



AUTOLOADING TAPE LIBRARY

Qualstar RLS-4445

PRICE As reviewed, £12,960 (exc VAT)

BASIC WARRANTY 3yrs advanced replacement

INTERNET www.qualstar.com

SUPPLIER Qualstar Corporation 01932 895380

VERDICT A top choice for enterprise backup, this superbly built tape library packs an impressive storage punch with a wide range of tape format support and plenty of room to expand.

There's no denying Qualstar's tape libraries are designed by engineers for engineers, as their build quality is quite superb. Storage capacity is something else as well. Although the 5U high RLS-4445 on review is actually at the low end of this range, it still manages to pack in up to 4.5TB of native capacity in this AIT-3-equipped version.

A number of other formats are supported, too. The chassis can handle up to four AIT drives or a pair of SDLT, LTO or S-AIT drives instead. For the latter, Sony's design philosophy of adhering to a standard form factor for its latest high-capacity drive has paid off and this variant takes native capacity up to a staggering 22TB.

For the price, you get a pair of AIT-3 drives mounted at the front of the library with room for two more to be easily slipped in alongside. An optional adaptor allows the drives to be hot-swapped without having to reset the SCSI bus. The loader mechanism moves across the width of the chassis in front of the drives, and the cartridges are stored in a carousel that occupies the remaining room. This rectangular 'storage array' is a smart feature as it holds up to nine magazines, each capable of storing five cartridges. These can be driven in either direction to reduce access time. With four drives in place you can also upgrade the carousel to handle up to 70 cartridges. Inventory times are reduced substantially as the loader arm has its own database of the cartridge locations and barcode information held in NVRAM, which it makes available to the host software. Sensors linked to alarms keep an eye on internal temperatures, the cabinet is pressurised to keep out dust and even the airflow is filtered before being drawn through the chassis.

The library uses different IPMs (interface personality modules) slotted into a bay at the rear. The basic model provides SCSI interfaces for the changer and a serial port for local configuration access. The review model also included a 10BaseT Ethernet port for Qualstar's Q-Link browser management and a 2Gb/sec Fibre Channel option is also available. A smart backlit LCD display and control pad at the front are used for manual configuration, setting the IP address of the management port and to load and unload cartridges.

Despite the Qualstar's size, installation didn't take long. Once the SCSI interfaces at the rear had been daisy-chained together, we connected the library to a dual 1.7GHz Xeon system running Windows Server 2003. All components were correctly identified, with a new driver only required for the medium changer.



The RLS-4445 offers a Fibre Channel connectivity option, as well as the SCSI version on review.

For testing we used Computer Associates ARCserve 11 and Veritas Backup Exec 9.1, with neither product having any problems recognising the library and providing full access to all slots and drives. Using an 8.5GB mix of test data the AIT-3 drives delivered almost identical results to the external model tested in the last Enterprise tape drive group test (see issue 114, p163), which secured Sony a well-deserved Recommended award.

The RLS-4445 is without doubt an impressive tape library that delivers a range of features highly suited to enterprise-level data protection. It offers a top capacity and good remote management tools and can easily be upgraded to provide even more performance and storage space.

DAVE MITCHELL

PC PRO RATINGS

PERFORMANCE	★★★★★
FEATURES & DESIGN	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

SPECIFICATIONS 5U AIT tape library; 2 x AIT-3 internal tape drives; quoted native transfer rate 12MB/sec; native storage per cartridge, 100GB; 9 x 5-slot tape magazines; total native library storage, 4.5TB; LVD/SE SCSI interfaces; 9-pin serial port; 10BaseT Ethernet port; backlit LCD status panel and manual control buttons. Supports: HTTP, DHCP. CLI and web browser management, optional barcode reader.