

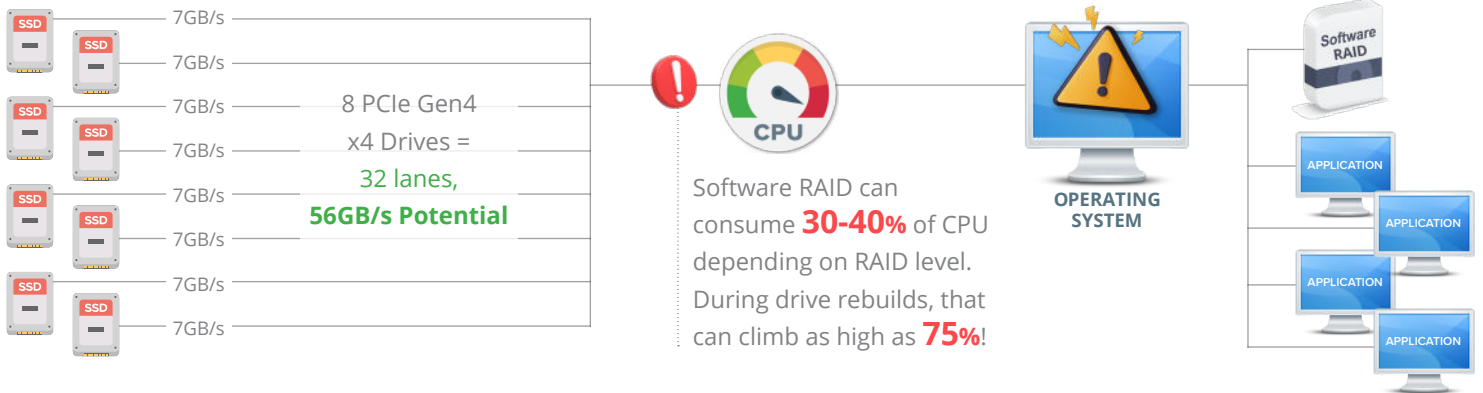
SupremeRAID™ vs. Software RAID

Reclaim Overtaxed CPU Performance with SupremeRAID™

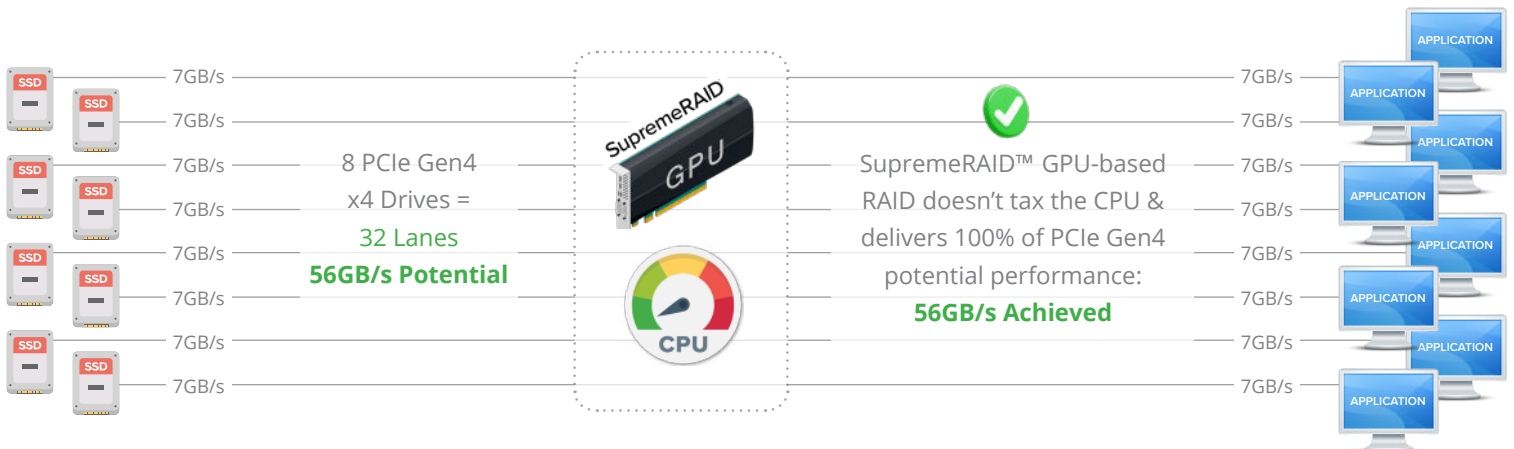
Modern operating systems, including Linux and Windows, support software-based RAID, one of the standard choices for protecting data stored on drives. However, software RAID clogs CPU resources, leading to degraded performance and workload bottlenecks, by consuming significant system resources while protecting data, especially when using solid-state drives (SSDs). Increasing storage workloads generates

