

Sun StorageTek™ 6540 Array

Ideal for commercial applications and high-performance environments



Highlights

- High-availability architecture and nondisruptive upgrades help users meet stringent reliability requirements
- Data protection software enables replication, snapshot, and volume copy
- Powerful dual controllers and end-to-end 4 Gb/s design stand up to the most rigorous computing demands
- Sun StorageTek Common Array Manager (CAM) software provides a browser-based, application-oriented management console that works with all Sun StorageTek modular family storage systems
- Automated configuration uses pre-defined application profiles to enable precise, predictable, and repeatable results
- A common storage module used across the StorageTek modular family enables users to pay as they grow and to protect IT investments
- Available with two Sun System Packs – a Performance Pack combining the Sun StorageTek 6540 array with more support in one optimized offering, and a Performance Plus Pack with services to help deploy and maintain your Sun StorageTek 6540 array



The Sun StorageTek™ 6540 array is designed to handle large data sets in applications such as OLTP, HPTC, and databases. It delivers market-leading performance for primary storage and is a cost-effective business continuity solution. Like all systems in the Sun StorageTek modular family, the array is designed to deliver investment protection and exceptional data protection while applications evolve. The modular family is also distinguished by high availability, extensive interoperability, easy manageability, and flexible scalability.

Boost protection with high-availability architecture

The Sun StorageTek 6540 array's design permits nondisruptive capacity additions and the ability to change volume characteristics on the fly to optimize protection and minimize risk.

Simplify management and configuration

The SMI-S-compliant Sun StorageTek Common Array Manager software is the array's browser-based, application-oriented management interface. Accessible from anywhere with the use of a secure Internet connection, CAM includes built-in performance tracking and automated diagnostics so users can focus on precise, predictable, and repeatable results.

Expand capacity with online, data-in-place functionality

The array supports up to 224 disks, is upgradable, and is compatible with other members of the modular portfolio. Users can mix SATA and Fibre Channel drives to design a tiered storage environment with centralized management and integrated data services for business continuity.

Added value and cost savings with Sun System Packs

Sun System Performance Packs exceed the traditional warranty and include 24-hour technical support by phone, extended onsite coverage hours, SunVIP™ cross-vendor/-platform interoperability problem management, and access to online learning resources. Sun System Performance Plus Packs add essential services to help deploy and maintain your modular storage.

Sun StorageTek 6540 Array Specifications

StorageTek 6540 array

Controller card	Dual Fibre Channel RAID controller								
Cache size (with ECC protection)	4 GB, 8 GB, or 16 GB dedicated data cache								
Host interfaces/link speeds	Eight 4 GB direct, arbitrated loop, or switched attach ports								
Other interfaces	Eight 4 Gb/s FC expansion ports Four 10/100 Base-T Ethernet ports Two nine-pin RS-232 serial ports								
RAID level	0, 1, 3, 5, and 1+0								
Cache battery backup	Up to seven days (depending on cache size)								
Integrated data services/ premium features (optional)	<ul style="list-style-type: none"> Sun StorageTek™ Data Snapshot (optional) (supports up to 16 snaps per volume, 1,024 per array) Sun StorageTek™ Data Volume Copy (optional) (supports up to eight active copies per volume, 1,024 per array) Sun StorageTek™ Data Replicator (optional) (supports up to 128 replicated volumes) Sun StorageTek™ Storage Domains (supports up to 512 storage domains) 								
Dynamic capacity expansion	Five to 224 drives 365 GB to 224 TB								
Expansion tray	Up to 14 CSMII expansion trays								
Dynamic reconfiguration	Volume expansion, RAID migration, capacity expansion, segment size migration, volume and virtual disk reconfiguration, controller firmware upgrades								
Drive depopulation	Scales from five to 16 hard disk drives per tray								
Volume	Up to 2,048								
Global host spares	unlimited								
Maximum array capacity	224 TB								
Disk drives									
Form factor	3.5 in., low-profile								
Interface	Dual-ported Fibre Channel								
Supported drives/system per tray capacity (raw, unformatted)									
Fibre Channel drives	<table border="0"> <tr> <td>146 GB 15,000 rpm 4 Gb/s</td> <td>2,336 GB per tray (3 RU)</td> </tr> <tr> <td>300 GB 10,000 rpm 2Gb/s</td> <td>4,800 GB per tray (3RU)</td> </tr> <tr> <td>300 GB 15,000 rpm 4Gb/s</td> <td>4,800 GB per (3RU)</td> </tr> <tr> <td>400 GB 10,000 rpm 4 Gb/s</td> <td>6,400 GB per tray (3 RU)</td> </tr> </table>	146 GB 15,000 rpm 4 Gb/s	2,336 GB per tray (3 RU)	300 GB 10,000 rpm 2Gb/s	4,800 GB per tray (3RU)	300 GB 15,000 rpm 4Gb/s	4,800 GB per (3RU)	400 GB 10,000 rpm 4 Gb/s	6,400 GB per tray (3 RU)
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Supported software:

