



# EqualLogic PS6210 Series

The Dell™ EqualLogic™ PS6210 arrays bring a new level of performance for your most demanding applications, while delivering the simplicity of the EqualLogic management experience.

## Performance and efficiency simplified for the real world

The Dell EqualLogic PS6210 is an intelligent storage array, designed to provide simple management and seamless expansion using innovative Dell technology. The Dell Storage PS Series arrays include SAN configuration features and capabilities that sense network connections, automatically build RAID sets, and conduct system health checks to help ensure that all components are fully functional. Based on a virtualized modular storage architecture that enables you to purchase only the storage you need — when you need it — the PS Series arrays help prevent both underutilization and overprovisioning in your data center. All PS Series arrays in a SAN work together to automatically manage data, load balance across all resources, and expand to meet your growing storage needs. With the addition of EqualLogic FS Series appliances, you can effectively store both block and file data in a unified storage solution.

PS Series products are designed to meet and exceed the rugged requirements of the data center including fault-tolerant capabilities through fully redundant and hot-swappable components: dual controllers, dual fan trays, dual power supplies, and disk drives with hot spares.

#### Build and scale the storage system you need

With choices in performance, capacity and networking, the EqualLogic PS6210 Series arrays offer enterprise-class storage features that are easy to operate and manage. These features are optimized for virtualization platforms and a variety of applications such as deployments of faster networking technology, server virtualization, VDI, OLTP (online transactional processing) database workloads, large-block sequential workloads, and other high-IOPS workloads that are latency sensitive.

The SSD-enabled PS6210 arrays provide flash at the price of disk with a new level of performance in the PS Series line: Twice the maximum IOPS as prior models for their most critical applications.<sup>1</sup>

All-flash PS6210S arrays provide load-balanced performance and dense SSD capacity that can be scaled out predictably. PS6210XS hybrid-flash arrays are ideal for VDI deployments, important databases and other mixed workloads by providing auto-tiering for hot data.

#### Feature-rich software portfolio

The Dell Storage PS Series arrays include innovative firmware and host software with no additional cost or software licensing fees.

EqualLogic 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 SAN Headquarters (SAN HQ) management software are included with your EqualLogic array purchase. SAN HQ provides an interface for monitoring your groups of EqualLogic arrays, and offers a proactive and automated support process with SupportAssist to help improve productivity and accuracy while helping you gain insight and control.

A flash-enabled PS Series SAN can provide over 267K IOPS for an OLTP database workload with less than five milliseconds of latency.<sup>2</sup>

