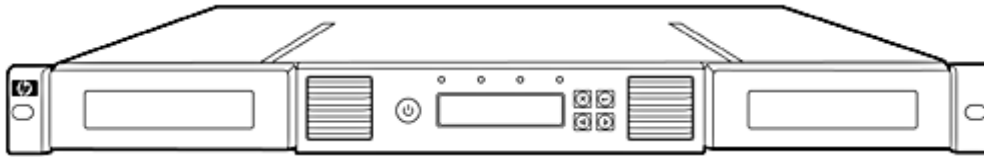


Overview

HPE StoreEver 1/8 G2 Tape Autoloader

The HPE StoreEver 1/8 G2 Tape Autoloader provides a cost-effective and easy-to-manage tape solution. The HPE 1/8 G2 autoloader combines incredible storage density and features into a compact 1U form factor. Capable of up to 120TB of compressed capacity in only a 1U form factor, the autoloader is well equipped to offer room for data growth. Web-based remote management offers the capability to quickly and easily access, configure, monitor, and troubleshoot the autoloader that will reduce dependencies on local IT staff while allowing multiple sites to be supported centrally. Protect confidential information with native encryption, ensuring that if a tape is lost or stolen your data is protected from unauthorized access. Proactively monitor utilization, operational performance, as well as health information for both the drive and media with TapeAssure.



What's New

LTO-7 Ultrium 15000FC and SAS tape drives and tape media are now available.

Key Features

- LTO-7 Ultrium 15000 tape technology delivers 120TB of compressed capacity (2.5:1) in a 1U form factor.
- Easy to install, manage and use integrated solution
- Protect and secure your data with native autoloader encryption
- Predictive and proactive monitoring with Tape Assure
- Integrated web-based remote management
- Flexible tape technology and interface choices to suit your needs
- Easily serviceable and replaceable components

| Family Comparison | 1/8 G2 LTO-7 Ultrium 15000 Tape Autoloader | 1/8 G2 LTO-6 Ultrium 6250 Tape Autoloader | 1/8 G2 LTO-5 Ultrium 3000 Tape Autoloader | 1/8 G2 LTO-4 Ultrium 1760 Tape Autoloader |
|------------------------------------|--|---|---|---|
| Drive Technology | Ultrium 15000 | Ultrium 6250 | Ultrium 3000 | Ultrium 1760 |
| Capacity (compressed 2.5:1) | 120 TB | 50 TB | | |
| Capacity (compressed 2:1) | | | 24 TB | 12.8 TB |
| Data Transfer (max native) | 300 MB/s | 160 MB/s | 140 MB/s | 80 MB/s |
| Interface | 8 Gb/sec FC 6 Gb/sec SAS | 8 Gb/sec FC 6 Gb/sec SAS | 8 Gb/sec FC 6 Gb/sec SAS | 3 Gb/sec SAS (LTO 5, 4, 3) |

Product Highlights

Easy Installation

The 1/8 G2 Tape Autoloader ships as a rack-ready unit. A separate 1/8 G2 Tape Autoloader Rack Kit must be purchased to allow installation in a variety of HPE racks which include the 10000 series, 9000 series, 5000 series and System/E racks.

A set of rubber feet are included in the box if you choose to use the unit on a tabletop or desk. For additional structural rigidity, Hewlett Packard Enterprise recommends the purchase of the 1/8 G2 Rack-to-Tabletop conversion kit which has a maximum load of 33 pounds (15 kilograms) and fully encloses the unit.

Data Protector backup and recovery software

If the Autoloader is for a large environment that requires UNIX support and/or enterprise class application and feature support then HPE Data Protector is the recommended backup and recovery software. If current or future requirements will require Data Protector, this software should be installed from day 1.

For more information and evaluation software please visit:

<http://www.hpe.com/storage/dataprotector>.

HPE StoreOpen Automation

HPE StoreOpen Automation is a free downloadable application that extends the LTFS capability to HPE Autoloaders, HPE MSL and ESL G3 Tape Libraries. By simply mounting the tape autoloader or library as a file system, the intuitive HPE StoreOpen Automation interface makes it easier to copy, rename, create or move files. When a cartridge folder is selected for use, that tape is automatically moved to an available tape drive.

For more information, including user guide, downloads and compatibility, visit:

<http://www.hpe.com/storage/HPStoreOpen>

Manageability

The 1/8 G2 Tape Autoloader allows web-based remote manageability; the unit can be monitored and managed from across the room or across the globe. Functions included in the management tool include:

- Status information on the drive and system
 - System configuration operations and reporting
 - System error and status logs
 - Library and drive firmware upload capabilities
 - Diagnostic tests and information
 - Cartridge movement for maintenance and management purposes
 - Cleaning cartridge support
 - Security and access control
 - SNMP support for IP communications
-

Proven Reliability

With a rating of 2,000,000 robot load/unload cycles, the 1/8 G2 Tape Autoloader provides necessary high reliability for today's demanding environment. To improve reliability and longevity, all HPE Ultrium products feature Data Rate Matching (DRM). This allows the tape drive to dynamically adjust the speed of the drive down to one-third the native transfer rate of the tape drive to match the speed of the host.. This increases performance, reduces mechanical wear on the tape drive, and extends tape life.

Longevity

Organizations need to be confident that their data in archive is still there when they need it. LTO tape media is specified with a 30 year shelf life in normal ambient conditions.

Product Highlights

Disaster Recovery and Security

Removable media also has the advantage that data is held 'offline' which means that archive data on tape has the additional level of protection from the threats to on-line data from viruses, hackers and cyber-attacks. All Ultrium tape drives (since generation 4) include hardware based data encryption to prevent unauthorized access to data at rest and cartridges are available with write-once-read-many (WORM) capability to prevent accidental overwriting of data archived on the tape. Both WORM and hardware data encryption features help organizations to comply with increased data security regulations.

Encryption

The HPE 1/8 G2 Tape Autoloader offers multiple options for data encryption, depending on the requirements for policy, regulation, compliance, and centralized key management.

