



LTO-4 HH

Quantum's Innovative
Full Performance, Energy Efficient,
Half-Height Drive.

Quantum's LTO-4 HH tape drive is a half-height tape drive that offers the same performance and reliability as competitors' full-height LTO-4 tape drives. At the same time, Quantum's LTO-4 HH is the smart choice for those looking to reduce power consumption and cooling costs in the data center because it uses up to 46% less power when idle and up to 26% less power in standby than other LTO-4 drives on the market*. In addition, it uses less power when reading and writing than LTO-3 drives, while performing 50% faster!

The drive has a native transfer rate of 120MB/sec and native capacity of up to 800GB. Its simple space saving half-height form factor uses the latest industry standard interface -- Serial Attached SCSI (SAS)-- to allow for easy installation and integration into your datacenter, while providing the same performance as competitors' full-height LTO-4 drives. Quantum's LTO-4 HH tape drives also protect your investment by providing backward read and write compatibility with LTO-3 media and backward read compatibility with LTO-2 media.

Quantum's exclusive FastSense™ variable speed feature has been improved for LTO-4 HH tape drives. The FastSense feature monitors the speed of incoming data and matches the speed at which the drive streams data more effectively than the competitors' LTO drives. The result is that Quantum's LTO-4 HH tape drives complete backups faster, using less power than any other LTO-4 drives available. In addition, Quantum also provides exclusive features like SmartVerify™ to concurrently verify all data written to the tape, virtually eliminating the time consuming verify pass during backup operations.

And with Quantum's LTO-4 HH drives, security is now at its highest level as drives feature AES 256-bit data encryption. Encryption on LTO-4HH tape drives is hardware based, allowing for the highest level of security without any loss of performance during the encryption process. In addition, LTO-4 HH is WORM capable when used with LTO WORM data cartridges.

Quantum's LTO-4 HH is available in a server-installable internal, convenient tabletop or space-efficient rackmount configuration. Quantum "Backup Ready" certified solutions allow you to go from box-to-backup in minutes with the highly reliable Quantum LTO-4 HH tape drive, world-class Backup Exec™ QuickStart software and durable Quantum media.

- UP TO 800GB NATIVE CAPACITY
- UP TO 120MB/SEC TRANSFER RATE
- ENERGY AND COST EFFICIENT DESIGN
- AES 256-BIT DATA ENCRYPTION SECURITY FEATURE
- "BACKUP READY" SOLUTION WITH 3 YEAR RAPID EXCHANGE WARRANTY

FEATURES AND BENEFITS

- Performance** - Native transfer rates of 120MB/sec – same as competitors' full height LTO-4 drives
- Capacity** - Native capacity of 800GB – 2X LTO-3 HH and the same as other full height LTO-4
- Energy Efficient Design** - Lower power and cooling costs vs. previous generation drives and other LTO-4 drives on the market without sacrificing performance
- Value** - Cost-effective half-height design allows for more attractive price point versus full-height drives
- Format / Security** - Space saving half-height format, AES 256-bit native Encryption, WORM capability
- Compatibility** - Investment protection with backward read/write compatibility to LTO-3 media and backward read compatibility to LTO-2 media

DRIVE CAPACITY AND PERFORMANCE

Drive Type	Interface	Cartridge Capacity		Average File Access Time (sec)
		Native/Compressed ¹ (GB)	Drive Throughput Native/Compressed* (MB/sec)	
LTO-4HH	3Gb/s SAS	800 / 1600	120 / 240	55

Configurations: Internal Bare, Internal Kit, Tabletop Kit and 1U Rackmount

Interface Connector Type:

SAS: SFF8088 (Tabletop and 1U Rack), 7-Pin 1X SATA Style (Internal Bare and Internal Kit)

Burst Transfer Rate (MB/sec)

SAS (max): 300

TAPE/FORMAT COMPATIBILITY

LTO-4 (read/write):	800GB native capacity
LTO-4 WORM (read/write):	800GB native capacity
LTO-3 (read/write):	400GB native capacity
LTO-3 WORM (read/write):	400GB native capacity
LTO-2 (read only):	200GB native capacity

RELIABILITY

MTBF (hours):	250,000 @ 100% duty cycle
MCBF:	100,000 Load/Thread/Unload
Non-recoverable Error Rate:	1 x 10 ¹⁷ bits (non-media error, clean drive)

PHYSICAL SPECIFICATIONS

Form Factor	Internal w/o bezel	Internal w/ bezel	Tabletop
Width (in/mm)	5.76 / 146.3	5.87 / 149.1	8.35 / 212.1
Height (in/mm)	1.63 / 41.3	1.7 / 43.1	2.6 / 66.2
Length (in/mm)	8.56 / 217.5	8.76 / 222.57	10.73 / 272.49
Weight (lbs/kg)	3.66 / 1.66	3.72 / 1.69	8.0 / 3.63

ENVIRONMENTAL

Operating	
Temperature °F (°C):	50° to 104° (10° to 40°)
Humidity:	80% (non-condensing)
Altitude (ft. maximum):	10,000 feet MSL (at 25°C)
Non-Operating	
Temperature °F (°C):	-40° to 149° (-40° to 66°) excluding media
Humidity (%):	10 to 95 (non-condensing)
Voltage (V):	+5, +12
Power Consumption (W):	Idle (no cartridge): 6.4 Watts Standby (with cartridge): 9.5 Watts Typical: 28.8 Watts Max: 30.1 Watts

TAPE FORMAT SPECIFICATIONS

Recording Format:	LTO Ultrium 4
Recording Density:	5,120 RLL-encoded ONEs per mm
Encoding Method:	0.13/11 RLL
Data Compression:	ALDZ-2

COMPATIBILITY

Operating Systems:	Windows Desktop, Windows Server, Novell NetWare, UNIX, Linux, Mac OS
Software/Hardware:	Go to www.quantum.com for the most up-to-date tested solutions

TAPE SPECIFICATIONS

Cartridge Dimensions:	4.1" x 4.1" x 1.0" (104.1mmx104.1mmx25.4mm)
Archive Storage:	30 years
Durability:	20,000 load/unload cycles

WARRANTY

Tape:	Limited lifetime
Tape Drive:	3 year limited with Rapid Exchange

¹ Based on 2:1 compression

* See your Quantum sales representative for more details

Model Numbers and Descriptions

TC-L42AN-BR	LTO-4 HH, Internal Bare, 3Gb/s SAS, black bezel	TC-L42AN-EZ	LTO-4 HH internal SAS HBA Bundle, 3Gb/s SAS, black bezel
TC-L42AN-EY	LTO-4 HH, Internal Kit, 3Gb/s SAS, black bezel	TC-L42BN-EZ	LTO-4 HH Tabletop SAS HBA Bundle, 3Gb/s SAS, black bezel
TC-L42BN-EY	LTO-4 HH, Tabletop Kit, 3Gb/s SAS, black bezel		
TC-L43CN-EY	LTO-4 HH, 1U Rackmount, 3Gb/s SAS, black bezel		

 For contact and product information, visit quantum.com or call 800-677-6268

Quantum®

Backup. Recovery. Archive. It's What We Do.

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About Quantum

Quantum Corp. (NYSE:QTM) is the leading global storage company specializing in backup, recovery and archive. Combining focused expertise, customer-driven innovation, and platform independence, Quantum provides a comprehensive range of disk, tape, media and software solutions supported by a world-class sales and service organization. As a long-standing and trusted partner, the company works closely with a broad network of resellers, OEMs and other suppliers to meet customers' evolving data protection needs.