

**hp surestore disk array  
xp512 and xp48**



**bigger. faster. more reliable.  
always-on storage from hp.**



## when do you need more disk space?

**Always.** Call it the law of the computer era: When your business grows, your data grows with it. Whether or not you're data warehousing or managing your e-commerce growth, over time you'll need to handle more data faster and more reliably. You'll always need bigger, faster, and more reliable storage.

That's just what you get with the HP Surestore Disk Array family of products.

**Bigger.** Scalable from 72 GB to an incredible 37 TB. **Faster.** Crossbar Architecture makes bus-based arrays look slow. **More Reliable.** Smart design eliminates planned downtimes, and legendary HP reliability takes care of the rest.

### always stress-free

Start with superfast, ultra-high-availability Fibre Channel disk drives, connected by the explosively fast Crossbar Architecture. Build in a fault-tolerant, redundant architecture with no single failure point, with industry-leading performance from every component. Include the industry's best storage management software. Finish with continuous proactive monitoring and repair that detects and prevents problems before they occur. What do you get? The HP Surestore Disk Array xp512 and xp48—the fastest and most reliable data storage solutions you can buy. Period.

**Make disk storage the least of your worries with an HP Surestore Disk Array.**

### key features

- **RAID 0/1 and RAID 5** support for optimum storage performance
- **Ultra-high-reliability** 18 GB and 73 GB 10,000 RPM Fibre Channel drives for up to 37 TB total capacity
- **Online firmware upgrades** and **hot-swappable PC boards** eliminate planned downtime
- **Fibre Channel, ESCON, and SCSI (via bridge)** support all your data-center needs from consolidation and long distance mirroring to disaster recovery and beyond
- **Battery-protected mirrored write cache** keeps your data safe no matter what
- **Continuous proactive monitoring and repair** identifies and resolves problems before they occur
- **Choose** the right model:  
**HP Surestore Disk Array xp512** for more capacity and performance  
**HP Surestore Disk Array xp48** for more economy in less space. Both have the scalability, performance, and reliability you need to make your disk array the least of your worries





**always the space  
you need**

HP Surestore disk arrays grow with your business, scaling from 72 GB all the way to 37 TB. And you'll never have to take the array down to do it.

- Up to 512 Fibre Channel drives
- Up to 32 Fibre Channel ports
- Online firmware upgrades
- Hot-pluggable PC boards



**always fast**

Powerful Crossbar Architecture and leading-edge components combine to deliver up to three times the performance of other high-end arrays.

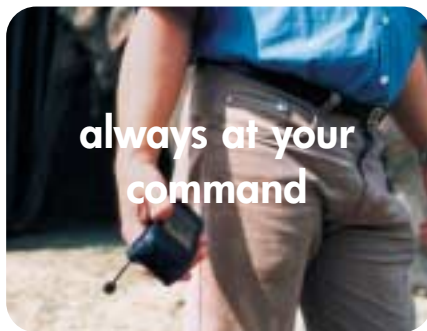
- Crossbar switch technology
- Up to 32 GB cache
- Fibre Channel backend
- Exceptional sequential and random I/O performance



**always available**

Can't stand storage problems? The xp512 and xp48 have no single failure point and continuously monitor and repair themselves. No problem.

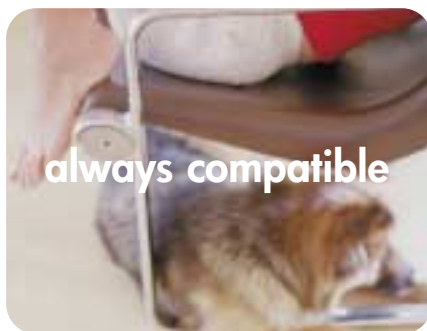
- Fault-tolerant, redundant architecture
- Continuous monitoring and repair
- Battery-protected mirrored write cache
- 2-year onsite emergency response warranty



**always at your  
command**

HP Surestore disk arrays include comprehensive storage management software, so you can monitor and manage your storage anytime, from anywhere.

- Complete management software suite for truly heterogeneous environments
- Supports HP-UX, Sun Solaris, IBM AIX, and multi-vendor NT solutions



**always compatible**

Plug the xp512 and xp48 into the network you have. It works. Get the new components you want. It works with them, too. That's the benefit of being the open choice of third-party vendors.

- UNIX, HP MPE/iX, multi-vendor Windows NT and 2000, mainframes
- Sun, Compaq/DEC, Novell, SGI, IBM AIX and many more
- STK, Brocade, Ancor, Emulex

the more things change...



...the more they stay the same



**The primary difference between the xp512 and the xp48 is size:**

- The xp512 holds more data—max. capacity 37.3 TB vs. 3.5 TB for the xp48
- The xp48 is more compact, with both control hardware and up to 48 disk drives in a single
- The second difference between the xp512 and xp48 is performance:
- With a 6.4 Gbps Crossbar the xp512 is the industry's fastest disk array; the 3.2 Gbps xp48 is a close second. The xp512 benefits from more cache and shared memory (32 GB max. cache vs. 16 GB max. for the xp48; 1.28 GB max. shared memory vs. 1 GB)
- The xp512 supports more drives, with more host connectivity and scalability to keep those drives working at peak possible speed, which improves performance for many applications

**The xp512 and xp48 share the same high-performance components and architecture and offer unbeatable HP service, support, and software:**