Protect the confidentiality and integrity of your data:

The HPE 1/8 G2 & MSL Encryption Kit provides a library-enabled encryption solution that greatly enhances data privacy, confidentiality, and integrity of your critical business data while supporting compliance requirements. While there are a wide range of encryption solutions available, the HPE 1/8 G2 & MSL Encryption Kit is intended to be an easy and affordable library-enabled solution for small businesses.

The encryption kit includes two USB key server tokens, product documentation, and firmware support. One encryption kit is needed per library or autoloader and it must be physically accessible so that the USB token can be inserted into the automation device. One of the two tokens will plug into the USB port in the autoloader or library and will generate and maintain encryption keys for the LTO-7, LTO-6, LTO-5 and LTO-4 drives/libraries. The USB key server token uses a hardware random number generator, password authentication, and digital envelopes for strong encryption keys and security operations. The encryption kit provides a self-contained solution for autoloaders and MSL libraries with no additional software, PCs, or servers required or involved.

Protect critical data across an enterprise:

To meet requirements for larger scale encryption key managers, the HPE 1/8 G2 Tape Autoloader supports KMIP 1.2 compliant key managers. With the purchase of the KMIP Encryption License, the 1/8 G2 Tape Autoloader and MSL libraries will be able to request encryption keys from KMIP 1.2 compliant key managers, for data encryption and key management.

For more information on all supported key management servers, please visit:

<http://www.hpe.com/storage/BURACompatibility>

LTO Ultrium Technology

HPE LTO (Linear Tape Open) Ultrium Tape Drives use best of breed technology. By taking the best features from other tape technologies and combining them into a single new technology, Ultrium tape drives are in a league of their own. The LTO Ultrium specification is an industry standard format; thus data written on HPE Ultrium Tape Drives can be interchanged directly with Ultrium Tape Drives from other vendors.

Investment protection

HPE LTO tape drives and automation products are founded on the LTO open standard and adhere to the published LTO format roadmap to Generation 10. The ability to read back two generation and read/write back one generation of media, assures LTO customers' investment protection.

Data Rate Matching

Data Rate Matching combines sophisticated buffer management with variable tape drivemotor speeds to match the tape drive transfer rate to the host output. . This feature ensures that the tape drive continues to stream data regardless of the environment, and brings three big advantages:

- It optimizes performance and maximizes overall efficiency, allowing the drive to respond immediately to any data speed changes from the host.
- It minimizes rewinding and repositioning of the tape, significantly reducing physical wear and increasing reliability.
- It minimizes the power requirements for the drive by reducing the number of repositions

Product Highlights

needed.

| LTO Ultrium Tape Drive | ATS data transfer rate range (native) |
|-------------------------|---------------------------------------|
| HPE LTO-7 Ultrium 15000 | 101 to 300 MB/s |
| HPE LTO-6 Ultrium 6250 | 54 to 160 MB/s |
| HPE LTO-5 Ultrium 3000 | 47 to 140 MB/s |
| HPE LTO-4 Ultrium 1760 | 33 to 80 MB/s |

HPE Ultrium WORM

Critical to the success of data retention policies in highly regulated environments is the ability to store and manage data in an unalterable state. Following stringent guidelines set forth by regulatory agencies such as the SEC and HIPPA, IT organizations must now integrate new solutions and policies that can verify the integrity of stored data for periods that can extend well beyond seven years. Every generation of LTO Ultrium since LTO-3 tape drives feature the ability to archive and store data in a read-only, non-rewriteable format that meets the most stringent regulatory guidelines. Using a combination of integrated fail-safe features in the drive firmware, cartridge memory, and tape formatting, LTO Ultrium provides the ability to archive large amounts of data for periods of up to 30 years in a secure, untampered state. Ultrium tape drives include support for both rewritable and WORM media providing for a secure, long-term archiving solution into any data protection strategy. LTO Ultrium WORM provides the following advantages:

- A single drive to support all backup and archiving needs
- Two distinctive tape cartridges to easily distinguish and manage both rewriteable and WORM data cartridges
- A specially designed WORM data cartridge with multiple integrated fail-safe features to prevent accidental or intentional overwriting of data
- Support from many backup and archiving software vendors, providing the most comprehensive and mainstream support in the industry
- The LTO open standard that offers greater choice and compatibility across all third- and fourth-generation LTO Ultrium products

NOTE: While all HPE LTO-7, LTO-6, LTO-5, and LTO-4 Ultrium tape drives support LTO Ultrium WORM media, some third, fourth and fifth-generation LTO Ultrium tape drives from other manufacturers may not include read and write support for LTO Ultrium WORM media. For non-HPE third- and fourth-generation LTO Ultrium tape drives, please check the manufacturers' specifications to ensure this support is provided if you are using your WORM media. If WORM support is not provided, the drive will eject the WORM tape cartridge immediately upon insertion into to the tape drive.

HPE Library and Tape Tools

The 1/8 G2 Tape Autoloader is supported on The Hewlett Packard Enterprise industry-leading diagnostic tool - HPE Library and Tape Tools (L&TT). L&TT is a single, convenient program that's a snap to install and simple to operate. L&TT's intuitive user interface eliminates the need for training and deploys in less than five minutes. This robust diagnostic tool is designed for both the experienced professional and the untrained administrator. It ensures product integrity through self-diagnostics and fast resolution to device concerns. Additional information on L&TT plus download information can be found at: <http://www.hpe.com/support/tapetools>.

HPE Storage Media

Hewlett Packard Enterprise recommends that you use Hewlett Packard Enterprise cartridges in the 1/8 G2 Tape Autoloader to assure the highest level of protection for your valuable data. The test program for HPE media is the most thorough and comprehensive in the industry.

All HPE cartridges must satisfy an exhaustive battery of additional tests that relate directly to real life situations, where real data and real businesses are at stake. The benefit of the Hewlett Packard

Product Highlights

Enterprise brand specification for media is consistent quality. Through the testing of thousands of HPE drives and HPE cartridges, the ideal formulation for backup performance is defined and then continuously monitored. This hugely resource-intensive process is unique to Hewlett Packard Enterprise and affords deep insight into the HPE backup solution for a wide range of environments and duty cycles. Your best choice for ease of support and maximum dependability is to use HPE-branded Ultrium cartridges at all times.

