QUALSTAR LTO TAPE LIBRARY SYSTEM

AUTOMATED TAPE LIBRARIES FEATURING ULTRIUM LTO TECHNOLOGY

ULTRIUM LTO

The TLS-8000 Series family of automated tape libraries brings the power of LTO Ultrium™ technology to enterprise class backup and near online data storage. Developed jointly by Hewlett-Packard, IBM Corporation and Seagate Technology, LTO technology sets new standards in midrange tape storage solutions. Combined with our advanced robotic design, it yields capacity, performance and storage densities that lead the industry.

SEAMLESS, TRANSPARENT INTEGRATION
Concurrent data transfer combining up to 8 drives provides the high throughput necessary to backup large networks. Simultaneous reading and writing means procedures can be scheduled anytime of the day or night completely independent of any operator whatsoever and with no interference with production. SANSmart technology and multiple SCSI busses increase throughput to meet narrowing backup windows. The TLS-8000 family is supported by all leading data protection, archive and storage management applications for easy integration and very low cost per terabyte.

THE RIGHT SYSTEM FOR YOU NOW...
Offering unbeatable reliability, performance and value, our TLS-8000 LTO tape library family includes 6 models spanning capacities from 2.2 terabytes to over 420 terabytes. Individual models house two, four, or eight tape drives, delivering data transfer rates exceeding 4.6 terabytes per hour and storage densities over 27 terabytes per square foot.

...AND THE EXPANDABLE SYSTEM FOR YOUR FUTURE
Field upgrade kits are available for some models that double the number of tapes. Additional drives are easily installed to increase throughput. Tape drives are housed in plug-in canisters containing dedicated cooling fans to enhance reliability. Drives can be user-installed in less than one minute, and without opening the library. Capacity expansion kits take less than an hour to install.

RELIABLE, INTELLIGENT ROBOTICS
Our unique robotic mechanism is simply better, by design. Leadscrew-based robotics using brushless motors and closed-loop servo control systems 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 optional on all models. Q-Link allows any TLS-8000 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, a unique variable I/O port design, allows users to determine how many slots to commit to importing and exporting tapes. 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. The LTO 2 Direct Fibre Attach tape drives are available in all models. Tape drives can now be connected directly to a FC switch port for maximum data throughput.

Logical Library is built into all TLS-8000 SCSI 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.

- **SIMPLY RELIABLE ROBOTIC DESIGN FOR EXCEPTIONALLY LONG LIFE**

- **WORLDWIDE REMOTE MANAGEMENT VIA Q-LINK REDUCES COSTS**

- **EASY UPGRADE TO THE LATEST LTO DRIVE TECHNOLOGY**

- **FILTERED, PRESSURIZED FORCED AIR COOLING FOR LONGER MEDIA LIFE**

- **VARIABLE I/O PORT FOR FAST BULK MEDIA EXCHANGE**

QUALSTAR®

SIMPLY RELIABLE

QUALSTAR LTO TAPE LIBRARY SYSTEM

AUTOMATED TAPE LIBRARIES FEATURING ULTRIUM LTO TECHNOLOGY

ULTRIUM LTO

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 for easy field upgrades **3**
- Auto-aligning, no mechanical or electrical adjustments **4**
- Pressurized, filtered, forced air cooling with redundant fans
- Over 2,000,000 MEBF

EFFICIENT MEDIA CONTROL
- Barcode scanning of data cartridges **5**
- All tapes are housed in convenient removable magazines
- 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
- Direct Fibre Attach tape drives
- 2 Gb SANSmart Fibre Channel option
- Logical Library dynamic partitioning
- Simultaneous random and multi-sequential operating modes
- Selectable recycling and dual-bin sequential modes
- Rackmount kit options

QUALSTAR CORPORATION

3990-B Heritage Oak Court
Simi Valley, CA 93063
Fax: 805-583-7749
Tel: 805-583-7744
     800-468-0680
E-mail: sales@qualstar.com
Website: www.qualstar.com
NASDAQ: QBAK

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

6 Models To Choose From		8211	8222	8433	8466	88132	88264
Number of Drives		1-2	1-2	1-4	1-4	1-8	1-8
Number of Tapes		11	22	33	66	132	264
Native Capacity (TB)	LTO 3	4.4	8.8	13.2	26.4	52.8	105.6
	LTO 4	8.8	17.6	26.4	52.8	105.6	211.2
Compressed Capacity (TB)*	LTO 3	8.8	17.6	26.4	52.8	105.6	211.2
	LTO 4	17.6	35.2	52.8	105.6	211.2	422.4
Max Native Data Rate (TB/hr)	LTO 3	.57	.57	1.1	1.1	2.3	2.3
	LTO 4	.8	.8	1.7	1.7	3.4	3.4
Max Compressed Data Rate (TB/hr)*	LTO 3	1.1	1.1	2.2	2.2	4.6	4.6
	LTO 4	1.7	1.7	3.4	3.4	6.9	6.9
Average Exchange Time (seconds)		14	15	16	16	18	18
Time to Scan Barcodes (seconds)		12	26	41	91	92	108
Barcode Reader		Opt	Opt	Std	Std	Std	Std
I/O Port		Opt	Opt	Std	Std	Std	Std
Field Expansion Kit		Yes		Yes		Yes	
Height (in/cm)		36 / 91		45 / 114		62 / 157	
Width (in/cm)		13 / 33		19 / 48		37 / 94	
Depth (in/cm)		25 / 63		30 / 77		30 / 76	
Net Weight (lb/kg)		89 / 40		153 / 69		359 / 163	
Power Consumption (watts, avg)		150		250		470	

* Using typical compression techniques

QUALSTAR®

SIMPLY RELIABLE