

Data sheet



# HP StoreEver LTO Ultrium Tape Drives

Meet data protection and storage challenges head-on



December 2012

What if your storage gave you improved performance, smoother manageability, and better data security? With six generations of Linear Tape-Open (LTO) technology backing, storing up to 6.25 TB per cartridge (compressed), HP StoreEver LTO Ultrium Tape Drives are just what you need. Integrated with HP TapeAssure for manageability, hardware data encryption, and HP StoreOpen with Linear Tape File System (LTFS) for ease of use, HP StoreEver LTO Ultrium Tape Drives enable better data security and faster tape performance, so you get centralized management, easier administrative control, and cost-effective data protection, every day.

HP StoreEver LTO Ultrium Tape Drives are essential for a good disaster recovery plan and as key media for archiving. The portability of tape allows it to be easily and safely stored offsite. Tape provides the last line of defense against virus, fire, floods, hackers, human error, software bugs, and replicated errors that could otherwise put data at risk.

As Businesses understand that storing, securing, and repurposing data assets are fundamental to their success, the position of tape as the ideal low-cost data archiving solution is being strengthened. Tape media is financially viable, and its long shelf life makes it the smarter medium for long-term storage that helps meet regulatory compliance. The adoption of LTO with LTFS is increasing rapidly in the media and entertainment industry, healthcare and medical imaging, video surveillance, and high-performance computing environments.

HP-branded LTO Ultrium media enhances performance reliably. Our cartridges pass exhaustive laboratory tests that go beyond the requirements of industry standard logo specifications. Our goal is to provide greater quality for backup and archiving operations and, for restoring your data when you need it most. Before LTO-6 was launched, we had already completed nearly half a million hours of testing for LTO-6 media, pulling over 500,000 miles of tape. Also in 2011, we conducted over 2.6 million hours of quality control testing for HP LTO Ultrium branded media.

## Key features and benefits

Designed for long-term, durable data protection, and including a number of unique HP reliability features, HP StoreEver LTO Ultrium Tape Drives offer:

### **Outstanding capacity and performance with monitoring and management capabilities and hardware encryption by:**

- Providing up to 6.25 TB of compressed capacity on a single cartridge
- Offering up to 1.44 TB/hr data transfer rate to enable smoother performance for even the tightest backup window
- Providing users with the ability to use standard file operations on tape media for accessing, managing, and sharing files with an interface that behaves just like a hard disk because HP StoreOpen with LTF5 makes tape self-describing, file-based, and easy to use
- Allowing the switch from reactive to proactive management with HP TapeAssure that monitors drive and media utilization operational performance, and life/health information for drive and media
- Providing highest level of security with hardware data encryption to secure confidential information and addresses compliance quickly, with fewer cartridges

### **Premium technology for enhanced reliability with:**

- Robust store and restore over extended periods with tape head-positioning designed to flex with time and conditions
- Energy efficiency with the new LTO-6 hibernate mode
- Dynamic data rate matching for enhanced performance
- Leading Mean-Time-Between-Failure (MTBF) of 250,000 hours at 100 percent duty cycle<sup>1</sup>

### **Connectivity and compatibility**

- A wide choice of models including internal, external, and rack mount, a choice of interfaces SAS and SCSI, and wide connectivity to server platform including vendors such as Dell, IBM, and Sun Software compatibility includes an extensive list of supported backup and archiving software applications from HP, CA, VERITAS

### **Complete solution straight out-of-the-box**

- Provides a complete solution to protect your data with HP LTO media, cleaning cartridges (with full height drives), and the option to download a free copy of Yosemite Server Backup Basic software with support for hardware data encryption and One-Button Disaster Recovery (OBDR), cables, and documentation
- Restores your entire ProLiant system with OBDR, without the need for system disks or software CDs
- Offers a secure method for archiving records with WORM data protection capability to help meet industry compliance regulations

<sup>1</sup> HP internal testing, November 2012

## Technical specifications



### HP LTO Ultrium Cartridges

<b>Recording technology</b>	LTO-1 Ultrium, LTO-2 Ultrium, LTO-3 Ultrium, LTO-4 Ultrium, LTO-5 Ultrium, LTO-6 Ultrium
<b>Media labeling</b>	Write-on labels in box
<b>Media format</b>	Rewritable and Write-once media
<b>Quantity per package</b>	1 Maximum, depending on model
<b>Capacity</b>	6.25 TB Compressed 2.5:1 Maximum, depending on model
<b>Read speed</b>	400 MB/s Maximum, depending on media type
<b>Product color</b>	LTO-1 medium blue; LTO-2 red; LTO-3 yellow; LTO-4 green; LTO-5 light blue; LTO-6 purple
<b>Tape length</b>	846 m Maximum, depending on model
<b>Tape width (metric)</b>	12.65 mm
<b>Tape thickness</b>	6.4 mm Minimum, depending on model
<b>Base film type</b>	Metal particle or Barium ferrite
<b>Bit density</b>	343 Kb/in. Maximum, depending on model
<b>Number of data tracks</b>	2,176 Maximum, depending on model
<b>Magnetic layer coercivity</b>	2500 - 2700 Oe Maximum, depending on model
<b>Archival storage life</b>	30 years
<b>Drive compatibility</b>	Storage Media Compatibility Matrix: <a href="http://hptapecompat.com">hptapecompat.com</a>
<b>Warranty standard statement</b>	Limited lifetime

