HP StorageWorks P2000 G3 FC MSA Array Systems

HP StorageWorks P2000 G3 FC/iSCSI Combo MSA Array Systems

HP StorageWorks P2000 G3 SAS MSA Array Systems

HP StorageWorks P2000 G3 10 GbE iSCSI MSA Array Systems

HP StorageWorks P2000 G3 Arrays

Family data sheet

Delivers affordable, flexible, high-performance SAN arrays offering 8 Gb Fibre Channel, Combo FC/iSCSI, 6 Gb SAS, and 1 GbE or 10 GbE iSCSI connectivity, 64 snaps and Volume Copy standard, and optional Remote Snap for FC and Combo models.

How can the flexibility of the HP StorageWorks P2000 G3 MSA Array Systems help remedy large storage needs and small budgets? By offering high-performance 8 Gb FC, Combo FC/iSCSI, 6 Gb SAS, 1 GbE or 10 GbE iSCSI connected arrays designed for efficient storage consolidation at affordable prices. Additionally, the FC/iSCSI Combo controller gives the flexibility to share the array resources over two protocols, supporting the needs of dissimilar departments and budgets.

All P2000 G3 MSA arrays ship standard with 64 Snapshots and Volume Copy enabled for increased data protection. The FC or Combo FC/iSCSI controllers also allow remote replication with optional Remote Snap software. The arrays allow departments and small to medium businesses to grow capacity as needed up to 149 drives. Mixing of large form factor (LFF) and small form factor (SFF) enterprise-class SAS, SAS MDL, and archival-class SATA drives is supported. Configure with a single controller for low initial cost, or dual controllers for high availability for the most demanding entry-level situations.

HP StorageWorks P2000 Remote Snap Software

Provides mid-range installations with local or remote, array-based, asynchronous Snapshot replication between HP StorageWorks P2000 G3 FC or Combo FC/iSCSI MSA Arrays.
HP StorageWorks P2000 Remote Snap Software offers controller-based, asynchronous replication technology that provides local or remote replication between two HP StorageWorks P2000 G3 FC MSA Arrays. HP Remote Snap functionality is based on existing Snapshot technology offered by HP 2000 MSA SAN Array products. Snapshots are used to track the data to be replicated, as well as to determine the differences in data updated on the master volume, reducing the amount of data needing to be transferred.

Supporting both Fibre Channel and Ethernet (on the Combo controller) interconnects provides flexible options to your application environments. Protect your investment with Snapshot-based replication enabling local and remote recovery based on need. Leveraging the integrated 64 Snapshots and the Volume Copy standard on the P2000 G3 FC MSA Array, the Remote Snap software cost-effectively creates the local or remote copies.

Key features and benefits of P2000 G3 MSA Array Systems

Easily managed, highly affordable, highly efficient storage consolidation

- The HP StorageWorks P2000 G3 MSA Array Systems deliver low-cost, consolidated storage array solutions to meet departmental and small to medium businesses requirements with 8 Gb Fibre Channel, Combo FC/iSCSI, 6 Gb SAS, and 1 GbE or 10 GbE iSCSI systems accommodating LFF and SFF SAS, SAS MDL, and SATA drives.

- The P2000 G3 MSA offers single controller models for low initial investment, or dual controllers for higher performance and data protection. The FC/iSCSI Combo controller allows sharing of resources between different departments with the most cost-effective protocol. A wide choice of drive types means a high return on investment (ROI).

- The HP P2000 G3 MSA Array Systems offer a choice of drives: high-performance enterprise class dual-ported SAS drives and low-cost, high capacity archival class SAS MDL or SATA MDL. The array head comes standard with either 12 or 24 drive bays—able to simultaneously accommodate all three drive types.

- The P2000 G3 MSA comes standard with 64 Snapshot and Volume Copy cloning capability enabled. Snapshots can be optionally boosted to 512 snaps, and the P2000 G3 FC MSA and FC/iSCSI Combo models support the Remote Snap (replication) software option.

Start small and grow in number of supported servers and total capacity—flexible

- The P2000 G3 FC MSA allows customers to grow their storage as demands increase up to 57.6 TB SAS or 192 TB SATA supporting up to 64 hosts for Fibre Channel, 1 GbE and 10 GbE iSCSI arrays. The P2000 G3 MSA arrays can support 7 LFF enclosures and 96 drives or 5 SFF enclosures and a maximum of 149 drives.

- Powerful new controllers (FC, FC/iSCSI, SAS, 1 GbE and 10 GbE iSCSI) and 2 GB of read/write cache provide support for up to 64 hosts. Latest 8 Gb Fibre Channel, 6 Gb SAS, and 10 GbE iSCSI and four-port 1 GbE iSCSI technology means that the users will have fast and reliable access to their data.

