



Cisco Compute-only X210c M8 AI NVMe Node

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Cisco and Nutanix have partnered to introduce the IT industry's most complete hyperconverged solution by integrating and validating Cisco® servers, storage, networking, and SaaS operations with the Nutanix hybrid multicloud platform. Cisco Compute Hyperconverged with Nutanix is built, managed, and supported holistically to deliver a more seamless experience, foster innovation, and accelerate customers' hybrid-cloud journeys. Modern workloads require modern flexibility. Traditional hyperconverged solutions require scaling compute and storage together. When you need to scale compute capacity without adding storage, Cisco Compute-Only (CO) nodes provide that critical capability – empowering you to design clusters that match your exact requirements.

Product overview

The Cisco Compute X-Series 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 focus from administrative details to business outcomes—with hybrid-cloud infrastructure that is assembled from the cloud, shaped to your workloads, and continuously optimized.

Cisco Compute-Only X210c M8 All NVMe Node

Expanding Cisco Compute Hyperconverged node cluster with Cisco Compute-Only node

The Cisco Compute-Only node solution enables you to expand the compute resources of Cisco hyperconverged clusters running Nutanix by adding Cisco UCS®-certified servers without additional storage. These storage-less, Compute-Only (CO) servers certified by Cisco integrate seamlessly into your existing or new hyperconverged Nutanix cluster, allowing organizations to efficiently support compute-intensive applications by scaling processing resources independently of storage infrastructure.

Key benefits

- Cost-effective scaling for compute-heavy workloads
- Flexibility in cluster design

Table 1. Minimum cluster requirements for Cisco Compute-Only nodes

Cluster attributes	Hyperconverged node (HCI) with Cisco Compute-Only node
Number of nodes	Minimum of 3 HCI nodes and minimum of 2 CO nodes
Nodes ratio	<p>Nutanix recommends the following nodes ratio:</p> <p>1 CO: 2 HCI (default)</p> <p>1 CO: 1 HCI (This is supported only when the total number of VMs is less than or equal to 128 times the number of HCI nodes.)</p>
Hypervisor	<p>Hyperconverged node: Nutanix AHV only</p> <p>Compute-only node: Nutanix AHV only</p>
Management	Cisco Intersight Managed Mode (IMM)
Licensing	<p>NCI licenses on a per-core basis</p> <p>For more information about NCI licenses, see NCI section in Nutanix Cloud Platform Software Options</p>
Nutanix Cloud Platform software	The same as Cisco Compute Hyperconverged with Nutanix

Cisco Compute-Only node connected to [Everpure Flash Array](#) (FlashStack with Nutanix)

Everpure FlashArray//X and FlashArray//XL delivers mission-critical performance with the efficiency and resiliency that's missing from legacy arrays. FlashArray //X and FlashArray//XL pack more IOPS, ultra-consistent latency, and greater scale into a smaller footprint. Nondisruptive upgrades, always-on availability, and built-in data protection ensure workloads are always running while cutting risk. FlashArray//XL is designed to provide the highest performance density with a level of operational and management simplicity. FlashArray//C delivers a balanced all-flash storage solution optimized for file services and general-purpose workloads. With predictable performance, streamlined operations, and built-in cyber resiliency, it keeps applications consistently secure and positions organizations to outperform capacity-optimized, all-flash, and hybrid storage alternatives.

Nutanix Cloud Platform (NCP) consolidates computing, storage, and networking into a unified pool. It uses Nutanix Acropolis Operating System (AOS) for storage, Nutanix (Acropolis Hypervisor (AHV) for virtualization, and Nutanix Prism Central for centralized management across environments.

The Cisco Compute-Only node with Nutanix Cloud Platform (NCP) and Everpure FlashArray solution delivers a disaggregated infrastructure architecture that enables independent scaling of compute and storage resources. This solution combines industry-standard Cisco Compute-Only node servers running Nutanix AHV and AOS connected to external Everpure FlashArray. This architecture leverages Everpure software-defined storage environment optimized for enterprise workloads. The FlashStack solution with Nutanix integration provides organizations with the agility to adapt infrastructure resources dynamically while maintaining enterprise-level reliability and performance.

Key benefits

- **Independent scalability:** Scale compute and storage resources separately based on workload demands.
- **Enterprise-grade protection:** Built-in data protection and disaster recovery capabilities.
- **Hybrid-cloud readiness:** Seamlessly extend operations across on-premises and cloud environments.
- **Investment protection:** Use Nutanix Cloud Platform with existing external storage.

