

Cisco UCS B230 M2 Blade Server



Product Overview

The Cisco[®] UCS B230 M2 Blade Server is one of the industry's highest-density two-socket blade server platforms. It is a critical new building block in the Cisco Unified Computing System[™] portfolio, offering compact performance for enterprise-critical applications within the Cisco Unified Computing System architecture. It is an excellent choice for IT departments that are looking for ways to increase computing performance and memory capacity while getting the most value from the available space in their data centers.

Cisco continues its commitment to being a trusted x86 systems provider with a wide range of system options. The Cisco UCS B230 M2 further extends the capabilities of the Cisco Unified Computing System by delivering new levels of performance, energy efficiency, reliability and security for mission-critical applications in a virtualized environment.

The Cisco UCS B230 M2 is based on industry-standard server technologies and provides:

- One or two multicore Intel[®] Xeon[®] processor E7-2800 product family, for up to 20 processing cores
- 32 DIMM slots for industry-standard double-data-rate 3 (DDR3) memory
- Two optional front-accessible, hot-pluggable solid state drives (SSDs)
- One dual-port mezzanine slot for up to 40 Gbps of redundant I/O throughput
- Local keyboard, video, and mouse (KVM) access through a front console port on each server
- Out-of-band access by remote KVM, Secure Shell (SSH) Protocol, and virtual media (vMedia) as well as the Intelligent Platform Management Interface (IPMI)

The Cisco UCS B230 M2 is a half-width blade (Figure 1). Up to eight of these high-density two-socket servers can reside in the six-rack-unit (6RU) Cisco UCS 5100 Series Blade Server Chassis, offering one of the highest densities of servers per rack unit in the industry.

Figure 1. Cisco UCS B230 M2 Blade Server



Table 1 provides an overview of the Cisco UCS B230 M2.

Table 1. Cisco UCS B230 M2 Overview

| Model | Number of Processor Sockets | Maximum Memory Capacity | Memory Size and Speed | Size and Form Factor | Maximum Number of Servers per Chassis | Maximum Number of Servers per Cisco Unified Computing System | Mezzanine Adapters | Throughput |
|--------------------------------|-----------------------------|--|--|----------------------|---------------------------------------|--|--------------------|--------------------------------|
| Cisco UCS B230 M2 Blade Server | 2 | 32 registered DIMMs (RDIMMs); up to 512 GB | 4, 8, and 16-GB DDR3; error-correcting code (ECC) RDIMMs | Half-width | 8 | 160 | 1 | Up to 40 Gbps of redundant I/O |

Features and Benefits

IT departments are constantly looking for ways to increase computing performance and memory capacity while getting the most value from the available space in their data centers. For these environments, Cisco uses the architectural advantages of the Intel® Xeon® processor E7-2800 product family to deliver new levels of performance, reliability and security. Advanced silicon-level reliability and security features automatically manage hardware errors and protect against malicious software attacks, maintaining data integrity and increasing the availability of mission-critical services. With the introduction of the Cisco UCS B230 M2, Cisco delivers one of the industry's highest-performance two-socket blade server platforms in a dense, half-width form factor. Combining the performance of the Intel® Xeon® processor E7-2800 product family with up to 32 DIMM slots, the Cisco UCS B230 M2 delivers compact performance and exceptional memory-per-core count to improve virtualization performance, reduce software license costs, and help enable more virtual machines.

The Cisco UCS B230 M2 is managed by Cisco UCS Manager, an award-winning embedded management system that provides unified management of all system components. Cisco's innovative service profile technology embedded in Cisco UCS Manager provisions Cisco UCS B-Series Blade Servers and their I/O properties (for more information, please see [Cisco UCS Manager At-a-Glance](#)). Infrastructure policies needed to provision servers and deploy applications, such as policies for power and cooling, security, identity, hardware health, and Ethernet and storage networking, are encapsulated in the service profiles. Use of service profiles helps reduce the number of manual steps needed for provisioning, the opportunities for human error, and server and network deployment times. In addition, service profiles improve policy consistency and coherency across the entire Cisco Unified Computing System.

