Specification Sheet

Dell EMC PowerVault ME4 Series Storage Specification Sheet

Enterprise-class features in our most affordable entry level SAN/DAS storage array

Purpose-built for SAN/DAS

The affordable, simple, and fast Dell EMC PowerVault ME4 Series SAN/DAS Storage Series is optimized to run a variety of mixed workload applications – physical and virtual – for small businesses. Whether you need to consolidate your block storage, support the demands of data intensive applications, take advantage of intelligent data management, or optimize your virtual environments, the ME4 Series has been designed to meet your growing business needs. The flexibility of the ME4 Series lets you decide the protocol, supports a wide range of mixed drive types (including SED), scales to 4PB raw, is highly aligned with Dell PowerEdge Servers, and is delivered to you with all-inclusive software – everything you'll need to store, manage, and protect your data.

FUTURE-PROOF
LOYALTY PROGRAM

Powerful entry storage architecture

Based on the family of Intel processors, Dell EMC PowerVault ME4 Series storage implements a block architecture with VMware virtualization integration and concurrent support for native iSCSI, Fibre Channel, and SAS protocols. Each system leverages dual storage processors (single storage processor systems are available) and a full 12Gb SAS back-end. Additional storage capacity is added via Disk Array Enclosures (DAEs) while Distributed RAID (ADAPT) delivers faster drive re-build times. And all ME4 Series arrays are managed by an integrated HTML5 web-based GUI.

PowerVault ME4 Series Base System and Expansion Models

The two non-dense ME4 base arrays start at 2U and the dense ME4 array starts at 5U. Both models include dual controllers with Dual-core Intel Xeon processors, 8GB per controller and 4x10Gb iSCSI, 4x12Gb SAS, and 4x16Gb FC network connections (auto-negotiation supported on iSCSI and FC).



ME4012 SAN/DAS Array
(12 drive) 3.5" drive slots, 2U



ME4024 SAN/DAS ARRAY
(24 drive) 2.5" drive slots, 2U



ME4084 SAN/DAS ARRAY
(84 drive) 2.5" drive slots,5U

Optional ME4 Series expansion enclosures let you scale up to 336 drives or 4PB. PowerVault ME412 and ME424 expansion enclosures can only be used with either ME4012 or ME4024 base arrays.

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The ME484 dense expansion enclosure (also available as JBOD) is supported behind any ME4 base array. All array and expansion enclosure models support a mix of SSD, 15K, 10K and 7.2K drives (including FIPS-certified SEDs)



ME412 Expansion Enclosure
(12 drive) 3.5” drive slots, 2U



ME424 Expansion Enclosure
(24 drive) 2.5” drive slots, 2U



ME484 Expansion Enclosure
(84 drive) 3.5” drive slots, 5U

PowerVault ME4 Series Specifications

Chassis Overview

Chassis format	All-in-one (single/dual controllers, internal drive bays, networking) with expansion options
Rack size	2U or 5U
Controllers	2 hot-swappable per chassis (dual active) Single/dual controller support for 2U Dual controller only support for 5U
Processor	Intel® 2-core, 2.2GHz
Internal storage	**ME4012:** 12 x 3.5” drive bays (2.5” drive carriers supported) **ME4024:** 24 x 2.5” drive bays **ME4084:** 84x 3.5” drive bays (2.5” drive carriers supported)
System memory	8GB per controller

Expansion Capacity

Expansion enclosures	**ME412:** 12 x 3.5” drive bays (12Gb SAS) **ME424:** 24 x 2.5” drive bays (12Gb SAS) **ME484:** 84 x 3.5” drive bays (12Gb SAS) Also available as JBOD
Min/Max drive count	**ME4012:** 2/264 **ME4024:** 2/276 **ME4084:** 28/336
Max raw capacity	**ME4012:** 3.1PB (with ME484 expansion) **ME4024:** 3PB (with ME484 expansion) **ME4084:** 4PB
NAS Support	Supported with NX Series Windows NAS appliance
Storage media	SAS and NL-SAS drives; different drive types, transfer rates, rotational speeds can be mixed in the same system: • NLSAS (7.2K 3.5”): 4TB, 8TB, 10TB, 12TB, 12TB SED • NLSAS (7.2K 2.5”): 2TB, 2TB SED • SAS (10K 2.5”): 1.2TB, 1.8TB, 2.4TB, 2.4TB SED • SAS (15K 2.5”): 900GB, 900GB SED • SSD: 480GB, 960GB, 1.92TB, 1.92TB SED • SDD and HDD: FIPS-certified SEDs

Network and Expansion I/O

Host interface	FC, iSCSI, SAS (supports simultaneous multiprotocol FC/iSCSI)
Max 16Gb FC ports	8 per array (support auto-negotiate to 8Gb)
Max 10Gb iSCSI ports	8 SFP+ or BaseT ports per array (BaseT only support auto negotiate to 1Gb)

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Max 12Gb SAS ports	8 12Gb SAS ports
Max multi-protocol ports	4 ports 16Gb FC SFP+ 4 ports 10Gb iSCSI SFP+
Max management ports	2 per array (1Gb BASE-T)
Disk expansion protocol	12Gb SAS
Disk interface expansion ports	2 12Gb SAS (wide-Port) per array (1 port per controller) Up to 9 2U expansion enclosures per 2U base array Up to 3 5U expansion enclosures per 2U base array Up to 3 5U expansion enclosures per 5U base array
Functional	
Array configurations	All-flash, hybrid or all HDD arrays
Storage format	Native SAN or DAS

