SupremeRAID™ SR-1000

# Challenge the status quo for performance-demanding workloads with SupremeRAID™

**Graid Technology Inc.**

SupremeRAID™ is the world's fastest NVMe and NVMeoF RAID solution for PCIe Gen 3, 4 and 5 servers. A single SupremeRAID™ card supports up to 32 native NVMe drives, delivering superior NVMe/NVMeoF performance while increasing scalability, improving flexibility, and lowering 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 | **220GB/s** Throughput | UP TO **100%** SSD Performance | **80%** Cost Savings | **8x** Faster |
|---|---|---|---|---|

|  | SupremeRAID™ SR-1000 | High-end Hardware RAID |
|---|---|---|
| 4K Random Read | **16 M IOPS** | 6.9 M IOPS |
| 4K Random Write | **900 K IOPS** | 651 K IOPS |
| 1M Sequential Read | **220 GB/s** | 28.2 GB/s |
| 1M Sequential Write | **90 GB/s** | 10.4 GB/s |
| 4K Random Read In Rebuild | **3 M IOPS** | 1 M IOPS |
| 4K Random Write In Rebuild | **600 K IOPS** | 548 K IOPS |

Based on Linux RAID5 with AMD EPYC 9654 96-Core Processor x 2 and KIOXIA CM7 x 24

# Unbeatable Performance

**Graid Technology Inc.**

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 220GB/s of throughput.**

### 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
Unprecedented NVMe/NVMeoF performance up to 16M IOPS and 220GB/s throughput with a single SupremeRAID™ card delivers the full value of your server investment

### 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

## Global Partners

| | | | |
|---|---|---|---|
| AIC | ASUS | LIQID | SuperMicro |
| Altos | Gigabyte | MSi | Tyan |
| AMD | KeyWin | Seagate | Western Digital |
| ASRock Rack | KIOXIA | StarWind | |

## Global Distributors

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|---|---|---|
| Afastor | CLIMB | InnoTech |
| Arrow | EDOM Tech | Sunway |
| ASBIS | Gluesys | TD Synnex |

## Global Resellers

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|---|---|---|
| Advanced HPC | Define Tech | primeLine Solutions |
| Applied Data Systems | Evotek | SHI |
| ARKAY | Exxact | Starline |
| Aspen Systems | Flytech Spain | SysGen |
| AUK Computing | GPL Technologies | TBA Informatica |
| A-VAR | GTS Technology Solutions | Technologies for Tomorrow |
| Boston | HPC Tech Japan | Thinkmate |
| Bold Data | Images et Technologie | Top Flight Computers |
| Computacenter | 365 Master Data | Trenton Systems |
| Crystal Group | Mazda Computing | Vesper |
| Data in Science (DST) | Nextron | |
| DiGiCOR | OMTX Brazil | |

> "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

**StorageReview**

# Challenge the status quo for performance-demanding workloads with SupremeRAID™

Graid Technology Inc. is headquartered in Silicon Valley, with 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.

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