



Dell Storage PS4210 Series

The Dell™ Storage PS4210 Series arrays offer next-generation storage with increased memory, performance and connectivity options for small-to-medium data centers, remote offices and current EqualLogic™ environments. The PS4210 10GbE iSCSI arrays feature industry-leading capabilities of the Dell EqualLogic PS Series product line with streamlined management, multi-generational compatibility and all-inclusive software licensing. This series offers multiple configurations in drive capacities with up to 48TB of storage in 2U, 2.5" and 3.5" drive options. Additionally, the PS4210 Series offers a hybrid configuration to auto-tier data and store frequently accessed data on SSDs for rapid response, and store cold data on HDDs within the same array. This minimizes the number of SSDs required, reducing your overall cost.

Optimized performance, capacity and connectivity

With choices in performance, capacity and networking, the Dell Storage PS4210 Series arrays can provide your small data center or remote office with an easy to manage storage solution that is optimized for virtualization platforms and a variety of applications. The PS4210 Series allows you to auto negotiate from 1Gb to 10Gb to make your environment easier to manage while providing the flexibility of using SFP+ or 10GBASE-T (copper) ports so you can leverage your existing infrastructure or build out lower-cost 10GBASE-T.

With new hybrid arrays, the next-generation Dell Storage PS4210 Series offers up to 6x the performance improvement of the previous generation arrays.¹ These hybrid-flash arrays are ideal for mission-critical workloads such as VDI deployments, OLTP databases and other mixed workloads with up to 80,000 random read performance.¹

Enterprise power, everyday simplicity

PS Series arrays are based on a virtualized, modular storage architecture that enables you to purchase only the storage you need when you need it. Sophisticated, yet simple management features speed SAN configuration, and built-in intelligence capabilities sense network connections, automatically build RAID sets, and conduct system health checks. All PS Series arrays, regardless of generation, work together to automatically manage data, load balance across all resources or seamlessly expand the storage pool when you add a new array. The PS4210 Series also includes fault-tolerant capabilities through use of fully redundant and hot-swappable controllers, fan trays, power supplies and disk drives.

With the Dell Storage PS Series line, the cost of a small iSCSI SAN solution could save organizations up to 60% when compared

with two similar vendors.² The PS4210 Series arrays offer low TCO through a family of solutions that can be tailored to fit your exact needs, and grow with you, simply and cost effectively.

Feature-rich software portfolio

The PS Series arrays include innovative firmware and host software with no additional cost or software licensing fees. EqualLogic PS Series host software extends the functionality of the array-based software enabling cooperation with the host. Host Integration Tools for Microsoft®, VMware® and Linux® environments as well as EqualLogic PS Series SAN Headquarters (SAN HQ) management software are included with your PS Series array purchase.

SAN HQ provides an interface for monitoring your groups of PS Series arrays, and offers a proactive and automated support process with SupportAssist to help improve productivity and accuracy, while helping you gain insight and control.

Lowest TCO over a five year period compared to two comparable SAN arrays in the market²

Feature	PS4210E	PS4210X	PS4210XV	PS4210XV 3.5"	PS4210XS
Product configurations	Entry-level configurations for affordable capacity	Great balance of cost, performance and capacity	Highest performance HDD system	High-performance 15K RPM HDD system with high capacity	SSD speed and HDD capacity within one array
Storage controllers	Dual controllers with 16GB ³ non-volatile memory (8GB per controller) with up to 32GB non-volatile memory in a group of 2 arrays				
Network interfaces	10GbE connectivity Management network: 1 x 100BASE-TX per controller Interfaces ports: 2 x 10GBASE-T with RJ45 or 2 x 10GbE SFP+ for fibre or twin-ax copper cabling				
Drive types	12 hot-pluggable 3.5" 7.2K NL-SAS	24 hot-pluggable 2.5" 10K SAS	24 hot-pluggable 2.5" 15K SAS	12 hot-pluggable 3.5" 15K SAS	7 hot-pluggable 2.5" SSDs plus 17 hot-pluggable 2.5" 10K RPM SAS drives
Drive capacities	2TB, 3TB, 4TB	600GB, 900GB, 1.2TB	300GB	600GB	400GB SSD and 600GB SAS

