



Cisco UCS C210 M2 General-Purpose Rack-Mount Server

General-Purpose Server for Workloads Requiring Economical, High-Capacity Internal Storage

At-A-Glance

High-Capacity Server for Storage-Intensive Workloads

The Cisco® UCS C210 M2 General-Purpose Rack-Mount Server is a general-purpose, two-socket, two-rack-unit (2RU) rack-mount server designed to balance performance, density, and efficiency for workloads requiring economical, high-capacity, reliable internal storage (Figure 1).

Figure 1. Cisco UCS C210 M2 Server



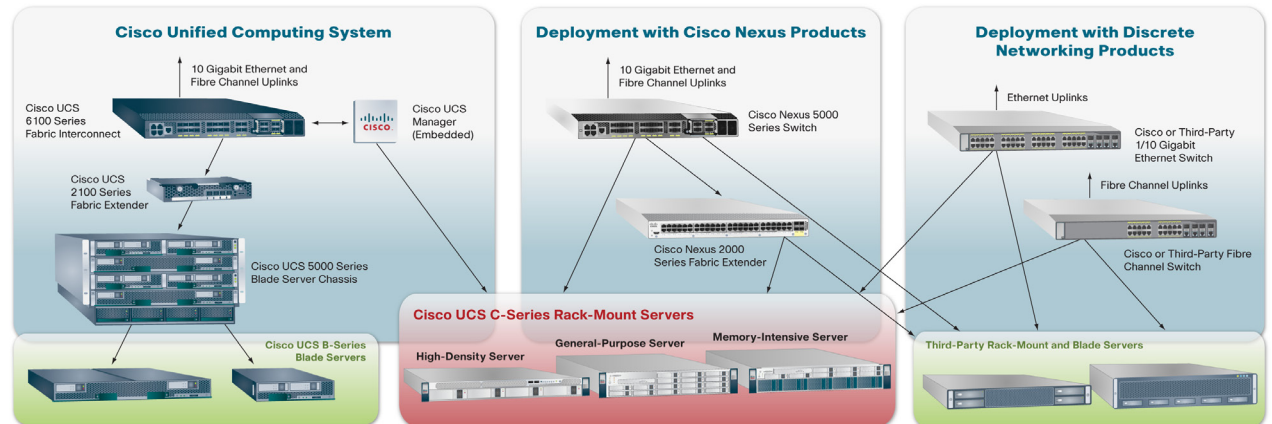
Designed for applications such as virtualization, network file servers, application servers, appliances, storage servers, database servers, and content-delivery servers, the Cisco UCS C210 M2 server packs up to 16 Small Form-Factor (SFF) SAS, SATA and SSD drives into only two rack units, for a total of up to 16 terabytes (TB) of storage.

Not all storage-intensive workloads are alike, and the Cisco UCS C210 M2 server's disk configuration adapts to balance performance and economy to best meet individual workload requirements. Both 10,000- and 15,000-RPM SAS drives deliver a high number of I/O operations per second for transactional workloads such as database management systems. High-capacity SATA drives provide an economical solution for applications, including content-delivery servers. A choice of three RAID controller options helps increase performance and reliability and the server's flexibility.

Unique Benefits in a Familiar Package

The Cisco UCS C210 M2 server extends Cisco's product portfolio to meet the needs of customers that choose to deploy rack-mount servers. The server enables organizations to deploy systems incrementally—using as many or as few servers as needed—on a schedule that best meets the organization's timing and budget.

Figure 2. Cisco UCS C-Series Rack-Mount Servers Are Designed to Operate in a Wide Range of Data Center Environments, Including Those Using the Cisco Unified Computing System, Cisco Nexus® Family Products, and Discrete Ethernet and Fibre Channel Switches from Cisco and Third Parties



Designed to operate both in standalone environments and as part of the Cisco Unified Computing System™* (Figure 2), the server combines high-capacity disk storage and I/O configurations with Cisco innovations, including a unified network fabric and network-aware Cisco VN-Link technology.

The server brings differentiation and value to what has been a commodity market with products not optimized to meet the needs of virtualized data centers. Available from Cisco and its data center network infrastructure (DCNI) partners, the server advances the rack-mount server market with the following features:

- **Flexible I/O and storage options:** With five PCI Express (PCIe) expansion slots, the server offers I/O flexibility and bandwidth, including the ability to integrate with traditional Gigabit Ethernet LANs and Fibre Channel SANs and incorporate a range of RAID controller options to support up to 16 drives.
- **10 Gigabit unified network fabric:** When equipped with converged network adapters (CNAs) or the Cisco UCS P81E Virtual Interface Card*, the server integrates with a low-latency, lossless 10-Gbps

Ethernet and industry-standard Fibre Channel over Ethernet (FCoE) fabric. This technology enables a “wire-once” deployment model in which changing I/O configurations no longer means installing adapters and recabling racks and switches.

