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SPARCstorage Array Series: The industry's most innovative storage solution.

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The one thing you demand from your information systems, above all else, is dependability. Benchmarks and gigabytes don't mean much if the system isn't up and running. But you don't need us to tell you that. What you need is an affordable solution that's easy to implement and even easier to maintain.

Our SPARCstorage(tm) Array subsystems provide an unmatched combination of capacity, performance, high availability, and manageability at surprisingly low prices. This line of disk arrays integrate a remarkable number of features -- RAID, hot spares, a high-speed fibre channel, and a dual-ported controller for system failover, to name just a few -- so you'll have something you can really use. Peace of mind.

Capacity and performance that scale in concert

Because of their modular design, both the SPARCstorage Array 100 Series and 200 Series can easily and cost-effectively add storage capacity and performance.

The base configuration of the compact, stackable SPARCstorage Array 100 Series includes six high-performance, low-profile disk drives, and you can add two dozen more. For even greater capacity, you can connect two arrays to each SBus slot on the host system. So, whether you're dealing with hundreds of gigabytes or even a terabyte or more, these subsystems will do the job.

For enterprise servers that require multiple terabytes of capacity, there's the cabinet-size SPARCstorage Array 200 Series. Combined with our SPARCcenter(tm) 2000 server, it delivers the scalability needed for large mission-critical data center applications at an exceptionally low price per gigabyte. With the 200 Series, you can connect up to 36 large form factor drives for up to 300 gigabytes in a single cabinet - with the added benefit of protecting your investment in 5.25-inch disks.

Furthermore, the SPARCstorage Array's intelligent controller, with nonvolatile cache, offloads the I/O processing burden from the server so performance increases as you add more arrays to your system.

With their leading-edge fibre channel interface, our SPARCstorage Array subsystems give you more bandwidth than other disk arrays. They also allow you to use fiber-optic cables as long as two kilometers, so the host system and the disk array can reside in different buildings. That way, even in the event of a fire or other disaster, your data will be safe.

Putting an end to unplanned downtime

To ensure that you won't lose any data -- even if a disk drive should fail -- our SPARCstorage Array subsystems provide RAID levels 5, 1, and 0+1. They even give you the additional flexibility of RAID 0 and independent disks, all at the same time. So you can choose the ideal configuration to match your requirements for availability, performance, capacity, and price.

With the hot-spare option, you have the luxury of choosing the most convenient time to replace a faulty disk. A built-in spare goes to work automatically, rebuilding your data and restoring the system to full speed. And when you're ready, replacing a disk in the 100 Series takes less than a minute -- no tools required. With our warm-plug feature, you don't even have to shut off the power. Which means you don't have to reboot.

Should you want even more peace of mind, our SPARCstorage Array products are also backed by SunService, one of the industry's highest rated service and support organizations. But the beauty of these innovative disk arrays is just how much you can do for yourself.

Almost all administrative tasks can be handled on line. You can monitor component status, tune performance, even reconfigure the

system using simple point-and-click, drag-and-drop commands -- all while users continue to access information and run all their applications.

In other words, our SPARCstorage Array subsystems not only make system administrators' lives easier, they can make your whole business more productive.

SPARCstorage Array Series Specifications

Common to Model 100 and Model 200 Series

Main Memory

Main processor	SPARC® Version 8, microSPARC
Read/write cache	4 MB nonvolatile RAM on board (battery module on daughter card)
Bus/cache controller	Sun Bus Interface and NVRAM Controller ASIC
Interfaces to host	Fibre channel Sun Serial Optical Channel ASIC Dual ported (optional)
Internal SCSI channels	Six intelligent, low-overhead processors Fast/wide (20 MB/sec) SCSI-2

Host System Interface

SBus card	Single-width fibre channel SBus card Sun Serial Optical Channel ASIC Up to 2 arrays per card
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Fibre Channel Interface

Standards	ANSI Fibre Channel FC-PH Rev 4.2, X3T11-755D ANSI SCSI Fibre Channel Protocol Rev 8, X3T10-993D
Optical modules	25 MB/sec (266 Mb/sec) full duplex 780 nanometer shortwave laser
Fiber cable type	50/125 micrometer multimode, ST type connectors
Maximum cable length	2 kilometers

