

IBM LTO 10 Tape Drive Data Sheet

Highlights

- Store up to 1.73EB per 18- frame library with 2.5:1 compression
- Store up to 99PB compressed in 10-sq-ft library with LTO 10 tape drives
- Achieve 75TB compressed capacity per cartridge, 66% better than LTO 9
- Support for new and field merge LTO 10 drives into 3584 models L55 and D55
- Execute fast restores with 400MB/s transfer rate
- Retrieve data 73% faster with Open Recommended Access Order (oRAO)
- Enable intuitive and graphical access to data with IBM Storage Archive
- Get better protection with Physical Air Gap adding a barrier to hackers
- Avoid data corruption with Data immutability with WORM capabilities
- Prevent data visibility with AES-256-bit data encryption at rest

Tenth generation LTO Ultrium, full-height internal tape drive

Storage requirements have inevitably grown alongside rising data volumes in today's information-driven enterprises. Besides primary storage, backups have become increasingly important for disaster recovery and regulatory compliance. IBM LTO 10 Tape Drive answers those business needs by incorporating the latest generation of industry-leading LTO technology that will help organizations handle the growing data demands of modern tape use cases like big data, cloud computing, Internet of Things (IoT), media and entertainment, digital video surveillance, active file archiving and, of course, for backup.

IBM LTO 10 tape drive provides even higher capacity than the previous generation. For midsized and enterprise businesses requiring backup and low-cost archival storage of data, IBM LTO 10 tape drive is an excellent tape-storage solution, providing a physical storage capacity of up to 75 TB per cartridge (with 2.5:1 compression).



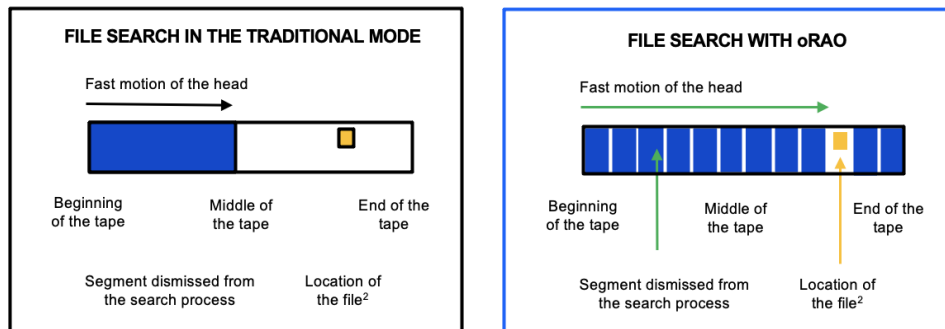
IBM LTO 10 Tape Drive Full-height

The drive boasts an uncompressed data transfer rate of up to 400 MBps with 32Gbps FC or 12Gbps SAS interface connectivity. For flexible network integration, this compact external drive offers both two Fiber Channel or SAS ports and one Ethernet port. The dual ports allow daisy-chaining a second FC or SAS device.

Open Recommended Access Order (oRAO) on LTO 10 technology

A key challenge when proposing an infrastructure based on tape technology is the battle with disk drive performance. While accessing disk files seems instant from a user's point of view, access time to tape files is significantly higher, raising to several minutes for a series of files. If large volumes are being traded, this issue becomes a serious performance bottleneck and optimizations are queried in order to balance the numbers. The new LTO 10 tape drive technology leverages the Open Recommended Access Order (oRAO) feature introduced on LTO 9 to optimize tape performance. With LTO 9 and LTO 10 full height Tape drive, obtain up to 73% faster data retrieval access¹ to your LTO Ultrium tape cartridges while reducing wasted movement of the tape media and tape robotics, reduction of tape drive and media wear without an extra cost to the existing library.

Up to 73% faster data access retrieval with IBM LTO 9 and LTO 10 tape drives when working larger volumes of data



Improve file access and recall times with IBM LTO 9 & 10 tape drives

Advanced features

The IBM LTO 10 tape drive enables it to connect to a wide spectrum of open-system servers. The LTO Ultrium 10 tape media provides partitioning support, which, in conjunction with IBM Storage Archive, provides users with file-level access to tape data. This support helps users quickly locate and update information on the tape media. LTO Ultrium 10 technology is also designed to natively support data encryption, with core hardware encryption and decryption capabilities resident in the LTO Ultrium 10 tape drive itself.

