

QUALSTAR SAIT TAPE LIBRARY SYSTEM

AUTOMATED TAPE LIBRARIES FEATURING SAIT TECHNOLOGY



The TLS-5000 Series is the first family of automated tape libraries to implement the power of Sony's new SAIT™ (Super AIT) tape drive technology, creating ultra-dense enterprise class backup and near online data storage solutions. The SAIT-1 tape drive combines the best features of Sony's widely used AIT recording technology with the increased media area afforded by the 1/2-inch tape format. In Qualstar's advanced robotic design, SAIT yields industry-leading capacity, storage density, performance and reliability.

SEAMLESS, TRANSPARENT INTEGRATION

Concurrent data transfer across up to eight SAIT drives provides the high data rates necessary to backup large networks. Using our SANsmart technology and multiple SCSI busses increases data throughput to meet ever narrowing backup windows. The TLS-5000 family is supported by leading application developers. Backup and storage management programs provide broad application and easy integration at very low cost per terabyte.

THE RIGHT SYSTEM FOR YOU NOW...

Combining our *Simply Reliable* design with SAIT-1 tape drives yields unbeatable performance and value. Our TLS-5000 SAIT Tape Library family comprises four models, spanning capacities to over 340 terabytes using typical data compression. Individual models house up to eight tape drives, delivering data transfer rates exceeding 2.2 terabytes per hour and storage densities approaching 45 terabytes per square foot in the largest model.

...AND THE EXPANDABLE SYSTEM FOR YOUR FUTURE

Field upgrade kits are available that double the number of tapes for two models in the family, and additional drives are easily installed to increase



throughput. Tape drives are housed in plug-in canisters containing dedicated cooling fans to enhance reliability. Drives are hot-pluggable and can be user-installed in less than one minute, without opening the library. Capacity expansion kits take less than an hour to install.

RELIABLE, INTELLIGENT ROBOTICS

Our unique robotic mechanism features leadscrew-based robotics using brushless motors and closed-loop servo control systems to provide precise positioning and flawless media handling for years of dependable operation. All electrical and mechanical adjustments have been completely eliminated by sophisticated, adaptive "smart" logic design. Filtered positive air pressure within each unit eliminates airborne contamination for extended tape and head life.

POWERFUL USER INTERFACE

An intuitive menu-driven control system provides easy-to-use installation, configuration and operational information via the large LCD panel. Critical operating messages are displayed, and an audible alarm signals conditions requiring immediate action. Q-Link, our web browser-based remote library manager, is built in on all models. Q-Link allows any TLS-5000 Series Tape Library to be configured, monitored and managed from anywhere in the world. Using Q-Link, companies can deploy enterprise class

data protection without increasing staff or degrading data security. Even firmware updates can be installed remotely.

ADVANCED CARTRIDGE MANAGEMENT AND SECURITY

Barcode scanning enhances throughput and controls the media inventory. VIOP, variable I/O port, a Qualstar-unique feature, allows users to determine how many slots to commit to importing and exporting tapes, building in flexibility and control to media operations. Our exclusive Inventory Sentry senses whether the tapes or magazines have actually been moved when the door is opened. If they haven't, operation is resumed without causing a time consuming reinventory.

SANSMART AND LOGICAL LIBRARY

The SANsmart Fibre Channel Options support the latest SAN and serverless backup applications. Logical Library is built into all TLS-5000 models and allows up to four SCSI-connected servers to share a library, even if each server is running a separate application. Systems that you couldn't afford to upgrade can now be protected automatically.

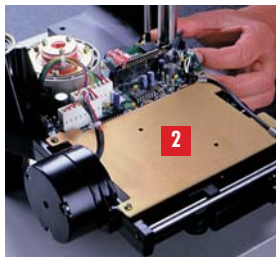
QUALSTAR: SIMPLY RELIABLE

Installation and support are provided by leading VARs and Integrators. Qualstar's *Simply Reliable* Tape Libraries are the preferred choice of IT professionals worldwide.

- **UP TO 45 TERABYTES PER SQUARE FOOT: INDUSTRY LEADING STORAGE DENSITY**
- **LOWEST COST-PER-TERABYTE FOR BACKUP, ARCHIVE, RICH MEDIA APPLICATIONS**
- **WORLDWIDE REMOTE MANAGEMENT VIA Q-LINK REDUCES COSTS**
- **SIMPLY RELIABLE PATENTED ROBOTIC DESIGN**

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Qualstar's unique robotic mechanism provides precise positioning and flawless media handling for years of dependable operation.

Leadscrew-based robotics using brushless motors insure reliability, high performance and maximum value.

ENGINEERED FOR RELIABILITY

- All brushless motors, no belts or pulleys **1**
- Self-calibrating, all-digital servo control system **2**
- Pre-wired tape drive mounting slots **3**
- Auto-aligning, no mechanical or electrical adjustments **4**
- Pressurized, filtered, forced air cooling with redundant fans
- Over 1,000,000 MEBF
- Automated tape drive cleaning

EFFICIENT MEDIA CONTROL

- Barcode scanning of data cartridges **5**
- Key locked door with a large window
- VIOP, variable I/O port for inserting and removing cartridges or magazines
- Inventory Sentry minimizes offline time

COMPREHENSIVE USER INTERFACE

- Q-Link browser-based remote library manager option
- Back-lighted 80 character display
- Control panel menu system for easy installation, configuration, operation and maintenance

VERSATILITY

- LVD/SE interface
- Multiple SCSI bus connections supported
- 2 Gb SANSmart Fibre Channel Options
- Logical Library dynamic partitioning (SCSI only)
- Simultaneous random and multi-sequential operating modes
- Selectable recycling and dual-bin sequential modes
- Rackmount kit options

THE RIGHT SYSTEM FOR YOU NOW...AND THE EXPANDABLE SYSTEM FOR YOUR FUTURE

4 MODELS TO CHOOSE FROM	5433	5466	58132	58264
Number of Drives	1 - 4	1 - 4	1 - 8	1 - 8
Number of Tapes	33	66	132	264
Native Capacity (TB)	SAIT-1 16.5	33	66	132
Compressed Capacity (TB)*	SAIT-1 42.9	85.8	171.6	343.2
Max. Native Data Rate (GB/hr)	SAIT-1 432	432	864	864
Max. Comp. Data Rate (TB/hr.)	SAIT-1 1.1	1.1	2.2	2.2
Avg. Exchange Time (seconds)	16	16	18	18
Time to Scan Barcodes (seconds)	41	91	92	108
Q-Link Remote Library Manager	Std.	Std.	Std.	Std.
Barcode Reader	Std.	Std.	Std.	Std.
I/O Port	Std.	Std.	Std.	Std.
Field Expansion Kit	Yes		Yes	
Height (in./cm)	45/114		62/157	
Width (in./cm)	19/48		37/94	
Depth (in./cm)	30/77		30/76	
Net Weight (lb./kg)	105/48		359/163	
Power Consumption (watts, avg.)	250		470	

* Using 2.6:1 compression ratio

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Qualstar Corporation does not warrant the MEBF to be representative of any particular unit installed for customer use. Failure rates are derived from a large database of test samples. The individual failure rate will vary from unit to unit.

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Qualstar products are covered by one or more of the following patents: 6,271,982 and 6,560,061. Other patents pending.

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