



Overview

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Overview

Cisco UCS C245 M6 Server (UCSC-C245-M6SX) server is orderable in one Small form-factor (SFF) drives version, with 24-drive back-plane front panel configuration:

- Front-loading drive bays 1—24 support 2.5-inch SAS/SATA drives.
- Optionally, front-loading drive bays 1 to 4 support 2.5-inch NVMe SSDs (with optional front NVMe cables).
- Optionally, Risers 1B and 3B support up to four Gen4 NVMe SSDs (2 drives per riser).

Following PCIe Riser combinations are available:

- Riser 1—Supports Riser 1A and 1B. PCIe slots 1, 2, and 3 numbered bottom to top with the following options:
 - Riser 1A (UCSC-RIS1A-240M6)—Slot 1 PCIe supports full height, full length PCIe Add-in-card; Slot 2 PCIe supports full height, full length PCIe Add-in-card; Slot 3 PCIe supports full height, full length PCIe Add-in-card.
 - Riser 1B (UCSC-RIS1B-245M6) (Storage Option)—Slot 1 PCIe is disabled; Slot 2 supports 2.5-inch NVMe SSD; Slot 3 supports 2.5-inch NVMe SSD.
- Riser 2—Supports Riser 2A. PCIe slots 4, 5, and 6 numbered bottom to top with the following options:
 - Riser 2A (UCSC-RIS2A-240M6)—Slot 4, 5, and 6 PCIe support full height, full length PCIe Add-in-card.
- Riser 3—Supports Riser 3A, 3B and 3C. PCIe slots 7 and 8 numbered bottom to top with the following options:
 - Riser 3A (UCSC-RIS3A-240M6)—Slot 7 PCIe supports full height, full length PCIe Add-in-card; Slot 8 PCIe supports full height, full length PCIe Add-in-card.

- Riser 3B (UCSC-RIS3B-240M6)—Slot 7 supports 2.5-inch NVMe SSD; Slot 8 supports 2.5-inch NVMe SSD.
- Riser 3C (UCSC-RIS3C-240M6)—Slot 7 PCIe supports full height, full length PCIe Add-in-card.
- Network connectivity through either a dedicated modular LAN over motherboard card (mLOM) that accepts a series 14xxx Cisco virtual interface card (VIC) or a third-party NIC. These options are in addition to Intel x550 10Gbase-T mLOM ports built into the server motherboard.
- Or, one mLOM/VIC card that provides 10/25/40/50/100 Gbps. The following mLOMs are supported:
 - Cisco UCS VIC 15428 Quad Port CNA MLOM (UCSC-M-V5Q50G) supports:
 - a x16 PCIe Gen4 Host Interface to the rack server
 - four 10G/25G/50G SFP56 ports
 - 4GB DDR4 Memory, 3200 MHz
 - Integrated blower for optimal ventilation
 - Cisco UCS VIC 15427 Quad Port CNA MLOM (UCSC-M-V5Q50GV2) supports:
 - a x16 PCIe Gen4 Host Interface to the rack server
 - four 10G/25G/50G SFP+/SFP28/SFP56 ports
 - 4GB DDR4 Memory, 3200 MHz
 - Integrated blower for optimal ventilation
 - Secure boot support
 - Cisco UCS VIC 15425 Quad Port 10G/25G/50G SFP56 CNA PCIe (UCSC-P-V5Q50G)
 - a x16 PCIe Gen4 Host Interface to the rack server
 - Four 10G/25G/50G SFP+/SFP28/SFP56 ports
 - 4GB DDR4 Memory, 3200MHz
 - Integrated blower for optimal ventilation
 - Secure boot support
 - Cisco UCS VIC 15238 Dual Port 40/100G QSFP28 mLOM (UCSC-M-V5D200G) supports:
 - a x16 PCIe Gen4 Host Interface to the rack server
 - two 40G/100G QSFP28 ports
 - 4GB DDR4 Memory, 3200 MHz
 - Integrated blower for optimal ventilation
 - Cisco UCS VIC 15237 Dual Port 40G/100G/200G QSFP56 mLOM (UCSC-M-V5D200GV2) supports:
 - a x16 PCIe Gen4 Host Interface to the rack server

