IBM TS7700

Outstanding virtualization capabilities for continuous data protection of IBM z Systems data

To effectively protect data, deliver uninterrupted data access, address regulatory requirements and archive business data, organizations need a solution that can manage both primary and backup data that is active, inactive or even archived. As data centers and the data they store continue to grow, data protection often becomes more complex. This may include moving more primary data to tape, continuous backup, multiple metro and global sites, simplifying offsite recovery, disaster-recovery verification, and many other objectives and processes to ensure an enterprise level of business continuance. This growth in complexity can in turn lead to higher data management overhead and costs.

IBM TS7700 is a family of mainframe virtual tape solutions that optimize data protection and business continuance for z Systems data. Through the use of virtualization and disk cache, the TS7700 family operates at disk speeds while maintaining compatibility with existing tape operations. Its fully integrated tiered storage hierarchy takes advantage of both disk and tape technologies to deliver performance for active data and best economics for inactive and archive data.
The TS7700 family of z Systems tape virtualization is offered in three models:

- IBM TS7720 features encryption-capable high-capacity cache using 3 TB SAS disk drives with RAID 6, providing the ability to scale to very large capacities with the highest level of data protection.
- IBM TS7740 features encryption-capable 600 GB SAS drives with RAID 6 protection.
- IBM TS7760 features encryption-capable 8 TB SAS drives with Distributed RAID protection.

All models write data by policy to physical tape through attachment to high-capacity, high-performance IBM TS1150 and earlier IBM 3592 model tape drives installed in IBM TS4500 or IBM TS3500 tape libraries. Physical tape support is optional on TS7720 and TS7760.

The TS7700 family has been designed to help enhance performance and provide the capacity needed for today's tape processing requirements. Deploying these innovative solutions can help reduce batch processing time, total cost of ownership and management overhead.

**Data protection and retention for mainframe environments**

The TS7700 family supports z Systems servers using 8 Gbps IBM FICON® at distances of up to 250 km (155 miles) using dense wavelength division multiplexing in combination with switches; or more extended distances using supported channel extension products.
Protect your business with TS7700 grids
The grid communication feature allows interconnection of up to eight TS7700 systems in any combination of TS7720, TS7740 and TS7760 models, to form a grid configuration. This TS7700 function is comparable to IBM Metro Mirror and IBM Global Mirror. Since TS7700 systems typically reside in different locations to provide better availability and disaster recovery, grid communication is designed to help keep data available, even if one of the remote sites experiences an outage. This helps maintain availability during planned maintenance, service or system upgrades, or unexpected outages and helps avoid the physical transportation of tape cartridges in the event of a disaster. The grid configuration also allows administrators to use TS7700 as an archival installation with full back-end physical tape functionality.

Simplify management using a graphical user interface
A web-based graphical user interface (GUI), based on the interface used in several other IBM storage solutions, is provided to configure and monitor TS7700. The GUI can be used to access information such as the current system status and resource usage statistics. This interface has been designed to make more efficient use of a storage administrators’ time in configuring and managing the TS7700 models while also helping reduce the time needed to train new administrators.

Ensure data security and regulatory compliance
Designed to keep data more secure and to help meet regulatory guidelines, TS7700 provides end-to-end data encryption. All models support disk-based encryption for data at rest within the disk cache repositories.

To help keep information confidential if physical tapes are lost or compromised, all models support TS1150 tape drive encryption capabilities. TS1150, IBM TS1140 and some earlier 3592 model tape drives include data encryption capabilities to help prevent the need for host-based data encryption—and the concurrent drain on host performance and resources—or the additional expense of specialized encryption appliances.

IBM Security Key Lifecycle Manager can generate and manage encryption keys across the enterprise. IBM Security Key Lifecycle Manager can deliver encryption keys to TS7700 for encryption of data on disk or tape. This offering delivers advanced, federated, cross-domain key management designed to help lock down organizational data more comprehensively and easily than ever before.

To help support the long-term retention of reference data and meet the requirements of regulatory bodies worldwide, micro-code capabilities enable the TS7700 family to support a virtual equivalent of write-once-read-many (WORM) tape functionality.

Why IBM?
The performance and availability of your storage environment can either enhance or hamper your business processes. That’s where IBM comes in. As a market leader in the storage industry, we can help you handle the challenges that your organization encounters.
IBM TS7720, TS7740 and TS7760 at a glance

<table>
<thead>
<tr>
<th>Specification</th>
<th>TS7720</th>
<th>TS7740</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>644 mm (25.4 in.)</td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td>1,102 mm (43.4 in.)</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>1,804 mm (71.0 in.)</td>
<td></td>
</tr>
<tr>
<td>Weight (TS7720)</td>
<td>669.1 kg (1,475 lb)</td>
<td></td>
</tr>
<tr>
<td>Weight (TS7740)</td>
<td>481.9 kg (1,062 lb)</td>
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<tr>
<td>Supported environments*</td>
<td>IBM z/OS®</td>
<td>IBM z/VM®</td>
</tr>
<tr>
<td></td>
<td>IBM z/VSE®</td>
<td>IBM z/TPF</td>
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For more information
To learn more about the IBM TS7700 family, please contact your IBM representative or IBM Business Partner, visit: ibm.com/systems/storage/virtualization or ibm.com/systems/storage/tape

IBM Global Financing can help enable credit-qualified clients to transform their business with affordable options to acquire the latest IT solutions, visit: ibm.com/financing

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Actual available storage capacity may be reported for both uncompressed and compressed data and will vary and may be less than stated.

* Please refer to the technical documentation for minimum software-level requirements and specific function or feature support.

1 Grids of more than 4 systems require RPQ.

2 IBM TS1130 and IBM TS1120 tape drives also support encryption.