

IBM TS4300 Tape Library

Supports secure, long-term data storage
in a highly scalable tape library



Highlights

Get highly scalable solution
with one 3U base module
and up to fifteen
expansions

Provide secure,
long-term data storage

Simplify tape
storage deployment
and management

Help reduce data
center costs with
a high-density solution

Requirements for secure, long-term data retention especially in the financial services, healthcare and life sciences industries are common and increasingly stringent, with data volumes escalating exponentially. Data stored on offline tape or write-once media, is nearly impervious to hacking. The IBM® TS4300 Tape Library is a high-density, highly scalable, easy-to-manage tape library designed to keep data securely stored long term, while helping reduce the cost associated with data center space and utilities.

The TS4300's modular architecture facilitates scalability of both cartridge and drive capacities according to demand. This library, based on a compact 3U-high modular base, supports vertical expansion with up to sixteen modules, incorporating the base, Linear Tape-Open (LTO) Ultrium cartridges, drives, and redundant power supplies. A solitary robot efficiently manages operations across all modules within the stack. In a fully expanded setup, a TS4300 can accommodate up to 640 LTO cartridges.

A user-friendly installation and configuration wizard ensures that users, regardless of their technical expertise, can effortlessly install, expand, and service the library.

To adhere to stringent security and compliance standards, the TS4300 Tape Library incorporates WORM cartridges, bolstering data protection. Furthermore, it integrates library-managed encryption via IBM Security Key Lifecycle Manager for enhanced data security.

In terms of business continuity, the TS4300 offers automatic control-path and data-path failover features, ensuring seamless operation even in the event of a host adapter or control path failure.

Leveraging IBM Storage, the TS4300 provides direct, intuitive, and graphical access to data stored in IBM tape drives and libraries. This is achieved through the utilization of the IBM Linear Tape File System (LTFS) format standard, enabling tape-stored data to be accessed as if it were on disk or flash storage, thereby simplifying data retrieval processes.

The TS4300 base library contains all the necessary robotics and intelligence to manage the base library system, with a maximum of 40 slots of LTO cartridge capacity per module, up to five input/output (I/O) slots, and support for three combinations of full- and/or half-height (FH or HH) LTO drives per module.

The TS4300 base library is rack or tabletop mountable. Module expansions are rack mountable only.

IBM TS4300 Tape Library configurations	Minimum configuration: Base module	Maximum configuration: TS4300 base module with 15 expansion modules
Total physical capacity * For MT 5544 with LTO10 PA media	720 TB 1.6 PB *	11.52 PB 25.6 PM *
LTO Ultrium cartridge capacity	40	640
Reduction in cartridges for I/O slots	0-5	0-80
Tape drives	1 FH LTO, 3 HH LTO, or 1 FH and 1 HH LTO	16 FH LTO or 48 HH LTO HH/FH drive mixture range 46/1 or 16/16
Logical libraries	Up to 21 logical libraries in the library (up to the number of drives installed with a maximum of 21)	Up to 21 logical libraries in the library (up to the number of drives installed with a maximum of 21)

Provide secure, long-term data storage

Management
software options

IBM Storage Archive	Enables users of LTO Ultrium 10, 9, 8, 7 and 6 tape library systems to inventory cartridges and read, write and search data on any cartridge.
	Enables writing metadata and tagging of individual files for easy and fast access to files stored on cartridges.
IBM Storage Protect	Enables users to create, manage and optimize archives.
	Provides management of concurrent copies of content, plus active, inactive and off-site content.
IBM Security Key Lifecycle Manager	Enhances data security while dramatically reducing the number of encryption keys to be managed.
	Simplifies encryption key management with an intuitive user interface for configuration and management.
	Helps minimize the risk of loss or breach of sensitive information.

Simplify tape storage deployment and management

TS4300 is based on an embedded, open-source software architecture to help speed deployment and simplify management. Best-in-class error recovery and reporting, library health monitoring and alerting, and auto recovery features help to speed diagnostics and resolution. An automation drive interface significantly increases drive communication speed for faster code updates and log downloads.

IBM offers diverse management software solutions for TS4300 to enhance the use of multipath architecture, as well as the use of a single TS4300 library. The library software includes application programming interface (API) hooks that enable easy integration of IBM software.



Figure 1. IBM TS4300 Tape Library

Help reduce data center costs with a high-density solution

IBM TS4300 Tape Drive Specifications

Form factor	3U
Physical capacity	<p>40 TB native capacity/up to 100 TB compressed capacity (LTO Ultrium 10 PA) **</p> <p>30 TB native capacity/up to 75 TB compressed capacity (LTO Ultrium 10) **</p> <p>18 TB native capacity/up to 45 TB compressed capacity (LTO Ultrium 9)</p> <p>12 TB native capacity/up to 30 TB compressed capacity (LTO Ultrium 8)</p> <p>6 TB native capacity/up to 15 TB compressed capacity (LTO Ultrium 7)</p> <p>2.5 TB native capacity/up to 6.25 TB compressed capacity (LTO Ultrium 6)</p>
Network interface	Ethernet
Power supply	1 standard power supply, optional 2nd redundant supply
Hot-swap components	Power supplies, tape drives
Systems management	Storage Management Initiative Specification (SMI-S) enabled
Operating systems supported	Selected IBM servers and other Linux® and Microsoft Windows open-system servers
Limited warranty	Three-year in-warranty coverage of select parts
Weight	<p>Base module maximum 28 kg (61.5 lb)</p> <p>Expansion module maximum 22.6 kg (49.6 lb)</p>
Dimensions (H x W x D)	133 mm (5.23 in.) x 480 mm (18.89 in.)* x 880 mm (34.6 in.)†

* Includes front covering of rack rails, allowing for magazine opening clearance.

† From the front of the bezel to the back of the fan on an inserted drive sled.

** New MT 5544 supports LTO 10, 9 and 8.

MT 3555 supports LTO 9, 8, 7 and 6.

Conclusion

The IBM TS4300 Tape Library stands out as an excellent choice for small and midsize businesses where long-term data retention is common and increasingly stringent, and with data volumes growing massively. Tape storage offers a less costly long-term storage option than disk drives or flash drives. Its high-density, scalability, and easy-to-manage tape library makes IBM TS4300 Tape Library a secure option to keep data securely stored long-term, while helping reduce costs.

Why IBM?

With more than 60 years of experience in delivering tape-based storage technology, IBM Storage solutions deliver the scalability, security and ease-of-use that organizations need to manage the massive volumes of data that have become common today. TS4300 Tape Library delivers a highly scalable, modular option that can expand as data storage requirements grow, while helping to avoid the costs of additional data center space and related utilities required to manage other, more expensive storage options.

For more information

To learn more about IBM TS4300 Tape Library, please contact your IBM representative or IBM Business Partner, or visit ibm.com/products/ts4300.

Additionally, IBM Global Financing provides numerous payment options to help you acquire the technology you need to grow your business. We provide full lifecycle management of IT products and services, from acquisition to disposition.

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