Data Optimization	
Auto-tiering	Up to 3 primary (media-based) tiers (2 level tiering supported)
RAID support	RAID 0, 1, 5, 6, 10, 50 or Adapt; any combination of RAID levels can exist in single array
Adapt	Distributed erasure coding that reduces rebuild times when drive failures occur
Thin provisioning	Active by default on all volumes, operates at full performance across all features
Snapshots	1024 maximum snapshots per array
Data Mobility and Migration	
Replication	Replicates with other ME4 Series Arrays Asynchronous block via FC or iSCSI Target/source relationships may be one-to-many or many-to-one
Volume copy	Copy complete standalone volumes
Data Protection, Disaster Recovery, Security	
Business continuity	VMware Site Recovery Manager
Data-at-rest encryption	Self-encrypting drives (SEDs) in SSD or HDD formats Full Disk Encryption (FCE) based on AES-256 Drives certified to FIPS 140-2 Level 2
Key manager	Internal controller key management

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Management	
Management	ME Storage Manager (MESM) HTML5 GUI, CLI
VMware vCenter	Support VMware vCenter plugin to manage the ME4 arrays through vCenter.
Scripting	CLI Microsoft PowerShell API
Supported host OS	Windows 2016 and 2012 R2 RHEL 6.9 and 7.4 SLES 12.3 VMware 6.7, 6.5 and 6.0
Virtualization integration	VMware vSphere (ESXi) vCenter; SRM Microsoft Hyper-V
Physical Base System	
Rack size	**ME4012** (2U), **ME4024** (2U), **ME4084** (5U)
Base system height	**ME4012:** 8.79 cm (3.46 inches) **ME4024:** 8.79 cm (3.46 inches) **ME4084:** 22.23 cm (8.75 inches)
Base system width	**ME4012:** 48.30 cm (19.01 inches) **ME4024:** 48.30 cm (19.01 inches) **ME4084:** 48.30 cm (19.01 inches)
Base system depth	**ME4012:** 60.29 cm (23.74 inches) **ME4024:** 60.29 cm (23.74 inches) **ME4084:** 97.47 cm (38.31 inches)
Weight (max configuration)	**ME4012:** 32.00 kg (71.00 lbs) **ME4024:** 30.00 kg (66.00 lbs) **ME4084:** 135.00 kg (298.00 lbs)
Weight (empty)	**ME4012:** 4.80 kg (10.56 lbs) without drives **ME4024:** 4.80 kg (10.56 lbs) without drives **ME4084:** 64.00 kg (141.00 lbs) without drives
Physical Expansion Enclosure	
Rack size	**ME412** (2U)**, ME424** (2U), **ME484** (5U)
Expansion height	**ME412:** 8.79 cm (3.46 inches) **ME424:** 8.79 cm (3.46 inches) **ME484:** 22.23 cm (8.75 inches)
Expansion width	**ME412:** 48.30 cm (19.01 inches) **ME424:** 48.30 cm (19.01 inches) **ME484:** 48.30 cm (19.01 inches)
Expansion depth	**ME412:** 60.29 cm (23.74 inches) **ME424:** 60.29 cm (23.74 inches) **ME484:** 97.47 cm (38.31 inches)
Weight (max configuration)	**ME412:** 28.00 kg (62.00 lbs) **ME424:** 25.00 kg (55.00 lbs) **ME484:** 130.00 kg (287.00 lbs)
Weight (empty)	**ME412:** 4.80 kg (10.56 lbs) without drives **ME424:** 4.80 kg (10.56 lbs) without drives **ME484:** 64.00 kg (141.00 lbs) without drives
Base System Power	
Power/wattage	**ME4012:** 580W **ME4024:** 580W **ME4084:** 2200W
Heat dissipation	**ME4012:** 1980 BTU **ME4024:** 1980 BTU **ME4084:** 7507 BTU

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Voltage	**ME4012:** 100-240 VAC **ME4024:** 100-240 VAC **ME4084:** 200-240 VAC
Frequency	50/60 Hz
Amperage	**ME4012:** 7.6-3.0A (x2) **ME4024:** 7.6-3.0A (x2) **ME4084:** 11.07-9.23A (x2)

Expansion Power

Power/wattage	**ME412:** 580W **ME424:** 580W **ME484:** 2200W
Heat dissipation	**ME412:** 1980 BTU **ME424:** 1980 BTU **ME484:** 7507 BTU
Voltage	**ME412:** 100-240 VAC **ME424:** 100-240 VAC **ME484:** 200-240 VAC
Frequency	50/60 Hz
Amperage	**ME412:** 7.6-3.0A (x2) **ME424:** 7.6-3.0A (x2) **ME484:** 11.07-9.23A(x2)

Environmental Operating Conditions

Operating temperature	41 - 95°F (5 - 35°C)
Non-operating temperature	-40 - 149°F (-40 - 65°C)
Operating humidity ranges (non-condensing)	10% to 80% with 29°C (84.2°F) maximum dew point
Non-operating humidity (non-condensing)	5% to 95% with 33°C (91°F) maximum dew point

Service & Warranty

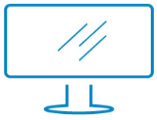
Services	Dell ProSupport with deployment and consulting services. Optional ProSupport Plus is available offering proactive and preventative services to improve performance and stability. Dell Optimize is available for additional ongoing strategic counsel and guidance from a highly-trained system analyst.
System sizing	Dell EMC Midrange Sizer Tool

OEM-Ready

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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