SGI® InfiniteStorage RM610 and RM660 Storage Systems

Storage networking systems for rich media

System Highlights

- High bandwidth for digital cinema mastering, video post and IT-based broadcast
- Isochronous performance for critical real-time operations
- Linear scalability of performance for uninterrupted rich media streaming
- Support for Fibre Channel and SATA disks
- Consistent delivery of content even through degraded operation mode
- Ease of setup and configuration
- Large installed media base with proven success

High Performance Networked Storage for Rich Media and Streaming Applications

SGI InfiniteStorage RM610 and RM660 storage networking systems provide enhanced storage attributes for rich media industries such as broadcasting, digital cinema mastering and video editing and finishing. With the broadcast industry's conversion from video-centric infrastructure to IT-based digital workflow and the emergence of high definition television the need for hosting multi-format content with increasingly higher bandwidth has become acute. In feature film production the adoption of 2K and 4K resolution workflows and the emergence of digital intermediates have exponentially increased the capacity and bandwidth requirements for storage of content and have made management and access of content a higher priority throughout the workflow process. In all rich media industries there are common requirements: store and manage more content with greater resolution, deliver content on time and the highest quality, and maintain broadcast and production schedules 24 hours a day.

SGI InfiniteStorage RM610 and RM660 for Broadcast

SGI® RM storage systems enable newsrooms and broadcast centers to accelerate their conversion from a video-centric infrastructure to an IT-based digital workflow, providing efficiencies, cost reduction and faster time-to-air. SGI RM storage systems deliver industry-leading performance capability for greater stream count, even during jog/shuttle operations or system failures. SGI RM storage systems allow broadcasters to leverage their investment in IT assets and get more content storage density from available rack space. SGI RM storage systems also provide spectacular ingest performance, maximizing resources while minimizing the total cost of ownership. Guaranteed latency ensures sustained play out even during degraded system conditions, delivering transmission frames in the event of component failure, protecting programming and advertising revenue. SGI RM storage systems are an excellent choice for centralized content storage for the entire studio. With support for popular non-linear editors (NLEs) and file formats, SGI RM storage systems allow multiple NLEs to work cooperatively within the newsroom giving reporters, writers, editors and producers greater productivity and faster time-to-air. Robust performance supports all compressed formats, as well as uncompressed Standard Definition and High Definition formats for news production.

SGI InfiniteStorage RM610 and RM660 for Digital film mastering and Video post-production

SGI RM products enable facilities to create, manage and distribute high resolution content efficiently and cost effectively. Guaranteed latency provides a rock-solid, reliable source of data for film printers, ensuring that mastering facilities win the race to distribution by keeping projects on schedule. Guaranteed latency also maintains complete synchronization with film scanners, ensuring integrity of film and television titles to digital formats. With the industry's highest available bandwidth, SGI Rich Media storage systems provide ample performance and capacity for mastering HD, 2K and the emerging 4K content workflows. From integration with digital cinema cameras and popular film scanners, to color grading, editing, effects and finishing, and all the way to output to 2K and 4K digital projectors, or distribution masters, SGI RM storage systems give production managers the ability to use a single storage technology to capture and manage project content.

SGI RM storage systems provide a scalable repository for hosting entire feature film versions and proxies, upgradeable in place without interruptions to scale content capacity performance. High availability features like RAID protection and complete component redundancy ensure continuous, uninterrupted production schedules ensuring that content is always available for artists, directorial reviews and digital intermediate services.

