



## HP StorageWorks 2324sa G2 Modular Smart Array (Small Form Factor)



The HP StorageWorks 2000sa G2 Modular Smart Array is a 3Gb SAS direct attach, external shared storage solution that helps customers easily transition from direct attached to centralized storage. It allows departmental and small to medium businesses customers to grow capacity as demands increase up to 29.7 TB SAS or 60 TB SATA, and supporting up to 64 hosts With up to 511 LUNs and LUN sizes up to 16 TB, the MSA2000sa G2 gives maximum configuration flexibility. The MSA2000sa G2 allows mixing of enterprise-class, dual-ported SAS drives and archival-class SATA drives, and supports both Large Form Factor and Small Form Factor drives. The optional HP StorageWorks 2000 Modular Smart Array Snapshot Software offers increased data protection. The MSA2000sa G2 can be configured with a single controller for a low initial price with future expansion, or with dual controller for situations that require higher availability and performance for the most demanding entry-level situations.

<b>Warranty</b>	3 Years Parts 0 Years Labour 0 Years On-Site
<b>Barcode</b>	0884420013174
<b>Maximum Enclosure Capacity</b>	Total Bay Capacity 12.0TB - Number of Bays 24
<b>Included Drive(s)</b>	0GB (0 x 0GB)
<b>RAID Levels Supported</b>	0 1 3 5 6 10 50
<b>Voltage/Power/Frequency</b>	100 to 240VAC / 50 to 60Hz
<b>Dimensions</b>	25.4cm (W) x 63.5cm (D) x 73.66cm (H) - Weight 21.73kg

### Features

- \* SAS controller with four SAS host ports
- \* Supports up to 8 hosts with SAS direct connect and 64 hosts (BladeSystem servers) using 3Gb SAS BL switch
- \* Support for Small Form Factor (SFF) SAS and SATA drives, common with ProLiant
- \* Support for attachment of THREE dual I/O MSA70 SFF JBODs (total ninety-nine SFF drives)
- \* Increased support to FOUR MSA2000 LFF disk enclosures with the MSA2012 Chassis (sixty LFF drives)
- \* Support for Small Form Factor 300 GB SAS drive - doubling the SFF SAS capacity
- \* Increased optional snapshot capability to 255 snaps
- \* Additional LUN support up to 511 total volumes in a Dual Controller system
- \* Availability of a carrier grade NEBS-certified DC-powered MSA2024 SFF chassis



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### Specification

#### General

The HP StorageWorks 2000sa G2 Modular Smart Array is a 3Gb SAS direct attach, external shared storage solution that helps customers easily transition from direct attached to centralized storage. It allows departmental and small to medium businesses customers to grow capacity as demands increase up to 29.7 TB SAS or 60 TB SATA, and supporting up to 64 hosts With up to 511 LUNs and LUN sizes up to 16 TB, the MSA2000sa G2 gives maximum configuration flexibility. The MSA2000sa G2 allows mixing of enterprise-class, dual-ported SAS drives and archival-class SATA drives, and supports both Large Form Factor and Small Form Factor drives. The optional HP StorageWorks 2000 Modular Smart Array Snapshot Software offers increased data protection. The MSA2000sa G2 can be configured with a single controller for a low initial price with future expansion, or with dual controller for situations that require higher availability and performance for the most demanding entry-level situations.

