

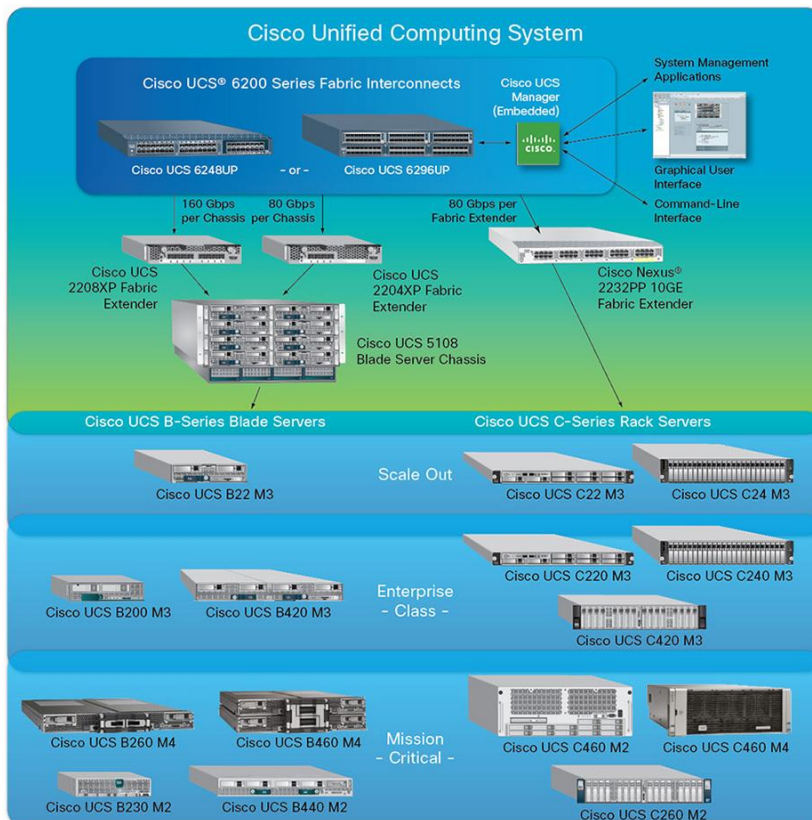
Cisco UCS B260 M4 Blade Server



Product Overview

The Cisco Unified Computing System™ (Cisco UCS®) combines Cisco UCS B-Series Blade Servers and C-Series Rack Servers with networking and storage access into a single converged system that greatly simplifies server management and delivers greater cost efficiency and agility with increased visibility and control (Figure 1). Cisco UCS automates all aspects of server deployment and provisioning through model-based service profiles: software objects that contain all attributes necessary to provision servers.

Figure 1. Cisco UCS Overview



The new Cisco UCS B260 M4 Blade Server (Figure 2) is the new server building block in Cisco's innovative server and Cisco UCS solutions. The increased performance of this new blade server continues the evolution of Cisco's revolutionary Cisco UCS platform with its advances in fabric-centric computing, open APIs, application-centric management, and hardware infrastructure abstraction.

Figure 2. Cisco UCS B260 M4 Blade Server



Increased Performance and Architectural Advantage

The Cisco UCS B260 M4 combines the power of two Intel® Xeon® processor v2 product family and accelerates access to critical data. This blade server supports up to 30 processor cores, 3.0 TB of memory (using 64-GB DIMMs), 1.8 TB of internal storage, and 160 Gbps of overall Ethernet throughput. In addition, the Cisco UCS B260 M4 server's innovative modular design offers the capability to upgrade to a 4-socket Cisco UCS B460 M4 server in a cost-effective manner. Simply add another blade module, along with the Cisco UCS M4 Scalability Connector, to double the computing, memory, and I/O capabilities of the server.

These innovative capabilities enable the Cisco UCS B260 M4 Blade Server to deliver the performance and enterprise-critical stability for memory-intensive workloads, such as database, virtualization, and consolidation applications. These mission-critical business workloads then become a competitive advantage by enabling you to harness the value of your most important data assets.

The fabric-centric, architectural advantage of Cisco UCS also means that you do not need to purchase additional power, cooling, and warranties or maintain excess switches and interface cards in each Cisco UCS blade chassis. This feature gives you uncompromised expandability and versatility in your blade servers. As a result, the Cisco UCS B260 M4 server is another example of a Cisco UCS B-Series Blade Server product that delivers leading computing, memory, and I/O performance, resulting in exceptional performance levels and expandability options for applications.

