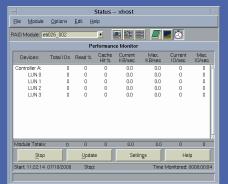# SUN STOREDGE™ A1000/D1000 ARRAYS

## Proven performance, reliability, and versatility for demanding storage environments.

The Sun StorEdge™ A1000/D1000 arrays offer performance and flexibility for a wide variety of computing environments. From simple deskside units to high capacity RAID cabinets capable of supporting close to 4 TB of storage, the Sun StorEdge A1000/D1000 arrays will meet your continually growing storage requirements. Designed for high data integrity and availability, the Sun StorEdge A1000/D1000 arrays provide full RAID functionality. The Sun StorEdge D1000 array is available with cost efficient server based software RAID, while the Sun StorEdge A1000 array has a dedicated 70 MIPS processor managing and controlling all RAID functions. For fast growing, I/O intensive networks, the Sun StorEdge A1000/D1000 arrays provide proven performance, reliability, and versatility that will easily support your demanding storage requirements.

### HIGHLIGHTS

- Up to 436 GB of storage (12 x 36 GB) in a single Sun StorEdge A1000/D1000 array.
- Up to 3.92 TB (nine Sun StorEdge A1000/D1000 arrays) in a single rack cabinet.

- Sun StorEdge A1000 array—hardware RAID controller with dedicated 70 MIPS processor and up to 80 MB of cache memory.

- Two node Sun™ server cluster support.
- Dual redundant hot-swap fans and power supplies.

- Single- and dual-channel SCSI backplane configurations.

## RAID MANAGER 6.22 BENEFITS



- In-depth performance monitoring of RAID controller/LUNs: displays total I/Os, cache hit percentage, current KB/sec, etc.
- Allows RAID levels of existing LUNs to be reconfigured dynamically.
- New drives can be added to existing drive groups without having to bring the system offline.

*With RAID Manager 6.22, system administrators can effectively monitor and optimize the performance of Sun StorEdge A1000 arrays.*

# SUN STOREDGE A1000/D1000 ARRAYS SPECIFICATIONS

### HOST SYSTEM INTERFACE

| | |
|---|---|
| Single-port | SBus card |
| Dual-port | PCI card |

### ULTRA SCSI, DIFFERENTIAL INTERFACE

| | |
|---|---|
| Standard | ANSI (x3.131-1994, x3.277-1996) |
| Maximum length | 20 m |

### SOFTWARE
RAID Manager (graphical user interface): Specific to Sun StorEdge A1000 array

### DISK DRIVES

| | |
|---|---|
| Form factor | 3.5 in., low profile or half-height Ultra SCSI |
| Interface | Ultra SCSI |
| Supported drives | 9.1 GB, 7,200 rpm |
| | 9.1 GB, 10,000 rpm |
| | 18.2 GB, 7,200 rpm |
| | 18.2 GB, 10,000 rpm |
| | 36.4 GB, 10,000 rpm |

### CONFIGURATIONS

| | |
|---|---|
| Workgroup | Up to 12 (1.0 in.) hot-swap, Ultra SCSI drives |
| | Two hot-swap, high-reliability power supplies |
| | Four variable-speed, hot-swap fans |
| | One HW RAID controller or one interface card (SW RAID) |
| Data center | Up to nine arrays (with 9.1-GB, 18.2-GB, or 36.4-GB drives) |
| | Sun Enterprise™ expansion cabinet |

### RELIABILITY, AVAILABILITY, SERVICEABILITY

| | |
|---|---|
| Redundancy | Power supplies |
| | Variable speed fans |
| High availability | RAID 0, 1, 1+0, 3, 5 |
| Battery backed-up cache | Minimum 72-hour hold time |
| Online serviceable components | AC/DC power supplies<br>Variable speed fans |
| | Ultra SCSI disk drives |

### ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| Input voltage | 100-240 VAC, single phase |
| Power requirements | 90-132 VAC (50-60 Hz) or 180-264 VAC (50-60 Hz) |
| Input current | 5 A at 100 VAC or 2.5 A at 200 VAC |

### ENVIRONMENT—WORKGROUP

| | |
|---|---|
| Operating | 5°C to 40°C (41°F to 104°F) |
| | 20% to 80% relative humidity, noncondensing |
| Altitude | −30 m to 3048 m (−100 to 10,000 ft.) |
| Vibration | 1.0 G, 5-500 Hz swept sine |
| Shock | 15 Gs, 11-ms, half sine |

| | |
|---|---|
| Nonoperating | −20°C to 60°C (−4°F to 140°F) |
| | 93% relative humidity, noncondensing |
| Altitude | −30 m to 3048 m (−100 to 10,000 ft.) |
| Vibration | 1.0 G, 5-500 Hz swept sine |
| Shock | 15 Gs, 11-ms, half sine |
| Operating acoustic noise | 6.6 bels (at 25°C) (63.7 dB measured sound power) |
| Idling acoustic noise | 6.4 bels (at 25°C) (61.0 dB measured sound power) |
| Heat output | 1092 BTUs/hour |

### REGULATIONS—WORKGROUP
Meets or exceeds the following requirements:

| | |
|---|---|
| Safety | UL 1950, CSA C22.2-No. 950, TUV EN 60950 |
| Emission | FCC Part 15 B Class B, CISPR 22 Class B, VCCI Class 2 |
| Immunity | EMC Directive (89/336/EEC), EN50082-1 |
| Harmonics | EMC Directive (89/336/EEC), EN60555-2 |

### DIMENSIONS AND WEIGHT—WORKGROUP

| | |
|---|---|
| Height | 17.7 cm (7.0 in.) |
| Width | 53.3 cm (21.0 in.) |
| Depth | 44.7 cm (17.6 in.) |
| Weight (without drives) | 19.3 kg (42.5 lb.) |
| Weight (with drives) | 28.4 kg (62.5 lb.) |
| Power cord | 2 m (6.5 ft.) |

### ENVIRONMENT—DATA CENTER

| | |
|---|---|
| AC power | 200-240 VAC, 47-63 Hz, 24 A |
| Input power | 4500 W |
| Operating | 5°C to 35°C (41°F to 95°F) |
| | 20% to 80% relative humidity, noncondensing |
| Nonoperating | −20°C to 60°C (−4°F to 140°F) |
| | 93% relative humidity, noncondensing |
| Operating acoustic noise | 7.3 bels (at 25°C) |
| Heat output | 15,400 BTUs/hour |

### REGULATIONS—DATA CENTER
Meets or exceeds the following regulations:

| | |
|---|---|
| Safety | UL 1950, CSA C22.2-No. 950, TUV EN 60950 |

Complies with the following when installed in a Sun data center cabinet:

| | |
|---|---|
| Emission | FCC Part 15 B Class B, CISPR 22 Class B, VCCI Class 2 |
| Immunity | EMC Directive (89/336/EEC), EN55082-1 |
| Harmonics | EMC Directive (89/336/EEC), EN60555-2 |

### DIMENSIONS AND WEIGHT—DATA CENTER

| | |
|---|---|
| Height | 187 cm (73.5 in.) |
| Width | 61 cm (24 in.) |
| Depth | 93 cm (36.5 in.) |
| Weight | 432 kg (950 lb.) |
| Power cord | 4.6 m (15 ft.) |

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