Warranty	3 Years Parts 0 Years Labour 0 Years On-Site
Barcode	0884420013174

#### Storage

Maximum Enclosure Capacity	Total Bay Capacity 12.0TB - Number of Bays 24
Included Drive(s)	0GB (0 x 0GB)
RAID Levels Supported	0 1 3 5 6 10 50
Host Connections	3Gb/s

#### Memory

Cache/Buffer Memory	1GB
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#### Interfaces Ports

Serial Attached SCSI (SAS)	SAS
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#### Electrical

Voltage/Power/Frequency	100 to 240VAC / 50 to 60Hz
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Cooling System	2 x Fans



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## **HP StorageWorks 2324sa G2 Modular Smart Array (Small Form Factor)**



### **Environmental**

Environmental

Operating Temperature 5 to 40C

Operating Humidity

Humidity 10 to 90%

### **Physical**

Enclosure type

Internal

In The Box

MSA2324 Chassis with 24 x 2.5-inch Drive Bays 2 x Power Supplies and Fans No Drives

Dimensions

25.4cm (W) x 63.5cm (D) x 73.66cm (H) - Weight 21.73kg



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### Options

#### Service Packs

HP	UA868E	HP Care Pack Startup - MSA1000/1500	1424.33	<a href="#">VIEW&gt;</a>
HP	UJ686E	HP Care Pack 4 Hours On-Site Response 24x7 5 Year	3982.88	<a href="#">VIEW&gt;</a>
HP	US573E	HP Care Pack Defective Media Retention with 6 Hours 24x7 Call-to-Repair Hardware Support 4 Year	Call us	<a href="#">VIEW&gt;</a>
HP	UK196PE	HP Care Pack Post Warranty Support Hardware Call-to-Repair within 6 Hours 24x7 1 Year	1270.47	<a href="#">VIEW&gt;</a>
HP	UT272E	HP Care Pack 24x7 24 Hours Call-to-Repair Hardware Support 3 Year	2675.01	<a href="#">VIEW&gt;</a>
HP	UT276E	HP Care Pack 24x7 24 Hours Call-to-Repair Hardware Support 5 Year	4461.26	<a href="#">VIEW&gt;</a>
HP	UJ685E	HP Care Pack 4 Hours On-Site Extended Hours Response 5 Year	3455.20	<a href="#">VIEW&gt;</a>
HP	US571E	HP Care Pack Defective Media Retention Next Business Day On-Site Hardware Support 4 Year	2084.19	<a href="#">VIEW&gt;</a>
HP	UJ673E	HP Care Pack Next Day On-Site Response 3 Year	1228.06	<a href="#">VIEW&gt;</a>
HP	UT274E	HP Care Pack 24x7 24 Hours Call-to-Repair Hardware Support 4 Year	Call us	<a href="#">VIEW&gt;</a>
HP	UP343E	HP Care Pack Defective Media Retention with 4 Hours 24x7 On-Site Hardware Support 4 Year	Call us	<a href="#">VIEW&gt;</a>
HP	UJ688E	HP Care Pack Defective Media Retention with 4 Hours 13x5 On-Site Hardware Support 5 Year	Call us	<a href="#">VIEW&gt;</a>
HP	UJ681E	HP Care Pack 4 Hours On-Site Extended Hours Response 4 Year	2767.72	<a href="#">VIEW&gt;</a>
HP	UJ676E	HP Care Pack Hardware Call-to-Repair within 6 Hours 24x7 3 Year	3420.67	<a href="#">VIEW&gt;</a>
HP	US575PE	HP Care Pack Post Warranty 4 Hours 24x7 On-Site Hardware Support 2 Year	1802.11	<a href="#">VIEW&gt;</a>
HP	UK193PE	HP Care Pack Post Warranty Service Next Day On-Site 1 Year	517.89	<a href="#">VIEW&gt;</a>
HP	UP337E	HP Care Pack Defective Media Retention with Support Plus 24 for Storage 3 Year	2675.01	<a href="#">VIEW&gt;</a>
HP	UT273E	HP Care Pack Defective Media Retention with 24x7 24 Hours Call-to-Repair Hardware Support 3 Year	Call us	<a href="#">VIEW&gt;</a>



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HP	UT277E	HP Care Pack Defective Media Retention with 24x7 24 Hours Call-to-Repair Hardware Support 5 Year	4939.62	<a href="#">VIEW&gt;</a>
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### Other