Factory Express Portfolio for Servers and Storage

HPE Factory Express offers configuration, customization, integration and deployment services for HPE servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. Customization must comply with all relevant product specifications and factory supported configurations.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. Type of service support varies by platform and product family. For more information on Factory Express services for your specific server model or storage device please contact your sales representative or go to: <http://www.hpe.com/info/factoryexpress>.

Compatibility

Compatibility

The Hewlett Packard Enterprise extensive compatibility testing program assures that your HPE 1/8 G2 Tape Autoloader works with leading servers, operating systems, and backup applications - and not just those sold by HP. The 1/8 G2 Tape Autoloader works seamlessly in many environments, making them especially suitable if you have a mixed system environment. For the latest list of servers, workstations, operating systems, and backup software that support the 1/8 G2 Tape Autoloader, reference the HPE Data Agile BURA Compatibility Matrix (Formerly EBS) at:

<http://www.hpe.com/storage/BURAcompatibility>.

NOTE: The 1/8 G2 Tape Autoloader requires an HBA with multiple LUN support and should not be used with RAID or Array controllers

Server Compatibility

The 1/8 G2 Tape Autoloader is supported on a wide range of HPE systems. For details of which 1/8 G2 Tape Autoloader works with which systems, including third-party systems, reference the HPE Data Agile BURA Compatibility Matrix (Formerly EBS) at:

<http://www.hpe.com/storage/BURAcompatibility> for the latest hardware compatibility information.

OS Support

Reference the HPE Data Agile BURA Compatibility Matrix (Formerly EBS) for the most up-to-date OS compatibility information at: <http://www.hpe.com/storage/BURAcompatibility>.

Software Support

Reference the HPE Data Agile BURA Compatibility Matrix (Formerly EBS) for the most up-to-date software compatibility information at: <http://www.hpe.com/storage/BURAcompatibility>.

Service and Support, HP Care Pack, and Warranty Information

Warranty

The warranty for this product consists of 1-year parts exchange, next business day.

For increased uptime, productivity and ROI, HPE Care Pack packaged services for Storage

These days, you need to get the most out of your storage investment—you can't afford not to. When you buy HPE storage products and solutions, it's also a good time to think about what levels of service and support you may need. To help take the worry out of deploying, designing, maintaining, and managing your environment, we've designed a portfolio of service options that are as flexible, reliable and scalable as your storage. Unlike storage-only vendors, we take a holistic approach to your entire environment, bridging storage, servers, blades, software and network infrastructures with our HPE Care Pack packaged services for Storage.

Protect your business beyond the warranty

When it comes to robustness and reliability, standard warranties on today's computing equipment have matured just as the technologies have matured. Good news on some fronts—but also a source of potential problems and subsequent consequences that come from depending on standard warranties alone. Standard warranty protects against product defects and some causes of downtime— but not the business. By using a standard approach to warranty uplifts, such as HPE Care Pack Services, you can reduce downtime risks and be more certain of operational consistency for both mission-critical and standard business computing. Simply put, HPE Care Pack Services normalize the warranty of combined products - helping you proactively guard against unplanned downtime.

Extending warranties with HPE Care Pack Services

For cost-effective upgrading or extending your standard warranty, HPE Care Pack Services offer a suite of standard reactive hardware and software support services that are sold separately, or combined as with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition, with HPE Proactive Select we offer an innovative approach to service delivery that gives you the flexibility to acquire the specific proactive services you need today, then add services as your needs evolve. HPE Proactive Select offers a broad set of technical or per-event type service options - including server, storage, and network, SAN device, and software, environment, installation and education services. Services that you can mix and match depending on your specific requirements, from preliminary planning and equipment delivery to installation, configuration, integration, and testing, through every level of ongoing support. Our HPE Care Pack packaged services for Storage assures help when you need it most. And for many products, post-warranty HPE Care Pack Services are available when your original warranty has expired.

HPE Storage Services: Offering reliability, flexibility and value—just like your storage

HPE Storage Services offers a full spectrum of customer care, from technology support to complex migrations to complete completely managed services. HPE Factory Express provides customization, integration and deployment services for turnkey solutions. HPE Education offers flexible, comprehensive training on storage networking, disk storage systems, and storage software to help your IT staff get the most out of your investments. And HPE Financial solutions extend innovative financing and asset management programs to cost-effective buy, manage and eventually retire your older equipment.

HPE Storage Services, the trusted business technology experts who manage your technology in action, because when technology works, business works. <http://www.hpe.com/services/storage>

NOTE: Care Pack Services availability may vary by product and country.

HPE Care Pack Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from Hewlett Packard Enterprise or an enterprise reseller are quoted using Hewlett Packard Enterprise order configuration tools.

Recommended HPE Care Pack Services for optimal satisfaction with your HPE product.

Recommended Services HPE Foundation Care 24x7 connects you to HPE 24 hours a day, seven days a week for assistance on resolving issues - hardware onsite response within four hours and software call back within two hours after opening your case. Three years' coverage recommended with HPE Care Pack Service.

Service and Support, HP Care Pack, and Warranty Information

HPE Install Storage Autoloader/Tape Drive Array Service

For smooth startup and better business outcomes, HPE Install Storage Autoloader/Tape Drive Array Service- this service provides initial hardware installation into your server technology environment (system configuration is not included). Leverage the full strength of HPE Technology Services - customers can trust the services professionals at Hewlett Packard Enterprise to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

- Allows your IT resources to stay focused on their core tasks and priorities
- Reduces implementation time, impact and risk to your storage environment

<http://h71028.www7.hpe.com/ERC/downloads/5981-9356EN.pdf>

HPE Proactive Select Service

Hewlett Packard Enterprise Proactive Select Service improves your IT performance and manageability through the use of cost effective flexible services. Hewlett Packard Enterprise provides technical expertise and best practices to accelerate ROI of your technology investment. Selectable proactive services span a wide range of technology and process services - a flexible way to purchase proactive services that fit your particular environment and situation.

Hewlett Packard Enterprise Proactive Select Service is technology agnostic and purchased in addition to your choice of underlying reactive support.

