Hewlett Packard Enterprise

HPE TFinity ExaScale Tape Library

Proven by the largest data users in the world, the HPE TFinity® ExaScale Tape Library delivers simplified management and scalability to create the ultimate solution for data preservation. With unsurpassed storage density packaged in the smallest footprint of any enterprise library on the market, the HPE TFinity ExaScale Tape Library storage solutions offers industry leading scalability with the speeds necessary to meet requirements of the most demanding environments.

Once data expands beyond the limits of the initial configuration, customers have the ability to scale from 45 to 40,680 TS11xx Technology slots, and can store up to 1.52 EB of compressed enterprise data using TS1155 Tape Technology. Alternatively, using LTO Technology you can scale from 50 to 53,460 LTO slots, to store over 801 PB of compressed enterprise data. With up to 144 drives, you can transfer data at a rate of up to 186.6 TB/hr (362.9 TB/hr compressed) using TS1150 or TS1155 Technology or 155.5 TB/hr (388.8 TB/hr compressed) using LTO-7 tape technology.

The HPE TFinity ExaScale Tape Library provides support for both LTO and TS11xx tape technology to be used concurrently in a single library. Customers can migrate between the technologies—enabling customers to select the tape technology that is most appropriate for their business needs.

Key features and benefits

High performance
- The HPE TFinity ExaScale library is built with the highest performance achievable in automated tape technology. From robotics, to drives, to software, to media, all performance innovations are included in these storage libraries.

- The transporter has been designed with goals of performance and reliability. These are accomplished by reduced cycle time or tape mount time (better performance) and increased mean time between failures (better reliability).

- With TS1155 Technology, at maximum drive configuration, transfer data up to 186.6 TB/hr (362.9 TB/hr compressed).

High capacity
- When data center real-estate counts, the HPE TFinity ExaScale Tape Library offers you incredible storage density and one of the smallest footprints through a unique and highly efficient library design built to fit into a standard rack-row layout for additional storage capacity in less floor space.

- Using innovative "shelves" instead of slots and TeraPack containers in place of individual cartridges, the HPE TFinity ExaScale's Tape Library density uses less floor space.

- With TS1155 Technology, you can store up to 610 PB (1.52 EB compressed) of data at the maximum slot configurations. With TS11xx Technology, capacity can range from 45 to 40,680 slots and 1 to 144 drives.

Built-in flexibility
- HPE TFinity ExaScale Tape Libraries can operate two different kinds of tape technology in the same library: LTO and TS11xx tape technology. This mixed media capability, paired with extensive software and hardware partners, mean that organizations can develop customized workflows for every situation.

- Empty TeraPacks provide a means to import tape media, already written with data, into a new library for continued use or migration. TeraPacks provide additional storage outside of the library.

- Thin provisioning optimizes the available storage in the partitions of a tape library. Administrators can change the size of a partition in the library without reconfiguring the entire library. It provides virtual storage capacity for simplified administration, reduced downtime and costs.

- Custom decorative skins enable customers to brand their data centers and the HPE TFinity ExaScale Tape Library. Customers can graphically customize the panels in nearly any way they would like.

High reliability

- The HPE TFinity ExaScale Tape Library includes a redundant dual robotic infrastructure that not only provides for a failover solution, but also twice the working ability. All of the parts and pieces have been carefully crafted and integrated for maximum reliability.

- Offers a sophisticated suite of standard features allowing you to actively check data already written to tape. Data integrity verification examines media health before and after data writes, when enabled. Integrated BlueScale® Encryption provides automatic data protection.

- PreScan checks each imported tape and verifies that the tape can be safely written to. QuickScan scans a tape uni-directionally to provide a rapid indicator of integrity of data written. FullScan confirms that there are no media errors on the tape by reading the entire length of the tape.

- A high level of encryption security, with compression, for strong backup data privacy to secure confidential information and address compliance quickly. Supports WORM media (using LTO-7, LTO-6), providing a fail-safe method for permanently storing data records.

HPE TeraPack Media

HPE TeraPack Media is designed to ensure that users have the most reliable and automated tape storage available. No other supplier places as much emphasis on continual enhancements and features that simplify all aspects of the media management process. From manufacturer selection to testing and customer shipment, every step of the HPE brand qualification process is designed to ensure customers have the most reliable and automated tape storage available.

1 **Quality:** Hewlett Packard Enterprise believes that the test program for HPE Ultrium storage supplies is the most thorough and comprehensive in the industry. In order to carry the HPE brand, designated cartridges must satisfy an exhaustive battery of additional procedures that relate directly to how the product is used in real life situations when real data and real businesses are at stake. Some of these procedures—for example, "five corner" environmental interchange, load/unload for automation, ageing simulation and drop testing are not found in the standard logo test. These exhaustive tests on media and both HPE and non-HPE drives ensure that HPE LTO Ultrium storage supplies will always offer maximum reliability even in the most extreme conditions. Unique to TeraPack media, a special CarbideClean® process adds further peace of mind for HPE TFinity ExaScale Tape Library customers.

