ıı|ıı|ıı
CISCO
The bridge to possible

Cisco UCS C245 M8 Rack Server

Contents

The Cisco UCS® C245 M8 Rack Server delivers industry-leading performance and expandability.

Product overview

The Cisco UCS C245 M8 Rack Server is perfectly suited for a wide range of storage and I/O-intensive applications such as big data analytics, databases, collaboration, virtualization, consolidation, AI/ML and high-performance computing supporting up to two AMD CPUs in a 2RU form factor.

The Cisco UCS C245 M8 Rack Server extends the capabilities of the Cisco UCS rack server portfolio. It powers 4th Gen AMD EPYC™ Processors with 100 percent more cores per socket designed using AMD's chiplet architecture. With advanced features like AMD Infinity Guard, compute-intensive applications will see significant performance improvements and will reap other benefits such as power and cost efficiencies.

You can deploy the Cisco UCS C-Series rack servers as part of the Cisco Unified Computing System™ managed by Cisco Intersight® or Cisco UCS Manager to take advantage of Cisco® standards-based unified computing innovations that can help reduce your Total Cost of Ownership (TCO) and increase your business agility or as standalone servers.

The Cisco UCS C245 M8 Rack Server brings many innovations to the UCS AMD rack server line. With the introduction of PCIe Gen 5.0 expansion slots for high-speed I/O, a DDR5 memory bus, and expanded storage capabilities, the server delivers significant performance and efficiency gains that will greatly enhance application performance. Features include:

- Support for up to two 4th Gen AMD EPYC™ CPUs in a server designed to drive as much as 256 CPU cores (128 cores per socket)
- Up to 24 DDR5 DIMM slots, yielding up to 6 TB of capacity, using 256 GB DIMMs (12 DIMMs per socket)
- Up to 4800 MT/s DDR5 memory
- Up to 8 x PCIe Gen 4.0 slots or up to 4 x PCIe Gen 5.0 slots, plus a hybrid modular LAN on motherboard (mLOM) /OCP 3.0 slot (details below)

- Support for Cisco UCS VIC 15000 Series adapters as well as a host of third-party NIC options

- Up to 28 hot-swappable small-form-factor (SFF) SAS/SATA or NVMe drives (with up to 8 direct-attach NVMe drives)

    ◦ New tri-mode RAID controller supports SAS4 plus NVMe hardware RAID

- M.2 boot options

    ◦ Up to two 960GB SATA M.2 drives with hardware RAID support

    ◦ Up to two 960GB NVMe M.2 drives with NVMe hardware RAID

- Support for up to Eight GPUs

- Modular LOM / OCP 3.0

    ◦ One dedicated PCIe Gen4x16 slot that can be used to add an mLOM or OCP 3.0 card for additional rear-panel connectivity

    ◦ mLOM slot that can be used to install a Cisco UCS Virtual Interface Card (VIC) without consuming a PCIe slot, supporting quad-port 10/25/50 Gbps or dual-port 40/100/200 Gbps network connectivity

    ◦ OCP 3.0 slot that features full out-of-band management for select adapters

High performance for data-intensive applications

The Cisco UCS C245 M8 Rack Server is well suited for a wide range of enterprise workloads, including:

- Virtualization and consolidation

- Big data and analytics

- AI/ML

- Collaboration

- Small and medium-sized business databases

- Storage servers

- Enterprise high-performance appliances

Cisco UCS C245 M8 Rack Servers can be deployed as part of a Cisco UCS-managed environment, through Cisco Intersight, or standalone. When used in combination with Cisco Intersight, the C245 M8 brings the power and automation of unified computing to enterprise applications, including Cisco SingleConnect technology, drastically reducing switching and cabling requirements.

Cisco Intersight leverages the familiar capabilities of Cisco UCS Manager with service profiles, templates, and policy-based management to enable rapid deployment and help ensure deployment consistency. It also enables end-to-end server visibility, management, and control in both virtualized and bare-metal environments.

The Cisco Integrated Management Controller (IMC) delivers comprehensive out-of-band server management with support for many industry standards, including:

- Redfish Version 1.13.0 (2021.1 schema0)

- Intelligent Platform Management Interface (IPMI) v2.0

- Simple Network Management Protocol (SNMP) v2 and v3

- Syslog

- Simple Mail Transfer Protocol (SMTP)

- Key Management Interoperability Protocol (KMIP)

- cKVM (all-new Cisco KVM)

- Command-line interface (CLI)

- XML API

Management Software Development Kits (SDKs) and DevOps integrations exist for Python, Microsoft PowerShell, Ansible, Puppet, Chef, and more. For more information about integrations, see Cisco DevNet (https://developer.cisco.com/site/ucs-dev-center/).

Product specifications

Table 1 lists the specifications for the Cisco UCS C245 M8 Rack Server.

