# HPE Storage LTO Ultrium Cartridges

## HPE LTO-9 Ultrium 45TB RW 20 Data Cartridges Library Pack without Cases (Q2079AH)

### What's new

- Massive increase in capacity—400% over the native capacity of LTO-7 (30 TB for LTO-10 versus 6 TB for LTO-7)
- Increase in native performance—possible to store 1.44 TB/hr using LTO-10 (full-height only)
- Built-in AES 256-bit encryption (IEEE1619.1) (LTO-5 through LTO-10)—granted FIPS140-2 Level 1 certification.

## Overview

HPE Storage LTO Ultrium Cartridges provide up to 75 TB of ultra-low-cost storage to protect your data against the threat of cyberattack and meet the need for maximum reliability when restoring data. They enable businesses to comply with the recommendations of law enforcement agencies around the world to maintain offline copies of their data. Built upon a 25-year legacy of ten generations, with native transfer speeds of up to 400 MB/s for LTO-10, there is a platform for every budget. Secure AES-256 encryption (per FIPS 197) provides even higher levels of data security and compliance with the most stringent industry regulations to prevent unauthorized data access. Linear Tape File System (LTFS) makes using tape as easy, flexible, portable and intuitive as using other removable and shareable media, such as a USB drive. Also, because LTO cartridges at rest require minimal additional power

and cooling, they offer a greener, more sustainable long-term archival solution for your data.

## Features

**Reliable Offline Medium that Creates an Air Gap to Keep Data Out of the Reach of Cybercriminals**

Government agencies around the world recommend keeping copies of data offline. Using LTO technology from HPE storage lets you place data behind an airgap. It can help protect data from criminals using connected networks to try and encrypt both your primary and backup data.

Built-in AES 256-bit encryption (LTO-5 to LTO-10) allows you to provide additional security for data stored on tape. With LTO encryption (strengthened by the option to use WORM cartridges), even if those tapes fall into the wrong hands, the data they contain is protected from unauthorized access.

HPE LTO Ultrium cartridge memory chip delivers faster access time and enhanced media monitoring.

First time restore ensured with fewer media failures and disrupted backups, regardless of duty cycle or environmental conditions.

**Lowest Total Cost of Ownership for Long-term Archiving**

According to a white paper from Solutions North, "Data Economics: LTO-9 Optimizing Data Value" (2023), LTO technology has a measurable Return on Investment of up to 1856% when compared to cloud storage and 501% compared to HDD.

Standardizing on HPE Storage LTO Ultrium Cartridges delivers the capacity to meet shrinking backup windows, industry-standard, AES 256-bit encryption (IEEE1619.1), and interchangeable read-write (RW) or WORM media without extra space or IT resource overhead.

Open standard technology helps ensure compatibility across product generations and gives you more choice. HPE Storage LTO Ultrium Cartridges are available as custom labeled or non-custom labeled.

HPE brand qualification test procedures (load/unload, shoeshine, drop testing and environmental stress testing). This helps ensure greater reliability for restoring your data.

HPE offers a limited lifetime warranty for HPE Storage LTO Ultrium Cartridges, including up to 30 years of archival life, if stored at the recommended storage conditions. This helps businesses meet the ever-increasing demands of regulation for data retention and archiving.

**Highest Capacity and Performance of any Comparable Tape Technology**

HPE LTO-10 Ultrium data cartridges can write or read data at a blistering native 1.44 TB/hour, storing, encrypting, and protecting up to 75 TB* on a single cartridge. This makes them ideal for large-scale, 24x7, mission-critical IT environments (*capacity assumes 2.5:1 compression).

A 69% increase in the number of tracks has permitted a capacity increase from 45 TB for LTO-9 to 75 TB for LTO-10. From 8,960 tracks for LTO-8 30 TB cartridges to 15,104 tracks for LTO-10 75 TB cartridges (assuming 2.5:1 compression).

**Ultra-reliable Storage Medium**

Tape is more reliable than enterprise SATA disk, with an uncorrectable bit error rate (UBER) of 1x10 to the power of 20 for LTO-9 versus 1x10 to the power of 15 for SATA HDDs. This difference of five orders of magnitude means tape is 100,000 times more reliable than enterprise SATA HDD.

The estimated amount of data written before the first error occurs is 125 TB for HDD and 12,500,000 TB for LTO-9.

HPE Storage Tape media brand qualification test procedures (load/unload, shoeshine, drop testing and environmental stress testing) surpass what is required for the industry standard LTO Ultrium media logo.

Superior smart grabber mechanism and mechanical interlock prevent the leader pin from being pulled inside the tape housing. Sensors detect proper connection and prevent leader loss that would ruin the tape. Simplified tape path to reduce wear, tear, and build-up of debris–crucial in automation.

User write-on labels are no longer included with HPE Storage LTO Ultrium Cartridges.

| Technical specifications | HPE LTO-9 Ultrium 45TB RW 20 Data Cartridges Library Pack without Cases |
|---|---|
| **Product Number** | Q2079AH |
| **Archival life** | 30 years |
| **Base material** | Barium Ferrite |
| **Bit density** | 545 kb/inch |
| **Capacity** | 45 TB<br>Compressed 2.5:1<br>Supported |
| **Magnetic coercivity** | 2850 Oe |
| **Data tracks** | 8,960 |
| **Read speed, media** | 1,000 MB/sec (full height drives only, assumes 2.5:1 compression) |
| **Tape length** | 1,035m |
| **Tape thickness** | 5.2 microns minimum |
| **Tape width** | 12.65 mm |
| **Recording technology** | LTO-9 Ultrium |
| **Media format** | Rewritable and Write-once media |
| **Product color** | Light blue |
| **Quantity per package** | 1 |
| **Warranty** | Limited Lifetime Warranty. |

# HPE Services

No matter where you are in your transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From strategy and planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

### Advisory & Professional services

Experts can help you map out your path to hybrid cloud and optimize your operations.

### Managed services

HPE runs your IT operations, giving you unified control, so can focus on innovation.

### Support services

Optimize your entire IT environment and drive innovation.  Manage day-to-day IT operational tasks while freeing up valuable time and resources.

— **HPE Complete Care Service:** a modular service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals. All delivered by an assigned team of HPE experts.

— **HPE Tech Care Service:** the operational service experience for HPE products. The service provides access to product specific experts, an AI driven digital experience, and general technical guidance to help reduce risk and search for ways to do things better.

— **HPE Multivendor Services:** Single point of accountability for managing on-site hardware and software support for multivendor products. HPE experts help manage your IT across technologies and platforms for HPE and non-HPE technologies, acting as the single point of contact for your IT operational needs.

### Lifecycle Services

Address your specific IT deployment project needs with tailored project management and deployment services.

### HPE Education Services

Training and certification designed for IT and business professionals across all industries. Create learning paths to expand proficiency in a specific subject.  Schedule training in a way that works best for your business with flexible continuous learning options

**Defective Media Retention** is optional and allows you to retain Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

### GreenLake

GreenLake is the cloud to run and manage your entire hybrid landscape—private, public, and edge. It helps you to:

— Streamline IT Operations across compute, storage, and networking without the chaos

— Unify and secure data, as you move faster

— Accelerate AI, from pilot to production

The result: greater operational efficiency, lower TCO, and faster AI delivery—all from one unified, intelligent platform built for today's hybrid enterprise.

For additional technical information, available models and options, please reference the QuickSpecs

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Parts and Materials: HPE will provide HPE-supported replacement parts and materials required to maintain the covered hardware.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

Image may differ from the actual product.

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