

Cisco Compute Hyperconverged C220 M6 Node Family

Contents

Product overview	3
Features and benefits	3
Product specifications	5
Ordering information	7
Cisco Unified Computing Services	7
Product sustainability	7
Cisco Capital	8
Document history	9

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.

Product overview

Cisco Compute Hyperconverged with Nutanix

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 M6 Node family

Cisco Compute Hyperconverged C220 M6 Node 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 M6 All-Flash or C220 M6 All-NVMe servers.

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

- **UCS Managed mode:** The nodes are connected a pair of Cisco UCS® 6400 Series or a pair of Cisco UCS 6500 Series fabric interconnects and managed as a single system using UCS Manager. The minimum number of nodes in such a cluster is three. These clusters can support both general-purpose deployments and mission-critical high-performance environments.
- **Intersight Standalone mode:** The nodes are connected to a pair of Top-of-Rack (ToR) switches and servers are centrally managed using Cisco Intersight®. 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 1-node and 2-node Nutanix clusters.

Features and benefits

Cisco Compute Hyperconverged C220 M6 All-Flash and All-NVMe nodes with Intel® Xeon® Scalable Processors are excellent for a wide range of enterprise workloads, including cloud computing, Virtual Desktop Infrastructure (VDI), databases, and server virtualization.

Table 1. Summary of features and benefits of Cisco Compute Hyperconverged C220 M6 All-Flash Node and C220 M6 All-NVMe Node

Feature	Benefits		
Memory	<ul style="list-style-type: none"> • High memory capacity • Up to 4 TB memory (32 x 128 GB DDR4 DIMMs) 		
3rd Generation Intel Xeon Scalable Processors	<p>High performance</p> <ul style="list-style-type: none"> • 10-nanometer (nm) processor technology • Massive processing power • Top-of-the-line memory-channel performance • Improved scalability and intercore data flow • Intel Automated Vector Extensions 2 (AVX2) 	<p>Agility</p> <ul style="list-style-type: none"> • Supports highly dense virtual-machine deployments • Offers flexible virtualization technology that optimizes performance for virtualized environments, including processor support for migration and direct I/O 	<p>Efficiency and security</p> <ul style="list-style-type: none"> • Low-power, high-speed DDR4 memory technology • Automated energy efficiency reduces energy costs by automatically putting the processor and memory in the lowest available power state while delivering the performance required • Hardware-assisted security advancements
Unified network fabric (Optional)	<ul style="list-style-type: none"> • Low-latency, 4 x 10/25 Gigabit Ethernet connections • Wire-once deployment model, eliminating the need to install adapters and re-cable racks and switches when changing I/O configurations • Fewer interface cards, cables, and upstream network ports to purchase, power, configure, and maintain 		
Virtualization optimization	<ul style="list-style-type: none"> • I/O virtualization and Intel Xeon Scalable Processor features, extending the network directly to virtual machines • Consistent and scalable operational model • Increased security and efficiency with reduced complexity 		
Cloud-based services and management	<p>Cisco Intersight® simplifies infrastructure operations across on-premises data centers, edge sites, and public clouds</p> <ul style="list-style-type: none"> • 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 	<p>Nutanix Cloud Platform (NCP) includes Nutanix Cloud Infrastructure (NCI), Nutanix Cloud Management (NCM) and desktop services:</p> <ul style="list-style-type: none"> • 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	Benefits
Storage	<ul style="list-style-type: none"> • All-flash or all-NVMe configurations • Deliver high-capacity configurations for the Cisco Compute Hyperconverged platform capacity layer • Nutanix Unified Storage provides software-defined, scale-out storage solutions for enterprise NAS and object workloads for unstructured data, block storage for structured data, and backup storage
Enterprise data protection	<ul style="list-style-type: none"> • Synchronous and near-synchronous replication with option to use runbook automation • Multisite asynchronous replication for disaster recovery • Deduplication and compression • Disaster recovery in cloud with Nutanix cloud clusters
Security	<ul style="list-style-type: none"> • Data-at-rest encryption using self-encrypting drives and enterprise key management integration • 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. • Software based data-at-rest encryption and micro-segmentation
Software	<ul style="list-style-type: none"> • Management software: Cisco Intersight, Nutanix Cloud Infrastructure (NCI), Nutanix Cloud Management (NCM), desktop services • Storage software: AOS Storage, Nutanix Unified Storage (NUS) – for files, objects, and volumes use cases • Hypervisor: Nutanix Acropolis Hypervisor (AHV) and VMware vSphere

Product specifications

Table 2. Common specifications for Cisco Compute Hyperconverged C220 M6 All Flash Node and C220 M6 All NVMe Node