Table 1. Specifications

Item	Specifications
Form factor	2RU rack server
Processors	4th Gen AMD EPYC™ Processors (1 or 2)
Memory	24 DDR5 DIMM slots: 16, 32, 64, 96, 128, and 256 GB up to 4800 MT/s
PCIe expansion	Up to 8 PCIe Gen 4.0 slots or up to 4 PCIe Gen 5.0 slots, 1 dedicated 24-Gbps RAID controller slot and 1 dedicated mLOM slot
RAID controllers	• Internal controllers: 　◦ Dual Cisco 24-Gbps modular tri-mode controller support with 4GB cache, supports SAS 4 or NVMe hardware RAID (up to 14 drives per controller) • Cisco 24-Gbps tri-mode passthrough HBA with SAS4/NVMe supports Cisco 24-Gbps modular tri-mode controller support with 4GB cache, supports SAS 4 or NVMe hardware RAID (up to 28 drives per controller) External controller: Cisco 12-Gbps 9500-8e SAS HBA
Internal storage	Backplane options: • Up to 28 x 2.5-inch SAS, SATA HDDs, SSDs or NVMe SSDs (up to 8 NVMe direct attach)
mLOM/OCP 3.0	One dedicated socket (PCIe Gen5 x16) that can be used to add an mLOM or OCP 3.0 card for additional rear-panel connectivity • mLOM slot can flexibly accommodate 10/25/50 and 40/100/200 100-Gbps Cisco VIC adapters. • OCP 3.0 slot features full out-of-band management with Intel® X710 OCP Dual 10GBase-T via mLOM interposer. • Several other OCP card offerings

Item	Specifications
Power supplies	Hot-pluggable, redundant platinum and titanium options: • Platinum: 1050W DC and 1600W AC • Titanium: 1200W AC and 2300W AC
Other storage	• Dedicated Baseboard Management Controller (BMC) FlexMMC for utilities (on board) • Dual M.2 SATA/NVMe SSDs with HW RAID support
Management	• Cisco Intersight • Cisco Integrated Management Controller (IMC) • Cisco UCS Manager
Rack options	• Cisco ball-bearing rail kit with optional reversible cable management arm
Hardware and software interoperability	• See the Cisco Hardware and Software Interoperability List for a complete listing of supported operating systems and peripheral options.

System requirements

Table 2 lists system requirements for the server.

Table 2. System requirements

Item	Requirements
Cisco IMC	Release 4.3(5)

Ordering information

Table 3. Ordering information

Part #	Product description
UCS-M8-MLB	Cisco UCS M8 rack, blade, chassis major line bundle (MLB) This MLB consists of the server node (UCSC-C245-M8SX) with software and Cisco Intersight options. Use this PID to begin a new configuration.
UCSC-C245-M8SX	C245 M8 2RU standard server with up to 28x SFF drive bays

Warranty information

The Cisco UCS C245 M8 Rack Server has a three-year, next-business-day (NBD) hardware warranty and a 90-day software warranty.

Cisco support

Augmenting the Cisco Unified Computing System (Cisco UCS) warranty, Cisco Smart Net Total Care® and Cisco Solution Support services are part of Cisco's technical services portfolio. Smart Net Total Care combines Cisco's industry-leading and award-winning foundational technical services with an extra level of actionable business intelligence that is delivered to you through the smart capabilities in the Smart Net Total Care portal. Learn more about Smart Net Total Care.

Cisco Solution Support includes both Cisco product support and solution-level support, resolving complex issues in multivendor environments on average 43 percent more quickly than with product support alone. Cisco Solution Support is a critical element in data-center administration, helping to 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 that you have deployed in your ecosystem. Whether there is an issue with a Cisco product or with a solution/partner product, just call us. Our experts are the primary point of contact and own the case from first call to resolution. Learn more about Cisco Solution Support.

Product sustainability

Information about Cisco's environmental, social, and governance (ESG) initiatives and performance is provided in Cisco's corporate social responsibility (CSR) and sustainability reporting.

Table 4.   Cisco environmental sustainability information

Sustainability topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries, and packaging	WEEE compliance
	Information on our product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability inquiries	Contact: csr_inquiries@cisco.com
	Operating and non-operating conditions	Product specifications
Material	Product packaging weight and materials	Contact: environment@cisco.com

Cisco and partner services

Cisco and our industry-leading partners deliver services that can accelerate your transition to a Cisco UCS X-Series Modular System solution. Cisco Unified Computing Systems Services can help you create an agile infrastructure, accelerate time to value, reduce costs and risks, and maintain availability during deployment and migration. After deployment, our services can help you improve performance, availability, and resiliency as your business needs evolve and help you further mitigate risk. For more information, visit https://www.cisco.com/go/unifiedcomputingservices.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation, and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services, and complementary third-party equipment in easy, predictable payments. Learn more.

Document history

New or revised topic	Described in	Date
–	–	–
–	–	–

Printed in USA

C78-4114923-02   05/24