Cisco HyperFlex HX220c Edge M6 Node

High storage capacity for edge computing

October 2021

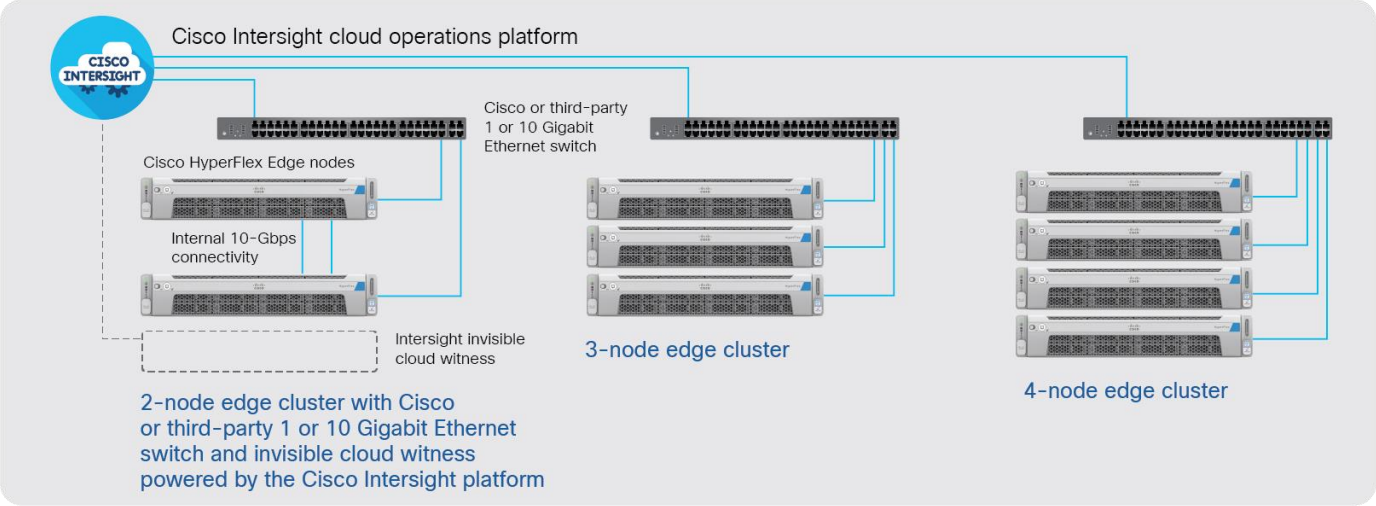
Contents

Rich digital experiences need always-on, local, high-performance computing that is close to users. Retail, finance, education, healthcare, transportation, and manufacturing organizations, and remote and branch offices in general, are all pushing computing to the network edge. Cisco HyperFlex™ HX220c Edge M6 Nodes bring the robust feature set of Cisco HyperFlex systems to your edge environments with high-capacity storage and cloud management in a small footprint.

Simplicity for the edge

As enterprise applications migrated to centralized data centers and the cloud, the Internet edge moved closer to user devices and organizational touchpoints like remote and branch offices. Cisco HyperFlex HX220c Edge M6 Nodes are deployed as a preintegrated cluster with a unified pool of resources that you can quickly provision, adapt, scale, and manage to efficiently power your remote-office and branch-office (ROBO) locations. Physically, the solutions are deployed as sets of two, three, or four edge-specific nodes that use Cisco or third-party Gigabit or 10 Gigabit Ethernet switches, offering the utmost in flexibility for deployment in remote and branch-office environments (Figure 1). All nodes use 3rd Gen Intel® Xeon® Scalable CPUs and next-generation DDR4 memory and offer 12-Gbps SAS throughput.

Figure 1.
Cisco HyperFlex Edge delivers a preintegrated, high storage capacity cluster to remote-office and branch-office locations



Cisco HyperFlex HX220c Edge M6 Nodes

Cisco HyperFlex HX220c Edge M6 Nodes bring high storage capacity to the network edge. These nodes are available with hybrid and all-flash storage in a one-rack-unit (1RU) chassis. With the same easy deployment and management as all Cisco HyperFlex Edge systems, these platforms bring greater storage capacity to edge locations and small or medium-size businesses. The solutions are managed by the Cisco Intersight™ cloud operations platform, delivering consistent policy-based enforcement, powering growing requirements in branch offices and remote sites, and enabling new IoT and intelligent services at the network edge.

Features and benefits

Table 1. Features and benefits of Cisco HyperFlex HX220c Edge M6 Nodes.

Feature	Benefit		
Memory	• High memory capacity, up to 8 TB of memory		
Intel Xeon Scalable CPUs	High performance • 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)	Agility • Supports highly densive virtual machine deployments • Offers flexible virtualization technology that optimizes performance for virtualized environments, including processor support for migration and direct I/O	Efficiency and security • 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
Network	• Easy deployment in existing edge locations • Use of existing top-of-rack 1 Gigabit Ethernet or 10/25 Gigabit Ethernet swiching networks for cluster communication • Support for single and dual switch configurations		
Expansion	• Support for up to 1 to 3 half-height PCIe risers or 1 to 2 full height PCI risers • Flexibility, increased performance, and compatibility with industry standards • High I/O bandwidth, increased flexibility, and backward compatibility with support for PCIe 2.0		
Virtualization optimization	• 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 • Capability to move virtual machine security features and policies from rack to rack or rack to blade		
Cloud-based management	Cisco Intersight™ simplifies operations across on-premises data centers, edge sites, and public clouds. • Use a software-as-a-service platform that bridges applications with infrastructure • Gain instant access to clusters regardless of where they are deployed • Correlate visibility and management across bare-metal servers, hypervisors, Kubernetes, and serverless and application components • Transform operations with artificial intelligence to reach needed scale and velocity • Collaborate and work smarter and faster by automating lifecycle workflows • Support compliance and governance with extensible, open capabilities that natively integrate with third-party platforms and tools • Proactively respond to impending issues with a recommendation engine that determines when capacity needs to be scaled	Additional management capabilities include: • Optional Installation wizard for automated configuration • Support for the VMware vSphere plug-in • Support for the Cisco HyperFlex Connect interface with an HTML 5 presentation layer accessible on desktop and laptop computers and mobile devices	
Storage	• All-flash-memory or hybrid (hard-disk drive [HDD] and solid-state-disk [SSD] memory) storage configurations		
Enterprise data protection	• Pointer-based snapshot capabilities		

