



HP P2000 G3 Modular Smart Arrays



Delivers affordable, high-performing modular SAN arrays offering 8 Gb Fibre Channel, Combo Fibre Channel/iSCSI, 6 Gb SAS, 10GbE or 1 Gb iSCSI connectivity, 64 snaps standard, and optional Remote Snap (replication) for Fibre Channel and iSCSI models

How can the flexibility of the HP 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, and 1 Gb or 10GbE iSCSI connected arrays designed for efficient storage consolidation at affordable prices. The HP P2000 G3 MSA FC/iSCSI Combo Controller economically 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, Combo FC/iSCSI, and iSCSI controllers allow snap 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 LFF and SFF enterprise-class SAS, SAS Midline, and archival-class SATA Midline 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 P2000 MSA Remote Snap Software

HP P2000 Remote Snap Software offers controller-based, asynchronous replication technology that provides local or remote replication between two HP P2000 G3 FC, FC/iSCSI Combo, and 1GbE or 10GbE MSA Systems. HP P2000 Remote Snap Software functionality is based on existing snapshot technology.

Supporting both Ethernet and Fibre Channel interconnects provides flexible options to protect your application environments. Protect your investment with snapshot-based replication enabling local and remote recovery based on need.

For more information, visit hp.com/go/RemoteSnap

Key features and benefits of HP P2000 G3 MSA Systems

Easily managed, highly affordable, and highly efficient storage consolidation

- 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 SAS MDL, or archival class SATA MDL drives. The array head comes with either 12 or 24 drive bays that are 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, FC/iSCSI Combo, and both 1GbE and 10GbE iSCSI models support the Remote Snap (replication) software option.

Start small and grow in number of supported servers and total capacity— adaptable to changing needs

- P2000 G3 MSA allows customers to grow their storage as demands increase from 600 GB to 57.6 TB SAS, 288 TB SAS MDL, or 192 TB SATA MDL. The P2000 G3 MSA arrays can support 7 LFF enclosures and 96 drives or 5 SFF enclosures and a maximum of 149 drives. Single or dual controllers accommodate any budget.
- With 512 LUNs and greater than 40 TB LUN size depending on the RAID chosen, the P2000 G3 MSA arrays have more than sufficient LUN flexibility for a wide variety of configuration choices.

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.
- Reduced time-to-operation with easy and enhanced deployment, reduced risk from operator errors that result in less downtime and data loss, while increasing customer satisfaction. Supports customer replaceable hot-plug components such as drives, controllers, fans, and power supplies.
- HP P2000 G3 MSA controllers support upgrading prior generations of HP MSA2000 G1 and G2 models, regardless of protocol. The HP P2000 G3 FC, FC/iSCSI Combo, SAS, 10GbE or four-port 1GbE iSCSI controllers support data-in-place upgrades to the older models, thereby protecting the user's investment in JBODs and drives, and delivering greater performance and functionality.

HP Services

Tap into the HP support 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. Depending on your individual support requirements, choose from three levels of care that cover the entire lifecycle to better address your needs:

Optimized Care: delivers best performance and stability through deployment and proactive management practices

- **HP MSA installation and startup service**
- **Proactive Care 24x7 support , plus 40 Credits/year**
- **Optional related services: HP Storage technical assistance**

Standard Care: maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support

- **HP MSA installation and startup service**
- **Proactive Care 24x7 support, plus 30 Credits/year**
- **Optional related services: HP Storage technical assistance**

Basic Care: Minimum recommended support

- **HP MSA installation and startup service**
- **Support Plus 24, 10 Credits/year**
- **Optional related services: HP Storage technical assistance**

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.

Technical Specifications

HP P2000 G3 MSA Array Systems



Drive description	149 SFF SAS/MDL SAS/SATA or 96 LFFSAS/MDL SAS/SATA
Drive Type	146 GB 6G 15K SFF Dual-port ENT SAS 300 GB 6G 10K SFF Dual-port ENT SAS 300 GB 6G 15K SFF Dual-port ENT SAS 600 GB 6G 10K SFF Dual-port ENT SAS 900 GB 6G 10K SFF Dual-port ENT SAS 1 TB 6G 7.2K SFF Dual-port SAS MDL 300 GB 6G 15K LFF Dual-port ENT SAS 450 GB 6G 15K LFF Dual-port ENT SAS 600 GB 6G 15K LFF Dual-port ENT SAS 1 TB 6G 7.2K LFF Dual-port SAS MDL 2 TB 6G 7.2K LFF Dual-port SAS MDL 3 TB 6G 7.2K LFF Dual-port SAS MDL
Capacity	288 TB maximum including expansion, depending on model
Storage expansion options	P2000 3.5-inch disk enclosure or D2700 2.5-inch disk enclosure
Host interface	Choose the appropriate protocol offered by five different controllers 1. 8 Gb Fibre Channel with 2 Ports per controller 2. 8 Gb Fibre Channel with 2 Ports per controller and 1GbE iSCSI 2 Ports per controller 3. 6 Gb SAS with 4 Ports per controller 4. 10GbE with 2 Ports per controller 5. 1GbE iSCSI with 4 Ports per controller

The total package—Software		
HP P2000 Snapshot Software	HP P2000 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 hp.com/go/P2000 .	Included
HP P2000 Volume Copy Software	HP Volume Copy Software makes a physical copy of the data to another set of disks within the same array. One of the benefits of HP P2000 Snapshot Software and HP P2000 Volume Copy Software is the ability to mount a snap or volume copy to another server for backup, application testing, or data mining. HP P2000 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 HP MSA P2000 G3 Systems ship standard with 64 snapshots and Volume Copy. For more information, visit hp.com/go/P2000 .	Included
HP P2000 Array Remote Snap Software	HP P2000 Array Remote Snap Software is a storage-based, asynchronous replication technology that provides remote replication on the HP MSA P2000 G3 Systems (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 for your application environments. Protect your investment with snapshot-based replication that enables local and remote recovery, based on need. For more information, visit hp.com/go/RemoteSnap .	Optional

Service and support

HP Factory Express

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. For more information, visit hp.com/go/factoryexpress.

Customer technical training

We offer 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 online and onsite training. For more information, visit hp.com/learn/storage.

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you acquire, manage, and ultimately retire your HP solutions. For more information on these services, visit hp.com/go/hpfinancialservices.

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

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