System capacities	Up to 48TB (up to 96TB with 2 arrays)	Up to 28.8TB (up to 57.6TB with 2 arrays)	Up to 7.2TB (up to 14.4TB with 2 arrays)	Up to 13TB (up to 26TB with 2 arrays)
Technical highlights				
Host protocol	Any standards-compliant iSCSI initiator			
Expansion option	Can be combined with other EqualLogic PS Series arrays in the same SAN group, online with a maximum of 16 total arrays per group that can support up to 2 PS4xxx arrays and 14 PS6xxx arrays. A maximum of two arrays can be in a group of PS4xxx series with up to 96TB.			
Operating systems and hypervisors	Microsoft® Windows Server® including Hyper-V® VMware® ESX Server Red Hat® Enterprise Linux® (RHEL) SUSE® Enterprise Linux® (SLES) Oracle® Linux		Oracle® Solaris™ HP-UX Mac OS® X Citrix® XenServer® Novell® NetWare®	
	For a complete list of supported OS versions including software initiators, NICs/CNAs, and HBAs, please see the EqualLogic Compatibility Matrix .			
RAID	RAID 6, RAID 10, and RAID 50 ⁴			Accelerated RAID 6
TCP Network Support	IPv4, IPv6 core support			
Reliability	Redundant hot-swappable controllers with vertical port sharing Hot-swappable disks and power supplies			
Enclosure Monitoring System	CHAP authentication; Access control lists for iSCSI as well as new Access Control Policies; Access control for management interfaces including Active Directory, LDAP, or RADIUS support			
Management Interfaces	SAN Headquarters multi-group performance and event monitoring tool Serial console Ability to configure a separate management network SNMP, telnet, SSH, HTTP, Web (SSL), host scripting Multi-administrator support			
Security	CHAP authentication Access control for iSCSI Access control for management interfaces including RADIUS support			
Notification Methods	SNMP traps, email, syslog			
Physical	Height: 2U 8.68 cm (3.41 in) Width: 44.63 cm (17.57 in) E/XV 3.5" Depth: 59.4 cm (23.4 in) X/XV Depth: 54.1 cm (21.3 in) E/XV 3.5" Weight: 29.2 Kg (64.4 lb) X/XV Weight: 24.1 Kg (53.1 lb)			
Power	AC voltage: 100-240 VAC +10% single phase 700W (max, total), +5V up to 155W; +12V up to 624W; +5Vsb up to 10W Frequency: 50/60 Hz Power factor: 0.98 (minimum) Power supplies: Dual 700W			
Rack support	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			
Dell support and optional storage service offerings	Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support are recommended to provide you the right support services for your EqualLogic solution. ⁵ Contact your Dell representative today for more information.			

¹ Performance will vary depending on the workload and drive type. Based on August 2014 Dell performance testing the PS4210XS hybrid-flash arrays and the PS4110XV HDD arrays with 4KB block and 100% random read I/Os.

² Source: ESG Lab Report, "Dell EqualLogic PS Series Storage and TCO Analysis- Delivering Lasting Value with Streamlined Management and Improved Performance Scalability," a January 2014 report sponsored by Dell. For the full report see http://en.community.dell.com/techcenter/extras/m/white_papers/20438150/download.aspx

³ GB means 1 billion bytes, TB equals 1 trillion bytes and PB equals 1 quadrillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

⁴ RAID 5 is also available for non-production data, but is generally not recommended; RAID 50 is similarly not recommended for production data on drives larger than 2TB.

⁵ Availability and terms of Dell Services vary by region. Dell Basic Service is included standard with EqualLogic units. For more information, visit Dell.com/ServiceDescriptions.

End-to-end technology solutions

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