SupremeRAID™ SR-1010

The World's Fastest NVMe & NVMeoF RAID Card for PCIe Gen 4

Further disrupting the global storage industry, GRAID Technology Inc. now offers the world's fastest NVMe and NVMeoF RAID card for PCIe Gen 4, designed to deliver world class data protection while increasing read and write performance —all at world record performance speeds and and extremely low TCO.

GRAID

THE CHALLENGE

RAID Bottleneck

As NVMe SSD quickly becomes the new standard for storage infrastructure, a challenge arises for data center storage infrastructure design: the industry requires a future-ready solution to deliver NVMe SSD performance without sacrificing data security or business continuity. Simply put: flash storage performance is evolving too fast to be fully utilized by existing storage architecture.

Implementing a basic software RAID via the CPU can only deliver 10-20% SSD performance on average, while unfortunately consuming almost all of the CPU computing power. While utilizing proprietary hardware might achieve improved performance, the architecture still can't maximize the potential of flash storage.

THE SOLUTION

SupremeRAID™ SR-1010

In today's data center world, speed and throughput are everything. GRAID Technology recognized the limitations and bottlenecks caused by traditional RAID and developed a GPU-based storage solution to launch RAID technology into the future.

GRAID Technology is proud to introduce the world's first NVMe and NVMeoF RAID card created to unlock the full potential of your SSD performance. Our innovative GPU-based solution delivers world-record performance while increasing scalability, improving flexibility, and lowering TCO. With proven performance tests and partnerships with global industry leaders, SupremeRAID™ delivers maximum SSD performance, comprehensive enterprise data protection, unmatched flexibility, and ubeatable ROI.

| **19M** | **110GB/s** | UP TO **100%** | **80%** | **5x** |
| IOPS | Throughput | SSD Performance | Cost Savings | Faster |

	SupremeRAID™ SR-1010	High-end Hardware RAID
4k Random Read	19 M IOPS	3.5 M IOPS
4k Random Write	1.5 M IOPS	180 k IOPS
512k Sequential Read	110 GB/s	13.5 GB/s
512k Sequential Write	22 GB/s	4 GB/s
4k Random Read In Rebuild	**5.5 M IOPS**	36 k IOPS
4k Random Write In Rebuild	**1.1 M IOPS**	18 k IOPS

*Based on Linux RAID5 with Intel Xeon Gold 6338 CPU 32-Core with 2.0GHz x 2

Unbeatable Performance

GRAID

SupremeRAID™ SR-1010 increases read performance to **19 M IOPS and 110GB/s** throughput and increases write performance to **1.1 M IOPS and 22 GB/s** throughput in RAID 5/6, while maintaining the superior level of data protection our customers and partners have come to expect.

Flexible & Future Ready

Unmatched flexibility with features like new O/S support, compression, encryption, thin provisioning, or boot drive protection easily added with software releases

World Record Performance

SupremeRAID™ SR-1010 increases read performance to 19M IOPS and 110GB/s throughput and write performance to 1.5M IOPS and 22GB/s throughput in RAID5/6

Highly Scalable

Easily manage 32 direct attached NVMe SSDs; extend data protection without sacrificing performance with Software Composable Infrastructure

Plug & Play

Effortless installation, no cabling or motherboard re-layout required; direct connect to SSD without PCIe switches

Free Up CPU Resources

Offload your entire RAID computation to SupremeRAID™ to free-up CPU computing resources for 5G, AI and AIoT applications

Easy to Use

SupremeRAID™ doesn't rely on memory caching technology, eliminating the need for battery backup modules

GIGABYTE   KIOXIA   AMD   SEAGATE   NVIDIA

"Leveraging a speedier PCIe 4.0 interface, the SupremeRAID™ SR-1010 arrives with a substantial performance uplift...it's light years beyond even the most high-end hardware RAID arrays."

TOM'S HARDWARE
INDEPENDENT REVIEW
APRIL 27, 2022

tom'sHARDWARE

Are You Ready to Unleash Your Data Performance?

Don't get left behind, join the future of enterprise data protection. Contact us today.

Learn more about award-winning SupremeRAID™—the world's first NVMe and NVMeoF RAID card created to unlock the full potential of your SSD performance, enabling enterprise data centers to achieve record-breaking performance without sacrificing data security or business continuity.

GRAID Technology Inc. is headquartered in Silicon Valley, with a sales office in Ontario and an R&D center in Taipei, Taiwan. Our leadership is composed of a dedicated team of experts with decades of experience in the SDS, ASIC and storage industries. Learn more at www.graidtech.com/news.

