

### Overview

#### HPE TeraPack® Media

Because HPE offers a comprehensive data protection portfolio for Hybrid IT, it understands the requirements for current and next generation LTO Ultrium tape solutions. In particular, the importance of media reliability in providing a long term home for archive data, as well as a final safeguard against natural disasters, network or power outages, human error, or malicious acts.

HPE TeraPack® Media is designed to make certain that customers have the most reliable and automated tape storage solution available. Our approach places the emphasis on ongoing enhancements and features that simplify virtually all aspects of the media management process.



**HPE TeraPack® Media**

#### Models

##### Description

Description	SKU
HPE LTO-8 Ultrium 30 TB RW Non Custom Labeled TeraPack 10 Data Cartridges	Q2R69A
HPE LTO-8 Ultrium 30 TB RW Custom Labeled TeraPack 10 Data Cartridges	Q2R70A
HPE LTO-8 Ultrium Type M 22.5 TB RW Non Custom Labeled TeraPack 10 Data Cartridges	QS211A
HPE LTO-8 Ultrium Type M 22.5 TB RW Custom Labeled TeraPack 10 Data Cartridges	QS212A
HPE LTO-7 Ultrium 15 TB RW Non Custom Labeled TeraPack 10 Data Cartridges	Q1H01A
HPE LTO-7 Ultrium 15 TB RW Custom Labeled TeraPack 10 Data Cartridges	Q1H02A
HPE LTO-6 Ultrium 6.25 TB BaFe RW Non Custom Labeled TeraPack 10 Data Cartridges	Q1G95A
HPE LTO-6 Ultrium 6.25 TB BaFe RW Custom Labeled TeraPack 10 Data Cartridges	Q1G96A
HPE LTO-6 Ultrium 6.25 TB MP RW Non Custom Labeled TeraPack 10 Data Cartridges	Q1G97A
HPE LTO-6 Ultrium 6.25 TB MP RW Custom Labeled TeraPack 10 Data Cartridges	Q1G98A

## Overview

### Description

	<b>SKU</b>
HPE TS1160 JE Non Custom Labeled TeraPack 9 Data Cartridges	R0R28A
HPE TS1160 JE Custom Labeled TeraPack 9 Data Cartridges	R0R29A
HPE TS1150/TS1155 JD Non Custom Labeled TeraPack 9 Data Cartridges	Q1G99A
HPE TS1150/TS1155 JD Custom Labeled TeraPack 9 Data Cartridges	Q1H00A
HPE LTO Ultrium Cleaning TeraPack 10 Cartridges	Q1H03A
HPE TS Series Cleaning TeraPack 9 Cartridges	Q1H04A
HPE LTO TeraPack Dust Cover	Q1H05A
HPE LTO Empty TeraPack Tray No Cover or Media	Q1J40A
HPE TS Series Empty TeraPack Tray No Cover or Media	Q1J41A
HPE T10000 Empty TeraPack Tray No Cover or Media	Q2P43A

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## Standard Features

### Why Buy HPE TeraPack Media?

- All HPE TeraPack media is pre-initialised using RFID LTO-Cartridge Memory
- This CM flag is unique to HPE TeraPack media and integrates with advanced Media Lifecycle Management tools
  - MLM records up to 40 health statistics every time a tape is loaded
  - Combined with BlueScale software, you can manage, track and report every stage of an individual tape's usage, from creation to retirement, all within the same console
  - BlueScale reporting allows easy visibility of tapes with high error rates, even in multiple drives and partitions, allowing for their removal before they cause data corruption.
- MLM / BlueScale reporting is only available for pre-initialised TeraPack media - e.g. it is not accessible using non-TeraPack media
- Unique benefits of MLM enabled by TeraPack:
  - Reduce media-related errors
  - Monitor a tape's health at any point during its lifecycle
  - Leverage user-defined thresholds to protect critical data sets
  - Quickly identify overused and underused media
  - Identify when media should be retired
  - Know when tape has been used in unplanned locations
  - Simplify and improve troubleshooting
  - Track and monitor cleaning media's history

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### Warranty and Support

Includes a limited lifetime warranty, fully supported by a worldwide network of resellers and service providers as well as toll-free 24 X 7 technical phone support during the warranty period. For full details on warranty and support for pre-labeled media, please go to: <https://www.hpe.com/us/en/contact-hpe.html>

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### Reliable Archival Storage and Restore

- Only the highest quality media becomes HPE TeraPack Media. This makes certain you have the most reliable and worry-free data protection possible.
- HPE TeraPack Media also undergoes a unique 'Carbide Clean' process to remove any trace of debris that may have originated during manufacturing or transportation, giving you additional peace of mind that your system will run at peak performance.