HP	T5512A	HP StorageWorks MSA2000 Snapshot 64 Software LTU	1509.84	<a href="#">VIEW&gt;</a>
HP	T5515A	HP StorageWorks MSA2000 Snapshot 8 to 64 Upgrade Software LTU	Call us	<a href="#">VIEW&gt;</a>
HP	T5541A	HP StorageWorks MSA2000 Snapshot 64 to 255 Upgrade Software LTU	Call us	<a href="#">VIEW&gt;</a>
HP	T5514A	HP StorageWorks MSA2000 Snapshot Volume Copy Software LTU	Call us	<a href="#">VIEW&gt;</a>
HP	T5540A	HP StorageWorks MSA2000 Snapshot 8 to 255 Upgrade Software LTU	Call us	<a href="#">VIEW&gt;</a>
HP	T5513A	HP StorageWorks MSA2000 Snapshot 8 Software LTU	564.48	<a href="#">VIEW&gt;</a>
HP	T5539A	HP StorageWorks MSA2000 Snapshot 255 Software LTU	2273.24	<a href="#">VIEW&gt;</a>

### Other

HP	TA717A	HP StorageWorks Storage Mirroring Software Linux Edition Stock LTU	Call us	<a href="#">VIEW&gt;</a>
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### LAN Switches

HP	AJ864A	HP 3Gb 8 Port SAS 2.0 BL-c Switch Module for BladeSystem c-Class Enclosure	1371.90	<a href="#">VIEW&gt;</a>
HP	AJ865A	HP 3Gb 8 Port SAS 2.0 BL-c Switch Module for BladeSystem c-Class Enclosure Dual Pack	2738.81	<a href="#">VIEW&gt;</a>

### Servers

HP	AJ754A	HP StorageWorks 2000sa Modular Smart Array Controller	1365.98	<a href="#">VIEW&gt;</a>
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### Hard Disk Drives

HP	504062-B21	HP 146GB 3G (15,000rpm) 2.5-inch SAS Dual Port Enterprise Hard Drive	473.15	<a href="#">VIEW&gt;</a>
HP	AJ738A	HP 500GB (7200rpm) 3.5 inch Dual-Port SATA Hard Drive	246.08	<a href="#">VIEW&gt;</a>
HP	512547-B21	HP 146GB 6G (15,000rpm) 2.5-inch SAS Dual Port Enterprise Hard Drive	311.96	<a href="#">VIEW&gt;</a>



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HP	507125-B21	HP 146GB 6G (10,000rpm) 2.5-inch SAS Dual Port Enterprise Hard Drive	252.71	<a href="#">VIEW&gt;</a>
HP	AJ736A	HP 300GB (15,000 rpm) SAS 3.5 inch Hard Drive	456.13	<a href="#">VIEW&gt;</a>
HP	492620-B21	HP 300GB (10000rpm) Plug 2.5 inch SAS Hard Drive	289.48	<a href="#">VIEW&gt;</a>
HP	AJ738A#0D1	HP 500GB (7200rpm) 3.5 inch Dual-Port SATA Hard Drive (Factory Integrated)	Call us	<a href="#">VIEW&gt;</a>

### Disk arrays

HP	AJ808A	HP StorageWorks MSA2300sa Controller	1974.37	<a href="#">VIEW&gt;</a>
HP	418800-B21#0D1	HP StorageWorks MSA70 Modular Smart Array (Factory Integrated)	Call us	<a href="#">VIEW&gt;</a>
HP	AJ750A	HP StorageWorks MSA2000 Dual I/O 3.5 inch 12 Drive Enclosure	2235.11	<a href="#">VIEW&gt;</a>
HP	AJ749A	HP StorageWorks MSA2000 Single I/O 3.5 inch 12 Drive Enclosure	1687.33	<a href="#">VIEW&gt;</a>
HP	418800-B21	HP StorageWorks MSA70 Modular Smart Array	1994.12	<a href="#">VIEW&gt;</a>
HP	AJ751A	HP StorageWorks MSA2000 Drive Enclosure I/O Module	437.58	<a href="#">VIEW&gt;</a>
HP	AG779A	HP StorageWorks Dual Domain I/O Module for MSA60/MSA70 Disk Arrays	289.43	<a href="#">VIEW&gt;</a>

