMM DRx4 3200 (16Gb) | 1.2 V | 2 |
| UCS-ML-128G4RW | 128 GB LRDIMM QRx4 3200 (16Gb) (non 3DS) | 1.2 V | 4 |
| **Intel® Optane™ Persistent Memory (PMem)[1]** | | | |
| UCS-MP-128GS-B0 | Intel® Optane™ Persistent Memory, 128GB, 3200 MHz | | |
| UCS-MP-256GS-B0 | Intel® Optane™ Persistent Memory, 256 GB, 3200 MHz | | |
| UCS-MP-512GS-B0 | Intel® Optane™ Persistent Memory, 512 GB, 3200 MHz | | |
| **DIMM Blank[2]** | | | |
| UCS-DIMM-BLK | UCS DIMM Blank | | |
| **Intel® Optane™ Persistent Memory (PMem) Operational Modes** | | | |
| UCS-DCPMM-AD | App Direct Mode | | |
| UCS-DCPMM-MM | Memory Mode | | |
| **Memory Mirroring Option** | | | |
| N01-MMIRROR | Memory mirroring option | | |

**Notes:**

1. All 3rd Generation Intel® Xeon® Scalable Processors (Ice Lake) support PMem products, except 4309Y, 4310, 4310T, and 4316 processor.
2. Any empty DIM M slot must be populated with a DIMM blank to maintain proper cooling airflow.

## Memory Configurations, Features, and Modes

System speed is dependent on the CPU DIMM speed support. Refer to ***Available CPUs, page 13*** for DIMM speeds.

- The server supports the following memory reliability, availability, and serviceability (RAS) BIOS options (only one option can be chosen):
  - Adaptive Double Device Data Correction (ADDDC) (default)
  - Maximum performance
  - Full mirroring
  - Partial mirroring
- For best performance, observe the following:
  - When one DIMM is used, it must be populated in DIMM slot 1 (farthest away from the CPU) of a given channel.
  - When single- or dual-rank DIMMs are populated in two DIMMs per channel (2DPC) configurations, always populate the higher number rank DIMM first (starting from the farthest slot). For a 2DPC example, first populate with dual-rank DIMMs in DIMM slot 1. Then populate single-rank DIMMs in DIMM 2 slot.
- DIMMs for CPU 1 and CPU 2 (when populated) must always be configured identically.
- Cisco memory from previous generation servers (DDR3 and DDR4) is not compatible with the server.
- Memory can be configured in any number of DIMMs as pairs, although for optimal performance, see the document at the following link:

**Cisco UCS C220/C240/B200 M6 Memory Guide**

- For detailed Intel® Optane™ Persistent Memory (PMem) configurations, refer to

**https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html**

### Approved Configurations

**(1) 1-CPU configuration without memory mirroring:**

- Select from 1 to 16 DIMMs.
  - 1, 2, 4, 6, 8, 12, or 16 DIMMs allowed
  - 3, 5, 7, 9, 10, 11, 13, 14, 15 DIMMs not allowed
  - DIMMs for both CPUs must be configured identically.

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

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

**(2) 1-CPU configuration with memory mirroring:**

- Select 8 or 12, or 16 DIMMs per CPU (DIMMs for all CPUs must be configured identically). In addition, the memory mirroring option (N01-MMIRROR) as shown in ***Table 6 on page 18*** must be selected.

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

| # DIMMs Per CPU | CPU 1 DIMM Placement in Channels (for identical ranked DIMMs) |
|---|---|
| 8 | (A1, C1); (D1, E1); (G1, H1); (B1, F1) |
| 16 | (A1, B1); (C1, D1); (E1, F1); (G1, H1); (A2, B2); (C2, D2); (E2, F2); (G2, H2) |

- Select the memory mirroring option (N01-MMIRROR) as shown in ***Table 6 on page 18***.

**(3) 2-CPU configuration without memory mirroring:**

- Select from 1 to 16 DIMMs per CPU.
  - 1, 2, 4, 6, 8, 12, or 16 DIMMs allowed
  - 3, 5, 7, 9, 10, 11, 13, 14, 15 DIMMs not allowed
  - DIMMs for both CPUs must be configured identically.

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

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

**(4) 2-CPU configuration with memory mirroring:**

- Select 8 or 16 DIMMs per CPU (DIMMs for all CPUs must be configured identically). In addition, the memory mirroring option (N01-MMIRROR) as shown in ***Table 6 on page 18*** must be selected.

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

| # DIMMs Per CPU | CPU 1 DIMM Placement in Channels (for identical ranked DIMMs) | CPU 2 DIMM Placement in Channels (for identically ranked DIMMs) |
|---|---|---|
| 8 | (A1, C1); (D1, E1); (G1, H1); (B1, F1) | (A1, C1); (D1, E1); (G1, H1); (B1, F1) |
| 16 | (A1, B1); (C1, D1); (E1, F1); (G1, H1); (A2, B2); (C2, D2); (E2, F2); (G2, H2) | (A1, B1); (C1, D1); (E1, F1); (G1, H1); (A2, B2); (C2, D2); (E2, F2); (G2, H2) |

- Select the memory mirroring option (N01-MMIRROR) as shown in ***Table 6 on page 18***.



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

**Table 7 3200-MHz DIMM Memory Speeds with Different Intel® Xeon® Ice Lake® Processors**

| DIMM and CPU Frequencies (MHz) | DPC | LRDIMM (4Rx4)- 128 GB (MHz) | RDIMM (2Rx4) - 64 GB (MHz) | RDIMM (2Rx4) - 32 GB (MHz) | RDIMM (1Rx4) - 16 GB (MHz) |
|---|---|---|---|---|---|
| | | 1.2 V | 1.2 V | 1.2 V | 1.2 V |
| DIMM = 3200 CPU = 3200 | 1DPC | 3200 | 3200 | 3200 | 3200 |
| | 2DPC | 3200 | 3200 | 3200 | 3200 |
| DIMM = 3200 CPU = 2933 | 1DPC | 2933 | 2933 | 2933 | 2933 |
| | 2DPC | 2933 | 2933 | 2933 | 2933 |
| DIMM = 3200 CPU = 2666 | 1DPC | 2666 | 2666 | 2666 | 2666 |
| | 2DPC | 2666 | 2666 | 2666 | 2666 |

### DIMM Rules

- Allowed DIMM count for 1 CPU:
  - Minimum DIMM count = 1; Maximum DIMM count = 16
  - 1, 2, 4, 6, 8, 12, or 16 DIMMs allowed
  - 3, 5, 7. 9, 10, 11, 13, 14, or 15 DIMMs not allowed.
- Allowed DIMM count for 2 CPUs
  - Minimum DIMM count = 2; Maximum DIMM count = 32
  - 2, 4, 8, 12, 16, 24, or 32 DIMMs allowed
  - 6, 10, 14, 18, 20, 22, 26, 28, or 30 DIMMs not allowed.
- DIMM Mixing:
  - Mixing different types of DIMM (RDIMM with any type of LRDIMM or 3DS LRDIMM with non-3DS LRDIMM) is not supported within a server.
  - Mixing RDIMM with RDIMM types is allowed if they are mixed in same quantities, in a balanced configuration.
  - Mixing 16 GB, 32 GB, and 64 GB RDIMMs is supported.



**NOTE:** DIMM mixing is not allowed when PMem are installed; in these cases, all DIMMs must be the same type and size.

See the detailed mixing DIMM configurations at the following link
**Cisco UCS C220/C240/B200 M6 Memory Guide**

See *Table 8* for PMem memory modes.

**Table 8 Intel® Optane™ Persistent Memory Modes**

| Intel® DC Persistent Memory Modes | |
|---|---|
| App Direct Mode: | PMem operates as a solid-state disk storage device. Data is saved and is non-volatile. Both PMem and DIMM capacities count towards the CPU capacity limit. |
| Memory Mode: | PMem operates as a 100% memory module. Data is volatile and DRAM acts as a cache for PMem. Only the PMem capacity counts towards the CPU capacity limit). This is the factory default mode. |

**Table 9 Intel® Xeon® Ice Lake® Processor DIMM and PMem[1] Physical Configuration**

| DIMM + PMem Count | CPU 1 or CPU 2 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ICX: IMC2 | | | | ICX: IMC3 | | | | ICX: IMC1 | | | | ICX: IMC0 | | | |
| | Chan 0 (F) | | Chan 1 (E) | | Chan 0 (H | | Chan 1 (G) | | Chan 0 (C) | | Chan 1 (D) | | Chan 0 (A) | | Chan 1 (B) | |
| | Slot 1 | Slot 2 | Slot 1 | Slot 2 | Slot 1 | Slot 2 | Slot 1 | Slot 2 | Slot 2 | Slot 1 | Slot 2 | Slot 1 | Slot 2 | Slot 1 | Slot 2 | Slot 1 |
| 4 + 4[2] | PMem | | DIMM | | PMem | | DIMM | | | DIMM | | PMem | | DIMM | | PMem |
| 8 + 1[3] | DIMM | | DIMM | | DIMM | | DIMM | | | DIMM | | DIMM | PMem | DIMM | | DIMM |
| 8 + 4[4] | DIMM | | DIMM | PMem | DIMM | | DIMM | PMem | PMem | DIMM | | DIMM | PMem | DIMM | | DIMM |
| 8 + 8[5] | DIMM | PMem | DIMM | PMem | DIMM | PMem | DIMM | PMem | PMem | DIMM | PMem | DIMM | PMem | DIMM | PMem | DIMM |
| NOTE: AD = App Direct Mode, MM = Memory Mode | | | | | | | | | | | | | | | | |

**Notes:**

1. All systems must be fully populated with two CPUs when using PMem at this time.
2. AD, MM
3. AD
4. AD, MM
5. AD, MM

For detailed Intel PMem configurations, refer to:

**https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html**

For detailed DIMM/PMem information, refer to

**Cisco UCS C220/C240/B200 M6 Memory Guide**

## STEP 5 SELECT DRIVE CONTROLLERS

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

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

### Cisco M6 12G SAS RAID Controller with 4 GB FBWC

This RAID controller supports up to 32 SAS or SATA drives. It includes a SuperCap for a 4 GB flash-back write cache (FBWC) and supports RAID 0, 1, 5, 6, 10, 50, 60, JBOD mode, and SRAID0. The RAID controller plugs into slot 1 of riser 1B.



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

### Cisco M6 12G SAS HBA

This HBA supports up to 32 SAS or SATA drives. It supports JBOD or pass-through mode (not RAID) and plugs into slot 1 of riser 1B.

### RAID Volumes and Groups

When creating each RAID volume, follow these guidelines:

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

#### Select RAID Controller Options

Select one of the following:

- One Cisco M6 12G SAS RAID controller (see ***Table 10***), or
- Cisco M6 12G SAS HBA (see ***Table 10***)

**Table 10 Hardware Controller Options**

| Product ID (PID) | PID Description |
|---|---|
| **Controllers for Internal Drives**<br>**Note that if the following Cisco 12G SAS RAID controller or Cisco 12G SAS HBA is selected, it is factory-installed in slot 1 of riser 1B** | |
| UCSC-RAID-M6HD | Cisco M6 12G SAS RAID Controller with 4 GB FBWC (32 drives)<br>■ Supports up to 32 internal SAS HDDs and SAS/SATA SSDs.<br>■ Supports RAID 0, 1, 5, 6, 10, 50, 60, and JBOD mode. Supports mixed RAID and JBOD mode.<br>■ For all self-encrypting drives (SED), standalone Management (CIMC/UCSM) is supported for configuring and managing local keys. For now, SED drives are managed with local key management only. Third-party key management will be supported (KMIP compliant). |
| UCSC-SAS-M6HD | Cisco M6 12G SAS HBA (32 drives)<br>■ Supports up to 32 internal SAS HDDs and SAS/SATA SSDs<br>■ Supports JBOD or pass-through mode |
| **Supercap** | |
| UCS-SCAP-M6 | M6 Supercap for write cache backup |
| **RAID Configuration Options (not available for Cisco 12G SAS HBA)** | |
| R2XX-SRAID0 | Enable single disk RAID 0 Setting. |
| R2XX-RAID0 | Factory preconfigured RAID striping option<br>Enable RAID 0 Setting. Requires two or more hard drive.s |
| R2XX-RAID1 | Factory preconfigured RAID mirroring option<br>Enable RAID 1 Setting. Requires two or more drives with the same size, speed, capacity. |
| R2XX-RAID5 | Factory preconfigured RAID option<br>Enable RAID 5 Setting. Requires a minimum of three drives of the same size, speed, capacity. |
| R2XX-RAID6 | Factory preconfigured RAID option<br>Enable RAID 6 Setting. Requires a minimum of four drives of the same size, speed, capacity. |
| R2XX-RAID10 | Factory preconfigured RAID option<br>Enable RAID 10 Setting. Requires a even number of drives (minimum of four drives) of the same size, speed, capacity. |

### Approved Configurations

The C240 M6 LFF server can be ordered with up to 12 front LFF drives (SAS-only), up to 4 midplane LFF drives (SAS-only), and up to 4 rear SFF drives (SAS/SATA/NVMe)

- There is no RAID support for NVMe drives.
- The Cisco M6 12G SAS RAID Controller with 4 GB FBWC supports up to 32 internal drives with support for RAID 0, 1, 10, 5, 6, 50, 60, and JBOD mode.
- The Cisco M6 12G SAS HBA supports up to 32 internal drives with JBOD support.

## STEP 6 SELECT DRIVES

The standard disk drive features are:

- 3.5-inch large form factor (front and mid-plane drives)
- 2.5-inch small form factor (rear drives)
- Hot-pluggable
- Drives come mounted in sleds

### Select Front-Facing Drives for the UCSC-C240-M6L Server

The available front-facing drives are listed in ***Table 11***.

**Table 11 Available Hot-Pluggable Sled-Mounted Front Facing Drives**

| Product ID (PID) | PID Description | Drive Type | Capacity |
|---|---|---|---|
| **HDDs (7.2K RPM)** | | | |
| UCS-HD2T7KL12N | 2 TB 12G SAS 7.2K RPM LFF HDD | SAS | 2 TB |
| UCS-HD4T7KL12N | 4 TB 12G SAS 7.2K RPM LFF HDD | SAS | 4 TB |
| UCS-HD6T7KL4KN[1] | 6 TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 6 TB |
| UCS-HD8T7K4KAN | 8 TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 8 TB |
| UCS-HD10T7K4KAN | 10 TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 10 TB |
| UCS-HD12T7KL4KN | 12 TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 12 TB |
| UCS-HD14TT7KL4KN | 14 TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 14 TB |
| UCS-HD16T7KL4KN | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 16 TB |
| UCS-HD16TW7KL4KN | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 16 TB |
| UCS-HD18TW7KL4KN | 18 TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 18 TB |
| UCS-HD22TW7KL4KN | 22TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 22 TB |
| UCS-HD20TW7KL4KN | 20TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 20 TB |
| UCS-HD20TT7KL4KN | 20TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 20 TB |
| UCS-HDL24TW1S74K6 | 24TB 3.5in 12G SAS 7.2K RPM 4K Front Load WD HDD | SAS | 24 TB |
| **Self-Encrypted Drives (SEDs)** | | | |
| UCS-HD4T12GNK9 | 4 TB 7.2k RPM LFF HDD (SED) | SED | 4 TB |
| UCS-HD6T12GANK9 | 6 TB 7.2k RPM LFF HDD (4K format, SED) | SED | 6 TB |
| UCS-HD12T7KL4NK9 | 12 TB 7.2k RPM LFF HDD (4K format SED) | SED | 12 TB |
| UCS-HD18T7KL4KN9 | 18TB 12G SAS 7.2K RPM LFF HDD (4K) (SED-FIPS) [Front load PID] | SED | 18 TB |

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

**Notes:**

1. Operating Systems that support 4k sector size drives are as follows:
   - CentOS 7.9/8.2/8.3 (and later)
   - Windows Server 2016/2019 (and later)
   - Red Hat Enterprise Linux 7.9/8.2 (and later)
   - SUSE Linux Enterprise Server 15.2 (and later)
   - ESXi 6.7 U3/7.0 U2 (and later)
   - See this link for operating system guidance: https://ucshcltool.cloudapps.cisco.com/public/
   - UEFI Mode must be used when booting from 4K sector size drives (legacy mode is not supported).
   - Ensure that 4K sector size and 512 byte sector size drives are not mixed in the same RAID volume.

## Select Midplane Drives for the UCSC-C240-M6L Server



**NOTE:** A midplane kit (PID UCSC-MPSTOM6L-KIT) is included even if midplane drives are not ordered. Note that if a double-wide GPU is selected, a midplane kit and midplane drives cannot be installed.

The available midplane drives are listed in ***Table 12***.

**Table 12 Available Hot-Pluggable Sled-Mounted Midplane Drives**

| Product ID (PID) | PID Description | Drive Type | Capacity |
|---|---|---|---|
| **HDDs (7.2K RPM)** | | | |
| UCS-HD4T7KL12M | 4 TB 12G SAS 7.2K RPM LFF HDD | SAS | 4 TB |
| UCS-HD6T7KL4KM | 6TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 6 TB |
| UCS-HD8T7K4KAM[1] | 8 TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 8 TB |
| UCS-HD12T7KL4KM | 12 TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 12 TB |
| UCS-HD12T7KL4MK9 | 12 TB 7.2k RPM SAS LFF HDD (4K format, **SED**) | SAS | 12 TB |
| UCS-HD16T7KL4KM | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 16 TB |
| UCS-HD18TW7KL4KM | 18TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 18 TB |
| UCS-HD16TW7KL4KM | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 16 TB |
| UCS-HD10T7K4KAM | 10TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 10 TB |
| UCS-HD14TT7KL4KM | 14TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 14 TB |
| UCS-HD18T7KL4KM9 | 12G SAS 7.2K RPM LFF HDD (4K) (SED-FIPS) [Top load or mid-plane PID] | SAS | 18 TB |

**Table 12 Available Hot-Pluggable Sled-Mounted Midplane Drives *(continued)***

| Product ID (PID) | PID Description | Drive Type | Capacity |
|---|---|---|---|
| UCS-HD22TW7KL4KM | 22TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 22 TB |
| UCS-HD20TW7KL4KM | 20TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 20 TB |
| UCS-HD20TT7KL4KM | 20TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 20 TB |
| UCS-HD14TW7KL4KM | 14TB 4Kn SAS He14 7200RPM LFF HDD ISE | SAS | 14 TB |
| UCS-HD8TT7K4KAM | 8TB 12G SAS 7.2K RPM LFF HDD (4K) | SAS | 8 TB |
| UCS-HD18TS7KL4KM | 18TB 12G SAS 7.2K RPM LFF HDD(4K) | SAS | 18 TB |
| UCS-HDM24TW1S74K6 | 24TB 3.5in 12G SAS 7.2K RPM 4K Top Load WD HDD | SAS | 24 TB |
| **NOTE:** Cisco uses solid state drives from a number of vendors. All solid state drives are subject to physical write limits and have varying maximum usage limitation specifications set by the manufacturer. Cisco will not replace any solid state drives that have exceeded any maximum usage specifications set by Cisco or the manufacturer, as determined solely by Cisco. | | | |

**Notes:**

1. Operating Systems that support 4k sector size drives are as follows:
   - CentOS 7.9/8.2/8.3
   - Windows Server 2016/2019
   - Red Hat Enterprise Linux 7.9/8.2
   - SUSE Linux Enterprise Server 15.2
   - ESXi 6.7 U3/7.0 U1/7.0 U2
   - UEFI Mode must be used when booting from 4K sector size drives (legacy mode is not supported).
   - Ensure that 4K sector size and 512 byte sector size drives are not mixed in the same RAID volume.

## Select Rear Drives for the UCSC-C240-M6L Server

The available rear drives are listed in ***Table 13***.