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### Protection and Encryption

When combining HPE TeraPack Media with HPE's Enterprise tape library integrated BlueScale® Encryption Key Management, your data is protected with a straightforward, easily installed solution.

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### Intelligence and Verification

- Media Lifecycle Management (MLM) allows you to proactively manage your tape inventory through simple monitoring of over 40 health statistics.
  - 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.
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## Standard Features

### Ease of Management and Installation

- Media is customized with individual tapes unwrapped and pre-applied barcode labels bundled in TeraPack containers, ready for bulk loading. A myriad of choices allow you to specify the exact number of tapes you require in custom or non-custom barcode sequences.
- An optional dust cover is available for off-site storage in archive.
- TeraPack architecture utilizes 3D space within the library frame increasing density per square foot. Multiple tape cartridges are grouped in a single container that is used throughout the library and beyond.
- Library robotics can transport a TeraPack within the library and select a requested tape from the TeraPack case. In this unique architecture, each TeraPack case equals 9 x Enterprise media or 10 x LTO media tape slots.
- A robot can move a bar-coded TeraPack case that contains 9 or 10 pieces of media in a single robotic move, while other tape libraries require 9 or 10 separate robotic moves to accomplish this task.
- Traditional libraries organize tapes one-tape-deep along the library chassis wall. The T950 library uses TeraPack cases to store tapes, with each TeraPack case extending into the library's interior. This provides HPE Tape Libraries with very high density, allowing more tapes in a given area than competitors' libraries.

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### CarbideClean®

The CarbideClean® process provides HPE TeraPack users with extra peace of mind that they have the most reliable media - right from the very first time they load a tape into the drive. Carbide Cleaning removes any vestiges of microscopic debris from the tape surface, maximising the potential that every bit is written and helping to extend the life of your tape drive.

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## Related Options

### Related Hardware Options

#### HPE T950® Tape Libraries

Meeting enterprise data growth challenges head-on, HPE T950 Tape Libraries deliver enormous scalability to keep pace with unpredictable data growth. Choose from a range of base configurations and scale up to 10,020 LTO tape cartridges in increments of 10 slots or 7,615 TS11xx Technology tape cartridges in increments of 9 slots for capacity on demand. Incorporating between 1 and 120 tape drives you can consolidate and store up to 456 PB (compressed 2.5:1) using TS1160 Technology or 300 PB (compressed 2.5:1) using LTO-8 tape cartridges, of enterprise data. Learn more at <http://www.hpe.com/storage/t950>

#### HPE TFinity® ExaScale Tape Libraries

Meeting enterprise data growth challenges head-on, HPE TFinity® ExaScale Tape Libraries deliver enormous scalability to keep pace with unpredictable data growth. Choose from a range of base configurations and scale up to 53,460 LTO-8 tape cartridges or 40,680 TS11xx Technology cartridges in increments of 10 LTO or 9 TS11xx Technology slots for capacity on demand. Incorporating between 1 and 144 tape drives you can consolidate and store up to 2.4 EB (compressed 2.5:1) using TS1160 Technology or 1.6 EB (compressed 2.5:1) using LTO-8 tape cartridges of enterprise data. Learn more at <http://www.hpe.com/storage/tfinity>

Storage Temperature:	60° to 90° F (16° to 32° C)
Archival Temperature:	41° to 73° F (5° to 23° C)
Wet Bulb (not to exceed) Temperature:	79° F (26° C)
Humidity:	10 to 80% (Operating) 20 to 60% (Archival)

