STORAGETEK®

T9840C
TAPE DRIVE

Key benefits

Reduce costs
Fast data access enables you to meet more of your data storage needs with affordable tape and minimize the need for higher cost disk.

Protect investments
When you upgrade to the T9840C drive, you can reuse media — and double capacity. Mix and match tape drives in StorageTek tape libraries to achieve the optimum balance of access and capacity.

Improve availability
Availability often depends on reliability. Like all StorageTek enterprise-class T-Series™ tape drives, the T9840C is designed exclusively for high duty cycles in automation environments. With a 16-channel tape head, internal tape path and robust motors and cartridge loading mechanism, the T9840C drive delivers exceptional reliability in the harshest operating conditions.

Increase productivity
With a native data transfer rate of 30 megabytes per second, the T9840C helps you: increase throughput, shorten batch windows in mainframe environments and reduce backup windows in open systems environments.

Reduce footprint
With the ability to store up to 40 gigabytes of uncompressed data on a single cartridge, the T9840C tape drive allows you to improve resource and space utilization.

Simplify storage management
In both mainframe and open systems environments, StorageTek offers easy-to-use software that lets you manage data on multiple platforms and operating systems from a central location. You save time and IT resources.

T9840C tape drive

In today's transaction-intensive IT environments, speed, reliability and predictability are core data protection requirements. StorageTek's T9840C tape drive provides fast data access, fast recall and high throughput. This allows you to improve response times, shrink backup windows, accelerate batch processing, cut recovery times and improve system and application availability.

As the industry's only two-reel fast access tape drive, the T9840C drive offers exceptional data protection advantages:

- Move data at a rate of 30 megabytes per second — over one and a half times the speed of the T9840B tape drive and three times the speed of the T9840A tape drive.
- Store 40 gigabytes native capacity on a single cartridge — double the capacity of the first- and second-generation T9840 drives.
- Access data in an average of 12 seconds thanks to the cartridge's midpoint load design and internal tape path.

The T9840C tape drives use the same StorageTek® 9840 media as the T9840A and T940B tape drives. If you currently use T9840 drives, you can leverage your existing media assets with the T9840C to meet changing storage requirements. For example, you can apply your media budget to the purchase of capital assets and simply reformat existing cartridges to store higher capacities.

STORAGETEK®

Take advantage of ultra-reliability

Think of the potential cost of downtime in the form of lost business, lost customers and lost profit. Every edge helps. The T9840C's enterprise-class engineering and performance minimize the risk of downtime. With the ultra-reliable T9840C in your infrastructure, you can improve efficiency and worry less with these unique enterprise class features:

- Heated tape heads contribute to consistent operational temperature and extended head life.
- Sixteen-channel heads reduce the required number of tape passes and increase data reliability.
- Tape path remains inside the media cartridge for improved data integrity and faster access times.
- Removal of tape from heads during high speed operations, such as search and rewind, extends the life of the head and reduces the need for head cleaning.
- Data buffer management enables drive back hitching to be accomplished more quickly than the data buffer can be filled, resolving the issue of data interruption from the server at slow throughput speeds.
- Robust cartridge loader mechanism is designed to operate in the industry's fastest libraries, the StreamLine™ SL8500 modular library system and the PowderHorn® 9310 tape library.

Improve business continuance in enterprise environments

The T9840C provides direct-attach ESCON or FICON options, which help enable remote storage applications and increase business continuance options. Support distances up to nine kilometers with ESCON and up to 100 kilometers with FICON without channel extensions or significant throughput reduction. With direct connection, you decrease cost, complexity and points of failure.

In mainframe environments, you can use T9840C tape drives with StorageTek's Virtual Storage Manager® (VSM®) system for speedy retrieval of active data or hierarchal storage management (HSM) software, such as Lifecycle Director™ software, to centralize storage management.