- **Virtualization optimization:** Cisco VN-Link technology, I/O virtualization, and Intel® Xeon® 5600 series processor features extend the network directly to virtual machines. This optimization enables a consistent and scalable operational model, helping increase security and efficiency while reducing complexity.
- **Unified management*:** When integrated as a part of the Cisco Unified Computing System, management is uniquely integrated into all components of the system, enabling the entire solution to be managed as a single entity through Cisco UCS Manager, improving operational efficiency and flexibility.



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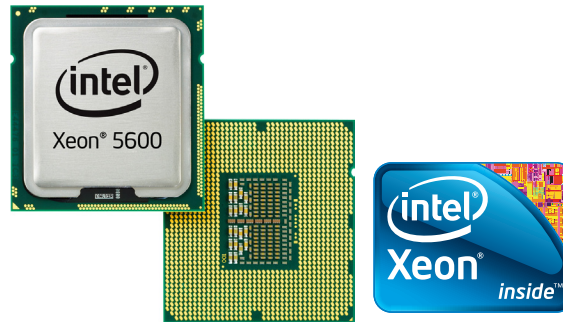
- **Service profiles***: When integrated as part of the Cisco Unified Computing System, Cisco UCS Manager implements role- and policy-based management using service profiles and templates. Service profiles help automate provisioning and increase business agility, allowing data center managers to provision applications in minutes instead of days.

Features of the Cisco UCS C210 M2 Server

- Up to two six-core Intel Xeon 5500 or 5600 series processors (Figure 3); these multicore processors automatically and intelligently adjust server performance according to application needs, increasing performance when needed and achieving substantial energy savings when not
- Up to 192 GB of industry-standard DDR3 main memory (using 12, 16-GB DIMMs)
- Up to 16 internal SFF SAS, SATA or SSD drives for a total of up to 16 TB
- RAID 0 and 1 support for four to sixteen SATA drives using the built-in RAID controller; RAID 0, 1 and 1E support for up to four, eight or sixteen SAS, SATA or SSD drives with the optional LSI 1064 Controller-Based Mezzanine Card; and RAID 0, 1, 5, 6, 10, 50, and 60 support with up to two LSI MegaRAID Controllers
- Room for up to five full-height PCIe cards: two full-height, full-length x8 cards, and three full-height, half-length x8 cards; all slots use x16 connectors
- Two integrated Gigabit Ethernet ports and one 10/100-Mbps Ethernet management port for accessing the Cisco UCS Integrated Management Controller
- Optional front-panel CD/DVD drive, locator LED, and interface with video, two USB, and serial port connections
- Back-panel video, two USB, and serial port connectors

- Increased reliability, availability, and serviceability through optional dual-redundant power supplies that meet Climate Smart specifications

Figure 3. Intel Xeon 5600 Series Processor



Flexible I/O Options

One of the benefits of rack-mount servers is the capability to configure a range of I/O options to meet specific workload requirements. The Cisco UCS C210 M2 server offers a range of flexible I/O options through its five PCIe expansion slots. Cisco supports adapters through arrangements with original equipment manufacturers (OEMs).

- **The Cisco UCS P8 1E Virtual Interface Card*** delivers the full power of the Cisco Unified Computing System by providing up to 128 Ethernet or Fibre Channel virtual interfaces that are programmed on demand to meet the needs of virtualized and nonvirtualized environments alike. The dual-port card interfaces with a 10-Gbps unified fabric.
- **CNAs from Emulex and QLogic** present both Ethernet network interface cards (NICs) and Fibre Channel host bus adapters (HBAs) to the host operating system, consolidating traffic over a 10-Gbps unified fabric.
- **Discrete I/O adapters** further enhance customer flexibility and choice with Gigabit Ethernet, 10 Gigabit Ethernet, and 4-Gbps Fibre Channel

interfaces from industry-leading vendors including Broadcom, Emulex, and QLogic.

Cisco Unified Computing Services

Using a unified view of data center resources, Cisco and our industry-leading partners deliver services that accelerate your transition to a Cisco UCS C-Series Rack-Mount Server solution. Cisco Unified Computing Services help you quickly deploy the servers, optimize ongoing operations to better meet your business needs, and migrate to Cisco's unified computing architecture. For more information, visit <http://www.cisco.com/go/unifiedcomputingservices>.

Why Cisco?

The Cisco Unified Computing System continues Cisco's long history of innovation in delivering integrated systems for improved business results based on industry standards and using the network as the platform. Recent examples include IP telephony, LAN switching, unified communications, and unified I/O. Cisco began the unified computing phase of our Data Center 3.0 strategy several years ago by assembling an experienced team from the computing and virtualization industries to augment our own networking and storage access expertise. As a result, Cisco delivered foundational technologies, including the Cisco Nexus® Family, supporting unified fabric and server virtualization. The Cisco Unified Computing System completes this phase, delivering innovation in architecture, technology, partnerships, and services. Cisco is well positioned to deliver this innovation by taking a systems approach to computing that unifies network intelligence and scalability with innovative application-specific integrated circuits (ASICs), integrated management, and standard computing components.

For More Information

Please visit: <http://www.cisco.com/go/unifiedcomputing>.

* Future capability planned to follow the product's first customer shipment.