

Cisco UCS M4308 Modular Chassis

Modular, Dense, and Power-Efficient Computing Platform for Cloud-Scale Applications

Cisco UCS[®] M-Series Modular Servers are designed to meet the high-performance demands of massively parallelized, predominantly single-threaded applications. The innovative architecture of the Cisco UCS M-Series combines Cisco[®] Virtual Interface Card (VIC) technology and server fabric management with widely deployed x86 computing elements for a cost-effective, scalable platform. The Cisco UCS M4308 Modular Chassis is one of the main elements of the [Cisco UCS M-Series Modular Servers](#).

The [Cisco UCS M4308 Modular Chassis](#) (Figure 1) extends the capabilities of the Cisco Unified Computing System[™] (Cisco UCS) portfolio to a high-density 2RU form-factor chassis with up to eight front-access slots that accommodates up to eight single-wide cartridges.

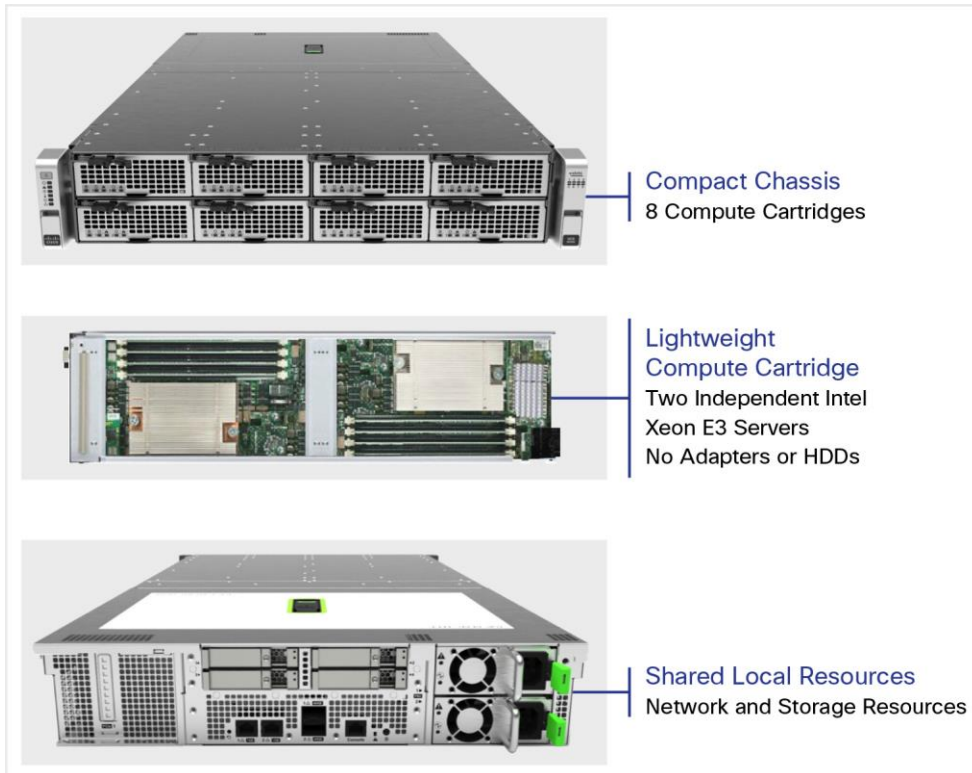
The chassis architecture accommodates computing cartridges as well as other specialized cartridges. The rear of the chassis supports four SSDs that are connected to an internal removable RAID controller. Storage capacity and connectivity are distributed to the pluggable computing cartridges using Cisco's third-generation VIC. Network I/O is provided by two 40-Gbps QSFP ports that aggregate all computing cartridge I/O and management traffic into a single connection for cable consolidation and efficiency. An upstream VNTag-capable top-of-rack switch is required for the total solution and is available at launch with the Cisco UCS 6200 Series Fabric Interconnects.

