Sun StorageTek VolSafe®

Secure Media Technology

The media identifier label background, and the write-protect switch allow the operator to easily distinguish VolSafe technology media from other media.

Highlights

Permanently write-protect valuable corporate data
Address regulatory requirements and business continuity with VolSafe secure media technology. It was designed to permanently write and protect data.

Reduce cost of ownership
Since T10000, T9840, and T9940B tape drives are VolSafe-technology-capable, you simply purchase VolSafe technology tape cartridges, just like you would any other media. You do not have to invest in other hardware, simply purchase VolSafe technology tape cartridges.

Simplify media management
For current Sun StorageTek tape library customers, VolSafe technology requires no additional hardware, staff, or special operating procedures.

Improve user access
Automated VolSafe technology solutions provide customers stymied by manual archive policies with easy and fast data access.

Improve asset utilization
VolSafe technology media can be managed in a library concurrently with non-VolSafe technology media and even non-9840 or non-9940 media.

VolSafe secure media technology

StorageTek™ VolSafe secure media technology from Sun is the industry's premier non-erasable, non-rewritable, tape-based write once read many (WORM) storage solution. Once your information is written to tape, additional information can then be added or read as often as needed, but never changed, modified, or deleted. Additionally, VolSafe technology supports the most demanding electronic storage regulatory requirements, including those of the Securities and Exchange Commission.

VolSafe technology combines visual, physical, and electronic redundancy to protect data security.

- Visibly — VolSafe technology write-protect switches and cartridge labels are different colors to facilitate identification.
- Physically — Drive sensors detect a unique depression on the bottom of the VolSafe technology cartridge and identify it as VolSafe technology enabled.
- Electronically — The media information region (MIR) contains a VolSafe technology identifier that is written on the tape at the factory.

T9840 tape drive with WORM technology

The StorageTek T9840 tape drive technology was designed to deliver access times that rival those of optical disk, offering almost immediate access to your WORM data without additional equipment to purchase and at a lower operating cost than optical disk solutions. VolSafe technology, coupled with Sun StorageTek tape libraries, provides a highly scalable, reliable, and fast WORM storage answer. It is the superior option and the ideal solution.

Get WORM for your growing data needs with the T10000 tape drive

The Sun StorageTek T10000 tape drive technology offers massive capacity coupled with superior performance. Tried and proven with the T9840 tape drive, VolSafe technology capability is extended to the T10000 tape drive and T10000 tape media. In order to utilize the VolSafe technology functionality, the customer purchases T10000 VolSafe technology data cartridges.

VolSafe technology is an integral part of future tape technologies from Sun. It is designed to help customers dramatically reduce the total cost of storage, provide enterprise-wide storage access, deliver unequaled performance, reduce the storage management burden, and deliver 24 x 7 x forever secure data storage and access.

Engage the storage experts

Sun StorageTek 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. We can help you pinpoint opportunities to reduce costs, mitigate business risk, and better leverage information assets. Our consulting and managed services offer clear and simple choices in solutions that address your regulatory concerns, complex storage growth, resource management, and scalability challenges. Covering over 125 countries, more than 2100 dedicated storage service professionals can help you gain and sustain measurable results with the reliability and flexibility that you require.

VolSafe Secure Media Technology Compatibility with T10000 and T9x40 Tape Drives

Tape drives	9840 VolSafe cartridge	9840C VolSafe cartridge	9940B VolSafe cartridge	T10000 cartridge
T9840A/B drive	Read/write			
T9840C drive	Read only	Read/write		
T9940B drive			Read/write	
T10000 drive				Read/write

Specifications

Capacity	9x40 VolSafe technology cartridge	T10000 cartridge
Capacity, native (uncompressed)	200 GB (T9940B), 40 GB (T9840C), 20 GB (T9840B)	500 GB (T10000 standard), 120 GB (T10000 Sport)
Performance tape speed		
Read and write	79 in./sec (2.0 m/sec) — T9840A	375 in./sec (9.5 m/sec) — T10000
	158 in./sec (4.0 m/sec) — T9840B	
	134 in./sec (3.4 m/sec) — T9940B, T9840C	
Search and rewind	433 in./sec (11 m/sec)	433 in./sec (11 m/sec)
Formulation	Advanced metal particle (AMP)	Advanced metal particle (AMP)
Coercivity	1625 +/- 75 Oersteds (130 +/- 6.0 KA/m)	2500 +/- 100 Oersteds (200 +/- 8.0 KA/m)
Substrate	Polyethylene naphthalate (PEN)	Polyethylene naphthalate (PEN)
Track-following servo	Factory pre-recorded (Caution: Do not bulk-erase cartridges)	Factory pre-recorded (Caution: Do not bulk-erase cartridges)
Mechanical		
Width	4.29 in. (10.9 cm)	4.29 in. (10.9 cm)
Length	4.92 in. (12.5 cm)	4.92 in. (12.5 cm)
Height	1.00 in. (2.54 cm)	1.00 in. (2.54 cm)
Weight	9.17 oz (262 g)	9.31 oz (263.9 g)
Drop strength	39.4 in. (1 m)	39.4 in. (1 m)
Compatibility		
Tape drive compatibility	3490, 3590, T9840A, T9840B, T9840C, T9940B	T10000
Number of tracks	288 (T9840A, T9840B, T9840C, 576, T9940B)	768
Form factor	Half inch, 3480/3490E	Half inch, 3480/3490E
Availability		
Archival life	30 years	30 years
Short-length durability	80,000 write/read passes minimum	N/A
Long-length durability	6500 write/read passes minimum	N/A
Uncorrected bit error rate	$1x10^{-18}$	$1x10^{-19}$
Permanent errors	Zero	Zero
Load/unloads	10,000 minimum	15,000 minimum
Environmental		
Temperature (non-condensing)		
Operating	+60° F to +90° F (+15° C to +32° C)	+59° F to +104° F (+15° C to +40° C)
Storage (up to 4 weeks)	+40° F to +90° F (+5° C to +32° C)	+50° F to +90° F (+10° C to +32° C)
Storage (archive)	+59° F to +77° F (+15° C to +25° C)	+59° F to +79° F (+15° C to +26° C)
Shipping	-9° F to +120° F (-23° C to +49° C)	-9° F to +120° F (-23° C to +49° C)
Humidity		
Operating	20% to 80%	20% to 80%
Storage (up to 4 weeks)	5% to 80%	5% to 80%
Storage (archive)	30% to 40%	30% to 40%
Shipping	5% to 80%	5% to 80%
Wet bulb maximum		
Operating	+78° F (+ 26° C)	+78° F (+ 26° C)
Storage (up to 4 weeks)	+78° F (+26° C)	+78° F (+26° C)
Storage (archive)	+78° F (+26° C)	+78° F (+26° C)
Shipping	+78° F (+26° C)	+78° F (+26° C)

Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 USA **Phone** 1-650-960-1300 or 1-800-555-9SUN **Web** sun.com

TC 0017 C 05/06 SunWin# 473208