**NOTE:** You cannot mix SAS/SATA with NVMe rear drives. They must be all SAS/SATA or all NVMe.

**Table 13 Available Hot-Pluggable Sled-Mounted Rear Drives**

| Product ID (PID) | PID Description | Drive Type | Capacity |
|---|---|---|---|
| **SAS/SATA HDDs** | | | |
| UCS-HD900G15K12N | 900 GB 12G SAS 15K RPM SFF HDD | SAS | 900 GB |
| UCS-HD300G15K12N | 300 GB 12G SAS 15K RPM SFF HDD | SAS | 300 GB |
| UCS-HD600G15K12N | 600 GB 12G SAS 15K RPM SFF HDD | SAS | 600 GB |

**Table 13 Available Hot-Pluggable Sled-Mounted Rear Drives *(continued)***

| Product ID (PID) | PID Description | Drive Type | Capacity |
|---|---|---|---|
| UCS-HD300G10K12N | 300 GB 12G SAS 10K RPM SFF HDD | SAS | 300 GB |
| UCS-HD600G10K12N | 600 GB 12G SAS 10K RPM SFF HDD | SAS | 600 GB |
| UCS-HD12TB10K12N | 1.2 TB 12G SAS 10K RPM SFF HDD | SAS | 1.2 TB |
| UCS-HD18TB10K4KN[1] | 1.8 TB 12G SAS 10K RPM SFF HDD (4K) | SAS | 1.8 TB |
| UCS-HD24TB10K4KN | 2.4 TB 12G SAS 10K RPM SFF HDD (4K) | SAS | 2.4 TB |
| **SAS/SATA SSD Enterprise Performance** | | | |
| UCS-SD19T63X-EP | 1.9 TB 2.5in Enterprise performance 6G SATA SSD(3X endurance) | SATA | 1.9 TB |
| UCS-SD480G63X-EP | 480 GB 2.5in Enterprise Performance 6G SATA SSD(3X endurance) | SATA | 480 GB |
| UCS-SD19TBM3X-EP | 1.9TB 2.5in Enterprise performance 6GSATA SSD(3X endurance) | SATA | 1.9 TB |
| UCS-SD960GBM3X-EP | 960GB 2.5in Enterprise performance 6GSATA SSD(3X endurance) | SATA | 960 GB |
| UCS-SD480GBM3X-EP | 480GB 2.5in Enterprise Performance 6GSATA SSD(3X endurance) | SATA | 480 GB |
| UCS-SD32TKA3X-EP | 3.2TB 2.5in Enter Perf 12G SAS Kioxia G2 SSD (3X) | SAS | 3.2 TB |
| UCS-SD16TKA3X-EP | 1.6TB 2.5in Enterprise Performance 12G SAS SSD(3X endurance) | SAS | 1.6 TB |
| UCS-SDB960OA1PM6 | 960GB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD | SATA | 960 GB |
| UCS-SDB3T8OA1PM6 | 3.8TB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD | SATA | 3.8 TB |
| UCS-SDB480OA1PM6 | 480GB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD | SATA | 480 GB |
| UCS-SDB1T9OA1PM6 | 1.9TB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD | SATA | 1.9 TB |
| **SAS/SATA SSD Enterprise Value** | | | |
| UCS-SD960G6I1X-EV | 960 GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 960 GB |
| UCS-SD480G6I1X-EV | 480 GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 480 GB |
| UCS-SD960G6S1X-EV | 960GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 960 GB |
| UCS-SD240GBM1X-EV | 240GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 240 GB |
| UCS-SD480GBM1X-EV | 480 GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 480 GB |
| UCS-SD19TBM1X-EV | 1.9TB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 1.9 TB |
| UCS-SD76TBM1X-EV | 7.6TB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 7.6 TB |
| UCS-SD38TBM1X-EV | 3.8TB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 3.8 TB |
| UCS-SD19TBM1X-EV | 1.9TB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 1.9 TB |
| UCS-SD16TBM1X-EV | 1.6TB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 1.6 TB |
| UCS-SD960GBM1X-EV | 960GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 960 GB |
| UCS-SD480GBM1X-EV | 480GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 480 GB |
| UCS-SD240GBM1X-EV | 240GB 2.5 inch Enterprise Value 6G SATA SSD | SATA | 240 GB |
| UCS-SDB960SA1V | 960GB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD | SATA | 960 GB |
| UCS-SDB1T9SA1V | 1.9TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD | SATA | 1.9 TB |
| UCS-SDB3T8SA1V | 3.8TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD | SATA | 3.8 TB |

**Table 13 Available Hot-Pluggable Sled-Mounted Rear Drives *(continued)***

| Product ID (PID) | PID Description | Drive Type | Capacity |
|---|---|---|---|
| UCS-SDB7T6SA1V | 7.6TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD | SATA | 7.6 TB |
| UCS-SDB480OA1VM6 | 480GB 2.5in 15mm Solidigm S4520 Enter Value 6G SATA 1X SSD | SATA | 480 GB |
| UCS-SDB960OA1VM6 | 960GB 2.5in 15mm Solidigm S4520 Enter Value 6G SATA 1X SSD | SATA | 960 GB |
| UCS-SD15TKA1X-EV | 15.3TB 2.5in Enter Value 12G SAS Kioxia G2 SSD | SAS | 15.3 TB |
| UCS-SD76TKA1X-EV | 7.6TB 2.5 inch Enterprise Value 12G SAS SSD | SAS | 7.6 TB |
| UCS-SD38TKA1X-EV | 3.8TB 2.5 inch Enterprise Value 12G SAS SSD | SAS | 3.8 TB |
| UCS-SD19TKA1X-EV | 1.9TB 2.5 inch Enterprise Value 12G SAS SSD | SAS | 1.9 TB |
| UCS-SD38TS1X-EV | 3.8TB 2.5in Enter Value 12G SAS Seagate SSD | SAS | 3.8 TB |
| **Self-Encrypted Drives (SEDs)** | | | |
| UCS-HD24T10NK9 | 2.4TB 10k rpm 4k SED HDD | SED | 2.4 TB |
| UCS-HD18T10NK9 | 1.8TB 12G SAS 10K RPM SFF HDD (4K format, SED) | SED | 1.8 TB |
| UCS-HD12T10NK9 | 1.2TB 12G SAS 10K RPM SFF HDD (SED-FIPS) | SED | 1.2 TB |
| UCS-HD600G15NK9 | 600GB 12G SAS 15K RPM SFF HDD (SED) | SED | 600 GB |
| UCS-SD800GBKNK9 | 800GB Enterprise Performance SAS SSD (3X DWPD, SED) | SED | 800 GB |
| UCS-SD960GBKNK9 | 960GB Enterprise Value SAS SSD (1X DWPD, SED) | SED | 960 GB |
| UCS-SD76TEM2NK9 | 7.6TB Enterprise value SATA SSD (1X, SED) | SED | 7.6 TB |
| UCS-SD960GM2NK9 | 960GB Enterprise value SATA SSD (1X , SED) | SED | 960 GB |
| UCS-SD76TBKANK9 | 7.6TB Enterprise value SAS SSD (1 DWPD, SED-FIPS) | SED | 7.6 TB |
| UCS-SD38TBKANK9 | 3.8TB 2.5in Enterprise value 12G SAS SSD (1DWPD, SED-FIPS) | SED | 3.8 TB |
| UCS-SD16TBKANK9 | 1.6TB 2.5in Enter Perf 12G SAS Kioxia G2 SSD (3X SED-FIPS) | SED | 1.6 TB |
| **PCIe/NVMe 2.5-in SFF[2]** | | | |
| UCS-NVMEXP-I400 | 400GB 2.5in U.2 Intel P5800X Optane NVMe Extreme Perform SSD | NVMe | 400 GB |
| UCS-NVMEXP-I800 | 800GB 2.5in U.2Intel P5800X Optane NVMe Extreme Perform SSD | NVMe | 800 GB |
| UCS-NVME4-1920 | 1.9TB 2.5in U.2 15mm P5520 Hg Perf Med End NVMe | NVMe | 1,9 TB |
| UCS-NVME4-6400 | 6.4TB 2.5in U.2 15mm P5620 Hg Perf Hg End NVMe (3X) | NVMe | 6.4 TB |
| UCS-NVMEM6-W3200 | 3.2TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance | NVMe | 3.2 TB |
| UCS-NVMEM6-W15300 | 15.3TB 2.5in U.2 WD SN840 NVMe Extreme Perf. Value Endurance | NVMe | 15.3 TB |
| UCS-NVB1T6O1PM6 | 1.6TB 2.5in U.2 15mm Solidigm P5620 Hg Perf Hg End 3X NVMe | NVMe | 1.6 TB |
| UCS-NVB3T8O1VM6 | 3.8TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe | NVMe | 3.8 TB |
| UCS-NVB7T6O1VM6 | 7.6TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe | NVMe | 7.6 TB |
| UCS-NVB15TO1VM6 | 15.3TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe | NVMe | 15.3 TB |
| UCS-NVB3T2O1PM6 | 3.2TB 2.5in U.2 15mm Solidigm P5620 Hg Perf Hg End 3X NVMe | NVMe | 3.2 TB |
| UCS-NVB6T4O1PM6 | 6.4TB 2.5in U.2 15mm Solidigm P5620 Hg Perf Hg End 3X NVMe | NVMe | 6.4 TB |
| UCS-NVB1T9O1VM6 | 1.9TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe | NVMe | 1.9 TB |

**Table 13 Available Hot-Pluggable Sled-Mounted Rear Drives *(continued)***

| Product ID (PID) | PID Description | Drive Type | Capacity |
|---|---|---|---|
| UCS-NVB15T3O1LM6 | 15.3TB 2.5in U.2 15mm SolidigmP5316 HgPerf LowEnd <0.5X NVMe | NVMe | 15.3 TB |

**Notes:**

1. Operating Systems that support 4k sector size drives are as follows:
   - CentOS 7.9/8.2/8.3 (and later)
   - Windows Server 2016/2019 (and later)
   - Red Hat Enterprise Linux 7.9/8.2 (and later)
   - SUSE Linux Enterprise Server 15.2 (and later)
   - ESXi 6.7 U3/7.0 U1/7.0 U2 (and later)
   - See this link for operating system guidance: https://ucshcltool.cloudapps.cisco.com/public/
   - UEFI Mode must be used when booting from 4K sector size drives (legacy mode is not supported).
   - Ensure that 4K sector size and 512 byte sector size drives are not mixed in the same RAID volume.
2. Except HGST, Intel and Western Digital NVMe drives can be mixed.

**NOTE:**

- Intel® VROC is only supported with Intel drives
- Intel® VROC enablement key factory pre-provisioned to BIOS - no additional licensing required.

**Caveats**

- You can mix HDDs and SSDs as long as you keep all HDDs in their own RAID volume and all SSDs in their own RAID volume.
- You can mix SAS HDDs and SAS/SATA SSDs when using the Cisco 12G SAS RAID controller or Cisco 12G SAS HBA.
- If you order any SFF NVMe rear drives, you must also order two CPUs.
- SED drives can be mixed with non-SED drives in ***Table 11 on page 27***
- 2.5-inch SFF NVMe drives are connected directly to the CPU, and are not managed by the RAID controller or SAS HBA.
- A midplane kit (PID UCSC-MPSTOM6L-KIT) is required
- Rear drive slots are not supported for the U.3 NVMe drives.

## Intel® Virtual RAID on CPU (Intel® VROC)

The server supports Intel® Virtual RAID on CPU (Intel® VROC). VROC is an enterprise RAID solution used with Intel NVMe SSDs (see ***Table 13*** for supported Intel NVMe SSDs). The Intel® Volume Management Device (Intel® VMD) is a controller integrated into the CPU PCIe root complex. Intel® VMD NVMe SSDs are connected to the CPU, which allows the full performance potential of fast Intel® Optane™ SSDs to be realized. Intel® VROC, when implemented, replaces traditional hardware RAID host bus adapter (HBA) cards placed between the drives and the CPU.

**NOTE:**

- Intel® VROC is only supported with Intel drives
- Intel® VROC enablement key factory pre-provisioned to BIOS - no additional licensing required.

VROC has the following features:

- Small Form Factor (SFF) drive support (only)
- No battery backup (BBU) or external SuperCap needed
- Software-based solution utilizing Intel SFF NVMe direct connected to Intel CPU
- RAID 0/1/5/10 support
- Windows and Linux OS support.
- Host Tools- Windows GUI/CLI, Linux CLI.
- UEFI Support- HII Utility, OBSE.
- Intel VROC NVMe operates in UEFI mode only

See the **instructions on setting up and managing VROC for Intel NVMe SSDs** for more information.

## STEP 7 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 option card offerings are:

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



**WARNING: If VIC/MLOM modules are not selected then the product does not offer any onboard management port capability.**

### Select PCIe Option Cards

The available PCIe option cards are listed in ***Table 14***.

**Table 14 Available PCIe Option Cards**

| Product ID (PID) | PID Description | Location | Card Size[1] |
|---|---|---|---|
| **Modular LAN on Motherboard (mLOM)** | | | |
| UCSC-M-V25-04 | Cisco UCS VIC 1467 quad port 10/25G SFP28 mLOM | mLOM | HHHL, SS |
| UCSC-M-V100-04 | Cisco UCS VIC 1477 dual port 40/100G QSFP28 mLOM | mLOM | HHHL, SS |
| UCSC-M-V5Q50GV2[2] | Cisco UCS VIC 15427 Quad Port CNA MLOM with Secure Boot | mLOM | HHHL, SS |
| UCSC-M-V5D200GV2[2] | VIC 15237, MLOM, 2x40/100/200G for Rack | mLOM | HHHL, SS |
| **Open Compute Project (OCP)** | | | |
| UCSC-O-N6CD25GF | Cisco-NVDA MCX631432AC-ADAB CX6Lx 2x25G SFP28 x8 OCP NIC | OCP | SFF |
| **Virtual Interface Card (VICs)** | | | |
| UCSC-PCIE-C100-04 | Cisco UCS VIC 1495 Dual Port 40/100G QSFP28 CNA PCIe | Riser 2 only | HHHL, SS |
| UCSC-PCIE-C25Q-04 | Cisco UCS VIC 1455 quad port 10/25G SFP28 PCIe | Riser 2 only | HHHL, SS |
| UCSC-P-V5Q50G | Cisco UCS VIC 15425 Quad Port 10/25/50G CNA PCIE | Riser 2 only | HHHL, SS |
| UCSC-P-V5D200G | Cisco UCS VIC 15235 Dual Port 40/100/200G CNA PCIE | Riser 2 only | HHHL, SS |
| **Network Interface Cards (NICs)** | | | |
| **1 Gb NICs** | | | |
| UCSC-PCIE-IRJ45 | Intel i350 quad-port 1G copper PCIe | Riser 2 only | HHHL, SS |
| **10 Gb NICs** | | | |

**Table 14 Available PCIe Option Cards *(continued)***

| Product ID (PID) | PID Description | Location | Card Size[1] |
|---|---|---|---|
| UCSC-PCIE-ID10GF | Intel X710-DA2 Dual Port 10Gb SFP+ NIC | Riser 2 only | HHHL, SS |
| UCSC-PCIE-IQ10GF | Intel X710 quad-port 10G SFP+ NIC | Riser 2 only | FHHL, SS |
| UCSC-P-ID10GC | Cisco-Intel X710T2LG 2x10 GbE RJ45 PCIe NIC | Riser 2 only | HHHL, SS |
| UCSC-P-IQ10GC | Cisco-Intel X710T4LG 4x10 GbE RJ45 PCIe NIC | Riser 2 only | HHHL, SS |
| **25 Gb NICs** | | | |
| UCSC-P-I8D25GF[3] | Cisco-Intel E810XXVDA2 2x25/10 GbE SFP28 PCIe NIC | Riser 2 only | HHHL, SS |
| UCSC-P-M5D25GF[3] | Mellanox MCX512A-ACAT dual port 10/25G SFP28 NIC | Riser 2 only | HHHL, SS |
| UCSC-P-I8Q25GF[3] | Cisco-Intel E810XXVDA4L 4x25/10 GbE SFP28 PCIe NIC | Riser 2 only | FHHL, SS |
| UCSC-P-N6D25GF | Cisco-NVDA MCX631102AS-ADAT CX6Lx 2x25GbE SFP28 x8 PCIe NIC | Riser 2 only | HHHL, SS |
| **100 Gb NICs** | | | |
| UCSC-P-M5D100GF[3] | Mellanox CX-5 MCX516A-CDAT 2x100GbE QSFP PCIe NIC | Riser 2 only | HHHL, SS |
| UCSC-P-M6CD100GF[3] | Cisco-MLNX MCX623106AC-CDAT 2x100GbE QSFP56 PCIe NIC (with Crypto) | Riser 2 only | HHHL, SS |
| UCSC-P-M6DD100GF[3] | Cisco-MLNX MCX623106AS-CDAT 2x100GbE QSFP56 PCIe NIC | Riser 2 only | HHHL, SS |
| UCSC-P-I8D100GF[3] | Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC | Riser 2 only | HHHL, SS |
| **Nexus Smart NIC** | | | |
| NXN-K3P-2X | Nexus X25 2-port SFP28 SmartNIC (2-channel), KU3P FPGA | Riser 1, 2, or 3 | HHHL, SS |
| NXN-K3P-2X-4GB | Nexus X25 2-port SFP28 SmartNIC (2-channel), KU3P FPGA, 4GB | Riser 1, 2, or 3 | HHHL, SS |
| NXN-K3P-8X | Nexus X100 2-port QSFP28 SmartNIC (8-channel), KU3P FPGA | Riser 1, 2, or 3 | HHHL, SS |
| NXN-K3P-8X-9GB | Nexus X100 2p QSFP28 SmartNIC (8-channel), KU3P FPGA, 9GB | Riser 1, 2, or 3 | HHHL, SS |
| NXN-V9P-16X-9GB | Nexus 2-port QDD SmartNIC+ (16-channel), VU9P FPGA, 9GB DDR | Riser 1, 2, or 3 | HHHL, SS |
| **Host Bus Adapters (HBAs)** | | | |
| UCSC-P-Q6D32GF | Cisco-QLogic QLE2772 2x32GFC Gen 6 Enhanced PCIe HBA | Riser 2 only | HHHL, SS |
| UCSC-P-B7D32GF | Cisco-Emulex LPe35002-M2-2x32GFC Gen 7 PCIe HBA | Riser 2 only | HHHL, SS |
| UCSC-PCIE-QD16GF | Qlogic QLE2692 dual-port 16G FC HBA | Riser 2 only | HHHL, SS |
| UCSC-PCIE-BD16GF | Emulex LPe31002 dual port 16G FC HBA | Riser 2 only | HHHL, SS |
| **External Storage HBA** | | | |
| UCSC-9500-8E | 9500 Series PCIe Gen 4.0 Tri-Mode Storage HBA 12Gb/s SAS/SATA/PCIe (NVMe) | Riser 2 only | HHHL, SS |

**Notes:**

1. HHHL = half-height, half-length; FHHL = Full-height, half-length; SS = single-slot; DS = double-slot
2. Can not be mixed with 1400 series VICs
3. When present, the recommended Fan Speed Control policy setting is balanced.

### Caveats

- For 1-CPU systems:
  - One PCIe slot (slot 1) is available for a 1-CPU system. However, it is reserved for the RAID controller or HBA only.
- For 2-CPU systems:
  - The following PCIe slots are available:
    - One on PCIe riser 1B (slots 1, reserved for drive controller),
    - Three on PCIe riser 2A (PCIe slots 4, 5, and 6), and
    - None on PCIe riser 3B.
  - One plug-in PCIe VIC card can be installed in dual CPU systems, using slot 5. In addition, you can order an mLOM VIC card, which is installed in the mLOM slot inside the chassis and thus have two VIC cards in operation at the same time. See ***Table 14 on page 34*** for the selection of plug-in and mLOM VIC cards. See also ***Table 1 on page 7*** and ***SPARE PARTS, page 77*** for the PCIe slot physical descriptions.
  - The server supports up to one PCIe Cisco VICs plus an MLOM VIC

    However, single wire management is supported on only one VIC at a time. If multiple VICs are installed on a server, only one slot has NCSI enabled at a time and for single wire management, priority goes to the MLOM slot, then slot 5 for NCSI management traffic. When multiple cards are installed, connect the single wire management cables in the priority order mentioned above.
- To help ensure that your operating system is compatible with the card you have selected, or to see additional cards that have been qualified to work with the UCS C240 M6 server, but are not sold on the Cisco price list, check the Hardware Compatibility List at this link:

**http://www.cisco.com/en/US/products/ps10477/prod_technical_reference_list.html**

# ORDER OPTIONAL PCIE OPTION CARD ACCESSORIES

- These optics and cables have been tested for compatibility and are approved for use with Ethernet Network Adapter (as of the time of this publication). For the latest update, check the and consult Cisco Compatibility Matrix at https://tmgmatrix.cisco.com.
- For list of supported optics and cables for VIC 1455, VIC 1467, VIC 1495 and VIC 1477 refer to VIC 1400 series data sheet at the following links:
  - https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-b-series-blade-servers/datasheet-listing.html
  - https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/datasheet-c78-741130.html

The information in the preceding tables was compiled from testing conducted by Cisco Transceiver Module Group (TMG) and vendors. 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 8 ORDER GPU CARDS (OPTIONAL)

**NOTE:** If you order a GPU, the server does not come with a midplane kit and therefore no midplane drives can be installed. Also, when a GPU is ordered, the server comes with low-profile heatsinks (PID = UCSC-HSLP-M6) and need to select special air duct (PID = UCSC-AD-M6LGPU) for double-wide GPUs.

### Select GPU Options

The available GPU PCIe options and their riser slot compatibilities are listed in ***Table 15***.

