SGI 400 Virtual Tape Library

Fast, Reliable Backup and Archive Solution

More Reliable Data Protection and Archiving

The SGI 400 Virtual Tape Library (VTL) is a robust data protection and archive solution that provides more reliable backups and efficient access than automated tape libraries. The SGI 400 VTL delivers up to 23TB/hour of throughput, which is ideal for users with massive amounts of data who need to meet mounting service level agreements.

The MAID Advantages

The SGI 400 VTL is based on the SGI Enterprise MAID (Massive Array of Idle Disks) platform, which is purpose-built to cost effectively address the long-term data storage requirements of persistent data.

With SGI Enterprise MAID, only those disks that contain requested data by a specific application are powered on, and then are powered off when they are not needed. This makes SGI MAID storage extremely energy efficient, significantly reducing the power consumption of the storage system by up to 85%. Economical design allows the 2.7PB of raw capacity to fit into just 10ft.2 of floor space.

Patented Disk Aerobics® Software
Provides ongoing and continuous data verification by periodically exercising all disks and detecting potential drive failures before they occur.

Patented Power Managed RAID® Software
Provides full RAID 5 data protection and helps lower energy costs as a maximum of 25% or 50% of drives are powered on at any one time and are powered down when not in use.

Secure Data Movement
Data encryption for replication and tape export protects data in flight from unauthorized access.

Flexible Existence with Tape
The SGI 400 VTL seamlessly coexists with physical tape. Tape export or the backup application's tape copy function enables data to be moved to physical tape if desired. This is ideal for environments where recent data is stored on the VTL for faster backups and restores and deeper archive is moved to more economical tape.

Seamless Integration into Existing Environments
The SGI 400 VTL integrates seamlessly with existing backup/restore and archive software, so there is no need to change or disrupt storage infrastructure. The SGI 400 VTL enables disks to emulate leading tape libraries, delivering the speed, reliability, and availability benefits of disk-based backup while allowing users to continue using existing tape backup software and procedures.

The SGI 400 VTL is compatible with leading backup software providers such as HP, IBM, Legato, Oracle, Symantec and more. Archive applications from a number of providers that write to physical tape enable users to benefit from replacing or complimenting physical tape, while increasing availability and performance.

Included Features

- COPAN Management Console
- Power Managed RAID® Software
- Disc Aerobics® Software
- Virtual Tape Library Interface
- Compression
- Tape Export

SGI 400 VTL - Base Configuration

The SGI 400 VTL base configuration offers all the benefits of Enterprise MAID, Disk Aerobics software, and Power Managed RAID for simplified management and advanced data protection of persistent data. Up to 2.7PB of raw capacity can be accessed from a single VTL application server.

SGI 400 VTL – Enhanced Configuration Options

The SGI 400 VTL can add additional application servers, up to a maximum of four to increase throughput, connectivity and virtual tape cartridge quantity. Optional active-active failover can be deployed to enable data access to continue in the event of a VTL application server failure.

SGI 400 VTL Optional Features

- Encryption for Tape Export or Replication
- Electronic Data Replication
- ACSLS Export Support
- NDMP Support
- Tape Caching
- Active-active failover

Advantages

Superior Performance and Faster, More Reliable Backups and Restores
Fast and more reliable backups and faster restores than automated tape libraries. Your data is better protected than with tape, with complete online access to all your critical data.

Seamless Integration into Existing Backup Environments
Compatible with all leading software providers such as HP, IBM, Legato, Oracle, Symantec and more.

Breakthrough Scale and Economics
Unmatched capacities within a single chassis at costs dramatically lower than transactional storage.

Power and Footprint Savings
Patented Enterprise MAID saves up to 85% on power and cooling and offers up to 2.7PB of raw capacity.

Investment Protection
Operates within existing backup and archive infrastructure, extending the life of backup servers and tape hardware.

Multiple Personality Flexibility
The SGI 400 VTL can coexist with the SGI 400M Enterprise MAID. This flexibility enables customers to deploy multiple solutions within a single cabinet, saving footprint while meeting shifting business objectives.

