

Family data sheet

HP NonStop LTO tape drives



More capacity. Better performance. Added security.



LTO-6—the latest LTO technology

Higher throughput, greater density, and added data security

Linear Tape-Open (LTO) technology—a powerful open-tape specification—was developed as an open-standard alternative to proprietary magnetic formats. Ever since its emergence in the late 1990s, the LTO has rapidly defined the “super tape” market. Today, it’s widely used with small- and large-computer systems, especially for backup.

The original version, LTO-1, was released in 2000 and could hold 100 GB of data in a cartridge. LTO-6, released more than a decade later, offered 6.25 TB capabilities per cartridge. LTO-4 incorporated native encryption technology to protect data stored on tape, and so does LTO-6. Similar to encryption support with LTO-4 and LTO-5, LTO-6 supports write-once-read-many (WORM) technology.

LTO-6 also offers higher throughput and read and write capability with LTO-5 cartridges and read compatibility with LTO-5 and LTO-4 cartridges.

LTO-6 on HP Integrity NonStop systems

HP NonStop LTO-6 is the next iteration of HP NonStop LTO drives that began with LTO-2 and continued through LTO-5. LTO-6 is fully integrated and available for use with HP Integrity NonStop X servers and HP Integrity NonStop i servers. The NonStop LTO-6 tape drives offer an ideal solution for tape backup where security, speed, reliability, and the ability to archive are critical.

Choose from three versions of NonStop LTO tape drives. Find the one that best suits your needs:

HP M8801A ACL tape drive and M8802A ACL LTO-6 FC tape drive

HP M8801A and M8802A ACL LTO generation 6 tape drives represent the sixth generation of the Ultrium tape drive family. Both of the units come with two 12-cartridge magazines that provide a capacity of up to 60 terabytes native capacity.

The M8801A ACL and M8802A ACL are fully read and write compatible with sixth (LTO-6) and fifth-generation (LTO-5) Ultrium data cartridges. Both offer a further degree of investment protection through backward-read compatibility with fourth-generation (LTO-4) Ultrium media. These auto cartridge loader (ACL) tape drives are available for use with HP Integrity NonStop X servers, HP Integrity NonStop NS-series servers running the J-series NonStop OS, and HP Integrity NonStop BladeSystem servers. The M8801A ACL comes in a rack mount configuration. The M8802A ACL comes in a table top configuration.

Key features and benefits

- **Dependable**—The HP M8801A ACL and M8802A ACL FC tape drives set new standards for data integrity and reliability with a simple and robust design based on inherently reliable LTO technology.
- **High capacity**—Both LTO-6 drives store up to 6.25 TB per data cartridge assuming 2.5:1 compression.
- **Unit capacity**—Both store up to 150 TB assuming 2.5:1 compression with 24 data cartridges.
- **Fast**—The HP M8801A and M8802A tape drives reduce interruptions with high speed and dynamic data rate matching that squeezes peak performance from your HP NonStop server.
- **Affordable**—Both LTO-6 tape drives provide high capacity with low media cost to deliver an exceptionally low total cost of ownership.
- **Reliable**—The M8801A and M8802A tape drives protect your data with a simple, high-integrity data path, including read and write dynamic random-access memory.

Technical specifications HP M8801A ACL tape drive and M8802A ACL LTO-6 FC tape drive

Tape format	LTO Ultrium generation 6
Tape media compatibility	Read/Write Ultrium 6 and 5, read-only Ultrium 4
Cartridge capacity	2.5 TB native; up to 6.25 TB compressed (assuming 2.5:1)
Unit capacity	Up to 60 TB native with 24 data cartridges; up to 150 TB compressed with 24 data cartridges
Buffer size	512 MB
Data access time	50 seconds from beginning of LTO-6 media (average)
Rewind tape speed	9 m/s for LTO-6, LTO-5, and LTO-4 media
Interface	Fibre Channel
Plug type	Fibre Channel LC
Power specifications	100–240 VAC, 50–60 Hz, 2.5 A

Key features and benefits

- **High capacity**—With LTO-6, this large-capacity tape drive is capable of storing up to 6.25 TB of compressed storage on a single cartridge, requiring fewer data cartridges to meet storage needs and significantly reducing IT costs.
- **Reliable**—HP's exclusive data-rate matching feature automatically adjusts the drive's read and write speed based on the server and network environment, which increases performance, reduces mechanical wear on the drive, and extends tape life. Soft load feature automatically takes the data cartridge and moves it into the load position. Advanced tape leader capture design ensures fail-safe cartridge loading. Active head cleaning provides automated cleaning that increases head life and reduces the need for using the cleaning cartridge.
- **Affordable**—High capacity combined with low media cost delivers an exceptionally low cost of ownership and ensures a faster return on investment.
- **Investment protection**—A compelling technology roadmap offers you higher capacity and performance tape solutions with backward read and write compatibility for previous drive generations.

