

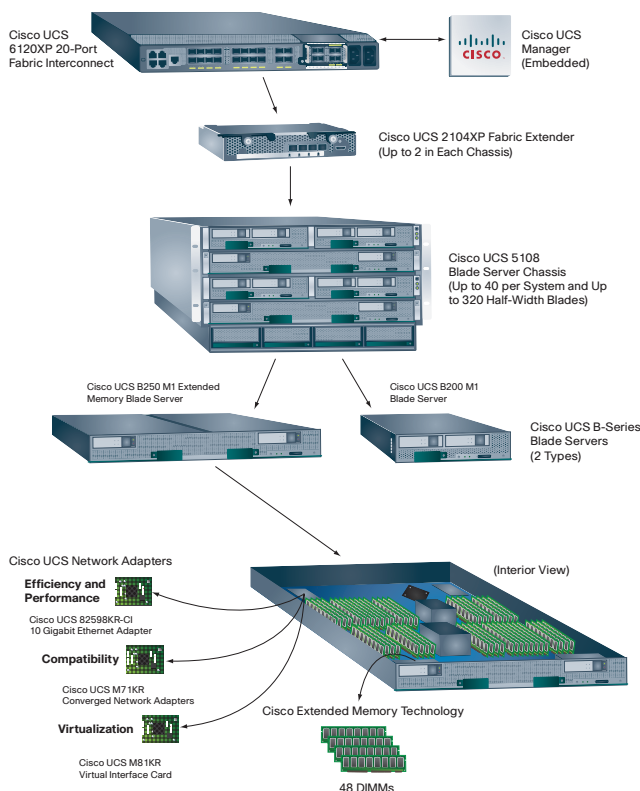
Cisco UCS 5100 Series Blade Server Chassis



Cisco Unified Computing System Overview

The Cisco® Unified Computing System is a next-generation data center platform that unites compute, network, storage access, and virtualization into a cohesive system designed to reduce total cost of ownership (TCO) and increase business agility. The system integrates a low-latency, lossless 10 Gigabit Ethernet unified network fabric with enterprise-class, x86-architecture servers. The system is an integrated, scalable, multichassis platform in which all resources participate in a unified management domain (Figure 1).

Figure 1. The Cisco Unified Computing System Is a Highly Available Cohesive Architecture



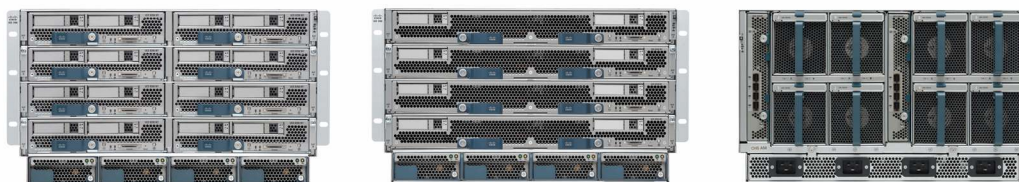
Product Overview

The Cisco UCS 5100 Series Blade Server Chassis is a crucial building block of the Cisco Unified Computing System, delivering a scalable and flexible blade server chassis for today's and tomorrow's data center while helping reduce TCO.

Cisco's first blade server chassis offering, the Cisco UCS 5108 Blade Server Chassis (Figure 2), is six rack units (6RU) high and can mount in an industry-standard 19-inch rack. A chassis can house up to eight half-width Cisco UCS B-Series Blade Servers and can accommodate both half- and full-width blade form factors.

Four single-phase, hot-swappable power supplies are accessible from the front of the chassis. These power supplies are 92 percent efficient and can be configured to support nonredundant, N+1 redundant, and grid-redundant configurations. The rear of the chassis contains eight hot-swappable fans, four power connectors (one per power supply), and two I/O bays for Cisco UCS 2104XP Fabric Extenders. A passive midplane provides up to 20 Gbps of I/O bandwidth per server slot and up to 40 Gbps of I/O bandwidth for two slots. The chassis is capable of supporting future 40 Gigabit Ethernet standards.

Figure 2. Cisco UCS 5108 Blade Server Chassis with Blade Servers Front and Back.



Features and Benefits

The Cisco UCS 5108 revolutionizes the use and deployment of blade-based systems. By incorporating unified fabric, integrated, embedded management, and fabric extender technology, the Cisco Unified Computing System enables the chassis to have fewer physical components, no independent management, and be more energy efficient than traditional blade server chassis. This simplicity eliminates the need for dedicated chassis management and blade switches, reduces cabling, and enables the Cisco Unified Computing System to scale to 40 chassis without adding complexity. The Cisco UCS 5108 chassis is a critical component in delivering the Cisco Unified Computing System benefits of data center simplicity and IT responsiveness.