**Table 15 Available PCIe GPU Cards[1]**

| GPU Product ID (PID) | PID Description | Card Size | Max GPU per Node | Riser Slot Compatibility | | |
|---|---|---|---|---|---|---|
| | | | | Riser 1B[2] | Riser 2 (Gen 4) | Riser 3B[3] |
| UCSC-GPU-A10 | TESLA A10, PASSIVE, 150W, 24GB | Single-wide | 2 | N/A | 5 (x16)<br>6 (x8) | N/A |
| UCSC-GPU-L4M6 | NVIDIA L4, 70W, 24GB, 1-slot HHHL GPU | Single-wide | 2 | N/A | 5 (x16)<br>6 (x8) | N/A |

**Notes:**

1. Refer to **https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html** for more details.
2. Riser 1B does not accept GPUs
3. Riser 3B does not accept GPUs

**NOTE:**

- All GPU cards must be procured from Cisco as there is a unique SBIOS ID required by CIMC and UCSM
- Slots 4, 5, and 6 on riser card 2A accommodate single-wide GPUs
- IF you are adding GPUs later, please refer to ***SPARE PARTS, page 77*** section of the below spec sheet to find the accessories/cables needed along with the GPU spare.
- Please refer to **installation guide** for the GPU related information.

## GPU Ready Configuration

In the GPU ready configuration, the unit is configured to accept GPUs at a later stage, but GPUs are not installed at the time of ordering

**Table 16 NVIDIA GPU Licenses**

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

## STEP 9 ORDER POWER SUPPLY

Power supplies share a common electrical and physical design that allows for hot-plug and tool-less installation into M6 C-Series servers. Each power supply is certified for high-efficiency operation and offers multiple power output options. This allows users to “right-size” based on server configuration, which improves power efficiency, lowers overall energy costs, and helps 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 (CPUs, drives, memory, and so on):

**http://ucspowercalc.cisco.com**



**WARNING:**

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

**Table 17 Power Supply**

| Product ID (PID) | PID Description |
|---|---|
| **PSU (Input High Line 210VAC)** | |
| UCSC-PSU1-1050W | UCS 1050W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSUV2-1050DC | 1050W DC power supply for C-Series servers **Platinum** |
| UCSC-PSUV21050D6I[1] | 1050W -48V DC power supply for C-Series servers (India) Requires cable CAB-48DC-40A-8AWG |
| UCSC-PSU1-1200W | 1200W Titanium power supply for C-Series Servers |
| UCSC-PSU1-1600W | UCS 1600W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSU1-2300W[2] | 2300W Power supply for C-series servers **Titanium** |
| **PSU (Input Low Line 110VAC)** | |
| UCSC-PSU1-1050W | UCS 1050W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSUV2-1050DC | 1050W DC power supply for C-Series servers **Platinum** |
| UCSC-PSU1-1050ELV | 1050W AC PSU Enhanced Low Line (Not EU/UK Lot 9 Compliant) **Platinum** |
| UCSC-PSUV21050D6I[1] | 1050W -48V DC power supply for C-Series servers (India) Requires cable CAB-48DC-40A-8AWG |
| UCSC-PSU1-1200W | 1200W Titanium power supply for C-Series Servers |
| UCSC-PSU1-1600W | UCS 1600W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSU1-2300W | 2300W Power supply for C-series servers **Titanium** |

**Notes:**

1. This power supply only supported with NO-POWER-CORD and CAB-48DC-40A-8AWG. Must be ordered for India shipments, limited to India only.
2. The 2300 W power supply uses a different power connector that the rest of the power supplies, so you must use different power cables to connect it. See ***Table 18 on page 42*** and ***Table 19 on page 45***.

**NOTE:**

- In a server with two power supplies, both power supplies must be identical.
- DC PSUs are not impacted by Lot 9 Regulation and are EU/UK Lot 9 compliant

## STEP 10 SELECT INPUT POWER CORD(s)

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

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

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

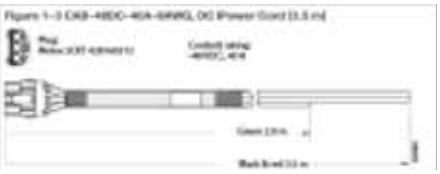
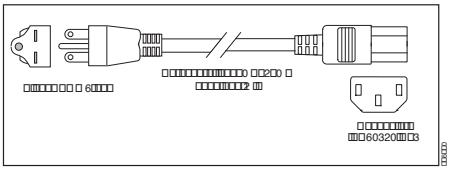
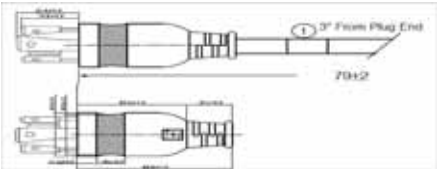
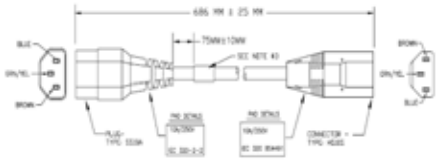
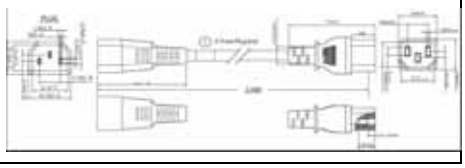
| Product ID (PID) | PID Description | Images |
|---|---|---|
| NO-POWER-CORD | ECO friendly green option, no power cable will be shipped | |
| R2XX-DMYMPWRCORD | No power cord (dummy PID to allow for a no power cord option) | Not applicable |
| CAB-48DC-40A-8AWG | C-Series -48VDC PSU Power Cord, 3.5M, 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 18 Available Power Cords (for server PSUs less than 2300 W)**

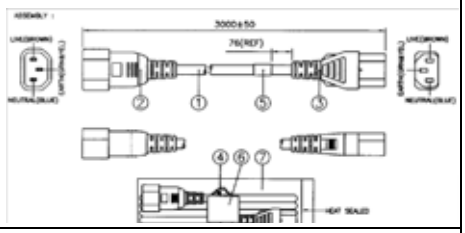
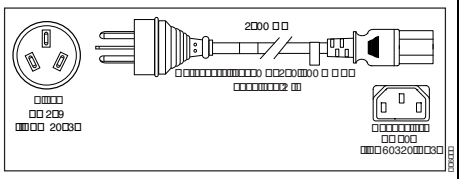
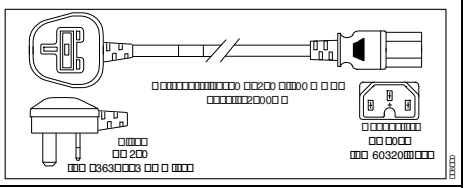
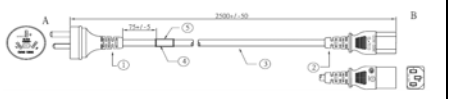
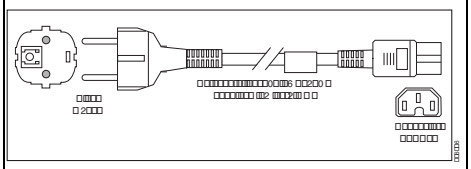
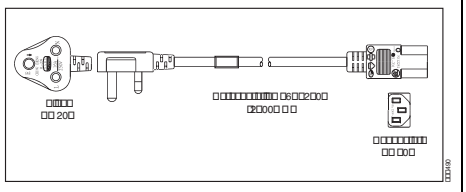
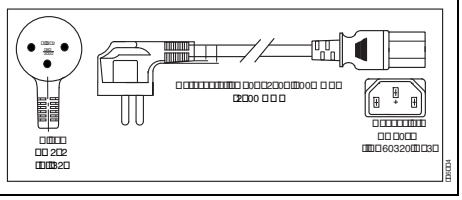
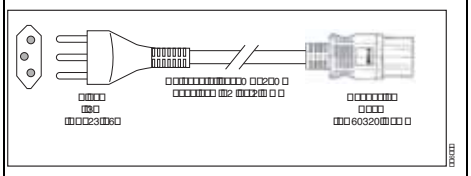
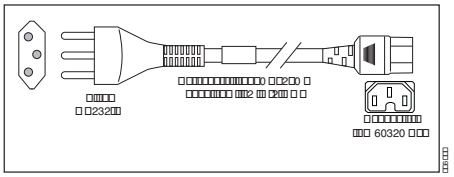
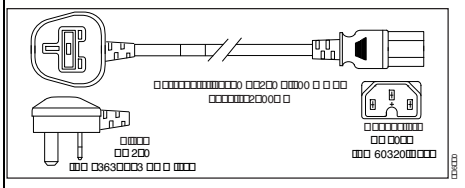
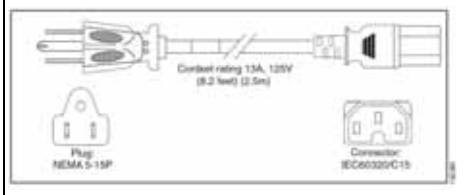
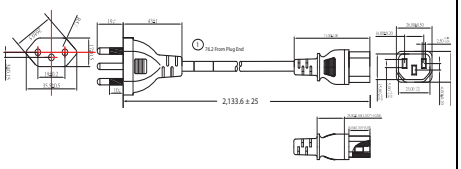
| Product ID (PID) | PID Description | Images |
|---|---|---|
| CAB-C13-C14-AC | CORD,PWR,JMP,IEC60320/C14,IEC60320/C13, 3.0M |  |
| CAB-250V-10A-AR | Power Cord, 250V, 10A, Argentina |  |
| CAB-9K10A-AU | Power Cord, 250VAC 10A 3112 Plug, Australia |  |
| CAB-250V-10A-CN | AC Power Cord - 250V, 10A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

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

| Product ID (PID) | PID Description | Images |
|---|---|---|
| CAB-9K10A-IT | Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy |  |
| 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 |
| CAB-48DC-40A-INT | C-Series -48VDC PSU PWR Cord, 3.5M, 3 Wire, 8AWG, 40A (INT) | Image not available |
| CAB-48DC-40A-AS | C-Series -48VDC PSU PWR Cord, 3.5M, 3Wire, 8AWG, 40A (AS/NZ) | Image not available |

**Notes:**

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

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

| Product ID (PID) | PID Description | Images |
|---|---|---|
| CAB-C19-CBN | Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors | Not applicable |
| CAB-S132-C19-ISRL | S132 to IEC-C19 14ft Israeli | Image not available |
| CAB-IR2073-C19-AR | IRSM 2073 to IEC-C19 14ft Argen | Image not available |
| CAB-BS1363-C19-UK | BS-1363 to IEC-C19 14ft UK | Image not available |
| CAB-SABS-C19-IND | SABS 164-1 to IEC-C19 India | Image not available |
| CAB-C2316-C19-IT | CEI 23-16 to IEC-C19 14ft Italy | Image not available |
| CAB-US515P-C19-US | NEMA 5-15 to IEC-C19 13ft US | Image not available |
| CAB-US520-C19-US | NEMA 5-20 to IEC-C19 14ft US | Image not available |
| CAB-US620P-C19-US | NEMA 6-20 to IEC-C19 13ft US | Image not available |
| CAB-9K16A-BRZ | Power Cord 250VAC 16A, Brazil, Src Plug EL224-C19 | Image not available |
| CAB-9K16A-KOR | Power Cord 250VAC 16A, Korea, Src Plug | Image not available |
| CAB-AC-16A-AUS | Power Cord, 250VAC, 16A, Australia C19 | Image not available |
| CAB-AC-2500W-EU | Power Cord, 250Vac 16A, Europe | Image not available |
| CAB-C14C19-10A-EU | Power Cord C14-C19 10A EU | Image not available |
| CAB-AC-2500W-INT | Power Cord, 250Vac 16A, INTL | Image not available |
| CAB-AC-2500W-ISRL | Power Cord,250VAC,16A,Israel | Image not available |
| CAB-AC-C19-TW | Power Cord, 250 V, 16A, C19, Taiwan | Image not available |
| CAB-AC-C6K-TWLK | Power Cord, 250Vac 16A, twist lock NEMA L6-20 plug, US | Image not available |
| CAB-AC16A-CH | 16A AC Power Cord For China | Image not available |
| CAB-ACS-16 | AC Power Cord (Swiss) 16A | Image not available |
| CAB-C19-C20-3M-JP | Power Cord C19-C20, 3M/10ft Japan PSE mark | Image not available |
| CAB-C19-C20-IND | Power Cord C19-C20 India | Image not available |
| UCSB-CABL-C19-BRZ | NBR 14136 to C19 AC 14FT POWER CORD, BRAZIL | Image not available |
| NO-POWER-CORD | ECO friendly green option, no power cable will be shipped | Image not available |
| R2XX-DMYMPWRCORD | No power cord option Not valid for delivery destination in Argentina, Brazil, Japan | Image not available |

## STEP 11 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM

### Select a Tool-less Rail Kit

Select a tool-less rail kit from ***Table 20***.

**Table 20 Tool-less Rail Kit Options**

| Product ID (PID) | PID Description |
|---|---|
| UCSC-RAIL-M6 | Ball Bearing Rail Kit for C220 & C240 M6 rack servers |
| UCSC-RAIL-NONE | 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 21*** to order a cable management arm.

**Table 21 Cable Management Arm**

| Product ID (PID) | PID Description |
|---|---|
| UCSC-CMA-C240M6 | Reversible CMA for C220 M6 ball bearing rail kit |

For more information about the tool-less rail kit and cable management arm, see the Cisco UCS C240 M6 Installation and Service Guide at this URL:

**https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html**

**NOTE:** If you plan to rackmount your UCS C240 M6 server, you must order a tool-less rail kit.

## STEP 12 MANAGEMENT CONFIGURATION (OPTIONAL)

By default, the C240 M6 server NIC mode is configured to be Shared LOM Extended. This NIC mode allows any LOM port or adapter card port to be used to access the Cisco Integrated Management Controller (CIMC). The Cisco VIC card must be installed in a slot with NCSI support.

To change the default NIC mode to Dedicated, select the UCSC-DLOM-01 PID shown in ***Table 22***. In Dedicated NIC mode, the CIMC can be accessed only through the dedicated management port. See ***Chassis Rear View, page 5*** for the location of the management port.

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

For more details on all the NIC mode settings, see

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

**Table 22 Management Configuration Ordering Information**

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

## STEP 13 SELECT SERVER BOOT MODE (OPTIONAL)

By default, the C220 M6 server ships with UEFI as the default boot mode. To have a server shipped with the Legacy BIOS mode (which was standard on M4 and previous generation servers), select the Legacy BIOS PID from ***Table 23***.

**Table 23 Server Boot Mode Ordering Information**

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

## STEP 14 ORDER SECURITY DEVICES (OPTIONAL)

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

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

The security device ordering information is listed in ***Table 24***.

**Table 24 Security Devices**

| Product ID (PID) | PID Description |
|---|---|
| UCSX-TPM-002C | TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified, for M6 servers |
| UCS-TPM-002D | TPM 2.0 TCG FIPS140-2 CC+ Cert M6 Intel MSW2022 Compliant |
| UCSX-TPM-OPT-OUT | OPT OUT, TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified[1] |
| UCSC-INT-SW02 | C220 and C240 M6 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



**NOTE:**

- The TPM module used in this system conforms to TPM 2.0, as defined by the Trusted Computing Group (TCG). It is also SPI-based.
- TPM installation is supported after-factory. However, a TPM installs with a one-way screw and cannot be replaced, upgraded, or moved to another server. If a server with a TPM is returned, the replacement server must be ordered with a new TPM.

## STEP 15 SELECT LOCKING SECURITY BEZEL (OPTIONAL)

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

Select the locking bezel from ***Table 25***.

**Table 25 Locking Bezel Option**

| Product ID (PID) | Description |
|---|---|
| UCSC-BZL-C240M5 | C240 M5 Security Bezel |

## STEP 16 ORDER M.2 SATA SSD (OPTIONAL)

Order one or two matching M.2 SATA SSDs (see ***Table 26***) along with a boot-optimized RAID controller (see ***Table 27***). See ***Figure 8 on page 69*** for the location of the extender board connector on the motherboard. The motherboard extender board connector accepts the extender board and the extender board accepts the boot-optimized RAID controller.

Each boot-optimized RAID controller can accommodate up to two SATA M.2 SSDs shown in ***Table 26***.Order one or two M.2 SATA SSDs from ***Table 26***



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

**Table 26 M.2 SATA SSDs**

| Product ID (PID) | PID Description |
|---|---|
| UCS-M2-I240GB | 240GB SATA M.2 SSD |
| UCS-M2-240G | 240GB SATA M.2 |
| UCS-M2-480G | 480GB M.2 SATA SSD |
| UCS-M2-960G | 960GB SATA M.2 |
| UCS-M2240OA1VM6 | 240GB M.2 Boot Solidigm S4520 SATA 1X SSD |
| UCS-M2480OA1VM6 | 480GB M.2 Boot Solidigm S4520 SATA 1X SSD |

Order the Boot-Optimized RAID controller from ***Table 27***. The Boot-Optimized RAID controller plugs into the extender board and holds up to two M.2 SATA drives.



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

**Table 27 Boot-Optimized RAID Controller**

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

**NOTE:**

- The UCS-M2-HWRAID boot-optimized RAID controller supports RAID 1 and JBOD mode
- (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.

### Caveats

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

## STEP 17 SELECT OPERATING SYSTEM AND VALUE-ADDED SOFTWARE

**NOTE:**

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

**Select**

- Operating System (***Table 28***)

**Table 28 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 |
| MSWS-22-DC16C | Windows Server 2022 Data Center (16 Cores/Unlimited VMs) |
| MSWS-22-DC16C-NS | Windows Server 2022 DC (16 Cores/Unlim VMs) - No Cisco SVC |
| MSWS-22-DCA2C | Windows Server 2022 Data Center - Additional 2 Cores |
| MSWS-22-DCA2C-NS | Windows Server 2022 DC - Additional 2 Cores - No Cisco SVC |
| MSWS-22-ST16C | Windows Server 2022 Standard (16 Cores/2 VMs) |
| MSWS-22-ST16C-NS | Windows Server 2022 Standard (16 Cores/2 VMs) - No Cisco SVC |
| MSWS-22-STA2C | Windows Server 2022 Standard - Additional 2 Cores |
| MSWS-22-STA2C-NS | Windows Server 2022 Stan - Additional 2 Cores - 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 |

**Table 28 Operating System *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| **Red Hat Ent Linux/ High Avail/ Res Strg/ Scal** | |
| RHEL-2S2V-1S | Red Hat Enterprise Linux (1-2 CPU,1-2 VN); Prem 1-Yr SnS |
| RHEL-2S2V-3S | Red Hat Enterprise Linux (1-2 CPU,1-2 VN); Prem 3-Yr SnS |
| RHEL-2S-HA-1S | RHEL High Availability (1-2 CPU); Premium 1-yr SnS |
| RHEL-2S-HA-3S | RHEL High Availability (1-2 CPU); Premium 3-yr SnS |
| RHEL-2S-RS-1S | RHEL Resilient Storage (1-2 CPU); Premium 1-yr SnS |
| RHEL-2S-RS-3S | RHEL Resilient Storage (1-2 CPU); Premium 3-yr SnS |
| RHEL-VDC-2SUV-1S | RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 1 Yr SnS Reqd |
| RHEL-VDC-2SUV-3S | RHEL for Virt Datacenters (1-2 CPU, Unlim VN) 3 Yr SnS Reqd |
| **Red Hat SAP** | |
| RHEL-SAP-2S2V-1S | RHEL for SAP Apps (1-2 CPU, 1-2 VN); Prem 1-Yr SnS |
| RHEL-SAP-2S2V-3S | RHEL for SAP Apps (1-2 CPU, 1-2 VN); Prem 3-Yr SnS |
| **SUSE** | |
| SLES-2S2V-1A | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 1-Yr Support Req |
| SLES-2S2V-3A | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 3-Yr Support Req |
| SLES-2S2V-5A | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); 5-Yr Support Req |
| SLES-2S2V-1S | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 1-Yr SnS |
| SLES-2S2V-3S | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 3-Yr SnS |
| SLES-2S2V-5S | SUSE Linux Enterprise Svr (1-2 CPU,1-2 VM); Prio 5-Yr SnS |
| SLES-2S-HA-1S | SUSE Linux High Availability Ext (1-2 CPU); 1yr SnS |
| SLES-2S-HA-3S | SUSE Linux High Availability Ext (1-2 CPU); 3yr SnS |
| SLES-2S-HA-5S | SUSE Linux High Availability Ext (1-2 CPU); 5yr SnS |
| SLES-2S-GC-1S | SUSE Linux GEO Clustering for HA (1-2 CPU); 1yr Sns |
| SLES-2S-GC-3S | SUSE Linux GEO Clustering for HA (1-2 CPU); 3yr SnS |
| SLES-2S-GC-5S | SUSE Linux GEO Clustering for HA (1-2 CPU); 5yr SnS |
| SLES-2S-LP-1S | SUSE Linux Live Patching Add-on (1-2 CPU); 1yr SnS Required |
| SLES-2S-LP-3S | SUSE Linux Live Patching Add-on (1-2 CPU); 3yr SnS Required |
| SLES-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 |

**Table 28 Operating System *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| SLES-2SUVM-1A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; 1Y Supp Req |
| SLES-2SUVM-1S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; Prio 1Y SnS |
| SLES-2SUVM-1YR | SUSE Linux Entp Svr (1-2 CPU,Unl VM) LP; Prio SnS 24x7 - 1Y |
| SLES-2SUVM-3A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; 3Y Supp Req |
| SLES-2SUVM-3S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; Prio 3Y SnS |
| SLES-2SUVM-3YR | SUSE Linux Entp Svr (1-2 CPU,Unl VM) LP; Prio SnS 24x7 - 3Y |
| SLES-2SUVM-5A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; 5Y Supp Req |
| SLES-2SUVM-5S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM) LP; Prio 5Y SnS |
| SLES-2SUVM-5YR | SUSE Linux Entp Svr (1-2 CPU,Unl VM) LP; Prio SnS 24x7 - 5Y |
| SLES-SAP2SUVM-1A | SLES for SAP Apps w/ HA (1-2 CPU, Unl VM) LP; 1Y Supp Reqd |
| SLES-SAP2SUVM-1S | SLES for SAP Apps (1-2 CPU, Unl VM) LP; Priority 1Y SnS |
| SLES-SAP2SUVM-1YR | SUSE for SAP Apps; (1-2 CPU,Unl VM) LP; Prio SnS 24x7 - 1Y |
| SLES-SAP2SUVM-3A | SLES for SAP Apps w/ HA (1-2 CPU, Unl VM) LP; 3Y Supp Reqd |
| SLES-SAP2SUVM-3S | SLES for SAP Apps (1-2 CPU, Unl VM) LP; Priority 3Y SnS |
| SLES-SAP2SUVM-3YR | SUSE for SAP Apps; (1-2 CPU,Unl VM) LP; Prio SnS 24x7 - 3Y |
| SLES-SAP2SUVM-5A | SLES for SAP Apps w/ HA (1-2 CPU, Unl VM) LP; 5Y Supp Reqd |
| SLES-SAP2SUVM-5S | SLES for SAP Apps (1-2 CPU, Unl VM) LP; Priority 5Y SnS |
| SLES-SAP2SUVM-5YR | SUSE for SAP Apps; (1-2 CPU,Unl VM) LP; Prio SnS 24x7 - 5Y |
| **SLES and SAP** | |
| SLES-SAP-2S2V-1A | SLES for SAP Apps (1-2 CPU, 1-2 VM); 1-Yr Support Reqd |
| SLES-SAP-2S2V-3A | SLES for SAP Apps (1-2 CPU, 1-2 VM); 3-Yr Support Reqd |
| SLES-SAP-2S2V-5A | SLES for SAP Apps (1-2 CPU, 1-2 VM); 5-Yr Support Reqd |
| SLES-SAP-2S2V-1S | SLES for SAP Apps (1-2 CPU, 1-2 VM); Priority 1-Yr SnS |
| SLES-SAP-2S2V-3S | SLES for SAP Apps (1-2 CPU, 1-2 VM); Priority 3-Yr SnS |
| SLES-SAP-2S2V-5S | SLES for SAP Apps (1-2 CPU, 1-2 VM); Priority 5-Yr SnS |

## STEP 18 SELECT OPERATING SYSTEM MEDIA KIT

Select the optional operating system media listed in ***Table 29***.

