IBM TS1150 Tape Drive

Reduce the costs of long-term data protection in big-data, cloud, mobile and social environments

Highlights

- Deliver high-performance, high-capacity storage with a reliable solution
- Support fast access to data with IBM Spectrum Archive using LTFS technology
- Protect, retain and secure critical data with encryption
- Extend storage investments with support for existing IBM tape automation
- Integrate with IBM Spectrum Protect and other compatible software offerings
- Simplify storage management with open-systems server and IBM Z support
- Support data retention needs with write-once-read-many (WORM) cartridges

In today's data-hungry world, cost-efficient storage is more important than ever. Business analytics have increased the value of data stored for long periods of time, while end-user demands for data accessibility just keep escalating—thanks to the growing use of cloud, mobile and social media technologies. Yet storing massive volumes of static, rarely accessed data on expensive storage media can put a huge strain on shrinking IT budgets.

IBM TS1150 Tape Drive gives organizations an easy way to deliver fast access to data, improve security and provide long-term retention—and for less expense than disk solutions. TS1150 offers high-performance, flexible data storage with support for data encryption. This fifth-generation drive can help protect investments in tape automation by offering compatibility with existing automation. Plus, an upgrade model is available for existing IBM TS1140 Tape Drives. What's more, TS1150 supports the LTFS format in IBM Spectrum Archive for direct, intuitive and graphical access to data.

TS1150 supports IBM TS4500 and IBM TS3500 Tape Libraries as well as IBM racks that enable stand-alone installation. TS1150 features three options for type D media. The IBM Tape Cartridge 3592 Advanced Type D Read/Write, JD media, provides up to 10 TB of native capacity, and up to 10 TB are provided by IBM Tape Cartridge 3592 Advanced Type D WORM, JZ media. IBM Tape Cartridge 3592 Advanced Type D Economy, JL media, is also available, storing 2 TB and providing fast access to data. TS1150 can also read and write on previous media, type C (JC, JY and JK media).

To help optimize drive utilization and reduce infrastructure requirements, TS1150 can be shared among supported hosts on a storage area network (SAN). It also offers multiplatform support and can scale from midrange to enterprise environments, delivering flexible storage for heterogeneous server environments.

IBM TS1150 Tape Drive

Deliver fast access to dynamic data

TS1150 offers the performance needed to meet today's dynamic data requirements. The drive supports a native data transfer rate of up to 360 MBps to deliver information at the speed demanded by cloud, mobile and social media users. TS1150 also helps simplify big-data management by transferring data at up to 700 MBps with data compression.

Choose the right tape drive for all your needs

Help lower cost of ownership with the flexibility of TS1150. Reduce the need to purchase two different tape drives by choosing a tape storage solution that addresses the need for both high capacity and fast access to data. Support data retention needs with IBM Tape Cartridge 3592 WORM cartridges and support for media partitioning for more flexible data management. Also, promote data interchange with the ability to read and write tapes in TS1140 formats, as well as the ability to improve the capacity of JC/JY media from 4 to 7 TB and JK media from 500 to 900 GB.

Use encryption to help protect data

Security is an important issue when storing, accessing and managing your data. Encryption can help organizations protect data against theft or accidental loss, particularly data that contains the personal or sensitive information of individual customers.

Reduce the need for host-based encryption—and the concurrent drain on performance—or reduce the use of specialized encryption appliances using the built-in data encryption capabilities of TS1150. This capability is intended to protect information if tape cartridges are lost or stolen by supporting the storage of the data in an encrypted form.

Organizations can generate and manage encryption keys for TS1150 Tape Drives across a distributed environment with IBM Security Key Lifecycle Manager. This solution provides the interface between IBM encrypting tape drives and external keystores.

To further protect mission-critical data, TS1150 delivers advanced technology—such as advanced, interleaved error-correction codes and factory-written servo tracks on the tape cartridge—to provide precise head positioning. In addition, extraordinary functions such as a virtual backhitch and a high-resolution directory help improve small file-write performance and improve recall access to data, respectively.

IBM TS1150 Tape Drive

Help lower costs with IBM Spectrum Archive support

TS1150 can help reduce the costs of long-term data retention by including support for IBM Spectrum Archive with LTFS technology, allowing users and applications direct access to files and directories stored on tape. IBM Spectrum Archive provides an easy-to-use interface that enables organizations to automatically move infrequently accessed data from disk to tape without the need for proprietary tape applications. This allows data centers to add extensive capacity with lower media, floor space and power costs. Users can access archived data with drag-and-drop simplicity—just as if it were stored on disk.

