



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

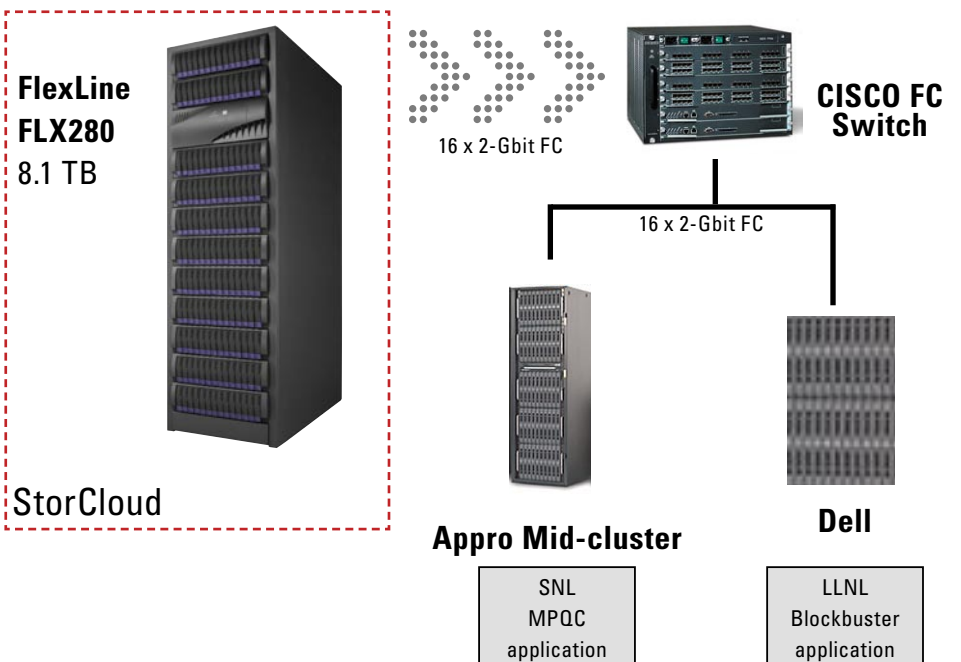
Fabric login support and multi-host heterogeneous support combine to help you realize the full potential of storage area networks. SANtricity® software suite enables you to share your FLX280 disk system as an effective SAN resource, while providing secure, dedicated online storage.

Performance-based controller supports Sandia National Lab and Lawrence Livermore National Lab at SC2004

StorageTek will be supporting the entries for Sandia National Lab and Lawrence Livermore National Lab in the StorCloud 2004 computing competition by providing nine FLX280 enterprise storage systems. The FLX280 controller disk configuration is designed to support the mix of throughput intensive and I/O intensive phases of the two applications. The disk configuration provides 8.1 terabytes of raw capacity configured as 3.3 terabytes usable RAID 0/1 plus hot spares, with 16 Fibre Channel connections. Dedicated disk resources are allocated to each application. This permits individual tuning and LUN structures to best match the disparate file systems used.

The Sandia entry is an improved version of the Massively Parallel Quantum Chemistry (MPQC) application already known in the bio-chemistry research community. It is used to compute the energy, geometry, and other properties of molecules, in whole and in part, at a level of detail and accuracy not previously achieved. MPQC is thus a useful tool in the study of metabolic and signaling pathways in the cell. This application is hosted on a multi-node Linux cluster located in the ASC booth using the GPFS filesystem to access the StorageTek disk across eight RAID 1/0 2+2 LUN's.

The Livermore entry is the Blockbuster application. Blockbuster is a scalable animation display code that relies on the combined power of a cluster of visualization nodes operating in parallel to perform video rendering of scientific datasets in parallel.



Blockbuster enables the interactive display of data visualization and other video as part of a scientific presentation at various frame rates, resolutions, and positioning on tiled, “power-wall” display grids.

This application is hosted on a multi-node Linux cluster located in the ASC booth using the Terrascale filesystem to access the StorageTek disk across sixteen RAID 1/0 2+2 LUN’s.

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.

StorCloud: a high-bandwidth storage area network initiative

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
-----------------------------	------------------------------------------------------------------------------

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 STORAGE TEK®

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, or call 1.800.275.4785 or 01.303.673.2800.

WORLD HEADQUARTERS

Storage Technology Corporation
One StorageTek Drive
Louisville, Colorado 80028 USA
1.800.877.9220 or 01.303.673.5151

