

Cisco HyperFlex HX220c Edge M5



Hyperconvergence engineered on the fifth-generation Cisco UCS platform

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™ Edge brings the robust feature set of Cisco HyperFlex systems to your edge environments with a low-cost, easy-to-deploy, centrally managed solution.

Designed for the edge

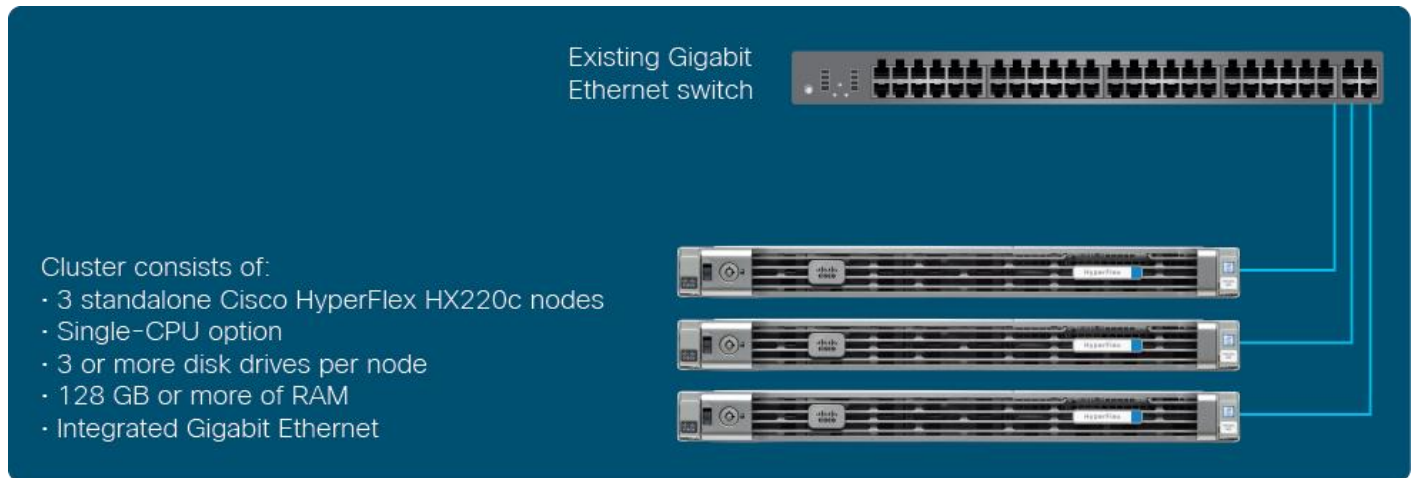
While enterprise applications have been migrating to centralized data centers and to the cloud, the Internet edge has been moving to branch and remote locations closer to user devices and organizational touchpoints. Cisco HyperFlex Edge can help your organization extend its reach and service customers and employees at their touchpoints.

Built on the full power of Cisco HyperFlex systems, our entry-level Cisco HyperFlex Edge configurations can be deployed in existing edge locations and can even use existing networks for cluster communication. These features enable you to easily and affordably deploy Cisco HyperFlex Edge as a hyperconverged solution in a multitude of edge locations, or even as the sole cluster supporting a small or medium-size business.

Cisco HyperFlex Edge

Cisco HyperFlex Edge is 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 (Figure 1). Physically, the system is delivered as a cluster of three hybrid or all-flash nodes that are integrated using your existing Gigabit Ethernet switch. All nodes use Intel® Xeon® Scalable CPUs and next-generation DDR4 memory and offer 12-Gbps SAS throughput. As a result, these fifth-generation servers offer faster processing, more cores, and a faster, larger memory capacity than previous-generation nodes.

Figure 1. Cisco HyperFlex Edge



Main features and benefits

Table 1 summarizes the features and benefits of the Cisco HyperFlex Edge system.

Table 1. Features and benefits

Feature	Benefit
Memory	128 GB or more of memory per node Capability to use 16-, 32-, 64-, or 128-GB DIMMs
1 or 2 Intel Xeon Scalable CPUs	Built on 14-nanometer (nm) processor technology, Intel Xeon Scalable processors are designed to deliver highly robust capabilities with outstanding performance, security, and agility. Up to 28 cores in 2-socket configurations Top-of-the-line memory-channel performance Three Intel Ultra Path Interconnect (UPI) links across sockets for improved scalability and intercore data flow Hardware-assisted security advancements Low-power, high-speed DDR4 memory technology Increased performance with Intel Automated Vector Extensions 2 (AVX2) Increased virtual machine density Automated energy efficiency that reduces energy costs by automatically putting the processor and memory in the lowest available power state while still delivering the performance required Flexible virtualization technology that optimizes performance for virtualized environments, including processor support for migration and direct I/O Innovation with the latest processors, which increase processor frequency and improve security
Network	Deployment in existing edge locations Use of existing Gigabit Ethernet networks for cluster communication
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
Choice of management tools	Installation wizard for automated configuration Capability to manage centralized and remote locations through the VMware vSphere plug-in Access through the Cisco HyperFlex Connect interface with an HTML 5 presentation layer accessible on desktop and laptop computers and mobile devices

