



QUANTUM LTO TAPE DRIVE OFFERINGS AND OPTIONS

Form Factor	Tabletop	1U Rackmount	Internal
Ideally Suited for	Direct connect to a workstation	Mounting in a rack, options for 1 or 2 HH drives	Integration into a third-party server
Dimensions (in/mm)			
Width	8.4 / 213	18.7 / 480	5.72 / 146
Height	2.3 / 58	1.7 / 43	1.61 / 41
Length	13.10 / 332	17.6 / 438	8.07 / 205
Weight (lb/kg)	9.4 / 4.3	14.2 / 6.4	3.55 / 1.61
Drive Type Offered	LTO-9 HH LTO-8 HH LTO-7 HH See table below for drive specifications	LTO-9 HH LTO-8 HH LTO-7 HH See table below for drive specifications	LTO-9 HH LTO-8 HH LTO-7 HH See table below for drive specifications
Backup Software Included	DATASTOR Backup Software		
Items Included	Base Kit: (1) LTO Drive, (1) Data cartridge magazine (1) Cleaning Cartridge; 2 Meter Mini-SAS cable and worldwide power cords Optional: with HBA bundle	Base Kit: 1U Rack with (1) LTO Drive, and (1) cartridge magazine (1) Cleaning Cartridge; 5 Meter Mini-SAS cable and worldwide power cords Optional: 2nd Drive option kit	Base Kit: (1) LTO Drive Option 1: (1) Data cartridge magazine (1) Cleaning Cartridge; Option 2: (1) Data cartridge magazine (1) Cleaning Cartridge and HBA Bundle

LTO DRIVE SPECIFICATIONS

Drive Generation	LTO-9 HH Tape Drives	LTO-8 HH Tape Drives	LTO-7 HH Tape Drives
Media Compatibility	Read/Write to LTO-9 and LTO-8 media	Read/Write to LTO-8, LTO-7 M8, and LTO-7 media	Read/Write to LTO-7 and LTO-6 media, read from LTO-5 media
Connectivity	12 Gb SAS	6 Gb SAS	6 Gb SAS
Sustained Transfer Rate, Native	300 MB/s	300 MB/s	300 / MB/s
Burst Transfer Rate	1,200 MB/s	600 MB/s	600 / MB/s

LTO MEDIA SPECIFICATIONS

Media Type	LTO-9	LTO-8	LTO-7 M8 ²	LTO-7
Capacity (Raw / Compressed) ¹	18 / 45 TB	12 / 30 TB	9 / 22.5 TB	6 / 15 TB

¹Assumes 2.5:1 compression. ²New, unused LTO generation 7 cartridges can be initialized as LTO-8 type M media (M8). ³See compatibility guide for Quantum compatible media: www.quantum.com/swcompguide.aspx

LTO DRIVE ADDITIONAL SPECIFICATIONS

BACKUP SOFTWARE		TAPE FORMAT	
Included Software:	DATASTOR Shield Single-Server Backup	Recording Density	LTO-9: 21,459 KB/mm, LTO-8: 20,579 KB/mm, LTO-7: 19,107 KB/mm
Deduplication Rate:	20:1 (typical)	Encoding Density:	LTO-9, LTO-8, LTO-7: 32 Channel 32/33 RLL
Software Compatibility:	Windows only	Data Compression:	LTO-9, LTO-8, LTO-7: 2.5:1
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		
SAFETY STANDARDS AND COMPLIANCE CERTIFICATION			
Tabletop			
Safety Standards:	IEC 60950-1 and IEC 62368-1 with worldwide deviations, EN62368-1, UL 62368-1, CNS14336-1		
Emission Standards:	FCC Part 15 Class A, EN 55032 Class A, KN 32, VCCI, CNS 13438 Class A, ICES-003 Class A		
Immunity Standards:	EN 55024, EN 55035, KN 35; KN24		
International Certifications:	cNEMKOus (US and Canada), FCC (US), ICES (Canada) CE (Europe), UKCA (United Kingdom), GS (Germany), Nemko (Norway), Morocco (C-Mark), BIS (India), VCCI (Japan), KC (Korea), BSMI (Taiwan), RCM (AUSTRALIA/NEW ZEALAND)		
Internal (Quantum Branded)			
Safety Standards:	IEC 60950-1 and IEC 62368-1 with worldwide deviations, EN62368-1, UL 62368-1, CNS14336-1		
Emission Standards:	FCC Part 15 Class A, EN 55032 Class A, KN 32, VCCI, CNS 13438 Class A, ICES-003 Class A		
Immunity Standards:	EN 55024, EN 55035, KN 35; KN24		
International Certifications:	cNEMKOus (US and Canada), FCC (US), ICES (Canada) CE (Europe), UKCA (United Kingdom), Bauart (Germany), Morocco (C-Mark), VCCI (Japan), KC (Korea), BSMI (Taiwan), RCM (AUSTRALIA/NEW ZEALAND)		
Warranty:	3 years Limited Rapid Exchange		

