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# Cisco UCS C220 M5 Rack Server

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The Cisco UCS® C220 M5 Rack Server delivers record-breaking performance for space-constrained environments.

## Product overview

The Cisco UCS C220 M5 Rack Server is among the most versatile general-purpose enterprise infrastructure and application servers in the industry. It is a high-density 2-socket rack server that delivers industry-leading performance and efficiency for a wide range of workloads, including virtualization, collaboration, and bare-metal applications. The Cisco UCS C-Series Rack Servers can be deployed as standalone servers or as part of the Cisco Unified Computing System™ (Cisco UCS) to take advantage of Cisco's standards-based unified computing innovations that help reduce customers' Total Cost of Ownership (TCO) and increase their business agility.

The Cisco UCS C220 M5 server extends the capabilities of the Cisco UCS portfolio in a 1-Rack-Unit (1RU) form factor. It incorporates the Intel® Xeon® Scalable processors, supporting up to 20 percent more cores per socket, twice the memory capacity, 20 percent greater storage density, and five times more PCIe NVMe Solid-State Disks (SSDs) compared to the previous generation of servers. These improvements deliver significant performance and efficiency gains that will improve your application performance. The C220 M5 delivers outstanding levels of expandability and performance in a compact package, with:

- Latest (second generation) Intel Xeon Scalable CPUs with up to 28 cores per socket
- Supports first-generation Intel Xeon Scalable CPUs with up to 28 cores per socket
- Up to 24 DDR4 DIMMs for improved performance
- Support for the Intel Optane DC Persistent Memory (128G, 256G, 512G)[1]
- Up to 10 Small-Form-Factor (SFF) 2.5-inch drives or 4 Large-Form-Factor (LFF) 3.5-inch drives (77 TB storage capacity with all NVMe PCIe SSDs)
- Support for 12-Gbps SAS modular RAID controller in a dedicated slot, leaving the remaining PCIe Generation 3.0 slots available for other expansion cards
- Modular LAN-On-Motherboard (mLOM) slot that can be used to install a Cisco UCS Virtual Interface Card (VIC) without consuming a PCIe slot
- Dual embedded Intel x550 10GBASE-T LAN-On-Motherboard (LOM) ports

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[1] Requires a DDR4 DIMM for deployment. The sizes of DCPMM must be the same and the DDR4 DIMMS must the same. But between the DCPMM and DIMMs, the sizes may vary, as shown in the 18-TB configuration described earlier in this data sheet.

## Powering Next-generation applications

The Cisco UCS C220 M5 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

C220 M5 servers can be deployed as standalone servers or in a Cisco UCS managed environment. When used in combination with Cisco UCS Manager, the C220 M5 brings the power and automation of unified computing to enterprise applications, including Cisco® SingleConnect technology, drastically reducing switching and cabling requirements.

Cisco UCS Manager uses service profiles, templates, and policy-based management to enable rapid deployment and help ensure deployment consistency. If 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 1.01 (v1.01)

- 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)

- HTML5 GUI

- HTML5 virtual Keyboard, Video, and Mouse (vKVM)

- 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.

The C220 M5 is Cisco Intersight™ ready. Cisco Intersight is a new cloud-based management platform that uses analytics to deliver proactive automation and support. By combining intelligence with automated actions, you can reduce costs dramatically and resolve issues more quickly.

## Product specifications

Table 1 lists the specifications for the Cisco UCS C220 M5 Rack Server.

**Table 1.**    Specifications

| Item | Specifications |
|---|---|
| **Form factor** | 1RU rack server |
| **Processors** | Intel Xeon Scalable processors (1 or 2) or second-generation Intel Xeon Scalable processors (1 or 2) |
| **Memory** | 24 DDR4 DIMM slots: 8, 16, 32, 64, and 128 GB up to 2666 MHz<br><br>Support for the Intel Optane DC Persistent Memory (128G, 256G, 512G) |
| **PCIe expansion** | 2 PCIe 3.0 slots plus 1 dedicated 12-Gbps RAID controller slot and 1 dedicated mLOM slot |
| **RAID controllers** | • Internal controllers: Cisco 12-Gbps Modular RAID Controller (PCIe 3.0) with 1- or 2-GB Flash-Backed Write Cache (FBWC), providing enterprise-class data protection for up to 10 SAS and SATA Hard-Disk Drives (HDDs), SSDs, or NVMe PCIe SSDs; or Cisco 12-Gbps Modular SAS Host Bus Adapter (HBA)<br>• External controller: Cisco 12-Gbps 9400-8e SAS HBA |
| **Internal storage** | Backplane options:<br>• Up to 10 x 2.5-inch SAS and SATA HDDs and SSDs and up to 2 NVMe PCIe drives<br>• Up to 10 x 2.5-inch NVMe PCIe drives<br>• Up to 4 x 3.5-inch SAS and SATA HDDs and SSDs and up to 2 NVMe PCIe drives |
| **Embedded Network Interface Cards (NICs)** | Dual 10GBASE-T Intel x550 Ethernet ports |
| **mLOM** | Dedicated mLOM slot that can flexibly accommodate 1-, 10-, 25-, 40-, and 100-Gbps adapters |
| **Power supplies** | Hot-pluggable, redundant 770W AC, 1050W AC, 1050W DC, and 1600W AC |
| **Other storage** | • Dual internal Cisco FlexFlash Secure Digital (SD) cards (32, 64, and 128 GB) for installing an operating system or hypervisor<br>• Support for RAID 0 mirroring between SD cards<br>• Dedicated Baseboard Management Controller (BMC) MicroSD card (32 GB) for server utilities<br>• Dual M.2 SATA SSD or NVMe |
| **Management** | • Cisco® Intersight™<br>• Cisco IMC<br>• Cisco IMC Supervisor<br>• Cisco UCS Manager<br>• Cisco UCS Central Software<br>• Cisco UCS Director<br>• Cisco UCS Performance Manager |

| Item | Specifications |
|---|---|
| Rack options | Cisco ball-bearing rail kit or friction 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 UCS Manager (optional) | Release 3.2(1) or later |
| Cisco IMC | Release 3.1(1) or later |

## Ordering information

For information about installing or upgrading your server, see the Cisco UCS C220 M5 hardware installation guide.

For ordering information, see:

- Cisco UCS C220 M5 SFF rack server specification sheet
- Cisco UCS C220 M5 LFF rack server specification sheet

## Warranty information

Cisco UCS C220 M5 Rack Servers have a 3-year Next-Business-Day (NBD) hardware warranty and 90-day software warranty.

Augmenting the Cisco UCS warranty, Cisco Smart Net Total Care™ and Cisco Solution Support services are part of Cisco's technical services portfolio. Cisco 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 Cisco Smart Net Total Care portal. For more information, please refer to https://www.cisco.com/c/en/us/support/services/smart-net-total-care/index.html.

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. Solution Support is a critical element in data center administration, helping 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: https://www.cisco.com/c/en/us/services/technical/solution-support.html.

## Product environmental information

Product environmental information for users per Commission Regulation (EU) 2019/424
https://www.cisco.com/web/dofc/12135000.pdf

## Cisco Customer Recycling Solutions

https://www.cisco.com/c/en/us/about/product-innovation-stewardship/product-recycling/takeback-recycle-program.html.

## Cisco and Partner Services

Cisco and our industry-leading partners deliver services that accelerate your transition to a Cisco UCS C-Series Rack Servers solution. Cisco Unified Computing 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.

## For more information

For more information about Cisco UCS servers, refer to https://www.cisco.com/go/ucs.

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