**Table 29 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 |
| MSWS-22-ST16C-RM | Windows Server 2022 Stan (16 Cores/2 VMs) Rec Media DVD Only |
| MSWS-22-DC16C-RM | Windows Server 2022 DC (16Cores/Unlim VM) Rec Media DVD Only |

## STEP 19 SELECT SERVICE AND SUPPORT PIDS

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

## Unified Computing Warranty, No Contract

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

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

## Smart Net Total Care (SNTC) for Cisco UCS

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

For systems that include Unified Computing System Manager (UCSM), 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 30***.

**Table 30 Cisco SNTC for UCS Service (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-PREM-UCSCC2L | C2P | Yes | SNTC 24X7X2OS |
| CON-UCSD8-UCSCC2L | UCSD8 | Yes | UC SUPP DR 24X7X2OS* |
| CON-C2PL-UCSCC2L | C2PL | Yes | LL 24X7X2OS** |
| CON-OSP-UCSCC2L | C4P | Yes | SNTC 24X7X4OS |
| CON-UCSD7-UCSCC2L | UCSD7 | Yes | UCS DR 24X7X4OS* |

**Table 30 Cisco SNTC for UCS Service (PID UCSC-C240-M6L) *(continued)***

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-C4PL-UCSCC2L | C4PL | Yes | LL 24X7X4OS** |
| CON-USD7L-UCSCC2L | USD7L | Yes | LLUCS HW DR 24X7X4OS*** |
| CON-OSE-UCSCC2L | C4S | Yes | SNTC 8X5X4OS |
| CON-UCSD6-UCSCC2L | UCSD6 | Yes | UC SUPP DR 8X5X4OS* |
| CON-SNCO-UCSCC2L | SNCO | Yes | SNTC 8x7xNCDOS**** |
| CON-OS-UCSCC2L | CS | Yes | SNTC 8X5XNBDOS |
| CON-UCSD5-UCSCC2L | UCSD5 | Yes | UCS DR 8X5XNBDOS* |
| CON-S2P-UCSCC2L | S2P | No | SNTC 24X7X2 |
| CON-S2PL- UCSCC2L | S2PL | No | LL 24X7X2** |
| CON-SNTP-UCSCC2L | SNTP | No | SNTC 24X7X4 |
| CON-SNTPL-UCSCC2L | SNTPL | No | LL 24X7X4** |
| CON-SNTE-UCSCC2L | SNTE | No | SNTC 8X5X4 |
| CON-SNC-UCSCC2L | SNC | No | SNTC 8x7xNCD |
| CON-SNT-UCSCC2L | SNT | No | SNTC 8X5XNBD |
| CON-SW-UCSCC2L | SW | No | SNTC NO RMA |
| Note: For PID UCSC-C240-M6L-BR, select Service SKU with UCSCCB24 suffix (Example: CON-OSP-UCSCCB24) | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-OSP-ULSCC2L4) | | | |
| *Includes Drive Retention (see below for full description) | | | |
| **Includes Local Language Support (see below for full description) – Only available in China and Japan | | | |
| ***Includes Local Language Support and Drive Retention – Only available in China and Japan | | | |

## Smart Net Total Care for Cisco UCS Onsite Troubleshooting Service

An enhanced offer over traditional Smart Net Total Care which provides onsite troubleshooting expertise to aid in the diagnostics and isolation of hardware issue within our customers' Cisco Unified Computing System (UCS) environment. It is delivered by a Cisco Certified field engineer (FE) in collaboration with remote TAC engineer and Virtual Internetworking Support Engineer (VISE). You can choose a desired service listed in ***Table 31***.

**Table 31 SNTC for Cisco UCS Onsite Troubleshooting Service (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-OSPT-UCSCC2L | OSPT | Yes | 24X7X4OS Trblshtg |
| CON-OSPTD-UCSCC2L | OSPTD | Yes | 24X7X4OS TrblshtgDR* |
| CON-OSPTL-UCSCC2L | OSPTL | Yes | 24X7X4OS TrblshtgLL** |
| CON-OPTLD-UCSCC2L | OPTLD | Yes | 24X7X4OS TrblshtgLLD*** |
| | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-OSPT-ULSCC2L4) | | | |
| *Includes Drive Retention (see below for full description) | | | |
| **Includes Local Language Support (see below for full description) – Only available in China and Japan | | | |
| ***Includes Local Language Support and Drive Retention – Only available in China and Japan | | | |

## Solution Support (SSPT) 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 32***..

**Table 32 Solution Support for UCS Service (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-SSC2P-UCSCC2L | SSC2P | Yes | SOLN SUPP 24X7X2OS |
| CON-SSC4P-UCSCC2L | SSC4P | Yes | SOLN SUPP 24X7X4OS |
| CON-SSC4S-UCSCC2L | SSC4S | Yes | SOLN SUPP 8X5X4OS |
| CON-SSCS-UCSCC2L | SSCS | Yes | SOLN SUPP 8X5XNBDOS |
| CON-SSDR7-UCSCC2L | SSDR7 | Yes | SSPT DR 24X7X4OS* |
| CON-SSDR5-UCSCC2L | SSDR5 | Yes | SSPT DR 8X5XNBDOS* |
| CON-SSS2P-UCSCC2L | SSS2P | No | SOLN SUPP 24X7X2 |
| CON-SSSNP-UCSCC2L | SSSNP | No | SOLN SUPP 24X7X4 |
| CON-SSSNE-UCSCC2L | SSSNE | No | SOLN SUPP 8X5X4 |
| CON-SSSNC-UCSCC2L | SSSNC | No | SOLN SUPP NCD |
| CON-SSSNT-UCSCC2L | SSSNT | No | SOLN SUPP 8X5XNBD |
| | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-SSC4P-ULSCC2L4) | | | |
| *Includes Drive Retention (see below for full description) | | | |

## Solution Support for Service Providers

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

**Table 33 Solution Support for UCS Service (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| SP-SSC2P-UCSCC2L | SPSSC2P | Yes | SP SOLN SUPP 24X7X2OS |
| SP-SSC4P-UCSCC2L | SPSSC4P | Yes | SP SOLN SUPP 24X7X4OS |
| SP-SSC4S-UCSCC2L | SPSSC4S | Yes | SP SOLN SUPP 8X5X4OS |
| SP-SSCS-UCSCC2L | SPSSCS | Yes | SP SOLN SUPP 8X5XNBDOS |
| SP-SSS2P-UCSCC2L | SPSSS2P | Yes | SP SOLN SUPP 24X7X2 |
| SP-SSS4P-UCSCC2L | SPSSS4P | Yes | SP SOLN SUPP 24X7X4 |
| SP-SSSNE-UCSCC2L | SPSSSNE | No | SP SOLN SUPP 8X5X4 |
| SP-SSSNT-UCSCC2L | SPSSSNT | No | SP SOLN SUPP 8X5XNBD |
| SP-SSSPB-UCSCC2L | SPSSSPB | No | SP SOLN SUPP NO HW RPL |
| Note: For PID UCSC-C240-M6L-BR, select Service SKU with UCSCCB24 suffix (Example: CON-SSC4P-UCSCCB24) | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-SSC4P-ULSCC2L4) | | | |

## 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 34***.

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**Table 34 SNTC for UCS Hardware Only Service (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-UCW7-UCSCC2L | UCW7 | Yes | UCS HW 24X7X4OS |
| CON-UCWD7-UCSCC2L | UCWD7 | Yes | UCS HW+DR 24X7X4OS* |
| CON-UCW7L-UCSCC2L | UCW7L | Yes | LL UCS 24X7X4OS** |
| CON-UWD7L-UCSCC2L | UWD7L | Yes | LL UCS DR 24X7X4OS*** |
| CON-UCW5-UCSCC2L | UCW5 | Yes | UCS HW 8X5XNBDOS |
| CON-UCWD5-UCSCC2L | UCWD5 | Yes | UCS HW+DR 8X5XNBDOS* |

**Table 34 SNTC for UCS Hardware Only Service (PID UCSC-C240-M6L) *(continued)***

| |
|---|
| Note: For PID UCSC-C240-M6L-BR, select Service SKU with UCSCCB24 suffix (Example: CON-UCW7-UCSCCB24) |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-UCW7-ULSCC2L4) |
| *Includes Drive Retention (see below for full description) |
| **Includes Local Language Support (see below for full description) – Only available in China and Japan |
| ***Includes Local Language Support and Drive Retention – Only available in China and Japan |

## Partner Support Service for UCS

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

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

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

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

PSS for UCS provides hardware and software support, including triage support for third party software, backed by Cisco technical resources and level three support. You can choose a desired service listed in ***Table 35***.

**Table 35 PSS for UCS (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-PSJ8-UCSCC2L | PSJ8 | Yes | UCS PSS 24X7X2 OS |
| CON-PSJ7-UCSCC2L | PSJ7 | Yes | UCS PSS 24X7X4 OS |
| CON-PSJD7-UCSCC2L | PSJD7 | Yes | UCS PSS 24X7X4 DR* |
| CON-PSJ6-UCSCC2L | PSJ6 | Yes | UCS PSS 8X5X4 OS |
| CON-PSJD6-UCSCC2L | PSJD6 | Yes | UCS PSS 8X5X4 DR* |
| CON-PSJ4-UCSCC2L | PSJ4 | No | UCS SUPP PSS 24X7X2 |
| CON-PSJ3-UCSCC2L | PSJ3 | No | UCS SUPP PSS 24X7X4 |
| CON-PSJ2-UCSCC2L | PSJ2 | No | UCS SUPP PSS 8X5X4 |

**Table 35 PSS for UCS (PID UCSC-C240-M6L) *(continued)***

| | | | |
|---|---|---|---|
| CON-PSJ1-UCSCC2L | PSJ1 | No | UCS SUPP PSS 8X5XNBD |
| Note: For PID UCSC-C240-M6L-BR, select Service SKU with UCSCCB24 suffix (Example: CON-PSJ7-UCSCCB24) | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-PSJ7-ULSCC2L4) | | | |
| *Includes Drive Retention (see below for full description) | | | |

## PSS for UCS Hardware Only

PSS for UCS Hardware Only provides customers with replacement parts in as little as two hours and provides remote access any time to Partner Support professionals who can determine if a return materials authorization (RMA) is required. You can choose a desired service listed in ***Table 36***.

**Table 36 PSS for UCS Hardware Only (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-PSW7-UCSCC2L | PSW7 | Yes | UCS W PSS 24X7X4 OS |
| CON-PSWD7-UCSCC2L | PSWD7 | Yes | UCS W PSS 24X7X4 DR* |
| CON-PSW6-UCSCC2L | PSW6 | Yes | UCS W PSS 8X5X4 OS |
| CON-PSWD6-UCSCC2L | PSWD6 | Yes | UCS W PSS 8X5X4 DR* |
| CON-PSW4-UCSCC2L | PSW4 | No | UCS W PL PSS 24X7X2 |
| CON-PSW3-UCSCC2L | PSW3 | No | UCS W PL PSS 24X7X4 |
| CON-PSW2-UCSCC2L | PSW2 | No | UCS W PL PSS 8X5X4 |
| | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-PSW7-ULSCC2L4) | | | |
| *Includes Drive Retention (see below for full description) | | | |

## Distributor Support Service

You can choose a desired service listed in ***Table 37***

.

**Table 37 DSS for UCS Support Service for UCS (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-DSCO-UCSCC2L | DSCO | Yes | DSS CORE 24X7X2OS |
| CON-DSO-UCSCC2L | DSO | Yes | DSS CORE 24X7X4 |
| CON-DSNO-UCSCC2L | DSNO | Yes | DSS CORE 8X5XNBDOS |
| CON-DSCC-UCSCC2L | DSCC | No | DSS CORE 24X7X2 |
| CON-DCP-UCSCC2L | DCP | No | DSS CORE 24X7X4 |
| CON-DSE-UCSCC2L | DSE | No | DSS CORE 8X5X4 |
| CON-DSN-UCSCC2L | DSN | No | DSS CORE 8X5XNBD |
| Note: For PID UCSC-C240-M6L-BR, select Service SKU with UCSCCB24 suffix (Example: CON-DSO-UCSCCB24) | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-DSO-ULSCC2L4) | | | |

## 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 38***

**Table 38 DSS for UCS Support Service for UCS (PID UCSC-C240-M6L)**

| Service SKU | Service Level GSP | On Site? | Description |
|---|---|---|---|
| CON-NCF2P-UCSCC2L | NCF2P | Yes | CMB SVC 24X7X2OS |
| CON-NCF4P-UCSCC2L | NCF4P | Yes | CMB SVC 24X7X4OS |
| CON-NCF4S-UCSCC2L | NCF4S | Yes | CMB SVC 8X5X4OS |
| CON-NCFCS-UCSCC2L | NCFCS | Yes | CMB SVC 8X5XNBDOS |
| CON-NCF2-UCSCC2L | NCF2 | No | CMB SVC 24X7X2 |
| CON-NCFP-UCSCC2L | NCFP | No | CMB SVC 24X7X4 |
| CON-NCFE-UCSCC2L | NCFE | No | CMB SVC 8X5X4 |
| CON-NCFT-UCSCC2L | NCFT | No | CMB SVC 8X5XNBD |
| CON-NCFW-UCSCC2L | NCFW | No | CMB SVC SW |
| Note: For PID UCSC-C240-M6L-BR, select Service SKU with UCSCCB24 suffix (Example: CON-NCF4P-UCSCCB24) | | | |
| For PID UCSC-C240-M6L-CH, select Service SKU with ULSCC2L4 suffix (Example: CON-NCF4P-ULSCC2L4) | | | |

## UCS Drive Retention Service

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

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

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



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

## Local Language Technical Support for UCS

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

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

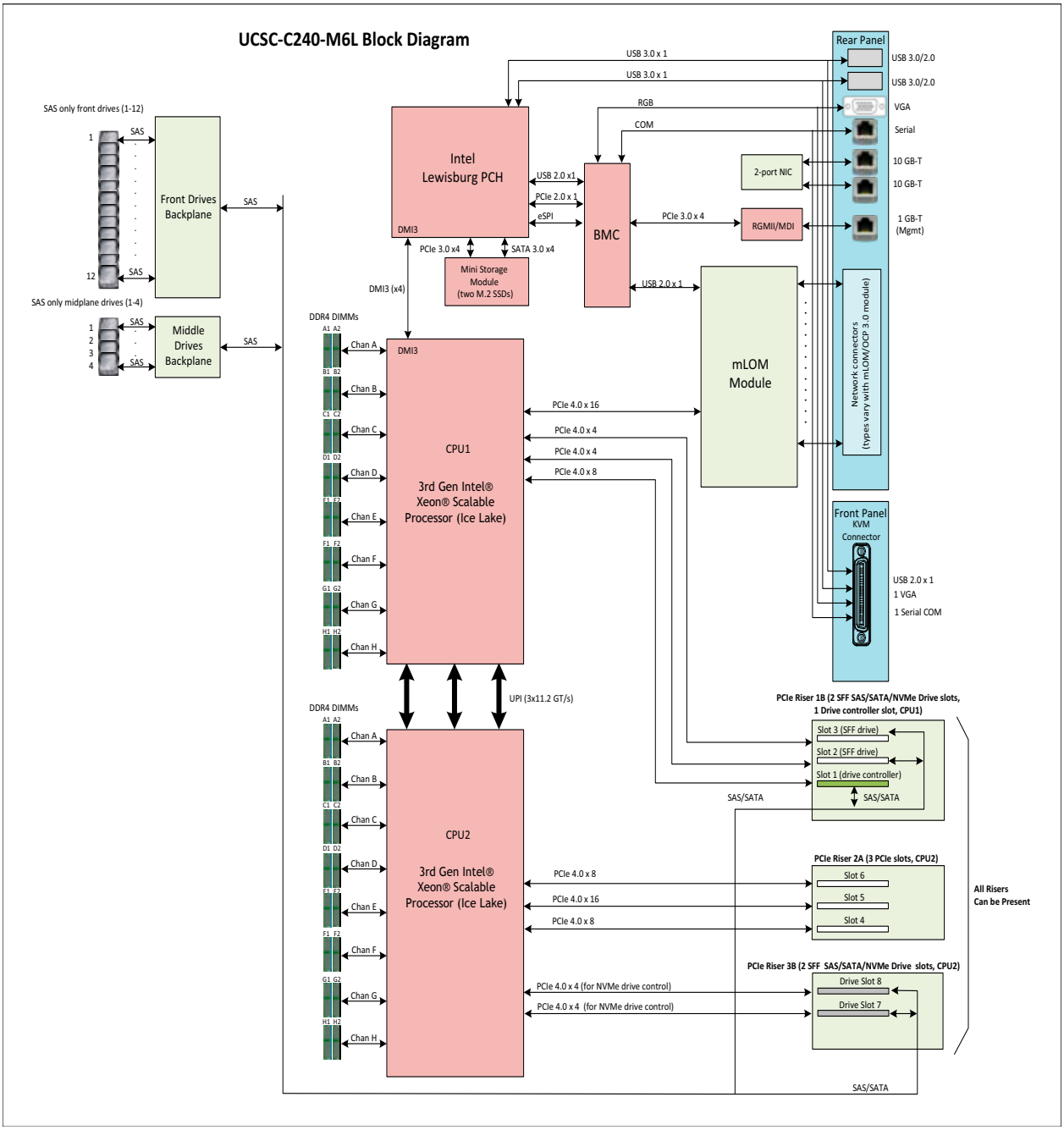
http://www.cisco.com/en/US/products/ps10312/serv_group_home.html

# SUPPLEMENTAL MATERIAL

## Block Diagram

A block diagram of the C240 M6 LFF is shown in ***Figure 5***.