T9840C
TAPE DRIVE

Enable high performing SANs in open systems environments

The T9840C offers a native two-gigabit, fabric-aware Fibre Channel interface, enabling high-powered connectivity. Go ahead — implement a high-speed storage area network (SAN) with confidence. With a 200-megabytes-per-second burst data rate and a 30-megabytes-per-second sustained data transfer rate, the T9840C helps reduce network congestion and gives you the performance you need to place more and more data on cost-effective tape. You gain the speed you need for backup/recovery or disaster recovery.

In open systems environments, you can use T9840C tape drives with StorageTek's ACSLS Manager™ software to implement a centralized library management solution that allows you to dynamically allocate library resources without hard partitioning tape slots. With StorageTek's Virtual Storage Manager™ (VSM™) open solution, the T9840C helps you complete backup jobs faster and reduce "resource not available" time outs.

Support compliance and retention requirements

StorageTek's VolSafe® secure media technology helps you meet stringent electronic storage regulatory and legal requirements. Combine this write once, read many (WORM) tape technology with T9840C tape drives, and you can securely archive data on non-erasable, non-rewritable tape. Recall data within seconds when you need it.

Protect your investments today and tomorrow

The T9840C tape drive is compatible with most StorageTek automated tape libraries. Through advanced functionality, such as Any Cartridge Any Slot™ technology, you can easily adopt and mix new technologies, drives and media types, thereby protecting the value of your StorageTek library investment.

Use the T9840C in combination with other drives, such as StorageTek's capacity-centric T9940B tape drive, to achieve specific access and capacity objectives, with an attractive total cost of ownership.

Performance. Reliability. Investment protection. With the T9840C, you can bolster business continuance or disaster recovery or "business as usual."

T9840C tape drive specifications

Performance

Access time*	(See footnote)
Tape load and thread to ready	4 sec
Average file access time (first file)	8 sec
Average access time	12 sec
Maximum/average rewind time	16/8 sec
Unload time	4 sec
Data transfer rate, native (uncompressed)	30 MB/sec
Data transfer rate, native (compressed)	70 MB/sec

Capacity

Capacity, native (uncompressed)	40 GB

VR²

Availability

Mean time between failures (MTBF)	
Power on	290,000 hr @ 100% duty cycle
Tape load	240,000 hr @ 10 loads/day (100,000 loads)
Tape path motion	216,000 hr @ 70% TPM duty cycle
Head life	8.5 yr @ 70% TPM duty cycle
Uncorrected bit error rate	1×10^{-18}
Undetected bit error rate	1×10^{-33}

Compatibility

Interface	2-Gb Fibre Channel, ESCON, ESCON for VSM, 2-Gb FICON for FICON and FICON Express channels
Burst transfer rate	
Channel rate (Fibre Channel)	200 MB/sec (maximum instantaneous)
Interface (Fibre Channel)	N & NL port, FC-PLDA (hard and soft AL-PA capability), FC-AL-2 FCP-2, FC-TAPE
Read/write compatibility interface	Proprietary format
Emulation modes	Native, 3490E, 3590

Mechanical

Height	5.25 in (13.3 cm)
Depth	15.0 in (38.1 cm)

Environmental

Temperature	
Operating	+59° to +90° F (+15° to +32° C)
Non-operating	+50° to +104° F (+10° to +40° C)
Relative humidity	
Operating	20% to 80%
Non-operating	10% to 95%

Power

Voltage	100–240 VAC @ 50–60 Hz
Consumption/dissipation (operating maximum continuous — not peak)	82 VA/280 BTU/hr

* The actions of the tape drive can be divided into four distinct phases:

Phase 1: Load time — the amount of time required to insert a cartridge in the drive, load the tape and prepare to read, write or search.

Phase 2: Average file access time — the amount of time required to search from the beginning of the tape to the midpoint; does not include load time.

Phase 3: Maximum rewind time — the amount of time required to rewind the tape from the end to the beginning of the tape. The average rewind time is the time to rewind a tape from the midpoint to the beginning, i.e. one-half of the maximum rewind time.

Phase 4: Unload time — the amount of time required to eject the cartridge from the drive.

StorageTek®

TC 0024 A 01/05