

IBM TS1160 Tape Drive

Fast access to data and secure long-term retention

Highlights

- Helps secure data with support for encryption and key management
- Extends storage investments with support for existing IBM tape automation
- Helps meet compliance requirements with Write Once Read Many (WORM) support
- Offers high performance and high capacity for storage consolidation
- Optimize drive utilization with support for FC, Ethernet and SAS interfaces
- Cyber resilient technology with physical air gap

Overview

Massive data growth has led to many ways of handling and securing all that information. Modern use cases like big data, cloud or analytics sometimes require a hyperscale approach to be able to meet the business goals in a cost-effective manner. The IBM TS1160 Tape Drive is a perfect fit for environments that achieve massive scale in computing and it helps lower total cost of ownership. IBM TS1160 Tape drive gives organizations an easy way to improve capacity, deliver fast access to data, and provide secure long-term retention for less than the cost of disk or flash solutions.

Innovation keeps the highly successful 3592 Enterprise Drives always ahead of other drive formats, for example, the new TS1160 provides a significant capacity and throughput increase over the IBM TS1150 with the introduction of the new JE media. Plus, it offers complete integration with Spectrum Software Defined Storage which helps improve data management and reduce storage costs.

The recent enhancement of the sixth-generation TS1160 tape drive improves native capacity to up to 20 TB (up to 60 TB with compression) and can help protect investments in tape automation by offering compatibility with existing automation.

To help optimize drive utilization and reduce infrastructure requirements, TS1160 can be shared on a storage area network through the existing Fibre Channel 16 Gb, Ethernet 10 Gb or 25 Gb, and now SAS 12 Gb interfaces. It offers multi-platform support and can scale from midrange to enterprise environments, delivering flexible storage for

heterogeneous server environments. The TS1160 Tape Drive supports IBM System Storage TS4500 and TS3500 Tape Libraries and racks that enable stand-alone installation.

Access information at the speed of business

Leverage performance to handle the requirements of your business needs. The TS1160 tape drive supports a native data transfer rate of up to 400 MBps (up to 900 MBps with compression) to deliver information at the speed your business demands.



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Address your needs in one tape storage solution

Lower your cost of ownership with the flexible usage of the TS1160 tape drive. Reduce the need to purchase two different tape drives with a tape storage solution that addresses both the need for high capacity, as well as fast access to data. Support data retention needs with 3592 WORM cartridges and support to media partitioning for more flexible data management. Support read and write of 20 TB capacities on JE media. Also, promote data interchange with the ability to read and write 20 TB capacities on JE media and JD media in both TS1155 (15 TB capacity) and TS1150 (10 TB capacity) formats, read and write JC media in TS1150 (7 TB capacity) format,

read-only JC media (4 TB capacity) in TS1140 formats. Media written in TS1160 is not readable in TS1155 or TS1150.

Protect your sensitive data

Security is an important issue when storing, accessing and managing your data. Tape offers the most powerful modern data protection of all. Unlike other storage media, you can easily pull a tape cartridge offline and simply store it on a shelf – creating a physical barrier or “air gap” that hackers can’t penetrate. The upsurge in tape usage demonstrates that ransomware and other cybersecurity concerns are prompting many organizations to put tape technology back in service as the ultimate line of defense for sensitive corporate data.

In addition, encryption is a potent technology to help protect data against theft or accidental loss, particularly data that contain personal or sensitive information concerning a company’s customers.

Reduce the need for host-based encryption—and the concurrent drain on performance—or reduce the use of specialized encryption appliances with built-in data encryption capabilities from the TS1160 tape drive. This capability is intended to provide customers with greater ability to protect information if tape cartridges are lost or stolen by supporting the storage of the data in an encrypted form.

Generate and manage encryption keys for TS1160 tape drives across the enterprise with IBM Security Key Lifecycle Manager. This solution is the interface between IBM encrypting tape drives and external keystores.