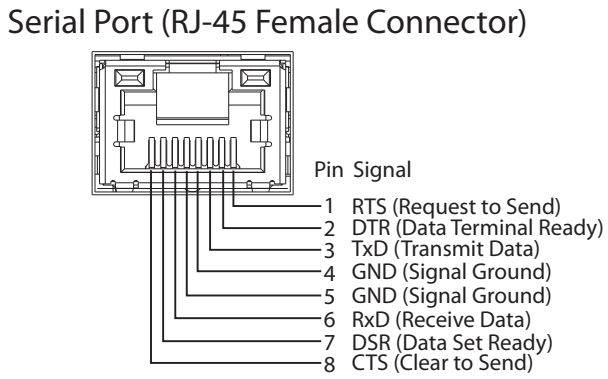
**Figure 5 UCSC-C240-M6L Block Diagram**



## Serial Port Details

The pinout details of the rear RJ-45 serial port connector are shown in ***Figure 6***.

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




## KVM CABLE

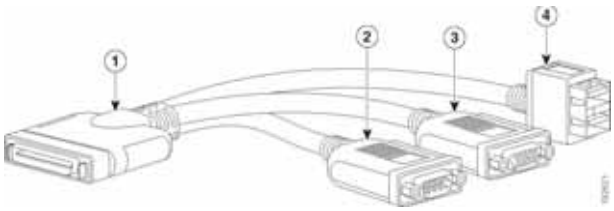
The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB 2.0 ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

The KVM cable ordering information is listed in ***Table 39***.

**Table 39 KVM Cable**

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

**Figure 7 KVM Cable**

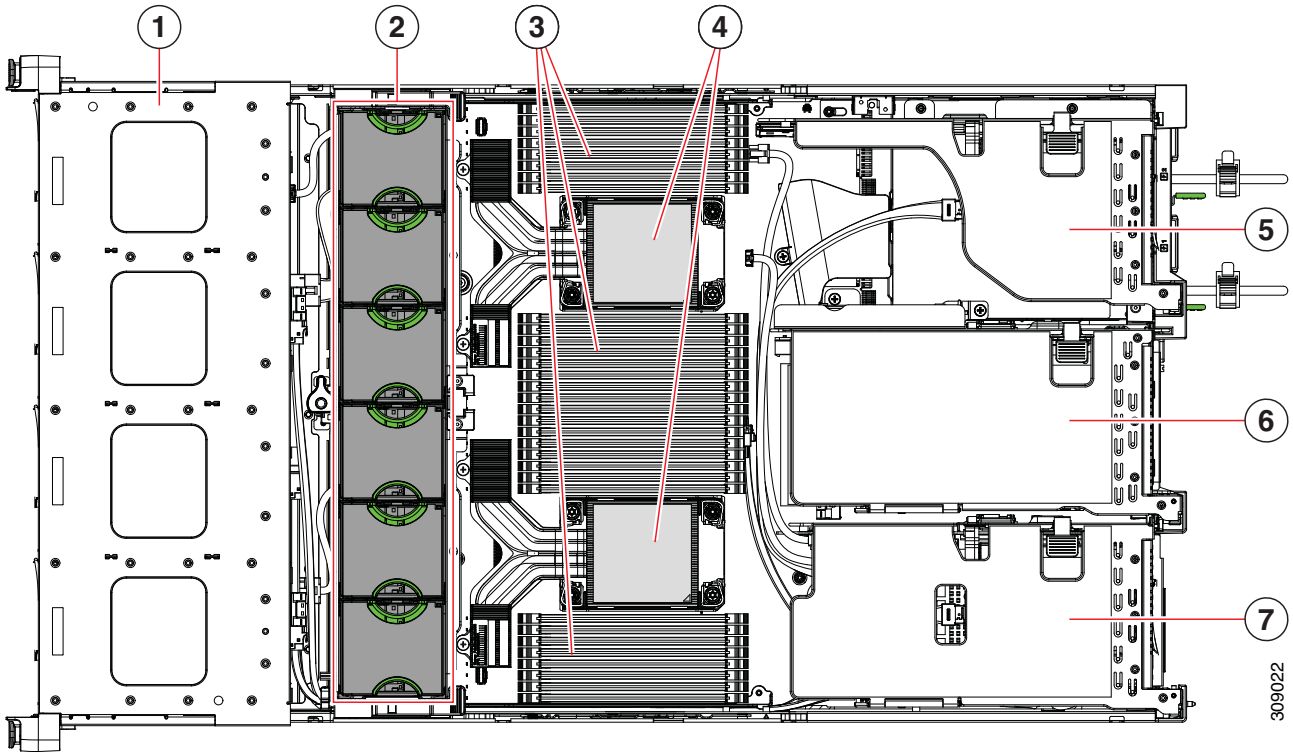



| | | | |
|---|---|---|---|
| **1** | Connector (to server front panel) | **3** | VGA connector (for a monitor) |
| **2** | DB-9 serial connector | **4** | Two-port USB 2.0 connector (for a mouse and keyboard) |

## Chassis

An internal view of the C240 M6 chassis with the top cover removed is shown in ***Figure 8***.

**Figure 8 C240 M6 Server With Top Cover Off**




| | | | |
|---|---|---|---|
| **1** | Front-loading drive bays. | **2** | Cooling fan modules (six, hot-swappable) |
| **3** | DIMM sockets on motherboard (16 per CPU)<br>An air baffle rests on top of the DIMMs and CPUs when the server is operating. The air baffle is not displayed in this illustration. | **4** | CPU sockets<br>CPU 2 is at the top and CPU 1 is at the bottom. |
| **5** | PCIe riser 3 (PCIe slots 7 and 8 numbered from bottom to top), with the following options:<br>■ 3B (Storage Option)—Slots 7 (x24 mechanical, x4 electrical) and 8 (x24 mechanical, x4 electrical). Both slots can accept 2.5-inch SFF universal HDDs. | **6** | PCIe riser 2 (PCIe slots 4, 5, 6 numbered from bottom to top), with the following options:<br>■ 2A (Default Option)—Slot 4 (x24 mechanical, x8 electrical) supports full height, ¾ length card; Slot 5 (x24 mechanical, x16 electrical) supports full height, full length GPU card; Slot 6 (x24 mechanical, x8 electrical) supports full height, full length card. |

| | | | |
|---|---|---|---|
| **7** | PCIe riser 1 (PCIe slot 1, 2, 3 numbered bottom to top), with the following options:<br>■ 1B (Storage Option)—Slot 1 is reserved for drive controller; Slot 2 (x4 electrical), supports 2.5-inch SFF universal HDD; Slot 3 (x4 electrical), supports 2.5-inch SFF universal HDD | **-** | |

## Risers

*Figure 9* shows the locations of the PCIe riser connectors on the C240 M6 LFF motherboard.

**Figure 9 C240 M6 LFF Riser Connector Locations**

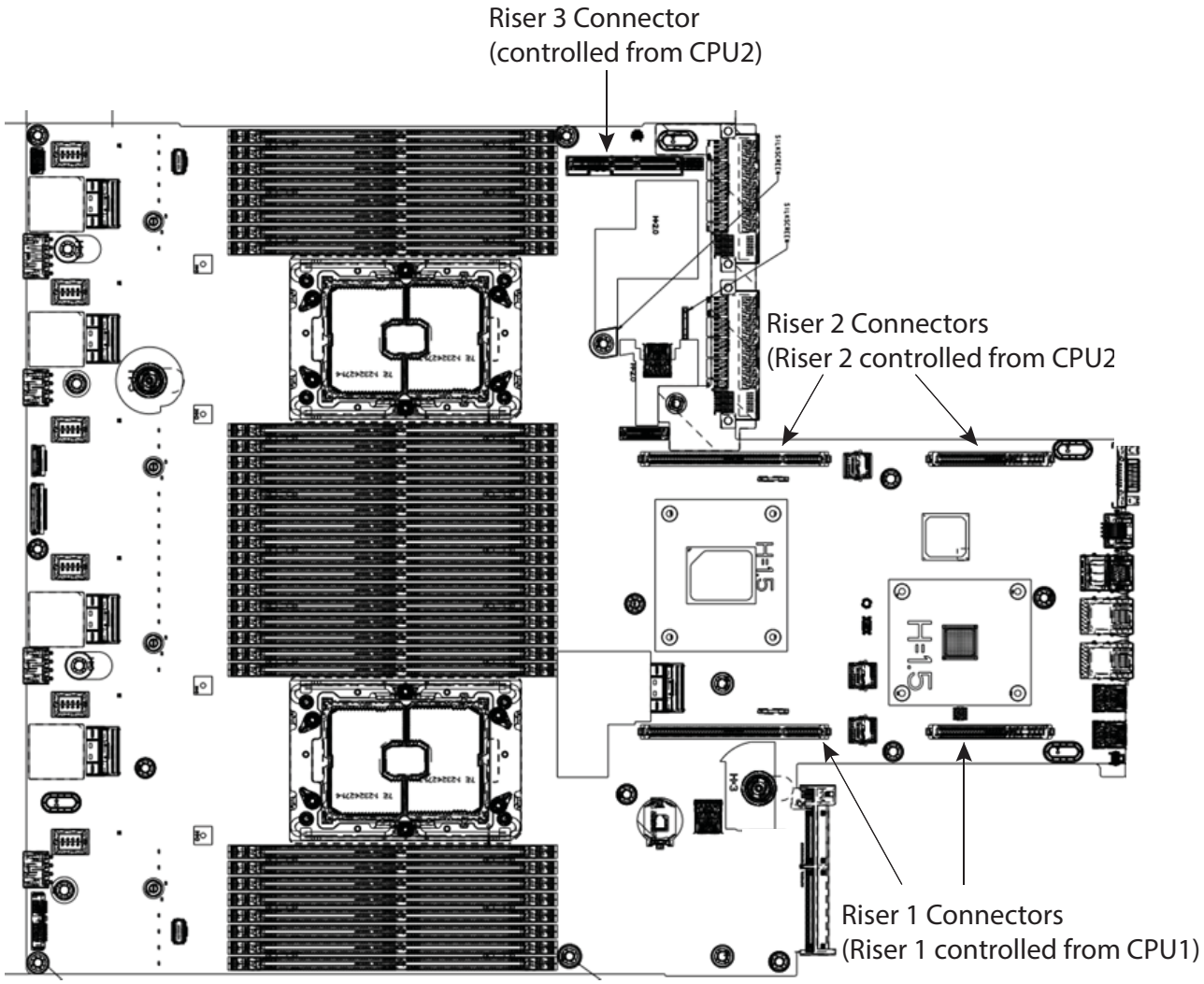
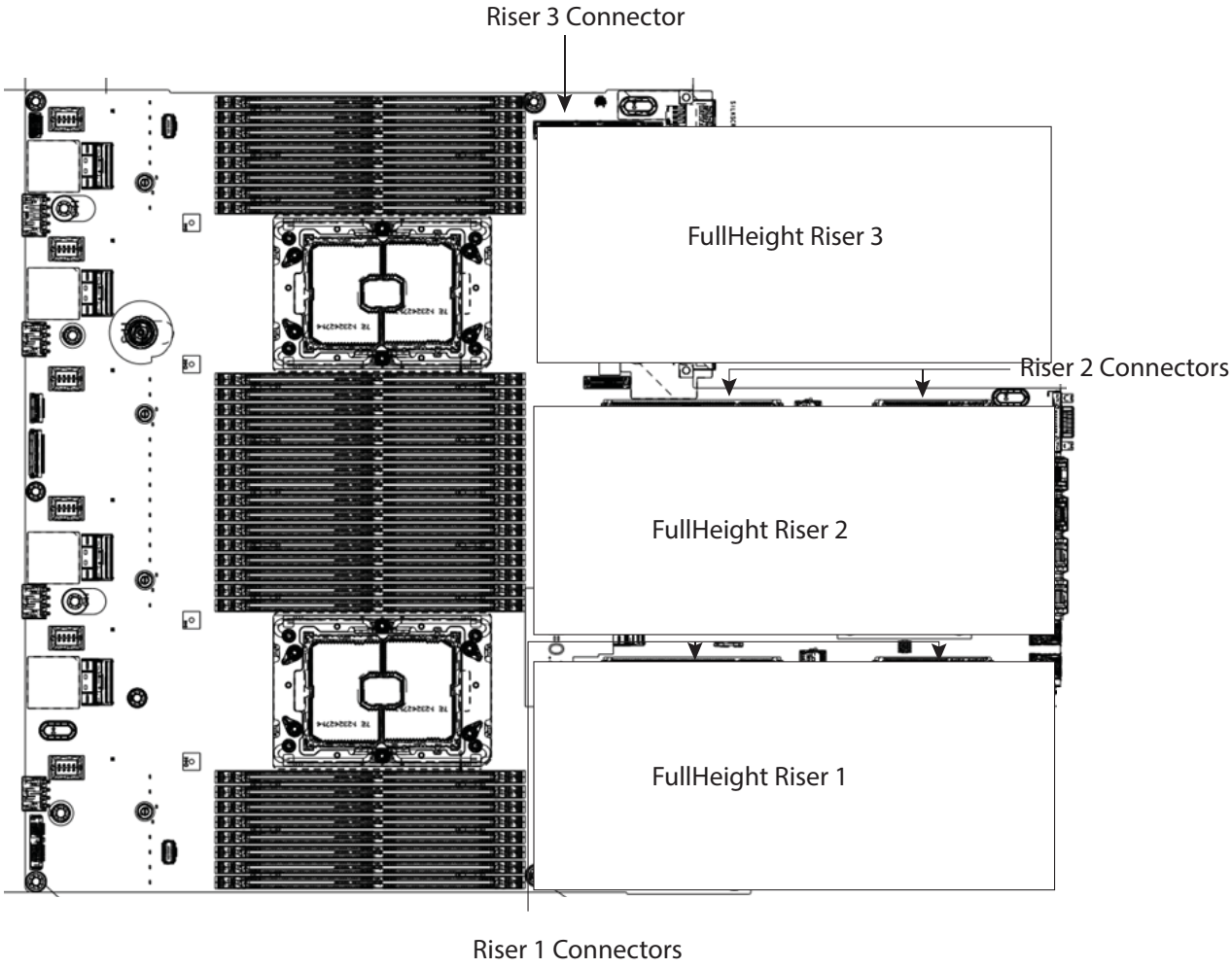


*Figure 10* shows the locations of the PCIe riser connectors on the C240 M6 LFF motherboard.

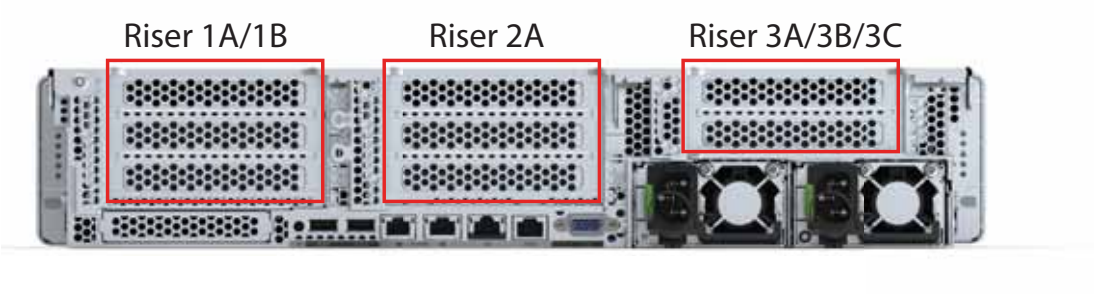
**Figure 10 C240 M6 LFF Riser Connector Locations**



## Riser Card Configuration and Options

The riser card locations are shown in ***Figure 11***. Only risers 1B, 2A, and 3B are supported.

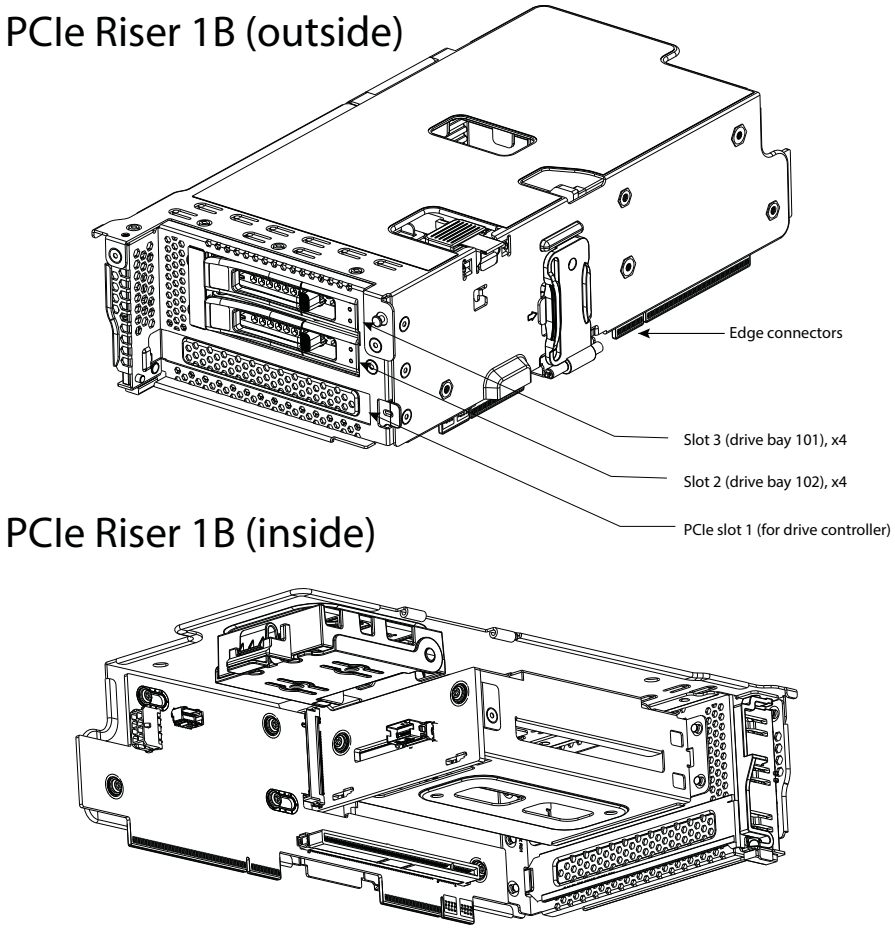
**Figure 11 Riser Card Locations**




### Riser 1B

Riser 1B mechanical information is shown in ***Figure 12***.

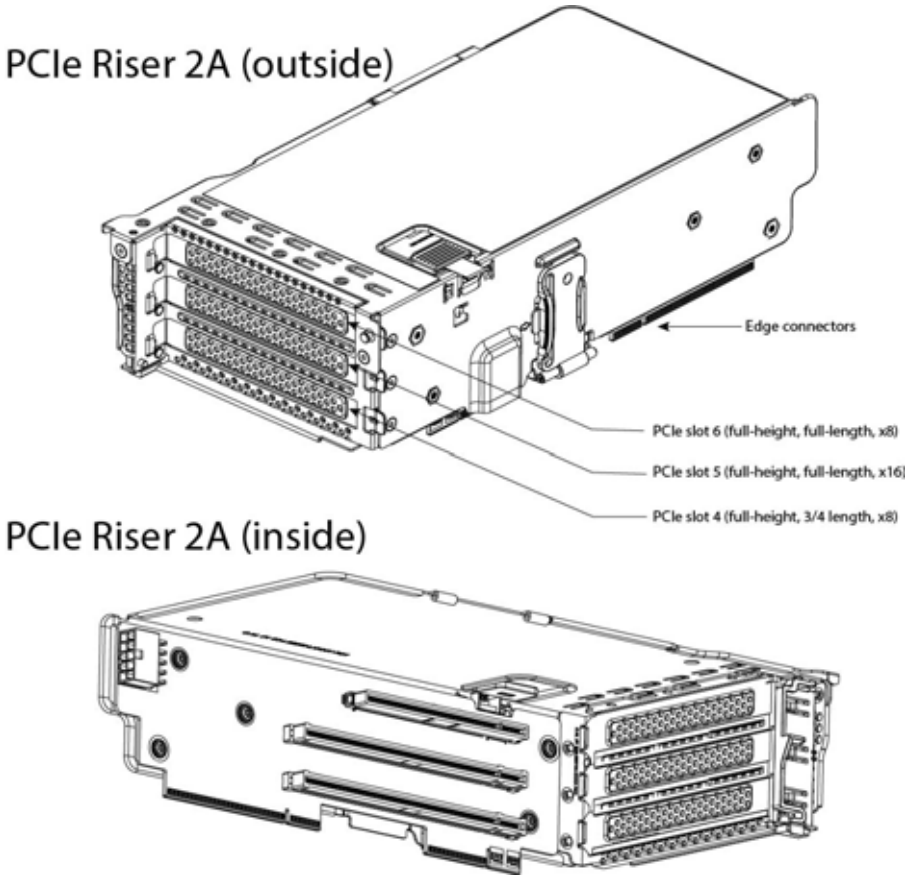
**Figure 12 Riser Card 1B**



## Riser 2A

Riser 2A mechanical information is shown in ***Figure 13***.

