

hp storage

high-availability storage solution

Introducing the HP Disk Array xp512, the industry's ONLY true high-end storage platform. Part of the HP Surestore family of storage products, this disk array features explosive performance, incredible scalability and reliability, and unmatched manageability in truly heterogeneous environments.

Fault-tolerant, redundant architecture ensures there is no single point of failure, so your data is available when you need it. Online firmware upgrades virtually eliminate planned downtime. Proven ultra-high-availability disk drives guarantee superior uptime. And with no single point of failure, this disk array gives you data access anytime. Non-disruptive upgrades and additional capabilities for both hardware and firmware upgrades eliminate downtime as you scale up your system to meet new business needs. Rest easy, because HP Disk Array xp512 disk drives have been tested at an astonishing 2.5 million hours mean time between failures!

extremely capable, flexible storage

HP Disk Array xp512 has the features you need for your data center:

- **it's bigger**, for greater scalability up to 92 TB.
- **it's faster**, for dramatically increased performance with the new 2 Gb/s Fibre Channel Interface.
- **it's manageable**, with HP's unique time-saving storage management software.
- **it's open**, which is ideal for heterogeneous environments.

hp disk array xp512—the industry's only true high-end storage platform



features benefits

RAID 0/1 and RAID 5 support	optimizes storage performance
super-high-reliability 18 GB, 73 GB, and 181 GB Fibre Channel drives	provide choice, scalability, and reliability to fit your capacity requirements
2 Gb/s Fibre Channel, FWD-SCSI*, and ESCON connectivity	supports a wide range of open systems and mainframe host connectivity as well as key data mirroring, disaster recovery, and fast 2 Gb/s transfer rates
battery-protected, mirrored write cache	ensures all data written to an HP Disk Array xp512 is safe—no matter what
24 x 365 proactive support	identifies and resolves problems before they occur

* Via a Fibre Channel to FWD-SCSI bridge



versatile

the versatility of crossbar architecture

The HP Disk Array xp512's crossbar architecture provides explosive performance compared to bus-based arrays. Crossbar allows sequential I/Os for data warehousing applications and technical computing environments. The exceptional I/O performance paves the way for leading SAP, Oracle®, and messaging workloads.

strength that withstands all situations

Best of all, the HP Disk Array xp512 is the choice of third-party vendors. It works with what you have and what you might want: Sun, Compaq/DEC, Sequent, Novell, SGI, IBM, and Hitachi—and also with providers such as STK, Brocade, Ancor, Emulex, and McData.

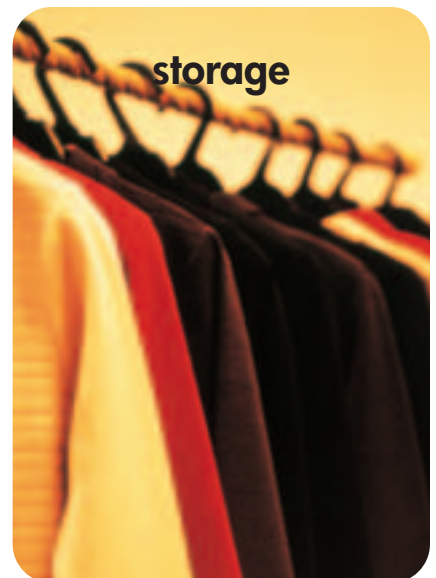
protection for your future investments—today

Not only does the HP Disk Array xp512 support new generations of lower-cost disk technology in existing frames, but also its modular disk upgradability reduces the need for troublesome “forklift” upgrades as your capacity needs grow. It can scale from four disk drives to 512 disk drives without a moment of downtime. Fast, easy, and secure data access across multiple mainframe and heterogeneous UNIX®, HP MPE, multi-vendor Windows NT®, Windows® 2000, and other open systems provides a robust multi-platform solution for storage consolidation, OLTP, data warehousing, enterprise backup and restore, and disaster recovery. Microsoft® certification ensures compatibility and uptime in Windows NT and Windows 2000 environments. And full integration into the HP Equation storage architecture ensures open, secure storage area network (SAN) management. Support for HP-UX, Sun Solaris, IBM AIX, and multi-vendor Windows NT backup and restore solutions is designed to avoid impact on operations. HP Continuous Access XP and HP Continuous Access XP Extension provide exceptionally reliable, high-speed data transfer over unlimited wide area network (WAN) distances for disaster recovery.

hp puts the solid in consolidation

You can trust HP to protect your most valuable data at every possible step. Everything about the HP Disk Array xp512—the components, architecture, software, service, and support—was chosen to make it the most reliable disk array you can buy:

- ultra-high-reliability Fibre Channel disk drives
- fault-tolerant, redundant architecture
- continuous self-monitoring and repair
- battery-protected mirrored write cache
- two-year onsite emergency response warranty
- proactive “phone home” capability lets our support staff continuously monitor your system remotely, alerting you of problems before they happen



storage

hp disk array xp512

The powerful Web-based management platform lets you manage your data anytime, from anywhere. Intelligent SAN management software provides centralized monitoring and management of SAN infrastructure and your XP disk arrays. And secure logical unit number (LUN) management software provides secure, SAN-based data management for a wide range of open systems platforms.