- Access to a list of flexible and customizable proactive service activities
- Enhance customers' in-house IT team with complementary assistance from Hewlett Packard Enterprise
- Improved time to solution
- Reduce business risk and project costs by accessing HPE specialists
- Simplify IT operational procedures by leveraging HPE best practices

<http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA2-3842ENN.pdf>

eSupport

HPE eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

Support Portal

The Hewlett Packard Enterprise support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires a Hewlett Packard Enterprise service agreement. To access the support portal, visit <http://www.hpe.com/support>

Customer Technical Training

Consider education as an integral part of your strategy to get the best return on investment for your HPE storage solution. Hewlett Packard Enterprise offers a variety of training courses on storage

Service and Support, HP Care Pack, and Warranty Information

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 on-site training customized to your needs or online. <http://www.hpe.com/learn/storage>

HPE Services Awards

HPE Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction. For a list of all our awards, please visit

<http://h20219.www2.hpe.com/services/cache/433028-0-0-225-121.htm>

Additional Services Information

For more information about HPE Care Pack Services for Storage, please visit:

<http://www.hpe.com/services/storage>

If you have specific questions, contact your local Hewlett Packard Enterprise representative. Contact information for a representative in your area can be found at "Contact HPE" <http://www.hpe.com>

Configuration Information

Step 1 – Base Configuration

Select one:

| Model Name | Model Description | Part Number |
|------------|--|-------------|
| | HPE StoreEver 1/8 G2 LTO-7 Ultrium 15000 SAS Tape Autoloader | N7P35A |
| | HPE StoreEver 1/8 G2 LTO-7 Ultrium 15000 FC Tape Autoloader | N7P34A |
| | HP StoreEver 1/8 G2 LTO-6 Ultrium 6250 SAS Tape Autoloader | COH18A |
| | HP StoreEver 1/8 G2 LTO-6 Ultrium 6250 FC Tape Autoloader | COH19A |
| | HP StoreEver 1/8 G2 LTO-5 Ultrium 3000 Fibre Channel Tape Autoloader | BL541B |
| | HP StoreEver 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader | BL536B |
| | HP StoreEver 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader | AK377B |

Kit Contents (for each autoloader):

- **SAS models:**
 - (1) 2.5M PDU Power Cord, C13/C14, 10A
 - (1) HPE SAS MiniHD-Mini 1x-2m Cable Assembly Kit
 - (1) RJ-45 Ethernet cable
 - Set of six rubber feet (for tabletop use)
 - Getting Started Poster
 - Flyer for Yosemite Server Backup software
- **FC models:**
 - (1) 2.5M PDU Power Cord, C13/C14, 10A
 - (1) RJ-45 Ethernet cable
 - Set of six rubber feet (for tabletop use)
 - Getting Started Poster
 - Flyer for Yosemite Server Backup software

Step 2 - Additional Options

NOTE: The HPE StoreEver 1/8 G2 Tape Autoloader comes standard as a one drive, 8-slot unit (includes both a right and left 4-slot magazine) which is shipped rack-ready. A separate 1/8 G2 Tape Autoloader Rack Kit must be purchased to complete the rack installation. The HPE 1/8 G2 Tape Autoloader ships with a PDU power cord (C13/C14, 10A, P/N 142257-002). If a 110V receptacle power cord is needed please order (P/N AF556A). For power cord options, please visit: HPE

<http://www.hpe.com/products/powercords>

Select each required option with quantities specified:

| Power Cord | Quantity | Description | Part Number |
|------------|----------|---|-------------|
| | 1 each | HP C13 - NEMA 5-15P US/CA 110V 10Amp 1.83m Power Cord NOTE: This cord does not ship standard with 1/8 G2 Tape Autoloader. | AF556A |
| | 1 each | HP C13 - C14 WW 250V 10Amp 2.5m Jumper Cord NOTE: This cord ships standard with each 1/8 G2 Tape Autoloader; can be used to connect the rack-mounted device to PDUs with IEC-320 receptacles. | 142257-002 |
| | 1 each | HP C13 - CEE-VII EU 250V 10Amp 1.83m Power Cord | AF568A |
| | 1 each | HP C13 - BS-1363A UK/HK/SG 250V 10Amp 1.83m Power Cord | AF570A |
| | 1 each | HP C13 - DK-2.5A DK 250V 10Amp 1.83m Power Cord | AF566A |
| | 1 each | HP C13 - SEV 1011 CH 250V 10Amp 1.83m Power Cord | AF565A |

Configuration Information

| | | |
|--------|---|--------|
| 1 each | HP C13 - CEI-23-50 IT/CL 250V 10Amp 1.83m Power Cord | AF571A |
| 1 each | HP C13 - SABS-164 ZA 250V 10Amp 2.5m Power Cord | AF567A |
| 1 each | HP C13 - CNS-690 TW 110V 13Amp 1.83m Power Cord | AF561A |
| 1 each | HP C13 - GB-1002 CN 250V 10Amp 1.83m Power Cord | AF557A |
| 1 each | HP C13 - JIS C8303 JP 100V 12Amp 2.0m Power Cord | AF572A |
| 1 each | HP C13 - AS3112-3 AU 250V 10Amp 2.5m Power Cord | AF569A |
| 1 each | HP C13 - IRAM -2073 AR 250V 10A 2.5m Power Cord | AF558A |
| 1 each | HP C13 - NEMA 5-15P TH/PH 250V 10Amp 1.83m Power Cord | AF559A |
| 1 each | HP C13 - KSC- 8305 KR 250V 10Amp 1.83m Power Cord | AF560A |
| 1 each | HP C13 - SI-32 IL 250V 10Amp 1.83m Power Cord | AF564A |
| 1 each | HP C13 - IS-1293 IN 240V 6Amp LV 2.0m Power Cord | AF562A |

NOTE: One power cord is required; please select the correct power cord for your geographical location.

