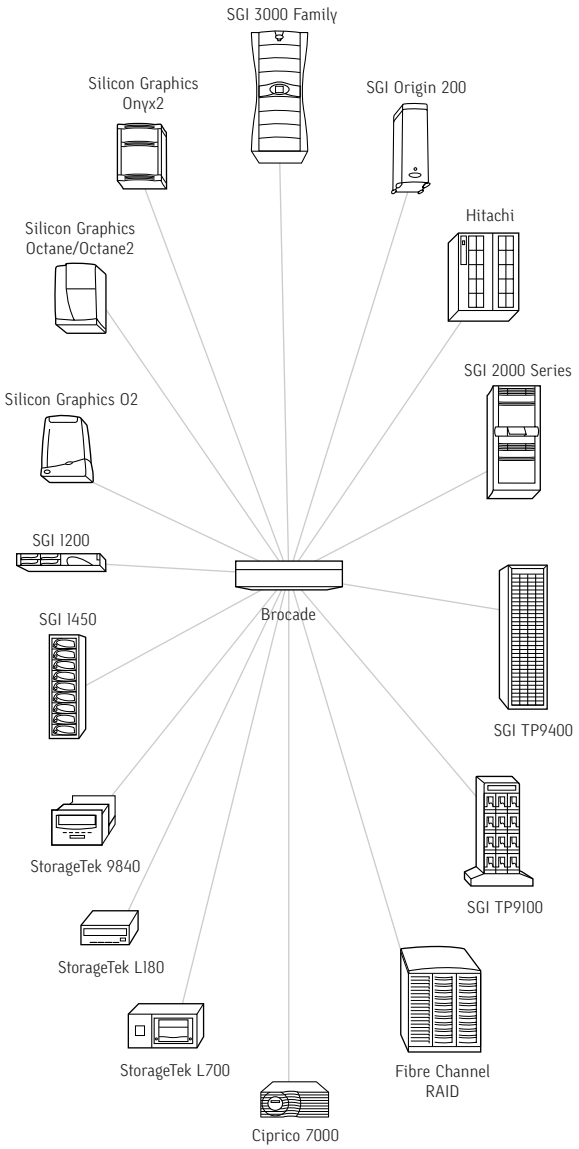
Datasheet

SGI™ Storage Area Network (SAN)

For IRIX®, Linux®, Windows® 2000, and Windows NT® Systems

Features

- Storage resource consolidation maximizes data access and usability
- Centralized management reduces total cost of ownership
- Fibre Channel infrastructure removes storage traffic on the LAN



Highly Scalable and Cost-Efficient SAN Solution

The SGI Storage Area Network solution delivers exceptional application performance and data availability in an industry-leading infrastructure. The SGI approach to SANs provides storage consolidation, centralized storage management, connectivity, and data sharing while significantly lowering the total cost of ownership. The full-featured Fibre Channel fabric topology is exceptionally scalable, easily expanding to meet your increasing data storage and management requirements.

Centralize Your Data and Manage It More Efficiently

In a SAN, storage devices are connected to servers via a dedicated Fibre Channel network. This network creates a centralized storage pool, available to all servers, that can be monitored and managed more efficiently than data accessed via local area networks (LANs). This storage resource consolidation dramatically improves your ability to access and use your data, regardless of its location.

SGI SANs enhance your storage control capabilities using management tools for fabric zoning, storage LUN partitioning, and component monitoring and configuration. In the storage environment, the SAN supports applications such as centralized backup and restore, data archiving and retrieval, data replication, node failover, logical volume mirroring, and hierarchical storage management.

Superior Performance with Complete Reliability

The breakthrough performance afforded by high bandwidth is achieved through the separation of LAN and SAN traffic and by the performance increase associated with the Fibre Channel media and low protocol overhead. The SGI Fibre Channel switch fabric supports up to 64 fabric ports, with an aggregate bandwidth up to 6400MB per second. Data sharing with other SAN components extends the outstanding full-fiber performance throughout the complex storage network environment.

Reliability of the SAN is of the utmost importance, ensuring nonstop application performance and data availability. The SGI SAN can be configured to provide complete redundancy, including alternate hardware pathing, component hot swappability, and CXFS™, IRIS FailSafe™, and Linux FailSafe™ cascading node failover.

Realize the Potential of Modular Scalability

The SGI SAN delivers the most robust storage available, affording independent scaling of your specific storage network environment. A single SAN fabric with two compute nodes and one storage node can be expanded to any combination of up to 64 compute and 64 storage nodes, all with full Fibre Channel performance. Compute and storage units may be added, deleted, or reassigned without rewiring or moving equipment. The fabric dynamically discovers the added units without operator interaction.

SGI Storage Area Network
Technical Specifications

Products

Servers/Systems
- SGI™ 3000 family
- SGI™ 2000 series
- SGI™ 1450
- SGI™ 1200
- SGI™ Origin™ 200
- Silicon Graphics® Onyx2®

Workstations
- Silicon Graphics® Octane®
- Silicon Graphics® Octane2™
- Silicon Graphics® O2®

Fabric Products
- SGI Fibre Channel switch
- Fibre Channel HUB

RAID Products
- SGI™ TP9100
- SGI™ TP9400
- Hitachi
- FC RAID
- Ciprico 7000

Tape Products
- StorageTek 9840
- StorageTek L180
- StorageTek L700

Software Products
- Linux FailSafe
- CXFS
- XVM
- IRIS FailSafe
- Netbackup
- Networker
- Software products for:
  - HSM
  - Fabric management
  - RAID management
  - Tape management

System Architecture
- FC-AL Rev. 4.5
- FC-AL Rev. 7.0 (draft)
- FC-FLA Rev. 2.7
- FC-GS-2 Rev. 5.3 (draft)
- FC-PG Rev. 3.5
- FC-PH Rev. 4.3
- FC-PH-2 Rev. 7.4
- FC-PH-3 Rev. 9.4
- FC-PLDA Rev. 2
- FC-SW Rev. 3.3
- FC-VI Rev. 1.0 (draft)

Host Bus Adapter Support
- PCI-FC-IP-OPT
- PCI-FC-IP-OPT-A

Fibre Channel Ports
- FC-Switch-8: 8 universal ports
- FC-Switch-16: 16 universal ports

Scalability
- Architecture—239 switches maximum

Certified Maximum per Fabric
- 12 switches

Performance
- Full line switching 200MB/sec per port, full duplex

Switch Bandwidth
- FC-Switch-8: 8GB/sec end-to-end
- FC-Switch-16: 16GB/sec nonblocking

Class of Services
- Class 2
- Class 3
- Class F (interswitch frames)

Port Types
- F_Port
- FL_Port
- E_Port
- Self-discovery based on connection type

Media Types
- Hot-pluggable, industry-standard GBICs
- Short-wave laser, up to 500 m
- Long-wave laser, up to 10 km
- Passive-copper, up to 12 m

Fabric Services
- Simple name server
- Registered state change notification
- Zoning

Management
- SNMP
- Telnet
- Web tools

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