Cisco HyperFlex HX240c Edge M5 Short Depth Nodes

High storage capacity for edge computing

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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™ HX240c Edge M5 Short-Depth (SD) Nodes bring the robust feature set of Cisco HyperFlex systems to your edge environments with high-capacity storage and cloud management in a smaller form factor.

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 HX240c Edge M5 SD 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 Intel® Xeon® Scalable CPUs and next-generation DDR4 memory and offer 12-Gbps SAS throughput.
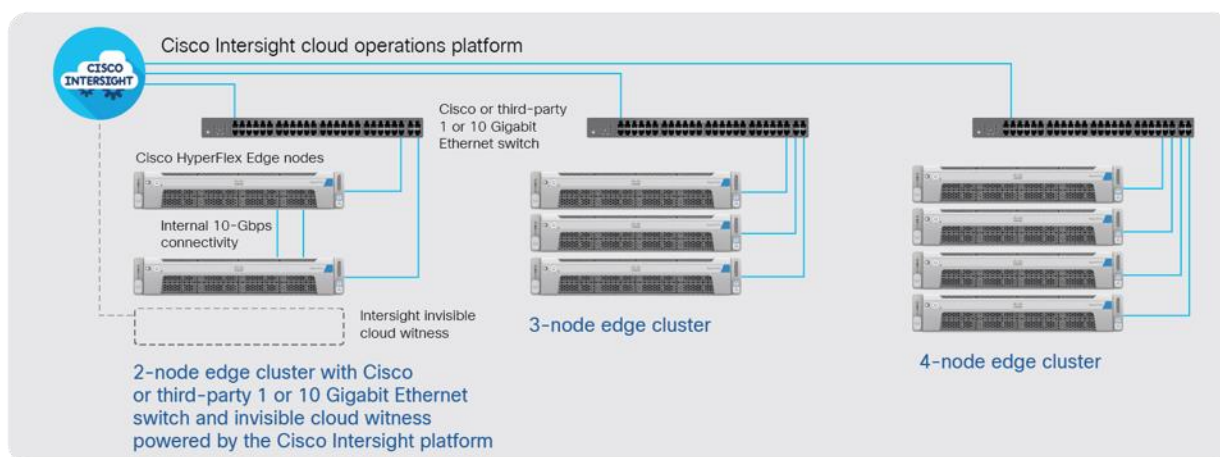
Figure 1.
Cisco HyperFlex Edge delivers a preintegrated, high storage capacity cluster to remote-office and branch-office locations

Cisco HyperFlex HX240c Edge M5 SD Nodes

Cisco HyperFlex HX240c Edge M5 SD Nodes bring high storage capacity to the network edge. These nodes are available with hybrid and all-flash storage in a Two-Rack-Unit (2RU), short-depth 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 HX240c Edge M5 Short Depth Nodes.

Feature	Benefit		
Memory	• High memory capacity, from 128 GB to 3 TB of memory		
Intel Xeon Scalable CPUs	High performance • 14-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 2 PCI Express (PCIe) 3.0 slots • 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	

Feature	Benefit
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 • Near-instant cloning • Inline deduplication and compression
Software	• Cisco HyperFlex HX Data Platform Software (software subscription)

Product specifications

Table 2.   Specifications for Cisco HyperFlex HX240c Edge M5 Hybrid, All Flash, and Short Depth Nodes.

Feature	Description
Chassis	• 2RU of rack space per node in a short-depth (22-inch) chassis
Nodes	• 2, 3, or 4 Cisco HyperFlex HX240c Short Depth Nodes (hybrid or all-flash)
Processors	• 1 or 2 Intel Xeon Scalable CPUs per node
Interconnect	• 3 Intel UPI channels per processor, each capable of 10.4 Gigatransfers Per Second (GTPS)
Chip set	• Intel C620 series
Memory	• 24 DDR2 DIMM slots per node • 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 6 PCIe slots (on two riser cards)
	• Option 1: 2 drive bays, 1 PCIe slot, and 1 Micro SD slot
	  ◦ Drive bay 3: 4 x 2.5-inch card height
	  ◦ Drive bay 5: 4 x 2.5-inch card height
	  ◦ PCIe slot 1: full-height, ¾ length slot
	  ◦ Micro SD slot include on top of riser
	• Option 2: 2 drive bays, 1 PCIe slot, 1 NVMe connector
	  ◦ Drive bay 3: 4 x 2.5-inch card height
	  ◦ Drive bay 5: 4 x 2.5-inch card height
	  ◦ PCIe slot 1: full-height, ¾ length slot
	  ◦ 1 NVMe connector that supports 2 PCIe NVME drives
	• 1 dedicated SAS HBA slot

Feature	Description
Modular LAN on Motherboard (mLOM) slot	• 1 dedicated mLOM spot supports Cisco Virtual Interface Cards
Storage	• HX240c Edge Short Depth: 　◦ Up to 6 Small-Form-Factor (SFF) SDD or HDD storage capacity drives (960-GB, 3.8-TB, or 7.6-TB options) for up to 45.6 TB total capacity 　◦ 1 SSD caching drive (480-GB or 800-GB options) 　◦ 1 SSD logging drive (240-GB or 480-GB options) • Cisco 12-Gbps Modular SAS Host Bus Adapter (HBA) for internal connection for up to 6 internal SAS/SAA SSDs or SAS/SATA HDDs • M.2 SATA SSD drive for boot
Cisco® Integrated Management Controller (IMC)	• Provides video using the Matrox G200e 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
Front-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 • Power, reset, and ID buttons • System, fan, temperature, power supply, and network activity status LEDs
Power and cooling	• Two hot-swappable power supplies for full redundancy • 1050W (AC and DC options) • 6 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)

Ordering information

For a complete list of part numbers, refer to the [HX240c Edge M5 Hybrid and All Flash](#) and [HX240c Edge M5 Short Depth](#) specification sheets.

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For more information

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

Document history

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