

# HP StorageWorks XP10000 Disk Array

Data sheet



The HP StorageWorks XP10000 Disk Array delivers state-of-the-art reliability and “always-on” availability for enterprise mission-critical IT. No single-point-of-failure, non-disruptive online upgrades and world-class services ensure that data is always available. Outstanding performance and boot-once scalability meets capacity, performance and heterogeneous connectivity needs today and tomorrow. Advanced virtualization technology provides tiered storage up to 16 Petabytes. Array partitioning eases provisioning, while local and remote data copying enables multi-site disaster tolerance. The XP10000 enables an adaptive enterprise—one that can quickly manage change, increase business agility and decrease stress where downtime is not an option.

## Features and benefits

- **Reliability**—The XP10000 provides extreme reliability with no single-point-of-failure and redundant hot-swappable components. Non-disruptive online upgrades ensure that data is always protected.
- **Availability**—All XP10000 components are redundant and hot-swappable to provide extreme availability, including: disk drives, processors, I/O interfaces, power supplies, batteries, fans and control processors. Array-to-array local and remote data copying enables multi-site disaster tolerance.
- **Performance**—The XP10000 uses an advanced crossbar fault tolerant architecture resulting in outstanding levels of random and sequential I/O operations for database, OLTP, Oracle®, SAP and Exchange workloads.
- **Value**—The XP10000 offers an excellent price/performance ratio, increased productivity via higher throughput speeds and zero downtime, compact footprint to conserve floor space and easy management.
- **Open Connectivity**—The XP10000 supports Fibre Channel, FICON\*, and ESCON\* connectivity.
- **Flexible**—The XP10000 supports a mixture of disk drives configured as RAID 1 (2D+2D), RAID 5 (3D+1P), RAID 6 (6D+2P).
- **Manageable**—Multiple arrays and hundreds of terabytes can be managed from a single station by existing staff, with no additional resources.
- **Scalable**—The XP10000 scales from 5 to 120/240\* disk drives for over 34.5/69\* TB of internal capacity, to 16 PB of external capacity, 32 GB of cache and to more than double the internal performance of the XP128—all while online with no interruptions to applications and without requiring a forklift upgrade.

\* Available late 2005.