- two 40G/100G/200G QSFP/QSFP28/QSFP56 ports
 - 4GB DDR4 Memory, 3200 MHz
 - Integrated blower for optimal ventilation
 - Secure boot support
- Cisco UCS VIC 15235 Dual Port 40G/100G/200G QSFP56 CNA PCIe (UCSC-P-V5D200G)
 - a x16 PCIe Gen4 Host Interface to the rack server
 - two 40G/100G/200G QSFP/QSFP28/QSFP56 ports
 - 4GB DDR4 Memory, 3200MHz
 - Integrated blower for optimal ventilation
 - Secure boot support
- Cisco UCS VIC 1477 Dual Port 40/100G QSFP28 (UCSC-M-V100-04)
 - a x16 PCIe Gen3 Host Interface to the rack server
 - two 40G/100G QSFP28 ports
 - 2GB DDR3 Memory, 1866 MHz
- Cisco UCS VIC 1467 Quad Port 10/25G SFP28 mLOM (UCSC-M-V25-04) supports:
 - a x16 PCIe Gen3 Host Interface to the rack server
 - four 10G/25G QSFP28 ports
 - 2GB DDR3 Memory, 1866 MHz

These options are in addition to Intel x550 10Gbase-T mLOM ports built into the server motherboard.

- The following virtual interface cards (VICs) are supported in addition to some third-party VICs):
 - Cisco UCS VIC 1455 quad port 10/25G SFP28 PCIe (UCSC-PCIE-C25Q-04=)
 - Cisco UCS VIC 1495 Dual Port 40/100G QSFP28 CNA PCIe (UCSC-PCIE-C100-042)

Cisco UCS C245 M6 Server (UCSC-C245-M6SN) server is also available as **GPU Ready Configuration** unit. The server is configured to accept GPU, but GPUs are not installed while placing the order.

GPU Ready Configuration units are shipped with low profile heatsink: UCSC-HSLP-C245M6 and UCSC-ADGPU-245M6 (GPU air duct).



Note **GPU Ready Configuration** should follow the same temperature limit as GPU configured unit.

You should select the GPU airduct PID to enable **GPU Ready Configuration**. Follow Cisco Commerce Workspace (CCW) rules for more details.

External Features

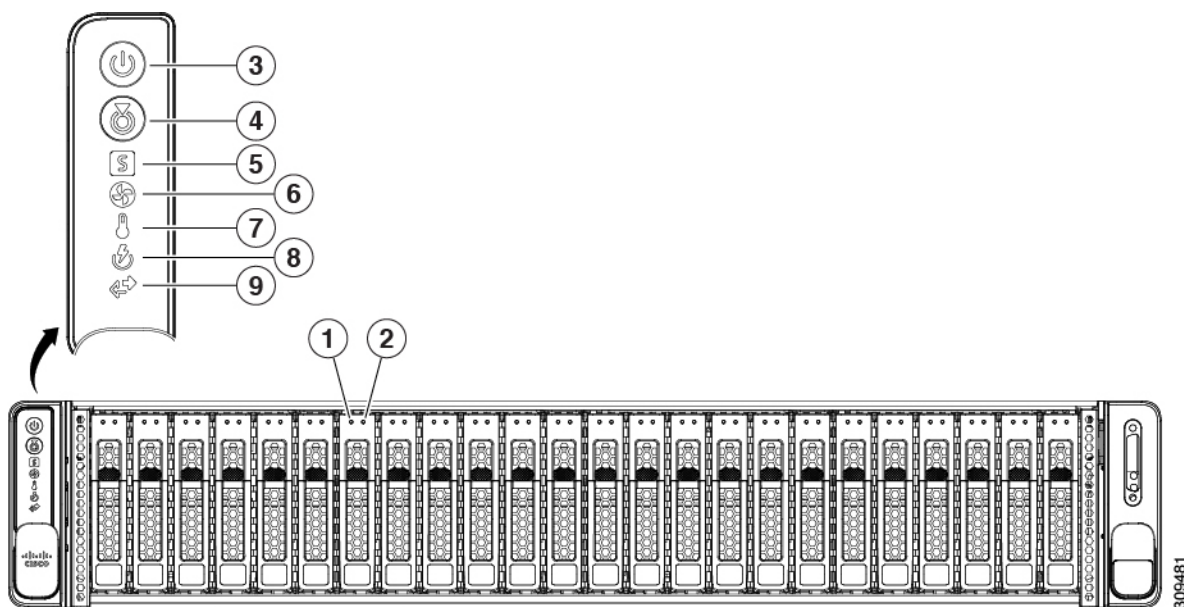
This topic shows the external features of the server.

For definitions of LED states, see [Front-Panel LEDs](#).