Feature	Benefit
	• Native snapshots for iSCSI LUNs, including a consistency group for snapshot operations, instantaneous snapshot creation, and RESTful APIs for snapshot creation and third-party backup use • Snapshot integration with MEDITECH-BridgeHead for electronic health records and databases • Near-instant cloning • Inline deduplication and compression • Native replication for disaster recovery • N:1 replication for data center clusters with fabric interconnects and more than 4 nodes, as well as a flexible retention policy for local and remote point-in-time copies • Data-at-rest encryption using self-encrypting drives and enterprise key management integration
Security	• Locking bezel option to protect against unauthorized access to disk drives
Software	• Cisco HyperFlex HX Data Platform Software (software subscription, Edge License)

Product specifications

Table 2. Specifications for Cisco HyperFlex HX220c Edge M6 Hybrid, and All Flash Short Depth Nodes.

Feature	Description
Chassis	• 1RU of rack space per node
Nodes	• 2, 3, or 4 Cisco HyperFlex HX220c Short Depth Nodes (hybrid or all-flash)
Processors	• One or two 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake)
Graphics Processing Units (GPUs)	• NVIDIA T4 Tensor Core GPU card (optional)
Interconnect	• 3 Intel UPI channels per processor, each capable of 10.4 gigatransfers per second (GTPS)
Chip set	• Intel C621 series
Memory	• 32 DDR4 DIMMs • Support for DDR4 registered DIMMs (RDIMMs) and Load-Reduced DIMMS (LRDIMMs) • Advanced error-correcting code (ECC) • Independent channel mode • Lockstep channel mode
PCIe slots	• Up to 1 to 3 half-height PCIe risers or 1 to 2 full height PCI risers • 2 dedicated SAS HBA slots
Modular LAN on Motherboard (mLOM) slot	• Two dedicated mLOM ports support Cisco Virtual Interface Cards • Cisco UCS VIC 1467 Quad Port 10/25 Gigabit SFP 28
Network interface cards supported	• Intel i350 quad-port 1 Gigabit Ethernet network interface card • Intel X710-DA2 dual-port 10 Gigabit Ethernet network interface card • Intel X710 quad-port 10 Gigabit Ethernet network interface card • Intel X710-T2LG dual-port 10 Gigabit Ethernet network interface card • Intel XXV810-DA2 dual-port 25 Gigabit Ethernet network interface card • Intel XXV810-DA2 quad-port 25 Gigabit Ethernet network interface card

Feature	Description
Storage	• High-capacity configurations for the HX Data Platform capacity layer • HX220c M6 Node All Flash Node: 6 to 8 SSD capacity drives • HX220c M6 Hybrid Node: 6 to 8 capacity hard-disk drives (HDDs) • 1 SATA SSD logging drive • 1 SATA SSD caching drive See the specification sheet for more information
Cisco® Integrated Management Controller (IMC)	• Provides video using the ASPEED Pilot 4 video and graphics controller • Connection to Cisco UCS management or the Cisco HyperFlex dashboard for automated configuration through a unified interface • Integraded 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	• 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 uptime 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 • Cisco Call Home and onsite 24-hours-a-day, 7-days-a-week (24 x 7) support options
Rear-panel connectors	• 1 Gigabit Ethernet management port • 2 x 10 Gigabit Ethernet ports • 1 flexible modular LAN on motherboard (mLOM) slot • 1 RS-232 serial port (RJ45 connector) • 1 Video Graphics Array (VGA) video port (DB15 connector) • 2 USB 3.0 ports
Front-panel connectors	• 1 KVM console connector (supplies 2 USB, 1 VGA DB15, and 1 RS-232 serial port connectors)
Power and cooling	• 1 or 2 hot-swappable power supplies for full redundancy • 1050W (AC and DC options) • 1600W (AC) • 2300W (AC) • 8 hot-swappable fans for front-to-rear cooling
Rail-kit options	• Cisco ball-bearing rail kit with optional reversible cable-management arm • Cisco friction rail kit with optional reversible cable-management arm
Software	• Cisco HyperFlex HX Data Platform Software (software subscription, Edge license)

Ordering information

For a complete list of part numbers, refer to the HX220c Edge M6 specification sheet.

Cisco Unified Computing Services

Cisco and our industry-leading partners deliver services that accelerate your transition to Cisco HyperFlex systems. Cisco Unified Computing 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 and help you further mitigate risk.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's Corporate Social Responsibility (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

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.

How to buy

To view buying options and speak with a Cisco sales representative, go to www.cisco.com/c/en/us/buy.

For more information

For more information about Cisco HyperFlex systems, refer to http://www.cisco.com/go/hyperflex.

Document history

New or revised topic	Described in	Date
Initial release	Spec sheet	September 2021

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **https://www.cisco.com/go/offices**.

Printed in USA LE-79605-00 10/21