Specification Sheet



Dell EMC MD1400 and MD1420

Dell EMC introduces the latest technology in the MD Series of direct-attach storage enclosures designed to maximize your server storage capacity. The MD1400 and the MD1420 offer low-cost storage expansion with double the bandwidth using 12Gbps SAS connectivity to support your growing application workloads.

Cost-effective storage

As data continues to grow, the need to store and access that data increases exponentially as well. The Dell EMC MD Series offers affordable storage expansion for Dell PowerEdge servers[1]. The MD1400 and MD1420 models are designed to scale capacity behind Dell's PowerEdge servers, without busting your storage budget. When cost is an issue, and you need to optimize your cost per terabyte, the MD Series offers a simple and cost-effective solution while ensuring your performance requirements are met.

The intelligence of the Dell PowerEdge RAID Controller (PERC) H830 or H840 HostRAID adapter, which enables the software to recognize all of your storage as a single unit, helps increase reliability and fault tolerance. You can place up to eight MD enclosures behind a PowerEdge server using a 12Gb SAS HBA or the PERC9 series with a 12Gb RAID controller. Directly connected to your PowerEdge server, either configuration gives you a viable storage solution, creating an end-to-end performance centric 12Gb solution.

Designed for capacity and performance

The MD Series offers the versatility needed to meet both your storage capacity and performance requirements. The MD1400 and MD1420 models are specifically designed to work with the latest PowerEdge servers using the PERC H830 or H840 RAID controllers with 12Gbps SAS offering unmatched I/O performance for database applications, streaming digital media environments and storage intensive applications.

Meet your high-capacity storage requirements with the MD Series by choosing the drive type and speed that meets your data center specifications. The MD1400 and MD1420 models offer the flexibility to mix and match NL-SAS, SAS and SSD drives within an enclosure to assist with your data tiering initiatives. With the option of either 12 or 24 hard drives in an enclosure, you can scale non-disruptively to meet your application demands.

The MD1400 offers the flexibility of 3.5-inch or 2.5-inch hard drives (with specially designed carriers) in a 2U, 12-drive enclosure. This model can expand to 8 enclosures and up to 96 hard drives behind the PowerEdge server.

The MD1420 supports 24 2.5-inch hard drives in a 2U form-factor, expanding up to 8 enclosures and up to 192 hard drives supporting high storage capacity requirements.

Seamless integration and management

Leveraging the technology and design of PowerEdge servers, the MD1400 and the MD1420 use the same hot-swappable drives, fans and power supplies to minimize the cost of spares. If drive security is a priority, the option to use self-encrypted drives (SED) with drive-level encryption ensures your data is secure, even if the drive is removed. Additionally, SEDs support instant Secure Erase of drives which permanently removes data when repurposing or decommissioning drives.

Data can be managed simply through Dell OpenManage™ system management technology, leveraging iDRAC (Integrated Dell Remote Access Controller) to help simplify and automate your most essential management tasks across server, storage and networking platforms in multi-hypervisor and OS environments.

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You can manage both the internal and external storage as a single interface, optimizing performance with the end-to-end 12Gbps connectivity. This helps reduce resource load on the system and enables easier navigation for the user.

When combined with Dell's storage- optimized PowerEdge servers and the new MD Series of expansion enclosures, you have an affordable direct-attached storage option in Microsoft environments.

Maximize your PowerEdge server capacity with the MD1400 and MD1420 storage expansion enclosures

Dell EMC MD1400 and MD1420 technical specifications

Feature	MD1400	MD1420
Drives	Up to 12 hot-pluggable 3.5" or 2.5" drives (2.5" available with adapter)	Up to 24 hot-pluggable 2.5" drives
Drive performance and capacities	3.5" and 2.5" NL-SAS, 2.5" SAS and 2.5" SSD drives	2.5" NL-SAS, SAS and SSD drives
Maximum capacity per enclosure	Up to 168TB when using 12 x 14TB NL-SAS 3.5" HDDs	Up to 57.6TB when using 24 x 2.4TB NL-SAS 2.5" HDDs
Expansion capabilities	PERC H830/H840 HBA enables expansion to 8 enclosures, PCIe 3.0, 12Gbps SAS, dual -port, 4 ports per enclosure	
Host connectivity		
Unified mode	Unified mode (single path) for daisy chaining of up to 8 enclosures per PERC H830/H840 (4 enclosures per port, single path) Unified mode (recommended redundant path) for daisy chaining up to 4 enclosures per PERC H830 (4 enclosures connected to both ports via redundant path cabling)	
Enclosure management modules (EMM) and RAID levels		
EMM	2 EMM provide redundant enclosure management capability	
RAID levels	0, 1, 5, 6, 10, 50, 60	
Back-panel connectors per EMM		
Connectivity	4 mini-SAS HD connector for connection to the host or expansion	
Service management	USB mini-B connector (for factory use only)	
Power supplies per PSU		
Wattage - AC and DC power	AC - 600W; DC - 700W	
Host heat dissipation	AC - 2047BTU/hr.; DC - 2388BTU/hr.	
Input voltage range	100-240V AC, auto-sensing; 48V DC	
Frequency range	50/60Hz	
Amperage	8.6A at 100V, 4.3A at 240V	
Available hard drive power (per slot)		
Supported continuous consumption	Up to 1.2A at +5V Up to 0.5A at +12V	
Physical		
Rack support	Dell ReadyRails™ II static rails for tool-less mounting in 4-post racks with square or unthreaded round holes or tooled mounting in 4-post threaded-hole racks	
Height x width x depth	8.7 cm (3.43") x 48.2 cm (18.98") x 54.61 (23.3") depth includes PSU	8.7 cm (3.43") x 48.2 cm (18.98") x 53.9 (21.22") depth includes PSU
Weight	28.59 kg (63.03 lb) (maximum configuration) 9.0 kg (19.8 lb) (empty)	24.2 kg (53.35 lb) (maximum configuration) 8.8 kg (19.4 lb) (empty)

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Feature	MD1400	MD1420
Environmental		
Temperature	Operating: 10° to 35°C (50° to 95°F) with maximum temperature gradation of 10°C per hour Storage: -40° to 65°C (-40° to 149°F) with temperature gradation of 20°C per hour	
Relative humidity	Operating: 8% to 85% (non-condensing) with maximum humidity gradation of 10% per hour Storage: 5% to 95% (non-condensing)	
Altitude	Operating: -16 to 3048 m (-50 to 10,000 ft) Storage: -16 to 10,600 m (-50 to 35,000 ft)	

[1] See the compatibility matrix on Dell.com/Support for more information on supported PowerEdge servers.

Global services and support

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OEM-ready version available

From bezel to BIOS to packaging, your storage arrays can look and feel as if they were designed and built by you. For more information, visit Dell.com/OEM.

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