

# Cisco UCS C220 M7 Rack Server

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The Cisco UCS® C220 M7 Rack Server delivers record-breaking performance for space-constrained environments.

## Product overview



The Cisco UCS C220 M7 Rack Server is a versatile general-purpose infrastructure and application server. This high-density, 1RU, 2-socket rack server delivers industry-leading performance and efficiency for a wide range of workloads, including virtualization, collaboration, and bare-metal applications.

The Cisco UCS C220 M7 Rack Server extends the capabilities of the Cisco UCS rack server portfolio. It incorporates the 4<sup>th</sup> Gen Intel® Xeon® Scalable Processors with 50 percent more cores per socket, advanced features such as Intel Advanced Matrix Extensions (AMX), Data Streaming Accelerator (DSA), In-Memory Analytics Accelerator (IAA), and QuickAssist Technology (QAT). Many applications will see significant performance improvements.

You can deploy the Cisco UCS C-Series rack servers as standalone servers or as part of the Cisco Unified Computing System™ managed by Cisco Intersight™ or Cisco UCS Manager<sup>1</sup> 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.

The C220 M7 rack server brings many new innovations to the UCS rack server portfolio. With the introduction of PCIe Gen 5.0 for high-speed I/O, a DDR5 memory bus, and expanded storage capabilities, the server delivers significant performance and efficiency gains that will improve your application performance.

- Supports up to two 4<sup>th</sup> Gen Intel Xeon Scalable CPUs, with up to 52 cores per socket
- Up to 32 DDR5 DIMMs for up to 4 TB of capacity using 128 GB DIMMs (16 DIMMs per socket)
- 4800 MT/s DDR5 memory plus other speeds depending on the CPU installed
- Up to 3 PCIe 4.0 slots or up to 2 PCIe 5.0<sup>1</sup> slots, plus a modular LAN on motherboard (mLOM) slot
- Support for Cisco UCS VIC 15000 Series adapters as well as third-party options
- Up to 10 SAS/SATA or NVMe disk drives
  - New tri-mode RAID controller<sup>1</sup> supports SAS4 RAID or NVMe hardware RAID with optional up to four direct-attach NVMe drives
  - Option for 10 direct-attach NVMe drives at PCIe Gen4x4 each
- M.2 boot options
  - Up to two 960GB SATA M.2 drives with hardware RAID, or
  - Up to two 960GB NVMe M.2 drives with NVMe hardware RAID<sup>1</sup>

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- Up to three GPUs supported<sup>1</sup>
  - Hybrid modular LOM/OCP 3.0
    - One dedicated Gen 4.0 x16 slot that can be used to add an mLOM or OCP 3.0 card for additional rear-panel connectivity.
    - mLOM allows for Cisco UCS Virtual Interface Cards (VICs) 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 features full out-of-band management for select adapters.

## Powering next-generation applications

The Cisco UCS C220 M7 Rack Server is well suited for a wide range of workloads, including:

- IT and web infrastructure
- High-performance virtual desktops
- Medium-sized and distributed databases
- Middleware
- Collaboration
- Public cloud

Cisco UCS C220 M7 Rack Servers can be deployed as standalone servers, part of a Cisco UCS-managed environment or through Cisco Intersight. When used in combination with Cisco Intersight, the C220 M7 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 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.

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<sup>1</sup> Post first customer ship

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 C220 M7 Rack Server.

**Table 1.** Specifications

Item	Specifications
<b>Form factor</b>	1RU rack server
<b>Processors</b>	4 <sup>th</sup> Generation Intel Xeon Scalable Processors (1 or 2)
<b>Memory</b>	32 DDR5 DIMM slots: 16, 32, 64, and 128 GB up to 4800 MT/s
<b>PCIe expansion</b>	Up to 3 PCIe 4.0 slots or up to 2 PCIe 5.0 <sup>2</sup> slots plus 1 dedicated 24-Gbps RAID controller slot and 1 dedicated mLOM/OCP 3.0 slot
<b>RAID controllers</b>	<ul style="list-style-type: none"> <li>• Internal controllers:               <ul style="list-style-type: none"> <li>◦ Cisco 24-Gbps modular tri-mode controller<sup>1</sup> supports SAS 4 or NVMe hardware RAID for up to 10 SAS and SATA Hard Disk Drives (HDDs), SSDs, or NVMe SSDs,</li> <li>◦ Cisco 12-Gbps modular RAID controller (PCIe 4.0) with 4-GB Flash-Backed Write Cache (FBWC), or</li> <li>◦ Cisco 12-Gbps modular SAS Host Bus Adapter (HBA)</li> </ul> </li> <li>• External controller: Cisco 12-Gbps 9500-8e SAS HBA</li> </ul>
<b>Internal storage</b>	Backplane options: <ul style="list-style-type: none"> <li>• Up to 10 x 2.5-inch SAS and SATA HDDs, SSD, NVMe drives, with the option of up to 4 direct-attach NVMe drives</li> <li>• Up to 10 x 2.5-inch NVMe PCIe SSDs (all direct-attach PCIe Gen4x4)</li> </ul>

