



FLEXLINE™

# FLX280

ENTERPRISE STORAGE SYSTEM

## Key benefits

### Unprecedented performance

Increase employee productivity and deliver better service to your customers with faster response times.

### Investment protection

Buy only what you need and expand your storage as you need to in the future. Or, migrate from smaller systems to an FLX280 easily and quickly.

### Simplified management

SANtricity® software suite provides non-disruptive, online storage management that can be performed from your IT shop floor or from remote locations.

### SAN-readiness

Fabric login support and multi-host heterogeneous support combine to help you realize the full potential of storage area networks. SANtricity® software suite enables you to share your FLX280 disk system as an effective SAN resource, while providing secure, dedicated online storage.

### Professional services and support

Maintain one-source accountability with evaluation, recommendations and support from StorageTek.

## Performance-based controller supports San Diego Supercomputer Center at SC2004

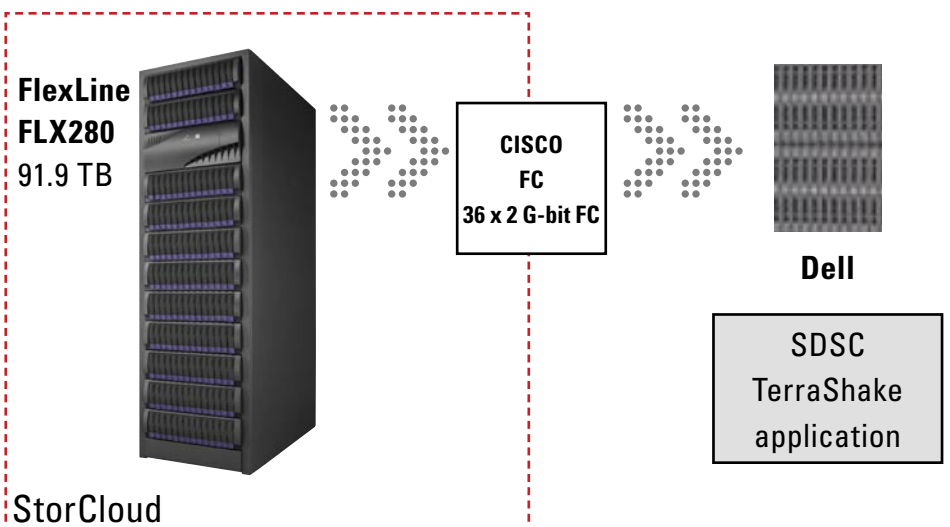
StorageTek will be supporting the San Diego Supercomputer Center's entry in the StorCloud 2004 computing competition by providing nine FLX280 enterprise storage systems. The FLX280 controller disk configuration is designed to maximize performance and capacity within the constrained footprint available in the StorCloud booth. It provides 91.9 terabytes of raw capacity, configured as 64.9 terabytes usable RAID 5 plus hot spares, with 36 Fibre Channel connections.

The SDSC entry is TeraShake, a Southern California Earthquake Center Community Modeling Environment (SCEC/CME) simulation. TeraShake models a large earthquake occurring on the southern San Andreas Fault in California. The simulation is based on the An-elastic Wave Propagation Model code, developed by Kim B. Olsen from San Diego State University, and enhanced during the TeraShake effort.

The full-scale simulation models a 3000 x 1500 x 400 mesh with 1.8 billion points run for 20,000 time steps. Each step can produce a 21.6 giga-byte snapshot containing 3-dimensional ground motion velocity vectors. A 10% sample from the 20,000 time steps, amounting to 43 tera-bytes of data, is saved for further study. Surface-motion data totaling 1 tera-byte, is be archived every step for synthetic seismogram engineering analysis.

This application is hosted on a multi-node Linux cluster located in the StorCloud booth using a standard Linux filesystem to access the StorageTek disk across one hundred seventeen RAID 5 4+1 LUN's. FlexLine FLX280 enterprise storage system

The FLX280 is an enterprise-class, open systems storage solution that satisfies the most demanding requirements for throughput and transaction processing applications. This is an ideal controller for high I/O applications, such as ERP, OLTP and general databases. The FLX280 storage system also excels in bandwidth-intensive applications such as video streaming, imaging and seismic processing.



