

The SnapSAN S1000 modular storage array is an ideal platform for providing non-stop storage services to the most demanding applications. Designed for high availability, the S1000 combines advanced data protection features and proven reliability with flexible host connectivity to ensure that it will integrate into any storage environment, right out of the box. Installation and management are simple and straight-forward with your choice of single or dual controllers; iSCSI, Fibre Channel, or SAS connectivity, and the ability to scale to 120TB. The SnapSAN S1000 delivers the perfect balance of price-performance, availability, and features to meet your business's needs.

CAPABILITIES		Dual Controllers Dual Controllers with Active-Active Failover
		Flexible Connectivity Choose from iSCSI, FC or SAS connectivity options
		Windows Integration Support for Microsoft MPIO and VSS
		Online Capacity Expansion Grow your RAID and Volumes Online with no interruption
		Snapshots Create instant, point-in-time images of the storage volumes
		Drive Spin-Down Reduces power consumption and extends drive life

Flexible

The S1000 supports a variety of connectivity options, making it ideal for organizations who desire the ability to leverage their existing infrastructure and the flexibility to adapt as requirements change or new technologies become available. Choose the best connectivity option for your environment between 1GbE or 10GbE iSCSI, 4Gb Fibre Channel, or 6Gb/sec SAS controllers.

Highly Available

The SnapSAN S1000 is equipped with everything you need to protect your most valuable business data and provide non-stop services for critical applications. High availability features include fully redundant, hot-swappable components (power supplies, fan modules, battery backup modules, and SAS expansion ports), volume configuration restoration which eliminates the need to reboot or shut down host systems, and redundant RAID controllers with automatic failover.

For data protection, you can take read-only or writable snapshots for point-in-time recovery, as well as choose from a variety of RAID levels including "N-way" mirroring to guard your data against simultaneous drive failures.

Easily Integrated

Extensive host OS support as well as certifications for Microsoft and VMware ensure that the S1000 can integrate seamlessly into any operating environment. Ideal for virtualization environments, multiple servers can be easily installed, managed and protected with no downtime or single point-of-failure.

The S1000 is fully compatible with Microsoft Windows Volume Shadow Copy Service (VSS) providing integrated data protection for Windows Server applications; and support for Microsoft MPIO ensures that host connectivity remains stable to maximize system uptime.

Scalable

Redundant SAS connections enable scalability for up to four SnapDisk E1000 expansion enclosures for 120TB of capacity. With the ability to mix-and-match drives within the same chassis and the support for high performance SAS, Enterprise SATA as well as Green SATA drives, the S1000 allows you to grow your storage in any way necessary to meet the needs of your business.

Fast

The S1000 delivers best-in-class performance for server consolidation, databases, and low latency applications. With superior throughput and IOPS, the S1000 is an ideal storage platform for applications such as virtualization, cloud storage, Exchange, SQL, Oracle, and video surveillance.

Efficient

All S1000 systems are equipped with a variety of "Green" features and advanced cooling mechanisms which maximize energy efficiency and power savings. The auto disk spin-down feature along with support for Green drive technology ensures that the system is consuming only the amount of power required to serve data. Environmental temperatures are monitored and fans are automatically adjusted as needed to keep the system cool and running optimally. In addition, the power supplies were designed to further maximize power efficiencies.



Highlights

- Your choice of iSCSI, Fibre Channel, and SAS connectivity
- Dual controller option with load balancing and failover for high availability
- Fully redundant and hot-swappable components
- Scales to 120TB with the addition of up to four SnapDisk E1000 expansion enclosures
- Green storage design includes auto disk spin-down, advanced cooling and energy-efficient power supplies
- Advanced data protection features including RAID, snapshots, and Windows VSS support
- Advanced RAID features including Online Capacity Expansion, RAID Migration and Volume Expansion

