Cisco Compute Hyperconverged with VMware vSAN C220 M8 Rack Server Family



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Product overview

Cisco Compute Hyperconverged with VMware vSAN

VMware vSAN Express Storage Architecture (ESA) is a software-defined storage solution that runs natively as part of ESXi hypervisor. It aggregates local storage from multiple hosts to create a shared storage pool for virtual machines that can then be accessed by all hosts in the vSAN cluster.

Cisco Compute Hyperconverged with VMware vSAN is a purpose-built platform that unifies compute, storage, and networking into a single, software-defined infrastructure. Cisco and VMware by Broadcom have partnered to deliver a robust, scalable, and high-performance Hyperconverged Infrastructure (HCI) solution for modern workloads.



Figure 1. Cisco Compute Hyperconverged with VMware vSAN HCIVS220C M8 All-NVMe Server

VMware vSAN Express Storage Architecture (ESA) is a next-generation Hyperconverged Infrastructure (HCI) architecture designed to deliver exceptional performance, scalability, and resilience. vSAN ESA is optimized for high-performance NVMe-based storage and modern server platforms, offering a simplified, flash-optimized data path that enables faster I/O, improved efficiency, and lower latency. By decoupling performance from capacity, vSAN ESA supports mission-critical workloads with enhanced data services and streamlined operations—making it ideal for modern enterprise environments. VMware vSAN ReadyNodes are pre-configured, tested, and jointly certified by Broadcom and Cisco to deliver enterprise-grade storage performance and reliability for IT customers. When deployed on Cisco UCS® servers qualified as vSAN ReadyNodes customers can confidently build a robust hyperconverged infrastructure stack that maximizes hardware utilization, simplifies operations, and scales linearly with business growth.

Cisco Compute Hyperconverged with VMware vSAN C220 M8 Rack Server family

The 1RU, Cisco Compute Hyperconverged C220 M8 Rack Server family delivers performance, flexibility, and resiliency in a small footprint. Physically, the servers are deployed in clusters, with a cluster consisting of two or more Cisco Compute Hyperconverged C220 M8 All NVMe Rack Servers.

The Cisco Compute Hyperconverged C220 M8 Rack Server family incorporates Intel® Xeon® 6 processors and 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:

- **Cisco Intersight Standalone Mode:** The servers (nodes) are connected to a pair of Top-of-Rack (ToR) switches and 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

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deploy a standard vSAN cluster, we also offer an option to deploy in Remote-Offices/Branch-Offices (ROBO) that have a small number of workloads but require high availability. Refer to the Cisco spec sheets for further details on the use of two-node vSAN clusters.

- **Cisco 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 two nodes (two-node cluster) for remote-office/branch-office environments. A standard vSAN cluster requires a minimum of three nodes and can scale up to 64 nodes in a single cluster. These clusters can support both general-purpose deployments and mission-critical high-performance environments.

Note: Cisco UCS Managed Mode (UMM) is not recommended. M8 will be the last generation of hardware that will support UMM. It is recommended to deploy all new clusters in Intersight Managed Mode or in Intersight Standalone Mode.

Features and benefits

Cisco Compute Hyperconverged C220 M8 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 with VMware vSAN C220 M8 Rack Server

Feature	Benefit
Memory	• High memory capacity • Up to 8 TB memory (32 x 256 GB DDR5 DIMMs)
Processors	• One or two 6th Gen Intel Xeon 6700P or 6500P processors (Granite Rapids) • Massive processing power with up to 86 cores per socket • Improved performance with AI-accelerated features and new virtual machine security features • High-speed DDR5 memory technology for up to 6400 MT/s • Multiple built-in accelerators for new functional capabilities across AI, analytics, security, and storage

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Feature	Benefit	
Unified network fabric (optional)	• Low latency, up to 8 x 10/25/50 Gigabit Ethernet connections or up to 4 x 40/100 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	
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.	VMware vCenter is the centralized management platform for vSphere environments, including vSAN: • Configure, control, scale, and monitor your vSphere environment. • Obtain full control over Virtual Machines (VMs), the virtualization layer, and software-defined storage. • Use the Leverage Distributed Resource Scheduler (DRS) to balance workloads across the cluster.
Storage	• E3.S All-NVMe configurations or U.2/U.3 All NVMe configuration • Deliver high-capacity configurations for the Cisco Compute Hyperconverged platform capacity layer. • VMware vSAN ESA eliminates traditional disk groups and instead pools all local NVMe devices into a single storage tier, enabling direct, parallel access across drives. This architecture simplifies storage management and improves performance by allowing dynamic distribution of data and metadata. Data is stored using a log-structured, object-based model with built-in services such as compression and erasure coding applied in the write path.	
Enterprise data protection	• Synchronous and asynchronous replication, allowing for flexible disaster recovery strategies tailored to specific needs • Deduplication and compression • Virtual-machine data protection and disaster recovery with VMware vSphere Replication • Disaster recovery with VMware's DRaaS (Disaster-as-a-Service)	