## Technical Specifications

LTO Ultrium TeraPack Media					
Part Name	HPE LTO-6 BaFe	HPE LTO-6	HPE LTO-7 & LTO-8 Type M	HPE LTO-8	HPE LTO Cleaning
	Non Custom / Custom Data Cartridge				Cleaning Cartridge
Part Number	Q1G95A/Q1G96A	Q1G97A/Q1G98A	Q1H01A/Q1H02A QS211A/QS212A	Q2R69A/Q2R70A	Q1H03A
Format	LTO-6 BaFe	LTO-6 MP	LTO-7 LTO-8 Type M	LTO-8	LTO Cleaning Tapes
Media Format	Re-Writable	Re-Writable	Re-Writable	Re-Writable	-
Quantity per Package	10 cartridges per TeraPack				
Native Uncompressed Capacity	2.5 TB	2.5 TB	6.0 TB LTO-7 9TB LTO-8 Type M	12.0 TB	-
Compressed Capacity	6.25 TB	6.25 TB	15 TB LTO-7 22.5 TB LTO-8 Type M	30 TB	-
Tape Length	846 m	846 m	960 m	960 m	319 m
Tape Width (Metric)	12.65 mm				
Tape Thickness	6.1 um	6.4 um	5.6 um	5.6 um	8.9 um

## Technical Specifications

LTO Ultrium TeraPack Media					
Particle Type	BaFe	MP	BaFe	BaFe	MP
<b>Bit Density</b>	343 kbits/inch	343 kbits/inch	485 kbits/inch	525 kbit/inch	-
<b>Number of Data Tracks</b>	2176	2176	3584 LTO-7 5376 LTO-8 Type M	6656	-
<b>Magnetic Layer Coercivity</b>	2280 Oe	2850 Oe	2850 Oe	2300 Oe	-
<b>Archival Storage Life</b>	30 years				-
<b>Warranty</b>	Limited Lifetime Warranty				
<b>Environmental Operating Temperature</b>	10 to 45°C (50 to 113°F)				
<b>Relative Humidity</b>	10-80%				
<b>Maximum wet bulb temperature</b>	26°C (79°F)	26°C (79°F)	26°C	26°C	26°C
<b>Environmental Storage Conditions Temperature</b>	16 to 32°C (61 to 90°F)				
<b>Relative Humidity</b>	20-80%				20-60%
<b>Maximum wet bulb temperature</b>	26°C (79°F)				

## Technical Specifications

HPE TS Series Technology TeraPack Media			
Part Name	HPE TS Series (TS115X and TS1160) Non Custom TeraPack	HPE TS Series (TS115X and TS1160) Custom TeraPack	HPE TS Series Cleaning TeraPack
Part Number	Q1G99A, R0R28A	Q1H00A, R0R29A	Q1H04A
Format	TS1150, TS1155, TS1160	TS1150, TS1155, TS1160	-
Media Format	Re-Writable	Re-Writable	-
Quantity per Package	9 cartridges per TeraPack		
Native Uncompressed Capacity	TS1150 10 TB TS1155 15 TB TS1160 20 TB	TS1150 10 TB TS1155 15 TB TS1160 20 TB	-
Compressed Capacity	TS1150 25 TB TS1155 37.5 TB TS1160 60 TB	TS1150 25 TB TS1155 37.5 TB TS1160 60 TB	-
Tape Length	1072 m	1072 m	318 m
Tape Width (Metric)	12.65 mm	12.65 mm	12.65 mm
Tape Thickness	5.0 um	5.0 um	5.0 um
Archival Storage Life	30 years		-
Warranty	Limited Lifetime Warranty		
Environmental Operating Temperature	16 to 25°C (61 to 77°F)		
Relative Humidity	20-50%		
Max Wet Bulb Temperature	26°C (79°F)		



## Summary of Changes

Date	Version History	Action	Description of Change
06-Apr-2020	Version 3	Changed	QuickSpecs layout was updated
06-May-2019	Version 2	Changed	New TS1160 information Overview, Technical Specifications and Related Options sections were updated.
05-Feb-2018	Version 1	Added	New QuickSpecs.



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For tape drives and media, 1 GB = 1 billion bytes. Actual formatted capacity is less.

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