Table 2. [Need caption]

Attributes	Cisco Compute-Only (CO) node connected to Everpure FlashArray
Cisco Compute-Only nodes	<p>Nutanix Foundation allocates the following minimum resources to the CVM:</p> <p>CVM logical cores: 16</p> <p>CPU physical cores per Socket: 16</p> <p>vRAM (in GiB): 32</p> <p>(Please leverage Nutanix Sizer for all customer workload sizing)</p> <p>M.2 boot drives with M.2 RAID controller (A minimum of 480 GB is recommended)</p> <p>Storage protocol: NVMe over Fabric (NVMeoF) over TCP</p> <p>A 25Gb Ethernet network connection is recommended between Cisco Nutanix Compute cluster and Everpure FlashArray. (10Gb will be supported)</p> <p>A minimum of 3 CO nodes</p>
Hypervisor	Nutanix AHV only
Management	Cisco Intersight Managed Mode (IMM)
Everpure	FlashArray//, FlashArray//XL, FlashArray//C
Nutanix Cloud Platform software	<p>Supported Nutanix software:</p> <ul style="list-style-type: none"> • Nutanix Cloud Infrastructure (NCI) • Nutanix Cloud Manager (NCM) • Nutanix Cloud Platform (NCP) • Nutanix Kubernetes Platform (NKP)
Licensing	<p>Nutanix Cloud Infrastructure (NCI) licenses on a per-core basis</p> <p>Nutanix Cloud Infrastructure: compute (NCI-C) (2000 cores minimum)</p> <p>For more information about NCI licenses, see NCI section in Nutanix Cloud Platform Software Options</p>

The Cisco Compute-Only X210c M8 All NVMe Node provides these main features:

- **CPU:** up to 2x 6th Gen Intel® Xeon® Scalable Processors with up to 86 cores per processor and up to 336 MB cache per CPU.
- **Memory:** up to 8 TB of main memory with 32x 256 GB DDR5 6400 MT/s.
- **Storage:**
 - Up to nine hot-pluggable EDSFF E3.S NVMe drives with a new passthrough front mezzanine controller option.
 - Up to six hot-pluggable U.2/U.3 NVMe drives with a new passthrough front mezzanine controller option.
 - Two M.2 SATA drives with hardware RAID.
 - For Compute-Only (CO) node, these slots are not used.
- **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's 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's 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 All NVMe 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.

The Cisco Compute-Only X210c M8 All NVMe Node incorporates 6th Gen Intel Xeon Scalable Processors. It improves security, performance, and efficiency while helping achieve sustainability goals with built-in accelerators such as Intel Trust Domain Extensions (TDX), Intel Data Streaming Accelerator (DSA), Intel QuickAssist Technology (QAT), Intel Advanced Matrix Extensions (AMX), and Intel In-Memory Analytics Accelerator (IAA).

The Cisco Compute-Only X210c M8 All NVMe Node can be repurposed as an HCI node by adding NVMe drives. For more information, please refer to [Cisco Compute Hyperconverged with Nutanix-HCIX210c M8 All-NVMe Node](#) specification document.



Software and management

Cisco [Intersight](#) simplifies infrastructure operations across on-premises data centers, edge sites, and public clouds. Intersight Managed Mode (IMM) is a newer architecture that manages the Cisco UCS fabric-interconnected systems through a Redfish-based standard model. In this mode, Cisco UCS X210c M8 All NVMe nodes are connected to a pair of Cisco UCS 6400 series, a pair of Cisco UCS 6500, or a pair of Cisco UCS 6600 fabric interconnects and managed by Intersight.

Nutanix Cloud Platform software: The Nutanix Cloud Platform (NCP) offering includes various software packages in multiple editions (Starter, Pro, and Ultimate) to meet customer's infrastructure needs with the right set of capabilities.

- Nutanix Cloud Infrastructure (NCI) is a complete software stack to unify your hybrid-cloud infrastructure including compute, storage and network, hypervisors, and containers, in public or enterprise clouds.
- Nutanix Cloud Manager (NCM) software allows enterprises to build, use, operate, and govern their applications and IT infrastructure by offering intelligent operations, including monitoring, insights, and automated remediation. Self-service and orchestration capabilities help to streamline team tasks for scaling applications in a hybrid-cloud environment.

