IBM System Storage TS3200 Tape Library Express Model

Entry-level LTO tape library designed to provide reliable, high-capacity, high-performance tape backup

Highlights

- Designed to support the newest generation of LTO® with up to two IBM Ultrium® 5 full-height tape drives or up to four IBM Ultrium 5 half-height tape drives, as well as LTO generations 3 and 4 tape drives using a 4U form factor

- Designed to offer outstanding capacity, performance and reliability for a cost-effective backup, restore and archive for midrange storage environments

- Remote library management through a standard web interface supports flexibility and greater administrative control of storage operations

Our world has become more instrumented, interconnected and intelligent. In this new environment where storage requirements are doubling every one to two years, smarter mid-size companies strive to store, archive and retrieve more information efficiently, while driving down IT costs. You need to protect and secure your information, meet compliance requirements and make information available when you need it, at the lowest possible cost.

The IBM System Storage® TS3200 Tape Library Express® Model supports these needs by leveraging the newest generation of LTO technology to help cost-effectively handle growing storage requirements.

The TS3200 Express Model and its storage management applications are designed to address capacity, performance, data protection, reliability, affordability and application requirements. It is designed as a functionally rich, high-capacity, entry-level tape-storage solution incorporating LTO Ultrium tape technology. The IBM TS3200 Express model is an excellent solution for large-capacity or high-performance tape backup with or without random access. The TS3200 is also an excellent choice for tape automation for IBM Power Systems™, IBM System x® and other open systems.

The IBM TS3200 Tape Library Express is well-suited for handling the backup, restore and archive data-storage needs for small to medium-size environments. With the use of up to two LTO full-height tape drives or up to four LTO half-height tape drives and 48 tape cartridge capacity, the IBM TS3200 model is designed to use LTO technology to cost-effectively handle growing storage requirements. The TS3200 Tape Library is configured with four removable cartridge magazines, two on the left side (24 data cartridge slots) and two on the right (24 data cartridge slots). Additionally, the lower left magazine includes a

three-slot I/O station to help support continuous library operation while importing and exporting media. A bar-code reader is standard in the library, supporting the library's operation in sequential or random access mode. The TS3200 also comes standard with remote management capabilities to allow for remote administration of the tape library through a Web interface. Path Failover, an optional feature, is designed to provide automatic control path failover to a preconfigured redundant control path in the event that a host adapter or control path drive is lost without aborting the current job in process.

The IBM Ultrium 5 technology is designed to provide greater capacity with continued support for encryption of data. The hardware encryption and decryption core and control core resides in the IBM Ultrium 5 tape drive (available to the TS3200 with the 6 Gbps SAS and 8 Gbps FC interface). A larger internal data buffer in the full-height drive helps improve data access rates and reduce cartridge fill and rewind times along with dynamic channel calibration to help increase data throughput. In addition to reading and writing to LTO 5 tape cartridges, the LTO 5 tape drive can read and write to LTO 4 cartridges and read LTO 3 cartridges with improved data rates. The IBM Ultrium 5 tape drive is designed to support up to 140 MBps native data-transfer rates and up to 1.5 TB native physical capacity when using the IBM System Storage Ultrium 1.5 TB Data Cartridge (3.0 TB with 2:1 compression). The TS3200, featuring Ultrium 5 tape drives, has a capacity of up to 72 TB native (144 TB with 2:1 compression).

The IBM LTO 4 tape drives are designed to support up to 120 MBps native data-transfer rates. In addition, the TS3200, featuring Ultrium 4 tape drives, has a capacity of up to 38.4 TB (76.8 TB with a 2:1 compression).

The IBM TS3200 Tape Library Express featuring full-height and half-height technology offers an 8 Gbps fibre channel and 6 Gbps SAS interfaces for Ultrium 5, Ultrium 4 and Ultrium 3 (HH SAS only) and it can be attached to a wide variety of open-system servers. The sequential or random access library comes in a stand-alone or optional rack-mountable configuration. The IBM TS3200 also has an LCD display and indicators for power, drive and activity, error status and message information.

