

Cisco UCS XE150c M8 Compute Node

Contents

Overview.....	2
Models and specifications.....	7
Ordering information	9
Warranty.....	11
Sustainability profile.....	12
Appendix.....	13

Overview

Cisco Unified Edge 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 3 RU, short-depth, multi-mountable chassis with features to operate in extended temperature range (up to 0 to 45°C)¹, maintain a quiet acoustic profile (40s dBA or lower under certain conditions)², and offer protection against airborne pollutants, allowing deployments in a wide range of physical spaces.

The Cisco UCS® XE150c M8 is a family of 2 RU, half-width, short-depth compute nodes; up to two Cisco UCS XE150c 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 UCS XE150c M8 offers industry-leading adaptability at the edge, supporting an expanded range of higher wattage, FHFL PCIe accelerators (such as the NVIDIA RTX Pro 4500/6000 Blackwell Server Edition GPUs, and L40S), PCIe NIC and FC adapters, and integrated dual 25 Gbps connectivity to the in-chassis network mid-plane. This versatility enables the Cisco UCS XE150c M8 as a building block in the deployment of a wide range of workloads, including bare-metal servers, virtualization, containers, and AI/ML.

1. Actual operating temperature ranges are dependent on multiple factors including workload, chassis and node configurations, and the operating altitude.

2. Actual operating acoustics are dependent on multiple factors including workload, chassis and node configurations, operating temperature, and spatial considerations.



Image 1. Cisco Unified Edge

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**, 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 enabling the deployment of fleet blueprints, 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.

Unify edge systems

- **Unifying edge systems**, by bringing together key technologies to meet the distinctive needs of edge environments, while assuring security, manageability, and performance.
- **Unified platform**, a modular, edge-optimized, AI-ready, and SaaS-managed platform integrating compute, network, storage, and security so IT teams can streamline deployment and simplify lifecycle management.
- **Optimized for edge environments**, meeting unique edge requirements for power, cooling, acoustics, and space while supporting workloads of today and tomorrow.
- **Integrated protection**, extending advanced compute and networking platform-level physical and digital security across the entire system to protect edge operations. SaaS management platforms ensure that users are verified and authenticated before granting access, minimizing risks and protecting sensitive data.
- **Streamline lifecycle management**, reusing chassis power and cooling infrastructure across multiple generations or types of nodes, enhancing longevity, sustainability, and serviceability. The modular architecture lets organizations adopt technologies at their pace, simplifying lifecycle management with less risk.

Redefine edge solutions

- **Redefining edge solutions for AI era**, by integrating smoothly with existing edge environments, while delivering the accelerated performance required for AI applications. Cisco Unified Edge acts as a springboard to help organizations unlock new levels of data-powered efficiency and innovation.
- **AI-ready system**, with support for advanced processors and accelerators, helping ensure that IT teams can efficiently run evolving workload demands without compromising on performance or efficiency.
- **Ecosystem integration**, offering a choice of infrastructure software, such as Nutanix, Red Hat, VMware, and SUSE, provides flexibility to address any use case. This integration capability allows IT teams to tailor solutions to specific needs, for compatibility and optimized performance.
- **Validated edge solutions**, offering tested and certified solutions for vertical-specific use cases, ensuring reliability. IT teams can deploy with confidence, knowing that the solutions are tailored to meet the unique challenges of their specific industry.
- **Continuous SaaS enhancements**, offering advanced end-to-end visibility and remediation capabilities, allows IT teams to quickly identify and resolve issues, maintaining system integrity and performance over time.

Key features and benefits

The Cisco UCS XE150c M8 empowers organizations to unlock the full potential of their edge data by providing a modular, high-performance compute foundation that is ready for the next decade of AI innovation. The following table describes its key capabilities.

Table 1. Key features of Cisco UCS XE150c M8 Compute Node

Form factor	2 RU-high, half-width, and short-depth compute node with a sled-based design that is optimized for ease of serviceability and can be installed or removed without any tools.
CPU	One (1) Intel Xeon 6 SoC with P-core processor, choice of 20 or 32 physical cores at 2.0 GHz, equipped with a rich set of processor features including: Intel Integrated Ethernet (connectivity); Intel Turbo Boost (overclocking); Intel AVX-512 (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), and Intel Media Accelerator (32-core XE150c M8 compute nodes only).
Memory	Up to 1,024 GB of main memory with eight (8) 128 GB DDR5-6400 DIMMs.
GPU	Dedicated x16 PCIe Gen5 slot on the mezzanine expansion tray for one (1) FHFL GPU or other adapters.
Connectivity	<ul style="list-style-type: none"> • Two (2) rear-facing integrated 25 Gbps ports connecting via chassis mid-plane to the embedded switches on both Cisco UCS XE Chassis Management Controllers. • Two (2) front-facing integrated 10 Gbps RJ-45 host ports.
Storage	<p>There are two types of flash storage options simultaneously available in the Cisco UCS XE150c M8 Compute Node:</p> <ul style="list-style-type: none"> • Internal M.2 SSDs (boot drives): Up to two (2) M.2 SSDs protected by hardware RAID 1 • Front-facing E3.S NVMe drives: <ul style="list-style-type: none"> • “Storage-Optimized” configuration: up to four (4) E3.S NVMe drive slots • “IO-Optimized” configuration: up to three (3) E3.S NVMe drive slots