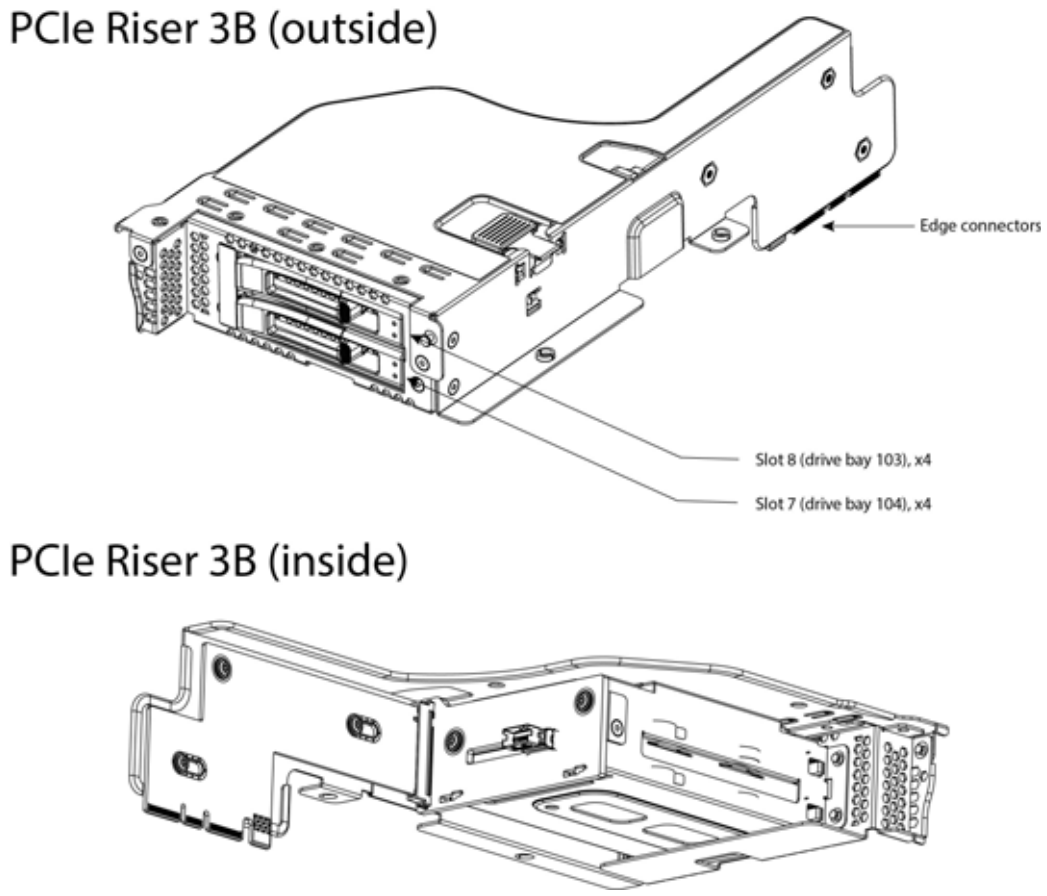
**Figure 13 Riser Card 2A**



## Riser 3B

Riser 3B mechanical information is shown in ***Figure 14***.

**Figure 14 Riser Card 3B**



# Memory Support for 3rd Generation Intel® Xeon® Scalable Processors (Ice Lake)

## PMem Support

The Ice Lake CPUs support two memory modes:

- App Direct Mode
- Memory Mode

## App Direct Mode

PMem operates as a solid-state disk storage device. Data is saved and is non-volatile. Both DCPMM and DIMM capacities count towards the CPU capacity limit.

For example, if App Direct mode is configured and the DIMM sockets for a CPU are populated with 8 x 128 GB DRAMs (1 TB total DRAM) and 8 x 512 GB PMem (4 TB total PMem), then 5 TB total counts towards the CPU capacity limit. Follow the Intel recommended DRAM:PMem ratio for App Direct Mode.

## Memory Mode

PMem operates as a 100% memory module. Data is volatile and DRAM acts as a cache for PMem. Only the PMem capacity counts towards the CPU capacity limit. This is the factory default mode.

For example, if Memory mode is configured and the DIMM sockets for a CPU are populated with 8 x 128 GB DRAMs (1 TB total DRAM) and 8 x 512 GB PMem (4 TB total PMem), then only 4 TB total (the PMem memory) counts towards the CPU capacity limit. All of the DRAM capacity (1 TB) is used as cache and does not factor into CPU capacity. The recommended Intel DRAM:PMem ratio for Memory Mode is 1:4, 1:8, or 1:16

For 3rd Generation Intel® Xeon® Scalable Processors (Ice Lake):

- DRAMs and PMem are supported
- Each CPU has 16 DIMM sockets and supports the following maximum memory capacities:
  - 2 TB using 16 x 128 GB DRAMs, or
  - 5 TB using 8 x 128 GB DRAMs and 8 x 512 GB Intel® Optane™ Persistent Memory Modules (PMem)

Only the following mixed DRAM/PMem memory configurations are supported per CPU socket:

- 4 DRAMs and 4 PMem, or 8 DRAMs and 4 PMem, or 8 DRAMs and 1 PMem, or 8 DRAMs and 8 PMem

The available DRAM capacities are 32 GB, 64 GB, or 128 GB

The available PMem capacities are 128 GB, 256 GB, or 512 GB

For further details see the following link:

**https://www.cisco.com/c/dam/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/memory-guide-c220-c240-b200-m6.pdf**

# SPARE PARTS

This section lists the upgrade and service-related parts for the UCS C240 M6 server. Some of these parts are configured with every server.

**NOTE:** Some spare parts you order may also require accessories for full functionality. For example, drives or RAID controllers may need accompanying cables. CPUs may need heatsinks, thermal paste, and installation tools. The spares and their accessory parts are listed in ***Table 40***.