proactive 24 x 365 support

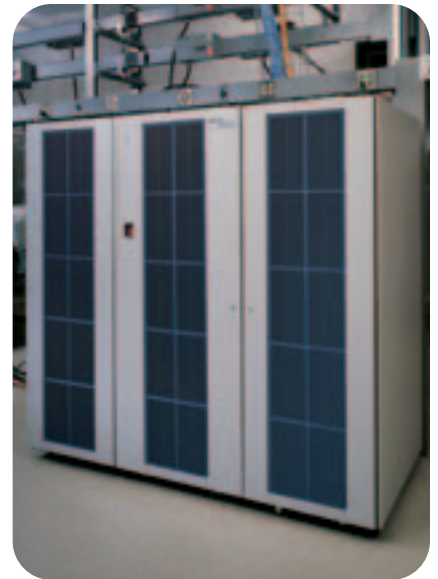
Remote, "Phone Home" capabilities detect and fix problems before they occur. We offer comprehensive support and consulting services spanning your server, SAN, and storage requirements.

hp's proven experience

Only HP has the experience and expertise to develop any scale of data center storage solutions to meet your specific needs today and in years to come.

broad, simple, powerful management

HP's integrated software portfolio uniquely solves your critical IT management issues. It delivers powerful disaster recovery capabilities and zero-impact, zero-downtime backup and restore solutions. And a common Web-based graphical user interface (GUI) makes it easy to move to another application or workstation.



specifications

Control Frame

Client host interface processor (CHIP)
Number of CHIP pairs 1, 2, 3, or 4

Host Interfaces per Subsystem

Maximum 32
ESCON 0-32
FWD SCSI (via Bridge) 0-32
2 Gb/s Fibre Channel 0-32

Transfer Rates

ESCON 17 Mb/s
FWD-SCSI 20 Mb/s
2 Gb/s Fibre Channel 200 Mb/s

Nonvolatile Cache

2 to 32 GB

Array Control Processors (ACP)

ACP pairs 1, 2, 3, or 4

Fibre Channel Arbitrated Loop (FC-AL)

FC-AL paths per ACP 8
FC-AL paths per subsystem 32

Disk Drives

Minimum/Maximum array capacity	72 GB/92 TB
Capacity	18 GB 73 GB 181 GB
Head technology	MR MR MR
Form factor	3 in 3 in 3 in
Actuator	Recoilless rotary Recoilless rotary Recoilless rotary
Servo system	Digital Digital Digital
Interface	Dual-ported Fibre Channel Dual-ported Fibre Channel Dual-ported Fibre Channel
Rotation speed	15,000 rpm 10,025 rpm 7200 rpm
Data transfer rate	49-64 MB/s 34-57 MB/s 35-64 MB/s
Mean seek time	3.9/4.5 5.7/6.5 7.4/8.2
Average latency time	2.0 ms 2.99 ms 4.17 ms

Physical Specifications

	Control Frame	Array Frame
Height	70.5 in (1,790 mm)	70.5 in (1,790 mm)
Width	29.5 in (750 mm)	23.6 in (600 mm)
Depth	31.5 in (800 mm)	31.5 in (800 mm)
Weight	1,024 lbs (465 kg)	980 lbs (445 kg)
Power	2.41 kVA	3.0 kVA
Heat	2.33 kW	2.86 kW

Transfer Rate

FC-AL peak transfer rate 100 MB/s
Internal xp512 crossbar bandwidth 6.4 GB/s

Array Frame

Array frames per subsystem 1, 2, 3, 4, 5, or 6
Spare drives per subsystem (min.) 1 per drive capacity installed

Spare drives per subsystem (min.)

16

Operating System Support

Open Systems Server Connect, HP-UX, IBM AIX, Novell NetWare, Microsoft Windows NT, Microsoft Windows 2000, Red Hat Linux, HP-MPE, Compaq/Tru64 UNIX, IBM/NUMA-Q, Sun Solaris, SGI IRIX

Mainframe Connectivity

IBM system 370 and 390 compatible mainframes from IBM, Hitachi, and Amdahl

Mainframe Operating System Support

MVS/370, VM/HPO, MVS/ESA, VM/ESA, VSE/ESA, MVS/XA, VM/XA, VSE/SP (4.1), and more

* Contact sales office for availability of any given OS or configuration listed above.



www.hp.com/go/storage

Microsoft, Windows, and Windows NT are U.S. registered trademarks of Microsoft Corporation. Oracle is a registered U.S. trademark of Oracle Corporation, Redwood City, California. UNIX is a registered trademark of The Open Group.

Products may be shown with optional modules. The information contained in this document is subject to change without notice.

© Hewlett-Packard Co. 2001
Produced in USA 11/01

5980-8582EN