Storage	<p>Built-in role- and policy-based management through service profiles and templates, enabling more effective use of skilled server, network, and storage administrators</p> <p>Automated provisioning and increased business agility, allowing data center managers to provision applications in minutes rather than days by associating a service profile with a new, added, or repurposed Cisco HyperFlex HX220c M5 Node or HX220c All Flash Node</p> <p>All-flash-memory or hybrid (hard-disk drive [HDD] and solid-state-disk [SSD] memory) storage configurations</p> <p>High-capacity configurations for the Cisco HyperFlex HX Data Platform capacity layer:</p> <ul style="list-style-type: none"> HX220c M5 Node: 3 to 8 x 1.2-TB SAS HDDs HX220c M5 All Flash Node: 3 to 8 x 3.8-TB or 960-GB SSD drives <p>1 x 240-GB SSD log drive</p> <p>Caching or write log drive:</p> <ul style="list-style-type: none"> HX220c M5 Node: SSD caching drive HX220c M5 All Flash Node: SAS SSD write-logging drive <p>Cisco 12-Gbps Modular SAS host bus adapter (HBA) with internal SAS connectivity</p> <p>M.2 SATA SSD drive for boot</p>
Enterprise data protection	<p>Pointer-based snapshot capabilities</p> <p>Near-instant cloning</p> <p>Inline deduplication and compression</p>
Cisco® Integrated Management Controller (IMC)	<p>Connection to Cisco UCS management or the Cisco HyperFlex dashboard for automated configuration through a unified interface</p>
Advanced reliability, availability, and serviceability (RAS) features	<p>Highly available and self-healing architecture</p> <p>Robust reporting and analytics</p> <p>Hot-swappable, front-accessible drives</p> <p>Dual-redundant fans and hot-swappable, redundant power supplies for enterprise-class reliability and uptime</p> <p>Convenient latching lid for easy access to internal server</p> <p>Tool-free CPU insertion, enabling processor upgrades and replacements with less risk of damage</p> <p>Tool-free access to all serviceable items, and color-coded indicators to guide users to hot-pluggable and serviceable items</p> <p>Nondisruptive rolling upgrades</p> <p>Cisco Call Home and onsite 24-hours-a-day, 7-days-a-week (24 x 7) support options</p>
Security features	<p>Locking bezel option to protect against unauthorized access to disk drives</p>
Software	<p>Cisco HyperFlex HX Data Platform Software (software subscription)</p>

Product specifications

Table 2 lists specifications for Cisco HyperFlex Edge systems.

Table 2. Product specifications

Item	Specification
Chassis	3RU of rack space for the cluster
Nodes	3 Cisco HyperFlex HX220c M5SX Nodes or HX220c-M5SX All Flash Nodes
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 DDR4 DIMM slots per node Support for DDR4 registered DIMMs (RDIMMs) Advanced error-correcting code (ECC) Independent channel mode Lockstep channel mode
PCIe slots	6 PCIe 3.0 slots per cluster (2 PCIe slots per node)
Embedded network interface card (NIC)	Dual 10-Gbps Intel x550 Ethernet ports per node (1-Gbps connection usable for Cisco HyperFlex Edge) Support for the wake-on-LAN (WoL) standard
Power supplies	Up to 2 hot-pluggable, redundant 1050-watt (W) or 1600W power supplies per node
IMC	Integrated 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
Front-panel connector	One KVM console connector (supplies 2 USB connectors, 1 VGA connector, and 1 serial connector) per node
Front-panel locator LED	Indicator to help direct administrators to specific servers in large data center environments
Additional rear connectors	Additional interfaces including a Video Graphics Array (VGA) video port, 2 USB 3.0 ports, an RJ45 serial port, a 1 Gigabit Ethernet management port, and dual 10 Gigabit Ethernet ports per node
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 support	ESX 6.5 ESX 6.0 Cisco IMC Supervisor

Ordering information

For a complete list of part numbers, refer to the Cisco HyperFlex Edge 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 financing to help you achieve your objectives

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For more information

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



Cisco HyperFlex™ systems with Intel® Xeon® processors

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