**Table 40 Spare Parts**

| Product ID (PID) | PID Description |
|---|---|
| **KVM Cable** | |
| N20-BKVM= | KVM local IO cable for UCS servers console port |
| **Risers** | |
| UCSC-RIS1B-240M6= | C240 M6 Riser1B; 2xHDD/SSD; StBkt; (CPU1) |
| UCSC-RIS2A-240M6= | C240 M6 Riser2A; (x8;x16;x8);StBkt; (CPU2) |
| UCSC-RIS3B-240M6= | C240 M6 Riser 3B; 2xHDD; StBkt; (CPU2) |
| UCSC-FBRS2-C240M6= | C240M6 2U Riser2 Filler Blank |
| UCSC-FBRS3-C240M6= | C240M6 2U Riser3 Filler Blank |
| CBL-R3BS3-C240M6L<br>**Note:** This cable may required, if you order riser PID UCSC-RIS3B-240M6 and SAS/SATA rear drive and UCSC-SAS-240M6 or UCSC-RAID-C240M6 | CBL C240 M6L ZB, Raid to Rear BP (R1,R3) |
| **CPUs**<br>**Note:** If you are ordering a second CPU, see the **CPU Accessories** section in this table for additional parts you may need to order for the second CPU. | |
| **8000 Series Processors** | |
| UCS-CPU-I8380= | |
| UCS-CPU-I8362= | |
| UCS-CPU-I8360Y= | |
| UCS-CPU-I8358= | |
| UCS-CPU-I8352Y= | |
| UCS-CPU-I8352V= | |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCS-CPU-I8351N[1]= | |
| **6000 Series Processors** | |
| UCS-CPU-I6348= | |
| UCS-CPU-I6346= | |
| UCS-CPU-I6342= | |
| UCS-CPU-I6338N= | |
| UCS-CPU-I6338T= | |
| UCS-CPU-I6338= | |
| UCS-CPU-I6336Y= | |
| UCS-CPU-I6334= | |
| UCS-CPU-I6330N= | |
| UCS-CPU-I6330= | |
| UCS-CPU-I6326= | |
| UCS-CPU-I6314U=[2] | |
| UCS-CPU-I6312U[3]= | |
| **5000 Series Processors** | |
| UCS-CPU-I5320T= | |
| UCS-CPU-I5320= | |
| UCS-CPU-I5318N= | |
| UCS-CPU-I5318Y= | |
| UCS-CPU-I5317= | |
| **4000 Series Processors** | |
| UCS-CPU-I4316= | |
| UCS-CPU-I4314= | |
| UCS-CPU-I4310T= | |
| UCS-CPU-I4310= | |
| UCS-CPU-I4309Y= | |
| **CPU Accessories** | |
| UCS-CPU-TIM=<br><br>**Note:** This part is included with the purchase of spare CPU.Can be ordered separately. | Single CPU thermal interface material syringe for M5 server HS seal[4] |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCS-M6-CPU-CAR=<br><br>**Note:** This part is included with the purchase of spare CPU.Can be ordered separately. | Spare CPU Carrier for M6 |
| UCSX-HSCK=<br><br>**Note:** This part is included with the purchase of spare CPU.Can be ordered separately. | UCS CPU/Heatsink Cleaning Kit, for up to 4 CPU/heatsink sets |
| UCS-CPUAT=<br><br>**Note:** This part is included with the purchase of spare CPU.Can be ordered separately. | CPU Assembly Tool for Servers |
| UCSC-HSHP-240M6=<br><br>**Note:** Order this Heatsink, if you are adding additional CPU/spare CPU | Heatsink for 2U SFF M6 PCIe SKU |
| UCSC-FAN-C240M6= | C240M6 2U Fan |
| **Memory** | |
| **3200-MHz DIMMs** | |
| UCS-MR-X16G1RW= | 16 GB RDIMM SRx4 3200 (8Gb) |
| UCS-MR-X32G2RW= | 32 GB RDIMM DRx4 3200 (8Gb) |
| UCS-MR-X32G1RW= | 32 GB RDIMM SRx4 3200 (16Gb |
| UCS-MR-X64G2RW= | 64 GB RDIMM DRx4 3200 (16Gb) |
| UCS-ML-128G4RW= | 128 GB LRDIMM QRx4 3200 (16Gb) |
| **Intel® Optane™ Persistent Memory (PMem)** | |
| UCS-MP-128GS-B0= | Intel® Optane™ Persistent Memory, 128GB, 3200 MHz |
| UCS-MP-256GS-B0= | Intel® Optane™ Persistent Memory, 256 GB, 3200 MHz |
| UCS-MP-512GS-B0= | Intel® Optane™ Persistent Memory, 512 GB, 3200 MHz |
| **DIMM Blank** | |
| UCS-DIMM-BLK= | UCS DIMM Blank |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| **FRONT DRIVES**<br><br>**Note:** When ordering additional SAS/SATA or NVMe front drives, you may need to order a cable to connect from the drive to the motherboard. See the **Front Drive Cables** section in this table. | |
| UCS-HD2T7KL12N= | 2 TB 12G SAS 7.2K RPM LFF HDD |
| UCS-HD4T7KL12N= | 4 TB 12G SAS 7.2K RPM LFF HDD |
| UCS-HD6T7KL4KN[5]= | 6 TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD8T7K4KAN= | 8 TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD10T7K4KAN= | 10 TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD12T7KL4KN= | 12 TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD14TT7KL4KN= | 14 TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD16T7KL4KN= | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD16TW7KL4KN= | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD18TW7KL4KN= | 18 TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD22TW7KL4KN= | 22TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD20TW7KL4KN= | 20TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD20TT7KL4KN = | 20TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HDL24TW1S74K6= | 24TB 3.5in 12G SAS 7.2K RPM 4K Front Load WD HDD |
| **Self-Encrypted Drives (SEDs)** | |
| UCS-HD4T12GNK9= | 4 TB 7.2k RPM LFF HDD (SED) |
| UCS-HD6T12GANK9= | 6 TB 7.2k RPM LFF HDD (4K format, SED) |
| UCS-HD12T7KL4NK9= | 12 TB 7.2k RPM LFF HDD (4K format SED) |
| UCS-HD18T7KL4KN9 = | 18TB 12G SAS 7.2K RPM LFF HDD (4K) (SED-FIPS) [Front load PID] |
| **Front Drive Cables** | |
| **MIDPLANE DRIVES**<br><br>**Note:** When ordering additional SAS/SATA midplane drives, you may need to order a cable to connect from the drive to the motherboard. See the **Midplane Drive Cables** section in this table. | |
| **HDDs (7.2K RPM)** | |
| UCS-HD4T7KL12M= | 4 TB 12G SAS 7.2K RPM LFF HDD |
| UCS-HD6T7KL4KM= | 6TB 12G SAS 7.2K RPM LFF HDD (4K) |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCS-HD8T7K4KAM= | 8 TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD12T7KL4KM= | 12 TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD12T7KL4MK9= | 12 TB 7.2k RPM SAS LFF HDD (4K format, **SED**) |
| UCS-HD16T7KL4KM= | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD18TW7KL4KM= | 18TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD16TW7KL4KM= | 16 TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD10T7K4KAM= | 10TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD14TT7KL4KM= | 14TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD18T7KL4KM9= | 12G SAS 7.2K RPM LFF HDD (4K) (SED-FIPS) [Top load or mid-plane PID] |
| UCS-HD22TW7KL4KM= | 22TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD20TW7KL4KM= | 20TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD20TT7KL4KM = | 20TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HD14TW7KL4KM= | 14TB 4Kn SAS He14 7200RPM LFF HDD ISE |
| UCS-HD8TT7K4KAM= | 8TB 12G SAS 7.2K RPM LFF HDD (4K) |
| UCS-HD18TS7KL4KM= | 18TB 12G SAS 7.2K RPM LFF HDD(4K) |
| UCS-HDM24TW1S74K6= | 24TB 3.5in 12G SAS 7.2K RPM 4K Top Load WD HDD |
| **Midplane Drive Cables (no cables required)** | |
| **REAR DRIVES**<br><br>**Note:** When ordering additional SAS/SATA or NVMe rear drives, you may need to order a cable to connect from the drive to the motherboard. See the **Rear Drive Cables** section in this table. | |
| **SAS/SATA HDDs** | |
| UCS-HD900G15K12N= | 900 GB 12G SAS 15K RPM SFF HDD |
| UCS-HD300G15K12N= | 300 GB 12G SAS 15K RPM SFF HDD |
| UCS-HD600G15K12N= | 600 GB 12G SAS 15K RPM SFF HDD |
| UCS-HD300G10K12N= | 300 GB 12G SAS 10K RPM SFF HDD |
| UCS-HD600G10K12N= | 600 GB 12G SAS 10K RPM SFF HDD |
| UCS-HD12TB10K12N= | 1.2 TB 12G SAS 10K RPM SFF HDD |
| UCS-HD18TB10K4KN[6]= | 1.8 TB 12G SAS 10K RPM SFF HDD (4K) |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCS-HD24TB10K4KN= | 2.4 TB 12G SAS 10K RPM SFF HDD (4K) |
| **SAS/SATA SSD Enterprise Performance** | |
| UCS-SD19T63X-EP= | 1.9 TB 2.5in Enterprise performance 6G SATA SSD(3X endurance) |
| UCS-SD480G63X-EP= | 480 GB 2.5in Enterprise Performance 6G SATA SSD(3X endurance) |
| UCS-SD19TBM3X-EP= | 1.9TB 2.5in Enterprise performance 6GSATA SSD(3X endurance) |
| UCS-SD960GBM3X-EP= | 960GB 2.5in Enterprise performance 6GSATA SSD(3X endurance) |
| UCS-SD480GBM3X-EP= | 480GB 2.5in Enterprise Performance 6GSATA SSD(3X endurance) |
| UCS-SD32TKA3X-EP= | 3.2TB 2.5in Enter Perf 12G SAS Kioxia G2 SSD (3X) |
| UCS-SD16TKA3X-EP= | 1.6TB 2.5in Enterprise Performance 12G SAS SSD(3X endurance) |
| UCS-SDB960OA1PM6= | 960GB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD |
| UCS-SDB3T8OA1PM6= | 3.8TB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD |
| UCS-SDB480OA1PM6= | 480GB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD |
| UCS-SDB1T9OA1PM6= | 1.9TB 2.5in 15mm Solidigm S4620 Enter Perf 6G SATA 3X SSD |
| **SAS/SATA SSD Enterprise Value** | |
| UCS-SD960G6I1X-EV= | 960 GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD480G6I1X-EV= | 480 GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD960G6S1X-EV= | 960GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD240GBM1X-EV= | 240GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD480GBM1X-EV= | 480 GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD19TBM1X-EV= | 1.9TB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD76TBM1X-EV= | 7.6TB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD38TBM1X-EV= | 3.8TB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD19TBM1X-EV= | 1.9TB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD16TBM1X-EV= | 1.6TB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD960GBM1X-EV= | 960GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD480GBM1X-EV= | 480GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SD240GBM1X-EV= | 240GB 2.5 inch Enterprise Value 6G SATA SSD |
| UCS-SDB960SA1V= | 960GB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD |
| UCS-SDB1T9SA1V= | 1.9TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD |
| UCS-SDB3T8SA1V= | 3.8TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD |
| UCS-SDB7T6SA1V= | 7.6TB 2.5in 6G SATA Enter Value 1X Samsung G1PM893A SSD |
| UCS-SDB480OA1VM6= | 480GB 2.5in 15mm Solidigm S4520 Enter Value 6G SATA 1X SSD |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCS-SDB960OA1VM6= | 960GB 2.5in 15mm Solidigm S4520 Enter Value 6G SATA 1X SSD |
| UCS-SD15TKA1X-EV= | 15.3TB 2.5in Enter Value 12G SAS Kioxia G2 SSD |
| UCS-SD76TKA1X-EV= | 7.6TB 2.5 inch Enterprise Value 12G SAS SSD |
| UCS-SD38TKA1X-EV= | 3.8TB 2.5 inch Enterprise Value 12G SAS SSD |
| UCS-SD19TKA1X-EV= | 1.9TB 2.5 inch Enterprise Value 12G SAS SSD |
| UCS-SD38TS1X-EV= | 3.8TB 2.5in Enter Value 12G SAS Seagate SSD |
| **Self-Encrypted Drives (SEDs)** | |
| UCS-HD24T10NK9= | 2.4TB 10k rpm 4k SED HDD |
| UCS-HD18T10NK9= | 1.8TB 12G SAS 10K RPM SFF HDD (4K format, SED) |
| UCS-HD12T10NK9= | 1.2TB 12G SAS 10K RPM SFF HDD (SED-FIPS) |
| UCS-HD600G15NK9= | 600GB 12G SAS 15K RPM SFF HDD (SED) |
| UCS-SD800GBKNK9= | 800GB Enterprise Performance SAS SSD (3X DWPD, SED) |
| UCS-SD960GBKNK9= | 960GB Enterprise Value SAS SSD (1X DWPD, SED) |
| UCS-SD76TEM2NK9= | 7.6TB Enterprise value SATA SSD (1X, SED) |
| UCS-SD960GM2NK9= | 960GB Enterprise value SATA SSD (1X , SED) |
| UCS-SD76TBKANK9= | 7.6TB Enterprise value SAS SSD (1 DWPD, SED-FIPS) |
| UCS-SD38TBKANK9= | 3.8TB 2.5in Enterprise value 12G SAS SSD (1DWPD, SED-FIPS) |
| UCS-SD16TBKANK9= | 1.6TB 2.5in Enter Perf 12G SAS Kioxia G2 SSD (3X SED-FIPS) |
| **PCIe/NVMe 2.5-in SFF[7]** | |
| UCS-NVMEXP-I400= | 400GB 2.5in U.2 Intel P5800X Optane NVMe Extreme Perform SSD |
| UCS-NVMEXP-I800= | 800GB 2.5in U.2Intel P5800X Optane NVMe Extreme Perform SSD |
| UCS-NVME4-1920= | 1.9TB 2.5in U.2 15mm P5520 Hg Perf Med End NVMe |
| UCS-NVME4-6400= | 6.4TB 2.5in U.2 15mm P5620 Hg Perf Hg End NVMe (3X) |
| UCS-NVMEM6-W3200= | 3.2TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance |
| UCS-NVMEM6-W15300= | 15.3TB 2.5in U.2 WD SN840 NVMe Extreme Perf. Value Endurance |
| UCS-NVB1T6O1PM6= | 1.6TB 2.5in U.2 15mm Solidigm P5620 Hg Perf Hg End 3X NVMe |
| UCS-NVB3T8O1VM6= | 3.8TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe |
| UCS-NVB7T6O1VM6= | 7.6TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe |
| UCS-NVB15TO1VM6= | 15.3TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe |
| UCS-NVB3T2O1PM6= | 3.2TB 2.5in U.2 15mm Solidigm P5620 Hg Perf Hg End 3X NVMe |
| UCS-NVB6T4O1PM6= | 6.4TB 2.5in U.2 15mm Solidigm P5620 Hg Perf Hg End 3X NVMe |
| UCS-NVB1T9O1VM6= | 1.9TB 2.5in U.2 15mm Solidigm P5520 Hg Perf Med End 1X NVMe |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| **Rear Drive Cables** | |
| CBL-R3BS3-C240M6L<br><br>**Note:** This cable may needed if there are any rear NVMe drives | CBL C240 M6L ZB, Raid to Rear BP (R1,R3) |
| **M.2 SATA SSDs** | |
| UCS-M2-I240GB= | 240GB SATA M.2 SSD |
| UCS-M2-240G= | 240GB SATA M.2 |
| UCS-M2-480G= | 480GB M.2 SATA SSD |
| UCS-M2-960G= | 960GB SATA M.2 |
| UCSC-M2EXT-240M6=<br><br>**Note:** When ordering M.2 SATA SSDs spare, you may need to order M.2 Extender board. | C240M6 2U M.2 Extender board |
| **Drive Blanking Panel** | |
| UCSC-BBLKD-S2 | C-Series M5 SFF drive blanking panel |
| UCSC-BBLKD-L2 | C-Series M5 LFF drive blanking panel |
| **RAID Controller** | |
| UCSC-SAS-M6HD= | Cisco M6 12G SAS HBA (32 drives) |
| UCSC-RAID-M6HD= | M6 RAID controller; 32 ports; 4G Mem, w SC+cable |
| **RAID Controller Accessories** | |
| UCS-SCAP-M6= | M6 Supercap for write cache backup |
| CBL-SCAP-C240M6= | C240M6 Super Cap cable |
| **PCIe Cards** | |
| **Modular LAN on Motherboard (mLOM)** | |
| UCSC-M-V25-04= | Cisco UCS VIC 1467 quad port 10/25G SFP28 mLOM |
| UCSC-M-V100-04= | Cisco UCS VIC 1477 dual port 40/100G QSFP28 mLOM |
| UCSC-M-V5Q50G= | Cisco UCS VIC 15428 quad port 10/25/50G MLOM |
| **OCP** | |
| UCSC-O-N6CD100GF= | Cisco-NVDA MCX623436AC-CDAB CX6Dx 2x100G QSFP56 x16 OCP NIC |
| UCSC-O-N6CD25GF= | Cisco-NVDA MCX631432AC-ADAB CX6Lx 2x25G SFP28 x8 OCP NIC |
| **Virtual Interface Card (VICs)** | |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCSC-PCIE-C100-04= | Cisco UCS VIC 1495 Dual Port 40/100G QSFP28 CNA PCIe |
| UCSC-PCIE-C25Q-04= | Cisco UCS VIC 1455 quad port 10/25G SFP28 PCIe |
| **Network Interface Cards (NICs)** | |
| **1 Gb NICs** | |
| UCSC-PCIE-IRJ45= | Intel i350 quad-port 1G copper PCIe |
| **10 Gb NICs** | |
| UCSC-PCIE-ID10GF= | Intel X710-DA2 Dual Port 10Gb SFP+ NIC |
| UCSC-PCIE-IQ10GF= | Intel X710 quad-port 10G SFP+ NIC |
| UCSC-P-ID10GC= | Cisco-Intel X710T2LG 2x10 GbE RJ45 PCIe NIC |
| UCSC-P-IQ10GC= | Cisco-Intel X710T4LG 4x10 GbE RJ45 PCIe NIC |
| **25 Gb NICs** | |
| UCSC-P-I8D25GF= | Cisco-Intel E810XXVDA2 2x25/10 GbE SFP28 PCIe NIC |
| UCSC-P-M5D25GF= | Mellanox MCX512A-ACAT dual port 10/25G SFP28 NIC |
| UCSC-P-I8Q25GF= | Cisco-Intel E810XXVDA4L 4x25/10 GbE SFP28 PCIe NIC |
| UCSC-P-N6D25GF= | Cisco-NVDA MCX631102AS-ADAT CX6Lx 2x25GbE SFP28 x8 PCIe NIC |
| **100 Gb NICs** | |
| UCSC-P-M5D100GF= | Mellanox CX-5 MCX516A-CDAT 2x100GbE QSFP PCIe NIC |
| UCSC-P-M6CD100GF= | Cisco-MLNX MCX623106AC-CDAT 2x100GbE QSFP56 PCIe NIC (with Crypto) |
| UCSC-P-M6DD100GF= | Cisco-MLNX MCX623106AS-CDAT 2x100GbE QSFP56 PCIe NIC |
| UCSC-P-I8D100GF= | Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC |
| **Host Bus Adapters (HBAs)** | |
| UCSC-P-Q6D32GF= | Cisco-QLogic QLE2772 2x32GFC Gen 6 Enhanced PCIe HBA |
| UCSC-P-B7D32GF= | Cisco-Emulex LPe35002-M2-2x32GFC Gen 7 PCIe HBA |
| UCSC-PCIE-QD16GF= | Qlogic QLE2692 dual-port 16G FC HBA |
| UCSC-PCIE-BD16GF= | Emulex LPe31002 dual port 16G FC HBA |
| **External Storage HBA** | |
| UCSC-9500-8E= | 9500 Series PCIe Gen 4.0 Tri-Mode Storage HBA 12Gb/s SAS/SATA/PCIe (NVMe) |
| **GPU PCIe Cards** | |
|  **Note:** If you are adding a GPU, you may need to add cables for the GPU. You may also need to order special heatsinks and air baffle. See the GPU accessories section of this table. | |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCSC-GPU-A10= | TESLA A10, PASSIVE, 150W, 24GB |
| UCSC-GPU-L4M6= | NVIDIA L4, 70W, 24GB, 1-slot HHHL GPU |
| **GPU Accessories** | |
| UCS-M10CBL-C240M5=<br><br>**Note:** Order this cable if you are adding an M10 or A10 GPU | C240M5 NVIDIA A10 Cable |
| UCS-P100CBL-240M5=<br><br>**Note:** Order this cable if you are adding an A10/A100-80/A16/A30 GPU | C240M5 NVIDIA P100 /RTX /A100/A40/A30 Cable |
| UCSC-HSLP-M6=<br><br>**Note:** Order two of these low-profile heatsinks if you are adding an A10/A100-80/A16/A30 GPU | Heatsink for 1U/2U LFF/SFF GPU SKU |
| UCSC-AD-M6LGPU=<br><br>**Note:** Order this air baffle if you are adding an A10 GPU | LFF SKU PCIe Air Duct for Double-Wide GPU and A10 GPU |
| **NVIDIA GPU Licenses**<br><br>**Note:** Order the GPU licenses if are adding the NVDIA GPUs<br>• If you already have a NVDIA GPU and adding another one, or if you are replacing NVDIA GPUs, then existing license should be fine.<br>• if you don't have a GPU already installed, and you are adding the first one or two, you may need to order the license. | |
| NV-VCS-1YR= | NVIDIA vCompute Server Subscription - 1 GPU - 1 Year |
| NV-VCS-3YR= | NVIDIA vCompute Server Subscription - 1 GPU - 3 Year |
| NV-VCS-5YR= | NVIDIA vCompute Server Subscription - 1 GPU - 5 Year |
| NV-VCS-R-1Y= | Renew NVIDIA vCompute Server Subscription - 1 GPU - 1 Year |
| NV-VCS-R-3Y= | Renew NVIDIA vCompute Server Subscription - 1 GPU - 3 Year |
| NV-VCS-R-5Y= | Renew NVIDIA vCompute Server Subscription - 1 GPU - 5 Year |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| NV-GRDWK-1-5S= | Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 5Yr SUMS Req |
| NV-GRDVA-1-5S= | GRID Perpetual Lic - NVIDIA VDI APPs 1CCU; 5Yr SUMS Reqd |
| NV-GRDPC-1-5S= | GRID Perpetual Lic - NVIDIA VDI PC 1CCU; 5Yr SUMS Reqd |
| NV-GRD-EDP-5S= | EDU - Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 5Yr SUMS Reqd |
| NV-GRID-WKP-5YR= | NVIDIA Quadro Production SUMS - vDWS 1CCU - 5 Year |
| NV-GRID-VAP-5YR= | NVIDIA GRID Production SUMS - VDI Apps 1CCU - 5 Year |
| NV-GRID-PCP-5YR= | NVIDIA GRID Production SUMS - VDI PC 1CCU - 5 Year |
| NV-GRID-EDP-5YR= | EDU - NVIDIA Quadro vDWS Production SUMS - 1CCU - 5 Year |
| NV-GRID-WKS-1YR= | NVIDIA Quadro SW Subscription - vDWS 1CCU - 1 Year |
| NV-GRID-WKS-3YR= | NVIDIA Quadro SW Subscription - vDWS 1CCU - 3 Year |
| NV-GRID-WKS-4YR= | NVIDIA Quadro SW Subscription - vDWS 1CCU - 4 Year |
| NV-GRID-WKS-5YR= | NVIDIA Quadro SW Subscription - vDWS 1CCU - 5 Year |
| NV-GRID-PCS-1YR= | NVIDIA GRID Software Subscription - VDI PC 1CCU - 1 Year |
| NV-GRID-PCS-3YR= | NVIDIA GRID Software Subscription - VDI PC 1CCU - 3 Year |
| NV-GRID-PCS-4YR= | NVIDIA GRID Software Subscription - VDI PC 1CCU - 4 Year |
| NV-GRID-PCS-5YR= | NVIDIA GRID Software Subscription - VDI PC 1CCU - 5 Year |
| NV-GRID-VAS-1YR= | NVIDIA GRID Software Subscription - VDI Apps 1CCU - 1 Year |
| NV-GRID-VAS-3YR= | NVIDIA GRID Software Subscription - VDI Apps 1CCU - 3 Year |
| NV-GRID-VAS-4YR= | NVIDIA GRID Software Subscription - VDI Apps 1CCU - 4 Year |
| NV-GRID-VAS-5YR= | NVIDIA GRID Software Subscription - VDI Apps 1CCU - 5 Year |
| NV-GRID-EDS-1YR= | EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 1 Year |
| NV-GRID-EDS-3YR= | EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 3 Year |
| NV-GRID-EDS-4YR= | EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 4 Year |
| NV-GRID-EDS-5YR= | EDU - NVIDIA Quadro vDWS SW Subscription - 1CCU - 5 Year |
| NV-GRID-VAP-R-4Y= | Renew NVIDIA GRID vApps SUMS 1CCU 4 Year |
| NV-GRID-PCP-R-4Y= | Renew NVIDIA GRID vPC SUMS 1CCU 4 Year |
| NV-QUAD-WKP-R-4Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU 4 Year |
| NV-QUAD-WKPE-R-4Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 4 Year |
| NV-QUAD-WKS-R-1Y= | Renew NVIDIA Quadro vDWS Subscr 1CCU 1 Year |
| NV-QUAD-WKS-R-3Y= | Renew NVIDIA Quadro vDWS Subscr 1CCU 3 Year |
| NV-QUAD-WKS-R-4Y= | Renew NVIDIA Quadro vDWS Subscr 1CCU 4 Year |
| NV-QUAD-WKS-R-5Y= | Renew NVIDIA Quadro vDWS Subscr 1CCU 5 Year |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| NV-QUAD-WKSE-R-1Y= | Renew NVIDIA Quadro vDWS Subscr 1CCU EDU 1 Year |
| NV-QUAD-WKSE-R-3Y= | Renew NVIDIA Quadro vDWS Subscr 1CCU EDU 3 Year |
| NV-QUAD-WKSE-R-4Y= | Renew NVIDIA Quadro vDWS Subscr 1CCU EDU 4 Year |
| NV-GRID-VAS-R-1Y= | Renew NVIDIA GRID vApps Subscr 1CCU 1 Year |
| NV-GRID-VAS-R-3Y= | Renew NVIDIA GRID vApps Subscr 1CCU 3 Year |
| NV-GRID-VAS-R-4Y= | Renew NVIDIA GRID vApps Subscr 1CCU 4 Year |
| NV-GRID-VAS-R-5Y= | Renew NVIDIA GRID vApps Subscr 1CCU 5 Year |
| NV-GRID-PCS-R-1Y= | Renew NVIDIA GRID vPC Subscr 1CCU 1 Year |
| NV-GRID-PCS-R-3Y= | Renew NVIDIA GRID vPC Subscr 1CCU 3 Year |
| NV-GRID-PCS-R-4Y= | Renew NVIDIA GRID vPC Subscr 1CCU 4 Year |
| NV-GRID-PCS-R-5Y= | Renew NVIDIA GRID vPC Subscr 1CCU 5 Year |
| NV-QUAD-WKP-R-1Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU 1 Year |
| NV-QUAD-WKP-R-3Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU 3 Year |
| NV-QUAD-WKP-R-5Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU 5 Year |
| NV-QUAD-WKPE-R-1Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 1 Year |
| NV-QUAD-WKPE-R-3Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 3 Year |
| NV-QUAD-WKPE-R-5Y= | Renew NVIDIA Quadro vDWS SUMS 1CCU EDU 5 Year |
| NV-GRID-VAP-R-1Y= | Renew NVIDIA GRID vApps SUMS 1CCU 1 Year |
| NV-GRID-VAP-R-3Y= | Renew NVIDIA GRID vApps SUMS 1CCU 3 Year |
| NV-GRID-VAP-R-5Y= | Renew NVIDIA GRID vApps SUMS 1CCU 5 Year |
| NV-GRID-PCP-R-1Y= | Renew NVIDIA GRID vPC SUMS 1CCU 1 Year |
| NV-GRID-PCP-R-3Y= | Renew NVIDIA GRID vPC SUMS 1CCU 3 Year |
| NV-GRID-PCP-R-5Y= | Renew NVIDIA GRID vPC SUMS 1CCU 5 Year |
| NV-GRD-VA2WKP-5S= | Upgrade NVIDIA VDI APPs to Quadro vDWS 1CCU; 5Yr SUMS Reqd |
| NV-GRD-VA2PCP-5S= | Upgrade NVIDIA VDI APPs to vPC 1CCU; 5Yr SUMS Reqd |
| NV-GRD-VA2WKPE-5S= | Upgrade NVIDIA VDI to Quadro vDWS 1CCU; 5Yr SUMS Reqd |
| NV-GRD-PC2WKP-5S= | Upgrade NVIDIA vPC to Quadro vDWS 1CCU; 5Yr SUMS Reqd |
| NV-GRD-PC2WKPE-5S= | Upgrade NVIDIA vPC to Quadro vDWS 1CCU; 5Yr SUMS Reqd |
| **Power Supply** | |
| **PSU (Input High Line 210VAC)** | |
| UCSC-PSU1-1050W= | UCS 1050W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSUV2-1050DC= | 1050W DC power supply for C-Series servers **Platinum** |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| UCSC-PSUV21050D6I= | 1050W -48V DC power supply for C-Series servers (India) Requires cable CAB-48DC-40A-8AWG |
| UCSC-PSU1-1200W= | 1200W Titanium power supply for C-Series Servers |
| UCSC-PSU1-1600W= | UCS 1600W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSU1-2300W[8]= | 2300W Power supply for C-series servers **Titanium** |
| **PSU (Input Low Line 110VAC)** | |
| UCSC-PSU1-1050W= | UCS 1050W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSUV2-1050DC= | 1050W DC power supply for C-Series servers **Platinum** |
| UCSC-PSUV21050D6I= | 1050W -48V DC power supply for C-Series servers (India) Requires cable CAB-48DC-40A-8AWG |
| UCSC-PSU1-1050ELV= | 1050W AC PSU Enhanced Low Line (Not EU/UK Lot 9 Compliant) **Platinum** |
| UCSC-PSU1-1200W= | 1200W Titanium power supply for C-Series Servers |
| UCSC-PSU1-1600W= | UCS 1600W AC PSU Platinum (Not EU/UK Lot 9 Compliant) |
| UCSC-PSU1-2300W= | 2300W Power supply for C-series servers **Titanium** |
| **Power Cables** | |
| NO-POWER-CORD= | ECO friendly green option, no power cable will be shipped |
| CAB-48DC-40A-8AWG= | C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A |
| CAB-48DC-40A-AS= | C-Series -48VDC PSU PWR Cord, 3.5M, 3Wire, 8AWG, 40A (AS/NZ) |
| CAB-C13-CBN = | Cabinet Jumper Power Cord, 250 VAC 10A, C14-C13 Connectors |
| CAB-C13-C14-AC= | Power cord, C13 to C14 (recessed receptacle), 10A |
| CAB-C19-CBN= | Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors AC |
| CAB-C13-C14-2M= | CABASY,WIRE,JUMPER CORD,PWR,2 Meter,C13/C14,10A/250V AC |
| CAB-250V-10A-AR= | AC Power Cord - 250V, 10A - Argentina |
| CAB-IR2073-C19-AR= | IRSM 2073 to IEC-C19 14ft Argen AC |
| CAB-9K10A-AU= | N5000 AC Power Cable, 10A, 250V, Australia, 2.5m |
| CAB-AC-16A-AUS= | Power Cord, 250VAC, 16A, Australia C19 |
| CAB-250V-10A-BR= | Power Cord - 250V, 10A - Brazil |
| UCSB-CABL-C19-BRZ= | NBR 14136 to C19 AC 14FT POWER CORD, BRAZIL |
| CAB-9K16A-BRZ = | Power Cord 250VAC 16A, Brazil, Src Plug EL224-C19 |
| CAB-AC16A-CH = | 16A AC Power Cord For China |
| CAB-250V-10A-CN= | AC Power Cord - 250V, 10A - PRC |
| CAB-C14C19-10A-EU= | Power Cord C14-C19 10A EU |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| CAB-9K10A-EU= | N5000 AC Power Cable, 10A, 250V, Europe, 2.5m |
| CAB-AC-2500W-EU= | Power Cord, 250Vac 16A, Europe |
| CAB-250V-10A-ID= | AC Power Cord - 250V, 10A , India |
| CAB-C13-C14-3M-IN= | Power Cord Jumper, C13-C14 Connectors, 3 Meter Length, India |
| CAB-C13-C14-IN= | Power Cord Jumper,C13-C14 Connectors,1.4 Meter Length, India |
| CAB-SABS-C19-IND= | SABS 164-1 to IEC-C19 India |
| CAB-C19-C20-IND= | Power Cord C19-C20 India |
| CAB-250V-10A-ID= | AC Power Cord - 250V, 10A , India |
| CAB-48DC-40A-INT= | C-Series -48VDC PSU PWR Cord, 3.5M, 3 Wire, 8AWG, 40A (INT) |
| CAB-AC-2500W-INT = | Power Cord, 250Vac 16A, INTL |
| CAB-250V-10A-IS= | AC Power Cord - 250V, 10A - Israel |
| CAB-S132-C19-ISRL= | S132 to IEC-C19 14ft Israeli |
| CAB-AC-2500W-ISRL= | Power Cord,250VAC,16A,Israel |
| CAB-9K10A-IT= | N5000 AC Power Cable, 10A, 250V, Italy, 2.5m |
| CAB-C2316-C19-IT= | CEI 23-16 to IEC-C19 14ft Italy |
| CAB-C13-C14-2M-JP= | Power Cord C13-C14, 2M/6.5ft Japan PSE mark |
| CAB-JPN-3PIN= | Japan, 90-125VAC 12A NEMA 5-15 Plug, 2.4m |
| CAB-C19-C20-3M-JP= | Power Cord C19-C20, 3M/10ft Japan PSE mark |
| CAB-9K10A-KOR= | Power Cord, 125VAC 13A KSC8305 Plug, Korea |
| CAB-9K16A-KOR = | Power Cord 250VAC 16A, Korea, Src Plug |
| CAB-9K12A-NA= | N5000 Power Cord, 125VAC 15A NEMA 5-15 Plug, North America, 2.5m |
| CAB-N5K6A-NA= | N5000 AC Power Cable, 6A, 250V, North America, 2.5m |
| CAB-AC-L620-C13= | AC Power Cord, NEMA L6-20 - C13, 2M/6.5ft |
| CAB-AC-C6K-TWLK= | Power Cord, 250Vac 16A, twist lock NEMA L6-20 plug, US |
| CAB-9K10A-SW= | N5000 AC Power Cable, 10A, 250V, Switzerland, 2.5m |
| CAB-ACS-16 = | AC Power Cord (Swiss) 16A |
| CAB-AC-C19-TW= | Power Cord, 250 V, 16A, C19, Taiwan |
| CAB-9K10A-UK= | N5000 AC Power Cable, 10A, 250V, United Kingdom, 2.5m |
| CAB-BS1363-C19-UK= | BS-1363 to IEC-C19 14ft UK |
| CAB-US515P-C19-US= | NEMA 5-15 to IEC-C19 13ft US |
| CAB-US520-C19-US= | NEMA 5-20 to IEC-C19 14ft US |
| CAB-US620P-C19-US= | NEMA 6-20 to IEC-C19 13ft US |

**Table 40 Spare Parts *(continued)***

| Product ID (PID) | PID Description |
|---|---|
| **Rail Kit** | |
| UCSC-RAIL-M6= | Ball Bearing Rail Kit for C220 and C240 M6 rack servers |
| UCSC-RAIL-NONE= | No rail kit option |
| **CMA** | |
| UCSC-CMA-240M6= | Reversible CMA for C240 M4 and M5 rack servers |
| **Security** | |
| UCSX-TPM-002C= | TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified, for M6 servers |
| UCS-TPM-002D= | TPM 2.0 TCG FIPS140-2 CC+ Cert M6 Intel MSW2022 Compliant |
| UCSC-INT-SW02= | C220 and C240 M6 Chassis Intrusion Switch |
| **Bezel** | |
| UCSC-BZL-C240M5= | C240 M5 Security Bezel |
| **Software/Firmware** | |
| **Windows Server Recovery Media** | |
| MSWS-19-ST16C-RM= | Windows Server 2019 Stan (16 Cores/2 VMs) Rec Media DVD Only |
| MSWS-19-DC16C-RM= | Windows Server 2019 DC (16Cores/Unlim VM) Rec Media DVD Only |
| MSWS-22-ST16C-RM= | Windows Server 2022 Stan (16 Cores/2 VMs) Rec Media DVD Only |
| MSWS-22-DC16C-RM= | Windows Server 2022 DC (16Cores/Unlim VM) Rec Media DVD Only |
| **RHEL SAP** | |
| RHEL-SAPSP-3S= | RHEL SAP Solutions Premium - 3 Years |
| RHEL-SAPSS-3S= | RHEL SAP Solutions Standard - 3 Years |
| RHEL-SAPSP-R-1S= | Renew RHEL SAP Solutions Premium - 1 Year |
| RHEL-SAPSS-R-1S= | Renew RHEL SAP Solutions Standard - 1 Year |
| RHEL-SAPSP-R-3S= | Renew RHEL SAP Solutions Premium - 3 Years |
| RHEL-SAPSS-R-3S= | Renew RHEL SAP Solutions Standard -3 Years |

**Notes:**

1. The maximum number of UCS-CPU-I8351N CPUs is one
2. The maximum number of UCS-CPU-I6314U CPUs is one
3. The maximum number of UCS-CPU-I6312U CPUs is one
4. This part is included with the purchase of option or spare CPU or CPU processor kits.