2 **Intelligence:** Media lifecycle management (MLM) reduces the most common media-related failures. MLM allows you to proactively manage your tape inventory through simple monitoring of over 40 health statistics and automatically identifies at-risk tapes ready for retirement.

3 **Verification:** HPE TeraPack Media assures data integrity using an integrated, intelligent, and comprehensive set of data integrity verification (DIV) tools when integrated with your tape library. PreScan verifies your tapes are safe prior to usage and QuickScan and FullScan verify your data has been properly written to tape.

4 **Protect:** When combining HPE TeraPack Media and our tape library families integrated BlueScale Encryption Key Management, your data is protected with a straightforward, easily installed solution.

5 **Management:** Media arrives on customer's doorsteps, individual tapes unwrapped with pre-applied barcode labels bundled in TeraPack containers and ready for bulk-loading into your tape library.

6 **Warranty:** Lifetime Guarantee warrants our tapes to be free from defects in materials and workmanship for the life of the media. All HPE storage media products are supported by a worldwide network of resellers and service providers as well as toll-free 24x7 technical phone support during the warranty period.

HPE TFinity ExaScale technical specifications

Drive type	LTO-6 Ultrium 6650 LTO-7 Ultrium 15000 TS1150 TS1155 144 drives supported (maximum)
Number of cartridge slots	53,460 Maximum supported LTO Ultrium 40,680 Maximum supported TS11xx Tape Technology
Capacity	801 PB (compressed 2.5:1) Maximum using LTO-7 1.52 EB (compressed 2.5:1) Maximum using TS1155 Technology
Transfer rate	388.8 TB/hr Maximum LTO-7 362.9 TB/hr Maximum TS11xx
Host interface	8 Gb Fibre Channel Depending on drive type
Encryption capability	Hardware-based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) SKLM
Form factor	29-in. 42U free-standing frame (maximum of 44)
Dual robotics	Standard

HPE TFinity ExaScale LTO configuration specifications

	HPE TFinity ExaScale 3 Drive Bay assembly **Maximum 12 LTO Drives, 920 Slots**	**HPE TFinity ExaScale 6 Drive Bay assembly** **Maximum 24 LTO Drives, 800 Slots**
Model differentiator	Main Frame with 3 Drive Bay Assembly. Maximum 12 LTO Drives, 920 Slots in base frame. Minimum configuration includes Base Frame and 2 service frames, total 1920 Slots.	Main Frame with 6 Drive Bay Assembly. Maximum 24 LTO Drives, 800 Slots in base frame. Minimum configuration includes Base Frame and 2 service frames, total 1800 Slots.
Drive type	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA
Number of cartridge slots	1920 Maximum (including 2 Service Bays)	1800 Maximum (including 2 Service Bays)
Capacity	28.8 PB (compressed 2.5:1) Maximum with LTO-7 Drives	27 PB (compressed 2.5:1) Maximum with LTO-7 Drives
Transfer rate	32.4 TB/hr Maximum with LTO-7 Drives	64.8 TB/hr Maximum with LTO-7 Drives
Host interface	8 Gb Fibre Channel	8 Gb Fibre Channel
Encryption capability	Hardware-based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) SKLM	Hardware-based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) SKLM

HPE TFinity ExaScale TS Technology configuration specifications

	HPE TFinity ExaScale 6 Drive Bay assembly **Maximum 24 TS Technology Drives, 594 Slots**
Model differentiator	Main Frame with 6 Drive Bay Assembly, Maximum 24 TS11xx Technology Drives, 594 slots in base frame. Minimum configuration includes Base Frame and 2 service frames, total 1350 slots.
Drive type	0 Included 4 maximum drives per DBA
Number of cartridge slots	1350 Maximum (including 2 Service Bays)
Capacity	50.62 PB (compressed 2.5:1) Maximum using TS1155 Technology
Transfer rate	60.4 TB/hr (compressed 2.5:1) Maximum using TS1155 Technology
Host interface	8 Gb Fibre Channel
Encryption capability	Hardware-Based Encryption through HPE ESKM SKLM

Warranty, service, and support

Warranty
The HPE TFinity ExaScale Tape Library has a standard warranty that extends one year from the date of shipment from the factory. This warranty includes a Next Business Day service contract. Additional years of warranty service can be purchased.

Service and support
HPE offers a wide range of support options and professional services options. Support options include ongoing telephone and web support, an assisted self-maintenance (ASM) option that stores customer-replaceable spare parts on-site, a global spare drive option, and built-in "phone home" support through the library's AutoSupport feature. Professional Services further extends options through site visits and preventive maintenance options. Customers automatically receive complete installation and integration services.

Learn more at
hpe.com/storage/tfinity

Make the right purchase decision. Chat with our presales specialists.

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