

Quantum®

LTO Drives



> DATASHEET

Quantum LTO Tape Drive: Now with DATASTOR Shield Deduplication Software

Quantum's LTO-7, LTO-6, and LTO-5 standalone drives deliver a simple, affordable, all-in-one data protection solution that customers can depend on. Many companies can store all their data on a single cartridge, thanks to the tremendous capacity LTO technology provides. In addition, companies can keep this data secure using AES 256-bit encryption as tapes are transported offsite for disaster recovery or long-term archiving. LTO-7, LTO-6, and LTO-5 drives are WORM capable, allowing companies from healthcare, financial, and other related industries to meet tough regulatory requirements. LTO continues to offer two generations of backward read and one generation of backward write capability, providing an archive tape recovery solution with newer generation drives.

New functionality allows customers to simply drag and drop files to LTO-7, LTO-6, and LTO-5 as they would a hard drive using Linear Tape File System (LTFS) software. This eliminates the need for backup software and allows the information written to tape to be exchanged easily between different users, operating systems, and software. This is highly beneficial for many applications including media and entertainment, video and imaging, long-term archiving, and other applications where removing the dependence on a proprietary format is important. LTFS is compatible with Windows, Linux, and Apple Macintosh.

Quantum tape drives now include DATASTOR Shield™ backup software with deduplication to supercharge your backup. Quantum and DATASTOR have teamed up to provide the first backup with deduplication straight to tape. This technology, which reduces backups significantly (up to 20X), allows you to store more data per tape than competitive models.

FEATURES & BENEFITS

Performance*

LTO-7: Up to 750MB/sec compressed transfer rate
LTO-6: Up to 400MB/sec compressed transfer rate
LTO-5: Up to 280MB/sec compressed transfer rate

Capacity*

LTO-7: Up to 15TB with standard compression; up to 120TB with DATASTOR Shield
LTO-6: Up to 6.25TB with standard compression; up to 50TB with DATASTOR Shield
LTO-5: Up to 3.0TB with standard compression; up to 30TB with DATASTOR Shield

Security/Ease of Use

AES 256-bit data encryption security, WORM functionality, and partitioning capability

Compatibility

Investment protection with two generations of backward read and one generation of backward write capability

LTFS Software

Free LTFS software can be downloaded at www.quantum.com

Backup with Deduplication

Includes DATASTOR Shield backup software with deduplication; reduces data by up to 20X

*Assumes 2.5:1 compression for LTO-7 and LTO-6, 2:1 for LTO-5, 20:1 deduplication for DATASTOR Shield.



> LEARN MORE:
www.quantum.com/lto

TECHNICAL SPECIFICATIONS

DRIVE CAPACITY AND PERFORMANCE

Drive Type	Interface	Cartridge Capacity Native/Compressed/Deduplicated* (TB)	Drive Throughput Native/Compressed/Deduplicated* (MB/sec)
LTO-7	6Gb/sec SAS	6.0 / 15.0 / 120.0	300 / 750 / 6,000
LTO-6	6Gb/sec SAS	2.5 / 6.25 / 50.0	160 / 400 / 3,200
LTO-5	6Gb/sec SAS	1.5 / 3.0 / 30.0	140 / 280 / 2,800

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

Interface Connector Type: 6Gb/s SAS
SFF8482 w/integrated power (Internal), SFF8088 (Tabletop and Rack)

Burst Transfer Rate (MB/sec): SAS (max) 600

Data Buffer Size: LTO-7: 1GB
LTO-6: 512MB
LTO-5: 256MB

BACKUP SOFTWARE

Included Software: DATASTOR Shield Single Server Backup
Deduplication Rate: 20:1 (typical)
Software Compatibility: Windows Only
Backup Methods: Disk-to-disk-to-tape, disk-to-tape, archive-to-tape in native format
Upgradeable: Yes to multiple servers, SQL, Exchange, SharePoint, Bare Metal, Cloud and other functionality

TAPE/FORMAT COMPATIBILITY

	Media Read/Write	Media Read Only
LTO-7 Drive	LTO-7, LTO-7 WORM, LTO-6, LTO-6 WORM	LTO-5, LTO-5 WORM
LTO-6 Drive	LTO-6, LTO-6 WORM, LTO-5, LTO-5 WORM	LTO-4, LTO-4 WORM
LTO-5 Drive	LTO-5, LTO-5 WORM, LTO-4, LTO-4 WORM	LTO-3, LTO-3 WORM

RELIABILITY

MTBF hours: 250,000 @ 100% duty cycle
MSBF: 100,000 cycles
Load/Unload Life: 180,000 cycles
Non-Recoverable Error Rate: 1 in 1×10^9 bits (LTO-7 non-media error, clean drive)
1 in 1×10^7 bits (LTO-5, LTO-6 non-media error, clean drive)

PHYSICAL SPECIFICATIONS

Form Factor	Internal w/o bezel	Internal w/bezel	Tabletop	1U Rackmount
Width (in / mm)	5.75 / 146	5.83 / 148	8.4 / 213	18.7 / 480
Height (in / mm)	1.61 / 41	1.68 / 42.7	2.3 / 58	1.7 / 43
Length (in / mm)	8.07 / 205	8.27 / 210	13.10 / 332	17.6 / 438
Weight (lbs / kg)	3.55 / 1.61	3.57 / 1.62	9.4 / 4.3	14.2 / 6.4

*Assumes 2.5:1 compression for LTO-7 and LTO-6, 2:1 for LTO-5, 20:1 deduplication for DATASTOR Shield.

