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# Cisco Compute Hyperconverged C220 M8 Rack Server Family

## Contents

Product overview	3
Cisco Compute Hyperconverged with Nutanix	3
Features and benefits	4
Product specifications	6
System requirements	7
Ordering information	7
Cisco Unified Computing Services	7
Product sustainability	8
Cisco Capital	8
Document history	9

#### 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 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.

## Cisco Compute Hyperconverged C220 M8 Rack Server Family

Cisco Compute Hyperconverged C220 M8 Rack Server family delivers performance, flexibility, and resiliency in a small footprint. Physically, nodes are deployed into clusters, with a cluster consisting of one or more Cisco Compute Hyperconverged C220 M8 All-NVMe servers.

The Cisco Compute Hyperconverged C220 M8 Rack Server family incorporates Intel® Xeon® 6 CPUs. 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).

These servers can be interconnected and managed in two different ways:

Intersight Standalone Mode: The nodes are connected to a pair of Top-of-Rack (ToR) switches, and the servers are centrally managed using Cisco Intersight® (SaaS, Connected Virtual Appliance (CVA), or Private Virtual Appliance (PVA)). While a minimum of three nodes are required to deploy a standard Nutanix cluster, we also offer an option to deploy a single-node cluster and a two-node cluster for edge and branch locations and situations that already have a high-performance network fabric installed. Refer to the Cisco spec sheets for further detail on the use of one-node and two-node Nutanix clusters.

• Intersight Managed Mode: The nodes are connected to a pair of Cisco UCS® 6400 Series or a pair of Cisco UCS 6500 Series fabric interconnects running in Intersight Managed Mode (IMM) and managed as a single system using Cisco Intersight ((SaaS, Connected Virtual Appliance (CVA) or Private Virtual Appliance (PVA)). These clusters can be deployed with a minimum of one node (single-node cluster) for less critical non-production workloads and with two nodes in an edge or branch location. A standard production Nutanix cluster requires a minimum of 3 nodes and scale up to 32 nodes in a single cluster. These clusters can support both general-purpose deployments and mission-critical high-performance environments.

#### Features and benefits

Cisco Compute Hyperconverged C220 M8 All-NVMe Rack Servers with Intel Xeon Scalable Processors are excellent for a wide range of enterprise workloads, including Artificial Intelligence (AI), cloud computing, databases, server virtualization and Virtual Desktop Infrastructure (VDI).

Table 1. Summary of features and benefits of Cisco Compute Hyperconverged C220 M8 All-NVMe Rack Server

Feature	Benefit
Memory	<ul> <li>High memory capacity</li> <li>Up to 4 TB memory (32 x 128 GB DDR5 DIMMs)</li> </ul>
Processors	<ul> <li>6<sup>th</sup> Generation Intel Xeon Scalable Processors (Granite Rapids)</li> <li>Massive processing power with up to 86 cores per socket</li> <li>Improved performance with AI-accelerated features and new virtual machine security features</li> <li>High speed DDR5 memory technology for up to 6400 MT/s</li> <li>Multiple built-in accelerators for new functional capabilities across AI, analytics, security, and storage</li> </ul>
Unified network fabric (Optional)	<ul> <li>Low latency, up to 8 x 10/25/50 Gigabit Ethernet connections or up to 4 x 40/100 Gigabit Ethernet connections</li> <li>Wire-once deployment model, eliminating the need to install adapters and recable racks and switches when changing I/O configurations</li> <li>Fewer interface cards, cables, and upstream network ports to purchase, power, configure, and maintain</li> </ul>

Feature	Benefit	
Cloud-based services and management	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.	<ul> <li>Nutanix Cloud Platform (NCP) includes Nutanix Cloud Infrastructure (NCI), Nutanix Cloud Management (NCM), and desktop services:</li> <li>• NCI unifies compute, storage, and network, hypervisors and containers, in public or enterprise clouds.</li> <li>• 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.</li> <li>• Desktop services offer hybrid-cloud infrastructure capabilities for onpremises Virtual Desktop Infrastructure (VDI) and Desktop-as-a-Service (DaaS) use cases.</li> </ul>
Storage	<ul> <li>All-NVMe configurations</li> <li>Deliver high-capacity configurations for the Cisco Compute Hyperconverged platform capacity layer.</li> <li>Nutanix Unified Storage provides software-defined, scale-out storage solutions for enterprise Network Attached Storage (NAS) and object workloads for unstructured data, block storage for structured data, and backup storage.</li> </ul>	
Enterprise data protection	<ul> <li>Synchronous and near-synchronous replication with option to use runbook automation</li> <li>Multisite asynchronous replication for disaster recovery</li> <li>Deduplication and compression</li> <li>Disaster recovery in cloud with Nutanix cloud clusters</li> </ul>	
Security	<ul> <li>Data-at-rest encryption using enterprise key management integration</li> <li>Trusted Platform Module (TPM), a chip (microcontroller) that can securely store artifacts, including passwords, certificates, and encryption keys, which are used to authenticate the platform (node). Supports TPM 2.0</li> <li>Software-based data-at-rest encryption and microsegmentation</li> </ul>	
Software	<ul> <li>Management software: Cisco Intersight, Nutanix Cloud Infrastructure (NCI), Nutanix Cloud Management (NCM), Nutanix Enterprise AI (NAI), and Nutanix Kubernetes Platform (NKP) for container management</li> <li>Storage software: AOS Storage, Nutanix Unified Storage (NUS) - for files, objects, and volumes use cases</li> <li>Hypervisor Choice: Support for Nutanix Acropolis Hypervisor (AHV) and Broadcom VMware ESXi/vSphere</li> </ul>	