Software

SPARCstorage Volume Manager	Included with array subsystem X/Motif® graphical user interface Virtual storage management Independent disks, volume concatenation RAID levels 0 (striping), 1 (mirroring), 0+1 (mirrored stripes), and 5 (striping with rotated parity) On-line storage reorganization and load balancing Visual performance displays for tuning Complete status displays Command line interface also provided
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Specific to Model 100 Series

Packaging

Subsystem includes	Intelligent array controller 6 to 30 disk drives in 3 trays High reliability power supply 3 variable-speed fans with rotation and temperature sensors LCD panel with status displays for disk drives, fans, NVRAM battery, fiber links, controller, and power on self-test
Standard mounting	Table top
Mounting options	Tower stand Stacking kit with power distribution base Locking module

Rack-mount kit

Disk Drives

Form factor 3.5-in. low-profile Single Connector
 Supported drives 2.1-GB 7200 RPM fast-wide SCSI-2
 1.05-GB fast/wide SCSI-2
 535-MB fast SCSI-2

Environment

AC Power 100-240 VAC, 47-63 Hz, 6.5 amps at 100 VAC
 Operating 10° C to 40° C (50° F to 104° F)
 20% to 80% relative humidity, noncondensing
 Nonoperating -20° C to 60° C (-4° F to 140° F)
 5% to 95% relative humidity, noncondensing
 Operating acoustic noise 6.0 bels (at 25° C)

Regulations

Meets or exceeds the following requirements:

Safety UL 1950, CSA 950, TUV EN 60950
 Class 1 laser requirements per CFR 21, Part 1040
 and IEC 825
 RFI/EMI FCC Class B, DOC Class B, VCCI Class 2,
 EMC Directive (89/336/EEC), EN55022 Class B
 Immunity EMC Directive (89/336/EEC), EN55082-1
 Harmonics EMC Directive (89/336/EEC), EN60555-2

Dimensions and Weight

Height 22.7 cm (8.94 in.)
 Width 49.4 cm (19.46 in.)
 Depth 53.5 cm (21.06 in.)
 Weight (without disk drives) 30 kg (66 lb.) approx.
 Weight (with 30 disk drives) 48 kg (106 lb.) approx.
 Power cord 1.83 meters (6 feet)

Specific to Model 200 Series

Packaging

Subsystem includes Intelligent array controller
 Two SCSI interface boards, each with 3 fast/wide
 differential SCSI-2 interfaces
 Display board with status displays for fans,
 NVRAM battery, fiber links, controller, and
 power on self-test
 High reliability power supply
 Cooling system including two fans with rotation and
 temperature sensors
 Ordered separately Disk drive trays
 Data center cabinet
 Mounting Rack-mount
 Disk drive trays Up to 6 trays per Model 200 subsystem
 2 to 6 drives per tray
 Separate power supply and cooling in each tray
 Status LEDs for each drive

Disk Drives

Form factor 5.25-in. full height
 Supported drives 9-GB fast/wide SCSI-2
 2.9-GB fast/wide SCSI-2
 2.1-GB fast SCSI-2

Environment

AC Power 200-240 VAC 47-63 Hz 24 amps

Operating 10° C to 40° C (50° F to 104° F)
20% to 80% relative humidity, noncondensing
Nonoperating -20° C to 60° C (-4° F to 140° F)
5% to 95% relative humidity, noncondensing
Operating acoustic noise 6.0 bels (at 25° C)
Declared noise emissions in accordance with ISO 9296

Regulations

Meets or exceeds the following requirements:

Safety UL 1950, CSA 950, TUV EN 60950
Class 1 laser requirements per CFR 21, Part 1040
and IEC 825
Complies with the following when installed in a Sun data center cabinet:
RFI/EMI FCC Class A, DOC Class A, VCCI Class 2,
EMC Directive (89/336/EEC), EN55022 Class B
Immunity EMC Directive (89/336/EEC), EN55082-1
Harmonics EMC Directive (89/336/EEC), EN60555-2

Dimensions and Weight

Height 143 cm (56 in.)
Width 77 cm (30 in.)
Depth 99 cm (39 in.)
Weight (with 36 disk drives) 394 kg (867 lb.) approx.
Power cord 4.6 meters (15 feet)

Questions or comments regarding this service? webmaster@sun.com

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