HP StorageWorks Virtual Array 7110

The HP StorageWorks Virtual Array 7110 (VA7110) is a low cost, high capacity, high performance, 2 Gb Fibre Channel virtual disk array that delivers industry-leading uptime and availability. It is an ideal choice for environments requiring heterogeneous operating systems including HP-UX, other UNIX® servers, and WINtel servers. The VA7110 supports over 6 TB with up to 45 disks. You can mix and match drives of different size, and add capacity instantly.

The HP hot swap technology reduces planned downtime, and our virtual array architecture simplifies array management and administration. File or LUN creation occurs quickly, without concern for the underlying physical technology.

The VA7110 has one host port per array controller to enable configurations with no-single-point-of-failure. These ports support either 1 or 2 Gb Fibre Channel devices to protect your investment in connectivity infrastructure.

What's new
- Leverages the performance improvements developed from the VA7410 into a lower cost entry level replacement for the VA7100. In some cases, relative performance can be up to twice that of the VA7100

- Extends scalability to 45 disks from the current limit of 15

- Provides investment protection by supporting the new 146 GB disk mechanisms

Key features and benefits
- *Manageable:* enables easier administration and remote management through SCSI Enclosure Services

- *Serviceable:* makes repairs a breeze with hot-swappable disks, power supplies, fans, and I/O cards

- *Reliable:* ensures data access through redundant power supplies, fans, and I/O cards

- *High-performance:* supports the latest 2 Gb Fibre Channel interconnects with speeds of 200 MBs

- *Compact:* holds up to 15 disk drives (or over 2 TB in capacity) in a slim 3U form factor

- *Flexible:* supports mixed disk environments and is backward compatible with 1 Gb Fibre Channel

- *Scalable:* scales up to 45 disk drives (over 6 TB) to accommodate growing storage needs

- *Open:* supports multiple operating systems, including HP-UX, open systems UNIX, Linux, NetWare, Microsoft® Windows® NT/2000 and Windows Server 2003

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Native capacity	6.5 TB
External I/O ports	Two 2 Gbps or 1 Gbps Fibre Channel ports
Sustained performance	164 MBps read
Memory cache	Up to 2 Gb mirrored cache
Cache internal	Up to 2 Gb per controller
RAID levels	RAID 1+0 or AutoRAID (RAID 1+0 and RAID 5DP (double parity)
Maximum disks per array	45
Available disk mechanisms	36 GB, 10K rpm; 36 GB, 15K rpm; 73 GB, 10K rpm; 73 GB, 15K rpm; 146 GB, 10K rpm
Compatible operating systems	HP-UX, Windows NT, Windows 2000, Windows Server 2003, Linux (Red Hat, SuSE), Solaris, AIX, NetWare, MPE/ix
Current (maximum)	6.85 A @ 100 Vac; 2.98 A @ 200 Vac (current rating is with two inputs [power cords])
Power consumption	670 W
Power supply	100–240 Vac auto-ranging, 50–60 Hz
Compatible network management tools	HP OpenView Network Node Manager, HP Toptools, CA Unicenter, IBM Tivoli
Dimensions (HxWxD)	5.0 x 17.6 x 26.0 in (12.8 x 44.8 x 66.0 cm)
Safety	IEC 60950 (1991) 2nd Edition, 1992-A1, 1993-A2, 1995-A3, 1996-A4; CSA C22.2 No. 950-95; UL 1950-95
OS, platform, software compatibility	The VA supports all major OSs – HP-UX, Solaris, AIX, Linux, Microsoft Windows NT/2000, Windows .NET (when available), and NetWare
Solution components	HP StorageWorks Virtual Arrays – http://h18006.www1.hp.com/storage/arraysystems.html HP StorageWorks Tape Libraries – http://h18006.www1.hp.com/storage/tapestorage.html Servers – http://welcome.hp.com/country/us/eng/prodserv/servers.html Software: VA storage software provides centralized device management, high availability, data security, online backup and data replication • HP StorageWorks Command View: graphical, command-line, or web-based management console for virtual arrays • HP StorageWorks Business Copy VA: array-based LUN data replication • HP StorageWorks Auto Path for VA: I/O multi-path failover for single or clustered servers • HP StorageWorks Secure Manager for VA: protect LUNs against unauthorized access by servers or users • HP StorageWorks Enterprise Integrations: enable management of VAs from a single management console in OpenView, Tivoli, Computer Associates or BMC – www.hp.com/products1/storage/products/disk_arrays/modular/ Backup software • HP OpenView Omniback II – http://h18006.www1.hp.com/products/storage/software/dataprotector/index.html Consulting services – www.hp.com/hps Support services – www.hp.com/hps/storage
Accessories	For enterprise products: Note: the following cables are for use between the HP StorageWorks Disk System 2405 (ds2405) and VA7x10 enclosures or between VA7x10 enclosures and server or SAN components. Fiber optic cable, LC to LC, M/M, 2m — C7524A Fiber optic cable, LC to LC, M/M, 16m (52 ft) — C7525A Fiber optic cable, LC to LC, M/M, 50m — C7526A Fiber optic cable, LC to LC, M/M, 200m — C7527A Fiber optic coupler, SC to SC, F/F — C7534A Fiber optic adapter kit (C7529A + C7534A), LC to SC, M/F 2m (79 in) — C7540A
Supplies	36 GB 10K rpm Fibre Channel disk drive — A6192A Option 0D1 36 GB 15K rpm Fibre Channel disk drive — A6193A Option 0D1 73 GB 10K rpm Fibre Channel disk drive — A6194A Option 0D1 773 GB 10K rpm Fibre Channel disk drive — A7288A Option OD1 146 GB 10K rpm Fibre Channel disk drive — A7289A Option OD1