The [Cisco UCS M142 Compute Cartridge](#) is the first cartridge supported by the [Cisco UCS M4308 Modular Chassis](#).



Cisco UCS with
Intel[®] Xeon[®] Processors

Figure 1. Cisco UCS M4308 Modular Chassis



Overview

One of the main components of the Cisco UCS M4308 Modular Chassis is Cisco's next-generation VIC. The VIC provides the connectivity between the compute cartridges, the shared peripherals, and the Fabric Interconnects. The unique technology of the VIC enables a high level of server disaggregation and exceptional centralization of components across multiple servers: components that were previously captive and redundant in each and every physical server. The Cisco UCS M4308 chassis houses eight Compute Cartridges, each with two independent servers, as well as the centralized resources, which are shared across the system components.

The Cisco UCS M4308 Modular Chassis consists of the following:

- 2RU chassis: 3.5 x 30.5 x 17.5 in. (H x L x W)
- Up to eight Cisco UCS M142 Compute Cartridges
- Redundant 1400W power supplies
- Cisco 12G modular RAID controller with 2-GB flash-backed write cache (FBWC)
- 2 x 40-Gbps uplinks
- Up to 4 SSDs: Choice of SAS or SATA drives with capacities ranging from 240 GB to 1.6 TB per disk

The Cisco UCS M4308 chassis is physically cabled to the [Cisco UCS 6200 Series Fabric Interconnects](#). Fabric interconnects provide the management and communication backbone for the chassis and the installed compute cartridges. Up to 20 Cisco UCS M4308 chassis and the associated cartridges can be attached to a pair of Fabric Interconnects and managed as part of a single domain. Centralized unified management is provided by Cisco UCS Manager, which comes embedded on the Fabric Interconnects at no additional charge.

Cisco UCS M4308 Chassis Features and Benefits

Table 1 summarizes the features and benefits of the Cisco UCS M4308 Modular Chassis.

Table 1. Features and Benefits

Feature	Benefit
Unique architecture accommodating 16 servers in a 2RU footprint and up to 320 servers (1280 cores) in a single data center rack	The industry-leading server density offered by the Cisco UCS M-Series results in significant cost savings for data center customers deploying a large number of smaller servers to host highly parallelized workloads.
Unified embedded management provided by the proven Cisco UCS Manager, integrating servers, network, and storage	Single pane of glass to provision and manage all components in the rack without the need to switch from one console to another.
Policy-based provisioning and management enabled by Cisco UCS service profiles	Service Profiles augmented with the newly unleashed Storage Profiles significantly enable the dynamic slicing of centralized resources and help ensure the quality of service (QoS) for the deployed workloads.
Modular chassis with hot-pluggable components	The Cisco UCS M-Series enhances serviceability by providing easy tool-less replacement options for almost all the field-replaceable units (FRUs), thereby minimizing or eliminating downtime.
Reduced power consumption per server	The Cisco UCS M-Series uses the latest low-power-consuming CPUs to deliver optimized performance per watt.

Main Features

Table 2 presents the main characteristics of the Cisco UCS M4308 Modular Chassis.

Table 2. Main Features

Chassis size	2RU
Compute cartridges per chassis	8 independent front-load cartridges
Compute nodes per chassis	16 nodes (servers) per chassis
Nodes (servers) per cartridge	2 independent servers (nodes) per cartridge
Processors per node	1 x Intel® Xeon® processor E3 v3, 4 cores, and 32 GB of memory
Chassis aggregate	64 Intel® Xeon® processor cores and 512 GB of memory in 2RU
Disk drives per chassis	4 x SSDs, scaling from 240-GB SATA to 6.4-TB SAS
I/O per chassis	2 x 40-Gbps uplinks per chassis
Power	2 x 1400W power supplies
Management and connectivity	Cisco UCS Manager and Cisco UCS 6200 Series Fabric Interconnects



Cisco UCS with
Intel® Xeon® Processors




Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

 Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)