# Cisco Compute-only X215c M8 All NVMe Node

## Contents

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 X215c 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** | Nutanix recommends the following nodes ratio:<br>1 CO: 2 HCI (default)<br>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.) |
| **Hypervisor** | Hyperconverged node: Nutanix AHV only<br>Compute-only node: Nutanix AHV only |
| **Management** | Cisco Intersight Managed Mode (IMM) |
| **Licensing** | NCI licenses on a per-core basis<br>For more information about NCI licenses, see the NCI section in Nutanix Cloud Platform Software Options. |
| **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 deliver mission-critical performance with the efficiency and resiliency that is 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 help to ensure that workloads are always running while reducing 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 alternative.

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** | Nutanix Foundation allocates the following minimum resources to the CVM:<br>CVM logical cores: 16<br>CPU physical cores per socket: 16<br>vRAM (in GiB): 32<br>(Please leverage Nutanix Sizer for all customer workload sizing.)<br>M.2 boot drives with M.2 RAID controller (A minimum of 480 GB is recommended.)<br>Storage protocol: NVMe over Fabric (NVMeoF) over TCP<br>A 25Gb Ethernet network connection is recommended between Cisco Nutanix Compute cluster and Everpure FlashArray. (10Gb will be supported.)<br>A minimum of 3 CO nodes |
| **Hypervisor** | Nutanix AHV only |
| **Management** | Cisco Intersight Managed Mode (IMM) |
| **Everpure** | FlashArray//, FlashArray//XL, FlashArray//C |
| **Nutanix Cloud Platform software** | Supported Nutanix software:<br>- Nutanix Cloud Infrastructure (NCI)<br>- Nutanix Cloud Manager (NCM)<br>- Nutanix Cloud Platform (NCP)<br>- Nutanix Kubernetes Platform (NKP) |
| **Licensing** | Nutanix Cloud Infrastructure (NCI) licenses on a per-core basis<br>Nutanix Cloud Infrastructure: compute (NCI-C) (2000 cores minimum)<br>For more information about NCI licenses, see the NCI section in Nutanix Cloud Platform Software Options. |

The Cisco Compute-Only X215c M8 All NVMe Node provides these main features:

- **CPU:** up to 2x 5th Gen AMD EPYC CPUs with up to 160 cores per processor and up to 512 MB cache per CPU
- **Memory:** up to 6 TB of main memory with 24x 256 GB DDR5 6400 MT/s
- **Storage:**
  - Up to eight 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. A bridge card that is included 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 Cisco UCS X215c 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 X215c M8 All NVMe Node incorporates 5th Gen AMD EPYC Processors with 150 percent more cores per socket designed using AMD's chiplet architecture. With advanced features such as AMD Infinity Guard, compute-intensive applications can see significant performance improvements and reap other benefits such as power and cost efficiencies.

The Cisco Compute-Only X215c M8 All NVMe Node can be repurposed as an HCI node by adding NVMe drives. more information, please refer to Cisco Compute Hyperconverged with Nutanix-HCIX215c 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, UCS X215c M8 All NVMe nodes are connected to a pair of Cisco UCS 6400, a pair of Cisco UCS 6500, or a pair of Cisco UCS 6600 series 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 X215c M8 All NVMe Node supports Nutanix Acropolis Hypervisor (AHV) only.

**Management mode:** The Cisco Compute-Only X215c 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** | Up to 2 x 5th Gen AMD EPYC Processors (1 or 2) |
| **Memory** | 24 DDR5-6400 DIMM slots (12 DIMMS per CPU): 16, 32, 48, 64, 96, 128, or 256 GB at up to 6400 MT/s for up to 6 TB of memory with 5th Gen AMD Processors |
| **mLOM** | mLOM slot for Cisco UCS VIC 15420 or Cisco UCS VIC 15230 |
| **Mezzanine adapter (rear)** | Cisco UCS VIC 15422 mezzanine card with a Cisco UCS VIC 15000 bridge connector compatible with Cisco UCS VIC 15420 |
| **Mezzanine module (front)** | Front mezzanine module options:<br>• Cisco FlexStorage NVMe passthrough controller (for NVMe drives only)<br>• No front mezzanine |
| **Boot drive options** | • Mini-storage module with 2x M.2 (a minimum of 480 GB is recommended) SATA drives with hardware RAID for hypervisor boot |
| **GPUs** | • NVIDIA H100 Tensor Core GPU (dual slot)<br>• NVIDIA L40S GPU (dual slot)<br>• NVIDIA L4 Tensor Core GPU (single slot)<br>• NVIDIA A16 GPU (dual slot)<br>• GPU support requires a Cisco Compute Hyperconverged X-Series Gen4 PCIe Node (HCIX-440P-U). |
| **Riser options** | • Riser A for 1x dual-slot GPU per riser<br>• Riser B for 2x single-slot GPUs per riser |
| **Management** | • 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 |
| **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** | Cisco Compute Hyperconverged X9508 Chassis |
| **Fabric interconnect** | Pair of Cisco UCS 6454, Cisco UCS 64108, Cisco UCS 6536, or Cisco UCS 6600 fabric interconnects |
| **Cisco UCS X-Fabric modules** | Cisco 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 X215c 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 |
| **HCOXNX215C-M8SN** | Cisco Compute-Only X215c M8 All NVMe Node w/o CPU, memory, storage, mezzanine |
| **HCOXNX215C-M8SN-U** | Cisco Compute-Only X215c M8 All NVMe 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 X215c M8 All NVMe Node spec sheet.

## Warranty information

The Cisco Compute-Only X215c 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 6. 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.

## 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.

## Document history

| New or Revised Topic | Described In | Date |
|---|---|---|
| **Cisco Compute-Only X215c M8 All NVMe Node** | Data sheet | April 2026 |