- All P2000 G3 MSA models come with 64 Snapshot and Volume Copy capability at no extra charge. Increased Snapshot capability of 512 snaps is an option. Remote Snap software is also an option, allowing snap replication over the Fibre Channel or Combo FC/iSCSI controllers.

- With 512 LUNs and greater than 2 TB LUN size, the P2000 G3 FC MSA has more than sufficient LUNs for storage configuration flexibility.

Comprehensive data protection in an easily-administered SAN environment

- Reduce risk of IT failure with dual active/active controllers, dual-ported drives, and redundant hardware components.

- For increased data protection, the P2000 G3 MSA comes with a 64 Snapshot license (optional 512 snaps) and Volume Copy Software, giving space-efficient, copy-on-write Snapshots, and clones at no charge. Optional Remote Snap (replication) is available with the Fibre Channel or Combo FC/iSCSI models.

- Reduced time to operation with easy and secure deployment. Reduced risk from operator errors, resulting in less downtime and data loss, while increasing customer satisfaction. Supports customer replaceable hot plug components such as drives, controllers, fans, and power supplies.

- P2000 G3 controllers support upgrading prior generations of MSA2000 G1 and G2 models regardless of protocol. The P2000 G3 FC, FC/iSCSI Combo, SAS, 10 GbE or 4-port 1 GbE iSCSI controllers support data-in-place upgrades, protecting the user's investment in JBODs and drives and offering greater performance and functionality.

HP Services

Recommended Services

- **3-Year HP Support Plus 24:** Increase performance and availability with integrated reactive hardware and software services. HP Services engineers deliver onsite hardware support and over-the-phone software support around-the-clock 365 days per year.

  Benefits: Improve uptime with responsive hardware and software services. Enjoy consistent service coverage across geographically dispersed sites. Update HP software at a predictable cost. **5981-6638EN**

- **HP StorageWorks MSA Family Disk Array Installation and Startup Service:** Provides custom-tailored deployment of the P2000 MSA so that it is properly integrated into your storage environment.

  Benefits: Reduces implementation time, impact and risk to your storage environment. **4AA0-3048ENW**

Related Services

- **HP Entry Storage Data Migration Service for Windows:** Provides an economical approach to migrating data triggered by a storage consolidations or storage tiering strategy.

  Benefits: Our expertise with data migration helps ensure that potential issues are avoided (or quickly resolved) during data migration. **4AA2-4734ENW**

- **Implementing MSA2000 Storage Solutions Training:** Basic 1-day course covers essential information required to understand, manage, and configure your HP StorageWorks P4000 SAN. Advanced 1-day course covers best practices for HP StorageWorks P4000 SAN—based on field experiences and applied industry knowledge. **U4226S**

Technical specifications

	HP StorageWorks P2000 G3 FC MSA Array Systems	HP StorageWorks P2000 G3 SAS MSA Array Systems	HP StorageWorks P2000 G3 iSCSI MSA Array Systems
Models	Pre-configured array with (2) 8 Gb G3 FC controllers in a LFF, 12 drive bay chassis Pre-configured array with (2) 8 Gb G3 FC controllers in a SFF, 24 drive bay chassis Pre-configured array with (2) G3 FC/iSCSI Combo controllers in a LFF, 12 drive bay chassis Pre-configured array with (2) G3 FC/iSCSI Combo controllers in a SFF, 24 drive bay chassis	Pre-configured array with (2) 6 Gb G3 SAS controllers in a LFF, 12 drive bay chassis Pre-configured array with (2) 6 Gb G3 SAS controllers in a SFF, 24 drive bay chassis	Pre-configured array with (2) G3 1 or 10 GbE iSCSI controllers in a LFF, 12 drive bay chassis Pre-configured array with (2) G3 1 or 10 GbE iSCSI controllers in a SFF, 24 drive bay chassis
Drive description	149 SFF SAS/SATA or 96 LFF SAS/SATA Maximum including expansion, supported, depending on model	149 SFF SAS/SATA or 96 LFF SAS/SATA Maximum including expansion, supported, depending on model	149 SFF SAS/SATA or 96 LFF SAS/SATA Maximum including expansion, supported, depending on model
Capacity	192 TB Maximum Including expansion, depending on model	192 TB Maximum Including expansion, depending on model	192 TB Maximum Including expansion, depending on model
Storage expansion options	P2000 3.5-inch disk enclosure or D2700 2.5-inch disk enclosure	P2000 3.5-inch disk enclosure or D2700 2.5-inch disk enclosure	P2000 3.5-inch disk enclosure or D2700 2.5-inch disk enclosure
Host interface	8 Gb Fibre Channel (2) ports per controller 8 Gb Fibre Channel (2) ports and 1 GbE iSCSI (2) ports per Combo controller Depending on model	6 Gb/sec SAS (4) ports	10 GbE (2) ports per controller or 1 GbE (4) ports per controller
Storage controllers	(2) P2000 G3 Fibre Channel MSA Controller included (2) P2000 G3 Fibre Channel/iSCSI Combo MSA Controllers included Depending on model	(2) P2000 G3 SAS MSA Controllers included	(2) P2000 G3 1 or 10 GbE iSCSI MSA Controllers included
SAN Backup support	Yes	Yes	Yes
Storage Mirroring support	Yes	Yes	Yes
Systems Insight Manager support	Yes	Yes	Yes
Operating Systems support (Depending on the model)	Microsoft® Windows® Server 2008 Microsoft Windows Hyper-V Microsoft Windows 2003 VMware HP-UX OpenVMS Red Hat Linux SUSE Linux Solaris Detailed information available at: http://www.hp.com/storage/spock	Microsoft Windows Server 2008 Microsoft Windows Hyper-V Microsoft Windows 2003 VMware Red Hat Linux SUSE Linux Solaris Detailed information available at: http://www.hp.com/storage/spock	Microsoft Windows Server 2008 Microsoft Windows Hyper-V Microsoft Windows 2003 VMware Red Hat Linux SUSE Linux Detailed information available at: http://www.hp.com/storage/spock
Form factor	2U	2U	2U
Warranty	3-year parts only Next Business Day	3-year parts only Next Business Day	3-year parts only Next Business Day
QuickSpecs URL	http://h18000.www1.hp.com/products/quickspecs/13551_div/13551_div.pdf		

