Dell PowerVault MD3 Storage Array Series

The Dell™ PowerVault™ MD3 series introduces the next generation of affordable storage. Whether you need to consolidate your storage, support the demands of data intensive applications or optimize your virtual environments, the MD3 series has been designed to meet your growing business needs. The versatility of the MD3 series lets you decide the protocol, supports a wide range of drive types, and has many optional premium software features that you can add as you choose.

Keeping pace with the latest technology

The new 16Gb Fibre Channel, 10GbE iSCSI, and 12Gb SAS controllers offer the latest technology in high speed connectivity. The newest MD3 models offer improved performance and doubles the existing bandwidth.[1] Your data should be available when you need it. The MD3 series offers 8GB cache on dual controller options in SAS, iSCSI, or Fibre Channel providing up 16GB total cache per array. The next generation of MD3 has the efficiency you need to meet your demanding I/O requirements. You get high availability and high performance without sacrificing the ease of use for which the PowerVault MD family is known.

Gain a new level of management efficiency

The MD3 series arrays are managed by the advanced MD Storage Manager software, an intuitive client-based Java application. Designed for easy user interaction with the system no matter what your level of familiarity with storage systems, it offers two different management paths and features an enterprise window that monitors multiple systems through a single interface.

The multi-protocol MD Storage Manager can manage all administrative tasks, including configuration, re-configuration, expansion, maintenance and performance tuning, and can be performed with no system downtime and no interruption to array performance. MD Storage Manager's configuration flexibility includes the ability to mix RAID levels, segment sizes, array sizes, and cache policies all within a single storage array.

Versatile options your way

Reduce the effort required to store and manage your data. The MD3 series is available in 12 x 3.5-inch hard drive form factors, 24 x 2.5-inch hard drive form factors, or in the high density enclosure that holds up to 60 x 2.5" or 3.5" hard drives. And because your storage needs are almost guaranteed to grow, capacity can be added as you need it. The 12- and 24-drive form factors can scale up to 192 drives[2] when attached to the PowerVault MD1200 or MD1220 expansion enclosures. The 60 HDD array can expand to 180 drives[2] with its own, specially designed, high density enclosure.

Reliable storage is enhanced with software features that provide added data protection, improved virtualization and ease of managed.

With optional remote replication and enhanced snap features your data can be protected at any global location. The integration of VMware VAAI helps improve performance where you need it, freeing your server from storage related tasks. Data management is simplified with Dynamic Disk Pools (DDP). DDP has been designed to improve storage efficiencies with self-healing dynamic disk rebalancing, without the worries of traditional RAID configurations. Other feature enhancements include thin provisioning and SSD cache, which help improve performance when combined with the High-Performance Tiering option.

Premium features are now bundled into two options. One option is designed to support the high demand for performance, and includes the High-Performance Tiering feature. If protecting data is a priority, then the pre-packaged Data Protection features ensure the full suite of premium data protection options are available.

High bandwidth, smaller footprint

The MD3 family includes the high density enclosure with built in high performance tiering. If your industry is manufacturing, oil/gas, healthcare, or video surveillance, the MD3 has the high bandwidth that you need to manage your data.

The high density enclosures take up less space than if you purchased the smaller form factor enclosures with an equal number of hard drives by using just 4U. With this smaller footprint comes the added benefit of saving on power and cooling expenses.