### Hard disk drive array towers

HP	AJ949A	HP StorageWorks 2024 Modular Smart Array 2.5-inch Drive Bay Chassis (SFF)	2421.59	<a href="#">VIEW&gt;</a>
HP	AJ948A	HP StorageWorks 2012 Modular Smart Array 3.5-inch Drive Bay Chassis (LFF)	2179.81	<a href="#">VIEW&gt;</a>
HP	AJ948AR	HP StorageWorks 2012 Modular Smart Array 3.5-inch Drive Bay Chassis (LFF) REMARKET	1853.89	<a href="#">VIEW&gt;</a>

### Cases

HP	AF011A*	HP 10636 G2 (36U) Rack Cabinet - Pallet	Call us	<a href="#">VIEW&gt;</a>
HP	AJ951A	HP StorageWorks 2024 Modular Smart Array 2.5-in Drive Bay DC-power Chassis (SFF)	Call us	<a href="#">VIEW&gt;</a>
HP	AF011A	HP 10636 G2 (36U) Rack Cabinet - Pallet	897.64	<a href="#">VIEW&gt;</a>
HP	AJ950A	HP StorageWorks 2012 Modular Smart Array 3.5-in Drive Bay DC-power Chassis (LFF)	3517.68	<a href="#">VIEW&gt;</a>



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HP	AF022A	HP 10622 G2 (22U) Rack Cabinet - Shock Pallet	1384.88	<a href="#">VIEW&gt;</a>
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### Controller Cards

HP	508226-B21	HP Smart Array P700m/512 Controller	606.31	<a href="#">VIEW&gt;</a>
HP	488765-B21	HP SC08Ge Host Bus Adaptor	139.91	<a href="#">VIEW&gt;</a>
HP	507925-B21	HP Smart Array P700m/256 Controller	192.19	<a href="#">VIEW&gt;</a>

### Air conditioners

HP	AF025A	HP Modular Cooling System G2 Rack	16547.99	<a href="#">VIEW&gt;</a>
HP	AF026A	HP Modular Cooling System G2 Expansion Rack (10642 G2)	3469.20	<a href="#">VIEW&gt;</a>

### Metal housings or cabinets

HP	AF001A	HP 10642 G2 (42U) Rack Cabinet - Pallet	983.12	<a href="#">VIEW&gt;</a>
HP	AF012A#001	HP 10636 G2 (36U) Rack Cabinet (Shock Pallet)	435.37	<a href="#">VIEW&gt;</a>
HP	AF001A*	HP 10642 G2 (42U) Rack Cabinet - Pallet	Call us	<a href="#">VIEW&gt;</a>
HP	358254-B21	HP 5642 Rack (Unassembled) Metallic Carbonite	703.08	<a href="#">VIEW&gt;</a>
HP	AF012A	HP 10636 G2 (36U) Rack Cabinet (Shock Pallet)	1173.15	<a href="#">VIEW&gt;</a>

### Projector Accessories

HP	292302-B22	HP Rack S10614 (14U) - Rack Cabinet Shock Pallet	580.62	<a href="#">VIEW&gt;</a>
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### Mounts