## Technical specifications



### HP StoreEver LTO Ultrium Tape Drives

<b>Recording technology</b>	LTO-2, LTO-3, LTO-4, LTO-5, and LTO-6
<b>Capacity</b>	Up to 6.25 TB compressed 2.5:1
<b>Transfer rate</b>	Up to 1.44 TB/hr compressed 2.5:1
<b>Buffer size</b>	Up to 512 MB
<b>Host interface</b>	6 Gb/s SAS, 3 Gb/s SAS, Ultra 320 LVD SCSI (depending on the model)
<b>LTFS Support</b>	LTO-5 and LTO-6
<b>Encryption capability</b>	Yes (LTO-4, LTO-5, and LTO-6)
<b>WORM capability</b>	Yes (LTO-3, LTO-4, LTO-5, and LTO-6)
<b>Form factor</b>	5.25 inch, full height or half height (depending on the model)
<b>Warranty</b>	3-year, next-day, product exchange, limited warranty, plus 9x5 phone support

## The total package—Solution value statements

### HP ProLiant Server and HP LTO Ultrium Tape Drives

LTO Ultrium Tape Drives are ideal for use with HP ProLiant servers, providing reliable, affordable data protection for your ProLiant system. With up to 6.25 TB stored on a single LTO-6 cartridge in just over four hours, these drives provide a balance of price and performance for medium and enterprise business environments.

In addition, ProLiant customers using an Integrated Lights-Out (iLO) or RiLO card can take advantage of the remote restore functionality of HP OBDR to restore a ProLiant server remotely.

### HP Technology Services

HP Technology Services are the trusted business technology experts who manage your technology in action, because when technology works, business works.

Partner with HP to boost availability and avoid costly downtime by mitigating technology-related business risks. To help take the worry out of deploying, supporting, and managing your HP LTO Ultrium Tape Drives storage solution, we've designed a portfolio of service options that are as flexible, scalable, and affordable as our storage.

## Better technology, better management

HP Technology Services helps take the worry out of deploying, supporting, and managing your HP StoreEver LTO Ultrium storage solution—trust the services professionals at HP to boost availability and avoid costly downtime.

### We recommend:

- **3-Year HP Support Plus 24 Service:** For a higher return on your storage technology, this three-year combined reactive support option delivers integrated onsite hardware/software support services available 24x7
- **HP Installation Service:** For smooth startup and better business outcomes, this service provides initial hardware installation of your product into your technology environment (system configuration is not included)

## Resources

**To improve IT performance and manageability, visit [HP Proactive Select Service](#)**

**For additional benefits, visit [hp.com/hps/carepack](http://hp.com/hps/carepack)**

**For more information about HP services and support, visit [hp.com/hps/storage](http://hp.com/hps/storage)**

## The total package—Software

### Yosemite Server Backup

Yosemite Server Backup basic backup and recovery software is an easy-to-use application that can be installed in minutes and includes all the features needed to protect a single server. It also includes predefined and customizable media rotation schemes. Up to four parallel data streams keep the Ultrium tape drives streaming. Data encryption can be configured using the easy-to-manage interface. The Bare Metal Disaster Recovery feature supports OBDR for fast and automated recovery of a ProLiant server after a major disaster. To know more, visit [barracudaware.com/ysbbasic](http://barracudaware.com/ysbbasic)

## Service and support

### HP Factory Express

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speed deployment. For more information, visit [hp.com/go/factoryexpress](http://hp.com/go/factoryexpress)

### Customer technical training

We offer a variety of training courses on storage software, networking, archiving, and disk storage systems. Our classes are available in many delivery modalities—from traditional instructor-led courses at one of our 80 training centers worldwide to online and/or onsite training. For more information, visit [hp.com/learn/storage](http://hp.com/learn/storage)

### HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you acquire, manage, and ultimately retire your HP solutions. For more information, visit [hp.com/go/hpfinancialservices](http://hp.com/go/hpfinancialservices)

## For more information

**If your storage needs reliability, security, scalability, and a roadmap for long-term future capacity, HP StoreEver LTO Ultrium Tape Drives can take the guess work out of meeting your storage demands. To begin your journey towards smarter, proactive storage, visit [hp.com/go/tape](http://hp.com/go/tape).**

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