Cisco UCS C245 M6 Server (SFF Drives, 24-Drive) Front Panel Features

The following figure shows the front panel features of the server:

Figure 1: Cisco UCS C245 M6 Server (SFF Drives, 24-Drive) Front Panel



Cisco UCS C245 M6 Server features drive bays 1 to 24, which support SAS/SATA drives. Drive bays are numbered 1 through 24 from left to right. Optionally, front-loading drive bays 1 to 4 support 2.5-inch NVMe SSDs (with optional front NVMe cables). Other features are:

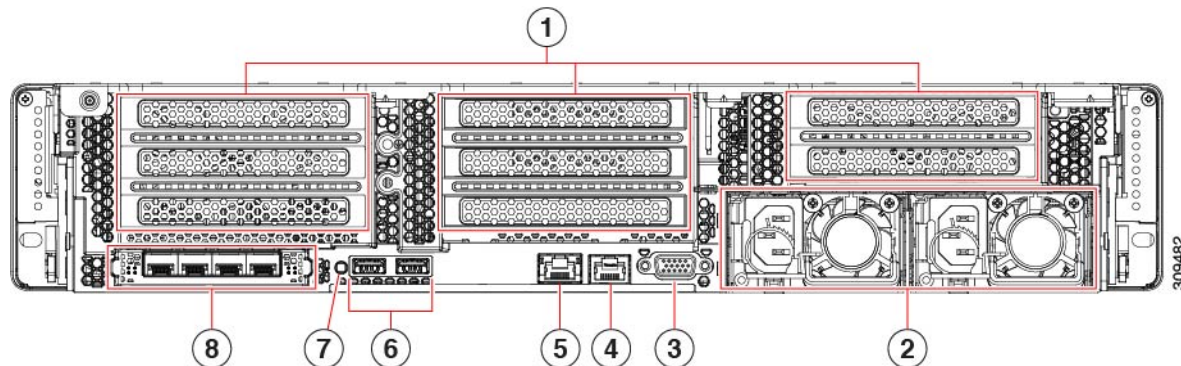
| | | | |
|---|-------------------------------|---|--------------------------------|
| 1 | SAS/SATA drive fault LED | 2 | SAS/SATA drive activity LED |
| 3 | Power button/power status LED | 4 | Unit identification button/LED |
| 5 | System Status LED | 6 | Fan status LED |
| 7 | Temperature status LED | 8 | Power supply status LED |
| 9 | Network link activity LED | | |

Cisco UCS C245 M6 Server Rear Panel Features

For definitions of LED states, see [Rear-Panel LEDs](#).

The following configuration of the server has no additional storage installed, with possible combination explained in table:

Figure 2: Cisco UCS C245 M6 Server Rear Panel

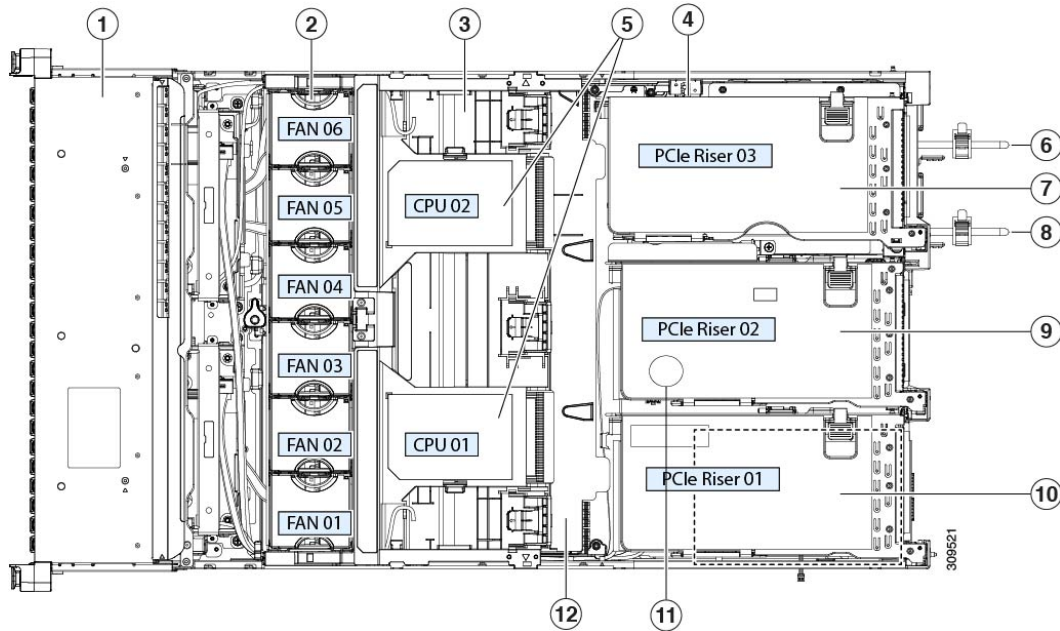


| | | |
|-----------------|---|--|
| <p>1</p> | <p>Cisco UCS C245 M6 Server supports three riser numbered 1 to 3 from left to right.</p> <p>Riser 1—Supports Riser 1A and 1B. PCIe slots 1, 2, and 3 numbered bottom to top with the following options:</p> <ul style="list-style-type: none"> • Riser 1A—Slot 1 PCIe supports full height, full length PCIe Add-in-card; Slot 2 PCIe supports full height, full length PCIe Add-in-card; Slot 3 PCIe supports full height, full length PCIe Add-in-card. • Riser 1B (Storage Option)—Slot 1 PCIe is disabled; Slot 2 supports 2.5-inch NVMe SSD; Slot 3 supports 2.5-inch NVMe SSD. <p>Riser 2—Supports Riser 2A. PCIe slots 4, 5, and 6 numbered bottom to top with the following options:</p> <ul style="list-style-type: none"> • Riser 2A (UCSC-RIS2A-240M6)—Slot 4, 5, and 6 PCIe support full height, full length PCIe Add-in-card. <p>Riser 3—Supports Riser 3A, 3B and 3C. PCIe slots 7 and 8 numbered bottom to top with the following options:</p> <ul style="list-style-type: none"> • Riser 3A—Slot 7 PCIe supports full height, full length PCIe Add-in-card; Slot 8 PCIe supports full height, full length PCIe Add-in-card. • Riser 3B—Slot 7 supports 2.5-inch NVMe SSD; Slot 8 supports 2.5-inch NVMe SSD. • Riser 3C—Slot 7 PCIe supports full height, full length PCIe Add-in-card. | |
| <p>2</p> | <p>Power supplies (two, redundant as 1+1) See Power Specifications for specifications and supported options.</p> | <p>3 VGA video port (DB-15 connector)</p> |
| <p>4</p> | <p>Serial port (RJ-45 connector) COM 1, BMC or Host Serial access</p> | <p>5 RJ45 BMC Dedicated Management Port</p> |
| <p>6</p> | <p>USB 3.0 ports, 2</p> | <p>7 Rear unit identification button/LED</p> |
| <p>8</p> | <p>Modular LAN-on-motherboard (mLOM) card slot (x16)</p> | |

Component Location

This topic shows the locations of the field-replaceable components and service-related items. The view in the following figure shows the server with the top cover removed.

Figure 3: Cisco UCS C245 M6 Server Serviceable Component Locations



| | | | |
|---|--|---|--|
| 1 | Front-loading drive bays. | 2 | Cooling fan modules (six, hot-swappable) Power supplies (hot-swappable when redundant as 1+1) |
| 3 | DIMM sockets on motherboard (16 per CPU) See DIMM Population Rules and Memory Performance Guidelines for DIMM slot numbering. Note An air baffle rests on top of the DIMM and CPUs when the server is operating. The air baffle is not displayed in this illustration. | 4 | Intrusion switch |
| 5 | CPU sockets, 2 CPU sockets are arranged side by side and labeled CPU1 and CPU2 next to the CPU socket. | 6 | Power Supply Unit (PSU) 1 |

| | | | |
|----|---|----|---|
| 7 | <p>Riser 3—Supports Riser 3A, 3B and 3C. PCIe slots 7 and 8 numbered bottom to top with the following options:</p> <ul style="list-style-type: none"> • Riser 3A—Slot 7 PCIe supports full height, full length PCIe Add-in-card; Slot 8 PCIe supports full height, full length PCIe Add-in-card. • Riser 3B—Slot 7 supports 2.5-inch NVMe SSD; Slot 8 supports 2.5-inch NVMe SSD. • Riser 3C—Slot 7 PCIe supports full height, full length PCIe Add-in-card. | 8 | Power Supply Unit (PSU) 2 |
| 9 | <p>Riser 2—Supports Riser 2A. PCIe slots 4, 5, and 6 numbered bottom to top with the following option:</p> <ul style="list-style-type: none"> • Riser 2A—Slot 4, 5, and 6 PCIe support full height, full length PCIe Add-in-card. | 10 | <p>Riser 1—Supports Riser 1A and 1B. PCIe slots 1, 2, and 3 numbered bottom to top with the following options:</p> <ul style="list-style-type: none"> • Riser 1A—Slot 1 PCIe supports full height, full length PCIe Add-in-card; Slot 2 PCIe supports full height, full length PCIe Add-in-card; Slot 3 PCIe supports full height, full length PCIe Add-in-card. • Riser 1B (Storage Option)—Slot 1 PCIe is disabled; Slot 2 supports 2.5-inch NVMe SSD; Slot 3 supports 2.5-inch NVMe SSD. |
| 11 | RTC Battery | 12 | Internal USB Port |

Summary of Server Features

The following table lists a summary of server features.

