



SEAGATE STORAGE SYSTEMS

# Seagate Storage Systems

Optimized for the future of data center storage

Seagate focuses on a system-based approach.

**Features an ASIC-based architecture:**

- Efficient cost structure with Predictable High Performance
- Industry Proven Quality
- Competition uses expensive CPUs and Memory to squeeze out performance

**Leverages a deep software stack:**

- Market-validated
- Strong foundation of features with ongoing innovation and unique data protection
- Competition requires complex and expensive software add-ons

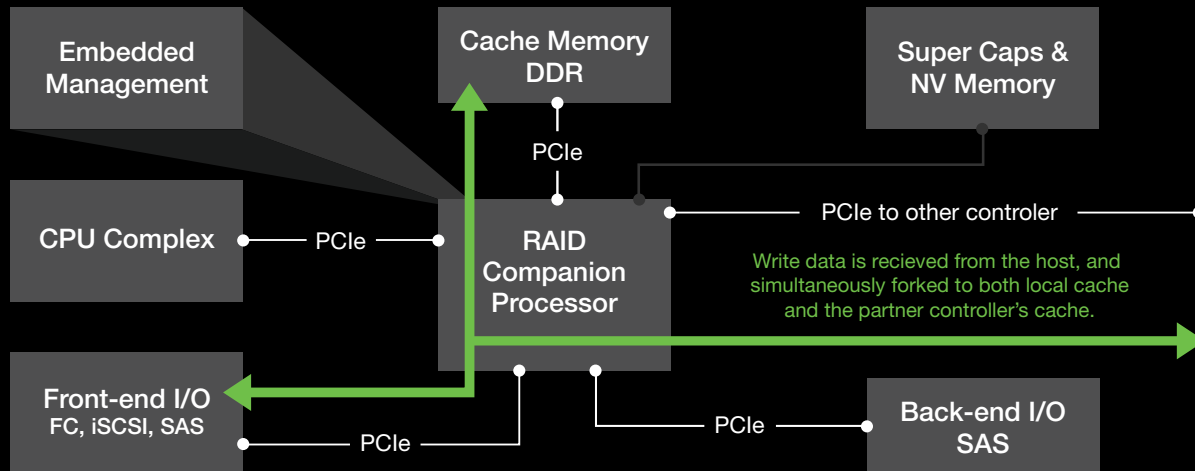




# SimulCache™

Improves write performance and data protection with redundancy

SimulCache is a highly-integrated ASIC-based, multi-core architecture delivering higher throughput to enable true active-active controllers.



SimulCache instantly mirrors cache between RAID controllers and improves data access times, in many cases **doubling the write performance** in dual controller environments

## HOW IT WORKS

- Embedded management on RAID companion processor
- Write command from host is placed in CPU memory
- Controller SW prepares for write data and issues ready command to the host
- Write data from host is forked to local cache and partner controller cache

## Benefits

**25%+**

higher sequential write performance

**2x Higher**

sequential write performance vs. competition

### Eliminate Performance Penalties

from active-active controller write verification by offloading to a processor on the motherboard

### Significant Performance Improvement

versus traditional implementations



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# Mid-Range Storage Competitive Landscape

		Seagate Exos® X	Competitor A	Competitor B	Competitor C
IOPS	Random Read	600K	450K	542K	Not published
Throughput	Sequential Write	5.5GB/s	3.2GB/s	5.3GB/s	Not published
Block Protocols	FC	✓	✓	✓	✓
	iSCSI	✓	✓	✗	✓
	SAS	✓	✓	✓	✓
Chassis	Standard	2U24, 2U12	2U12, 2U24, 3U16, 4U24	2U12, 2U24, 3U16, 4U24	✗
	High Density	5U84	✗	✗	4U48, 4U60
Data Efficiency	Thin Provisioning	✓	✓	✗	✗
	SSD Read Cache	✓	✓	✗	✗
	SSD Tiering	✓	✓	✗	✗
Advanced Data Protection	Dispersed Parity	✓ (ADAPT)	✗	✗	✗
Copy Services	Snapshots	✓	✓	✗	✓
	Remote Replication	✓	✓	✗	✓

## Enterprise Features

### Virtual Pools

Streamline management by automatically creating storage pools

### Auto Tiering

Accelerate performance while providing cost and capacity benefits of HDD

### Encryption

Improved Data Security by with array-based data-at-rest encryption leveraging Seagate SED and FIPS capable devices

### Snapshots

Reduce RPO/RTO and mount snapshots for development and testing

### Async Replication

Replicate between arrays for business continuity/disaster recovery

### ADAPT

Improved storage management and much faster rebuild times

### SSD Read Cache

Improved performance for Read intensive workloads while minimizing SSD cost

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