SD2000

Key Benefits

- Multiplies the throughput of business-critical transactions up to 10x
- Reduces total cost of transaction-intensive applications
- Combines memory-based access speed with the persistence of disk
- Supports Fibre Channel configurations for servers, clusters and SANs

Solid Data SD2000

The SD2000 is the world's fastest data access solution for Fibre Channel connected servers, clusters and storage area network (SAN) environments. With the ability to transfer data at memory speeds, the SD2000 solid state disk (SSD) system boosts server performance up to 10 times in transaction-intensive applications, while enabling more efficient utilization of the customer's server and storage investments.

The SD2000 provides extremely fast, random-access storage for frequently accessed application data such as message queues, transaction logs and database indexes, enabling customers to multiply the throughput of mission-critical application servers. When deployed on a SAN, the SD2000 serves as non-volatile shared storage for the most transaction-intensive applications and as a repository for critical infrastructure data such as file-system metadata and virtual-storage address tables.

In addition to improvements in application throughput and total cost of ownership, the SD2000 system improves the reliability, scalability, and manageability of response-critical data. The system's advanced design provides persistent, non-volatile data retention and easy configuration with standard device drivers. Designed with internal high-bandwidth data paths and dual Fibre Channel connections with path failover, the SD2000 system supports direct-connect, arbitrated loop and switched fabric mode configurations with up to 17.2GB of high-performance data capacity per 1U enclosure. Scales up to 4 terabytes with additional SSDs.

Speed and Persistence

The SD2000 delivers data at extremely high data rates, with access time less than 10 microseconds. To do this, the SD2000 stores the data on a memory array. It also incorporates Solid Data's third-generation Zero Latency Transfer (ZLT) architecture, which executes data-handling processes in hardware, minimizing microprocessor overhead. The ZLT architecture delivers extremely fast response times for transaction, database and messaging applications. At the same time, the high-bandwidth data paths and dual Fibre Channel connections support resource sharing at high speeds in server clusters and SANs.

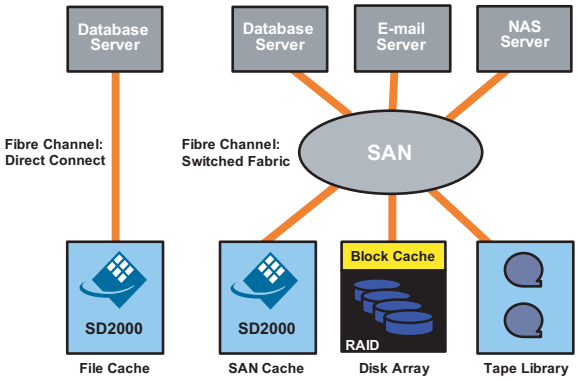
Along with its memory-based access speed, the SD2000 provides the persistence of disk storage by incorporating a built-in data retention system, which protects the data in the absence of line power. The SSD system includes an on-board UPS battery back-up system and an embedded disk drive for data recovery, as well as intelligent backup control logic.

Robust Data Protection

For the protection of business-critical data, the SD2000 incorporates multiple levels of data protection, including:

- Patented Data Retention System ™ includes on-board hard disk and automatic backup control logic. In the event of a power failure, batteries provide uninterrupted power to the array. After a prescribed time period, the system moves all data onto the internal disk for indefinite retention. When power is restored, the data is automatically transferred back to the memory array and accessible upon transfer completion.
- Memory array with patented on-the-fly error detection and correction.
- Integrated auto-ranging power supplies, batteries, and cooling fans for enterprise level system availability.
- Background diagnostics conducted periodically to verify operational status. The disk drive is also powered down during normal operation for energy savings and reduced operating temperatures.

SD2000 Fibre Channel Connection Examples



SolidData®

SD 2000

Powerful Remote Management

The SD2000 incorporates extensive monitoring and management features. An integrated system monitors component removals and insertions, status changes, voltages, fan speeds, enclosure temperature, memory error correction events and other conditions.

The remote monitoring functions support lights-out operation and continuous remote monitoring. A system integrator or operator can configure SNMP traps to send alerts when exception conditions are detected. This capability includes a Predictive Health Notification function that monitors potentially disruptive conditions and issues alerts before they become problems. In addition to SNMP, the SD2000 supports e-mail notifications as well as a password-protected web browser interface for anytime, anywhere viewing of status information.

The SD2000 also incorporates remote configuration management features that enable administrators to log in and change configuration settings using a remote management workstation or web browser.

Easy Installation and Operation

The SD2000 provides industry-standard Fibre Channel connections. No special device drives are required. Installation is fast and easy; the SSD can be implemented as part of a new platform deployment or to increase the transaction performance of an existing system. After connecting the SD2000 and verifying operation in a supported configuration, simply move the selected hot files onto the system and it is ready to go. There is no need to re-engineer applications or make extensive changes to business processes. If you're not sure which files to move, Solid Data can provide software tools and application expertise to assist in targeting the hot files to place onto the SD2000 for optimal overall system performance.

Compare Solid State Disk to...

RAM	CACHE	DISK
* Non-volatile	* File vs Block	* Zero Latency
* Shareable	* Non-volatile	* Zero Seek Time
* Scalable	* Scalable	* Access 1000x Faster

Specifications	SD2000
Capacity (GB)	
Minimum	2.1
Maximum	17.2
Host Interface Options	
Fibre Channel ports	2
Suported Fibre Channel Configurations	
Switched Fabric (FC-SW)	Yes
Arbitrated Loop (FC-AL)	Yes
Direct Connect	Yes
Performance	
Access Time (microseconds)	Less than 10
Maximum IOPs per port[1]	66,000
Seek Time	0
Latency	0
Patented Direct Addressing™	Yes
Data Protection	
Patented Data Retention System™	
On-Board UPS	Yes
Automatic Backup Control	Yes
Backup/Restore Rate (GB/minute)	1.75
Auto-ranging Power Supplies	Yes
Patented Error Detection/Correction (bytes corrected per 512 byte sector)	64
Remote Management	
Password Protection	Yes
Automatic Predictive Health Notification™	Yes
Monitored Parameters	94
Management Alerts (SNMP/Email/Ethernet)	56
Maximum IP Alert Addresses	10
Web Browser and Serial Based Management	Yes
Power Requirements (AC)	
Voltage (VAC, autoranging)	90-132/180-264
Frequency (Hz, single phase)	50/60
Maximum Power Consumption (Watts)	110
Power Connectors	NEMA 5-15
LUN Management	
LUNs Supported	64
LUN Mapping	Yes
LUN Masking	Yes
Physical	
Width (in/mm)	19.0/482.6
Height	
Rack Units	1U
Measure (in/mm)	1.75/44.4
Max Depth (in/mm)	27.7/703.6
Max Weight (lbs/kg)	35/15.9
Environmental	
Ambient Temperature (F/C)	32-104/0-40
Relative Humidity (non-condensing)	0-90%
Altitude (feet/meters, above sea level)	
Operating	10,000/3,048
Non-operating	40,000/12,192
Regulatory Compliance	
UL, C-UL, FCC, VDE/TUV, VCCI	Yes

[1]Excludes server overheads

**For additional information,
visit Solid Data at www.soliddata.com
or email Solid Data at info@soliddata.com**

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