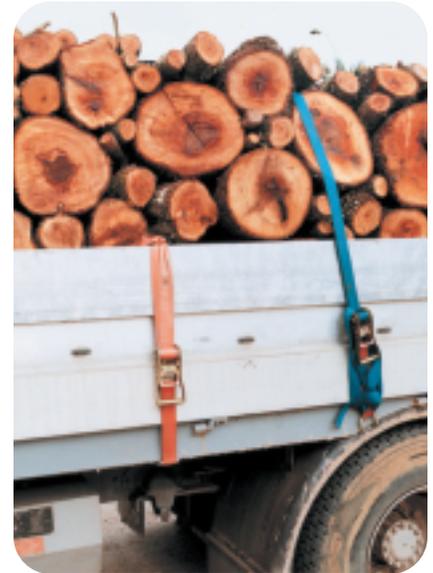




**double  
performance and  
capacity**



## hp StorageWorks Ultrium 460 tape drive



### what's new

- increased performance and capacity, setting a new high watermark for tape drives. Capacity is doubled to 400 GB and performance is 60 MB/sec (assuming 2:1 compression)
- reduced cost of ownership. Media for second-generation tape drives is cheaper than any other media on a cost per GB basis

### the next generation of the hp Ultrium tape drive family

Delivering the highest performance and capacity, the HP StorageWorks Ultrium 460 tape drive enables you to backup 400 GB in under 2 hours. The Ultrium 460 tape drive is the next generation of the HP Ultrium tape drive family with a transfer rate of 60 MB/sec (assuming 2:1 data compression). It builds on the success of the HP Ultrium 230 and HP Ultrium 215 drives, reinforcing the HP leadership position in tape drives. It provides unprecedented levels of performance, capacity and reliability — setting new standards in the superdrive tape market.

With a transfer rate of 60 MB/sec, the Ultrium 460 is the ideal choice for enterprise-class data protection needs — particularly where the backup window is shrinking.

The Ultrium 460 tape drive is fully read and write compatible with the first generation of Ultrium tape drives. As part of the four-generation LTO Ultrium open format, the Ultrium 460 offers customers the best choice and investment protection.

hp StorageWorks  
Ultrium 460  
tape drive



next generation

## key features and benefits

### controllable

- **high-performance:** stores 400 GB in under 2 hours (assuming 2:1 data compression)
- **evolutionary:** evolution from the very successful first generation of Ultrium tape drives
- **affordable:** lowest cost per GB of any tape drive
- **manageable:** cartridge memory helps to improve media management and reliability

### resilient

- **dependable:** the advantages of a legacy free roadmap that defines best-of-breed technologies for current and future generations

### extensible

- **open:** part of a 4 generation roadmap backed by industry leaders — an open format delivers the benefits of competition
- **well-connected:** tested with a broad range of servers, operating systems and backup packages

