

# Sun StorageTek™ 6140 Array

Advanced data protection for cost-conscious enterprises



## Highlights

- Start small and grow—get online, pay-as-you-grow scalability, protecting investments over time
- Nondisruptive flexibility—increase productivity by easily and dynamically scaling with the application
- Complete system availability—high-availability design and enterprise-level data protection software that provides continuous access to data
- Simplify management and configuration—Sun StorageTek™ Common Array Manager (CAM) software provides a browser-based, application-oriented management console that works across the entire product family
- With a mix of Fibre Channel and SATA drives, users can easily design a tiered storage environment
- Available with two Sun System Packs—a Performance Pack combining the Sun StorageTek 6140 array with more support in one optimized offering, and a Performance Plus Pack with services to help deploy and maintain your Sun StorageTek™ 6140 array



The Sun StorageTek™ 6140 array is ideal for primary storage within business-critical applications and data protection solutions. It is an affordable entry point into a family of products that grows with businesses in capacity, availability, performance, and connectivity, so users can manage data with confidence.

### Flexible configurations—start small, grow

The array supports up to 112 disks, is upgradable, and is compatible across its product family. The StorageTek modular line shares a common building block for capacity increases, data-in-place migration, and mixing SATA and Fibre Channel drives within a storage module.

### Simplify management and configuration

SMI-S-compliant Sun StorageTek Common Array Manager software is the array's browser-based, application-oriented management console. Accessible from anywhere, it requires only a secure Internet connection.

### Complete system availability

Redundant design includes switched technology with point-to-point connections. Controller firmware upgrades, capacity and volumes additions, RAID and segment size migration, and changing volume characteristics all can be done on the fly, optimizing protection and minimizing risk.

### Software for business continuity

Sun StorageTek™ Data Replicator software enables synchronous and asynchronous replication to remote sites for extended data protection and continuous access. Sun StorageTek Data Snapshot software conserves costly disk space with real-time protection of critical volumes. Sun StorageTek Volume Copy software quickly creates independent copies of production volumes.

### 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 6140 Array Specifications

StorageTek 6140 array	6140 — 2 GB cache	6140 — 4 GB cache
Controller card	Dual Fibre Channel RAID controller cards	
Cache size (with ECC protection)	2 GB data cache	4 GB data cache
Host ports	Four (SFPs)	Eight (SFPs)
Host interfaces/link speeds	Switched FC or FC-AL/4 Gb/s, 2 Gb/s, 4 Gb/s	
Other interfaces	Two 4 Gb/s or 2 Gb/s FC expansion ports (switched loop) Two six-pin Mini-DIN to nine-pin serial ports Four RJ45 10/100 Base-T network connectors	
RAID level	0, 1, 3, 5, 1+0, and 6 (p+q)	
Cache battery backup	Up to 72 hours	
Integrated data services/ premium features (optional)	<ul style="list-style-type: none"> <li>• Sun StorageTek™ Data Snapshot (optional) (support up to eight snaps per volume, 512 per array)</li> <li>• Sun StorageTek™ Data Volume Copy (optional) (supports up to eight active copies per volume, 1,024 per array)</li> <li>• Sun StorageTek™ Data Replicator (optional) (supports up to 64 replicated volumes)</li> <li>• Sun StorageTek™ Storage Domains (supports up to 128 storage domains) (6140 — 2 GB cache supports up to 32 only)</li> </ul>	
Dynamic capacity expansion	Five to 64 drives 365 GB to 64 TB	Five to 112 drives 365 GB to 112 TB
Expansion tray (FC-SBOD)	Up to three expansion trays	Up to six expansion trays
Dynamic reconfiguration	Volume expansion, RAID migration, capacity expansion, segment size migration, volume/virtual disk reconfiguration, controller firmware upgrades	
Drive depopulation	Scales from five to 16 hard disk drives per tray	
Volume	Up to 1,024	Up to 1,024
Global host spares	unlimited	unlimited
Maximum array capacity	64 TB	112 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	146 GB 15,000 rpm 4 Gb/s 300 GB 10,000 rpm 2Gb/s 300 GB 15,000 rpm 4 Gb/s 400 GB 10,000 rpm 4 Gb/s	2,336 GB per tray (3 RU) 4,800 GB per tray (3RU) 4,800 GB per tray (3 RU) 6,400 GB per tray (3 RU)
SATA-II drives	500 GB 7,200 rpm 3 Gb/s 750 GB 7,200 rpm 3 Gb/s 1,000 GB 7,200 rpm 3 Gb/s	8,000 GB per tray (3 RU) 12,000 GB per tray (3 RU) 16,000 GB per tray (3 RU)

## 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 Environment)
- Solaris™ Volume Manager (embedded in the Solaris 9 Operating Environment)
- Symantec NetBackup (NBU)
- Symantec Volume Manager with DMP (VxVM)
- Symantec File System (VxFS)
- Symantec Storage Foundation

## Management software support

Sun StorageTek Common Array Manager software (included)

## Learn More

For additional information on the Sun StorageTek 6140 array, visit [sun.com/storagetek/disk\\_systems/midrange/6140/](http://sun.com/storagetek/disk_systems/midrange/6140/)

## 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 6140 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.storitek.com/interop/interop>

## Host connectivity

Host/HBA/FC switches	<a href="https://extranet.storitek.com/interop/interop">https://extranet.storitek.com/interop/interop</a>
Multipath driver	Sun Traffic Manager for the Solaris OS Veritas DMP, as well as native driver for other operating systems

## 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™ available

## 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:	12.95cm (5.1 in.) x 44.7 cm (17.6 in.) x 57.15cm (22.5 in.)
Cabinet:	188 cm (74 in.) x 59.7 cm (23.5 in.) x 100 cm (39.4 in.)
Weight (maximum):	40 kg (88 lbs.)

## Power requirements

AC power (CU)	3.96 A max. operating @ 115 V AC (90 to 136 V AC range),
Controller module :	50/60 Hz 2.06 A max. operating @ 240 V AC (180 to 264 V AC range), 50/60 Hz
Expansion module:	4.11 A max, operating at 115 V AC (90-136 V AC range), 50/60 Hz 1.97 A max. operating @ 240 C (180-264 V AC range, 50/60 Hz
DC power: Controller module	17 A max. operating (-36 to -72 V DC range)
DC power: Expansion module	17 A max. operating (-36 to -72 V DC range)

## Environment

Operating temperature	15°C to 40°C (41°F to 104°F)
Relative humidity	5% to 85% noncondensing
Altitude	100 ft. (30.5m) below sea level to 9,840 ft. (3,000m)
Shock	10 G, 11 ms half-sine
Vibration	Random vibration to specified power spectral density
Heat output	Controller module: 460 W (1,571 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, 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, NEBS Level 3 (GR-63-CORE; GR-1089-CORE), ETSI EN 300 386
Immunity	
Ruggedized	