## Product specifications

Table 2. Specifications for Cisco Compute Hyperconverged C220 M8 All-NVMe Rack Server

Feature	Common specifications across the Cisco Compute Hyperconverged C220 M8 Node family	
Form factor	1RU rack server	
Processors	One or two 6 <sup>th</sup> Gen Intel Xeon 6700P or 6500P processors (Granite Rapids)	
Memory	32 DIMM slots (16 DIMMS per CPU):  • 16, 32, 48, 64, 96,128GB DDR5 at up to 6400 MT/s for up to 4TB of memory  • 32, 64GB MRDIMMs at up to 8000 MT/s	
Storage	<ul> <li>Specific drive options are available for Cisco Compute Hyperconverged C220 M8 Rack Servers with Nutanix:</li> <li>C220 All NVMe node: 1.9 TB, 3.8 TB, 7.6 TB or 15.3 TB E3.S NVMe drives (up to 16 drives per node)</li> <li>Dual M.2 SATA SSDs with HW RAID support</li> </ul>	
PCle	Up to 3 PCle 5.0 half-height slots or up to 2 PCle 5.0 full-height slots and 1 dedicated mLOM/OCP 3.0 slot	
Graphical Processing Units (GPUs)	Up to three single-wide GPUs supported	
Network	<ul> <li>Cisco UCS Virtual Interface Card 15238 or 15427 (modular LAN on Motherboard)</li> <li>Quad 10/25/50 G or Dual 40/100 G Ethernet VIC (Cisco UCS Virtual Interface Card 15425 or 15235) (optional)</li> <li>Intel E810 dual- or quad-port Network Interface Card (Intersight Standalone Mode only)</li> <li>Intel 710 dual- or quad-port Network Interface Card (Intersight Standalone Mode only)</li> </ul>	
Management	Cisco Intersight     Cisco Integrated Management Controller (CIMC)	
Advanced Reliability, Availability, and Serviceability (RAS) features	<ul> <li>Robust reporting and analytics</li> <li>Hot-swappable, front-accessible data drives</li> <li>Dual-redundant fans and hot-swappable, redundant power supplies for enterprise-class reliability and a convenient latching lid for easy access to internal server</li> <li>Tool-free CPU insertion, enabling processor upgrades and replacements with less risk of damage</li> <li>Tool-free access to all serviceable items, and color-coded indicators to guide users to hot-pluggable and serviceable items</li> <li>Non-disruptive rolling upgrades for hypervisor, AOS, and UCS firmware using Nutanix Life-Cycle Manager (LCM)</li> </ul>	

Feature	Common specifications across the Cisco Compute Hyperconverged C220 M8 Node family
Power supplies	Hot-pluggable, redundant platinum, and titanium options:  • Platinum: 1050W DC and 1600W AC  • Titanium: 1200W AC and 2300W AC
Rail-kit options	Cisco ball-bearing rail kit with optional reversible cable management arm

## System requirements

Table 3. Systems requirements

Item	Requirements	
Fabric interconnect	Cisco UCS 6454, 64108, and 6536 fabric interconnects (For Intersight Managed Mode only)	
Cisco Intersight	Intersight Managed Mode and Intersight Standalone Mode (minimum Intersight Essentials license per server)	

## Ordering information

Table 4. Ordering information

Part #	Product description	
HCI-M8-NTNX-MLB	Cisco Compute Hyperconverged with Nutanix M8 rack server MLB	
HCINX220C-M8E3S  Cisco Compute Hyperconverged C220 M8 1RU NVMe-optimized serving 16x E3.S NVMe drive bays		

For ordering information, see the <u>Cisco Compute Hyperconverged C220 M8 Node specification sheet</u> and Cisco Compute Hyperconverged C220 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, <u>Cisco services</u> 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 <u>reporting</u>.

 Table 5.
 Cisco environmental sustainability information

Sustainabi	lity topic	Reference
General	Information on product-material-content laws and regulations	<u>Materials</u>
	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.

### Cisco Capital

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## Document history

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