HP P2000 G3 Modular Smart Array Systems

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 snapshots standard, and optional Remote Snap (replication) for Fibre Channel and iSCSI models.

How can the flexibility of the HP P2000 G3 Modular Smart Array (MSA) 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 Systems ship standard with 64 snapshots and HP P2000 Volume Copy software-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, the software 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 P2000 G3 MSA 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 snapshots 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 you to grow your storage as demands increase up to 178 TB SAS, 576 TB SAS MDL, or 192 TB SATA MDL. The P2000 G3 MSA Systems 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.
- P2000 G3 MSA Systems have more than sufficient LUN flexibility for a wide variety of configuration choices, with 512 LUNs and up to 64 TB maximum LUN size depending on the RAID type chosen.

**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.
- Reduce 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.
- Upgrade easily with support of prior generations of G1 and G2 models, regardless of protocol. The HP P2000 G3 FC, FC/iSCSI Combo, SAS, 10GbE or 4-port 1GbE iSCSI controllers support data-in-place upgrades to the older models, thereby protecting your investment in JBODs and drives, and delivering greater performance and functionality.

**HP Technology Services**

**Expert HP storage consultants and service professionals** sit down with you and your team to map your storage needs. Not only can we help you accelerate implementation and reduce deployment risk, but we can also help you realize the full value of your storage purchases as you transform storage for the New Style of IT.

**Advise, transform, and integrate**
Navigate through the complexities of storage, backup, archive, disaster recovery, and Big Data with advisory, transformation, and integration consulting.

**Deploy and implement**
Access expertise to support deployment, operations, relocation, sanitization, and disposal, plus improvement-focused education.

**Operate and support**
Find the level of personalized, proactive, and simplified support right for your business. Note: Specific service availability varies by product.
**Foundation Care**
System-level IT hardware and software support delivers flexible coverage window and response time for more choice and simplicity.

**Proactive Care**
Combined reactive and proactive services provide easy-to-purchase, cost-efficient system-level support coupled with personalized expert advice and products connected to HP to help prevent problems and reduce downtime.

HP Proactive Care Advanced—builds and incorporates on Proactive Care and also gives customers personalized technical and operational advice from an Assigned, local Account Support Manager for personalized technical collaboration, flexible access to specialist skills to help optimize business critical IT, and Enhanced Critical Incident Management to help so the business is not affected if there is a system or device outage.

**Datacenter Care**
Get the support you need to deploy, operate, and evolve your data center environment to be hybrid-cloud ready with single-point-of-accountability for HP and others’ product. Get connected and get back to business—HP Storage Technology Services provide the path to get your HP Storage solutions and your business connected to HP. Once connected, our experts are able to scan your system and run health checks, then use that data to create personalized reports and recommendations for actions to take to prevent personalized problems and downtime.

**HP P2000 G3 Modular Smart Array Systems**

**Technical specifications**

<table>
<thead>
<tr>
<th><strong>Drive description</strong></th>
<th>Up to 149 SFF SAS/MDL SAS or 96 LFF SAS/MDL SAS Maximum including base array and expansion depending on model</th>
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<tbody>
<tr>
<td><strong>Drive type</strong></td>
<td>Please refer to QuickSpecs for detailed information on supported hard drives: h18000.www1.hp.com/products/quickspecs/13551_na/13551_na.pdf</td>
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<tr>
<td><strong>Capacity</strong></td>
<td>576 TB maximum including expansion, depending on model</td>
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<tr>
<td><strong>Storage expansion options</strong></td>
<td>HP P2000 3.5-inch disk enclosure or HP D2700 2.5-inch disk enclosure</td>
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<tr>
<td><strong>Host interface options</strong></td>
<td>Choose the appropriate protocol offered by five different controllers 1. 8 Gb Fibre Channel with 2 ports per controller 2. FC/ISCSI Combo with 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</td>
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</table>
Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment. 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. For more information, visit hp.com/go/factoryexpress.

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

### The total package—MSA Software and Data Services

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<tr>
<th>HP P2000 Snapshot software</th>
<th>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.</th>
<th>Included</th>
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<tr>
<td>HP P2000 Volume Copy software</td>
<td>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.</td>
<td>Included</td>
</tr>
<tr>
<td>HP P2000 Array Remote Snap software</td>
<td>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.</td>
<td>Optional</td>
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### HP StoreEasy File Services

An HP StoreEasy 3000 Gateway can add file, print, iSCSI, and management hosting services to an MSA P2000 G3 array. For more information, visit hp.com/go/storeeasy.

**Learn more at**

hp.com/go/P2000