Introducing the new MD3, the next generation of affordable storage

Dell PowerVault MD3 Storage Array Series Tech Specs

Feature	MD3 SAS	MD3 1GBASE-T	MD3 10GBASE-T	MD3 Fibre Channel
Number of drives/form factor	MD3800f/MD3800i/MD3600f/MD3600i/MD3400/MD3200i/MD3200: 12/2U MD3820f/MD3820i/MD3620f/MD3620i/MD3420/MD3220i/MD3220: 24/2U MD3860f/MD3860i/MD3660f/MD3660i/MD3460/MD3260i/MD3260/MD3060e: 60/4U			
Drive types	SAS, NL-SAS and SSD drives			
3.5" drive options	15K RPM SAS: 300GB and 600GB[2] 7.2K RPM NL-SAS: 500GB, 1TB, 2TB, 3TB, and 4TB SSDs: 200GB and 400GB; read-intensive SSDs: 800GB and 1.6TB (available with 3.5" HDD carriers)			
2.5" drive options	15K RPM SAS: 146GB and 300GB 10K RPM SAS: 300GB, 600GB, 900GB and 1.2TB 7.2K RPM NL-SAS: 500GB and 1TB SSDs: 200GB and 400GB; read-intensive SSDs: 800GB and 1.6TB			
Expansion capabilities[3]	Up to 192 drives using MD1200 and/or MD1220 expansion enclosures: MD3820f/MD3800f/MD3820i/MD3800i/MD3620f/MD3600f/MD3620i/MD3600i/MD3420/MD3400/MD3220i/MD3220/MD3200i/MD3200 Up to 180 drives using MD3060e dense enclosures: MD3860f/MD3860i/MD3660f/MD3660i/MD3460/MD3260i/MD3260			
Connection	MD32x0: 6Gb SAS; MD34x0: 12Gb SAS	1GBASE-T iSCSI	10GBASE-T iSCSI	MD36x0f: 8Gb FC; MD38x0f: 16Gb FC
Host connectivity	Single controller: Supports up to 4 servers directly connected; Dual controller; Supports up to 8 servers directly connected in a non-HA configuration or 4 servers in a HA configuration	Single or dual controllers support up to 64[4] servers on the 12 HDD and 24 HDD 2U arrays. Dual controllers on the dense 60 HDD, 4U array Single controller: 2GB cache[5] Dual controller: 2GB, 4GB, or 8GB cache		
RAID levels	Support for RAID levels 0, 1, 10, 5, 6; Up to 180/192[3] physical disks per group in RAID 0, 1, 10; Up to 30 physical disks per group in RAID 5, 6; Up to 512 virtual disks; DDP[6]			
Dynamic Disk Pools[6]	DDP available on all models, can be used with or without RAID			
OS support	Microsoft® Windows®, VMware®, Microsoft Hyper-V®, Citrix® XenServer®, Red Hat® and SUSE®			
Optional premium features				
Snapshots	Up to 128 snapshots per virtual disk and 512 per system (optional on all models)			
Snapshots plus VDC	511 VDCs in sum but maximum 8 simultaneous VDCs on the array (optional on all models)			
HPT	Standard on MD3860f, MD3860i, MD3460, MD3660f, MD3660i, MD3260i, MD3260			
Remote Replication	A-synchronous remote replication over common IP networks and with Fibre Channel interconnects			
Array Management	Modular Disk Storage Manager			
Physical dimensions				
Height x width x depth	MD3800f/MD3800i/MD3600f/MD3600i/MD3400/MD3200i/MD3200: 8.68cm (3.42") x 44.63cm (17.57") x 56.1cm (22.09") MD3820f/MD3820i/MD3620f/MD3620i/MD3420/MD3220i/MD3220: 8.68cm (3.42") x 44.63cm (17.57") x 50.8 (20") MD3860f/MD3860i/MD3660f/MD3660i/MD3460/MD3260i/MD3260/MD3060e: 17.78cm (7.0") x 48.26cm (19.0") x 82.55cm (32.5")			
Maximum weight	MD3800f/MD3800i/MD3600f/MD3600i/MD3400/MD3200i/MD3200: 29.3kg (64.59 lb) MD3820f/MD3820i/MD3620f/MD3620i/MD3420/MD3220i/MD3220: 24.2kg (53.35 lb) MD3860f/MD3860i/MD3660f/MD3660i/MD3460/MD3260i/MD3260/MD3060e: 105.24kg (232 lb)			
Rails	MD3 2U versions 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			
Environment				
Power	Wattage: MD3 2U versions support DC power supply MD3 2U models — AC: 600W peak output; DC: 700W MD3 dense models — AC: 1755W			
Heat dissipation (max)	MD3 2U models: 2047 BTU/hr — MD3 dense models: 5988 BTU/hr			
Voltage	MD3 2U models: 100 to 240 VAC; 48V DC — MD3 dense models: 220V AC, auto ranging			
Frequency range	50/60Hz			
Temperature	Operating: 10° to 35°C (50° to 95°F) with a maximum temperature gradation of 10°C per hour MD3 2U models support Fresh Air cooling, up to 35°C			
Relative humidity	Operating: 20% to 80% (non-condensing) with a maximum humidity gradation of 10% per hour			
Altitude	MD3 2U models: Operating: -16 to 3048 m (-50 to 10,000 ft) NOTE: For altitudes above 2950 feet, the maximum operating temperature is derated 1°F/550 ft MD3 dense models: Operating: -30.5m to 3000m (-100 ft to 9,840 ft) NOTE: For altitudes above 2950 ft, the maximum operating temperature is derated 1.8°F/1000 ft			

Global services and support

Reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell Enterprise Solutions and Services deliver innovation at any scale. And if you're looking to preserve cash or increase operational efficiency, Dell Financial Services has a wide range of options to make technology acquisition easy and affordable. Contact your Dell Sales Representative for more information.

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.[7] For more information, visit Dell.com/OEM.

[1] Based on the current MD32xx and MD34xx models.
[2] 10K and 15K 3.5" HDDs are not supported on MD3 Dense arrays.
[3] Expansion beyond 120 drives is based on the purchase of a premium feature for additional drives.
[4] The MD3 1GBASE-T supports only 32 hosts.
[5] Single 2GB cache controller option available on MD32x0, MD32x0i, MD36x0i, and MD36x0f models only.
[6] D MD32x0 and MD36x0f arrays are limited to a maximum of 10 DDPs up to 1024TB. MD32x0i and MD36x0i arrays are limited to a maximum of 10 DDPs up to 256TB. MD34x0, MD38x0i, and MD38x0f arrays are limited to a maximum of 20 DDPs per array up to 1024TB
[7] OEM-ready available on certain models.

Simplify Your Storage at Dell.com/PowerVaultMD3