ENVIRONMENTAL

OPERATING

Temperature °F (°C): 50° to 100° (10° to 38°) @ 5 CFM
Humidity: LTO-7: 20% to 80% (non-condensing)
LTO-6, LTO-5: 10% to 80% (non-condensing)
LTO-7: 10,000 ft (3,048 m)
LTO-6, LTO-5: 13,000 ft (4,000 m)

NON-OPERATING

Temperature °F (°C): LTO-7: -40° to 140° (-40° to 60°) excluding media
LTO-6, LTO-5: -40° to 149° (-40° to 66°) excluding media
Humidity: LTO-7: 10% to 90% (non-condensing)
LTO-6, LTO-5: 10% to 95% (non-condensing)

VOLTAGE (V): +5, +12

POWER CONSUMPTION (HALF-HEIGHT)

LTO-7: Idle: 21.1 Watts, Typical: 32 Watts, Peak: 64.5 Watts
LTO-6: Idle: 13.2 Watts, Typical: 24.7 Watts, Peak: 69 Watts
LTO-5: Idle: 13.3 Watts, Typical: 23.7 Watts, Peak: 69 Watts

TAPE FORMAT SPECIFICATIONS

Format: LTO Ultrium 6, LTO Ultrium 5
Recording Density: 15.143KB/mm
Encoding Method: LTO-7: 32 Channel 32/33 RLL
LTO-6, LTO-5: 16 Channel 32/33 RLL NPML
Data Compression: LTO-7: 2.5:1
LTO-6: 2.5:1
LTO-5: 2:1

COMPATIBILITY

Operating Systems: Microsoft Windows, Red Hat Linux, SuSE Linux, Mac OS
Software/Hardware: Go to www.quantum.com for the most up-to-date tested solutions

TAPE SPECIFICATIONS

Cartridge Dimensions (L×W×H): 4" × 4.15" × .85"
(102mm × 105.4mm × 21.5mm)
Archive Storage: 30 years
Durability: 20,000 load/unload cycles

WARRANTY

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

Model Numbers and Descriptions

TC-L72AN-BR-C LTO-7 HH, Internal, 6GB/s SAS, 5.25", black, bare
TC-L72AN-EY-C LTO-7 HH, Internal, 6GB/s SAS, 5.25", black
TC-L72AN-EZ-C LTO-7 HH, Internal, SAS HBA Bundle, 6GB/s SAS, 5.25", black
TC-L72BN-AR-C LTO-7 HH, Tabletop, 6GB/s SAS, black
TC-L72BN-EZ-C LTO-7 HH, Tabletop, SAS HBA Bundle, 6GB/s SAS, black
TC-L73CN-AR-C LTO-7 HH, Single, 1URackmount, 6GB/s SAS, black
TC-L72GN-BR-C LTO-7 HH, Internal Drive Option for 1U Rackmount, 6GB/s SAS, black, bare

TC-L62AN-BR-C LTO-6 HH, Internal, 6GB/s SAS, 5.25", black, bare
TC-L62AN-EY-C LTO-6 HH, Internal, 6GB/s SAS, 5.25", black
TC-L62AN-EZ-C LTO-6 HH, Internal, SAS HBA Bundle, 6GB/s SAS, 5.25", black
TC-L62BN-AR-C LTO-6 HH, Tabletop, 6GB/s SAS, black
TC-L62BN-EZ-C LTO-6 HH, Tabletop, SAS HBA Bundle, 6GB/s SAS, black
TC-L62BN-EM-C LTO-6 HH, Tabletop, SAS HBA and Media (5pcs) Bundle, 6GB/s SAS, black
TC-L63CN-AR-C LTO-6 HH, Single, 1URackmount, 6GB/s SAS, black
TC-L62GN-BR-C LTO-6 HH, Internal Drive Option for 1U Rackmount, 6GB/s SAS, black, bare

TC-L52AN-BR-C LTO-5 HH, Internal, 6GB/s SAS, 5.25", black, bare
TC-L52AN-EY-C LTO-5 HH, Internal, 6GB/s SAS, 5.25", black
TC-L52AN-EZ-C LTO-5 HH, Internal, SAS HBA Bundle, 6GB/s SAS, 5.25", black
TC-L52BN-AR-C LTO-5 HH, Tabletop, 6GB/s SAS, black
TC-L52BN-EZ-C LTO-5 HH, Tabletop, SAS HBA Bundle, 6GB/s SAS, black
TC-L52BN-EM-C LTO-5 HH, Tabletop, SAS HBA and Media (5pcs) Bundle, 6GB/s SAS, black
TC-L53CN-AR-C LTO-5 HH, Single, 1URackmount, 6GB/s SAS, black
TC-L52GN-BR-C LTO-5 HH, Internal Drive Option for 1U Rackmount, 6GB/s SAS, black, bare

To learn more about Quantum LTO, please visit www.quantum.com/lto

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