- Online firmware upgrades and hot-pluggable PC boards eliminate planned downtimes
- Explosive Crossbar switch technology
- Fibre channel drives and backend
- Fault-tolerant, redundant architecture
- Continuous monitoring and repair
- Battery-protected mirrored write cache
- 2-year onsite emergency response warranty
- Complete management software suite for truly heterogeneous environments
- Compatible with just about everything, including HP-UX, Sun Solaris, IBM AIX, Windows NT/2000, HP MPE/iX, mainframes, Sun, Compaq/DEC, Novell, SGI, IBM, STK, Brocade, Ancor, Emulex, and more
- Offer instant Capacity On-Demand for storage (iCOD-S) capabilities to allow instant growth without hassles

always right for your needs

Get the HP Surestore disk array that's just right for you.

	hp surestore xp48	hp surestore xp512
<b>capacity</b>	72 GB to 3.5 TB	72 GB to 37.3 TB
<b>array groups</b>	Up to 11	Up to 126
<b>dynamic spare disks</b>	Up to 4	Up to 16
<b>crossbar bandwidth</b>	3.2 Gbps	6.4 Gbps
<b>cache</b>	2 GB to 16 GB	2 GB to 32 GB
<b>shared memory (max.)</b>	1 GB	1.28 GB
<b>host connectivity ports (max.)</b>	24 FC-AL or ESCON	32 FC-AL or ESCON
<b>chip pairs</b>	1 to 3	1 to 4
<b>disk drives supported</b>	4 to 48 native FC-AL	4 to 512 native FC-AL
<b>ACP Pairs</b>	1 (included with frame)	1 to 4
<b>disk connectivity</b>	8 FC-AL loops	Up to 32 FC-AL loops
<b>DKC (control frame)</b>	Integrated DKC/DKU	1
<b>DKU (array frames)</b>	None	1 to 6
<b>size (w x d x h)</b>	Integrated control/disk frame: 700 x 800 x 1,790 mm (28 x 31 x 70 in)	Control frame (one only): 750 x 800 x 1,790 mm (30 x 31 x 70 in) Disk Frames (each, 6 max.): 600 x 800 x 1,790 mm (24 x 31 x 70 in)

## software

### xp solutions

- **Cluster Extension XP (CLX)** lets you leverage Continuous Access XP and Continuous Access XP Extension's industry-leading features and performance in a wide range of High Availability Cluster Solutions. CLX allows for the seamless integration of XP storage-based Remote Mirroring operation and management with Veritas Cluster Server (Sun Solaris) and HA CMP (IBM AIX). CLX extends the protection and failover capabilities of these solutions across citywide distances.
- **Zero Downtime Backup Solutions** let you backup systems with zero impact on your critical operational systems using HP's OMNIBACK or Veritas Netbackup tools.
- **Netstorage XP NAS Solutions** integrate the XP family of arrays into CIFS and NFS networking environments to provide true, highly available NAS capabilities for enterprise environments.
- **Instant Capacity on Demand for storage (iCOD-S)** provides utility pricing for XP storage simplifying and speeding the process for buying new storage.

HP offers a uniquely complete and powerful family of storage management software that extends the performance and reliability of your XP family array to the limit.

All XP software products are available on the xp48, xp512, and xp256 arrays and, of course, all XP software products seamlessly work with the visionary SAN Manager LM and DM Storage Area Networking (SAN) products.

### xp family array and data management products

**Command View XP** lets you monitor, command, and control your XP storage resources anytime, anywhere, with an easy-to-use Web browser. Command View XP provides a consistent, secure Web-based user interface for all other XP family software products.

**LUN Configuration Manager XP** lets you flexibly configure array capacity across one or many servers connected to the array in SAN or direct connect configurations.

**Secure Manager XP** provides data security in multi-server and SAN environments with industry leading security features not offered anywhere else!

**Cache LUN XP** allows data to be locked into the XP high speed cache for performance critical applications.

**Auto LUN XP** provides flexible automated data management based on user defined performance or usage metrics to automatically optimize array performance and capacity usage.

**Performance Advisor** handles real-time collecting and monitoring of performance data from your xp48, giving you the data you need to stay ahead of your storage curve. Includes both Web and command-line interfaces for easy integration into your infrastructure.

**Data Exchange XP** provides flexible mainframe to open systems data transfer and conversion capability.

**Resource Manager XP** enables mainframe host connectivity when using XP ESCON Channel Host Interface Processors (CHIP's).

**Vantagepoint Smart Plug-In** for XP products enables seamless integration into HP's award-winning Openview enterprise management environments, enabling monitoring and service level management capabilities in Openview environments.

### high availability and disaster recovery products

**Business Copy XP** lets you configure up to nine internally mirrored copies of data within an XP family array—more than any other enterprise-class array.

**Continuous Access XP** and **Continuous Access XP Extension** delivers the ultimate in stress-free failure protection. High performance real-time remote data mirroring ensures continuous data availability and maximum protection from catastrophic failures. It also provides synchronous copy mode remote data mirroring (remote mirroring solutions requiring distancing of greater than 3 km require ESCON Extenders or ESCON to WAN Converters). Continuous Access XP Extension provides asynchronous communications copy capability, too.

**Auto Path XP** automatically manages multiple, redundant I/O paths so data is always available at maximum performance. And, it configures itself automatically and performs dynamic load balancing for peak efficiency, instantly and automatically routing I/O around any failure of any path so operation continues normally, without downtime.

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