Cisco Compute Hyperconverged with Nutanix XE130C M8 Edge Server Family

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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 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 XE130C M8 Edge Server Family

Cisco Compute Hyperconverged XE130C M8 Edge Server is the flagship of the Cisco Unified Edge platform, which brings together compute, storage, routing, switching, and security into a single configurable solution to help IT organizations simplify the deployment, operations, and lifecycle management of edge infrastructure at global scale. Cisco Unified Edge is a fully integrated, edge-optimized, AI-ready, and SaaS managed platform, engineered to deliver a superior user experience with unprecedented visibility, consistency, and control for a host of edge use cases.

Cisco Unified Edge is a modular edge platform, with a 3RU, short-depth, multi-mountable chassis with features to operate in extended temperature range (5 to 45°C), maintain a quiet acoustic profile (40s dBA at 25°C and 20-percent load), and offer protection against high-particulate environments, allowing deployments in a wide range of physical spaces. The Cisco Compute Hyperconverged XE130C M8 Edge Servers are a family of 1RU, half-width compute nodes; up to five XE130c M8 compute nodes can be housed inside a Cisco UCS® XE9305 Chassis. It delivers enterprise-class performance, versatility, and density but in a compact edge-optimized form factor. Powered by the Intel® Xeon® 6 SoC processors with Performance-cores (P-cores) and available in two configurations ("Storage-Optimized" and "IO-Optimized"), the Cisco Compute Hyperconverged XE130C M8 Edge Server offers industry-leading adaptability at the edge, supporting a wide range of PCIe accelerators (GPUs, DPUs, etc.) and adapters, and integrated dual 25-Gbps connectivity to the in-chassis network mid-plane. This versatility enables the Cisco Compute Hyperconverged XE130C M8 Edge Server as a building block in the deployment of a wide range of workloads, including bare-metal servers, virtualization, containers, and AI/ML.

These Nutanix 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 can scale up to 5 nodes in a single cluster with Cisco Compute Hyperconverged XE130C M8 Edge Servers. These clusters can support both general-purpose deployments and mission-critical high-performance environments.

Figure 1. Cisco Compute Hyperconverged XE130C M8 Edge Server Front View.

Platform highlights

Simplify edge infrastructure and operations

- Modular edge-optimized solution, combining compute, storage, networking, and security into a single platform, significantly reducing complexity for IT teams. By integrating all these components, edge IT teams can streamline deployment and simplify infrastructure management.
- Zero-touch deployment with Cisco Intersight® and Nutanix Prism Central, eliminating the need for skilled IT staff to be physically present at the edge with easy serviceability and remote deployment, and enabling IT teams to efficiently roll out new services and updates while reducing costly truck rolls.
- Centralized management, providing global consistency, repeatability, and control and full-stack plug-and-play policies and settings at scale, leading to uniformity and ease of management across highly distributed edge locations.
- End-to-end visualization, offering global fleet visualization and cross-domain context visibility, improving operations for both server and network teams. This comprehensive view allows IT teams to monitor and manage their entire edge infrastructure effectively, enhancing operational efficiency and coordination across various domains.

Features and benefits

Table 1. Summary of features and benefits of Cisco Compute Hyperconverged XE130C M8 Edge Server

Feature	Benefit
Form factor	1RU-high and half-width compute node with a sled-based design that is optimized for ease of serviceability and can be installed or removed without any tools
Processors	One (1) Intel Xeon 6 SoC with P-core processor, choice of 20, or 32 physical cores at 2.0 GHz, equipped with features including: Intel Integrated Ethernet (connectivity); Intel Turbo Boost (overclocking); Intel AVX512 (AI and HPC workloads); Intel AMX (AI/ML workloads); Intel VT (virtualized workloads); and Intel Boot Guard, Intel TXT, Intel TDX, Intel SGX, Intel TME-MK (security); Intel QAT v2.2 (compression and cryptography); and Intel DSA (storage and networking performance)
Memory	Up to 768 GB of main memory with eight (8) 96-GB DDR5-6400 DIMMs
Storage	• Up to four all-NVMe E3.S form factor drives: – "Storage-Optimized" configuration: up to four (4) E3.S NVMe drive slots – "IO-Optimized" configuration: up to three (3) E3.S NVMe drive slots • Dual M.2 SATA SSDs with HW RAID support
GPU	Dedicated PCIe Gen5 GPU slot for one (1) 75-watt HH/HL GPU (optional)
Connectivity	• Two (2) rear-facing integrated 25 Gbps ports connecting through chassis midplane to the embedded switches on both Cisco UCS XE Chassis Management Controllers • Two (2) front-facing integrated 10 Gbps RJ-45 host ports