Table 1 summarizes the features and benefits of the Cisco UCS 5108.

Table 1. Features and Benefits

Feature	Benefit
Management by Cisco UCS Manager	<ul style="list-style-type: none"> Reduces TCO by removing management modules from the chassis, making the chassis stateless Provides a single, highly available management domain for all system chassis, reducing administrative tasks
Unified fabric	Decreases TCO by reducing the number of network interface cards (NICs), host bus adapters (HBAs), switches, and cables needed
Support for one or two Cisco UCS 2100 Series Fabric Extenders	<ul style="list-style-type: none"> Eliminates switches from the chassis along with complex configuration and management of those switches, allowing a system to scale without adding complexity and cost Allows use of two fabric extenders for redundancy or aggregation of bandwidth Enables bandwidth scaling based on application needs; blades can be configured for from 1.25 Gbps to 10 Gbps or more

Autodiscovery	Requires no configuration; like all components in the Cisco Unified Computing System, chassis are automatically recognized and configured by Cisco UCS Manager
High-performance midplane	<ul style="list-style-type: none"> • Provides investment protection • Supports up to 2x 40 Gigabit Ethernet for every blade server slot when available • Provides 8 blades with 1.2 terabits (Tb) of available Ethernet throughput for future I/O requirements • Provides reconfigurable chassis to accommodate a variety of form factors and functions
Redundant hot-swappable power supplies and fans	<ul style="list-style-type: none"> • Provides high availability in multiple configurations • Increases serviceability • Provides uninterrupted service during maintenance
Hot-pluggable blade servers and fabric extenders	Provides uninterrupted service during maintenance and server deployment
Comprehensive monitoring	<ul style="list-style-type: none"> • Provides extensive environmental monitoring on each chassis • Allows use of user thresholds to optimize environmental management of the chassis
Efficient front-to-back airflow	Helps reduce power consumption and increase component reliability
Tool-free installation	<ul style="list-style-type: none"> • Requires no specialized tools for chassis installation • Provides mounting rails for easy installation and servicing
Mixed blade configurations	Allows up to 8 half-width or 4 full-width blade servers, or any combination thereof, for maximum flexibility

Specifications

The Cisco UCS 5100 Series is designed for use in the Cisco Unified Computing System environment and requires Cisco UCS Manager, UCS 6100 Series Fabric Interconnects, UCS B-Series Blades, and UCS 2100 Series Fabric Extenders to function in this integrated environment.

Table 2 summarizes the specifications for the Cisco UCS 5100 Series. Table 3 summarizes regulatory standards compliance.

Table 2. Product Specifications

Item	Specification
Height	10.5 in. (26.7 cm); 6RU
Width	17.5 in. (44.5 cm); fits standard 19-inch square-hole rack
Depth	32 in. (81.2 cm)
Blade server slots	8
Fabric extender slots	2
Fabric interconnects	4x 10 Gigabit Ethernet external ports and 8x 10 Gigabit Ethernet internal ports (Fibre Channel over Ethernet [FCoE] capable) per Cisco UCS 2100 Series Fabric Extender
Power	Four 2500W, 208V (220V outside United States) single-phase, hot-swappable, redundant power supplies, 50 to 60 Hz, with IEC-320 C20 connections
Fans	8 hot-swappable fans
Management	Managed from the Cisco UCS 6100 Series Fabric Interconnects by Cisco UCS Manager (redundant management operations when the chassis is configured with two fabric extenders)
Backplane	1.2 Tb of aggregate throughput; supports 10BASE-KR connections for 8 blades
Temperature: Operating	50 to 95°F (10 to 35°C). (Decrease maximum temperature as altitude increases by 1 °C /300m)
Temperature: Nonoperating	-40 to 149°F (-40 to 65°C) , max altitude 40 ,000 feet
Humidity: Operating	5 to 93% noncondensing
Humidity: Nonoperating	5 to 93% noncondensing
Altitude: Operating	0 to 10,000 ft (3,000m) Maximum ambient temperature decreases by 1°C per 300m
Altitude: Nonoperating	40,000 ft (12,000m)

Table 3. Regulatory Standards Compliance: Safety and EMC

Specification	Description
Regulatory compliance	Products should comply with CE Markings per 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 help 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, 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 the Cisco UCS 5100 Series Blade Server Chassis, visit <http://www.cisco.com/en/US/products/ps10279/index.html> or contact your local Cisco representative.



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