Software support

Management solutions such as IBM Storage Protect or third-party storage management software can extend the power of IBM LTO 10 tape drive. IBM Storage Archive helps simplify access and management of IBM LTO 10 tape drive by enabling text-based file tagging, enabling more intuitive searches of drive content. This software creates an efficient “data footprint” to dynamically store every bit of data, helping maximize performance and ensure security.

Archiving enables storage of digital assets for the long term, so assets can be referenced and monetized for years to come. IBM Storage Archive supports the tape-oriented LTFS and helps reduce complexity by enabling a graphical user interface to the tape drive’s contents using the operating system file manager. These features together help make tape-based data as easy to find and access as disk- or flash-based data. In addition, LTFS-capable tape drives are designed to be interchangeable among compatible LTO tape drives and supported operating systems, so administrators do not have to worry about hardware or software compatibility. With LTFS, managers can quickly access, store or archive files on tape, and transport files to and from different locations in a very easy to use format. Anyone who needs fast and reliable access to inactive, ‘cold,’ data—like movie and music producers, post-production editors, broadcasters, digital video surveillance managers, and cloud and storage managers—now has an affordable solution to access and more easily archive high-quality files. LTFS opens the door to new uses and applications for LTO Ultrium tape, making tape easy and intuitive.

Media

IBM LTO 10 tape drive supports the LTO Consortium compressed specification for LTO Ultrium 10, offering up to 75 TB of data storage per cartridge (30 TB native), more compressed capacity of the previous LTO Ultrium 9 cartridges. IBM LTO 10 tape drive can read and write to LTO Ultrium 10 cartridges. IBM LTO 10 tape drive supports the self-describing features of LTO tape cartridges for operational simplicity.

IBM LTO 10 Tape Drive at a glance		
Available configuration	Model 3588 Fibre Channel Drives FAC and SAS Drives SAC —One LTO Ultrium 10 full height internal tape drive	
Interface	32 Gb FC or 12 Gb SAS	
Tape drive type	LTO Ultrium 10	
Physical capacity	30 TB native; 75 TB with 2.5:1 compression	
Number of tape drives	1	
Number of tape cartridges	1	
Data transfer rate	Up to 400 MBps native on FC & SAS, up to 1000MBps on SAS and up to 1200MBps on FC with compression	
Media Type	Read and Write LTO Ultrium 10 <ul style="list-style-type: none"> • 30 TB data cartridge • 30 TB WORM cartridge LTO Ultrium cleaning cartridge	
Weight	3.4 kg (7.49 lb)	
Power Requirements	100 – 240 V ac, 50 – 60 Hz auto-ranging	
Dimensions	Without Bezel Width: 146 mm (5.74 in) Depth: 284.3 mm (11.19 in) Height: 82.5 mm (3.24 in)	With Bezel Width: 148.26 mm (5.83 in) Depth: 289.5 mm (11.39 in) Height: 84.76 mm (3.3 in)
Warranty	One-year limited warranty, IBM on-site service in most countries, next-business-day 9x5, service upgrades available	

IBM LTO 10 Tape Drive at a glance

Operating systems support [See the IBM System Storage Interoperation Center](#)

¹Based on IBM internal testing of like User Data Sets, not all users will see these levels of performance improvements as optimization varies according to the number of segments retrieved. Source: *Tsuyoshi Miyamura and Osamu Matsumiya*, IBM LTO 9 Tape Drive RAO Performance Position Paper, May 2021.

Why IBM?

The capacity, speed and reliability of your backup and archiving solutions are critical to your enterprise, along with the performance of your storage infrastructure as a whole. IBM offers market-leading experience to help you handle the storage challenges that your network or company faces with a broad portfolio of proven software, hardware and solutions offerings. Innovative technology in tune with recent innovations, a commitment to open standards and high performance—all backed by IBM with its recognized expertise—are just a few of the reasons why you should consider IBM storage offerings.

For more information

For more information about the IBM LTO 10 tape systems, please [visit our solutions page](#), or contact your IBM representative or IBM Business Partner. If you don't yet have an IBM representative or business partner, you can [fill out this form](#) to schedule a consult with our storage experts."

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. For more information, visit: ibm.com/financing

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