Table 1: Feature Summary

| Feature | Description |
|-----------|---|
| Chassis | Two rack-unit (2RU) chassis |
| Processor | AMD SP3 Dual Socket (Rome Zen2 Core and Milan Zen3 Core) |
| Memory | 3200 MT/s DDR4 DIMM sockets on the motherboard (16 DIMMS/8 channels each CPU) |

| Feature | Description |
|----------------------------|--|
| Baseboard management | <p>BMC, running Cisco Integrated Management Controller (Cisco IMC) firmware.</p> <p>Gigabit Ethernet switch port 0 as 10/100/1000base-T interface connect to RJ45 connector as CIMC management port.</p> |
| Network and management I/O | <p>Rear panel:</p> <ul style="list-style-type: none"> • 1-Gb Ethernet dedicated management port, 1 • One RS-232 serial port (RJ-45 connector) • One VGA video connector port (DB-15 connector) • Two USB 3.0 ports <p>Front panel:</p> <ul style="list-style-type: none"> • One front-panel keyboard/video/mouse (KVM) connector that is used with the KVM cable, which provides two USB 2.0, one VGA, and one DB-9 serial connector. |
| Modular LOM | <p>x16 PCI Express Gen 3 connection, a SMBus (I2C), a 100M-Base-T link (MDI) interface and a RMII based NC-SI interface that support one wire Ethernet connection to the host.</p> <p>The panel interfaces support up to four 1G/10G ports with RJ45 connectors or SFP+ interfaces</p> |
| Power | <p>Two power supplies, redundant as 1+1, and cold redundancy:</p> <ul style="list-style-type: none"> • 770W AC PSU • 1050W AC PSU • 1600W AC PSU • 2300W AC PSU • 1050W DC PSU (NEBS) |
| Cooling | Six hot-swappable fan modules for front-to-rear cooling. |

| Feature | Description |
|----------------------|--|
| PCIe I/O | <p>Six horizontal PCIe expansion slots on 3 PCIe riser assemblies.</p> <p>One Storage PCIe slot for Cisco Storage Card.</p> <p>One mLOM PCIe slot for Cisco Network Interface Card and OCP adapter</p> <p>See PCIe Slot Specifications, on page 84 for specifications of the slots.</p> |
| Storage, front-panel | <p>Server is orderable in one Small form-factor (SFF) drives version, with 24-drive back-plane front panel configuration:</p> <ul style="list-style-type: none"> • Front-loading drive bays 1—24 support 2.5-inch SAS/SATA drives. • Optionally, front-loading drive bays 1 to 4 support 2.5-inch NVMe SSDs (with optional front NVMe cables). • Optionally, the three rear-loading drive bays support up to eight Gen4 NVMe SSDs. <p>SAS/SATA drives are hot-swappable. NVMe SSDs are hot-pluggable, meaning that they must be shut down in the operating system before hot-removal.</p> |
| Storage, rear-panel | <p>Riser 1B—Slot 1 PCIe is disabled; Slot 2 supports 2.5-inch NVMe SSD; Slot 3 supports 2.5-inch NVMe SSD.</p> <p>Riser 3B—Slot 7 supports 2.5-inch NVMe SSD; Slot 8 supports 2.5-inch NVMe SSD.</p> |
| Storage, internal | <ul style="list-style-type: none"> • One internal USB 3.0 slot • Mini-storage module socket, optionally with either: <ul style="list-style-type: none"> • Dual M.2 2280 NVMe drive through Fort Point Module • Dual M.2 2280 SATA drive with hardware RAID |
| RAID backup | <p>The server has a mounting bracket on the removable air baffle for one SuperCap unit that is used with the Cisco modular RAID controller card.</p> |

| Feature | Description |
|------------------|---|
| GPU Support | <p>Riser 1A—Slot 1 PCIe supports full height, full length PCIe Add-in-card; Slot 2 PCIe supports full height, full length PCIe Add-in-card; Slot 3 PCIe supports full height, full length PCIe Add-in-card (For both Riser 1 and 2).</p> <p>Riser 3A (UCSC-RIS3A-240M6)—Slot 7 PCIe supports full height, full length PCIe Add-in-card; Slot 8 PCIe supports full height, full length PCIe Add-in-card (For Riser 3).</p> |
| Integrated video | Integrated VGA video. |