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Feature	Benefit
Security	• Data-at-rest encryption with enterprise key-management integration • Trusted Platform Module (TPM), a chip (microcontroller) that can securely store artifacts, including passwords, certificates, and encryption keys that are used to authenticate the platform (node). Supports TPM 2.0. • Software-based data-at-rest encryption and microsegmentation
Software	• Management software: Cisco Intersight and Broadcom VMware vCenter • Storage software: Broadcom VMware vSAN ESA • Hypervisor choice: support for Broadcom VMware ESXi/vSphere

Product specifications

Table 2. Specifications for Cisco Compute Hyperconverged with VMware vSAN C220 M8 Rack Server

Feature	Common specifications across the Cisco Compute Hyperconverged with VMware vSAN C220 M8 Rack Server family
Form factor	1RU rack server
Processors	One or two 6th Gen Intel Xeon 6700P or 6500P processors (Granite Rapids)
Memory	32 DIMM slots (16 DIMMS per CPU): • 16, 32, 48, 64, 96, 128, 256GB DDR5 at up to 6400 MT/s for up to 4 TB of memory • 32, 64GB MRDIMMs at up to 8000 MT/s
Storage	Specific drive options are available for Cisco Compute Hyperconverged C220 M8 Rack Servers with vSAN: • C220 E3.S All-NVMe node: various capacity options from 1.6 TB or 15.3 TB E3.S directly attached drives (up to 16 direct attached drives per node) • C220 U.2/U.3 All NVMe node: various capacity options from 1.6 TB or 15.3 TB U.2/U.3 NVMe directly attached drives (up to 10 direct attached drives per node) • Dual M.2 SATA SSDs with HW RAID support
PCIe	Up to 3 PCIe 5.0 half-height slots or up to 2 PCIe 5.0 full-height slots and 1 dedicated mLOM/OCP 3.0 slot

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Feature	Common specifications across the Cisco Compute Hyperconverged with VMware vSAN C220 M8 Rack Server family
Graphical Processing Units (GPUs)	Up to three single-wide GPUs supported
Network	• Cisco UCS Virtual Interface Card 15237 or 15427 (modular LAN on motherboard) • Quad 10/25/50 G or dual 40/100/200 G Ethernet VIC (Cisco UCS Virtual Interface Card 15425 or 15235) (optional) • Intel E810 dual- or quad-port Network Interface Card (NIC) • Intel 710 dual- or quad-port Network Interface Card (NIC)
Management	• Cisco Intersight • Cisco Integrated Management Controller (CIMC)
Advanced Reliability, Availability, and Serviceability (RAS) features	• Robust reporting and analytics • Hot-swappable, front-accessible data 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
Power Supplies	Hot-pluggable, redundant platinum and titanium options: • Platinum: 1050W DC and 1600W AC • Titanium: 1200W AC and 2300W AC

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System requirements

Table 3. System requirements

Item	Requirements
Fabric interconnect	Cisco UCS 64xx and 65xx fabric interconnects (for Intersight Managed Mode only)
Cisco Intersight	Intersight Managed Mode and Intersight Standalone Mode (minimum Intersight Essentials license per server)
Cisco IMC	4.3(6) or later

Ordering information

Table 4. Ordering information

Part #	Product description
HCI-M8-VSAN-MLB	Cisco Compute Hyperconverged with VMware vSAN M8 Rack Server MLB
HCIVS220C-M8E3S	Cisco Compute Hyperconverged C220 M8 1RU standard rack server with up to 16x E3.S drive bays
HCIVS220C-M8SN	Cisco Compute Hyperconverged C220 M8 1RU standard rack server with up to 10x U.2/U.3 drive bays

For ordering information, see the Cisco Compute Hyperconverged C220 M8 Rack Server specification sheet.

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 Hyperconverged with vSAN to accelerate business outcomes? To achieve enhanced performance and reliability for your HCI solutions, Cisco services ensure seamless integration, efficient deployment, and scalability of vSAN-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.

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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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Document history

New or Revised Topic	Described In	Date
Minor updates to the description and Fabric Interconnect options	Throughout the data sheet	April 2026

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