The Cisco UCS B260 M4 provides:

- Two Intel® Xeon® processor E7-2800 v2, E7-4800 v2 and E7-8800 v2 product family
- 48 DDR3 memory DIMM slots
- Two hot-pluggable drive bays for Hard Disk Drives (HDDs) or Solid State Disks (SSDs)
- SAS controller on board with RAID 0 and 1 support
- Three PCIe mezzanine slots, with one dedicated for optional Cisco UCS VIC 1240, and two slots for Cisco UCS VIC 1280, VIC port expander, third-party network adapter or flash cards
- Cost effective option to upgrade to the Cisco UCS B460 M4 4-socket blade server

Cisco UCS VIC 1240 and 1280 Technology

The Cisco UCS VIC 1240 is a 4-port 10-Gbps Ethernet or Fibre Channel over Ethernet (FCoE)-capable mLOM designed exclusively for the M3 and M4 generations of the Cisco UCS B-Series Blade Servers. When used in combination with an optional port expander, the Cisco UCS VIC 1240 can be expanded to up to eight 10-Gbps ports.

The Cisco UCS VIC 1280 is an 8-port 10-Gbps Ethernet or FCoE adapter that further expands Cisco UCS B460 M4 Blade Server bandwidth to 160 Gbps. The Cisco UCS VIC 1240 and 1280 enable a policy-based, stateless, agile server infrastructure that can present up to 256 PCI Express (PCIe) standards-compliant interfaces to the host, which can be dynamically configured as either network interface cards (NICs) or host bus adapters (HBAs). In addition, the Cisco UCS VIC 1240 and 1280 support Cisco® Data Center Virtual Machine Fabric Extender (VM-FEX) technology, which extends the Cisco UCS fabric interconnect ports to virtual machines, simplifying server virtualization deployment.

Powering Mission-Critical Applications

The Cisco UCS B260 M4 continues Cisco's commitment to delivering differentiated value, fabric integration, and ease of management that is exceptional in the marketplace for mission critical applications:

- Database
- Virtualization
- Large-memory applications
- Consolidation workloads

Cisco UCS Servers Change the Economics of the Data Center

IT infrastructure matters now more than ever, as organizations seek to achieve the full potential of IaaS, bare-metal, virtualized servers, and cloud computing. Cisco continues to lead in data center innovation with the introduction of new, mission-critical, server building blocks for Cisco UCS that extend its exceptional simplicity, agility, and efficiency. New innovations such as the Cisco UCS B260 M4 bring greater performance and memory locality from IT infrastructure to enterprise applications. In addition, Cisco UCS is a system beyond individual rack or blades servers that conveys enormous benefits to customers (Table 1).

Table 1. Benefits of Cisco UCS Servers

| Benefit | Technology | Application Customer Benefit |
|---|---------------------------------|---|
| Lower costs | Cisco Single Connect technology | Fewer cables, HBAs, NICs, and switches to purchase, license, power, cool, and maintain |
| Greater flexibility through total hardware abstraction | Cisco UCS Manager software | <ul style="list-style-type: none"> • Less configuration drift among servers • Server provisioning times that are reduced from days to minutes • Servers that are provisioned in an automated and consistent manner • Future foundation for fast, consistent server provisioning |
| Total openness | Open APIs | Unique visibility into Cisco UCS beyond Cisco UCS Manager to Cisco UCS Director and other third-party management tools |

Cisco UCS provides three major innovations that lower both capital and operating expenditures for server customers: Cisco Single Connect technology, Cisco UCS Manager software, and open APIs.

- Cisco Single Connect technology provides a dramatic fabric simplification of networking and cabling infrastructure: one easy, intelligent, and efficient way to connect rack and blade servers, physical and virtual, LAN and SAN, and management.
- Cisco UCS unified management software allows administrators to create a software model (service profile) of a desired server and then instantiate that server and its I/O connectivity by associating a service profile with a model with specific physical resources.

- Cisco UCS Manager supports a comprehensive, open XML API that exposes 9000 points of integration. This facilitates custom development to achieve new levels of system visibility and control. The XML API for Cisco UCS Manager enables automation-friendly insertion into existing IT staff skills and tools and IT processes and management tools.

