Cisco Compute Hyperconverged X215c M8 All NVMe Node

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Product overview

Cisco Compute Hyperconverged with Nutanix

Cisco Compute Hyperconverged with Nutanix accelerates and simplifies the delivery of infrastructure and applications, at a global scale, through best-in-class cloud-operating models, industry-leading flexibility, and enhanced support and resiliency capabilities so you can power your hybrid multicloud future with the industry's most complete hyperconverged solution.

Cisco and Nutanix have partnered to introduce the industry's first hyperconverged solution using a modular server architecture. The Cisco Compute Hyperconverged X-Series System solution combines the operational simplicity of the Nutanix Cloud Platform with the flexibility and efficiency of the award-winning Cisco UCS® X-Series Modular System, enabling organizations to easily deploy, scale, and upgrade hyperconverged clusters with a more sustainable, future-ready solution.

The Cisco Compute Hyperconverged 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 thinking 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 Hyperconverged with Nutanix is supported on both the Cisco Compute Hyperconverged X-Series and Cisco Compute Hyperconverged X-Series Direct platforms. The primary distinction between these two platforms lies in the integration of the fabric module. The X-Series Direct features integrated fabric interconnects, which are particularly beneficial for edge, and small- or remote-office use cases, offering a self-contained system without the need for top-of-rack switches.

The X-Series, equipped with fabric interconnects, enables seamless scalability up to 160 servers, distributed across 20 chassis, each containing up to 8 nodes. This architecture simplifies management by eliminating the need for dedicated chassis management and blade switches, while also reduces cabling requirements, thereby minimizing complexity and enhancing operational efficiency.

Cisco Compute Hyperconverged x215c M8 All NVMe Node

Cisco Compute Hyperconverged x215c M8 All NVMe Node 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 8 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.

Cisco Compute Hyperconverged x215c M8 All NVMe Node family powers 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 will see significant performance improvements and reap other benefits such as power and cost efficiencies.

Features and benefits

The Cisco Compute Hyperconverged x215c M8 All NVMe Node provides the features given in Table 1.

Table 1. Summary of features and benefits of Cisco Compute Hyperconverged x215c M8 All NVMe Node

Feature	Benefit	
Memory	• Up to 6TB of main memory with 24x 256GB DDR5 6400 MT/s	
Processors	• 5th Gen AMD EPYC processors (Turin) • Massive processing power with up to 160 cores per socket • High-speed DDR5 memory technology for up to 6400 MT/s • Advanced capabilities, such as AMD Infinity Guard, enhance security in virtualized environments • Designed for compute-intensive applications	
Cloud-based services and management - retain	Cisco Intersight simplifies infrastructure operations across on-premises data centers, edge sites, and public clouds: • Use a software-as-a-service platform that bridges applications with infrastructure. • Correlate visibility and management across bare-metal servers, hypervisors, and application components. • Transform operations with artificial intelligence to reach needed scale and velocity.	Nutanix Cloud Platform (NCP) includes Nutanix Cloud Infrastructure (NCI), Nutanix Cloud Management (NCM), and desktop services: • NCI unifies compute, storage and network, hypervisors and containers, in public or enterprise clouds. • NCM offers customers simplicity and ease of use to build and grow their cloud deployments and realize rapid ROI, by providing intelligent operations, self-service and orchestration, visibility, and governance. • Desktop services offer hybrid-cloud infrastructure capabilities for on-premises Virtual Desktop Infrastructure (VDI) and Desktop-as-a-Service (DaaS) use cases.

Feature	Benefit
Storage	• Up to six hot-pluggable, U.2/U.3 Non-Volatile Memory Express (NVMe) 2.5-inch drives with a passthrough controller • Two M.2 SATA drives with hardware RAID
Enterprise data protection	• Synchronous and near-synchronous replication with optional runbook automation • Multisite asynchronous replication for disaster recovery • Deduplication and compression • Disaster recovery in cloud with Nutanix cloud clusters
Security	• The server supports an optional Trusted Platform Module (TPM). Additional features include a secure boot FPGA and ACT2 anti-counterfeit provisions
Software	• **Management software:** Cisco Intersight, Nutanix Cloud Infrastructure (NCI), Nutanix Cloud Management (NCM), desktop services, Nutanix Enterprise AI (NAI), and Nutanix Kubernetes Platform (NKP) for container management • **Storage software:** AOS Storage, Nutanix Unified Storage (NUS) – for files, objects, and volumes use cases • **Hypervisor choice:** support for Nutanix Acropolis Hypervisor (AHV) and Broadcom VMware ESXi/vSphere