Hypervisor: The Cisco Compute-Only X210c M8 All NVMe Node supports Nutanix Acropolis Hypervisor (AHV) only.

Management mode: The Cisco Compute-Only X210c M8 All NVMe Node supports only Intersight Management Mode (IMM).

Benefits

Since we first delivered the Cisco Unified Computing System™ (Cisco UCS) in 2009, our goal has been to simplify the data center. We pulled management out of servers and into the network. We simplified multiple networks into a single unified fabric. And we eliminated network layers in favor of a flat topology wrapped into a single unified system. With the Cisco Compute Hyperconverged X-Series System, we take that simplicity to the next level:

- Simplified operations with a solution that combines the operational simplicity of hyperconverged software with the efficiency and flexibility of a modular system.
- Increased agility and response to the dynamic needs of your business with a solution that is inherently easy to scale and includes support for future generations of processors, storage, accelerators, networking technologies, and SaaS innovations.
- Improved sustainability with a solution that is engineered to be more energy efficient and can be easily upgraded and reused, lowering the consumption of power and raw materials when compared to traditional rack servers.

Product specifications

Table 3. Product specifications

Item	Specifications
Processors	One or two Intel 6th Gen Intel Xeon Scalable Processors
Memory	Up to 32 DDR5-6400 DIMM slots (16 DIMMS per CPU): 16, 32, 48, 64, 96, 128, or 256 GB at up to 6400 MT/s for up to 8 TB of memory with 6th Gen Intel Xeon Scalable Processors
mLOM	mLOM slot for Cisco UCS VIC 15420 or Cisco UCS VIC 15230
Mezzanine adapter (rear)	15422 mezzanine card with Cisco UCS VIC 15000 bridge connector compatible with Cisco VIC 15420
Mezzanine module (front)	Front mezzanine module options: <ul style="list-style-type: none"> • Cisco FlexStorage NVMe passthrough controller (for NVMe drives only) • No front mezzanine
Boot drive options	<ul style="list-style-type: none"> • Mini-storage module with 2x M.2 (a minimum of 480 GB is recommended) SATA drives with hardware RAID for hypervisor boot
GPUs	<ul style="list-style-type: none"> • NVIDIA H100 Tensor Core GPU (dual slot) • NVIDIA L40S GPU (dual slot) • NVIDIA L4 Tensor Core GPU (single slot) • NVIDIA A16 GPU (dual slot) <p>GPU support requires a Cisco Compute Hyperconverged X-Series Gen4 PCIe Node (HCIX-440P-U).</p>
Riser options	<ul style="list-style-type: none"> • Riser A for 1x dual-slot GPU per riser • Riser B for 2x single-slot GPUs per riser
Management	<ul style="list-style-type: none"> • Cisco Intersight software (SaaS, virtual appliance, and private virtual appliance)
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 4. System requirements

Item	Requirements
Cisco UCS X-Series chassis	One or two Intel 6th Gen Intel Xeon Scalable Processors
Fabric interconnects	Pair of Cisco UCS 6454 or Cisco UCS 64108 or Cisco UCS 6536 or Cisco UCS 6664 fabric interconnects
Cisco UCS X-Fabric modules	mCisco UCS 9416 X-Fabric Modules for Cisco Compute Hyperconverged X9508 Chassis
Cisco Intersight	Intersight Managed Mode (minimum Essentials license per server)

Ordering information

Table 5 Provides ordering information for the Cisco Compute-Only X210c M8 All NVMe Node.

Table 5. Ordering information

Part number	Description
HCIX-M8-NTNX-MLB	Cisco Compute Hyperconverged and Compute-Only Node X-Series M8 with Nutanix MLB
HCOXNX210C-M8SN	Cisco Compute-Only X210c M8 Node w/o CPU, memory, storage, mezzanine
HCOXNX210C-M8SN-U	Cisco Compute-Only X210c M8 Node UPG 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 Compute Compute-Only X210c M8 All NVMe Node [spec sheet](#).

Warranty information

The Cisco Compute-Only X210c M8 All NVMe Node has a three-year Next-Business-Day (NBD) hardware warranty and a 90-day software warranty.

Augmenting the Cisco Unified Computing System 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 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 Corporate Social Responsibility (CSR) and sustainability [reporting](#).

Table 5. 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 Compute-Only node 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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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
Cisco Compute-Only X210c M8 All NVMe Node	New	March 2026