IBM System Storage TS3200 Tape Library Express Model at a glance

Drive options	Ultrium 5 Full Height: 6 Gbps SAS (FC # 8245 or 46X2683); 8 Gbps Fibre Channel (FC # 8244 or 46X2682) Ultrium 5 Half Height: 6 Gbps SAS (FC # 8247 or 46X2685); 8 Gbps Fibre Channel (FC # 8248 or 46X2684) Ultrium 4 Full Height: LVD SCSI (FC # 8143 or 95P5002), 3 Gbps SAS (FC # 8145 or 95P5006); 4 Gbps Fibre Channel (8144 or 95P5004) Ultrium 4 Half Height: 6 Gbps SAS (FC # 8149 or 46X7117), 8 Gbps FC (FC # 8148 or 46X6912) Ultrium 3 Half Height: 6 Gbps SAS (FC # 8049 or 46X7122)
Available models:	TS3200 Tape Library Model L4U Driveless 3573 L4U (MTM) 35734UL (HVEC)

Optional feature codes

Path Failover	45E9503 or FC # 1682
Transparent LTO Encryption	45E3081 or FC # 5900
Rack mount	23R6998 or FC # 7002
Right-side magazine set Left-side magazine, upper Left-side magazine, lower	23R6999 or FC # 8106 45E2225 or FC # 8107 45E2231 or FC # 8108
Ultrium Tape Cartridges	Ultrium 5 media: 46C2084 or FC # 8505/Ultrium 4 media: 95P4278 or FC # 8405/Ultrium 3 media: 95P2020 or FC # 8305
Ultrium Cleaning Cartridge	23R7008 or FC # 8002
Additional Power Supply	23R7263 or FC # 1901
Tape drive type	IBM LTO 5 Full Height and Half Height; IBM LTO 4 Full Height and Half Height; IBM LTO 3 Half Height
Number of drives	1-4
Number of tape cartridges	48
Number of mail slots	3
Physical capacity	Up to 3.0 TB per cartridge compressed; 1.5 TB native with LTO 5 Up to 1.6 TB per cartridge compressed; 800 GB native with LTO 4 Up to 800 GB per cartridge compressed; 400 GB native with LTO 3 Up to 144 TB per tape library compressed; 72 TB native with LTO Ultrium 5 Up to 76.8 TB per tape library compressed; 38.4 TB native with LTO Ultrium 4 Up to 38.4 TB per tape Library compressed; 19.2 TB native with LTO Ultrium 3
Data transfer rate (per drive)	Up to 140 MBps native with LTO 5 Up to 120 MBps native with LTO 4 Up to 80 MBps native with LTO 3

Dimensions (W x H x D)

Stand-alone	17.6 in (447.5 mm) x 7.29 in (185.2 mm) x 31.9 in (810 mm)
Rack-mount	17.6 in (447.5 mm) x 6.89 in (175.2 mm) x 29.13 in (740 mm)
Weight	47 lb (21.3 kg) without rack mount

Operating environment

Temperature	50 to 113 degrees F, 10 to 45 degrees C
Relative humidity	10% RH to 80% RH (non-condensing)
Electrical power	4.0 amps at 100 V ac, 2.0 amps at 240 V ac 0.1 KVA

Attachment support	8 Gbps fibre channel and 6 Gbps interface, LVD SCSI, 4 Gbps fibre channel and 3 Gbps SAS interfaces (LTO-4 FH)
Operating systems support	Native device-driver support is available for selected IBM System servers and other Linux® and Windows® open system servers. Latest support information: **ibm.com**/systems/support/storage/config/ssic
Warranty	Three-year, Customer Replaceable Unit (CRU) service in most countries

For more information

To learn more about the IBM System Storage TS3200 Tape Library Express Model, please contact your IBM representative or IBM Business Partner, or visit:

- **ibm.com**/systems/storage/tape/ts3200/
- **ibm.com**/systems/storage/tape/

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