WARNING: This product can ONLY be used with a Hewlett Packard Enterprise approved power cord for your specific geographic region. Use of a non-HPE approved power cord may result in: 1) not meeting individual country specific safety requirements; 2) insufficient conductor capacity that could result in overheating with potential personal injury and/or property damage; and 3) an unapproved power cord could fracture resulting in the internal contacts being exposed, which potentially could subject the user to a shock hazard. Hewlett Packard Enterprise disclaims all liability in the event a non- Hewlett Packard Enterprise approved power cord is used.

Related Options

racks, including the HPE Intelligent Series Racks and the HPE 10000 G2 Series Racks. For more information on the HPE rack offerings, please see the following URL:

<http://www.hpe.com/info/rackandpower>

NOTE: The 1/8 G2 Tape Autoloader is certified to ship in HPE racks that include a shock pallet. It is mandatory to use a shock pallet in order to ship racks with equipment installed.

FC Host Bus Adapters

The 1/8 G2 Tape Autoloader is certified with a number of HPE Fibre Channel Host Bus Adapters. For the most current list of supported FC HBAs, please see the HPE Data Agile BURA Compatibility Matrix (Formerly EBS) and Design Guide located at: hpe.com/storage/BURACompatibility.

SAS Host Bus Adapters

The 1/8 G2 Tape Autoloader is certified with a number of HPE SAS Host Bus Adapters. For the most current list of supported SAS HBAs, please see the HPE Data Agile BURA Compatibility Matrix (Formerly EBS) document and Design Guide located at: hpe.com/storage/BURACompatibility.

HP Mini SAS High Density to 4-lane Mini SAS External Fanout 2 Meter Cable K2R09A

HP Mini SAS High Density to 4-lane Mini SAS External Fanout 2 Meter Cable K2R09A

HP 2.0m External Mini SAS High Density to Mini SAS Cable 716191-B21

NOTE: One cable is required for every tape drive. Use this cable to connect HPE 1/8 G2 Tape Autoloader and HPE MSL SAS Tape Libraries to the HPE H241 Smart Host Bus Adapter.

HP 4.0m External Mini SAS High Density to Mini SAS Cable 716193-B21

NOTE: One cable is required for every tape drive. Use this cable to connect HPE 1/8 G2 Tape Autoloader and HPE MSL SAS Tape Libraries to the HPE H241 Smart Host Bus Adapter

HP External SAS to mini-SAS Fanout Cable AH587A

NOTE: One cable is required for every four autoloaders or every four library drives. Use this cable to connect HPE 1/8 G2 Tape Autoloader and MSL SAS Tape Libraries to HPE SAS controllers with Infiniband (SFF8470) connectors.

HP 2m External Mini-SAS to 4x1 Mini-SAS Cable AN975A

NOTE: One cable is required for every four autoloaders or every four library drives. Use this cable to connect HPE 1/8 G2 Tape Autoloader and MSL SAS Tape Libraries to Mini-SAS (SFF8088) ports.

HP 4m External Mini-SAS to 4x1 Mini-SAS Cable AN976A

NOTE: One cable is required for every four autoloaders or every four library drives. Use this cable to connect HPE 1/8 G2 Tape Autoloader and MSL SAS Tape Libraries to Mini-SAS (SFF8088) ports.

HP SAS Min-Min 1x-2M Cable Assembly Kit AE470A

NOTE: One cable per SAS autoloader. . Use this cable to connect HPE SAS external tape devices to HPE SAS controllers with external Mini-SAS (SFF8088) connectors.

HP SAS MIN-MIN 1X-4M Cable Assembly Kit AE465A

NOTE: One cable per SAS autoloader. . Use this cable to connect HPE SAS external tape devices to HPE SAS controllers with external Mini-SAS (SFF8088) connectors.

Related Options

Optical cables

OM4 LC-LC type cables

| | |
|--|--------|
| HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable | QK732A |
| HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable | QK733A |
| HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable | QK734A |
| HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable | QK735A |
| HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable | QK736A |
| HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable | QK737A |

Allowed cable lengths:

| Drive type | External Cable type | 2Gb | 4Gb | 8Gb |
|----------------------------------|---------------------|-------------|-------------|-------------|
| All | OM2 | 0.5m - 300m | 0.5m - 150m | .5-50m |
| All except LTO-5 Ultrium 3000 | OM3/OM4 | 0.5m - 500m | 0.5m - 380m | 0.5m - 150m |
| LTO-5 Ultrium 3000 | OM3/OM4 | 0.5m - 300m | 0.5m - 150m | 0.5m - 50m |

Controller/HBA & Cable Recommendation Matrix SAS

| Recommended HBA/ Controller for tape automation | Recommended HBA/ Controller for tape automation | HBA/ Controller Product Number |
|---|--|---|
| | HP SC44Ge SAS Host Bus Adapter NOTE: Recommended for ProLiant G5 SAS tape automation connect. | |
| | HP H241 12Gb 2-ports Ext Smart Host Bus Adapter NOTE: Recommended for ProLiant Gen9 SAS tape automation connect. | 726911-B21 |
| | HP External SAS to mini-SAS Fanout Cable | AH587A |
| | HP Smart Array P711m/1G 6Gb FBWC 4-ports Ext Mezzanine SAS Controller NOTE: Recommended for C series blade enclosure tape automation connect. | 513778-B21 |
| | HP Smart Array P712m/256 6Gb 2-ports Int/2-ports Ext Mezzanine SAS Controller NOTE: Recommended for C series blade enclosure tape automation connect. | 488348-B21 |
| | HPE P700m Smart Array Controller 256MB NOTE: Recommended for C series blade enclosure tape automation connect. | |
| | HPE P700m Smart Array Controller 512MB NOTE: Recommended for C series blade enclosure tape automation connect. | |
| Recommended Cables for Smart Array Controllers | For one autoloader: HP SAS Min-Min 1x-2M Cable Assembly Kit NOTE: one SAS tape drive only. | AE470A |
| | HP SAS MIN-MIN 1X-4M Cable Assembly Kit NOTE: one SAS tape drive only. | AE465A |
| | For two or more autoloaders or tape drives: HP 2m External Mini-SAS to 4x1 Mini-SAS Cable NOTE: One cable is required for every four drives. | AN975A |
| | HP 4m External Mini-SAS to 4x1 Mini-SAS Cable NOTE: One cable is required for every four drives | AN976A |