Feature	Benefit	
Cloud-native	Cisco Intersight simplifies infrastructure operations across data centers, colocations, and edge sites: • Manage using 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
Enterprise data protection	• 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	• Data-at-rest encryption using 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 microsegmentation	
Software	• Management software: Cisco Intersight, Nutanix Cloud Infrastructure (NCI), Nutanix Cloud Management (NCM), Nutanix Enterprise AI (NAI), and Nutanix Kubernetes Platform (NKP) for container management • Storage software: Nutanix AOS Storage, Nutanix Unified Storage (NUS) – for file, object, and volume use cases • Hypervisor: Nutanix Acropolis Hypervisor (AHV)	

Product specifications

Table 2. Specifications for Cisco Compute Hyperconverged XE130C M8 Edge Server

Feature	Common specifications across the Cisco Compute Hyperconverged XE130C M8 Edge Server Family
Form factor	1RU-high and half-width compute node with a sled-based design
Processors	One (1) Intel Xeon 6 SoC with P-core processor, with 20, or 32 physical cores
Memory	4 memory channels and 8 DIMM slots: 2, 4, or 8 of 16, 32, 48, 64, or 96 GB DDR5 6400 MT/s RDIMMs
Storage	• A ministorage module with two (2) M.2 SSDs, up to 960 GB each, protected by hardware RAID 1 • Storage-optimized configuration: four (4) front-panel hot-swappable E3.S NVMe drives, up to 30 TB each • I/O-optimized configuration: three (3) front-panel hot-swappable E3.S NVMe drives, up to 30 TB each
GPU	One (1) dedicated PCIe Gen5 GPU slot for a 75-watt, HH/HL GPU, such as the NVIDIA L4
Network	• Two (2) rear-facing integrated 25 Gbps uplink ports connecting through chassis midplane to both Cisco UCS XE Chassis Management Controllers • Two (2) front-facing integrated 10-Gbps RJ45 host ports
Management	Cisco Intersight (SaaS, Virtual Appliance and Private Virtual Appliance)
Temperature: operating*	23 to 113°F (5 to 45°C) (As the altitude increases, the maximum temperature decreases by 1°C per 300 m.)
Temperature: nonoperating*	-40 to 185°F (-40 to 85°C); maximum altitude is 40,000 ft
Humidity: operating*	5% to 85% noncondensing
Humidity: nonoperating*	5% to 93% noncondensing
Altitude: operating*	0 to 10,000 ft (0 to 3000 m); maximum ambient temperature decreases by 1°C per 300 m.
Altitude: Nonoperating*	40,000 ft (12,000 m)

*Pending finalization

Cisco UCS XE9305 Chassis

The foundation of Cisco Compute Hyperconverged XE130C M8 Edge Server is the Cisco UCS XE9305 chassis. A 3RU, short-depth, multi-mountable chassis, the Cisco UCS XE9305 Chassis provides five front-facing slots that can accommodate sled-like nodes that are easy to service and adaptable to deliver a range of capabilities, from computing to storage and networking to security. For more details, refer to Cisco UCS XE9305 Chassis Data Sheet.

System requirements

Table 3. System requirements

Item	Description
Cisco UCS XE9305 Chassis	Cisco UCS XE9305 Chassis supports upto 5 Cisco Compute Hyperconverged XE130C M8 Edge Servers in a chassis.
Cisco Intersight	Intersight (Saas/Virtual Appliance/Private Virtual Appliance) is required to configure and deploy a Nutanix HCI cluster with Cisco Compute Hyperconverged XE130C M8 Edge Servers.

Ordering information

Table 4. Ordering information

Part #	Product Description
HCIXE-M8-NTNX-MLB	Cisco Compute Hyperconverged XE-Series M8 with Nutanix MLB
HCIXENX-9305-U	Cisco HCI XE9305 3RU Nutanix Chassis (includes fans)
HCIXENX130C-M8-20	Cisco HCI XE130c M8 20-ore 1U Nutanix Compute Node
HCIXENX130C-M8-32	Cisco HCI XE130c M8 32-Core 1U Nutanix Compute Node
HCIXENX130C-M8-20U	Cisco HCI XE130c M8 20-Core 1U Nutanix Compute Node (ordered as standalone)
HCIXENX130C-M8-32U	Cisco HCI XE130c M8 32-Core 1U Nutanix Compute Node (ordered as standalone)

For ordering information, see the Cisco Compute Hyperconverged XE130C M8 Edge Server specification sheet and Cisco Compute Hyperconverged XE130C M8 with Nutanix MLB ordering guide.

Warranty

The Cisco UCS XE130c M8 Compute Node has a three-year Next-Business-Day (NBD) hardware warranty and a 90-day software warranty. Augmenting the Cisco Unified Computing System™ (Cisco UCS) 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-totalcare/index.html.

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 our 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

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