The total package—Software

HP StorageWorks 2000 Snapshot Software	HP MSA2000 Snapshot Software enables increased data protection by creating recovery points for your data, taking a "picture" of what your data was at the time of the Snapshot. The snapshots are maintained even as data continues to change. In the event of a failure, you can recover data to any previous Snapshot. Snapshots are a great complement to tape or disk backup strategy. HP MSA2000 Snapshot Software functionality is controller-based so no host resources are used and they are space-efficient and provide copy-on-write capability. For more information, visit: http://www.hp.com/go/P2000	Included
HP StorageWorks 2000 Volume Copy Software	HP MSA2000 Volume Copy Software makes a physical copy of the data to another set of disks within the same array. One of the benefits of Snapshot and Volume Copy Software is the ability to mount a snap or Volume Copy to another server for backup, application testing, or data mining. HP MSA2000 Volume Copy Software is controller-based, meaning no host resources are used. It provides a physical copy of data from one LUN to another with no server performance impact. The P2000 G3 arrays ship standard with 64 Snapshots and Volume Copy. For more information, please visit: http://www.hp.com/go/P2000	Included
HP StorageWorks P2000 Array Remote Snap Software	HP StorageWorks P2000 Array System Remote Snap Software is a storage-based asynchronous replication technology that provides remote replication on the HP StorageWorks P2000 G3 MSA Arrays (FC and Combo FC/iSCSI only). HP Remote Snap functionality is based on existing Snapshot technology. Supporting both Ethernet and Fibre Channel interconnects provides flexible options to your application environments. Protect your investment with Snapshot-based replication enabling local and remote recovery based on need. For more information, please visit: http://www.hp.com/go/RemoteSnap	Optional
HP StorageWorks Storage Mirroring	HP StorageWorks Storage Mirroring prevents data loss from failure, error, or disaster. It provides replication and recovery of valuable Windows and Linux data to another server. Proactive replication is a key strategy coupled with tape backup and Snapshot technology for up-to-the-second data protection. Having replicated data co-located enables customers to recover their static and transactional data in seconds to minutes. For more information, please visit: http://h18006.www1.hp.com/products/storage/software/sm/index.html	Optional

Service and support

HP Factory Express
HP Factory Express is designed to help you get a better return from your IT investment by providing customization, integration, and deployment services along with your storage and server purchases. It provides predictable, trusted, and tested IT solutions tailored to your business needs. We allow you to customize hardware to your exact specifications in the factory—helping to speed up deployment and free up internal resources. For more details, visit:
www.hp.com/go/factoryexpress

Customer technical training
Consider education as an integral part of your strategy to get the best return on investment for your HP storage solution. HP offers a variety of training courses on storage software, networking, archiving, and disk storage systems. Our classes are available in many delivery modalities from traditional instructor-led courses at one of our 80 training centers worldwide to onsite training customized to your needs or online. For more details, visit: **www.hp.com/learn/storage**

HP Financial Services
HP Financial Services provides innovative financing and financial asset management programs to help customers acquire, manage, and ultimately retire their HP solutions cost-effectively. For more information on these services, please contact your HP representative, or visit: **www.hp.com/go/hpfinancialservices**

To understand how you can achieve efficient storage consolidation at affordable prices, visit: **http://hp.com/go/msa2000**

Share with colleagues

Get connected
www.hp.com/go/getconnected
Current HP driver, support, and security alerts delivered directly to your desktop