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tape drive



investment  
protection

## technical specifications

<b>native capacity</b>	200 GB native (400 GB compressed)
<b>power</b>	internal version +5V DC (3.2A max) +12V DC (0.6A max) external version 100-240VAC 50/60HZ, 0.7A max auto ranging
<b>sustained transfer rate</b>	30 MB/sec native (60 MB/sec compressed)
<b>format</b>	Ultrium generation 2
<b>backwards compatibility</b>	fully read and write compatible with generation 1 drives, reads and writes generation 1 format 30% faster than Ultrium 230 drive
<b>media</b>	Ultrium 2 media, Ultrium 1 media
<b>interface</b>	Ultra 3 SCSI (LVD)
<b>interface plug type</b>	68 pin high density with automatic SCSI termination for external drives only
<b>hardware data compression</b>	ALDC
<b>cartridge memory</b>	4 KB (accessible over ACI)
<b>buffer size</b>	64 MB
<b>data access time</b>	52 sec from beginning of media (average)
<b>tape speed</b>	5.5 – 7.25 m/s
<b>accessibility</b>	improved accessibility, as per US Section 508 legislation
<b>data rate matching</b>	dynamically variable adaptive tape speed (ATS) to match host data rate from 10-30 MB/sec native
<b>reliability</b>	MTBF 250,000 hours at 100% duty cycle
<b>application support</b>	HP Data Protector, CA ARCserve, Legato NetWorker, Tivoli TSM, VERITAS, Backup Exec, NetBackup, and Yosemite TapeWare. For more information on hardware visit: <a href="http://www.hp.com/go/connect">www.hp.com/go/connect</a>
<b>operating system support</b>	HP-UX, Linux, Microsoft® Windows® NT/2000, NetWare, Solaris, AIX, and HP Tru64. For more information on hardware visit: <a href="http://www.hp.com/go/connect">www.hp.com/go/connect</a>
<b>dimensions: (h x w x d); in (cm) format</b>	internal 3.25 x 5.75 x 8.0 in (8.3 x 14.6 x 20.3 cm) external 4.63 x 8.19 x 11.50 in (11.8 x 20.8 x 29.2 cm) array module 10.14 x 13.26 x 17.94 in (26.0 x 34.0 x 46.0 cm)
<b>temperature range</b>	41 to 104°F (10° to 40°C) (operating) -40 to 151°F (-40° to 66°C) (storage)
<b>humidity range</b>	20 to 80% @ 79°F (26°C) (wet bulb) (operating) 10 to 95% @ 79°F (26°C) (wet bulb) (storage)
<b>weight: lb (kg) format</b>	internal 4.6 lb (2.1 kg) external 12.1 lb (5.5 kg) array module 7.88 lb (3.6 kg)
<b>accessories</b>	0.9 m internal SCSI cable 68-way LVD/SE, C7481 1 m internal SCSI cable 68-way LVD/SE, C7421 rail kits for Dell PowerEdge servers 2100 & 2200, C5731A rail kits for Dell PowerEdge servers 2300&4100, C5732A high-end tape kit, C7474A 0.9 m external SCSI cable (68-pin high-density to 68-pin high-density LVD/SE), C5741A 2.5 m external SCSI cable (68-pin high-density to 68-pin high-density LVD/SE), C5743A 68-pin high-density to 68-pin VHD, LVD/SE SCSI Adaptor, C7434A
<b>supplies</b>	Ultrium 1 200 GB data cartridge, C7971A Ultrium 2 400 GB data cartridge, C7972A Ultrium Universal Cleaning Cartridge (UCC), C7978A Ultrium 1 data cartridge with bar code label, C7971L
<b>safety</b>	UL 60950 – Third Edition (US) 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 (Including all national deviations;various)

hp StorageWorks  
Ultrium 460  
tape drive



backup

## ordering information

product number	product name	description
Q1508A	Ultrium 460 internal tape drive	internal tape drive, open connect
Q1509A	Ultrium 460 external tape drive	external tape drive, open connect
Q1512A	Ultrium 460 array module	array module, field integrated tape drive, open connect
Q1512A#OD1	Ultrium 460 array module (factory racked)	array module, factory-racked (build-to-order), open connect
Q1518A	Ultrium 460 internal tape drive for a ProLiant server	internal tape drive for ProLiant server connect, 2 variants (one is CTO)
Q1519A	Ultrium 460 external tape drive for a ProLiant server	external tape drive for ProLiant server connect, North America only
Q1520A	Ultrium 460 external tape drive for a ProLiant server	external tape drive for ProLiant server connect, ROW

## what's included

- for all Ultrium 460s: reply card; HP StorageWorks CD; manual; regulatory booklet; accessory box internal; getting started guide; language labels; one Ultrium 400 GB data cartridge and one cleaning cartridge
- internal drives also include: accessory kit, mounting kits; screws
- external drives also include: 2.5 m cable (68 pin HD-68 pin VHDCI)
- Ultrium 460 drives for a ProLiant server also include: ProLiant server instructions

## warranty and support

- warranty**
- 3 years parts exchange, next-business-day response, 9x5 phone support included
  - for external tape drives, HP can provide several warranty upgrades and extensions including same day, next day and 24x7 onsite support options
  - for more information on HP support and service offerings please visit: [www.compaq.com/services/storage/](http://www.compaq.com/services/storage/)

### warranty and support options

for product numbers Q1509A, Q1512A	support pack no.	description
	H3157A/E	3 years, 9x5 next business day, on-site coverage
	H4617A/E	3 years, 9x5 same business day, on-site coverage
	H4622A/E	3 years, 24x7, 4 hour response, on-site coverage
for product number Q1519A, Q1520A	CarePak no.	description
	FM-T1XEC-36 127258-002	3 years, 9x5 next business day, on-site coverage
	FM-T14EC-36 127261-002	3 years, 9x5 same business day, on-site coverage
	FM-T17EC-36 127264-002	3 years, 24x7, 4 hour response, on-site coverage

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## for more information

For more information on supported software and hardware combinations visit our Web site:

[www.hp.com/go/connect](http://www.hp.com/go/connect)

For more information on the HP StorageWorks Ultrium 460 tape drive visit our Web site:

[www.hp.com/go/ultrium](http://www.hp.com/go/ultrium)

