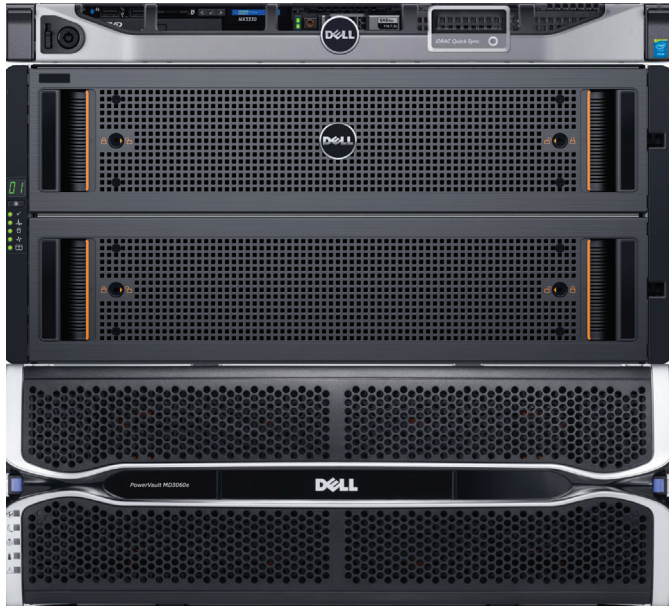




Storage designed
for value and
performance

Versatile options within
easy reach



Simplifying IT

Optimized for small and medium-sized businesses, branch offices and high-purpose computing, Dell Storage products are designed to enable affordable DAS, SAN and NAS solutions without compromising enterprise-class features and reliability. Dell Storage MD, PowerVault™ MD3, and NX Series provide a range of solid-state, SAS and NL-SAS technologies, as well as self-encrypting drive (SED) options. With easy deployment and management using Dell's Modular Disk Storage Manager, the optional storage management platform OpenManage™, or Microsoft® Windows® Storage Server, Dell Storage solutions offer a balance of performance, operational simplicity and flexible deployment.

The Dell difference

Deployment flexibility and scalability

- Modular solution design so you buy only what you need, then add capacity as your data storage requirements grow
- Versatile options in DAS, SAN and NAS designed to meet a broad range of infrastructures and system administrator expertise
- Full range of array and expansion enclosure sizes
- Scale capacity while taking advantage of Dell's high standards of HDD and SSD testing — the rigors ensure compatibility and optimal performance when using Dell's storage arrays and appliances

Balanced efficiency and performance

- Designed to maximize capacity at a low cost per gigabyte
- NAS gateway that can be used with any of Dell's primary storage arrays

Enterprise-class features

- Optional data protection features — snapshots, Dynamic Disk Pools (DDP), Virtual Disk Copy (VDC) replication, self-encrypting drives — help deliver added security and business continuity¹
- Available replication features for improved business continuity in case of disaster
- Managed data with the enterprise-class operating system Windows Storage Server 2012 R2²

Intuitive management

- Easy deployment with preconfigured options or wizard-based installation
- Modular Disk Storage Manager (MDSM) constantly monitors system health, alerts users of problems and can trigger a Recovery Guru feature to aid in troubleshooting and diagnostic assistance

Efficient, modular and reliable



Efficiency balanced with performance

Dell's modular storage addresses the challenges of relentless data growth and fixed budgets with versatile solutions optimized for smaller-scale storage consolidation, flexible virtualization projects and high business continuity. The broad range of connectivity options, drive types and capacities makes the entry-level PowerVault Series extremely versatile, meeting a variety of storage consolidation needs.

Storage consolidation and virtualization

The MD3 Series introduces the latest connectivity options with 12Gb SAS, 10Gb iSCSI and 16Gb Fibre Channel in a wide range of form factors and expansion chassis that offer unparalleled flexibility to extend performance or capacity as needs change. The MD3 Series is designed to scale and meet the needs of high-bandwidth applications. In addition, you can double the controller memory from the current maximum of 8GB cache to 16GB cache.³

Optimized for smaller-scale storage consolidation, virtualization and business continuity to fit a range of business needs

Adding capacity to Dell PowerEdge servers

Seamlessly expand storage capacity with Dell's direct-attach storage enclosures. Scale the latest generation of Dell PowerEdge™ servers with the 12Gb SAS Dell Storage MD1400 or MD1420 enclosures, taking advantage of end-to-end 12Gb SAS performance improvements. The MD1420 provides the performance required for the most demanding applications in a simple, energy-efficient DAS enclosure. The MD1400 offers versatility and high-capacity storage for mainstream applications, with optimal performance in sequential (streaming) applications. The Dell Storage MD1280 dense enclosure is designed to maximize PowerEdge server storage capacity while helping maintain compute power and performance. The MD1280 offers Dell's high-density expansion storage in just 5U of standard rack space with 84 high-capacity hard drives. If space is a constraint, the versatile MD3060e dense enclosure can support up to 240 hard drives in only 16U of standard rack space, maximizing capacity to almost a petabyte of data while saving space, power and cooling expenses.

Harnessing technology with Windows Storage Server 2012

Dell Storage NX430, NX3230 or NX3330 NAS products can help your organization meet your file-based storage needs. The NX Series harnesses the innovations of Windows Storage Server 2012 R2 offering affordable storage with enterprise-class features. These appliances have the latest Windows Storage Server software preinstalled for easy deployment and management, allowing you to manage and control file access through the familiar Windows administration interface. Dell integrates its best PowerEdge servers with Microsoft's latest Windows Storage Server operating system to improve reliability and performance.



