

# SUN STORAGE TEK T9840C TAPE DRIVE

## KEY FEATURES AND BENEFITS

### FEATURES

- Sixteen-channel tape head, internal tape path, and robust motors and cartridge loading mechanism
- Native data transfer rate of 30 MBps
- Up to 40 GB of storage for uncompressed data on a single cartridge
- Easy-to-use software for centralized data management

### BENEFITS

- **Reduce costs.** Fast data access enables you to meet more of your data storage needs with affordable tape.
- **Leverage investments.** When you upgrade to the T9840C drive, you can reuse media—and double capacity.
- **Improve availability.** The Sun StorageTek T9840C tape drive is designed exclusively for high-duty cycles in automation environments.
- **Increase productivity.** Increase throughput, shorten batch windows in mainframe environments, and reduce backup windows in open systems environments.
- **Reduce footprint.** Improve resource and space utilization.
- **Simplify storage management.** Centralized storage management saves time and IT resources.

*In today's transaction-intensive IT environments, speed, reliability, and predictability are core data protection requirements. Oracle's Sun StorageTek 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 Sun StorageTek T9840C tape drive offers speed, reliability, and predictability.

### Move, Store, and Access Data with Speed

As the industry's only two-reel fast-access tape drive, the Sun StorageTek T9840C tape drive offers exceptional data protection advantages, including the ability to

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

The Sun StorageTek T9840C tape drives use the same Sun StorageTek 9840 media as the Sun StorageTek T9840A and Sun StorageTek T940B tape drives. If you currently use Sun StorageTek T9840 drives, you can leverage your existing media assets with the Sun StorageTek 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.

### Take Advantage of Ultrareliability

Think of the potential cost of downtime in the form of lost business, lost customers, and lost profit. Every edge helps. The Sun StorageTek T9840C's enterprise-class engineering and performance minimize the risk of downtime. With the ultrareliable Sun StorageTek 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 Sun StorageTek T9840C provides direct-attach ESCON or FICON options, which help enable remote storage applications and increase business continuance options. It supports distances of up to 9 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 Sun StorageTek T9840C tape drives with the Sun StorageTek Virtual Storage Manager (VSM) system for speedy retrieval of active data or hierarchical storage management (HSM) software, such as Lifecycle Director software, to centralize storage management.

### Enable High-Performing Storage-Area Networks in Open Systems Environments

The Sun StorageTek 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 Sun StorageTek 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 Sun StorageTek T9840C tape drives with ACSLS Manager software to implement a centralized library management solution that allows you to dynamically allocate library resources without hard partitioning tape slots.

### **Support Compliance and Retention Requirements**

Sun StorageTek VolSafe secure media technology helps you meet stringent electronic storage regulatory and legal requirements. Combine this write-once, read-many (WORM) tape technology with Sun StorageTek T9840C tape drives, and you can securely archive data on nonerasable, nonrewritable tape. You can now recall data within seconds when you need it.

### **Protect Your Investments Today and Tomorrow**

The Sun StorageTek 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 Oracle library investment.

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

Performance, reliability, investment protection: With the Sun StorageTek T9840C, you can bolster business continuance or disaster recovery or “business as usual.”

### **Engage the Storage Experts**

Oracle service professionals help you address storage challenges by delivering integrated services and solutions that optimize and manage storage performance over the life of your data. Our recognized, world-class service and customer care give you confidence that your technology investment is protected and that your business will be responsive to change. To help you pinpoint opportunities to reduce costs, mitigate business risk, and better leverage information assets, our consulting and managed services offerings deliver clarity, simplicity, and choice in solutions that address regulatory concerns, complex storage growth, resource management, and scalability challenges. Oracle professionals can help you gain and sustain measurable results with the reliability and flexibility that you require.

**Sun StorageTek T9840C Tape Drive Specifications**

<b>Performance</b>
Access Time <sup>1</sup>
<ul style="list-style-type: none"> <li>• Tape load and thread to ready: 4 seconds</li> <li>• Average file access time (first file): 8 seconds</li> <li>• Average access time: 12 seconds</li> <li>• Maximum/average rewind time: 16/8 seconds</li> <li>• Unload time: 4 seconds</li> <li>• Data transfer rate, native (uncompressed): 30 MB/second</li> <li>• Data transfer rate, native (compressed): 70 MB/second</li> </ul>
<b>Capacity</b>
<ul style="list-style-type: none"> <li>• Native (uncompressed): 40GB</li> </ul>
<b>Availability</b>
Mean Time Between Failures (MTBF)
<ul style="list-style-type: none"> <li>• Power on: 290,000 hrs. @ 100% duty cycle</li> <li>• Tape load: 240,000 hrs. @ 10 loads/day (100,000 loads)</li> <li>• Tape path motion: 216,000 hrs. @ 70% TPM duty cycle</li> </ul>
Head Life
8.5 yrs. @ 70% TPM duty cycle
Uncorrected Bit Error Rate
$1 \times 10^{-18}$
Undetected Bit Error Rate
$1 \times 10^{-33}$
<b>Compatibility</b>
Interface
<ul style="list-style-type: none"> <li>• 2 Gb Fibre Channel</li> <li>• ESCON</li> <li>• ESCON for VSM</li> <li>• 2 Gb FICON for FICON and FICON Express channels</li> </ul>
Channel Rate (Fibre Channel)
200 MB/sec (maximum instantaneous)
Interface (Fibre Channel)
<ul style="list-style-type: none"> <li>• N &amp; NL port</li> <li>• FC-PLDA (hard- and soft AL-PA capability)</li> <li>• FC-AL-2 FCP-2</li> <li>• FC-TAPE</li> </ul>
Read/Write Compatibility Interface
Proprietary format

1. 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—that is, one-half of the maximum rewind time); Phase 4: Unload time—the amount of time required to eject the cartridge from the drive.

Emulation Modes
<ul style="list-style-type: none"> <li>• Native</li> <li>• 3490E</li> <li>• 3590</li> </ul>
Mechanical
<ul style="list-style-type: none"> <li>• Height: 5.25 in. (13.3 cm)</li> <li>• Depth: 15.0 in. (38.1 cm)</li> </ul>
Environmental
Temperature: <ul style="list-style-type: none"> <li>• Operating: +59°F to +90°F (+15°C to +32°C)</li> <li>• Nonoperating: +50°F to +104°F (+10°C to +40°C)</li> </ul> Relative Humidity <ul style="list-style-type: none"> <li>• Operating: 20% to 80%</li> <li>• Nonoperating: 10% to 95%</li> </ul>
Power
<ul style="list-style-type: none"> <li>• Voltage: 100–240 V AC @ 50 Hz–60 Hz</li> <li>• Consumption/Dissipation (operating maximum continuous—not peak): 82 VA/280 BTU/hr</li> </ul>

### Warranty

Visit [oracle.com/sun/warranty](http://oracle.com/sun/warranty) for Oracle's global warranty support information on Sun products.

### Services

Visit [oracle.com/sun/services](http://oracle.com/sun/services) for information on Oracle's service program offerings for Sun products.

### Contact Us

For more information about Oracle's Sun StorageTek T9840C tape drive, please visit [oracle.com/storage](http://oracle.com/storage) or call +1.800.786.0404 to speak to an Oracle representative.



Copyright © 2005, 2009, Oracle and/or its affiliates. All rights reserved.

This document is provided for information purposes only and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. UNIX is a registered trademark licensed through X/Open Company, Ltd. 0109