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Product number	Product name	Description
A7294A	VA7110	VA7110, dual controller, 1024 MB cache, field rackable
A7294AZ	VA7110	VA7110, dual controller, 1024 MB cache, factory racked
A7294AE	VA7110	VA7110, dual controller, 1024 MB cache, field rackable; ships non-integrated only
A7296A	VA7110	VA7110, dual controller, 2048 MB cache, field rackable
A7296AZ	VA7110	VA7110, dual controller, 2048 MB cache, factory racked
A7296AE	VA7110	VA7110, dual controller, 2048 MB cache, field rackable; ships non-integrated only
A6267A	VA7410	VA7410, dual controller, 1024 MB cache, field rackable
A6267AZ	VA7410	VA7410, dual controller, 1024 MB cache, factory racked
A6267AE	VA7410	VA7410, dual controller, 1024 MB cache, field rackable; ships non-integrated only
A6268A	VA7410	VA7410, dual controller, 2048 MB cache, field rackable
A6268AZ	VA7410	VA7410, dual controller, 2048 MB cache, factory racked
A6268AE	VA7410	VA7410, dual controller, 2048 MB cache, field rackable; ships non-integrated only
A6183A	VA enclosure	VA family base enclosure, field rackable
A6183AZ	VA enclosure	VA family base enclosure, factory racked
A6183AE	VA enclosure	VA family base enclosure, field rackable; ships non-integrated only
A6187B	1024 MB cache for virtual array 7x10	1024 MB cache (single DIMM)
A7293A	VA7110 virtual array controller	VA7110 virtual array controller
A6218A	VA7410 virtual array controller	VA7410 virtual array controller
A6250A	Disk System 2405	ds2405 with dual 2 GB link control cards, field rackable
A6250AZ	Disk System 2405	ds2405 with dual 2 GB link control cards, factory racked
A6250AE	Disk System 2405	ds2405 with dual 2 GB link control cards, ships non-integrated only; order cables separately
A6255A	Disk System 2405 Link Control Card	Link control cards to upgrade a ds2400 to a ds2405
C7524A	2m Fibre Channel LC/LC	Fibre Channel cable for ds2405 (must order two per ds2405) duplex 50/125 M/M
A6192A	36 GB 10K rpm Fibre Channel disk drive	36 GB 10K rpm Fibre Channel disk drive
A6193A	36 GB 15K rpm Fibre Channel disk drive	36 GB 15K rpm Fibre Channel disk drive
A6194A	73 GB 10K rpm Fibre Channel disk drive	73 GB 10K rpm Fibre Channel disk drive
A7288A	73 GB 15K rpm Fibre Channel disk drive	73 GB 15K rpm Fibre Channel disk drive
A7289A	146 GB 10K rpm Fibre Channel disk drive	146 GB 10K rpm Fibre Channel disk drive

For virtual array software product descriptions and ordering information visit our web site at: http://h20015.www2.hp.com/en/document.jhtml?lc=en&docName=lpg64105

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What's included	CD, manuals on CD, the number and type of disk drives that the customer has chosen, disk slot filler panels For those customers requiring capacities in excess of 15 drives, the solution includes the HP StorageWorks Disk System 2405

Warranty and support	Standard warranty • 2-year, on-site, limited warranty from HP or authorized resellers; same business-day response during standard business hours and Command View SDM phone-in-assistance • 2-year, 8x5, same-day, 4-hour on-site response with Command View SDM phone-in assistance (PIA) Hardware and mission critical support/warranty upgrade offerings • 1, 2, or 3-year, 4-hour on-site response, 24x7 phone-in assistance • Storage critical support (SCS for VA): • 1, 2, 3, 4, or 5-year, assigned account team, on-site response, 6-hour call-to-repair, 6 hours ASE consulting, storage map maintenance • Business continuity support (BCS): services include assigned account team, operational assessment, change management assistance, system monitoring, and preventive assistance with the High Availability Observatory (HAO) Software support offerings • 1, 2, or 3-year, 8x5, same-day support with phone-in assistance • 1, 2, or 3-year, 24x7, same-day support with phone-in assistance

For more information	For more information on HP StorageWorks Virtual Arrays, contact any of our worldwide sales offices or visit our web site at: www.hp.com/go/diskarrays