



HPE T950 Tape Library



Are your data storage requirements outstripping your backup, disaster recovery, and archive requirements? Proven by the largest data users in the world, the HPE T950 tape libraries deliver simplified management and scalability to create the ultimate solution for data preservation. The HPE T950 Tape Library provides powerful library management, superior and proactive data integrity administration, and deliver an enterprise tape solution with a low total cost of ownership.

The HPE T950 Tape Library combines field-proven reliability with storage innovation and gives you access to a full suite of enterprise capabilities. Once data expands beyond the limits of the initial configuration, you simply add up to, 120 drives and 10,020 LTO slots (7,614 enterprise slots) in a total of eight frames to keep pace with growing data demands. With a versatile BlueScale® software interface built-in, you have intelligent command, control and data integrity functionality at the touch of a screen. The HPE T950, with its compact footprint, is installed in some of the world's most prestigious organizations to meet their backup, archive and deep storage requirements.

Key features and benefits

High performance

- HPE T950 tape libraries are 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 libraries.
- The transporter has been designed with two primary goals: 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 at a rate of up to 155.5 TB/hr (302.4 TB/hr compressed).

High capacity

- When data center real-estate counts, HPE T950 offers you unsurpassed storage density and a small footprint through a unique and highly efficient library design, providing more storage capacity in less floor space.
- Using innovative “shelves” instead of slots, and TeraPack® containers in place of individual cartridges; the HPE T950 Tape Library uses less floor space.
- Only buy what you need today and add storage capacity as you need it. Upgrade capacity in intervals of 10 LTO or 9 Enterprise tape slots at a time. Tape consolidation is made easy through capacity performance, partitioning, and reporting, resulting in a lower total cost of ownership.
- With TS1155 Technology, you can store over 114.2 PB (285.5 PB compressed) of data at the maximum slot configuration. With TS11xx Technology, capacity can range from 45 to 7,614 slots and 1 to 120 drives.

Built-in flexibility

- HPE T950 tape storage libraries, can operate either LTO-6 and LTO-7 or TS1150 and TS1155 tape technologies. Paired with extensive software and hardware partners, organizations can develop customized workflows for every situation.
- 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, reducing downtime and costs.
- Empty TeraPacks provide a means to import tape media, already written with data, into a new library for continued use or migration. TeraPacks can also provide additional storage outside of the library.

High reliability

- The HPE T950 offer an advanced suite of standard features that allow you to actively check data already written to tape. Data integrity verification (DIV) 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 customers 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 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 T950 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 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 T950 technical specifications

Drive type	LTO-6 Ultrium 6650 LTO-7 Ultrium 15000 TS1150 TS1155 120 drives supported (maximum)
Number of cartridge slots	50–10,020 Maximum supported LTO Ultrium 45–7,614 Maximum supported TS11xx Tape Technology
Capacity	150 PB (compressed 2.5:1) Maximum using LTO-7 285.5 PB (compressed 2.5:1) Maximum using TS1155
Transfer rate	324 TB/hr (Maximum using LTO-7) 302.4 TB/hr (Maximum using TS1155)
Host interface	8 Gb Fibre Channel Depending on drive type
Encryption capability	Hardware-Based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) and SKLM
Form factor	29-in. 42U free-standing frame (maximum of 8)

HPE T950 LTO configuration specifications

	HPE T950 1 Drive Bay Assembly Maximum 4 LTO Drives 1000 Slots	HPE T950 3 Drive Bay Assembly Maximum 12 LTO Drives 920 Slots	HPE T950 6 Drive Bay Assembly Maximum 24 LTO Drives 800 Slots
Model differentiator	1 Drive Bay Assembly Maximum 4 LTO Drives 1000 slots	3 Drive Bay Assembly Maximum 12 LTO Drives 920 slots	6 Drive Bay Assembly Maximum 24 LTO Drives 800 slots
Drive type	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA
Number of cartridge slots	1000	920	800
Capacity	15 PB (compressed 2.5:1) Assumes LTO-7 media; dependent on media type	13.8 PB (compressed 2.5:1) Assumes LTO-7 media; dependent on media type	12 PB (compressed 2.5:1) Assumes LTO-7 media; dependent on media type
Transfer rate	10.8 TB/hr maximum compressed Maximum using LTO-7 Drives	32.4 TB/hr maximum compressed Maximum using LTO-7 Drives	64.8 TB/hr maximum compressed Maximum using LTO-7 Drives
Host interface	8 Gb Fibre Channel	8 Gb Fibre Channel	8 Gb Fibre Channel
Encryption capability	Hardware-Based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) and SKLM	Hardware-Based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) and SKLM	Hardware-Based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) and SKLM