Reference the HPE Data Agile BURAs Compatibility Matrix (Formerly EBS) for the most

Related Options

up-to-date HBA compatibility information at: hpe.com/storage/BURACompatibility

| | | |
|--------------|--|---------|
| Media | HP LTO-7 Ultrium 15 TB RW Data Cartridge | C7977A |
| | HP LTO-7 Ultrium 15 TB Eco Pack (20 Pack) | C7977AH |
| | HP LTO-6 Ultrium 6.25TB MP RW Data Cartridge | C7976A |
| | HP LTO-6 Ultrium 6.25TB BaFe RW Data Cartridge | C7976B |
| | HP LTO-5 Ultrium 3TB RW Data Cartridge | C7975A |
| | HP LTO-5 Ultrium 3TB WORM Data Cartridge | C7975W |
| | HP LTO4 Ultrium 1.6TB Read/Write Data Cartridge | C7974A |
| | HP LTO4 Ultrium 1.6TB WORM Data Tape Cartridge | C7974W |
| | HP LTO-3 Ultrium 800 GB Re-writable Data Cartridge | C7973A |
| | HP LTO-3 Ultrium 800 GB WORM Data Cartridge | C7973W |
| | HP LTO2 Ultrium 400GB RW Data Tape | C7972A |
| | HP LTO1 Ultrium 200GB RW Data Tape | C7971A |
| | HP Ultrium Universal Cleaning Cartridge | C7978A |
| | Bar Code Labels | |
| | HP LTO-7 Ultrium RW Bar Code Label Pack | Q2014A |
| | HP LTO-6 Ultrium RW Bar Code Label Pack | Q2013A |
| | HP LTO-5 Ultrium WORM Bar Code Label Pack | Q2012A |
| | HP LTO-5 Ultrium RW Bar Code Label Pack | Q2011A |
| | HP LTO-5 Ultrium WORM Bar Code Label Pack | Q2012A |
| | HP LTO-4 Ultrium Read/Write Bar Code Label Pack | Q2009A |
| | HP LTO-4 Ultrium WORM Bar Code Label Pack | Q2010A |
| | HP Ultrium 3 RW Bar Code Label Pack | Q2007A |
| | HP Ultrium 3 WORM Bar Code Label Pack | Q2008A |
| | HP Ultrium 2 Bar Code Label Pack | Q2002A |
| | HP Ultrium 1 Bar Code Label Pack | Q2001A |
| | Custom labeled Data Cartridges | |
| | NOTE: Custom labeled products allow customers to customize a specific sequence printed on each label. | |
| | HP LTO-7 Ultrium 15 TB RW RFID Custom Labeled Data Cartridge (20 pack) | 7977AF |
| | HP LTO-7 Ultrium 15 TB RW Custom Labeled Data Cartridge (20 pack) | C7977AL |
| | HP LTO-7 Ultrium 15 TB WORM Custom Labeled Data Cartridge (20 pack) | C7977WL |
| | HP LTO-6 Ultrium 6.25TB MP RW Custom Labeled Data Cartridge 20 Pack | C7976AL |
| | HP LTO-5 RW Custom Labeled Data Cartridge 20 Pack | C7975AL |
| | HP LTO-5 RW Custom Labeled No Case Data Cartridge 20 Pack | C7975AC |
| | HP LTO-5 WORM Custom Labeled Cartridge 20 Pack | C7975WL |
| | HP LTO-4 Ultrium 1.6TB RW Custom Label Data Cartridge 20 Pack | C7974AL |
| | HP LTO-4 Ultrium 1.6TB WORM Custom Label Data Cartridge 20 Pack | C7974WL |
| | HP LTO-3 Ultrium 800GB RW Labeled Data Cartridge 20 Pack | C7973AL |
| | HP LTO-3 Ultrium 800GB WORM Labeled Data Cartridge 20 Pack | C7973WL |
| | HP LTO-2 Ultrium 400GB Pre-labeled Data Cartridge 20 Pack | C7972AL |
| | HP Ultrium 200 GB pre-label Data Cartridge 20 Pk. | C7971AL |

Non-Custom Labeled Data Cartridges

NOTE: Non-Custom labels will come pre-labeled with a pre-determined number

Related Options

sequence.

| | |
|--|---------|
| HP LTO-7 Ultrium 15 TB RW Custom Labeled No Case Library Pack (20 pack) | C7977AC |
| HP LTO-7 Ultrium 15 TB RW Non-Custom Labeled Data Cartridge (20 pack) | C7977AN |
| HP LTO-6 Ultrium 6.25TB MP RW Non Custom Labeled Data Cartridge 20 Pack | C7976AN |
| HP LTO-6 Ultrium 6.25TB BaFe RW Non Custom Labeled Data Cartridges 20 Pack | C7976BN |
| HP LTO-5 Ultrium Non-custom Labeled Data Cartridge 20 Pack | C7975AN |
| HP LTO-4 Ultrium 1.6TB Non-custom Label Data Cartridge 20 Pack | C7974AN |
| HP Ultrium 800GB Non-custom Label 20 Pack | C7973AN |
| HP Ultrium 400GB Non-custom Label 20 Pack | C7972AN |
| HP Ultrium 200GB Non-custom Label 20 Pack | C7971AN |

NOTE: For more information on LTO media, see: <http://h18006.www1.hpe.com/storage/storagemedia.html?psn=storage>

HPE Care Pack Options

Same Day Response

| | |
|--|--------|
| HP 1 Year 4 hour 13X5 LTO Autoloader Hardware Support | U6364E |
| HP 1 Year 4 hour 24x7 LTO Autoloader Hardware Support | U6365E |
| HP 1 Year 6 hour 24x7 Call-to-Repair LTO Autoloader Hardware Support | U6366E |
| HP 3 Year 4 hour 13X5 LTO Autoloader Hardware Support | H5526E |
| HP 3 Year 4 hour 24x7 LTO Autoloader Hardware Support | H4624E |
| HP 3 Year 6 hour 24x7 Call-to-Repair LTO Autoloader Hardware Support | U6367E |
| HP 5 Year 4 hour 13X5 LTO Autoloader Hardware Support | U9376E |
| HP 5 Year 4 hour 24x7 LTO Autoloader Hardware Support | U9377E |

Next Business Day Response

| | |
|---|--------|
| HP 3 Year Next business day Parts Exchange LTO Autoloader Support | H2698E |
| HP 3 Year Next Business Day LTO Autoloader Hardware Support | H4619E |

Hardware Services

| | |
|---|--------|
| HP Install Storage Autoloader or Tape Drive Array Service | U2090E |
|---|--------|

NOTE: In order to maximize ROI and product uptime, and minimize the cost of ownership, Hewlett-Packard Enterprise recommends the 3-year, 24 x 7 service options. These offerings will ensure that any product issue can be tackled when they occur (most back up issues will occur outside standard business hours) and that the service coverage regarding period, covers the minimum expected life of the host system.