Support for your unique environment

Dell ProSupport⁴ for IT provides tech-to-tech support for IT professionals, database administrators and internal service desks or help desks. Features such as Fast-Track Dispatch, direct access to Dell Expert Centers, and customer-controlled severity levels were designed with your specific challenges in mind. Dell Infrastructure Consulting helps organizations — from small and medium-sized companies to large corporations — select the right storage infrastructure to ensure data availability and optimize it with a variety of service options to meet their requirements for backup, recovery and archiving. Dell Global Services incorporates operational excellence, accountability and value to deliver end-to-end service and support solutions designed to maximize your IT investment by simplifying your IT environment.

PowerVault technical specifications

MD3 standard array specifications

Model number	MD3800 Series	MD3400 Series
Intended for	Performance, productivity applications and virtualization	Entry-level consolidation and virtualization
Supported server-side connectivity	16Gb Fibre Channel, 10GbE iSCSI	12Gb SAS
Number of drives per chassis	Up to 12 x 3.5" or 24 x 2.5" drives	
Drive types and count	SSD, SAS, SED and NL-SAS; up to 192 drives with additional license key and multiple expansion chassis	
Optional features	High Performance Tiering (HPT), snapshot, virtual disk copy, remote replication (Fibre Channel only), HDD expansion option ⁵	
Chassis height	2U (3.42" or 8.68 cm)	
Chassis weight	MDxx00: 29.3 kg (64.59 lb); MDxx20: 24.2 kg (53.35 lb)	
Power wattage	AC: 600W peak output; DC: 700W	

MD3 dense array specifications

Model number	MD3860 Series	MD3460 Series	MD3060e
Intended for	High-purpose computing, virtualization, dense consolidation	General-purpose computing, dense consolidation, virtualization	MD3 dense array series and PowerEdge R630, R730 and R730xd servers ⁶
Supported server-side connectivity	16Gb Fibre Channel, 10GbE iSCSI	12Gb SAS	6Gb SAS
Number of drives per chassis	Up to 60 x 2.5" or 3.5" drives		
Drive types and count	SSD, SAS, SED and NL-SAS. Up to 180 drives supported per array		
Distinctive features	HPT, Dynamic Disk Pools ⁷ , ALUA, VMware [®] VAAI support		
Optional features	Snapshot, virtual disk copy, remote replication (Fibre Channel only), HDD expansion option ⁵		
Chassis height	4U (7.5" or 17.78 cm)		
Chassis weight	105.24 kg (232 lb)		
Power wattage	AC: 1755W		

Dell Storage MD & NX Series

MD direct-attached storage specifications

Model number	MD1400	MD1420	MD1200	MD1220	MD1280
Intended for	Designed for the 13th generation of PowerEdge servers, offering end-to-end 12Gb SAS connectivity and performance		Efficient expansion for servers and MD storage arrays		
Supported server-side connectivity	12Gb SAS		6Gb SAS		
Number of drives per chassis	Up to 12 x 3.5" or 2.5" drives (2.5" available with adapter)	Up to 24 x 2.5" drives	Up to 12 x 3.5" drives	Up to 24 x 2.5" drives	Up to 84 x 3.5" drive
Drive types and count	SSD, SAS, SED and NL-SAS; up to 192 drives with additional license key and multiple expansion chassis				
Chassis height	2U (3.42" or 8.68 cm)				5U (8.8" or 22.230 cm)
Chassis weight	28.59 kg (63.03 lb)	24.2 kg (53.35 lb)	28.39 kg (62.6 lb)	23.31 kg (51 lb)	130.1 kg (287 lb) (maximum configuration)
Power wattage	AC – 600W; DC – 700W				2800W

NX Series NAS appliance specifications

Model number	NX3330	NX3230	NX430
Intended for	File consolidation for Windows environments requiring high availability	Focused file consolidation for Windows environments without high availability requirements	Entry-level appliance to power collaboration and protect business-critical data for small businesses or remote offices
Operating system	Microsoft Windows Storage Server 2012 R2 Standard Edition		Microsoft Windows Storage Server 2012 R2 (Standard Edition and Workgroup Edition)
Protocol support	CIFS (SMB), NFS, FTP, Active Directory		CIFS, NFS, FTP, SMB3.0, SMB Direct (RDMA)
Supported expansion	PowerVault MD3, PS Series or SC Series	PowerVault MD1200 expansion enclosures	No
Architecture	One NAS controller per chassis		PERC H730 (internal drives) or H830 (optional for external drives)
High-availability clustering supported	Yes	No	No
Management	Dell OpenManage featuring Dell Management Console or Windows Server Management interface iDRAC8 Express or Enterprise		
Chassis height	1U (1.68" or 4.28 cm)	2U (3.44" or 8.73 cm)	1U (1.68" or 4.28 cm)
Chassis weight	Maximum weight: 16.9 kg (37 lb)	Maximum weight: 27.6 kg (60.84 lb)	Maximum weight: 13.8 kg (30.42 lb)
Power wattage	Redundant and non-redundant hot-plug 750W PSU options	Redundant and non-redundant hot-plug 750W and 1100W PSU options	Redundant, 750W

End-to-end technology solutions

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.⁸ For more information, visit Dell.com/OEM.

¹ MD3 models only.

² NX Windows NAS models only.

³ 8GB per controller, dual controller option. Available on new controller models only.

⁴ Availability and terms of Dell Services vary by region. For more information, visit Dell.com/servicesdescriptions.

⁵ Premium Feature Key required for expansion beyond 120 drives.

⁶ Requires a two-port LSI 9207-8E 6Gb SAS host bus adapter (HBA) to support server expansion.

⁷ MD34x0, MD38x0i and MD38x0f arrays are limited to a maximum of 20 DDPs per array up to 1024TB.

⁸ OEM-ready available on certain models.

Simplify Your Storage at Dell.com/Storage.

