

# HP XP P9500 Storage

## Bulletproof storage for mission-critical data



Designed for organizations that simply cannot afford any downtime, HP XP P9500 Storage combines a high-performance, online-scalable, fully redundant hardware platform with unique data replication capabilities integrated with clustering solutions for complete business continuity.

The HP XP P9000 software family decreases the complexities of critical data management. Organizations can improve utilization through HP XP P9000 Thin Provisioning software. Virtualization simplifies the management of diverse systems. HP XP P9000 Smart Tiers software improves storage performance, response times and control costs. Consolidation becomes a reality through the unified management of open systems, mainframe, and HP NonStop applications—all on a single XP P9500.

### Key features and benefits

#### Increase data availability to allow continuous operations

- The XP P9500 Storage mitigates the risk of data loss and downtime as all components are redundant and hot swappable. All XP hardware, firmware, and software can be upgraded online.
- The XP P9500 Storage supports a clustering solution that integrates remote mirroring with a high-availability server cluster to provide multisite server and storage disaster recovery.
- The XP P9500 Storage protects your data. Data held in cache is backed up to a Solid State Drive (SSD) to protect it from loss in the case of a power outage. RAID 6 adds fault tolerance at disk drive level.
- HP Continuous Track checks the XP P9500 Storage for unseen issues. The end-to-end checksum capability confirms data integrity from host port to disk and back.
- Security features in the HP XP P9000 Array Manager software decrease your exposure to data loss. This software reduces the risk of unauthorized access, prevents unauthorized modification, and protects your information at the end of its lifecycle by completely deleting data on a specified volume.

#### Reduce cost and complexity of storage through efficient data management

- Increase data center efficiency using virtualization with thin provisioning, heterogeneous external storage, local and remote multisite replication, automated smart-tiered capacity, and online data migration.
- Simplify management with easy-to-use task-based GUI; common and consistent CLI; easy serviceability, trouble-free provisioning with one-click volume creation, and dynamic or automatic provisioning and optimization.
- Improve utilization of SSD and Flash storage media and automate data movement between storage tiers with Smart Tiers software, saving administration time, reducing complexity, increasing performance, and maximizing storage media investments.
- Save power and cooling costs with thin provisioning and smart tiers that decrease stranded storage, thereby reducing unused storage that consumes power, requires cooling, and takes up space.

- Improve floor space utilization with 2.5-inch form factor drives installed into standard size 19-inch racks that easily fit into the existing data center space and improve the capacity/square meter.
- Reduce costs and simplify operations by consolidating multiple applications onto a single XP P9500 Storage. By having multiple hosts running diverse operating systems connected to the XP P9500 Storage, you can better manage the environment and simplify the implementation of backups and disaster recovery solutions.

#### Accelerate business growth with swift adaptability

- Thin provisioning provides the flexibility you need to respond quickly to new demands. You can now configure all the capacity you will need for the future, but only buy what you need today. HP XP P9000 Thin Provisioning software automatically allocates capacity as applications need it.
- The dilemma of overbuying capacity today or planning for a costly “forklift” upgrade tomorrow is now history. The XP P9500 Storage scales seamlessly. Main components can be added or replaced without shutting down critical operations. Simply buy what you need now and grow as your needs change.
- With the XP P9500 Storage, you get excellent performance for your 24x7 demands to deliver your critical data at very high speed.
- The XP P9500 Storage offers the flexibility you need to meet your performance and availability objectives.

## HP XP P9500 Storage

### Technical specifications

<b>Drive description</b>	2048 SFF SAS
<b>Drive and media types</b>	300 GB 6G 15K SFF dual-port SAS 600 GB 6G 10K SFF dual-port SAS 900 GB 6G 10K SFF dual-port SAS 1 TB 6G 7.2K SFF dual-port SAS 1.2 TB 6G 10K SFF dual-port SAS 200 GB SSD 400 GB SSD 800 GB SSD 1.6 TB Flash Module 3.2 TB Flash Module
<b>Maximum frames (cabinets)</b>	1–6
<b>Capacity</b>	2 PB raw 1.76 PB usable 255 PB connected through external storage Maximum supported
<b>Host interface</b>	8 Gb Fibre Channel (160) ports or, 8 Gb FICON (160) ports or, 10 Gb FCoE (80) ports supported
<b>Cache</b>	1 TB Maximum supported
<b>Supported operating systems</b>	HP NonStop HP OpenVMS HP-UX IBM AIX Linux Mainframe Microsoft® Windows® SUN Solaris VMware
<b>RAID support</b>	RAID 1 (2D + 2D), RAID 1 (4D + 4D), RAID 5 (3D + 1P), RAID 5 (7D + 1P), RAID 5 (14D + 2P), RAID 5 (28D + 4P), and RAID 6 (6D + 2P)
<b>Warranty</b>	3/3/3: Three-year parts, three-year labor, three-year onsite
<b>QuickSpecs URL</b>	<a href="http://h18000.www1.hp.com/products/quickspecs/13725_div/13725_div.pdf">h18000.www1.hp.com/products/quickspecs/13725_div/13725_div.pdf</a>