Product configurations	Capacity for your data-hungry applications	High performance for your demanding enterprise applications		High-performance storage optimized for your most critical applications
Storage controllers	Dual controllers with 16GB <sup>3</sup> non-volatile memory per controller with up to 512GB non-volatile memory in a group of 16 arrays			
Network interfaces	10GbE connectivity; management network: 1 x 100BASE-TX per controller; interface ports: 2 x 10GBASE-T with RJ45 or 2 x 10GbE SFP+ for fibre or twin-ax copper cabling			
Drives types	PS6210E: 24 hot-pluggable 3.5* 7.2K NL-SAS	PS6210XV: 24 hot-pluggable 2.5" 15K SAS PS6210X: 24 hot-pluggable 2.5" 10K SAS		PS6210S: 24 hot-pluggable 2.5" SSDs PS6210XS: 7 hot-pluggable SSDs plus 17 hot-pluggable 10K SAS
Drive capacities including self-encrypting drives (SED)	PS6210E: 2TB, 3TB, 4TB, 6TB NL-SAS, 4TB NL-SAS SED	PS6210XV: 300GB, 600GB SAS, 600GB SAS SED PS6210X: 600GB, 900GB, 1.2TB SAS, 1.2TB SAS SED		PS6210S: 400GB, 800GB SSD PS6210XS: 400GB and 800GB SSD plus 600GB and 1.2TB SAS
System capacities	PS6210E: Up to 144TB per array (up to 2.3PB with 16 arrays)	PS6210XV: Up to 14.4TB (up to 230.4TB with 16 arrays) PS6210X: Up to 28.8TB (up to 460.8TB with 16 arrays)		PS6210S: Up to 19.2TB (up to 307.2TB with 16 arrays) PS6210XS: Up to 26TB (up to 416TB with 16 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; maximum of 16 total arrays per group that can support a maximum of 384 drives with the PS6210 Series. With multigenerational capabilities, you can support up to 10 cross-generation types of controllers with multiple network configurations and drives types in a new or existing EqualLogic SAN resource pool, all managed by a single interface.			
Operating systems and hypervisors	Oracle® Linux     initiators, NICs/C       Oracle® Solaris™     Compatibility Ma			supported OS versions including software, and HBAs, please see the EqualLogic http://en.community.dell.com/techcenter/equallogic-compatibility-matrix-07262013.
RAID	PS6210E: RAID 6, RAID 10 and RAID 50 (for 2TB drives) <sup>5</sup>	RAID 6, RAID 10 and RAID	50 <sup>5</sup>	PS6210S: RAID 6, RAID 10 and RAID 50 <sup>5</sup> PS6210XS: Accelerated RAID 6
TCP network support	IPv4 SAN and management traffic supported, and IPv6 SAN and in-band management supported			
Reliability	Redundant hot-swappable controllers; hot-swappable disk drives and power supplies			
Enclosure monitoring system	Automatic spare configuration and utilization; SMART; Automatic bad block replacement; Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives			
Management interfaces	Group Manager (GUI and CLI) SAN Headquarters multi-group performance and event monitoring tool Virtual Storage Manager vCenter plugin Serial console		Ability to configure a separate management network SNMP, telnet, SSH, HTTP, Web (SSL) Host scripting, including Windows PowerShell Multi-administrator support	
Security	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			
Notification methods	SAN Headquarters alerting, including Dell SupportAssist, SNMP traps, email and syslog			
Physical	PS6210E: Height: 4U/175 mm (6.87 inches) Width: 446 mm (17.57 inches) Depth: 580 mm (22.83 inches) Weight: 47.1 kg (103.8 lb) <sup>6</sup>		PS6210X, PS6210S, P6210XS and PS6210XV: Height: 2U/87 mm (3.42 inches) Width: 446 mm (17.57 inches) Depth: 546 mm (21.50 inches) Weight: 26.4 kg (58.3 lb) <sup>6</sup>	
Power	PS6210E power supplies: dual 1080W, optional dual 1080W DC-DC PS6210X, PS6210XS and PS6210XV power supplies: dual 700W, optional dual 700W DC-DC			
Rack support	ReadyRails <sup>TM</sup> 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.7 Contact your Dell representative today for more information.			

PS6210XV/PS6210X

PS6210S/PS6210XS

- 1 Performance may vary depending on the workload and drive type. Based on September 2013 Dell performance testing comparing the PS6210XS and PS6110XS arrays with 4KB block and 70/30 read/
- <sup>2</sup> Performance may vary depending on the workload and drive type. Based on September 2013 Dell performance testing using eight PS6210XS arrays with Dell PowerEdge™ R620 and R610 servers and Dell Networking switches, using 70/30 read/write workloads.
- <sup>3</sup> 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.

  <sup>4</sup> Maximum number of drives dependent on group consisting of all PS6210 Series arrays.

5 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.

Actual unit and packaged weights will vary slightly by drive type and packaging.
 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

Features

 $Reduce\ IT\ complexity, lower\ costs\ and\ eliminate\ inefficiencies\ by\ making\ IT\ and\ business\ solutions\ work\ harder\ for\ you.\ You\ can\ count\ on\ Dell\ for\ properties and\ properties\ for\ proper$ 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.

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