

# MIDRANGE SAIT LIBRARY

GrowthDR™





GST's Midrange SAIT Library is part of our GrowthDR™ family. This mid-sized library uses SAIT-1 tape technology to provide 22TB native (57TB compressed) of automated unattended backup. It spans the gap from GST's Single and Dual Tape Subsystems on one end to our larger enterprise-wide libraries on the other end. A variety of unique capabilities not found in other tape backup systems include: Virtual Library Partitioning, Mirrored Backup and Off-line Copy.

The Midrange SAIT Library holds up to eleven 4-cartridge magazines for a total capacity of 44 cartridges. Magazines facilitate organizing tapes for off-site storage. Magazines can be used in a 7-day or 10-day tape rotation procedure, allowing a full week or more of unattended backup. Each Single-drive model of the Midrange SAIT Library is field-upgradeable to two drives and can be configured with Mirrored Backup capability for improved disaster recovery or with Virtual Library Partitioning for backup consolidation.

## THE BIG PICTURE

- One or two drives with 44 cartridge slots.
- Capacity: 22TB native (57TB compressed).
- Speed: 216GB/hour native (562GB/hour compressed).
- Mirrored Backup: supports disaster recovery.
- Backup Consolidation: supports two servers.
- Off-line copy with no penalty.
- Field upgrade from one to two drives.
- Supports SAIT-1; roadmap to SAIT-2, SAIT-3, SAIT-4.
- SAIT range: single drive to enterprise-wide libraries.
- Supports LVD, HVD, and FC connections.
- WORM enabled.

## MODEL OVERVIEW

GST's Midrange SAIT Library is available in a wide variety of desktop and rackmount models. Library configurations for four different functions are available in three types of interfaces.

Listed below are the four different functional configurations:

**Single-Drive Library.** Automated unattended backup for one server. One drive; 44 cartridges.

**Two-Drive Library.** Designed for one server; permits separate backup jobs to run simultaneously on each drive. Two drives; 44 cartridges allocated as needed.

**Mirrored Library.** Designed for one server; produces identical backup sets simultaneously; supports Disaster Recovery. Two drives; 44 cartridges (22 per drive).

**Virtual Library.** Designed for backing up two servers. Two drives; 44 cartridges allocated as needed.

Listed below are the three types of interfaces:

**Low Voltage Differential (LVD).** Maximum SCSI negotiation of 160MB/s; the total server-to-storage peripheral connectivity is 12 meters.

**High Voltage Differential (HVD).** Maximum SCSI negotiation of 40MB/s; the total server-to-storage peripheral connectivity is 25 meters.

**Fibre Channel (FC).** 2Gbit fibre interface.

## SAIT TECHNOLOGY

Native cartridge capacities are 500GB (1.3TB compressed) with speeds of 108GB/hour (281GB/hour compressed). A 4-generation roadmap provides for a native capacity of 4TB per cartridge (10.4TB compressed) and a transfer rate of up to 864GB/hour (2.25TB/hour compressed).

This new SAIT tape technology platform delivers high capacity and high performance using a half-inch, single-reel tape and a 5.25-inch full-height mechanism design, dramatically improving the value proposition between conventional tape roadmaps and future hard disk drive capacity trends. As a new class of tape solution, SAIT technology leapfrogs conventional linear solutions, offering significant advantages in capacity, performance, reliability, and scalability.



## KEY BENEFITS

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**Improved DR** – GST's Mirrored Backup function produces simultaneous sets of identical backup cartridges with no performance degradation and no software overhead; this provides off-site storage of one set to facilitate disaster recovery and a second set kept on-site for rapid restore.

**Backup Consolidation** – Backups can be consolidated with GST's Virtual Library Partitioning that partitions a multiple-drive library to back up two different hosts or LPARs within a single tape library.

**WORM Enabled** – SAIT-1 drives are available with Write Once Read Many (WORM) technology. WORM provides tamper-proof data protection with non-rewriteable and non-erasable data storage.

**Simplified Weekly Backups** – A rotating carousel holds eleven magazines with up to four cartridges per magazine, providing unattended SAIT-1 backup capacities of 22TB native (57TB compressed); fully automates backups for an entire week, to the point each week when the magazines are removed for safe storage.

**Added Tape Functions** – Off-line Copy/Verify is available with no processor penalty.

**High Transfer Rates** – SAIT-1 native transfer rates up to 216GB/hour on Virtual Library models are increased to 562GB/hour with compression reducing time required for backups.

**Fault-tolerant Backup and Restore** – In the event of a drive failure within a two-drive module, the second drive will continue to operate, ensuring the backup is completed successfully.