HP	AF031A	HP 10647 G2 (47U) Rack Cabinet - Pallet	1139.54	<a href="#">VIEW&gt;</a>
HP	AF014A	HP 10636 G2 (36U) Rack Cabinet , with Extension - Shock Pallet	1350.07	<a href="#">VIEW&gt;</a>
HP	AF002A#001	HP 10642 G2 (42U) Rack Cabinet - Shock Pallet CTO Factory Integrated	357.06	<a href="#">VIEW&gt;</a>
HP	AF021A	HP 10622 G2 (22U) Rack Cabinet - Pallet	1024.03	<a href="#">VIEW&gt;</a>
HP	AF042A	HP 10842 G2 (42U) 800mm Wide Rack Cabinet - Shock Pallet	1573.64	<a href="#">VIEW&gt;</a>
HP	AF031A*	HP 10647 G2 (47U) Rack Cabinet - Pallet	Call us	<a href="#">VIEW&gt;</a>
HP	AF002A	HP 10642 G2 (42U) Rack Cabinet - Shock Pallet CTO	1037.08	<a href="#">VIEW&gt;</a>





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HP	AF041A	HP 10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet	1307.22	<a href="#">VIEW&gt;</a>
HP	AF002A#OD1	HP 10642 G2 (42U) Rack Cabinet - Shock Pallet CTO Factory Integrated	Call us	<a href="#">VIEW&gt;</a>
HP	AF041A*	HP 10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet	Call us	<a href="#">VIEW&gt;</a>
HP	AF002A 001	HP 10642 G2 (42U) Rack Cabinet - Shock Pallet CTO	Call us	<a href="#">VIEW&gt;</a>

### Interconnect Cables

HP	389668-B21	HP External SAS Cable (2m)	117.59	<a href="#">VIEW&gt;</a>
HP	419570-B21	HP External SAS to Mini 1m Cable	134.19	<a href="#">VIEW&gt;</a>
HP	419571-B21	HP SAS to Mini 2m Cable	141.29	<a href="#">VIEW&gt;</a>
HP	389665-B21	HP External SAS Cable (1m)	105.75	<a href="#">VIEW&gt;</a>
HP	432238-B21	HP External SAS to Mini 4m Cable	138.33	<a href="#">VIEW&gt;</a>

### Batteries

HP	452348-B21	HP Smart Array P700m/512 Battery Option Kit	72.14	<a href="#">VIEW&gt;</a>
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## About Memory Express

Although we started out selling just Memory the best part of fifteen years ago, we have diversified organically over the years at the request of our customers. We specialise in Networking, Storage and Disaster Recovery and have the knowledge, experience and strategic partnerships to provide you with the service and value you demand - quality products, reasonably priced and delivered on time.

Memory Express can offer you a full range of installation and configuration services for hardware and software as well as detailed, accurate advice on all aspects of your IT projects. You'll be glad to know that we don't have a room full of school leavers trying to sell products they don't understand - all our staff are seasoned IT specialists and have an average length of service of over ten years. We won't just push you towards the solution we feel like selling; we'll help you to find the one you need.

Meanwhile, online, we offer one of the largest product ranges of any UK IT supplier. Showing near live stock, in depth product information and keen pricing, we're sure you'll find what you need. We also have matched memory upgrades for over 50,000 models of computer, server, printer, phone and camera, guaranteeing you the right memory, first time. All this is backed up by the same great service you'd expect when dealing with us over the phone. For our regular business customers, we provide T3, our corporate purchasing portal which provides a truly corporate focused buying experience.

We're conveniently located in Park Royal, London's Technology Business Park, allowing us to reach all areas of the UK quickly and efficiently. Many of our City based corporate clients benefit from same day delivery and we can offer next day delivery to established customers throughout the British Isles. Online delivery tracking and status information means that you need not worry about the whereabouts of your order.

We're proud to have built up a wide variety of partnerships with quality vendors and many of our staff hold certifications from top tier manufacturers including Microsoft, Acronis, Symantec and VMWare.





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Our clients vary in size from SMEs to many of the UK's largest corporates, government departments, schools and universities, and we're pleased to say that most have been our customers for many, many years - we believe in long term business relationships, not turning a quick profit. Why not contact us now to see how we can help you get the quality of service they already enjoy?