higher CPU workloads, creating unavoidable bottlenecks that slow systems, databases, and applications. SupremeRAID™ works differently. It combines two powerful technologies — software-defined storage (SDS) and GPU acceleration — to create an innovative solution ideal for NVMe SSD data protection. The result is better performing RAID-protected storage with the same PCIe NVMe SSDs.

Software RAID competes with your operating system and applications, taxing the CPU...



...but SupremeRAID™ GPU-based RAID eliminates the RAID bottleneck without taxing the CPU, and achieves the full potential of your SSD performance.



Top Reasons Why SupremeRAID™ Wins Over Software RAID

Record-setting RAID storage performance

Scales up to 28M IOPS and 260GB/s throughput for more SSD performance while protecting data

Modern software-defined storage

Relies on flexible software to deliver functionality, combines best-in-class hardware and software for RAID

GPU add-in card for RAID acceleration

Offloads RAID computations from the system's CPU, frees-up cores to process database, app workloads

Predictable system & RAID performance

Dedicated hardware processes RAID storage workloads, system runs optimally regardless of storage workloads

High-performance in degraded mode

GPU add-in card effortlessly recreates missing data, minimal impact on system performance during SSD failure

High-performance in rebuild mode

GPU add-in card effortlessly recovers to the replaced drive, minimal impact on system performance during SSD rebuild

Fast and easy setup and usage

Install add-in card and configure SSDs for RAID in minutes, less complicated than OS and file system RAID

SupremeRAID™ for both Linux and Windows

Standardize your RAID solution across multiple data centers to simplify system design, management, and administration

28M

IOPS

260GB/s

Throughput

UP TO **100%**

SSD Performance

80%

Cost Savings

9x

Faster



Better Performance & Scalability



Lower CPU Utilization



Lower Power Consumption

Rescue Wasted Performance

Every system with NVMe SSDs needs SupremeRAID™. The math is simple: software RAID 10 mirrors data across drive pairs, reducing bandwidth by 50%.

Achieve Better Overall TCO

SupremeRAID™ with RAID 5 delivers faster performance than software RAID and up to 50% higher capacity with the same SSDs; in essence, the money saved pays for SupremeRAID™.

Reclaim Valuable System Resources

SupremeRAID™ includes a GPU add-in card for RAID acceleration while software RAID uses CPU cores for RAID processing, consuming up to 87% of system resources.

Reclaim Overtaxed CPU Resources with SupremeRAID™

SupremeRAID™, the world's fastest NVMe and NVMeoF RAID solution for PCIe Gen 3, 4 and 5 servers, blasts performance to 28M IOPS and 260GB/s and supports up to 32 native NVMe drives to deliver superior performance while increasing scalability, improving flexibility, and lowering TCO. Visit graidtech.com to learn more.

Contact us today at info@graidtech.com

LEARN MORE:

SupremeRAID™ vs. Hardware RAID

SupremeRAID™ White Papers

SupremeRAID™ Resource Library