<sup>1</sup> Post first customer ship

Item	Specifications
<b>mLOM/OCP 3.0</b>	<ul style="list-style-type: none"> <li>One dedicated PCIe Gen4x16 slot that can be used to add an mLOM or OCP 3.0 card for additional rear-panel connectivity</li> <li>mLOM slot can flexibly accommodate 10/25/50/100/25/40, and 40/100/200 100-Gbps Cisco VIC adapters.</li> <li>OCP 3.0 slot features full out-of-band manageability that supports Intel X710 OCP Dual 10GBase-T via mLOM interposer.</li> </ul>
<b>Power supplies</b>	Hot-pluggable, redundant platinum and titanium options: <ul style="list-style-type: none"> <li>Platinum: 770W AC, 1050W DC, and 1600W AC</li> <li>Titanium: 1200W AC, and 2300W AC</li> </ul>
<b>Other storage</b>	<ul style="list-style-type: none"> <li>Dedicated Baseboard Management Controller (BMC) FlexMMC for utilities (on board)</li> <li>Dual M.2 SATA/NVMe SSDs with HW RAID support<sup>1</sup></li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>Cisco Intersight</li> <li><a href="#">Cisco Integrated Management Controller (IMC)</a></li> <li><a href="#">Cisco UCS Manager</a><sup>1</sup></li> </ul>
<b>Rack options</b>	<ul style="list-style-type: none"> <li>Cisco ball-bearing rail kit with optional reversible cable management arm</li> </ul>
<b>Hardware and software interoperability</b>	See the <a href="#">Cisco Hardware and Software Interoperability List</a> 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
<b>Cisco IMC</b>	Release 4.3(1) or later

## Ordering information

**Table 3.** Ordering information

Part #	Product description
<b>UCSC-C220-M7S</b>	C220 M7 1RU standard server with up to 10x SFF drive bays
<b>UCSC-C220-M7N</b>	C220 M7 1RU NVMe optimized server with up to 10x NVMe drive capability

For information about installing or upgrading your server, see the [Cisco UCS C220 M7 Server Installation and Service Guide](#).

For ordering information, see [Cisco UCS C220 M7 SFF rack server specifications sheet](#).

## Warranty information

The Cisco UCS C220 M7 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
<b>General</b>	Information on product-material-content laws and regulations	<a href="#">Materials</a>
	Information on electronic waste laws and regulations, including our products, batteries, and packaging	<a href="#">WEEE compliance</a>
	Information on our product takeback and reuse program	<a href="#">Cisco Takeback and Reuse Program</a>
	Sustainability inquiries	Contact: <a href="mailto:csr_inquiries@cisco.com">csr_inquiries@cisco.com</a>
	Operating and nonoperating conditions	<a href="#">Product specifications</a>
<b>Material</b>	Product packaging weight and materials	Contact: <a href="mailto:environment@cisco.com">environment@cisco.com</a>

## Product environmental information

Product environmental information for users per Commission Regulation (EU) 2019/424  
<https://www.cisco.com/web/dofc/23906225.pdf>.

## 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

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business needs evolve and help you further mitigate risk. For more information, visit <https://www.cisco.com/go/unifiedcomputingservices>.

## Cisco Capital

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## Document history

New or revised topic	Described in	Date

**Americas Headquarters**  
Cisco Systems, Inc.  
San Jose, CA

**Asia Pacific Headquarters**  
Cisco Systems (USA) Pte. Ltd.  
Singapore

**Europe Headquarters**  
Cisco Systems International BV Amsterdam,  
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