*Compatibility: OS: Microsoft Windows, Red Hat Linux, SUSE Linux, Mac OS.
Software/Hardware: For the most up-to-date tested solutions, visit www.quantum.com
Please see www.quantum.com for more drive specifications.

OPERATIONAL/STORAGE ENVIRONMENTAL REQUIREMENTS

Environmental Factor	Recommended ¹	Allowable ²	Shipping ³
Dry-Bulb Temperature	LTO-6, LTO-7, LTO-8: 16 to 25 °C (61 to 77 °F) LTO-9: 15 to 25 °C (59 to 77 °F)	LTO-6, LTO-7, LTO-8: 16 to 35 °C (61 to 95 °F) LTO-9: 15 to 35 °C (59 to 95 °F)	-23 to 49 °C (-9 to 120 °F)
Relative Humidity	20 to 50% (non-condensing)	20 to 80% (non-condensing)	5 to 80% (non-condensing)
Maximum Temperature Change	5 °C / hour	5 °C / hour	n/a
Maximum Humidity Change	5% / hour	5% / hour	n/a
Temperature Limitation for Humidity Conditions	LTO-6, LTO-7, LTO-8: Wet Bulb Temperature <= 26 °C (79 °F) LTO-9: Max Dew Point 22 °C (72 °F)	LTO-6, LTO-7, LTO-8: Wet Bulb Temperature <= 26 °C (79 °F) LTO-9: Max Dew Point 22 °C (72 °F)	Wet Bulb Temperature <= 26 °C (79 °F)
Maximum Altitude	3,048 m (10,000 ft)	3,048 m (10,000 ft)	12,192 m (40,000 ft)

¹Recommended: The recommended operational/storage environmental envelope provides guidance on the environmental range for optimal performance and high reliability. This environmental range protects for 30-year archival storage. (Derate the maximum recommended dry-bulb temperature by 1 °C/300 m above 1,800 m (1.8 °F/1,000 feet above 6,000 feet)).

²Allowable: The allowable operational/storage environmental envelope defines the test limits to verify that the equipment will function within the environmental envelope. This environmental range is defined for operational storage of less than 6 months. (Derate the maximum dry-bulb temperature by 1 °C/300 m above 900 m (1.8 °F/1,000 feet above 3,000 feet)).

³Shipping: When shipping media over extended environmental ranges, shipping times should be limited to minimize the duration of media being exposed to varying environmental conditions at lower and upper ranges. LTO tape media specifications provided by the LTO program at www.lto.org or specifications provided by the media manufacturer.

Note: The prolonged exposure to conditions outside the recommended range, especially approaching the extremes of the allowable operating environment, can result in decreased equipment reliability and longevity. An occasional short-term excursion into the allowable envelope is generally acceptable but may result in performance and reliability implications and higher power consumption. For additional information regarding tape cartridge storage, shipping and operational requirements, including acclimation requirements, please visit www.quantum.com/lto-media, or refer to specific LTO tape media specifications provided by the LTO consortium at www.lto.org or specifications provided by the media manufacturer.



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