In addition, Cisco continues to push the frontier of innovation in all Cisco UCS building blocks and supporting technologies. New Cisco VIC options, expanded Cisco UCS fabric interconnects, and additional fabric extender options expand both throughput and management simplicity for both blade and rack servers. Cisco Data Center VM-FEX technology collapses virtual and physical networking into a single infrastructure. Data center administrators can now provision, configure, manage, monitor, and diagnose virtual machine network traffic and bare-metal network traffic within a unified infrastructure. Together, these Cisco UCS architectural advantages and software advances and Cisco's continuous innovation, coupled with unique blade server and chassis design, make Cisco UCS the first truly unified data center platform and the best choice for both your virtual and bare-metal workloads.

Features and Benefits

Table 2 summarizes the features and benefits of the Cisco UCS B260 M4 server.

Table 2. Features and Benefits

| Feature | Benefit |
|---|---|
| Unified fabric | <ul style="list-style-type: none"> • Decreases total cost of ownership (TCO) by reducing the number of NICs, HBAs, switches, and cables needed • Enables the Cisco 5108 Blade Server Chassis to eliminate in-chassis HBAs, NICs, and switches and reallocates the saved power to denser, more powerful blade servers with more DIMM slots, and better per-blade performance compared to alternative offerings |
| Cisco UCS Manager service profiles | <ul style="list-style-type: none"> • Helps reduce the number of manual steps required to deploy servers in the data center, improving server policy consistency and coherency • Allows servers and support infrastructure to be provisioned in minutes instead of days, shifting IT's focus from maintenance to strategic initiatives • Reduces configuration errors significantly as blades are added or repurposed • Enables service profile movement from blade to blade, rack server to blade, blade to rack server, or blade to blade in another chassis |
| Autodiscovery | <ul style="list-style-type: none"> • Requires no configuration; as with all components in Cisco UCS, Cisco UCS B-Series blades and Cisco UCS C-Series racks are automatically recognized and configured by Cisco UCS Manager |
| Extensive monitoring | <ul style="list-style-type: none"> • Through Cisco UCS Manager, provides extensive environmental monitoring for each blade • Allows use of user thresholds to optimize environmental management of the blade |
| Cisco VIC adapter | <ul style="list-style-type: none"> • Cisco UCS VIC 1240 is a 4-port 10 Gigabit Ethernet, FCoE-capable adapter • When used in combination with its port expander card, Cisco UCS VIC 1240 can be expanded to 8 ports of 10 Gigabit Ethernet support |
| Mezzanine adapters | <ul style="list-style-type: none"> • Provides choice of third-party converged network adapters (CNAs), VICs, and PCIe flash memory devices, providing flexibility, increased application performance, compatibility with industry standards, and network policy coherence for virtualized environments |
| Cisco Flexible Flash | <ul style="list-style-type: none"> • The server includes two internal bays for Cisco Flexible Flash Cards |
| Optional local storage | <ul style="list-style-type: none"> • Provides support for up to two front-accessible hot-pluggable hard disk drives (HDDs) or solid state disks (SSDs) |

| Feature | Benefit |
|--|--|
| Upgradeability | <ul style="list-style-type: none"> Innovative modular design allows customers to easily, quickly, and cost-effectively upgrade to a Cisco UCS B460 M4 and double the computing, memory, and I/O capabilities |
| Intel® Xeon® Processor E7 v2 product family | <ul style="list-style-type: none"> The processor boosts business intelligence with triple the memory and double the performance. It rapidly processes and analyzes large amounts of data in near real time, with up to 50% more cores and threads, up to 25% more cache, and up to 2x average top-bin performance increase. (For more information, go to http://www.cisco.com/go/servers/performance.) Up to 3 TB (using 64GB DIMMs) in the Cisco B260 M4 blade server allows faster access to more data, resulting in quicker answers from today's most demanding applications. Keep data local with up to 1.5 TB of memory per socket to handily manage data-demanding, transaction-intensive workloads. Intel Run Sure Technology increases system uptime and data integrity for your business-critical solutions. Hardware embedded security features provide a safer environment and better protect data Advanced reliability features, including Machine Check Architecture Recovery, help you automatically monitor, report, and recover from hardware errors to maintain data integrity and keep mission-critical services online |

Specifications

Cisco UCS B-Series Blade Servers are critical components of the Cisco UCS environment and are enabled by the Cisco UCS Manager and Cisco UCS 6100 and 6200 Series Fabric Interconnects, 5100 Series Blade Server Chassis, and 2100 Series and 2200 Fabric Extenders.

Table 3 summarizes the specifications for the Cisco UCS B260 M4.

