

HP Ultrium LTO 460 tape drive for HP NonStop S-series servers

Data sheet



The HP Ultrium LTO 460 tape drive is the ideal choice for most enterprise-class data protection needs, delivering a capacity of up to 400 gigabytes of compressed data on a single cartridge at a transfer rate of up to 60 megabytes per second.

The HP Ultrium LTO 460 tape drive represents the newest generation of the Ultrium tape drive family and delivers a capacity of up to 400 gigabytes (assuming two-to-one data compression) on a single cartridge. Reinforcing HP's leadership position in tape, it builds on the success of the Ultrium 230 and Ultrium 215 drives and sets new standards for performance, capacity, and reliability in the superdrive market. As the latest member of the four-generation Ultrium LTO format, the Ultrium LTO 460 tape drive is an excellent choice for long-term investment protection.

The Ultrium LTO 460 tape drive is available in three configurations for use with HP NonStop S-series servers: an automatic cartridge loader (ACL)-equipped model for use in a NonStop S-series tape enclosure, an ACL-equipped model for standalone tabletop use (shown in photo), and a model for use with a CTL700 or CTL700M tape library.

Key features and benefits

- *Dependable*: Sets new standards for data integrity and reliability with a simple and robust design based on inherently reliable Linear Tape Open (LTO) technology
- *High-capacity*: Stores all your data on a single cartridge to make backups and restores simpler
- *Fast*: Minimizes network interruption with high speed and dynamic data rate matching that squeezes optimal performance from your HP NonStop S-series server
- *Affordable*: Combines high capacity with low media cost to deliver an exceptionally low total cost of ownership
- *Reliable*: Protects your data with a simple, high-integrity data path, including read and write dynamic random access memory

For more information

To learn more about the HP Ultrium LTO 460 tape drive, visit www.hp.com/go/storage. For more information about HP Ultrium LTO technology, view the white paper at http://www.hp.com/products1/storage/products/tapebackup/ultrium_tapedrives/ultrium230/infolibrary/whitepapers/ultrium_wp.pdf.

System requirements

Software	NonStop Kernel operating system, Release G06.21 or later
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Technical specifications

Tape format	Ultrium generation 2
Tape media	Ultrium 2 media, Ultrium 1 media
Cartridge capacity	200 GB native; up to 400 GB compressed
Data transfer rate	30 MB/s native; 60 MB/s compressed Note: Testing on NonStop S-series servers achieved a maximum data transfer rate of 12.72 MB/s on a NonStop S86000 server using the SNDA S-SAC.
Buffer size	64 MB
Data access time	52 seconds from beginning of media (average)
Tape speed	5.5 to 7.25 m/s
Interface	Ultra 3 SCSI (HVD)
Plug type	68-pin high density with automatic SCSI termination for external drives only

Environmental specifications

	Product ID	Description
Power requirements	N1521A (CTL700 version)	Unit installs into CTL700 tape library
	N1524A	15–240V, 50–60 Hz, 1.8–1.2A
	N1525A	15–240V, 50–60 Hz, 1.8–1.2A
Dimensions (height x width x depth)	N1521A	Unit installs into CTL700 tape library
	N1524A	Unit installs into NonStop S-series rack mount
	N1525A	8 x 17.25 x 20.25 in (20.3 x 43.8 x 51.43 cm)
Weight	N1521A	11.0 lb (5.0 kg)
	N1524A	53.0 lb (24.0 kg)
	N1525A	45.0 lb (20.5 kg)
Temperature range	41° to 104°F (10° to 40°C) (operating); –40° to 151°F (–40° to 66°C) (storage)	
Humidity range	20% to 80% at 79°F (26°C) (wet bulb) (operating); 10% to 95% at 79°F (26°C) (wet bulb) (storage)	
Safety (regulatory agency certifications)	Safety UL 60950, third edition (United States)	
	CSA 22.2 60950, third edition (Canada)	
	BS EN 60950:2000, third edition, including all amendments	
	IEC 60950:1999, third edition, including all amendments (Europe)	
	IEC 60950:1999, third edition, including all amendments (includes all national deviations; various)	

Ordering information

Product ID	Product name
N1521A	HP Ultrium LTO 460; CTL700 or CTL700M tape library
N1524A	HP Ultrium LTO 460; 11-slot ACL; NonStop S-series enclosure
N1525A	HP Ultrium LTO 460; 11-slot ACL; tabletop
Controller hardware options	
1970-A or later PMF	NonStop S74000 server or later PMF CRU SCSI port
1980 and 6762	IOMF2 with SCSI PIC
6760 and 6762	ServerNet/DA with SCSI PIC
SCSI cables—copper	
519-001W	SCSI cable, 1 m (3.3 ft)
519-003W	SCSI cable, 3 m (9.8 ft)
519-010K	SCSI cable, 10 m (32.8 ft)

519-015W	SCSI cable, 15 m (49.2 ft)
519-020W	SCSI cable, 20 m (65.6 ft)
519-020W	SCSI cable, 20 m (65.6 ft)
519-023W	SCSI cable, 23 m (75.4 ft)

SCSI extenders for long-distance attachment

HP Ultrium LTO 460 tape drives for the NonStop Kernel operating system can be attached at distances up to 10 kilometers from the host NonStop S-series server through the use of the following SCSI extender products. The two types of SCSI extenders are used in series along with a customer-supplied single-mode fiber cable. The connection using SCSI extenders is as follows:

Host → 519-0x cable → CTSFE → single-mode fiber cable → CTFSE → 519-0x cable → Super DLT tape drive

CTSFE	SCSI extender, host side
CTFSE	SCSI extender, device side
7290	Half-height NonStop S-series enclosure (optional)
7291	Half-height NonStop S-series enclosure add-on (optional)

NonStop S-series enclosures for N1524A

7186	Enclosure, single high
7187	Enclosure, double high
7188	Enclosure, single high add-on (no castors)

Supplies (available from HP StorageWorks)

C7971A	Ultrium 1 200-GB data cartridge
C7972A	Ultrium 2 400-GB data cartridge
C7978A	Ultrium Universal Cleaning Cartridge (UCC)
C7971L	Ultrium 1 data cartridge with bar code label

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For more information, go to www.hp.com/go/storage.
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