5. Operating Systems that support 4k sector size drives are as follows:
   - CentOS 7.9/8.2/8.3 (and later)
   - Windows Server 2016/2019 (and later)
   - Red Hat Enterprise Linux 7.9/8.2 (and later)
   - SUSE Linux Enterprise Server 15.2 (and later)
   - ESXi 6.7 U3/7.0 U2 (and later)
   - See this link for operating system guidance: https://ucshcltool.cloudapps.cisco.com/public/
   - UEFI Mode must be used when booting from 4K sector size drives (legacy mode is not supported).
   - Ensure that 4K sector size and 512 byte sector size drives are not mixed in the same RAID volume.
6. Operating Systems that support 4k sector size drives are as follows:
   - CentOS 7.9/8.2/8.3 (and later)
   - Windows Server 2016/2019 (and later)
   - Red Hat Enterprise Linux 7.9/8.2 (and later)
   - SUSE Linux Enterprise Server 15.2 (and later)
   - ESXi 6.7 U3/7.0 U1/7.0 U2 (and later)
   - See this link for operating system guidance: https://ucshcltool.cloudapps.cisco.com/public/
   - UEFI Mode must be used when booting from 4K sector size drives (legacy mode is not supported).
   - Ensure that 4K sector size and 512 byte sector size drives are not mixed in the same RAID volume.
7. Except HGST, Intel and Western Digital NVMe drives can be mixed.
8. The 2300 W power supply uses a different power connector that the rest of the power supplies, so you must use different power cables to connect it. See ***Table 18 on page 42*** and ***Table 19 on page 45***.

Please refer to “Cisco UCS C240 M6 Server Installation and Service Guide” for installation procedures. See this link:

**https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html**

# UPGRADING or REPLACING CPUs

**NOTE:** Before servicing any CPU, do the following:

- Decommission and power off the server.
- Slide the C220 M6 LFF server out from the rack.
- Remove the top cover.

**To replace an existing CPU, follow these steps:**

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

- T-30 Torx driver—Supplied with replacement CPU.
- #1 flat-head screwdriver—Supplied with replacement CPU.
- CPU assembly tool—Supplied with replacement CPU. Can be ordered separately as Cisco PID UCS-CPUAT=.
- Heatsink cleaning kit—Supplied with replacement CPU. Can be ordered separately as Cisco PID UCSX-HSCK=.
- Thermal interface material (TIM)—Syringe supplied with replacement CPU. Can be ordered separately as Cisco PID UCS-CPU-TIM=.

**(2) Order the appropriate replacement CPU from *Table 4 on page 13***

**(3) Carefully remove and replace the CPU and heatsink in accordance with the instructions found in "Cisco UCS C240 M6 Server Installation and Service Guide," found at:**

**https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html**

**To add a new CPU, follow these steps:**

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

- T-30 Torx driver—Supplied with new CPU.
- #1 flat-head screwdriver—Supplied with new CPU
- CPU assembly tool—Supplied with new CPU.Can be ordered separately as Cisco PID UCS-CPUAT=
- Thermal interface material (TIM)—Syringe supplied with replacement CPU.Can be ordered separately as Cisco PID UCS-CPU-TIM=

**(2) Order the appropriate new CPU from *Table 4 on page 13***

**(3) Order one heat sink for each new CPU.Order PID UCSC-HSLP-M6= for servers with GPUs.**

**(4) Carefully install the CPU and heatsink in accordance with the instructions found in "Cisco UCS C220 M6 Server Installation and Service Guide," found at:**

**https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html**

# UPGRADING or REPLACING MEMORY

**NOTE:** Before servicing any DIMM or PMem, do the following:

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

**To add or replace DIMMs or PMem, follow these steps:**

Step 1 Open both DIMM connector latches.

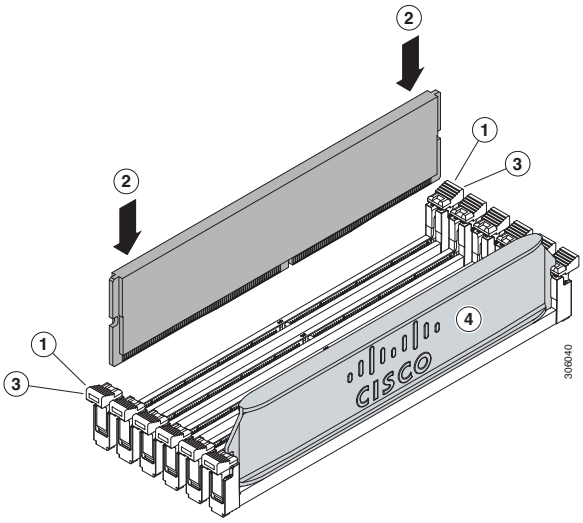
Step 2 Press evenly on both ends of the DIMM until it clicks into place in its slot

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

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

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

**Figure 15 Replacing Memory**




For additional details on replacing or upgrading DIMMs and PMem, see **"Cisco UCS C240 M6 Server Installation and Service Guide"** found at this link:

**https://www.cisco.com/content/en/us/td/docs/unified_computing/ucs/c/hw/c240m6/install/b-c240-m6-install-guide.html**

# 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 36 below to determine if still supported.

**Table 41 EOS**

| Product ID | Description | EOL/EOS link |
|---|---|---|
| **Software** | | |
| NV-GRDVA-1-4S | GRID Perpetual Lic - NVIDIA VDI APPs 1CCU; 4Yr SUMS Reqd | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| NV-GRDPC-1-4 | GRID Perpetual Lic - NVIDIA VDI PC 1CCU; 4Yr SUMS Reqd | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| NV-GRDWK-1-4S | Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 4Yr SUMS Req | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| NV-GRD-EDP-4S | EDU - Quadro Perpetual Lic - NVIDIA vDWS 1CCU; 4Yr SUMS Reqd | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| NV-GRID-VAP-4YR | NVIDIA GRID Production SUMS - VDI Apps 1CCU - 4 Year | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| NV-GRID-PCP-4YR | NVIDIA GRID Production SUMS - VDI PC 1CCU - 4 Year | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| NV-GRID-WKP-4YR | NVIDIA Quadro Production SUMS - vDWS 1CCU - 4 Year | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| NV-GRID-EDP-4YR | EDU - NVIDIA Quadro vDWS Production SUMS - 1CCU - 4 Year | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-commvault-veeam-vmware-nvdia-mapr-software-resell-eol.html |
| **Operating system** | | |
| SLES-2SUV-1A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 1-Yr Support Req | |
| SLES-2SUV-1S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 1-Yr SnS | |

**Table 41 EOS**

| | | |
|---|---|---|
| SLES-2SUV-3A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 3-Yr Support Req | |
| SLES-2SUV-3S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 3-Yr SnS | |
| SLES-2SUV-5A | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); 5-Yr Support Req | |
| SLES-2SUV-5S | SUSE Linux Enterprise Svr (1-2 CPU,Unl VM); Prio 5-Yr SnS | |
| SLES-SAP-2SUV-1A | SLES for SAP Apps w/ HA (1-2 CPU, Unl VM); 1-Yr Support Reqd | |
| SLES-SAP-2SUV-1S | SLES for SAP Apps (1-2 CPU, Unl VM); Priority 1-Yr SnS | |
| SLES-SAP-2SUV-3A | SLES for SAP Apps w/ HA (1-2 CPU, Unl VM); 3-Yr Support Reqd | |
| SLES-SAP-2SUV-3S | SLES for SAP Apps (1-2 CPU, Unl VM); Priority 3-Yr SnS | |
| SLES-SAP-2SUV-5A | SLES for SAP Apps w/ HA (1-2 CPU, Unl VM); 5-Yr Support Reqd | |
| SLES-SAP-2SUV-5S | SLES for SAP Apps (1-2 CPU, Unl VM); Priority 5-Yr SnS | |
| **Drives** | | |
| UCS-HD1T7KL12N | 1TB 12G SAS 7.2K RPM LFF HDD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hyperflex-accessories-eol.html |
| UCS-HD10T7KL4KN | 10 TB 12G SAS 7.2K RPM LFF HDD (4K) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hyperflex-accessories-eol.html |
| UCS-M2-240GB | 240GB M.2 SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-M2-960GB | 960GB M.2 SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-NVMEI4-I3840 | 3.8TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-access-eol-15074.html |
| UCS-NVMEI4-I7680 | 7.6TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-access-eol-15074.html |
| UCS-NVMEM6-W6400 | 6.4TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |

**Table 41 EOS**

| | | |
|---|---|---|
| UCS-SD76T61X-EV | 7.6TB 2.5 inch Enterprise Value 6G SATA SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hyperflex-accessories-eol2.html |
| UCS-SD76TBEM2NK9 | 7.6TB 2.5in Enter Value 6G SATA Micron G1 SSD (SED) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD960GBM2NK9 | 960GB 2.5in Enter Value 6G SATA Micron G1 SSD (SED) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD240GM1X-EV | 240GB 2.5in Enter Value 6G SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD480GM1X-EV | 480 GB 2.5in Enter Value 6G SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD76TM1X-EV | 7.6TB 2.5in Enter Value 6G SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD16TM1X-EV | 1.6TB 2.5in Enter Value 6G SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD38TM1X-EV | 3.8TB 2.5in Enter Value 6G SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD960G61X-EV | 960GB 2.5 inch Enterprise Value 6G SATA SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hyperflex-accessories-eol2.html |
| UCS-NVMEI4-I6400 | 6.4TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD32TK3X-EP | 3.2TB 2.5in Enter Perf 12G SAS Kioxia G1 SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD38TK1X-EV | 3.8TB 2.5in Enter Value 12G SAS Kioxia G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD76TBKNK9 | 7.6TB 2.5in Enter Value 12G SAS Kioxia G1 SSD (SED-FIPS) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |

**Table 41 EOS**

| | | |
|---|---|---|
| UCS-SD76TK1X-EV | 7.6TB 2.5in Enter Value 12G SAS Kioxia G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD15TK1X-EV | 15.3TB 2.5in Enter Value 12G SAS Kioxia G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD16TBKNK9 | 1.6TB 2.5in Enter Perf 12G SAS Kioxia G1 SSD (3X SED-FIPS) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD16TK3X-EP | 1.6TB 2.5in Enter Perf 12G SAS Kioxia G1 SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD19TK1X-EV | 1.9TB 2.5in Enter Value 12G SAS Kioxia G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-NVMEI4-I1920 | 1.9TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-access-eol-15074.html |
| UCS-HD14T7KL4KM | 14TB12G SAS 7.2K RPM LFF HDD(4K) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15502.html |
| UCS-HD14T7KL4KN | 14TB 12G SAS 7.2K RPM LFF HDD(4K) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15502.html |
| UCS-SD38T6S1X-EV | 3.8TB 2.5in Enter Value 6G SATA Samsung SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15502.html |
| UCS-NVMEI4-I3200 | 3.2TB 2.5in U.2 Intel P5600 NVMe High Perf Medium Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD120GM1X-EV | 120 GB 2.5 inch Enterprise Value 6G SATA SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD19TS1X-EV | 1.9TB 2.5v Enter Value 12G SAS Seagate SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCS-SD38T6S1X-EV | 3.8TB 2.5in Enter Value 6G SATA Samsung SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |

**Table 41 EOS**

| | | |
|---|---|---|
| UCS-SD960GS1X-EV | 960GB 2.5in Enter Value 12G SAS Seagate SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCSC-NVMEXP-I750 | 750GB 2.5in Intel Optane NVMe Extreme Perf. | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCSC-NVMEXPB-I375 | 375GB 2.5in Intel Optane NVMe Extreme Performance SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCS-NVME4-15360 | 15.3TB 2.5in U.2 15mm P5520 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-eol15502.html |
| UCS-NVME4-3200 | 3.2TB 2.5in U.2 15mm P5620 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-accessories-eol15502.html |
| UCS-NVMEM6-W1600 | 1.6TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-NVMEM6-W1600 | 1.6TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-NVMEM6-W6400 | ^6.4TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-NVMEM6-W6400 | ^6.4TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/unified-computing-accessories-eol.html |
| UCS-SD16TS3X-EP | 1.6TB 2.5in Enter Perf 12G SAS Seagate SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCS-SD19T61X-EV | ^1.9TB 2.5 inch Enterprise Value 6G SATA SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hyperflex-accessories-eol2.html |
| UCS-SD19T6S1X-EV | 1.9TB 2.5in Enter Value 6G SATA Samsung SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCS-SD19TM1X-EV | 1.9TB 2.5in Enter Value 6G SATA Micron G1 SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |

**Table 41 EOS**

| | | |
|---|---|---|
| UCS-SD32TS3X-EP | 3.2TB 2.5in Enter Perf 12G SAS Seagate SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15371.html |
| UCS-SD38T61X-EV | ^3.8TB 2.5 inch Enterprise Value 6G SATA SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCS-SD38T63X-EP | 3.8TB 2.5in Enter Perf 6G SATA Intel SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15502.html |
| UCS-SD38T6I1X-EV | 3.8TB 2.5in Enter Value 6G SATA Intel SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15502.html |
| UCS-SD76T6S1X-EV | 7.6TB 2.5in Enter Value 6G SATA Samsung SSD | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCS-SD76TBKNK9 | 7.6TB 2.5in Enter Value 12G SAS Kioxia G1 SSD (SED-FIPS) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/select-ucs-accessories-eol.html |
| UCS-SD800GK3X-EP | 800GB 2.5in Enter Perf 12G SAS Kioxia G1 SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15502.html |
| UCS-SD800GS3X-EP | 800GB 2.5in Enter Perf 12G SAS Seagate SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-hci-accessories-eol.html |
| UCS-SD960G63X-EP | 960GB 2.5in Enter Perf 6G SATA Intel SSD (3X) | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-accessories-eol15502.html |
| **PCIe Cards** | | |
| UCSC-M-V5Q50G | Cisco VIC 15428 4x 10/25/50G mLOM C-Series | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-ucsx-accessories-eol.html |
| **GPU** | | |
| UCSC-GPU-A100 | TESLA A100, PASSIVE, 250W, 40GB | https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/select-ucs-and-hyperflex-accessories.html |

# TECHNICAL SPECIFICATIONS

## Dimensions and Weight

**Table 42 UCS C240 M6 LFF Dimensions and Weight**

| Parameter | Value |
|---|---|
| Height | 3.42 in. (8.7 cm) |
| Width (Not including slam latches) | 16.9 in.(42.9 cm) |
| Width (including slam latches) | 18.9 in.(48.0 cm) |
| Depth | 30 in. (76.2 cm) |
| Front Clearance | 3 in. (76 mm) |
| Side Clearance | 1 in. (25 mm) |
| Rear Clearance | 6 in. (152 mm) |
| Weight | |
| Weight with following options and no rail kit:<br>0 HDD, 0 CPU, 0 DIMM, and 1 2400 W power supply | 39.13 lbs (17.8 kg) |
| Weight with following options and including rail kit:<br>0 HDD, 0 CPU, 0 DIMM, and 1 2400 W power supply | 47.44 lbs (21.5 kg) |
| Weight with following options and no rail kit:<br>1 HDD, 1 CPU, 1 DIMM, and 1 2400 W power supply | 41.95 lbs (19 kg) |
| Weight with following options and including rail kit:<br>1 HDD, 1 CPU, 1 DIMM, and 1 2400 W power supply | 50.26 lbs (22.8 kg) |
| Weight with following options and no rail kit:<br>12 HDDs, 2 CPUs, 32 DIMMs, and 2 2400 W power supplies | 61.7 lbs (28 kg) |
| Weight with following options and including rail kit:<br>12 HDDs, 2 CPUs, 32 DIMMs, and 2 2400 W power supplies | 66.75 lbs (30.3 kg) |

## Power Specifications

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

- 1050 W (AC) power supply (see ***Table 43***).
- 1050 W V2 (DC) power supply (see ***Table 44***)
- 1600 W (AC) power supply (see ***Table 45***)
- 2300 W (AC) power supply (see ***Table 46***)

**Table 43 UCS C240 M6 LFF Power Specifications (1050 W AC power supply)**

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

**Notes:**

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

**Table 44 UCS C240 M6 LFF 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 45 UCS C240 M6 LFF 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 46 UCS C240 M6 LFF 2300 W (AC) Power Supply Specifications**

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

**Notes:**

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

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

**http://ucspowercalc.cisco.com**

## Extended Operating Temperature Hardware Configuration Limits

**Table 47 Cisco UCS C240 M6 LFF Extended Operating Temperature Hardware Configuration Limits**

| Platform[1] | ASHRAE A3 (5ºC to 40ºC)[2] | ASHRAE A4 (5ºC to 45ºC)[3] |
|---|---|---|
| Processors: | 155W+ | 155W+ and 105W+ (4 or 6 Cores) |
| Memory: | LRDIMMs | LRDIMMs |
| Storage: | M.2 SATA SSDs<br>NVMe SSDs | M.2 SATA SSDs<br>NVMe SSDs |
| Peripherals: | PCIe NVMe SSDs<br>GPUs | HDDs or SSDs (Rear Bays)<br>PCIe NVMe SSDs<br>GPUs<br>VICs (Slots 1 and 4)<br>NICs (Slots 1 and 4)<br>HBAs (Slots 1 and 4) |

**Notes:**

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

## Environmental Specifications

The environmental specifications for the C240 M6 LFF server are listed in ***Table 48***.

**Table 48 UCS C240 M6 Environmental Specifications**

| Parameter | Minimum |
|---|---|
| Operating Temperature | Dry bulb temperature of 10°C to 35°C (50°F to 95°F)<br>Maximum temperature change of 20°C (36°F) per hour<br>(a temperature change within a specified period of time and not a rate of change)<br>Humidity condition: Uncontrolled, not to exceed 50% RH starting condition<br>Derate the maximum temperature by 1°C (33.8°F) per every 305 meters of altitude above 900m |
| Extended Operating Temperature | 5°C to 40°C (41°F to 104°F) with no direct sunlight<br>Humidity condition: Uncontrolled, not to exceed 50% RH starting condition<br>Derate the maximum temperature by 1°C (33.8°F) per every 305 meters of altitude above 900m |
| Non-Operating Temperature | Dry bulb temperature of -40°C to 65°C (-40°F to 149°F) |
| Operating Relative Humidity | 10% to 90% and 28°C (82.4°F) maximum dew-point temperature, non-condensing environment<br>Minimum to be higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity<br>Maximum to be 24°C (75.2°F) dew point or 90% relative humidity |
| Non-Operating Relative Humidity | 5% to 93% relative humidity, non-condensing, with a maximum wet bulb temperature of 28°C across the 20°C to 40°C dry bulb range. |
| Maximum Operating Duration | Unlimited |
| Operating Altitude | A maximum elevation of 3050 meters (10,006 ft) |
| Non-Operating Altitude | An elevation of 0 to 12,000 meters (39,370 ft) |
| Sound Power level, Measure A-weighted per ISO7779 LWAd (Bels) Operation at 23°C (73°F) | 5.5 |
| Sound Pressure level, Measure A-weighted per ISO7779 LpAm (dBA) Operation at 23°C (73°F) | 40 |

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