Table 3. Product Specifications

| Item | Specification |
|-----------------------------------|--|
| Processors | <ul style="list-style-type: none"> 2 Intel® Xeon® processor E7 v2 product family CPUs |
| Processor cores | <ul style="list-style-type: none"> 6, 8, 10, 12, and 15 cores, varying by processor model Full spectrum of the fastest Intel® Xeon® processor E7-v2 SKUs supporting power ranges from 105 to 155W and from 6 to 15 cores |
| Memory | <ul style="list-style-type: none"> 48 DIMM slots Maximum of 3 TB using 64GB DIMMs Future expansion to 3.0 TB with 64-GB DIMMs |
| Mezzanine adapter slots | <ul style="list-style-type: none"> 3 (one dedicated for Cisco UCS VIC 1240) |
| Disk drives | <ul style="list-style-type: none"> Up to 2 front-accessible hard disk drives (HDDs) or solid state disks (SSDs) |
| SSD and disk drive options | <ul style="list-style-type: none"> 100GB, 200GB, 400GB and 800GB 6Gb/s SSDs 300GB, 600GB, 900GB and 1.2TB HDDs |
| Maximum Internal Storage | <ul style="list-style-type: none"> Up to 2.4 TB |
| Drive controller | <ul style="list-style-type: none"> LSI SAS3004 12Gb/s RAID controller RAID 0 and 1 support |
| Flash memory | <ul style="list-style-type: none"> Two slots for Cisco Flexible Flash SD card |
| Management | <ul style="list-style-type: none"> Managed from the Cisco UCS 6100 or 6200 Series Fabric Interconnects by Cisco UCS Manager software |
| Temperature: Operating | <ul style="list-style-type: none"> 50 to 95°F (10 to 35°C) |
| Temperature: Nonoperating | <ul style="list-style-type: none"> -40 to 149°F (-40 to 65°C) |
| Humidity: Operating | <ul style="list-style-type: none"> 5 to 93% noncondensing |
| Humidity: Nonoperating | <ul style="list-style-type: none"> 5 to 93% noncondensing |
| Altitude: Operating | <ul style="list-style-type: none"> 0 to 10,000 ft (0 to 3000m); maximum ambient temperature decreases by 1°C per 300m |
| Altitude: Nonoperating | <ul style="list-style-type: none"> 40,000 ft (12,000m) |

Table 4 summarizes regulatory standards compliance.

Table 4. Regulatory Standards Compliance: Safety and EMC

| Specification | Description |
|------------------------------|--|
| Regulatory compliance | Products should comply with CE Markings according to directives 2004/108/EC and 2006/108/EC |
| Safety | <ul style="list-style-type: none"> • UL 60950-1 No. 21CFR1040 Second Edition • CAN/CSA-C22.2 No. 60950-1 Second Edition • IEC 60950-1 Second Edition • EN 60950-1 Second Edition • IEC 60950-1 Second Edition • AS/NZS 60950-1 • GB4943 2001 |
| EMC: Emissions | <ul style="list-style-type: none"> • 47CFR Part 15 (CFR 47) Class A • AS/NZS CISPR22 Class A • CISPR2 2 Class A • EN55022 Class A • ICES003 Class A • VCCI Class A • EN61000-3-2 • EN61000-3-3 • KN22 Class A • CNS13438 Class A |
| EMC: Immunity | <ul style="list-style-type: none"> • EN55024 • CISPR24 • EN300386 • KN24 |

Warranty Information

Find warranty information at Cisco.com on the [Product Warranties](#) page.

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 unified computing environment. Cisco Unified Computing Services helps you quickly deploy your data center resources and optimize ongoing operations to better meet your business needs. For more information about these and other Cisco Data Center Services offerings, visit <http://www.cisco.com/go/dcservices>.

Why Cisco?

Cisco has significant experience in listening to customer requirements and providing solid technology innovation for the enterprise data center. Cisco delivers standards-based solutions backed by a broad partner ecosystem of industry leaders to provide end-to-end customer solutions. Unified computing elevates the traditional product classification of network, server, storage, operating systems, and applications to a data center-wide vision. Cisco, as one of the largest technology providers in the world, has the resources, expertise, and customer focus to deliver on the unified computing vision.

For More Information

For more information about Cisco UCS B-Series Blade Servers, visit <http://www.cisco.com/en/US/products/ps10280/index.html>, or contact your local Cisco representative.




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