**Hardware Investment Protection** – Highly scalable libraries feature multiple models that permit easy upgrades from one-drive to two-drive libraries or adding Mirrored Backup or Virtual Library Partitioning.

## KEY FEATURES

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**Virtual Library Partitioning** – Cartridge slots can be assigned to a particular drive so the Midrange SAIT Library is divided into two partitions. Each partition can be assigned to a host server or LPAR; permits backup consolidation of two servers/partitions using one GST library.

**Compliance Ready** – WORM technology supports compliance with new government data storage regulations that apply to the tamperproof safeguarding of data.

**Variable I/O Port** – The VIOP is a separate tape I/O slot for importing and exporting individual tape cartridges and magazines under application control.

**Inventory Sentry** – Offline time is minimized with Inventory Sentry ensuring that cartridges or magazines have been inserted or removed when the I/O Door is opened.

**Barcode Selective Restore** – Barcode reader permits cartridge scanning and supports random access for selective restore from specified cartridges.

**Secure Cartridge Removal** – Host-controlled lockable I/O door prevents unauthorized inserting and removing of cartridges or magazines.

**Reliability Features** – Brushless DC motors turn lead screw-driven mechanisms; closed-loop servo controls all motions to provide absolute position accuracy in robotics.

**Field-Replaceable Unit (FRU) Design** – Many Midrange SAIT Library components are packaged in easily-installed FRUs requiring no wiring; Quick Swap drives, power supplies, controllers and robotics are easily removed/installed simplifying field servicing.

**Small Footprint** – Space-efficient size and light weight provides the best rackmount density for libraries available. Size: 12" h x 17" w x 32" d; weight: 150 lbs.

**Service and Support** – A variety of support programs provide installation and onsite service; includes GST's Accelerated Ship Program (GASP) to get replacement units on the scene rapidly.

**Warranty** – Purchase price includes a built-in manufacturer's warranty of three years.

# MIDRANGE SAIT LIBRARY



SPECIFICATIONS	ONE DRIVE	TWO DRIVE	MIRRORED	VIRTUAL
Capacity				
Native	22 TB	22 TB	11 TB	up to 22 TB
Compressed <sup>1</sup>	57 TB	57 TB	29 TB	up to 57 TB
Sustained Transfer Rate - MB/s				
Native	30 MB/s	30 MB/s	30 MB/s	60 MB/s
Compressed <sup>1</sup>	78 MB/s	78 MB/s	78 MB/s	156 MB/s
Sustained Transfer Rate - GB/hr				
Native	108 GB/hr	108 GB/hr	108 GB/hr	216 GB/hr
Compressed <sup>1</sup>	281 GB/hr	281 GB/hr	281 GB/hr	562 GB/hr
Drives and Media				
Drive Type	SAIT-1	SAIT-1	SAIT-1	SAIT-1
Media	SAIT1-500	SAIT1-500	SAIT1-500	SAIT1-500
Library Configuration				
Number of Drives	1	2	2	2
Number of Cartridges	44	44	44	44
Magazines per Library	4	4	4	4
Slots per Magazine	11	11	11	11
Mail Slots	up to 4	up to 4	up to 4	up to 4
Server and Library Partitions				
Server Attachment	1	1	1	2
Library Partitions	1	1	1	2
Library Specifications				
Average Exchange Time	16 seconds	16 seconds	16 seconds	16 seconds
Time to Scan Barcodes	48 seconds	48 seconds	48 seconds	48 seconds
Physical Specs, Library Only				
Dimensions (HxWxD), Desk	8.75" x 17" x 36"	8.75" x 17" x 36"	8.75" x 17" x 36"	8.75" x 17" x 36"
Weight, Desk	150 lbs	150 lbs	150 lbs	150 lbs
Dimensions (HxWxDxU), Rack	8.75" x 17" x 36" x 5U	8.75" x 17" x 36" x 5U	8.75" x 17" x 36" x 5U	8.75" x 17" x 36" x 5U
Weight (unpopulated), Rack	150 lbs	150 lbs	150 lbs	150 lbs
Warranty	3 Years	3 Years	3 Years	3 Years

1. Compressed Capacity & Transfer Rate Assumes 2.6:1 Ratio.



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GST, Inc. engineers, manufactures, markets and sells a full line of innovative storage backup and restore products to meet today's need for high-performance, fail-safe reliability and cost-effective data storage. Products include single and dual tape subsystems, autoloaders, midrange tape libraries and modular enterprise-wide libraries. Complete information about the company, its products and support can be found at: [www.gstinc.com](http://www.gstinc.com)