- Sun StorageTek™ QFS Software
- Sun StorageTek™ SAM-FS Software
- Sun™ Cluster Software
- Sun StorageTek™ Enterprise Backup Software (EBS)
- Solstice™ DiskSuite 4.2.1 (in conjunction with the Solaris 8 Operating System)
- Solaris™ Volume Manager (embedded in the Solaris 9 Operating System)
- Symantec NetBackup (NBU)
- Symantec Volume Manager with DMP (VxVM)
- Symantec File System (VxFS)
- Symantec Storage Foundation

Management software support:

Sun StorageTek Common Array Manager (included)
SANtricity Storage Manager (optional)

Learn More

For additional information on the Sun StorageTek 6540 array, visit sun.com/storagetek/disk_systems/midrange/6540/

Operating system support

- Solaris™ Operating System 8, 9, 10, and x64
- Microsoft Windows 2000 Server and Advanced Server (SP4)
- Microsoft Windows 2003 Server Standard, Enterprise, and Web editions
- HP-UX 11.11 and 11.23
- IBM AIX 5.3, 5.4
- Red Hat Linux AS/ES/WS Enterprise edition 4.0/5.0
- SUSE Linux LES 9 and 10
- Netware 6 SP5, Netware 6.5 SP3
- VMware ESX 3.5

The Sun StorageTek 6540 array is fully supported with major host operating systems and multipath drivers. For details, please refer to the Sun StorageTek Interop Tool at: <https://extranet.stortek.com/interop/interop>

Host connectivity

Host/HBA/FC switches	https://extranet.stortek.com/interop/interop
Multipath driver	Sun Traffic Manager for the Solaris OS Veritas DMP, as well as native drivers for other OSes

Warranty

Duration	Three years
Phone support	8 a.m. – 8 p.m., Mon. – Fri.
Onsite service	Next business day, 8 a.m. – 5 p.m., Mon. – Fri.
Onsite response time	Next business day, local business hours

Service upgrade	SunSpectrum™ service upgrades are available
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Dimensions

Height x width x depth	
Controller module:	17.5 cm (6.9 in.) x 48.3 cm (19.0 in.) x 65.1 cm (25.6 in.)
Expansion module:	12.95 cm (5.1 in.) x 44.70 cm (17.6 in.) x 57.15 cm (22.5 in.)
Cabinet:	188 cm (74 in.) x 59.7 cm (23.5 in.) x 100 cm (39.4 in.)

Weight (maximum)	
Controller module:	36.5 kg (80.5 lbs.)
Expansion module:	40 kg (88 lbs.)
Cabinet:	364.5 kg (810 lbs.) cabinet only

Power requirements

AC power (CU)	
Controller module:	2.65 A max. operating at 240 V AC (180–264 V AC range), 50/60 Hz 5.53 A max. operating at 115 V AC (90–136 V AC range), 50/60 Hz
Expansion module:	1.97 A max. operating at 240 V AC (180–264 V AC range), 50/60Hz 4.11 A max. operating at 115 V AC (90–136 V AC range), 50/60 Hz
Cabinet:	32 A (2 x 16 A) maximum, N + 1/dual grid redundant systems, single-phase 180-240 V AC, 47-63 Hz

Environment

Operating temperature	10°C to 40°C (50°F to 104°F)
Relative humidity	20% to 80% noncondensing
Altitude	100 ft. (30.5m) below sea level to 9,840 ft. (3,000m)
Shock	25 G, 3.75 ms triangular
Vibration	Random vibration to specified power spectral density
Heat output	Controller module: 235 W (804 BTU/hr.) Expansion module: 444 W (1,517 BTU/hr.)

Regulations

Safety and emissions	IEC 60950, EN 60950, UL/CSA 60950, FCC Part 15 (47CFR15B), CISPR 22 (EN55022—RF Radiated and Conducted Emissions), IEC 61000-3-2, IEC 61000-3-3
Immunity	CISPR 24 (EN55024), IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000 4-6, IEC 61000-4-11