The FLX280 storage system is a full, end-to-end 2-gigabit Fibre Channel storage solution that can support up to 16 arrays. Leveraging the power and flexibility of SANtricity® software suite for FlexLine™ 200 and 300 Series storage systems, the FLX280 can be configured in any combination of high-performance Fibre Channel or high-density ATA drives and is supported in all major Windows and UNIX environments.

### To learn more

To learn more about how the FLX280 enterprise storage system can help you in your storage environment, talk to your StorageTek representative or visit [www.storageitek.com](http://www.storageitek.com).

### StorCloud: a high-bandwidth storage area network initiative

A new initiative this year, StorCloud, has built a high-performance computing (HPC) storage capability to showcase HPC storage technologies (topologies, devices, interconnects). StorCloud's "storage-on-request" area network capability, comprised of state-of-the-art heterogeneous devices and technology, supports researchers and demonstrates high-bandwidth applications.

StorageTek is pleased that its FlexLine FLX280 storage system was chosen to power this SAN initiative.

## FlexLine™ FLX280 enterprise storage system specifications

### Performance

Maximum burst I/O rate	148,000 I/O/sec
Maximum sustained I/O rate (Fibre Channel)	53,200 I/O/sec
Maximum sustained I/O rate (SATA)	6,000 I/O/sec
Maximum sustained I/O rate (Blade)	12,800 I/O/sec
Maximum sustained throughput	795 MB/sec
Total cache size	2 GB

### Connectivity

Host interface	2 Gb/sec
Host connections	8 FC-AL direct attach or 4 FC-SW SAN attach
Drive interface	2 Gb/sec
Drive connections	4 Fibre Channel

### Capacity

Maximum number of drives	224 or 120 blades
Compatible arrays	Fibre Channel: FLA200, FLA300 SATA: FLC200 blade: FLC250
Drive capacity	Fibre Channel: 36 GB, 73 GB or 146 GB SATA: 250 GB blade: 1.25 TB
Maximum number of arrays	16 or 12 blade arrays

### Availability

Redundant components	Storage controllers, Fibre Channel drive loops, power supplies and cooling fans
Hot-swap components	Disk drives, storage controllers, power supplies, cooling fans and battery backup
High-availability features	Automatic drive failure detection and rebuild using global hot spare drives, cache battery backup
RAID levels supported	0, 1, 3, 5 and 1+0

### Compatibility

Supported operating systems	Windows Server 2003, Windows 2000, Solaris, HP-UX, IRIX, AIX, Linux, NetWare
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### Management

Storage management software	SANtricity 9.1 Storage Manager
Standard features	Drive intermix capability Online storage management Dynamic volume expansion Dynamic capacity expansion Dynamic drive configuration and migration
Premium features	SANshare Storage Partitioning (up to 64 partitions) SnapShot Copy Internal Volume Copy Remote Volume Mirror Storage Performance Analyzer

### Mechanical

Height	6.9 in (17.5 cm)
Depth	24.8 in (63.0 cm)
Width	19.0 in (48.3 cm)
Unit height	4u*
Weight	89.0 lb (40.4 kg)

### Environmental

Temperature	+50° to +104° F (+10° to +40° C)
Heat dissipation	2,904 Btu/hr (based on 1.12 kVA or 851 W power consumption)

### Power

International	230 V, 10 A, power connection as required
U.S. and Japan	115 V, 15 A, NEMA 5–15

### Regulatory compliance

Electromagnetic compliance	FCC (47 CFR 15, Subpart B) Class A CE (EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3) VCCI (CISPR 22) Class A Canada (ICES-003) Class A
Safety	UL 1950 CAN/CSA 22.2 No. 950 EN 60950

\*Rack space is measured in height and expressed as a "u". One u equals 1.75 in (4.45 cm) in height



### ABOUT STORAGEITEK®

Storage Technology Corporation (NYSE: STK) is a \$2 billion global company that enables businesses, through its information lifecycle management strategy, to align the cost of storage with the value of information. The company's innovative storage solutions manage the complexity and growth of information, lower costs, improve efficiency and protect investments. For more information, visit [www.storageitek.com](http://www.storageitek.com), or call 1.800.275.4785 or 01.303.673.2800.

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