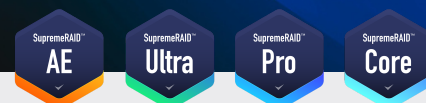


SupremeRAID™ HE (HPC Edition)

Engineered for clustered HPC, AI factories, and enterprise workloads, SupremeRAID™ HE redefines high-performance data delivery by harnessing GPUs to overcome the unique challenges of clustered storage at scale.



Are you focused on protecting mission-critical operations, preventing costly downtime, or meeting strict compliance requirements in your HPC environment?

If so, SupremeRAID™ HE is purpose-built for you. Engineered for high-performance computing, AI factories, and enterprise workloads that demand both speed and resilience, this GPU-accelerated, high-availability solution safeguards data, maintains compliance, and ensures critical applications run without interruption.

Designed for environments where uptime is essential, SupremeRAID™ HE delivers cross-node RAID protection and seamless array migration—without data replication. The result: greater usable capacity, lower TCO, and simplified failover, even at scale.

By shifting RAID operations from the CPU to the GPU, SupremeRAID™ HE (HPC Edition) achieves exceptional performance in clustered and distributed systems—up to 132GB/s reads and 83GB/s writes after RAID processing. The outcome: faster throughput, more available CPU resources, and optimized efficiency for your most demanding workloads.

SupremeRAID™ HE Ideal For:

High-availability HPC and clustered computing environments

AI model training and inference at massive scale

Enterprise analytics and database platforms

Petascale virtualized or cloud data infrastructures

GPU-powered HPC RAID

Unmatched NVMe performance and efficiency

Cross-node High Availability

Seamless protection with no replication required

File System Agnostic

Integrates with leading parallel file systems

Award Winning Innovation

Winner, Best of Show, Enterprise HPC at FMS 2025

SupremeRAID™ HE (HPC Edition)

Key Features & Benefits

Intelligent GPU-Accelerated RAID

SupremeRAID™ HE maximizes efficiency by shifting intensive RAID tasks from the CPU to the GPU, unleashing up to 132GB/s read and 83GB/s write throughput after RAID for clustered and distributed systems—and providing more CPU headroom for core applications.

Cross-Node High Availability

Unique cross-node RAID architecture delivers high availability and seamless failover without the complexities of replication, ensuring uninterrupted access and simplified disaster recovery, resulting in reduced NVMe Costs and maximum scalability.

NVMe-oF & Parallel File System Support

HE supports NVMe-oF, enabling scale-out storage across multiple hosts. It integrates with major file systems; including Ceph, Lustre, MinIO, IBM SpectrumScale, and BeeGFS, streamlining large-scale dataset management in any infrastructure.

Enterprise-Grade Data Protection

Double failure protection, distributed journaling across drives and controllers, and automated bad block recovery ensure resilient, reliable data storage for mission-critical workloads.

Flexible Deployment

Supports up to 32 NVMe SSDs per array (scalable), dual controllers, JBOF integration with Broadcom switches, and tested compatibility with Supermicro Petascale platforms. Linux OS support: AlmaLinux, RHEL, Rocky Linux, Ubuntu.

RESTful API & Automation

Comprehensive RESTful API allows integration with orchestration platforms and DevOps workflows, enabling automated monitoring, management, and reporting for optimized operations.

SupremeRAID™ HE (HPC Edition)

Detailed Technical Specifications

For questions about product specs, email us at info@graidtech.com

Supported RAID Levels	RAID 0/1/5/6/10
GPU Options	NVIDIA RTX A1000 (8GB), RTX 2000 Ada (16GB), or RTX 2000E Ada
Maximum Drives per Array	Up to 32 NVMe SSDs
Throughput	132GB/s (read), 83GB/s (write) post-RAID
File Systems	Ceph, Lustre, MinIO, IBM SpectrumScale, BeeGFS
Network Support	NVMe-oF, dual controller, Broadcom BF3 switches
Host OS Compatibility	AlmaLinux 9.0-9.7 (Kernel 5.14) RHEL 9.4 (Kernel 5.14), 9.6-9.7 (Kernel 5.14) Rocky Linux 9.0-9.7 (Kernel 5.14) Ubuntu 24.04 (Kernel 6.8)
Supported NVMe SSDs	Samsung PM1743, Kioxia CM7, Phison X200E
Management Interfaces	RESTful API, CLI

To learn how SupremeRAID™ HE performs in a 2U dual-node all-flash system with BeeGFS and Supermicro's Petascale High Availability Dual Node All-Flash platform, check out our full solution brief.

[Get the Solution Brief](#)



Learn more at graidtech.com/products/supremeraid-he

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**MOST INNOVATIVE
ENTERPRISE BUSINESS
APPLICATION: HPC
CATEGORY**