

# Cisco UCS X210c M8 Compute Node

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Un/Box the future with the 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 also 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 M8 Compute Node is the third 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 Chassis, offering one of the highest densities of compute, I/O, and storage per rack unit in the industry.

The Cisco UCS X210c M8 provides these main features:

- CPU: up to two Intel® Xeon® 6 Scalable Processors with up to 86 cores per processor and up to 336MB of Level 3 cache per CPU
- Memory: up to 8 TB of main memory with 32x 256 GB DDR5-6400 DIMMs and support for MRDIMMs at up to 8000 MT/s
- Storage:
  - Up to nine hot-pluggable EDSFF E3.S NVMe drives with a new passthrough front mezzanine controller option new to the Cisco UCS X210c M8
  - 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 with four lanes each of PCIe Gen 5 connectivity
  - Up to two M.2 SATA drives or two M.2 NVMe drives for flexible boot and local storage capabilities
- Optional front mezzanine GPU module: the Cisco UCS® front mezzanine GPU module is a passive PCIe Gen 4 front mezzanine option with support for up to two U.2 or U.3 NVMe drives and two HHHL GPUs
- Optional PCIe node connectivity for additional GPU support: the Cisco UCS X210c M8 Compute Node can be paired with the Cisco UCS X440p PCIe Node supporting up to two x16 full-height, full-length dual slot GPUs, or four x8 full-height, full-length single-slot GPUs

- mLOM virtual interface cards:
  - Cisco UCS VIC (Virtual Interface Card) 15420 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 50 Gbps (2x 25Gbps) of unified fabric connectivity to each of the chassis's Intelligent Fabric Modules (IFMs) for 100 Gbps connectivity per server with secure boot technology
  - 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's Intelligent Fabric Modules (IFMs) for 100 Gbps connectivity per server with secure boot technology
- Optional mezzanine card:
  - Cisco UCS VIC 15422, a 5th Gen virtual interface card, 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 4x 25 Gbps of network connections through IFM connectors, bringing the total bandwidth to 100 Gbps per fabric (for a total of 200 Gbps per server)
  - Cisco UCS PCI mezzanine card for Cisco UCS 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 Cisco UCS X210c Compute Node to the Cisco UCS 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
<b>Processors</b>	Up to 2x Intel Xeon 6 Scalable Processors (1 or 2)
<b>Memory</b>	Up to 32 DDR5 DIMM slots (up to 16 DIMMS per CPU): 16, 32, 64, 128, 256GB RDIMM at up to 6400 MT/s and support of 32, 64B MRDIMM at up to 8000 MT/s
<b>mLOM</b>	mLOM slot for Cisco UCS VIC 15420 or Cisco VIC 15230
<b>Mezzanine adapter (rear)</b>	Cisco UCS 15422 mezzanine card with UCS VIC 15000 bridge connector compatible with Cisco UCS VIC 15420
<b>Mezzanine Module (front)</b>	<p><b>Front mezzanine module options:</b></p> <ul style="list-style-type: none"> <li>• EDSFF E3.S NVMe passthrough controller</li> <li>• NVMe passthrough controller (for U.2 and U.3 NVMe drives only)</li> <li>• RAID controller with 4GB cache (for SSD and mix of SSD and NVMe)</li> <li>• GPU front mezzanine</li> <li>• No front mezzanine</li> </ul>

Item	Specifications
<b>Internal storage and GPU</b>	<p><b>Front mezzanine storage options:</b></p> <ul style="list-style-type: none"> <li>• Up to 9x EDSFF E3.S NVMe drives</li> <li>• Up to 6x 2.5-inch SAS and SATA RAID-compatible SSDs</li> <li>• Up to 6x 2.5-inch NVMe PCIe drives</li> <li>• A mixture of up to six SAS/SATA or NVMe drives</li> </ul> <p><b>Note:</b> Drives require a RAID or passthrough controller in the front mezzanine module slot.</p> <p><b>Boot drive options:</b></p> <ul style="list-style-type: none"> <li>• Mini storage module with 2x M.2 (up to 960GB per drive) SATA drives with Hardware RAID</li> <li>• Mini storage module with 2x M.2 (up to 960GB per drive) NVMe drives in pass-through mode</li> </ul> <p><b>GPU options:</b></p> <ul style="list-style-type: none"> <li>• GPU front mezzanine module with 2x 2.5-inch NVMe drives and 2x GPUs</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Cisco Intersight software (SaaS, virtual appliance, and private virtual appliance)</li> </ul>
<b>Temperature: operating</b>	50° to 95° F (10° to 35° C)
<b>Temperature: nonoperating</b>	-40° to 149° F (-40° to 65° C)
<b>Humidity: operating</b>	5% to 93% noncondensing
<b>Humidity: nonoperating</b>	5% to 93% noncondensing
<b>Altitude: operating</b>	0 to 10,000 ft (0 to 3000m); maximum ambient temperature decreases by 1° C per 300m
<b>Altitude: nonoperating</b>	40,000 ft (12,000m)

## System requirements

**Table 2.** System requirements

Item	Requirements
<b>X-Series chassis</b>	Cisco UCS X9508 Chassis
<b>Fabric interconnect</b>	<ul style="list-style-type: none"> <li>• Cisco UCS 6454, 64108, and 6536 fabric interconnects</li> <li>• Cisco UCS Fabric Interconnect 9108 100G</li> </ul>
<b>Cisco Intersight</b>	<ul style="list-style-type: none"> <li>• Intersight Managed Mode (minimum Essentials license per server)</li> </ul>

## Ordering information

Table 3 provides ordering information for the Cisco UCS X210c M8.

**Table 3.** Ordering information

Part number	Description
<b>UCSX-210C-M8</b>	Cisco UCS 210c M8 Compute Node w/o CPU, memory, storage, mezzanine
<b>UCSX-210C-M8-U</b>	Cisco UCS 210c M8 Compute Node UPG w/o CPU, memory, storage, mezzanine
<b>UCSX-210C-M8-CH</b>	DISTI: Cisco UCS 210c M8 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 M8 Compute Node spec sheet.

## Warranty information

The Cisco UCS X210c M8 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 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.

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	<a href="#">Materials</a>
	Information on electronic waste laws and regulations, including our products, batteries, and packaging	<a href="#">WEEE Compliance</a>
	Information on 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>
Material	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/EU101693.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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