Management

Cisco Intersight simplifies infrastructure operations across on-premises data centers, edge sites, and public clouds. In Intersight Managed Mode (IMM), the X215c M8 nodes are connected to a pair of Cisco UCS 6400 series or a pair of Cisco UCS 6500 series fabric interconnects and managed by Intersight. The primary use case is for general purpose workloads and mission and critical/high-performance workload deployments in the data center. While a minimum of three nodes are required to deploy a standard Nutanix cluster, the option to deploy a single-node cluster and a two-node cluster for edge and branch locations is supported with Cisco Compute Hyperconverged X-Series Direct. Refer to Nutanix documentation on single-node clusters.

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 2. Product specifications

Item	Common specifications across the Cisco Compute Hyperconverged X215c M8 All NVMe Node family
Processors	Up to 2x 5th Gen AMD EPYC processors (1 or 2)
Memory	**24 DDR5-6400 DIMM slots (12 DIMMS per CPU)**: 16, 32, 48, 64, 96, 128, 256 GB at up to 6400 MT/s
mLOM	mLOM slot for Cisco UCS VIC 15420 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: • Compute passthrough controller (for NVMe drives)
Internal storage and GPU	**Front mezzanine storage options:** • Up to 6x U.2/U.3 NVMe drives **Note:** Drives require a passthrough controller in the front mezzanine module slot. **Boot drive options:** • Mini storage module with 2x M.2 (up to 480GB per drive) SATA drives with hardware RAID **GPU options:** • Cisco HCI X-Series Gen4 PCIe node
Management	• Cisco Intersight software (SaaS, virtual appliance, and private virtual appliance)

System requirements

Table 3. System requirements

Item	Requirements
X-Series chassis	Cisco UCS X9508 Server Chassis
Fabric interconnect	Cisco UCS 6454, 64108, and 6536 fabric interconnects Cisco UCS Fabric Interconnect 9108 100G (for X-Series Direct deployment)
X-Fabric modules	Cisco 9416 X-Fabric Modules for Cisco Compute Hyperconverged X9508 Chassis
Cisco Intersight	Intersight Managed Mode (minimum Cisco Intersight Essentials license per server)

Ordering information

Table 4. Ordering information

Part number	Description
HCIX-M8-NTNX-MLB	Cisco Compute Hyperconverged X-Series M8 with Nutanix MLB
HCIXNX215C-M8SN	Cisco Compute Hyperconverged 215c M8 All NVME Node with up to 6x NVMe drives capability
HCIXNX215C-M8SN-U	Cisco Compute Hyperconverged 215c M8 All NVMe Node UPG with up to 6x NVMe drives capability

For ordering information, see the Cisco Compute Hyperconverged X215x M8 All NVMe Node specification sheet and Cisco Compute Hyperconverged X-Series M8 with Nutanix MLB ordering guide.

Cisco Unified Computing Services

Enhance your investment in Cisco Hyperconverged Infrastructure (HCI) with Cisco Services

How can you quickly adopt and maximize the value of your investments in Cisco Compute Hyperconverged with Nutanix to accelerate business outcomes? To achieve enhanced performance and reliability for your HCI solutions, Cisco services ensure seamless integration, efficient deployment, and scalability of Nutanix-powered environments on Cisco® platforms. From expert guidance and troubleshooting to best practices, Cisco and our certified partners provide comprehensive services to help you maximize your HCI investment while minimizing risks and downtime. For more information, contact your Cisco representative or trusted partner.

Cisco and Nutanix joint-support model

Cisco and Nutanix have partnered to deliver a streamlined support experience for the integrated hyperconverged infrastructure solutions. This joint-support model provides you with a single point of contact for both Cisco HCI hardware and Nutanix software issues, simplifying troubleshooting and accelerating resolution times. Benefit from the combined expertise of two industry leaders, ensuring efficient operation and minimizing downtime for your critical hybrid-cloud environment. Experience seamless support and focus on innovation, knowing your infrastructure is backed by a collaborative partnership. For more information, refer to Cisco and Nutanix Cooperative Support Overview.

Product sustainability

Information about Cisco's Environmental, Social, and Governance (ESG) initiatives and performance is provided in Cisco's 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

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

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