HPE T950 LTO multi-frame configuration specifications

	HPE T950 1 Drive Bay Assembly for multi-frame configurations Maximum 4 LTO Drives 1000 Slots	HPE T950 3 Drive Bay Assembly for multi-frame configurations Maximum 12 LTO Drives 920 Slots	HPE T950 6 Drive Bay Assembly for multi-frame configurations Maximum 24 LTO Drives 800 Slots
Model differentiator	1 Drive Bay Assembly Maximum 4 LTO Drives for multi-frame configurations 1000 slots	3 Drive Bay Assembly Maximum 12 LTO Drives for multi-frame configurations 920 slots	6 Drive Bay Assembly Maximum 24 LTO Drives for multi-frame configurations 800 slots
Drive type	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA
Number of cartridge slots	1000	920	800
Capacity	15 PB (compressed 2.5:1) Maximum using LTO-7 Drives	13.8 PB (compressed 2.5:1) Maximum using LTO-7 Drives	12 PB (compressed 2.5:1) Maximum using LTO-7 Drives
Transfer rate	10.8 TB/hr maximum compressed Maximum using LTO-7 Drives	32.4 TB/hr maximum compressed Maximum using LTO-7 Drives	64.8 TB/hr maximum compressed Maximum using LTO-7 Drives
Host interface	8 Gb Fibre Channel	8 Gb Fibre Channel	8 Gb Fibre Channel
Encryption capability	Hardware-Based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) and SKLM	Hardware-Based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) and SKLM	Hardware-Based Encryption through HPE ESKM BlueScale Professional Encryption (LTO only) and SKLM

HPE T950 TS Technology configuration specifications

	HPE T950 1 Drive Bay Assembly Maximum 4 TS Technology Drives 738 Slots	HPE T950 3 Drive Bay Assembly for multi-frame configurations Maximum 12 TS Drives 684 Slots	HPE T950 6 Drive Bay Assembly for multi-frame configurations Maximum 24 TS Drives 594 Slots
Model differentiator	1 Drive Bay Assembly Maximum 4 TS11xx Technology Drives 738 slots	3 Drive Bay Assembly Maximum 12 TS11xx Technology Drives 684 slots	6 Drive Bay Assembly Maximum 24 TS11xx Technology Drives 594 slots
Drive type	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA
Number of cartridge slots	738	684	594
Capacity	27.67 PB (compressed 2.5:1) Maximum using TS1155 Technology Drives	25.65 PB (compressed 2.5:1) Maximum using TS1155 Drives	22.27 PB (compressed 2.5:1) Maximum using TS1155 Drives
Transfer rate	10.1 TB/hr maximum compressed Maximum using TS1155 Technology Drives	30.24 TB/hr maximum compressed Maximum using TS1155 Technology Drives	60.48 TB/hr maximum compressed Maximum using TS1155 Technology Drives
Host interface	8 Gb Fibre Channel	8 Gb Fibre Channel	8 Gb Fibre Channel
Encryption Capability	Hardware-Based Encryption through HPE ESKM SKLM	Hardware-Based Encryption through HPE ESKM SKLM	Hardware-Based Encryption through HPE ESKM SKLM

HPE T950 TS Technology multi-frame configuration specifications

	HPE T950 1 Drive Bay Assembly for multi-frame configurations Maximum 4 TS Technology Drives 738 Slots	HPE T950 3 Drive Bay Assembly for multi-frame configurations Maximum 12 TS Technology Drives 684 Slots	HPE T950 6 Drive Bay Assembly for multi-frame configurations Maximum 24 TS Technology Drives 594 Slots
Model differentiator	1 Drive Bay Assembly Maximum 4 TS11xx Technology for multi-frame configurations 738 slots	3 Drive Bay Assembly Maximum 12 TS11xx Technology Drives for multi-frame configurations 684 slots	6 Drive Bay Assembly Maximum 24 TS11xx Technology Drives for multi-frame configurations 594 slots
Drive type	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA	0 included 4 maximum drives per DBA
Number of cartridge slots	738	684	594
Capacity	26.67 PB (compressed 2.5:1) Maximum using TS1155 Technology Drives	25.64 PB (compressed 2.5:1) Maximum using TS1155 Technology Drives	22.27 PB (compressed 2.5:1) Maximum using TS1155 Technology Drives
Transfer rate	10.1 TB/hr maximum compressed Maximum using TS1155 Technology Drives	30.24 TB/hr maximum compressed Maximum using TS1155 Technology Drives	60.48 TB/hr maximum compressed Maximum using TS1155 Technology Drives
Host interface	8 Gb Fibre Channel	8 Gb Fibre Channel	8 Gb Fibre Channel
Encryption Capability	Hardware-Based Encryption through HPE ESKM SKLM	Hardware-Based Encryption through HPE ESKM SKLM	Hardware-Based Encryption through HPE ESKM SKLM

Additional resources

QuickSpecs:

hpe.com/h20195/v2/GetDocument.aspx?docname=c05269704

Warranty, service, and support

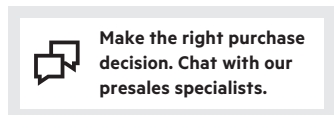
Warranty

The HPE T950 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/t950



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