Dell PowerVault MD3600i /MD3620i Series

The Dell™ PowerVault™ MD3600i/MD3620i arrays is a next generation 10G Ethernet iSCSI SAN solution that is ideal for entry-level storage consolidation in virtualized environments that require high availability and high performance without sacrificing ease of use. Designed for flexibility, the MD3600i/MD3620i arrays support a range of drive types, enclosures, and RAID levels all within a single array.

Next-generation Ethernet-based network storage

PowerVault MD3600i/MD3620i arrays offer exceptional performance and flexibility for storage consolidation and scalability to meet your business demands. Now it's simple to improve storage utilization by combining storage resources, increasing availability with redundant hardware, and streamlining the backup process. By consolidating data and resources with a single array, back up strategies and management complexities are minimized.

Consolidation = efficiency

Reduce the effort required to store and manage your data. MD3600i/MD3620i series arrays can support up to 64 physical servers when connected to one or more 1Gb or 10Gb Ethernet switches. Storage capacity, up to a base of 120 hard disk drives, can be expanded by attaching additional PowerVault MD1200 and/or MD1220 expansion enclosures. Furthermore, an option to upgrade to 192 hard drives is available for additionally scalability.

iSCSI storage, ideal for virtual server environments

Implement your high performance network storage solution for less with MD3600i/MD3620i series arrays using low-cost, well understood Ethernet technology. Along with significant savings in hardware, IP SANs can also lower training investment. Ethernet is a familiar technology, so there's usually no learning curve.

Now you can effectively consolidate storage to support the value of your virtual environment with the performance to meet both IOPs-intensive as well as high bandwidth applications. MD3600i/MD3620i storage systems are fully qualified for use in virtualized application environments with VMware® ESX and Microsoft® Hyper-V™ software.

Keep pace with ever-increasing storage demands

MD3600i/MD3620i arrays deliver an excellent performance/price ratio. Take advantage of a next-generation array with two (2) iSCSI ports per controller that offers a 2x performance improvement compared to earlier MD storage arrays.

They easily handle the application demands of large databases with increased processing capability. These arrays also support solid state drives (SSD) to meet the most demanding I/O requirements. An optional High Performance Tier (HPT) feature is available to increase array I/O and throughput performance.

Gain a new level of management efficiency

MD3600i/MD3620i 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 arrays, including previous generation MD3000i, and MD3200/MD3200i/MD3600f/MD3600i series arrays, through a single interface.

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

The PowerVault vCenter plug-in and vSphere Storage APIs - Storage Awareness (VASA) provides VMware administrators with powerful capabilities designed to increase their productivity and simplify their jobs.

Deployment scalability and flexibility

Scale up. Mix and match drive types to create your optimum tiered data environment.

Scale Easily: Up to 64 servers can be connected to a single MD3600i or MD3620i storage system. Storage capacity can be expanded up to a total of 192 hard drives. Scaling capacity is as simple as plugging in additional PowerVault MD1200 and/or PowerVault MD1220 enclosures.

Mix and Match Drives: MD3600i arrays can hold up to twelve (12) 3.5 inch form factor hard drives and MD3620i arrays hold up to twenty-four (24) 2.5 inch drives. Both the MD1200 enclosure (twelve 3.5" hard drives) and the MD1220 enclosure (twenty-four 2.5" drives) can be added behind MD3600i series arrays. This flexibility enables data tiering for optimizing system performance.

Optional features

Snapshots — Each virtual disk supports up to sixteen snapshots, with a total of 256 snapshots per system. These are typically used when data needs to be "frozen" in time. Snapshot scheduler and Snapshot Rollback are features included in the Premium Feature Key providing additional data availability.

Virtual Disk Copy (VDC) - Virtual disk copy is full replication of an existing virtual disk at any point in time, often used for decision support and application development testing. Reads and writes are supported while doing a virtual copy.

Self-Encrypting Drives (SEDs)- With SEDs, if a drive is removed from the array or powered down, the data on that drive is encrypted and useless to anyone who attempts to access it without the appropriate security authorization.

High Performance Tier (HPT) - Meet the most demanding performance requirements for your organization to remain productive and competitive.

Additional Hard Drives Premium Feature Key

Ability to add up to 192 hard drives providing additional capacity to the MD Series of arrays.