SGI® InfiniteStorage RM610 and RM660 Storage Systems

	SGI InfiniteStorage RM610	SGI InfiniteStorage RM660
Single Controller		
FC Host Ports	4 x 1Gbit	4 x 2Gbit
FC Back End Loops	6	10
Cache Size	1.5GB cache standard, upgrade available	2.5GB cache standard, upgrade available
	1U enclosure	2U enclosure
Dual Controller		
FC Host Ports	8 x 1Gbit	8 x 2Gbit
Back-end channels	12 FC-AL	20 FC-AL
Cache Size	3.0GB standard, upgrade available	5.0GB cache, upgrade available
	Mirrored cache capability	Mirrored cache capability
	2U for dual enclosures	4U for dual enclosures
Controller Enclosure Dimensions (each)		
Height	1.75", 4.45cm, 1 EIA unit	3.5", 8.9cm, 2 EIA units
Width	19.0" 48.3cm	19.0" 48.3cm
Depth	25.0", 63.5cm	25.0", 63.5cm
Weight	40 lb. (18 kg)	40 lb. (18 kg)
Storage Capacity		
Fibre Channel Drives	146GB and 300GB[1] 10,000 RPM, available in 5-drive tiers (4+1 parity)	146GB and 300GB 10,000 RPM, available in 9-drive tiers (8+1 parity)
Serial ATA drives	250GB[2] 7,200 RPM, 5-drive tiers (4+1 parity)	250GB 7,200 RPM, 9-drive tiers (8+1 parity)
Min. drive capacity	2 tiers (10 drives)	2 tiers (18 drives)
Max. drive capacity	Up to 288 total drives, 1000 data drives	Up to 1120 total drives, 1000 data drives
Drive expansion	2016, 4016, and 6016	2016, 4016, and 6016
Max. Expansion	18 Drive Enclosures	70 Drive Enclosures
Drives / enclosure	Up to 16	Up to 16
Max. drives / rack,	160	160
LUN Configuration	Up to 128 LUNs, divisible into 8,192 LUN segments	Up to 128 LUNs, divisible into 8,192 LUN segments
Fibre Channel loop for parity	Independent Fibre Channel loop for parity	Independent Fibre Channel loop for parity
Global Sparing & Fast Rebuilds	Independent Fibre Channel loop for global spares for fast rebuilds	Independent Fibre Channel loop for global spares for fast rebuilds
Global Sparing	Up to 48 global spare drives	Up to 112 global spare drives
Management Connectivity	One ethernet port per controller for remote management	One ethernet port per controller for remote management
	One RS-232 port per controller for system monitoring	One RS-232 port per controller for system monitoring
Temperature & Cooling	Temperature monitoring	Temperature monitoring
	Redundant hot-swappable power-cooling assemblies	4 redundant hot-swappable power supplies
		2 redundant hot-swappable cooling fans
Power Specifications		
Average / Maximum Current, Single Controller	2.8A @ 110VAC, 1.35A @ 230VAC / 3.8A @ 110VAC, 1.8A @ 230VAC	3.0A@ 110VAC, 1.5A@ 230VAC / 4.0A @ 110VAC, 1.9A @ 230VAC
Average / Maximum Current, Dual Controller	4.6A @ 110VAC, 2.2A @ 230VAC / 6.5A@ 110VAC, 3.1A @ 230VAC	6.0A @ 110VAC, 3.0A @ 230VAC / 8.0A@ 110VAC, 3.8A @ 230VAC
	Drive Enclosures (RM610 and RM660)	**Rack (RM610 and RM660)**
Height	5.25", 13.34cm, 3 EIA units	74.5", 190cm, 38 EIA units
Width	17.5", 44.45cm	23.5", 60.0cm
Depth	19.68", 50.0cm	31.5", 80.0cm
Weight	77 lbs (<35 kg) fully loaded, 19 lbs (<9kg) empty	265 lbs (120kg) empty
Cord Type / Connections	IEC 320, C-14, 250V, 10A socket; 250V, 10A plug	US:NEMA L6-30P locking plug, 250 VAC, 30A (qty 2) International: IEC 309 locking plug, 230 VAC 32A (qty 2)
Distribution	N/A	Dual internal rack power distribution
	Weight and dimensions apply to each enclosure model: 2016, 4016, 6016	to enclosures, single phase, 250 VAC (180 min. to 257 max.), 50/60 Hz, 16A (25A circuit breakers)

Environmental (RM610 and RM660)

- Operating temperature
  Minimum 41 degrees F
  (5 degrees C)
  Maximum 95 degrees F
  (35 degrees C)
- Non-operating temperature
  Minimum 14 degrees F
  (-10 degrees C)
  Maximum 122 degrees F
  (50 degrees C)
- Operating relative humidity 20% to 80% (noncondensing)
- Thermal rating (single-/dual-controller)
  RM610: 1500 BTU / 3000 BTU
  RM660: 1500 BTU / 3000 BTU
- Certification
  UL, CE, CUL, C-Tick, FCC

Warranty

- 2 year, 5X9 hardware parts and labor warranty, on-site, NBD response; upgradeable to multi-year, 7X24, 2-hour response

Software Management

- SGI InfiniteStorage RSM host mgmt. software (Windows, Linux, or IRIX)

Optional Host Software

- XVM - Volume Manager for SGI systems, is a virtualization technology to organize logical data structures for high performance and ease of management
- XVM Plexing - Provides disk striping, mirroring, concatenation and advanced recovery features
- XVM Snapshot - Creates point-in-time snapshots of data at the file system level; can create single snapshot of entire file system for customers with vast amounts of data
- XFS® - High-performance, 64-bit journaled file system for SGI IRIX and Linux system platforms
- 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 speeds
- DMF - Data Lifecycle Management (Archive) policy automation software virtualizes storage devices and automates the migration and archive of studio content throughout the virtual storage pool based upon business policies
- High-Availability Clustering - Cluster two or more systems for application high-availability. SGI InfiniteStorage high-availability clustering software (FailSafe® for IRIX, Cluster Manager for Linux) fail over filesystem mounts and user applications in case of system failure

[1] Available 1H CY05 [2] Available 1H CY05

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