IBM

ServeRAID-8i SAS Controller

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Highlights

- *Helping increase data protection and server availability through intelligent RAID control*

- *Investment protection provided by SAS/SATA 2 HDD configuration support*

- *Improving network reliability with IBM proven quality*

- *Interface to SAS and SATA 2 technology helps enable standard RAID 6 compatibility*

- *Data migration simplified through software and data consistency*

The new ServeRAID™-8i SAS Controller helps provide the performance, capacity and data protection that business-critical applications and storage environments require.

Higher performance—significant advantages

This advanced SAS RAID Controller helps provide high performance advantages that include:

- 600MHz Intel® IOP321 processor with Intel XScale® technology.

- 64-bit/133MHz PCI-X support for up to 3GBps[1] of throughput.

- 256MB ECC Write Back Cache with battery backup capability.

Performance of the ServeRAID-8i SAS RAID Controller is boosted through new Serial Attached SCSI (SAS) RAID technology. Advanced capabilities include: universal interconnect technology that can provide greater customization opportunities; simplified cabling through support for thinner cables and smaller connectors, all enabling improved performance.

Proven capability, compatibility and consistency

The controller is legacy compatible, helping protect your IT investment and enabling compatibility with earlier versions of RAID. Consistent software and data compatibility with other ServeRAID controllers simplifies the migration and protection of data between and across platforms.

The ServeRAID-8i SAS RAID Controller is designed with Zero Channel RAID (ZCR) for improved management of internal data

storage in selected @server™ xSeries™ servers. As a result, this controller can help achieve higher performance and up to 10X higher transfer rates than standard Ultra-320 SCSI units, plus it is built with more environmentally friendly technology.

The XScale based, Intel processor is optimized for low power consumption and high performance processing for networking applications.

Advanced reliability and manageability

The ServeRAID-8i SAS RAID Controller boasts:

- RAID 6 technology that helps protect mission-critical data in the event that two disk drives fail at the same time.

- Double parity checking for added data redundancy.

- Expansion of the storage capacity of existing RAID arrays through Online Capacity Expansion–without taking the server offline.

- Independent and adjustable stripe unit sizes of 16K, 32K, 64K, 128K, 256K and up to 1024K and 512K configurable per logical drive.

- BIOS and firmware updates can be performed under supported OS platform.

- Additional ServeRAID features that support logical drive migration, global hot spare drives and storage management tools like Copyback and Flashcopy.

- Rebuild and rapid restore features to preserve RAID configurations.

- Scalability–capable of supporting over 16,000 HDDs

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Technical specifications

Model	ServeRAID-8i SAS
Part number	39R8729
Number of SAS ports	Up to 8x1 3Gb SAS / SATA ports
Processor	Intel 80321 @ 600MHz with XScale technology
Cache memory	256MB, standard power memory
Battery-backed cache	Up to 96hrs / 72hrs @ 3yrs
SCSI interface	Attached
SCSI data transfer speed[2]	Up to 3GBps
Host bus interface	64MHz, 133MHz PCI-X
FlashCopy	Yes
Number of drives supported	128 (minimum)
RAID levels supported	0, 1, 10, 5, 6, 50, 60, 1E0, 5EE.
ServeRAID Management features	ServeRAID Manager: easy-to-use interface that provides configuration, monitoring and maintenance.
Independent and adjustable stripe support sizes	16K, 32K, default 64K, 128K, 256K, 512K and up to 1024K configurable per logical drive.
Operating systems	Supports Microsoft Windows 2000, 2003; Linux; VMware and NetWare
Form factor	Half size, low-profile
Clustering support	No
Warranty[3]	1-year limited warranty, or 3-year limited warranty when installed on IBM Enterprise Rack.

ServeRAID-8i SAS Controller advantages

- **Increased memory**–Improved data protection.

- **Copyback**–Simplifies the rebuild of an original array after a HDD is moved or replaced.

- **Better utilize HDD efficiency**–Made possible with RAID 1E and 5EE.

- **Hot Swap rebuild**–Avoid the downtime normally associated with replacing a HDD.

- **Identify drives**–Trace the location of a specific drive by causing the HDD LED to flash.

- **Logical drive migration**–Change RAID level, expand logical drives and expand arrays.

- **Data Consistency**–protect against power loss with stripe lock table to ensure RAID parity.

- **RAID 6**–Double parity support for higher reliability.

- **RAID 60**–support for systems with 8 HDDs or more.

Need more information?

World Wide Web

IBM xSeries Options	http://www.ibm.com/servers/eserver/xseries/storage/scsi_raid.html
IBM @server xSeries	http://www.**ibm**.com/servers/eserver/xseries/

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