Cisco UCS X210c M7 Compute Node

Contents

Un/Box the future with Cisco UCS® X-Series Modular System and Cisco Intersight™. Embrace an adaptable, future-ready, and cloud-operated system to simplify IT and innovate at the speed of software.

Product overview

The Cisco UCS X-Series Modular System simplifies your data center, adapting to the unpredictable needs of modern applications while also providing for traditional scale-out and enterprise workloads. It reduces the number of server types to maintain, helping to improve operational efficiency and agility as it helps reduce complexity. Powered by the Cisco Intersight cloud-operations platform, it shifts your thinking from administrative details to business outcomes—with hybrid-cloud infrastructure that is assembled from the cloud, shaped to your workloads, and continuously optimized.

Features and benefits

Main features

The Cisco UCS X210c M7 Compute Node is the second generation of compute node to integrate into the Cisco UCS X-Series Modular System. It delivers performance, flexibility, and optimization for deployments in data centers, in the cloud, and at remote sites. This enterprise-class server offers market-leading performance, versatility, and density without compromise for workloads. Up to eight compute nodes can reside in the 7-Rack-Unit (7RU) Cisco UCS X9508 Server Chassis, offering one of the highest densities of compute, I/O, and storage per rack unit in the industry.

The Cisco UCS X210c M7 provides these main features:

- CPU: Up to 2x 5th Gen or 4th Gen Intel® Xeon® Scalable Processors with up to 64 cores per processor and up to 320 MB of Level 3 cache per CPU.

- Memory: Up to 8TB of main memory with 32x 256 GB DDR5 5600 MT/s or DDR5 4800 MT/s DIMMs depending on the CPU installed.

- Storage: Up to six hot-pluggable, Solid-State Drives (SSDs), or Non-volatile Memory Express (NVMe) 2.5-inch drives with a choice of enterprise-class Redundant Array of Independent Disks (RAIDs) or passthrough controllers, up to two M.2 SATA drives with optional hardware RAID or up to two M.2 NVMe drives in pass-through mode.

- Optional front mezzanine GPU module: The Cisco UCS front mezzanine GPU module is a passive PCIe Gen 4.0 front mezzanine option with support for up to two NVMe drives and two HHHL GPUs.

- mLOM virtual interface cards (VICs):

  - Cisco UCS VIC 15420 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 50 Gbps of unified fabric connectivity to each of the chassis Intelligent Fabric Modules (IFMs) for 100 Gbps connectivity per server.

  - Cisco UCS VIC 15231 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis Intelligent Fabric Modules (IFMs) for 100 Gbps connectivity per server.

  - Cisco UCS VIC 15230 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis Intelligent Fabric Modules (IFMs) for 100 Gbps connectivity per server with secure boot technology.

- Optional mezzanine card:
  - Cisco UCS 5th Gen Virtual Interface Card (VIC) 15422 can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric technology. An included bridge card extends this VIC's 2x 50 Gbps of network connections through IFM connectors, bringing the total bandwidth to 100 Gbps per fabric (for a total of 200 Gbps per server) with secure boot technology.
  - Cisco UCS PCI Mezz card for X-Fabric can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric modules and enable connectivity to the Cisco UCS X440p PCIe Node.
  - All VIC mezzanine cards also provide I/O connections from the X210c M7 compute node to the X440p PCIe Node.
- Security: The server supports an optional Trusted Platform Module (TPM). Additional features include a secure boot FPGA and ACT2 anti-counterfeit provisions.