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SGI 400 Virtual Tape Library Configuration Specifications

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Cofigurations	
Raw Storage Capacity - Standar Config.	• 336TB to 2688TB per cabinet (upgrade in 336TB increments)
Useable Capacity - Standard Config.	• 234TB to 18772TB
Number of Storage Shelves	• 1–8
Connectivity	• Up to four 8-Gbps Fiber Channel ports per server
Number of Emulated Tape Libraries	• Up to 128 per server (512 maximum)
Number of Emulated Tape Drives	• 1 to 112 Standard (1-56 with 25% power enabled)
Max Number Virtual Tape Cartridges	• Up to 65,536 per server (262,144 maximum)
Performance	
Maximum Aggregate Throughput	• Up to 23TB per hour
Reliability	
RAID	• RAID 5 with POWER MANAGED RAID® Software
Alert Messaging	• SMTP, SNMP
Power Supplies	• N+N Redundancy, Hot Swappable
Dual Power	• Redundant
Fans	• Redundant, Hot Swappable
Specifications	
Max Spinning Drives at Full Operation	• 25% or 50% (configurable per shelf)
Spare Drives	• 5 per shelf for a maximum of 40
Disk Drive	• 3TB SAS
Dimensions	• 30" (76.2 cm) W x 48" (121.9 cm) D x 87" (221 cm) H
Clearances	• Front -40" (101.6 cm), Rear-36" (91.4 cm), Side-0"
Weight	• Maximum 3,193 lbs. (1,447 Kg)
Power Consumption @ Standby (min/max)	• 666/2,560 watts
Power Consumption @ 25% power (min/max)	• 1,060/4,641 watts
Power Consumption @ 50% power (min/max)	• 1,351/7,376 watts
Heat Dissipation @ Standby (min/max)	• 2,274/8,737 BTU/hr
Heat Dissipation @ 25% power (min/max)	• 3,616/15,843 BTU/hr
Heat Dissipation @ 50% power (min/max)	• 4,611/25,168 BTU/hr
AC Power - Dual Cord	• 200-240 VAC, 30AMP, 3-phase
Operating Temperature	• 50-95 °F (10–35 °C)
Regulatory Approvals	• cULus, FCC class A
Standard Product Warranty	• 3 year
System Management	
COPAN Management Console	• GUI (local or remote), CLI

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Supported Archive Applications	
ADIC®	• AMASS
Filetek	• Storehouse®
Microsoft®	• Remove Storage Manager
SGI®	• InfiniteStorage Data Migration Facility

Supported Backup Applications	
Atempo	• Time Navigator™
Bakbone®	• Netvault™
Commvault®	• Galaxy
Computer Associates	• BrightStor® ARCServer® Backup
EMC	• Networker, Retrospect
HP	• Data Protector, OpenView
IBM	• Tivoli Storage Manager
Oracle®	• Secure Backup
Symantec	• Veritas NetBackup™, Backup Exec™

Emulated Tape Libraries	
Exabyte	• ESL9000 Series
FalconStor	• VTL
IBM	• TS33500L22 (3584L22), TS33500L32 (3584L32), 3590 E11, 3590 B11, T3583-TL, TS3100 (3573-TL), TS3200 (3573-TL), TS3310E9U (3576-MTL), TS33105B (35676-MTL)
OVERLAND	• NEO Series 2000, 4100, 8000
QUALSTAR	• TLS-4222i
Quantum ADC	• Scalar 100, 1000, 10K, i500, i2000
Quantum ADL	• M1500, M1800, P1000, P3000, P4000, P7000, 7100, PX510, PX720
SONY	• CSM-2000
SPECTRA	• GATOR 12000, GATOR 20000, GATOR 64000, T50, T50e, T120, T200, T380, T680, T950
STK	• L20, L40, L80, L180, L700, 9710, 9714, 9730, SL50
HP	• EML E-series, ESL9000 series, MSL2024, MSL4048, MSL5052, MSL8096

Supported Virtual Drives	
HP	• Ultrium 1-SCSI ,Ultrium 2-SCSI, Ultrium 3-SCSI, ULTRIUM 4-SCSI, ULTRIUM 5-SCSI
IBM	• 3590E11, 3590B11, 3590E1A, 3590B1A, 3592J1A, Ultrium-TD1, Ultrium-TD2, Ultrium-TD3, Ultrium-TD4, Ultrium-TD5, ULT3580-TD1, ULT3580-TD2, ULT3580-TD3, ULT3580-TD4, ULT3580-TD5, TS1120, TS1130
Quantum	• DLT7000, DLT8000, DLT-S4, SuperDLT1, SDLT320, SDLT600
Seagate	• ULTRIUM0642-XXX
SONY	• SDX-300C, SDX-500C, SDX-700C, SDZ-100, SDZ-130
STK	• 9840, 9840B, 9840C, 9940A, 9940B, 9940C, T10000A, T10000B, T10000C

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