Feature	Common specifications across the Cisco Compute Hyperconverged C220 M6 node family
Chassis	<ul style="list-style-type: none"> • 1RU of rack space per node
Processors	<ul style="list-style-type: none"> • One or two 3rd Gen Intel Xeon Scalable Processors (Ice Lake) • A 2-CPU configuration is required when using an all-NVMe system.
Interconnect	<ul style="list-style-type: none"> • 3 Intel UPI channels per processor, each capable of 10.4 gigatransfers per second (GTPS)
Chip set	<ul style="list-style-type: none"> • Intel C621A series
Memory	<ul style="list-style-type: none"> • 32 DDR4 DIMM slots: 16, 32, 64 and 128 GB up to 3200 MHz • 4 TB using 32 x 128-GB DDR4 DIMMS • Advanced Error-Correcting Code (ECC)
Storage	<ul style="list-style-type: none"> • Specific drive options are available for Cisco Compute Hyperconverged C220 nodes: • C220 All Flash Node: 1.9 TB, 3.8 TB, or 7.6 TB SSD disks (up to 10 drives per node) • C220 All NVMe Node: 1.9 TB, 3.8 TB, 7.6 TB, or 15.3 TB NVMe disks (up to 10 drives per node) • Dual M.2 SATA SSDs with HW RAID support

Feature	Common specifications across the Cisco Compute Hyperconverged C220 M6 node family
PCIe	<ul style="list-style-type: none"> • 3 PCIe 4.0 slots plus 1 dedicated 12-Gbps RAID controller slot and 1 dedicated mLOM slot
Graphics Processing Units (GPUs)	<ul style="list-style-type: none"> • NVIDIA T4 Tensor Core GPU card (optional)
Network	<ul style="list-style-type: none"> • Cisco UCS Virtual Interface Card 1467 (modular LAN on Motherboard) • Quad 10/25 Gbps Ethernet VIC (Cisco UCS Virtual Interface Card 1455) (optional) • Intel E810 dual- or quad-port Network Interface Card (Intersight Standalone Mode) • Up to 256 I/O devices programmable on demand for hypervisor and virtual machine support
Cisco Integrated Management Controller (IMC)	<ul style="list-style-type: none"> • Integrated Baseboard Management Controller (BMC) • IPMI 2.0 compliant for management and control • One 10/100/1000 Ethernet out-of-band management interface • Command-Line Interface (CLI) and web GUI management tool for automated, lights-out management • Keyboard, Video, and Mouse (KVM) console
Advanced reliability, availability, and serviceability (RAS) features	<ul style="list-style-type: none"> • Highly available and self-healing architecture • Robust reporting and analytics • Hot-swappable, front-accessible drives • Dual-redundant fans and hot-swappable, redundant power supplies for enterprise-class reliability and a convenient latching lid for easy access to internal server • Tool-free CPU insertion, enabling processor upgrades and replacements with less risk of damage • Tool-free access to all serviceable items, and color-coded indicators to guide users to hot-pluggable and serviceable items • Nondisruptive rolling upgrades
Front-panel connector	<ul style="list-style-type: none"> • 1 KVM console connector per node (supplies 2 USB connectors, 1 VGA connector, and 1 serial connector)
Front-panel locator LED	<ul style="list-style-type: none"> • Helps direct administrators to specific servers in large data-center environments
Additional rear connectors	<ul style="list-style-type: none"> • 1 Gigabit Ethernet management port • 2 x 10 Gigabit Ethernet ports • 1 RS-232 serial port (RJ45 connector) • 1 Video Graphics Array (VGA) video port (DB15 connector) • 2 USB 3.0 ports
Power and cooling	<ul style="list-style-type: none"> • One or two hot-pluggable power supplies • Second power supply provides 1+1 redundancy. • 1050W, 1600W, or 2300W • 8 hot-swappable fans

Feature	Common specifications across the Cisco Compute Hyperconverged C220 M6 node family
Rail-kit options	<ul style="list-style-type: none"> • Cisco ball-bearing rail kit with optional reversible cable-management arm • Cisco friction rail kit with optional reversible cable-management arm
Software	<ul style="list-style-type: none"> • Management software: Nutanix Cloud Infrastructure, Nutanix Cloud Management, desktop services • Storage software: AOS Storage, Nutanix Unified Storage (files, objects, and volumes) • Hypervisor: Nutanix Acropolis Hypervisor (AHV) and VMware vSphere

Ordering information

For a complete list of part numbers, refer to the [Cisco Compute Hyperconverged C220 M6 All Flash and All NVMe specifications sheet](#).

Cisco Unified Computing Services

Cisco, Nutanix, and our industry-leading partners deliver services that accelerate your transition to Cisco Compute Hyperconverged systems. Professional services can help you create an agile infrastructure, accelerate time to value, reduce costs and risks, and maintain availability during deployment and migration. After you have deployed your system, our services can help you improve performance, availability, and resiliency as your business needs evolve.

Product sustainability

Information about Cisco's Environmental, Social, and Governance (ESG) initiatives and performance is provided in Cisco's CSR and sustainability [reporting](#).

Table 3. 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

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

New or Revised Topic	Described In	Date
Initial release	Data Sheet	August, 2023
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