Product specifications

Table 1. Product specifications

Item	Specifications
Processors	Up to 2x 5th Gen Intel Xeon Scalable processors (1 or 2) or Up to 2x 4th Gen Intel Xeon Scalable processors (1 or 2)
Memory	32 DDR5-5600 DIMM slots (16 DIMMS per CPU): 16, 32, 48, 64, 96, 128, 256 GB at up to 5600 MT/s for up to 8TB of memory with 5th Gen Intel Xeon Scalable processors or 32 DDR5-4800 DIMM slots (16 DIMMS per CPU): 16, 32, 64, 128, 256 GB at up to 4800 MT/s for up to 8TB of memory with 4th Gen Intel Xeon Scalable processors
mLOM	mLOM slot for Cisco UCS VIC 15420, Cisco UCS VIC 15231 or Cisco UCS VIC 15230
Mezzanine adapter (rear)	Cisco UCS 15422 mezzanine card with UCS VIC 15000 bridge connector compatible with Cisco UCS VIC 15420
Mezzanine module (front)	Front mezzanine module options: • Cisco FlexStorage NVMe passthrough controller (for NVMe drives only) • Cisco FlexStorage RAID controller with 4GB cache (for SSD and mix of SSD and NVMe) • GPU front mezzanine • No front mezzanine

Item	Specifications
Internal storage & GPU	Front mezzanine storage options: • Up to 6x 2.5-inch SAS, SATA and NVMe RAID-compatible SSDs • A mixture of up to six SAS/SATA or NVMe drives **Note:** Drives require a RAID or passthrough controller in the front mezzanine module slot. Boot drive options: • Mini storage module with 2x M.2 (up to 960GB per drive) SATA drives with hardware RAID or 2x M.2 (up to 960GB per drive) NVMe drives GPU options: • GPU front mezzanine module with 2x 2.5-inch NVMe drives and 2x GPUs
Management	• [Cisco Intersight software](#) (SaaS, virtual appliance, and private virtual appliance) • Cisco UCS Manager (UCSM) 4.3(2) or later
Temperature: operating	50° to 95°F (10° to 35°C)
Temperature: nonoperating	–40° to 149°F (–40° to 65°C)
Humidity: operating	5% to 90% noncondensing
Humidity: nonoperating	5% to 90% noncondensing
Altitude: operating	0 to 10,000 ft (0 to 3000m); maximum ambient temperature decreases by 1°C per 300m
Altitude: nonoperating	40,000 ft (12,000m)

System requirements

Table 2. System requirements

Item	Requirements
X-Series chassis	Cisco UCS X9508 Server Chassis
Fabric interconnect	Cisco UCS 6454, 64108, and 6536 fabric interconnects
Cisco Intersight	• Intersight Managed Mode (minimum Essentials license per server) • UCSM Managed Mode (UMM) with Intersight

Ordering information

Table 3 provides ordering information for the Cisco UCS X210c M7 Compute Node.

Table 3. Ordering information

Part number	Description
UCSX-210C-M7	Cisco UCS 210c M7 Compute Node w/o CPU, memory, storage, mezzanine
UCSX-210C-M7-U	Cisco UCS 210c M7 Compute Node UPG w/o CPU, memory, storage, mezzanine
UCSX-210C-M7-CH	DISTI: Cisco UCS 210c M7 Compute Node w/o CPU, memory, storage, mezzanine

For information about installing or upgrading your server, see the Hardware Installation Guide. For ordering information, see the Cisco UCS X210c M7 Compute Node spec sheet.

Warranty information

The Cisco UCS X210c Compute Node has a three-year Next-Business-Day (NBD) hardware warranty and a 90-day software warranty.

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. 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

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 rapidly resolve issues 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. For more information, please refer to https://www.cisco.com/c/en/us/services/technical/solution-support.html.

Product sustainability

Information about Cisco's Environmental, Social, and Governance (ESG) initiatives and performance is provided in Cisco's 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 product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
Material	Product packaging weight and materials	Contact: environment@cisco.com

Product environmental information

Product environmental information for users per Commission Regulation (EU) 2019/424 https://www.cisco.com/web/dofc/23906228.pdf.

Cisco and Partner services

Cisco and our industry-leading partners deliver services that accelerate your transition to a Cisco UCS X-Series Modular System 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

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Flexible payment solutions to help you achieve your objectives

Cisco Capital® financing 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 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
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