

QUALSTAR RLS SERIES LTO RACKMOUNT TAPE LIBRARY SYSTEMS

FEATURING
CAPACITY ON DEMAND



The RLS Series delivers Qualstar's *Simply Reliable* Automated Tape Library technology to LTO users requiring compact, 5U-high rackmountable solutions. Offering superior performance and value, the RLS Series LTO Tape Library family includes eleven models yielding capacities up to 66 terabytes (native). Using typical data compression ratios, capacity can exceed 130 terabytes. Individual models house up to four tape drives. Data transfer rates can exceed four terabytes per hour.

CAPACITY ON DEMAND (COD)

The RLS-8202, RLS-8204 and RLS-8404 models deliver a persuasive combination of low entry cost and easy capacity upgrades. These models support one to four tape drives, giving users technology choices in compact modules. Starting with twelve data tape slots, up to three or four, 8-slot expansion kits can be installed in just a few minutes. A simple software key and a pair of magazines is all it takes for users to easily add more capacity.

Q-LINK™ REMOTE MANAGER

Q-Link is the web browser-based remote library manager that allows any RLS Series Tape Library to be configured, monitored, diagnosed and managed from anywhere in the world. Using Q-Link, companies can deploy enterprise-class data protection without increasing staffs or degrading data security. Even firmware updates can be implemented remotely.



DFA DRIVES SUPPORTED

RLS "D" models house LTO Direct Fibre Attach tape drives. These drives have Fibre Channel interfaces to connect directly to ports on switches or to servers. The RLS library command interface can be connected with SCSI, or with Fibre Channel using the FCO option.

RELIABLE, INTELLIGENT ROBOTICS

The RLS Series unique robotic mechanism is *Simply Reliable* by design. Leadscrew based robotics using brushless DC motors and closed-loop servo control systems provide precise positioning and flawless media handling for years of dependable operation. All FRUs, options and tape drives are autodiscovering, and all electrical and mechanical adjustments have been completely eliminated by sophisticated, adaptive "smart" logic design. Built-in reliability is only part of the RLS Series story. Each tape drive is on a self-connecting mount that eliminates handling cables. Simply slide the drives in or out.

EASY OPERATION

An intuitive menu-driven control system provides easy-to-use installation, configuration and operational information via the onboard LCD panel. Critical operating functions are

displayed and an audible alarm signals conditions requiring immediate action. All of the information, functions and controls built into the front panel display are replicated in Q-Link. Tapes are housed in convenient magazines that simply snap in and out of the library. Removing and organizing tapes for offsite storage is easy.

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 removed when the door is opened. If they haven't, operation is resumed without causing a time consuming re-inventory.

LOGICAL LIBRARY

Logical Library partitioning is built into every RLS Series SCSI library. It allows up to four SCSI-connected servers to share a single library, even if each server is running a separate application. Systems that you couldn't afford to upgrade can now be protected automatically.



SIMPLY RELIABLE

QUALSTAR RLS SERIES LTO RACKMOUNT TAPE LIBRARY SYSTEMS

FEATURING CAPACITY ON DEMAND



ENGINEERED FOR RELIABILITY

- Auto-connecting user-installable tape drives
- All brushless motors
- Self-calibrating all-digital servo control system
- Auto-aligning, no mechanical or electrical adjustments
- Over 2,000,000 MEBF
- Automated tape drive cleaning

EFFICIENT MEDIA CONTROL

- Barcode scanning of data cartridges
- All tapes are housed in convenient removable magazines
- 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
- Back-lighted 80 character display
- Control panel menu system for easy installation, configuration, operation and maintenance

VERSATILITY

- Capacity on demand: add up to four 8-slot user-installed or factory option expansion kits
- Redundant hot-swappable power supply option
- LVD SCSI library interface
- Fibre Channel library interface option
- iSCSI option
- Fibre Channel, LVD and SAS drives supported
- Multiple bus connections supported
- Logical Library partitioning (SCSI library interface only, not supported under FC)
- Simultaneous random and multi-sequential operating modes
- Selectable recycling and dual-bin sequential modes

RLS SERIES LTO SPECIFICATIONS

Drive Type	RLS-8236 / 8236D			RLS-8244 / 8244D			RLS-8204 / 8204D			RLS-8202		RLS-8444 / 8444D			RLS-8404H / 8404D		
	LTO 3	LTO 4	LTO 5	LTO 3	LTO 4	LTO 5	LTO 3	LTO 4	LTO 5	LTO 4	LTO 5	LTO 3	LTO 4	LTO 5	LTO 3	LTO 4	LTO 5
Number of Drives	1 - 2			1 - 2			1 - 2			1 - 2		1 - 4			1 - 4		
Number of Tapes	36			44			12 - 44			12 - 36		44			12 - 44		
Native Capacity (TB)	14.4	28.8	54	17.6	35.2	66	4.8 - 17.6	9.6 - 35.2	18 - 66	9.6 - 28.8	18 - 54	17.6	35.2	66	4.8 - 17.6	9.6 - 35.2	18 - 66
Compressed Capacity (TB)*	28.8	57.6	108	35.2	70.4	132	9.6 - 35.2	19.2 - 70.4	36 - 132	19.2 - 57.6	36 - 108	35.2	70.4	132	9.6 - 35.2	19.2 - 70.4	36 - 132
Max Native Data Rate (TB/hr)	.6	.9	1.0	.6	.9	1.0	.6	.9	1.0	.9	1.0	.6	1.7	2.0	.6	1.7	2.0
Max Compressed Data Rate (TB/hr)*	1.1	1.7	2.0	1.1	1.7	2.0	1.1	1.7	2.0	1.7	2.0	1.1	3.4	4.0	1.1	3.4	4.0
Interface Options	LVD, FC	LVD, FC	SAS, FC	LVD, FC	LVD, FC	SAS, FC	LVD, FC	LVD, FC	SAS, FC	LVD	SAS	LVD	LVD	SAS, FC	LVD	LVD	SAS, FC
Field Expansion							Four, 8-slot increments			Three, 8-slot increments					Four, 8-slot increments		
Average Exchange Time (seconds)	16			18			18			18		18			18		
Time to Scan Barcodes (seconds)	62			78			78			78		78			78		
Barcode Reader	Standard			Standard			Standard			Standard		Standard			Standard		
Variable I/O Port	Standard			Standard			Standard			Standard		Standard			Standard		
Height (in/cm)	5U			5U			5U			5U		5U			5U		
Width (in/cm)	16.6 / 42.2			16.6 / 42.2			16.6 / 42.2			16.6 / 42.2		16.6 / 42.2			16.6 / 42.2		
Depth (in/cm)	32.0 / 81.3			36.8 / 93.5			36.8 / 93.5			36.8 / 93.5		36.8 / 93.5			36.8 / 93.5		
Net Weight (lb/kg)	104 / 47			147 / 67			147 / 67			147 / 67		147 / 67			147 / 67		
Power Consumption LVD & SAS (watts, avg)	130			130			130			130		130			130		
Power Consumption FC (watts, avg)	145			145			145			145		145			145		

* Using typical compression ratios

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SIMPLY RELIABLE