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SANTA CLARA, CA 95054

The New Performance Standard in Enterprise Data Protection

Designed for a modern software composable environment, GRAID Technology Inc. has developed world's first future-ready RAID card that not only protects direct-attached flash storage but also those connected via NVMe over Fabrics —all at world record performance speeds and extremely low TCO.

THE CHALLENGE

RAID Bottleneck

As NVMe SSD quickly becomes the new standard for storage infrastructure, a challenge arises for data center storage infrastructure design: the industry requires a future-ready solution to deliver NVMe SSD performance without sacrificing data security or business continuity. Simply put: flash storage performance is evolving too fast to be fully utilized by existing storage architecture.

Implementing a basic software RAID via the CPU can only deliver 10-20% SSD performance on average, while unfortunately consuming almost all of the CPU computing power. While utilizing proprietary hardware might achieve improved performance, the architecture still can't maximize the potential of flash storage.

THE SOLUTION

SupremeRAID™ SR-1000

In today's data center world, speed and throughput are everything. GRAID Technology recognized the limitations and bottlenecks caused by traditional RAID and developed a GPU-based storage solution to launch RAID technology into the future.

GRAID Technology is proud to introduce the world's first NVMe and NVMeoF RAID card created to unlock the full potential of your SSD performance. Our innovative GPU-based solution delivers world-record performance while increasing scalability, improving flexibility, and lowering TCO. With proven performance tests and partnerships with global industry leaders, SupremeRAID™ delivers maximum SSD performance, comprehensive enterprise data protection, unmatched flexibility, and ubeatable ROI.

16M IOPS	**110GB/s** Throughput	UP TO **100%** SSD Performance	**80%** Cost Savings	**5x** Faster

	SupremeRAID™ SR-1000	**High-end Hardware RAID**
4k Random Read	16 M IOPS	3.5 M IOPS
4k Random Write	820 k IOPS	180 k IOPS
512k Sequential Read	110 GB/s	13.5 GB/s
512k Sequential Write	11 GB/s	4 GB/s
4k Random Read In Rebuild	3 M IOPS	36 k IOPS

*Based on RAID5 with 3rd Generation Intel® Xeon Scalable Platform and Intel D7-P5510

Unbeatable Performance

SupremeRAID™ cutting edge technology eliminates the traditional RAID bottleneck to unlock the full potential of your SSD performance. A single SupremeRAID™ SR-1000 is capable of delivering **16 million IOPS and 110GB/s of throughput**.

GRAID

Flexible & Future Ready
Unmatched flexibility with features like new O/S support, compression, encryption, thin provisioning, or boot drive protection easily added with software releases

World Record Performance
Full NVMe performance with a single card: 16M IOPS and 110GB/s throughput based on RAID5 with 3rd Generation Intel® Xeon Scalable Platform and Intel D7-P5510

Highly Scalable
Easily manage 32 direct attached NVMe SSDs; extend data protection without sacrificing performance with Software Composable Infrastructure

Plug & Play
Effortless installation, no cabling or motherboard re-layout required; direct connect to SSD without PCIe switches

Free Up CPU Resources
Offload your entire RAID computation to SupremeRAID™ to free-up CPU computing resources for 5G, AI and AIoT applications

Easy to Use
SupremeRAID™ doesn't rely on memory caching technology, eliminating the need for battery backup modules

GIGABYTE   KIOXIA   AMD   SEAGATE   NVIDIA

"Absolutely phenomenal, we were blown away by the efficacy of this simple to use card and software. Compared to traditional hardware or software RAID, SupremeRAID™ delivers amazing ROI for demanding workloads."

BRIAN BEELER,
STORAGEREVIEW.COM
OCTOBER 2021

StorageReview

Are You Ready to Unleash Your Data Performance?

Don't get left behind, join the future of enterprise data protection. Contact us today.

Learn more about award-winning SupremeRAID™—the world's first NVMe and NVMeoF RAID card created to unlock the full potential of your SSD performance, enabling enterprise data centers to achieve record-breaking performance without sacrificing data security or business continuity.

GRAID Technology Inc. is headquartered in Silicon Valley, with a sales office in Ontario and an R&D center in Taipei, Taiwan. Our leadership is composed of a dedicated team of experts with decades of experience in the SDS, ASIC and storage industries. Learn more at www.graidtech.com/news.

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