SGI InfiniteStorage 16000

HPC Storage for Extreme Throughput and IOPS

KEY FEATURES

Industry Leading Performance, Capacity and Density

Supports the Most Drives

Reduces Energy Consumption

IS16000 Storage Highlights

The SGI InfiniteStorage 16000 platform fuses the best parts of today's advanced processor technology, busses and memory architecture with an optimized RAID engine and data management algorithms. These are tightly integrated to derive peak performance out of a massive IO infrastructure and multi-media disk drives to maximize system performance and lower storage investment costs. The fusion of unprecedented levels of bandwidth and IOPS enable this system to serve as the storage foundation for any Extreme Storage application set.

Breaking Down Barriers by Delivering Balanced Throughput and IOPS

The unstructured data landscape is changing. For years, the storage industry has designed systems that are optimized for either transaction-based computing or large file serving (throughput).

Multiple simultaneous (multi-threaded) throughput operations tax storage systems as they tend to look like a mixed workload requiring high IOPS rather than simply high throughput. Storage systems must now be able to respond to heavily threaded I/O patterns by delivering transaction-optimized extreme storage bandwidth as well as high throughput.

Massively Multi-Threaded Storage Processing

A multi-threaded storage processing architecture ensures that both host I/Os and background data management functions are delivered with the highest speeds possible.

The IS16000's high-speed storage processors are capable of delivering world-leading throughput and IOPS while also handling drive rebuild and correction with no application impact.

Simple Scalability: Ready for the Content Explosion

Capable of supporting up to 1,200 drives behind a single storage system, the IS16000 is truly a petabyte-class system. Add as few as 5 drives at a time for simple, online volume growth.

Intelligent Write Parallelism

The IS16000 is built with a data-aware storage engine – designed to intelligently parallelize large data to achieve optimally efficient storage bandwidth.

Green Storage

Compared to traditional storage systems, the IS16000's high-density packaging requires 25% of the storage enclosures, power supplies and fans to dramatically reduce storage energy costs by up to 50%.

Designed for Storage Tiering

With the ability to mix SAS, SATA and SSD drives within a single, scalable platform – the IS16000 enables storage consolidation and is capable of housing archive (SATA) and transactional (SAS/SSD) tiers to eliminate storage system sprawl.

Configuration Specifications

sgi.com/is16000

Controller	16000
RAID Controllers	• Dual, active/active
Cache Sizes	• 16GB
Host Interfaces	• 8Gb FC (16 ports), 140Gb QDR IB Ports
Controller Features	
RAID Levels	• RAID 6 (8+2) or (4+2)
	• RAID 5 (8+1) or (4+1)
	• RAID 1 (1+1)
Chunksizes	• 32KB, 64KB, 128KB and 256 KB
Global Hot Spare Drives	• Yes
Power and Cooling	• Dual redundant, n+1
Number of Drives Supported	• 1200
Controller Enclosure Dimensions (Dual Controller)	
Rack Height	• 8U with two 1U BBUs
Height	• 14", 35.6 cm
Width	• 17", 43.2 cm
Depth	• 25.5", 64.8 cm
Weight	• 120 lbs., 54.5 kg
60 Drive Expansion Enclosure Dimensions	**7000**
Rack Height	• 4U
Height	• 6.97", 177 mm
Width	• 16.56", 420.6 mm
Depth	• 38", 965.2 mm
Weight	• 215 lbs., 97.50 kg (full)

Power	AC Power
Controller	• 1200W Average Power 200 to 240 V @ 47-63 Hz
60 Drive Enclosure	• 1850W Average Power • 85 to 190 – 264 VAC @ 47– 63Hz and 400Hz

Environment	
Operating Temperature	• 50°F to 95°F (10°C to 35°C)
Relative Humidity	• 20% to 80% non-condensing
Maximum Heat Output	• 4095 BTU/hr Controller, 5973 BTU/hr Enclosure
Optional Host Software	
CXFS	• Heterogeneous shared file system for storage area networks; eliminates the need for replication of data across a network by allowing multiple users to share one version of content at Fibre Channel or InfiniBand speeds
DMF	• Data Lifecycle Management (Archive) policy automation software virtualizes storage devices and automates the migration and archive of digital content throughout a virtual tiered storage pool based upon business policies

Global Sales and Support: sgi.com/global