## HP XP P9000 Software

<b>HP XP P9000 Array Manager</b>	The HP XP P9000 Array Manager software provides Web-based access control, volume management, performance control, and data security for the XP P9500 Storage. Configure and manage all host access to the XP P9500 Storage so that you have efficient access to your data. Configure and manage data volumes for most effective use of your XP P9500 Storage. Partition array resources to isolate applications and reserve cache memory for your most frequently-accessed data. Create read-only volumes for archiving and data retention, and securely delete data when necessary.	Required
<b>HP XP P9000 Thin Provisioning</b>	The HP XP P9000 Thin Provisioning software allows you to supply disk storage capacity to your applications from a pool of virtualized storage. By enabling you to allocate your anticipated future storage capacity needs from virtual disk storage, P9000 Thin Provisioning software reduces the amount of physical disk capacity initially required. As utilization of physical disk space increases over time, you can purchase more disk capacity as needed, and install it without affecting your applications. Put an end to the guesswork around capacity planning and reduce the cost of volume management.	Optional
<b>HP XP P9000 External Storage</b>	HP XP P9000 External Storage software decreases the stress and cost of owning heterogeneous data storage by simplifying and centralizing common SAN management tasks through storage virtualization. In addition, it simplifies movement of data between dissimilar arrays. XP P9000 External Storage software provides these benefits by giving storage administrators the ability to access, monitor, and manage data residing on a variety of different disk arrays as if all of the data were residing on the XP P9500 Storage.	Optional
<b>HP XP P9000 Command View Advanced Edition</b>	HP XP P9000 Command View Advanced Edition (AE) software is a full-featured XP P9500 device manager, incorporating disk array management, configuration, and monitoring. It supports the HP Storage Essentials suite of products. XP P9000 Command View AE monitors storage resources quickly and easily. It automates storage management processes, delivering more efficient utilization and control across distributed enterprise storage. Easy access is provided to the XP P9500 Remote Web Console, which can be launched from the GUI.	Optional
<b>HP XP P9000 Business Copy</b>	HP XP P9000 Business Copy software is a local replication solution that provides data copies within a single XP P9500, or in storage systems attached to the XP P9500 as external storage. The XP P9000 Business Copy software uses array-based mirror and snapshot technologies that do not interfere with host-level operations, allowing you to spend your time conducting business rather than worrying about how backup and testing operations will impact your systems.	Optional
<b>HP XP P9000 Continuous Access Synchronous</b>	HP XP P9000 Continuous Access Synchronous software provides high-availability data and disaster recovery solutions that deliver host-independent, real-time, synchronous remote data mirroring between HP XP P9500 Storage and other XP disk arrays. With seamless integration into a full spectrum of remote mirroring-based solutions, this product can be deployed in solutions ranging from data migration to high-availability server clustering.	Optional
<b>HP XP P9000 Smart Tiers</b>	HP XP P9000 Smart Tiers software improves storage performance, decreases response times, and controls costs by transparently migrating data to appropriate storage tiers within the XP P9500. The most frequently used data is moved to the highest performance, most expensive media type, insuring maximum utilization of more expensive disks, SSDs or XP Flash Modules. Data is monitored and migrated to a different tier online based on policies set by the user.	Optional
<b>HP XP P9000 Performance Advisor</b>	HP XP P9000 Performance Advisor software is a Web-based application for collecting, monitoring, and displaying the real-time performance of your XP P9500. With P9000 Performance Advisor software, you choose the time and duration of performance data collection—so you can identify activities that significantly impact your disk array and tune the array accordingly. You can easily monitor storage performance and display usage statistics for the XP P9500 at any level, from a complete system overview down to individual components.	Optional
<b>HP XP P9000 Auto LUN</b>	HP XP P9000 Auto LUN software provides automatic monitoring and load balancing for the XP P9500. Make the most efficient use of your disk arrays by moving high-priority tasks to underutilized volumes. You set performance goals and limits, and the P9000 Auto LUN software does the rest. It proposes a migration plan and estimates how much your storage performance will improve when it's done. The P9000 Auto LUN software lets you evaluate disk array usage and determine whether resources are overloaded or out of balance.	Optional

## HP Factory Express

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment.  
[hp.com/go/hpfinancialservices](http://hp.com/go/hpfinancialservices)

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speed deployment. [hp.com/go/factoryexpress](http://hp.com/go/factoryexpress)

## Customer technical training

Gain the skills you need with ExpertOne training and certification from HP. With HP Converged Storage training, you will accelerate your technology transition, improve operational performance, and get the best return on your HP investment. Our training is available when and where you need it, through flexible delivery options and a global training capability.  
[hp.com/learn/storage](http://hp.com/learn/storage)

## HP Services

Tap into the HP Technology Services advantage—backed by the strategic and technical know-how of our consulting experts—for a single-source solution that makes the most of your investments. Choose from services recommended for XP P9500 Storage that meet your business needs.

### Optimized Care

For mission-critical environments demanding the highest levels performance and stability:

- Support: HP Critical Service, plus, 20 Proactive Select credits per year
- Additional options: 10 Proactive Select credits per year

### Standard Care

For business-critical environments that need to maintain the highest level of uptime:

- Support: HP Critical Service, plus, 10 Proactive Select credits per year
- Additional options: 10 Proactive Select credits per year

### Basic Care

For the minimum recommended support:

- Support: HP Proactive 24 Service

### Discover, plan, and design, understand your options and build it right from day one:

- HP Storage Efficiency Analysis
- HP Storage Impact Analysis
- HP Storage Modernization Service

### Deploy and integrate, increase uptime and decrease risk as you free up your resources:

- HP XP P9000 Disk Array Family Installation and Startup Service
- HP Data Replication Solution Service
- HP Enhanced Implementation Service for SANs
- HP Performance Analysis for the HP Storage Disk Arrays
- HP Storage Virtual Volume Design and Implementation Service
- HP Proactive Select
- HP Storage Data Migration Services
- HP Storage and Data Consultant Residency Services

If none of our support recommendations meet your needs, we can tailor a service solution for your unique support requirements. Only HP brings together deep expertise, proactive and business critical support and a strong partner network—plus, a full set of infrastructure services designed to power a Converged Infrastructure.

For more information, visit [hp.com/services/storage](http://hp.com/services/storage).

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