PCIe adapters	One (1) x8 PCIe Gen5 slot supporting a range of HHHL peripherals, including PCIe NIC and FC adapters. This is optional and requires the “IO-Optimized” configuration.
Security	<ul style="list-style-type: none">• Optional TPM 2.0 module for host OS• Built-in TPM 2.0 module for BMC

Models and specifications



Image 2. Cisco UCS XE150c M8 Compute Node

Table 2. Cisco UCS XE150c M8 Compute Node specifications

Item	Specifications
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, 96, or 128 GB DDR5 6400 MT/s RDIMMs
LOM	<p>Two (2) rear-facing integrated 25 Gbps uplink ports connecting via chassis mid-plane to both Chassis Management Controllers</p> <p>Two (2) front-panel integrated 10 Gbps RJ-45 host ports</p>

Item	Specifications
Front-panel ports	One (1) KVM connector One (1) USB-C port
Storage	A mini storage module with two (2) M.2 SSDs (boot drives), 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 IO-optimized configuration: three (3) front-panel hot-swappable E3.S NVMe drives, up to 30 TB each
GPU	One (1) x16 PCIe Gen5 slot on the mezzanine expansion tray for a FHFL accelerator, such as the NVIDIA RTX Pro 4500 Blackwell Server Edition GPU, NVIDIA RTX Pro 6000 Blackwell Server Edition GPU (Power Capped to 450W) and L40S
PCIe adapter	One (1) x8 PCIe Gen5 slot for a HH/HL NIC or FC adapter; requires IO-optimized configuration
Management	Cisco Intersight software (SaaS initially, Virtual Appliance and Private Virtual Appliance to follow)
Temperature: Operating*	23 to 113°F (0 to 35°C) (as altitude increases, 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

Item	Specifications
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

Chassis

See Cisco UCS XE9305 Chassis data sheet.

Ordering information

Table 3. Product IDs and descriptions

Part number	Description
UCSX-150C-M8-20	Cisco UCS XE150c M8 Compute Node with 20-core CPU and without storage or memory (ordered as a UCS XE9305 Chassis option)
UCSX-150C-M8-32	Cisco UCS XE150c M8 Compute Node with 32-core CPU and without storage or memory (ordered as a UCS XE9305 Chassis option)

Part number	Description
UCSX-150C-M8-20-U	Cisco UCS XE150c M8 Compute Node with 20-core CPU and without storage or memory (ordered as standalone)
UCSX-150C-M8-32-U	Cisco UCS XE150c M8 Compute Node with 32-core CPU and without storage or memory (ordered as standalone)

For information about installing or upgrading your Cisco UCS XE150c M8 Compute Node, see the Hardware Installation guide. For ordering information, see the Cisco UCS XE150c M8 Compute Node spec sheet or the Cisco Unified Edge ordering guide.

Warranty

The Cisco UCS XE150c 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 Support provides AI and human expertise for greater uptime, performance, and resilience. Composed of three simple tiers (Basic, Standard, and Signature), Cisco Support is designed to meet every support need.

Basic combines Cisco's industry-leading and award-winning foundational technical services with an extra level of actionable business intelligence that provides essential support coverage for individual products with access to Cisco Technical Assistance Center (TAC) with 24x7 product support.

Standard includes both Cisco® product support and solution-level support, driving faster resolution for multi-product, multivendor solution environments and minimize risk with proactive insights. Whether there is an issue with a Cisco product or with a solution partner product, just call us. Our experts act as the primary point of contact and manage cases from first call to resolution. Resolution times are reduced with proactive diagnostics, real-time alerts, and automated remediation, making this the preferred level of support by 60% of IT decision makers.

Signature provides personalized, expert-led engagements and AI insights for proactive operational excellence. With 15-minute response time and restoration Service Level Agreement (SLA), Signature is Cisco's top tier support offer and provides continuous lifecycle and contract oversight to optimize service coverage and license utilization.

For more information on Cisco Support, please refer to the following Legal Service Description https://www.cisco.com/c/dam/en_us/about/doing_business/legal/service_descriptions/docs/Cisco-Support.pdf.

Sustainability profile

Cisco is embedding sustainability into the product lifecycle—from manufacturing to end of use. Designed with consideration for [Circular Design Principles](#), our products feature both individual and portfolio-wide programs and innovations, including those that address efficient architecture design, power consumption, energy management, packaging sustainability, and takeback. These elements are pivotal in reducing operational costs and advancing net-zero greenhouse gas (GHG) emissions targets, and other sustainability-related ambitions.

Information about Cisco’s environmental, social, and governance (ESG) initiatives and performance is available in [Cisco’s Purpose Reporting Hub](#).

Table 4. 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
	Operating and nonoperating conditions	Table 2. Product specifications
	Regulatory compliance	Refer to UCS XE9305 chassis data sheet
Power	Power supply	Refer to UCS XE9305 chassis data sheet
	Thermal overview	Main features Table 2. Product specifications
Material	Product packaging weight and materials	Contact: environment@cisco.com
	Modular design	Benefits

Appendix

Cisco and partner services

Cisco and our industry-leading partners deliver services that accelerate your transition to a Cisco Unified Edge solution. Cisco Unified Computing Services (UCS) can help you create an agile infrastructure, accelerate time to value, reduce costs and risks, and maintain availability during deployment and migration. After deployment, our services can help you improve performance, availability, and resiliency as your business needs evolve, and help you further mitigate risk. For more information, visit <https://www.cisco.com/go/unifiedcomputingservices>.

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