To further protect mission-critical data, the TS1160 tape drive provides advanced technology—such as error correction code and factory-written servo tracks on the tape cartridge—to provide precise head positioning. In addition, unique functions such as virtual backhitch and a high-resolution directory help improve small file write performance and improve recall access to data, respectively.

Reliable and cost-efficient connectivity

Three different drive versions on the TS1160 family help to optimize drive utilization and reduce infrastructure requirements. TS1160 can be shared on a storage area network through the existing Fibre Channel 16 Gb interface, the Ethernet 10 Gb and 25 Gb¹ options, and now a SAS 12Gb version designed to support any open system environment.

Simplify and better manage with multiplatform support

A heterogeneous server environment can simplify your storage environment. The TS1160 tape drive offers multiplatform support for most open-systems servers, including IBM Power Systems. By supporting such a wide range of platforms simultaneously, TS1160 helps simplify the storage environment.

Support applications with storage management software

TS1160 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 as if it was stored on disk.

Media capacity cartridge options

The IBM 3592 cartridges used in the TS1160 tape drive are available in short, standard and extended lengths and in rewritable and WORM² formats. Cartridges can be ordered in packs of 20 and can be labeled and initialized, initialized only, or unlabeled² and uninitialized². An RFID label option is also available. For more information, contact your IBM representative or IBM Business Partner or visit: ibm.com/systems/storage/media

Cyber resilient technology with physical air gap

The term “air gap” refers to physical or virtual isolation of systems or networks to avoid widespread corruption of data due to malware infection, system failures, or human error. The basic concept around an air gap is to bring secondary storage systems online periodically to incorporate the latest changes and then take them back offline. The “offline by design” nature of tape offers a true physical air gap and provides one of the most secure protections to confront cyber crime.

¹Via RPQ

²Available through the media distribution network.

IBM TS1160 Tape Drive at a glance

Characteristics	
Recording technique	Linear Serpentine
Native capacity (uncompressed)	20 TB (using JE media), 15 TB / 10 TB (using JD media), 7 TB (using JC media)
Native sustained data rate (uncompressed)	400 MBps (type E media)
Burst data rate	1600 MBps
High-speed search (max)	12.4 mps end-end search rate
Warranty	One year
Dimensions	60E/ 60F Model: 86 mm H x 156 mm W x 374 mm D (3.4 in x 6.1 in x 14.7 in)
	60G Model: 93 mm H x 186 mm W x 467 mm D (3.7 in x 7.3 in x 18.4 in)
Weight	60E / 60F Model: 3.97 kg (8.75 lbs)
	60G Model: 5.57 kg (12.25 lbs)
Operating environment	
Temperature with media	16° to 32° C (60° F to 90° F)
Relative humidity	20% to 80% non-condensing (limited by media)
Maximum dew point temperature	22° C (72° F)
Power dissipation (drive and integrated blower)	56 Watts

Platform support

Power Systems	IBM AIX, IBM i, Linux	
	System p	IBM AIX and Linux
	System i	IBM i and IBM OS/400
	System x	see open system support
Open Systems	Oracle	Solaris
	Servers with Intel or AMD processors	SUSE Linux, Red Hat, Microsoft Windows
Storage SDS	IBM Spectrum Archive	
	IBM Spectrum Protect	

Why IBM?

The performance and availability of your storage environment can either enhance or hamper your business processes. That is where IBM comes in. With more than 60 years of experience in delivering tape-based storage technology, IBM Storage solutions deliver the scalability, security and reliability that organizations need to manage the massive volumes of data that have become common today.

Innovative technology; excellent performance; and a broad portfolio of proven storage hardware, software and solutions offerings are just a few of the reasons why you should consider storage solutions from IBM, including IBM TS1160 Tape Drives.

For more information

Contact your IBM representative or IBM Business Partner or visit:

<https://www.ibm.com/us-en/marketplace/ts1160>

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