Specifications

	1GbE iSCSI	10GbE iSCSI	Fibre Channel	Serial-Attached-SCSI
Connectivity per Controller (Two controllers per system)	Four RJ-45 1GbE ports (Eight per system)	Two 10GbE SFP+ ports (Four per system)	Two 4Gb SFP (Four per system)	Two 6Gb/s SFF-8088 (Four per system)
Host Connection Support	32 nodes per target 128 sessions per controller 16 hosts per volume	32 nodes per target 128 sessions per controller 16 hosts per volume	32 nodes per target 128 sessions per controller 16 hosts per volume	16 hosts per volume
iSCSI Features	iSCSI off-load engine; Compliant with iSCSI standard, RFC 3730; Supports iSCSI Persistent Reservations; Jumbo frames; CHAP		N/A	
Multi-path	MPIO, MC/S		MPIO	
Load Balancing	Switch Trunking, 802.3ad, LACP		N/A	
OS Support	Microsoft: Windows XP, Windows Vista, Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, Hyper-V VMware: ESX 4.0, ESX 4.0 U1, ESX 4.0 U2, ESX 4.1 Citrix: XenServer 5.6 Linux: Red Hat Enterprise Linux 5 Apple: Mac OS X 10.5 and 10.6 (using ATTO initiator for iSCSI) UNIX: Solaris 10 (Sparc and X86)			
Certifications	Microsoft: Windows Server 2003, Windows Server 2008, Windows Server 2008 R2 VMware: VMware Ready			
Management	Front Panel LCD; Serial console; SSH; Telnet; HTTP Web UI; Secured Web (HTTPS); iSNS; S.E.S. Seamless management port take-over Online firmware upgrade, no system down time Notification: Email; SNMP trap; Browser pop-up windows; Syslog; Windows Messenger One RJ-45 10/100M Ethernet per controller; two UART connections for serial console and UPS communication			
Snapshots	512 per array; writable snapshots, Microsoft Windows Volume Shadow Copy Service (VSS) provider included			
Green Features	Green SATA drive option available Auto disk spin-down Advanced cooling mechanism Energy-efficient power supplies			
Drive Configuration	Up to twelve 3.5" SAS or SATA II drives			
Drive Capacities	Enterprise SAS drives - 600GB, 300GB (15,000 RPM) Enterprise SATA drives - 1TB, 2TB (7,200 RPM) Energy Saving Green SATA drives - 1TB, 2TB (Variable speed)			
RAID Controller Modules	Single controller standard; Optional Active-Active Dual controllers with mirrored cache			
Memory/RAID Cache	2GB standard battery-backed cache (hot-swappable BBM)			
RAID Levels	RAID levels 0, 1, 0+1, 3, 5, 6, 10, 30, 50, 60, N-way mirror, and JBOD (no RAID)			
Advanced RAID Support	Up to 1,024 logical volumes Global and dedicated hot spare Write-through or write-back cache policy Online disk roaming; Online volume expansion; Online RAID migration Volume cloning			
Expansion	Expand up to 60 drives with four Snap E1000 expansion units (120TB maximum)			
Expansion Connectivity	One 6Gb/s Mini-SAS (SFF 8088) X4 wide port per controller			
Agency Approvals	CE, cULus, FCC Class A, RoHS 			
Power	500W auto ranging, hot-swappable modules (1+1 Redundant), 100-240VAC, 47-63Hz, 7 - 4 Amp			
Power Consumption	Maximum Dual: 424W; Single: 392W – 12 x 2TB HDD Normal Dual: 314W; Single 282W – 12 x 2TB HDD, full-speed fans and drives spun up Standby Dual: 250W; Single: 218W – 12 x 2TB HDD, low-speed fans and drives spun down No HDD Dual: 154W; Single: 122W			
Environmental Limits	Operating Temperature Range: 0° C to 40°C (32° to 104° F), Operating Humidity Range: 5% to 95% non-condensing, Operating Altitude: -200 ft. to 10,000 ft. (0m to 3,048m)			
Physical/Mounting	2U 19" Rackmount Width: 17.5 in (442.8 mm), Height: 3.5 in (88 mm) 2U, Depth: 19.8 in (500.6 mm) Weight: 55 lbs, 19 in rack mount bracket set included Minimum rack depth 25 in (635 mm)			
Warranty	The SnapSAN S1000 is covered by a three-year limited hardware warranty (1-year warranty for battery backup module) including return to factory hardware support and by a two year software warranty including firmware system updates and telephone support. SnapSAN systems are eligible for enhanced Overland Care maintenance options to augment the standard limited warranty. Specially priced multi-year Overland Care support upgrades are available to protect your investment for the life of the product. Support coverage of all SnapDisk Expansion units must be purchased separately and run concurrently with the primary Unit. For more information about Overland Storage services, please contact your reseller. Call Overland Storage at 1.800.442.7274 or visit us online at: http://support.overlandstorage.com/ for full details of all of our service programs.			



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