Technical Specifications

| | | 1/8 G2 LTO-7 Ultrium 15000 Tape Autoloader | 1/8 G2 LTO-6 Ultrium 6250 Tape Autoloader | 1/8 G2 LTO-5 Ultrium 3000 Tape Autoloader | 1/8 G2 LTO-4 Ultrium 1760 Tape Autoloader |
|---|---|--|---|--|--|
| Drive Technology | | Ultrium 15000 | Ultrium 6250 | Ultrium 3000 | Ultrium 1760 |
| Number of Drives | | 1 | 1 | 1 | 1 |
| Number of Slots | | 8 | 8 | 8 | 8 |
| Drive Interface | | 8Gb/sec Fibre Channel 6Gb/sec SAS | 8Gb/sec Fibre Channel 6Gb/sec SAS | 8Gb/sec Fibre Channel 6Gb/sec SAS | 3Gb/sec SAS (LTO 4, 3) |
| Capacity | Native | 48 TB | 20 TB | 12 TB | 6.4 TB |
| | Compressed (2.5:1) | 120 TB | 50 TB | | |
| | Compressed (2:1) | | | 24TB | 12.8 TB |
| Maximum Transfer Rate | Native | 300 MB/s | 160 MB/s | 140 MB/s | 80 MB/s |
| | | | | | |
| Dimensions | Out-of-Box (HxWxD) | 1.7 x 19 x 31.9 in (4.4 x 48.2 x 80.9 cm) | | | |
| | Shipping (HxWxD) | 10 x 23 x 39 in (25 x 58 x 99 cm) | | | |
| Weight | Out-of-Box | 25.4 lb (11.5 kg) | | | |
| | Shipping | 33.7 lb (15.3 kg) | | | |
| NOTE: The weight of the Autoloader varies a slight amount with the type of LTO drive used. | | | | | |
| Reliability | MSBF (mean swaps between failures) | 2 Million robot load/unload cycles | | | |
| | MTBF (mean time between failures) | 100,000 hours (based on 1M MSBF) | | | |
| Cartridge Swap Time | | 34 seconds average (drive to slot, slot to drive) | | | |
| Initialization Time | | 76 seconds | | | |
| Inventory Time | | 52 seconds (with bar code labeled cartridges) | | | |
| Connectors | | Mini-SAS (1/8 G2 SAS models) LC Short-wave Optical Fibre Channel (1/8 FC models)(1) RJ-45 (located on back of 1/8 G2) (1) USB port (located on back of 1/8 G2) | | | |
| LED Indicators (on front panel) | | Ready LED (Green): shows ready status information Clean LED (Amber): shows fault status information Attention LED (Amber): shows fault status information Error LED (Amber): shows fault status information | | | |
| Management Interface | | 10/100 Mbytes/second, auto-configuring interface. RJ-45 connection. Https configurable. | | | |
| Power | | 80 Watts (max) | | | |
| Input Requirements | | 100 to 240 VAC, 50 to 60 Hz | | | |

Technical Specifications

| | | | |
|--|---------------|--|-----------|
| Relative Humidity (non-condensing) | 10-80%RH | | Operating |
| | 90% RH | | Shipping |
| Temperature Range (wet bulb) | 5°C to 40°C | | Operating |
| | -40°C to 60°C | | Shipping |
| Altitude | 15,000 feet | | Operating |
| | 35,000 feet | | Shipping |

Summary of Changes

| Date | Version History | Action | Description of Change: |
|-------------|-----------------------|---------|--|
| 15-Jan-2016 | Version 45 to 46 | Changed | Edited for content |
| 01-Dec-2015 | Version 44 to 45 | Changed | Multiple Changes incl. LTO-7 SKUs added |
| 20-Mar-2015 | From Version 43 to 44 | Added | Added the two SAS cables 716191-B21 and 716193-B21. These are used to connect the Autoloader to the HPE H241 Smart Host Bus Adapter. |
| 16-Jan-2015 | From Version 42 to 43 | Added | Added below under 'Recommended HBA/Controller for tape automation': HPE H241 12Gb 2-ports Ext Smart Host Bus Adapter 726911-B21 NOTE: Recommended for ProLiant Gen9 SAS tape automation connect. |
| 31-Oct-2014 | From Version 41 to 42 | Changed | Changes made throughout all the QuickSpecs. |
| 15-Sep-2014 | From Version 40 to 41 | Changed | Edited the Configuration Information section. |
| 04-Jul-2014 | From Version 39 to 40 | Changed | Product Highlights – Encryption; Configuration Information – removed Note above Step 1 Base Configuration; Configuration Information – Step 1 – Base Configuration – SAS models – removed (1) 2M External Infiniband (SFF8470) to Mini SAS (SFF8088) 1x SAS Cable and changed description for the Min-Min cable assembly; Step 2 – Additional Options – added note at the top of this section; Related Options – Encryption – updated existing NOTE and added 5 more NOTES; Cable Kits (SCSI, SAS, FC) – update Notes for AE470A, Updated Note for AE465A; fix a few minor typos in the Related Options – Media section. |
| 09-May-2014 | From Version 38 to 39 | Changed | Recommended Services was revised. |
| 18-Mar-2014 | From Version 37 to 38 | Changed | Media was revised. |
| 22-Feb-2013 | From Version 36 to 37 | Changed | Updated the following Sections Key Features Product highlights Compatibility Configuration Information Related Options Technical Specifications |
| | | Removed | Customer Benefits Service |
| 18-Jan-2013 | From Version 35 to 36 | Changed | Updated Capacity in Technical Specifications. |
| 04-Dec-2012 | From Version 34 to 35 | Changed | Changes made throughout all the QuickSpec.s |
| 05-Oct-2012 | From Version 33 to 34 | Changed | Change made to URL in Service and Support, HPE Care Pack and Warranty Information section. |
| 24-Sep-2012 | From Version 32 to 33 | Changed | Changes made throughout the QuickSpec.s |