Simplify storage management

TS1150 offers support for most open-systems servers, including IBM Power Systems. TS1150 can support IBM Z environments when installed in an IBM TS3500 Tape Library attached to IBM TS7700 Virtualization Engine. By supporting such a wide range of platforms simultaneously, TS1150 helps simplify the storage environment.

In addition, IBM Spectrum Protect and other compatible software offerings can be used with TS1150 for storage and tape management. Supported software and applications can be obtained separately from IBM, IBM Business Partners or independent software vendors (ISVs).

Media capacity cartridge options

The IBM 3592 cartridges used in TS1150 Tape Drives are available in short and advanced lengths and in rewritable and WORM formats. Cartridges are available in packs of 20 and can be ordered as labeled and initialized, initialized only, or unlabeled and uninitialized. A radio frequency identification (RFID) label option is also available. For more information on media options, contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/systems/storage/media.

IBM TS1150 tape drive at a glance

Characteristics	
Recording technique	Linear serpentine 32-channel concurrent recording
Native capacity (uncompressed)	10 TB (using JD/JZ media), 7 TB (using JC/JY media) or 2 TB (using JL media)
Native sustained data rate (uncompressed)	360 MBps (type D media) 300 MBps (type C media re-formatted)
Adaptive instantaneous data rates	12 speeds, from 112 MBps to 365 MBps, for 3592 JD/JL/JZ cartridges initialized in Gen 5 format
	12 speeds, from 99 MBps to 303 MBps, for 3592 JC/JK/JY cartridges initialized in Gen 5 format
	12 speeds, from 90 MBps to 252 MBps for 3592 JC/JY in Gen 4 format
Burst data rate	800 MBps
High-speed search (maximum)	12.4 m/s end-end search rate
Physical characteristics	
Dimensions	3592-E08
	95 mm H x 198 mm W x 467 mm D (3.8 in. H x 7.8 in. W x 18.4 in. D)
	3592-EH8
	95 mm H x 150 mm W x 374 mm D (3.8 in. H x 5.9 in. W x 14.7 in. D)
Weight	3592-E08 5.7 kg (12 lb 7 oz) 3592-EH8 3.97 kb (8 lb 9 oz)
Operating environment	
Temperature with media	16°C – 32°C (60°F – 90°F)
Relative humidity	20% – 80% non-condensing (limited by media)
Wet bulb maximum	26°C (78.8°F)
Maximum continuous operating power dissipation (drive and integrated blower)	46 Watts

Platform support

	Platform	Operating system
IBM		
	IBM Power Systems	IBM AIX, IBM i, Linux
	IBM Z*	IBM z/OS, IBM z/VM, IBM z/VSE, IBM z/Transaction Processing Facility (TPF)
	IBM System p	AIX and Linux
	IBM System i	IBM i and IBM OS/400
	IBM System x	See open-system support
Open systems		
	Oracle	Solaris
	Servers with Intel or AMD processors	SUSE Linux Red Hat Linux Microsoft Windows
Encryption support	IBM i, AIX, Sun, Linux and Windows	
Warranty	One year	

* IBM Z attachment via IBM TS7700

Why IBM?

Innovative technology, open standards, excellent performance and a broad portfolio of proven storage software, hardware and solutions offerings—all backed by IBM with its recognized leading edge—are just a few of the reasons to consider storage solutions from IBM. In addition, IBM delivers some of the best storage products, technologies, services and solutions in the industry without the complexity of dealing with different hardware and software vendors.

For more information

To learn more about IBM TS1150 Tape Drive, contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/us-en/marketplace/ts1150

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

© Copyright IBM Corporation 2022.

IBM, the IBM logo, and ibm.com are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at https://www.ibm.com/legal/us/en/copytrade.shtml, and select third party trademarks that might be referenced in this document is available at https://www.ibm.com/legal/us/en/copytrade.shtml#section_4.

This document contains information pertaining to the following IBM products which are trademarks and/or registered trademarks of IBM Corporation:
IBM®, IBM Z®, IBM Business Partners®, IBM AIX®, IBM z/OS®, IBM z/VM®, IBM z/VSE®, IBM®, Spectrum Archive™, IBM Linear Tape File System™, IBM Power Systems™, IBM Spectrum Protect™,

Linear Tape-Open, LTO, the LTO Logo, Ultrium and the Ultrium Logo are registered trademarks of Hewlett Packard Enterprise, International Business Machines Corporation and Quantum Corporation in the United States and other countries.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.