HP M8805A LTO-6 SAS table top tape drive

The HP M8805A LTO-6 represents HP's sixth-generation of LTO tape drive technology capable of storing up to 6.25 TB per cartridge. The M8805A provides investment protection with full read and write backward support with LTO-5 media, and the ability to read LTO-4 cartridge.

By nearly doubling the capacity of previous generation LTO Ultrium drives, HP customers now require fewer data cartridges to meet their storage needs, significantly reducing their IT costs and increasing their return on investment (ROI).

The HP Model M8805A LTO-6 SAS table top manual load tape drive is designed for HP Integrity NonStop X servers, HP Integrity NonStop NS-series servers running the J-series NonStop OS, and HP Integrity NonStop BladeSystem servers. It lowers the cost of an entry-level tape drive on HP NonStop servers, while increasing both capacity and performance.

Technical specifications	HP M8805A LTO-6 SAS table top tape drive
Tape format	LTO Ultrium generation 6
Tape media compatibility	Read/Write Ultrium 6 and 5, read-only Ultrium 4
Cartridge capacity	2.5 TB native; up to 6.25 TB compressed (assuming 2.5:1)
Buffer size	512 MB
Data access time	50 seconds from beginning of LTO-6 media (average)
Rewind tape speed	9 m/s for LTO-6, LTO-5, and LTO-4 media
Interface	SAS external: mini-SAS SFF8088
Plug type	6 GB/s dual-port SAS
Power specifications	100–240 VAC, 50–60 Hz, auto ranging, 0.8 A max
Dimensions (H x W x D)	3 x 8.8 x 11.7 in. (7.7 x 22.3 x 29.5 cm)
Weight	10.3 lb. (4.65 kg)

HP ELMM for HP Integrity NonStop NS-series servers and HP Integrity NonStop BladeSystem servers

HP ELMM allows automated and remote management of the M8701A ACL LTO-5 FC and M8702A ACL LTO-5 FC tape drives for HP NonStop systems. The ELMM provides an intuitive, easy-to-use graphical interface that allows remote accessibility. This software also offers automated control and other features that help reduce the tedious management and operation involved in backing up data on NonStop systems. The ELMM can give you:

- An easy-to-use GUI for tape-management functions
- Unattended scheduling of backups
- Ease of restoration with easy-to-read screens
- Random access into the physical cartridge for quicker access to data
- The ability to connect to the NonStop host through a Cluster I/O Module connection
- Ease of configuration with NonStop utilities (for example, subsystem control facility)
- The benefit of running on industry-standard workstation that runs Microsoft® Windows® 7 or later

The ELMM is available in two versions for the HP Integrity NonStop servers that run the J-series and H-series NonStop OS. As an optional NonStop host-based software product, the ELMM allows M8701A ACL LTO-5 FC and M8702A ACL LTO-5 FC tape drives to be converted into 24-cartridge random-access libraries.

HP Technology Services for NonStop systems

HP Technology Services deliver confidence, reduce risk, and help customers realize agility and stability.

We recommend the following support services for your HP NonStop environment:

- **HP Critical Service (CS)** is for environments where downtime cannot be tolerated. It offers an integrated set of proactive and reactive services and utilizes an ITIL®-based framework of proven, integrated processes to help improve availability and performance across your IT infrastructure. CS provides an assigned account team composed of highly trained IT professionals that monitor your environment around the clock, 365 days a year, address issues, mitigate risks, and reduce incidents.
- **HP Proactive 24 Service** provides proactive and reactive support, delivered under the direction of an Account Support Manager. The support includes an assigned account team, remote monitoring, an account support plan, 24x7 hardware support with 4-hour onsite response, 24x7 software support with 2-hour response, and flexible call submittal. Customer incidents are addressed 24x7, 365 days a year.
- **HP Support Plus 24 Service** includes integrated 24x7 support that helps increase the availability of the IT infrastructure. We support hardware as well as software infrastructure for business critical IT environments.
- **HP Installation and Startup Services** provide efficient and effective deployment of HP NonStop systems.

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