Summary of Changes

| | | | |
|-------------|-----------------------|---------|--|
| 07-Sep-2012 | From Version 31 to 32 | Changed | Changes made in the North America and Canada versions only. |
| 17-Aug-2012 | From Version 30 to 31 | Changed | Changes made in the Related Options section. |
| 08-Aug-2012 | From Version 28 to 30 | Changed | Changes made in the North America and Canada versions only. |
| 18-Jun-2012 | From Version 27 to 28 | Changed | Changes made in the North America and Canada versions only. |
| 06-Apr-2012 | From Version 26 to 27 | Changed | Changes made in the Related Options section. |
| 16-Mar-2012 | From Version 25 to 26 | Changed | Changes made in the Related Options section. |
| 10-Feb-2012 | From Version 24 to 25 | Added | Added HPE Smart Array P711m and HPE Smart Array P712m adapters to the options section. |
| 30-Sep-2011 | From Version 23 to 24 | Changed | Drive Interface and Operating Altitude were revised in Technical Specifications Linear Tape File System (LTFS) and HPE StoreOpen Automation were added to Product Highlights and Optical Cables was added to Related Options |
| 08-Jul-2011 | From Version 22 to 23 | Changed | Changes made in the Configuration Information section. |
| 08-Jun-2011 | From Version 21 to 22 | Removed | StorageWorks was removed. |
| 06-Oct-2010 | From Version 20 to 21 | Changed | Changes made in Step 1 of the Configuration Information section only. |
| 27-Sep-2010 | From Version 19 to 20 | Added | Easy and economical upgrade of the included software to Data Protector Express and Data Protector backup and recovery software were added to Product Highlights HPE 1/8 G2 LTO-5 Ultrium 3000 FC Tape Autoloader and HPE Data Protector Express Basic backup and recovery software for Windows/Linux/Netware were added to Step 1 Upgrade included software to Data Protector Express was added to Media |
| | | Changed | Overview was updated Software in the Box was changed to Included backup and recovery software in Product Highlights 1/8 G2 LTO-2 Ultrium 448 Tape Autoloader was removed 5642 (42U) Rack Cabinet was removed from Rack Cabinets |
| 21-Jul-2010 | From Version 18 to 19 | Added | HPE 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader / BL536A to the Configuration Information section in the North America and Canada versions. |
| 24-Jun-2010 | From Version 17 to 18 | Added | HPE 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader / BL536A to the Configuration Information section. |
| 21-Jun-2010 | From Version 16 to 17 | Changed | Service and Support, HPE Care Pack, and Warranty Information was completely revised LTO-5 Ultrium 3000 Tape Autoloader was added Mentions of HPE ProLiant G7 Servers were added to SAS Host Bus Adapters Data Privacy was removed from Product Highlights |
| 25-Nov-2009 | From Version 15 to 16 | Changed | SAS and SCSI Host Bus Adapters and Cable Kits were modified in the Related Options section and Controller/HBA and Cable Recommendation Matrix was added to Related Options. |
| 27-Mar-2009 | From Version 14 to 15 | Added | HPE U320e SCSI Host Bus Adapter to the Related Options |

Summary of Changes

| | | | |
|-------------|-----------------------|---------|--|
| | | | section. |
| 22-Aug-2008 | From Version 13 to 14 | Changed | ATS data transfer rate range for the LTO Ultrium Tape Drives in the Data Rate Marketing section of the Product Highlights. |
| 15-Aug-2008 | From Version 12 to 13 | Changed | Changes were made to the following sections: Overview: Customer Benefits Family Comparison Product Highlights: Data Rate Matching Configuration Information: Step One Technical Specifications |
| 16-Jul-2008 | From Version 11 to 12 | Changed | Changes affected the North America and Canada versions only. Just the date and version were changed in the Worldwide and EMEA versions. |
| 16-Jun-2008 | From Version 10 to 11 | Changed | Changes were made throughout the entire QuickSpec except for the Service and Support section. |
| 22-Feb-2008 | From Version 9 to 10 | Changed | Changes were made within the Product Highlights, Related Options and Technical Specifications sections. |
| 11-Feb-2008 | From Version 8 to 9 | Changed | Changes were made throughout the QuickSpec to reflect the addition of "1/8 G2 LTO-4 Ultrium 1760 Tape Autoloader" option. |
| 25-Jan-2008 | From Version 6 to 7 | Added | "For tape drives and media, 1 GB = 1 billion bytes. Actual formatted capacity is less." was added as the last line in the Copy Right information. |
| 24-Aug-2007 | From Version 6 to 7 | Changed | Changes made within the Product Highlights and Related Options sections. |
| 07-Aug-2007 | From Version 5 to 6 | Changed | Corrected a formatting error in the PDF only. |
| 19-Jun-2007 | From Version 4 to 5 | Changed | Changes made within the What's New, Compatibility Information and Related Options sections. |
| 07-Jun-2007 | From Version 3 to 4 | Added | Added EMEA version. |
| 26-Mar-2007 | From Version 2 to 3 | Changed | Changes made throughout the QuickSpec except in the Compatibility and Service and Support sections. |
| 08-Dec-2006 | From Version 1 to 2 | Changed | Updated the following sections: Step 1 – Base Configuration – cable length |

Summary of Changes



Sign up for updates

★ Rate this document



© Copyright 2016 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for HPE products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HPE shall not be liable for technical or editorial errors or omissions contained herein.

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

c04123291 - 12630 - Worldwide - V46 - 15-January-2016