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<b>Capacity</b>	288 GB – 34.5/69* TB raw 144 GB – 26/52* TB usable				
<b>Controller cache</b>	4 to 32 GB				
<b>Shared memory</b>	1 to 6 GB				
<b>Battery backup</b>	36 hours				
<b>Host interfaces</b>	16–48 ports FC, 8 ports FICON*, 16 ports ESCON*				
<b>Host ports</b>	4 to 48				
<b>RAID levels</b>	RAID 1 (2D+2D), RAID 5 (3D+1P), RAID 6 (6D+2P)				
<b>Cabinets</b>	1,2*				
<b>Number of disks supported</b>	120/240*				
<b>Disk interface</b>	Dual-ported 2 Gbps Fibre Channel Arbitrated Loop (FC-AL)				
<b>Max LDEVs</b>	16,834				
<b>OS support</b>	HP-UX, Windows®, Linux®, Mainframe*, Tru64*, OVMS*, NonStop*, Solaris, AIX, Netware, IRIX				
<b>Redundant fans, power supplies</b>	Yes				
<b>Hardware</b>	The XP10000 hardware consists of a Primary Rack (DKC) that will hold up to 120 disks, and one optional Second Rack (DKU) for the remaining disks. The Primary Rack DKC contains the control panel, service processor (SVP), Cache Memory, Shared Memory, crossbar switch, batteries, Client Host Interface Processors (CHIPs), and Array Control Processor (ACP). The Second Rack can hold up to 120 disk drives, for a maximum of 240 disk drives total.				
<b>Software</b>	<p>A full complement of software tools are available for XP10000 Disk Array configuration management and to enable a wide range of high availability solutions.</p> <table border="0"> <tr> <td>                     HP StorageWorks Command View XP Advanced Edition                      HP StorageWorks LUN Configuration and Security Manager XP                      HP StorageWorks Performance Advisor XP                      HP StorageWorks Performance Control XP                      HP StorageWorks LUN Security XP Extension                      HP StorageWorks Cache LUN XP                      HP StorageWorks Resource Manager XP                      HP StorageWorks RAID Manager XP                      HP StorageWorks Flex Copy XP                      HP StorageWorks Secure Path XP/Auto Path XP                      HP StorageWorks Auto LUN XP                 </td> <td>                     HP StorageWorks Business Copy XP                      HP StorageWorks Continuous Access XP/XP Extension                      HP StorageWorks Data Exchange XP                      HP StorageWorks External Storage XP                      HP StorageWorks Disk/Cache Partition XP                      HP StorageWorks Data Shredder XP                      HP Storage Essentials                      HP OpenView Storage Area Manager                      HP OpenView Storage Data Protector                      HP OpenView Storage Media Operations                 </td> </tr> </table>			HP StorageWorks Command View XP Advanced Edition HP StorageWorks LUN Configuration and Security Manager XP HP StorageWorks Performance Advisor XP HP StorageWorks Performance Control XP HP StorageWorks LUN Security XP Extension HP StorageWorks Cache LUN XP HP StorageWorks Resource Manager XP HP StorageWorks RAID Manager XP HP StorageWorks Flex Copy XP HP StorageWorks Secure Path XP/Auto Path XP HP StorageWorks Auto LUN XP	HP StorageWorks Business Copy XP HP StorageWorks Continuous Access XP/XP Extension HP StorageWorks Data Exchange XP HP StorageWorks External Storage XP HP StorageWorks Disk/Cache Partition XP HP StorageWorks Data Shredder XP HP Storage Essentials HP OpenView Storage Area Manager HP OpenView Storage Data Protector HP OpenView Storage Media Operations
HP StorageWorks Command View XP Advanced Edition HP StorageWorks LUN Configuration and Security Manager XP HP StorageWorks Performance Advisor XP HP StorageWorks Performance Control XP HP StorageWorks LUN Security XP Extension HP StorageWorks Cache LUN XP HP StorageWorks Resource Manager XP HP StorageWorks RAID Manager XP HP StorageWorks Flex Copy XP HP StorageWorks Secure Path XP/Auto Path XP HP StorageWorks Auto LUN XP	HP StorageWorks Business Copy XP HP StorageWorks Continuous Access XP/XP Extension HP StorageWorks Data Exchange XP HP StorageWorks External Storage XP HP StorageWorks Disk/Cache Partition XP HP StorageWorks Data Shredder XP HP Storage Essentials HP OpenView Storage Area Manager HP OpenView Storage Data Protector HP OpenView Storage Media Operations				
<b>Disk drives</b>	Disk drives, capacity–spindle speed:	73 GB–15K rpm	146 GB–10K rpm	300 GB–10K rpm	
	Rotational latency:	2.01 ms	2.99 ms	2.99 ms	
	Average read/write seek time:	3.8/4.2 ms	4.9/5.4 ms	4.7/5.1 ms	
	Internal data transfer rate:	74.5 to 111.4 MB/sec	57.3 to 99.9 MB/sec	72.73 to 134.44 MB/sec	
<b>Power requirements</b>	<b>Parameter</b>	<b>Primary Rack</b>	<b>Second Rack</b>		
	Power consumption (kVA)	4.8	3.0		
	Heat dissipation (kW)	4.6	3.0		
	BTUs per hour	15700	10200		
	Kcal per hour	3960	2600		
	Nominal line voltage: 20 amp, 50 or 60 Hz, single phase, 200, 208*, 220, 230, 240 V				
	*60 Hz only				
<b>Dimensions (HxWxD)</b>	75.6 x 24 x 36.4 in/1920 x 610 x 925 cm (per rack)				
<b>Weight</b>	Primary Rack 1272 lb/577 kg Second Rack 1043 lb/473 kg				

\* Available late 2005.

