

Cisco UCS M1414 Compute Cartridge

Cisco UCS M-Series Compute Cartridges

[Cisco UCS® M-Series Modular Servers](#) are designed to meet the high-density demands of massively parallelized and cloud-scale applications. The unique design of the Cisco [UCS M4308 Modular Chassis](#) uses System Link Technology to provide infrastructure resources to the Cisco UCS M1414 Compute Cartridges, including power, cooling, I/O, and local disk—all managed in the stateless computing environment of Cisco UCS Manager.

The Cisco UCS M1414 Compute Cartridge (Figure 1) is a single-socket server using Intel® Xeon® processor E3-1200 v3 or E3-1200 v4 CPUs, with up to 32 or 64 GB of DDR3 1600-MHz memory. The high-frequency v3 CPUs used in the M1414 cartridge are well suited for grid applications like electronic design automation (EDA), seismic research, and DNA sequencing. The E3-1200 v4 CPUs are optimized for graphics-intensive workloads at a low cost and low-power consumption. The E3-1200 v4 processors can help meet the growing demand for high-quality video and complex 3D applications faster and at a lower total cost.

Figure 1. Cisco UCS M1414 Compute Cartridge



Cisco UCS M4308 Modular Chassis
Supports Cisco UCS M142, M1414, and M2814 Compute Cartridges



Cisco UCS M1414 Compute Cartridge
Single-Socket Intel Xeon Processor E3-1200 v3 Compute Cartridge
32-GB DDR3 1600-MHz Memory Capacity

Product Overview

The Cisco [UCS M1414 Compute Cartridge](#) loads directly in the front of the Cisco [UCS M4308 Modular Chassis](#). This chassis can hold up to eight M1414 cartridges. The system and domain discovery of all cartridges, as well as centralized unified management, is provided by Cisco UCS Manager, which comes embedded on the [Cisco UCS 6200 Series Fabric Interconnects](#).

The M1414 cartridge includes:

- Single-socket server using Intel Xeon processor E3-1200 v3 CPUs
 - Intel Xeon processor E3-1231 v3 at 3.4 GHz with 4 cores, 8-MB cache, and 80W
 - Intel Xeon processor E3-1241 v3 at 3.5 GHz with 4 cores, 8-MB cache, and 80W
 - Intel Xeon processor E3-1271 v3 at 3.6 GHz, with 4 cores, 8-MB cache, and 82W
 - Intel Xeon processor E3-1281 v3 at 3.7 GHz, with 4 cores, 8-MB cache, and 82W
- Single-socket server using Intel Xeon processor E5-1200 v4 CPUs
 - Intel Xeon processor E3-1285L v4 at 3.4 GHz, with 4 cores, 6-MB cache, and 65W
 - Intel Xeon processor E3-1285 v4 at 3.5 GHz, with 4 cores, 6-MB cache, and 95W
- 32-GB memory (4*8 GB UDIMM DDR3 1600 MHz) or 64-GB memory (4*16-GB UDIMM DDR3 1600 MHz)

The Cisco UCS M4308 chassis is physically cabled to the [Cisco UCS 6200 Series Fabric Interconnects](#). The fabric interconnects provide the management and communication backbone for the chassis and the installed computing cartridges. Up to 20 M4308 chassis and the associated cartridges can be attached to a pair of fabric interconnects and managed as part of a single domain.

Table 1 summarizes the features and benefits of the Cisco UCS M1414 Compute Cartridge.

Table 1. Features and Benefits

Feature	Benefit
Up to eight M1414 servers in a 2-RU chassis and up to 160 servers 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 applications that benefit from high-frequency CPUs and integrated graphics capabilities.
Unified management integrating servers, network, and storage provided by the proven Cisco UCS Manager	Cisco UCS Manager provides a single management interface for all hardware and software components of a Cisco UCS domain. The manager manages up to 20 M-Series chassis, using Cisco SingleConnect technology to consolidate network, storage, and management traffic. With Cisco UCS Central Software , management can be extended globally to thousands of servers in multiple domains.
Policy-based provisioning and management enabled by Cisco UCS service profiles	Cisco UCS service profiles revolutionize server deployment and enable a flexible, stateless computing environment that reduces TCO and increases business agility.
Modular chassis	The M-Series enhances serviceability by providing easy replacement options without tools for almost all field-replaceable units (FRUs), and thereby reducing or eliminating downtime.
Reduced power consumption per server	The M-Series uses shared local resources to optimize performance per watt.

Main Features

Table 2 presents the main features of the Cisco UCS M1414 Compute Cartridge.

Table 2. Main Features

Processors per server	1 Intel Xeon processor E3-1200 v3 Or 1 Intel Xeon processor E3-1200 v4
Memory per server and per chassis	32 or 64 GB of memory per Cisco UCS M1414 cartridge with 256 GB per Cisco UCS M4308 chassis
Servers per compute cartridge	1 single-socket server per Cisco UCS M1414 cartridge
Compute cartridges per chassis	8 independent front-load Cisco UCS M1414 cartridges per Cisco UCS M4308 chassis
Disk drives per chassis	4 SSD drives, scaling from 480 GB SATA to 6.40 TB SAS, provided by the Cisco UCS M4308 chassis

I/O per chassis	2 x 40-Gbps throughput provided by the Cisco UCS M4308 chassis
Power per chassis	Redundant 2 x 1400W power supplies provided by the Cisco UCS M4308 chassis
Management	Cisco UCS Manager

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<http://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-m-series-modular-servers/index.html>



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