Feature	Dell™ PowerVault™ MD3600i Series
Hard Disk Drives	MD3600i – Up to twelve (12) 3.5 inch SAS, Near-line SAS and SSD drives MD3620i – Up to twenty-four (24) 2.5 inch SAS, Near-line SAS and SSD drives
3.5" Drive Performance and Capacities	15,000 RPM SAS drives available in 300 GB, 450 GB and 600 GB 7,200 RPM Near-line SAS drives available in 500 GB, 1TB, 2TB and 3TB
2.5" Drive Performance and Capacities	15,000 RPM SAS drives available in 73 GB and 146 GB 10,000 RPM SAS drives available in 146 GB and 300 GB 7,200 RPM Near-line SAS drives available in 500 GB Solid State Drive (SSD) available in 149 GB (available in 3.5" HDD carriers)
Expansion Capabilities	Expand up to a base of 120 hard drives with an optional Premium Feature Key to scale up to 192 total drives using MD1200 and/or MD1220 expansion enclosures
Host Connectivity	
Single Controller Models	Supports up to 2 servers directly connected or up to 64 servers when configured with an Ethernet switch
Dual Controller Models	Supports up to 4 servers directly connected or up to 64 servers when configured with Ethernet switches
Storage Controllers and RAID Levels	
Storage Controllers	Each controller contains 2GB of battery-backed cache Dual controllers operate in an active-active environment mirroring each other's cache Cache protection is provided via flash memory for permanent data protection
RAID Levels	Support for RAID levels 0, 1, 10, 5, 6 Up to 120 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
Array Management and Optional Premium Features	
Array Management	2nd generation Modular Disk Storage Manager Multi-path software provides failover management of redundant data paths between the server and storage array
Optional Premium Features	Snapshots: Up to 16 snapshots per virtual disk and 256 per system Snapshots Plus Virtual Disk Copy: Up to 16 simultaneous virtual disk copies High Performance Tier firmware upgrade increases array IO performance Additional Hard Drives - capacity up to 192 hard drives
Back-Panel Connectors (per controller)	
Host Connectivity	Two RJ-45 10Gb Ethernet
Expansion Connectivity	One x4 6Gb SAS (8088 mini connector)
Remote Management	One RJ-45 1Gb Ethernet
Service Management	One PS/2 Serial
LED Indicators	
Front Panel	1 two-color LED indicator for system status, 1 single-color LED indicator for power, 1 LED unused in this system
Hard Drive Carrier	1 single-color activity LED, 1 two-color LED status indicator per drive
Storage Controller	1 one-color LED power indicator, 1 one-color LED controller fault indicator, 1 one-color LED controller identifier, 1 one-color LED cache activity indicator, 1 one-color LED battery fault indicator
Power Supply/Cooling Fan Module	3 one-color LED status for AC status, DC status and power supply cooling fan fault
Power Supplies (per supply)	
Wattage	600 W peak output
Maximum Heat Dissipation	150 W
Input Voltage Range	90 to 264 VAC
Frequency Range	47 to 63 Hz
Maximum Input Current at Rated Power	55 A for 10ms or less, 25 A for 10-150ms
Available Hard Drive Power (per slot)	
Supported Continuous Consumption	3.5" drive: 25 Watts; 2.5" drive: 12 Watts
Physical	
Height x Width x Depth	MD3600i: 8.68cm (3.42") x 44.63cm (17.57") x 56.1cm (22.09"); MD3620i: 8.68cm (3.42") x 44.63cm (17.57") x 50.8 (20")
Weight	MD3600i: 29.3kg (64.59 lbs.) (maximum configuration); MD3620i: 24.2kg (53.35 lbs.) (maximum configuration)
Environmental	
Expanded Temperature Operating Range	Continuous Operation: 10C to 35C, 10% to 80% relative humidity (RH) with a 26C max dew point. De-rate maximum allowable dry bulb temperature at 1°C/300 meters above 900 meters (1 degree F per 550 feet) 10% of annual operating hours: 5C to 40C, 5% to 85%RH with a 26C max dew point. For temperatures between 35 and 40C, de-rate maximum allowable dry bulb temperature 1°C/175 meters above 950 meters (1 degree F per 319 feet)
Relative Humidity	1% of annual operating hours: -5C to 45C, 5% to 90%RH, with a 26C max dew point. For temperatures between 40 and 45C, de-rate maximum allowable dry bulb temperature 1°C/125 meters above 950 meters (1 degree F per 228 feet)
Altitude	Operating: -16 to 3048 m (-50 to 10,000 ft) Note: For altitudes above 2950 feet, the maximum operating temperature is de-rated 1°F/550 ft.

Simplify your storage at Dell.com/PowerVault

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