Every Cisco UCS B-Series Blade Server uses converged network adapters (CNAs) for access to the unified fabric. This design reduces the number of adapters, cables, and access-layer switches needed while still allowing traditional LAN and SAN connectivity. This Cisco innovation reduces capital expenditures (CapEx) and operating expenses (OpEx), including administrative overhead and power and cooling costs. Among the I/O options, and unique to the Cisco Unified Computing System, the Cisco UCS Virtual Interface Card (VIC) 1280 delivers up to 256 dynamic virtual adapters and interfaces, all tightly integrated with Cisco UCS Manager and VMware vCenter Server. Incorporating Cisco VM-FEX technology, this advanced fabric interface unifies virtual and physical networking into a single infrastructure. It provides virtual-machine visibility from the physical network and a consistent network operations model for physical and virtual servers. One of these high-performance adapters can be employed to make use of the significant processing capacity of the Intel® Xeon® processor E7-2800 product family in the Cisco UCS B230 M2.

Excellent for financial services companies and service providers, the Cisco UCS B230 M2 is designed to efficiently handle demanding database workloads, such as Oracle Real Application Cluster (RAC), Microsoft SQL, and single-instance Oracle database workloads, as well as virtualized workloads using VMware ESX and Microsoft HyperV.

The powerful Cisco UCS B230 M2 offers an innovative combination of performance, density, energy efficiency and cost-effective value.

Table 2 summarizes the features and benefits of the Cisco UCS B230 M2.

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 network interface cards (NICs), host bus adapters (HBAs), switches, and cables needed |
| Integration with 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 |
| Autodiscovery | <ul style="list-style-type: none"> Requires no configuration; as with all components in the Cisco Unified Computing System, blades 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 |
| Mezzanine Adapters | <ul style="list-style-type: none"> Provides choice of CNAs and virtual interface adapters, providing flexibility, increased performance, compatibility with industry standards, and network policy coherence for virtualized environments |
| Optional Local Storage | <ul style="list-style-type: none"> Supports up to two front-accessible and hot-swappable SSDs Supports RAID 0 and 1 |
| Intel® Xeon® Processor E7-2800 Product Family | <ul style="list-style-type: none"> Provide performance, memory and I/O capacity to meet the diverse needs of a virtualized environment as well as the most computation-intensive standalone applications Use Intel Turbo Boost Technology and Intel Intelligent Power Technology to adapt processor performance to application demands and intelligently scale energy use based on utilization, reducing costs while still delivering the performance required Offer advanced reliability features, including Machine Check Architecture Recovery, to 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 designed for use in the Cisco Unified Computing System environment and require Cisco UCS Manager and Cisco UCS 6200 Series Fabric Interconnects, 5100 Series Blade Server Chassis, and 2200 Series Fabric Extenders to function in this integrated environment.

Table 3 summarizes the specifications for the Cisco UCS B230 M2.

Table 3. Product Specifications

| Item | Specification |
|---------------------------------|--|
| Processors | <ul style="list-style-type: none"> 1 or 2 Intel® Xeon® processor E7-2800 product family |
| Processor Cores | <ul style="list-style-type: none"> 6, 8, or 10 cores, varying by processor model |
| Memory | <ul style="list-style-type: none"> 32 DIMM slots Maximum of 512 GB memory capacity |
| Mezzanine Adapter Slots | <ul style="list-style-type: none"> 1 per Cisco UCS B230 M2 |
| Disk Drives | <ul style="list-style-type: none"> Up to 2 front-accessible, hot-swappable SSDs per blade |
| Disk Drive Options | <ul style="list-style-type: none"> 100-GB, 200-GB and 300-GB Enterprise Performance SSDs 100-GB and 400-GB Enterprise Value SSDs |
| Maximum Internal Storage | <ul style="list-style-type: none"> Up to 128 GB |

| Item | Specification |
|----------------------------------|--|
| Drive Controller | <ul style="list-style-type: none"> • LSI SAS2008 controller with RAID 0 and 1 support • RAID 0 and 1 support |
| Management | <ul style="list-style-type: none"> • Managed from the Cisco UCS 6200 Series Fabric Interconnects by Cisco UCS Manager |
| 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 • CAN/CSA-C22.2 No. 60950-1 • EN 60950-1 • IEC 60950-1 • AS/NZS 60950-1 • GB4943 |
| 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"> • EN50082-1 • EN61000-6-1 • EN55024 • CISPR24 • EN300386 • KN 61000-4 Series |

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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