## HP StorageWorks XP10000 Disk Array



Part number/SKU	Product name	Description
AE101A	HP StorageWorks XP10000 Disk Array	For new XP10000 orders
AE070A	HP StorageWorks XP12000/10000 Upgrade	For XP10000 upgrade orders
<b>What's included</b>	XP10000 primary rack contains the empty DKC box (holds CHIP, CHIP/ACP, Cache Memory, Shared Memory), power supplies, battery box (with batteries for up to 13 GB of cache and 3 GB of shared memory), one disk chassis that will hold up to 60 disk drives, SVP, HP microcode, HP Continuous Track XP and modem.	
<b>Accessories</b>	An extensive list of accessories is available for this product. For more information, please contact your HP sales representative.	
<b>Warranty service and support</b>	<p>Services included with the XP10000:</p> <ul style="list-style-type: none"> <li>• Hardware site preparation.</li> <li>• Array installation and start up.</li> <li>• Warranty level of hardware reactive support is 2 years, 24x7, 4 hour response on critical repairs. Next calendar day response for all other repairs.</li> <li>• 1 year of Proactive 24 proactive services.</li> </ul> <p>Software support—1 year of 24x7 support services, which includes LTU, right to new versions, documentation, phone in assistance and access to the IT Resource Center.</p> <ul style="list-style-type: none"> <li>• Software enablement is bundled in with each individual software title.</li> </ul> <p>HP Proactive 24 Service is an integrated hardware and software support solution designed to help you get more from your IT investment. It combines industry-leading preventive assistance with responsive support that helps you address problems quickly and effectively.</p> <ul style="list-style-type: none"> <li>• Assigned account manager who is your primary contact for proactive services and access to HP's diverse technical resources. He or she works closely with you to understand your IT environment and goals; document all the components of your infrastructure; recommend changes to improve availability, performance, and stability; and monitor ongoing operations using state-of-the-art remote tools.</li> <li>• Comprehensive 24x7 assistance.</li> <li>• 1-year, 2-hour response for software issues. Includes phone-in assistance, License to Use, rights to new versions, documentation and access to the IT Resource Center.</li> <li>• 2-year onsite response for hardware problems. Includes 4-hour response for critical problems, next calendar day response for all other repairs.</li> </ul> <p>HP warrants only that the software media will be free of physical defects for a period of ninety (90) days from delivery.</p> <p>For more information about HP's Global Limited Warranty and Technical Support, visit <a href="ftp://ftp.compaq.com/pub/products/storageworks/warranty/EN_321708-008.pdf">ftp://ftp.compaq.com/pub/products/storageworks/warranty/EN_321708-008.pdf</a></p>	
<b>Recommended service</b>	<p>3 Years - HP Proactive 24 Service</p> <ul style="list-style-type: none"> <li>• Easily extends support of your environment to three full years.</li> </ul> <p>HP Support Plus 24 Service is recommended to cover any devices used as external storage that will appear as a LUNs on the XP10000.</p> <p>Data Replication service:</p> <ul style="list-style-type: none"> <li>• Accelerate your time-to-ROI with HP implementation and integration expertise.</li> <li>• Enjoy rapid results when you deploy industry-leading HP Data Replication technologies.</li> <li>• Provides optimal solution to meet your IT and business needs via flexible scalable services.</li> </ul>	
<b>Service options</b>	Customers are also able to choose from a selection of technical services that will complement their Array: XP Performance Tuning and Optimization, XP Performance Analysis, High Availability Storage Assessment, Availability Assessment for SANs, SAN Solution Service, HP Resources Offer, Tech Startup—Array Add-on Service, Tech Startup—Array Add-on Service Extension, Additional Technical Assistance, HP Open Systems Data Migration, HP Open Systems Data Migration Extension, HP Mainframe Data Migration, HP Mainframe Data Migration Extension, HP Mixed Environment Data Migration, HP Mixed Environment Data Migration Extension, LUN Implementation for XP, and Data Replication Solution Service.	

# HP StorageWorks XP10000 Disk Array

The HP StorageWorks XP10000 Disk Array delivers state-of-the-art reliability, “always-on” availability, outstanding performance, boot-once scalability, external storage device support, heterogeneous connectivity and world-class services for enterprise mission-critical IT environments.

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**Financial Services**

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage and ultimately retire your HP solutions. For more information on these services, please contact your HP sales representative or find us on the web at: [www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices).

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**HP Customer Support**

HP Customer Support provides a broad spectrum of services to commercial and enterprise customers, including performance and availability services such as proactive mission-critical services and support management services for deployment of the entire IT infrastructure, including HP and multivendor environments. For more information on these services, contact your HP sales representative or visit [www.hp.com/hps/support](http://www.hp.com/hps/support).

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**For more information**

For more information about the HP StorageWorks XP10000 Disk Array, go to: [www.hp.com/go/storageworks/xp](http://www.hp.com/go/storageworks/xp).

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To learn more, visit [www.hp.com/go/storageworks/xp](http://www.hp.com/go/storageworks/xp)

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