

SupremeRAID™ SR-1010

FOR PCIe GEN 3, 4, & 5

Test Environment Specifications | Hardware Specs: Server: Supermicro AS -2125HS-TNR; CPU: AMD EPYC 9654 96-Core Processor x 2; Memory: Samsung M321R2GA3BB6-CQKVS DDR5 16GB x 24; SSD: Kioxia CM7 KCMY1RUG3T84 x 24; RAID Controller: SR-1010 x 1 | Software Environment: OS: Ubuntu 20.04.4 LTS; Kernel: 5.4.0-155-generic; Benchmarking tool: fio-3.16; SupremeRAID™ Driver version: 1.5.0-rc1-20230804.gcf5e69d8



SR-1010 Software Specs

Supported RAID levels: RAID 0, 1, 5, 6, 10	Max Virtual Drives per Drive Group: 1023
Max Physical Drives: 32	Max Drive Group Size: Defined by physical drive size
Max Drive Groups: 8	
OS Support:	
AlmaLinux 8.5, 8.6, 8.7 (Kernel 4.18)	
CentOS 7.9 (Kernel 3.10 or 4.18), 8.3, 8.4, 8.5 (Kernel 4.18)	
Debian 11.6 (Kernel 5.10)	
openSUSE Leap 15.2, 15.3 (Kernel 5.3)	
Oracle Linux 8.7 (RHCK 4.18 or UEK 5.15)	
Oracle Linux 9.1 (RHCK 5.14 or UEK 5.15)	
SLES 15 SP2, 15 SP3 (Kernel 5.3)	
RHEL 7.9 (Kernel 3.10 or 4.18), 8.3, 8.4, 8.5, 8.6, 8.7 (Kernel 4.18)	
RHEL 9.0, 9.1 (Kernel 5.14)	
Rocky Linux 8.5, 8.6, 8.7 (Kernel 4.18)	
Ubuntu 20.04.0-20.04.5 (Kernel 5.15)	
Ubuntu 22.04.0-22.04.2 (Kernel 5.15)	
Windows Server 2019 x86-64	
Windows Server 2022 x86-64	
Windows 11 x86-64	

SR-1010 Card Specs

Host Interface: x16 PCIe Gen 4.0	Form Factor: 2.713" H x 6.6" L, Dual Slot
Max Power Consumption: 70 W	Product Weight: 306 g



Flexible & Future Ready

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



World Record Performance

Unprecedented NVMe/NVMeoF performance up to 28M IOPS and 260GB/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

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RELEASE NOTES & DOCUMENTATION

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SupremeRAID™ SR-1010

FOR PCIe GEN 3, 4, & 5



The ultimate in flexibility and choice. SupremeRAID™ SR-1010 is the world's fastest NVMe/NVMeoF RAID card, designed to deliver the full potential of PCIe Gen 3, 4, & 5 systems in enterprise data centers. The SR-1010 increases performance of both reads and writes while maintaining the superior level of data protection our customers and partners have come to expect.



Unbeatable Performance

Designed for performance-demanding workloads, SupremeRAID™ is the world's fastest NVMe and NVMeoF RAID solution for PCIe Gen 3, 4 and 5 servers. A single SupremeRAID™ card blasts performance to 28M IOPS and 260GB/s and supports up to 32 native NVMe drives, delivering superior NVMe/NVMeoF performance while increasing scalability, improving flexibility, and lowering TCO.

	Linux Environment		
	RAID 5	RAID 6	RAID 10
OPTIMAL			
4K Random Read IOPS	28 M IOPS	28 M IOPS	24 M IOPS
4K Random Write IOPS	2 M IOPS	1.5 M IOPS	12 M IOPS
1M Sequential Read THROUGHPUT	260 GB/s	260 GB/s	260 GB/s
1M Sequential Write THROUGHPUT	100 GB/s	100 GB/s	70 GB/s

	Windows Environment		
	RAID 5	RAID 6	RAID 10
	2 M IOPS	2 M IOPS	2 M IOPS
	600 K IOPS	450 K IOPS	1 M IOPS
	74 GB/s	68 GB/s	70 GB/s
	15 GB/s	15 GB/s	35 GB/s

	Linux Environment		
	RAID 5	RAID 6	RAID 10
REBUILD			
4K Random Read IOPS	5.5 M IOPS	5.5 M IOPS	18 M IOPS
4K Random Write IOPS	1.1 M IOPS	800 k IOPS	12 M IOPS
1M Sequential Read THROUGHPUT	23 GB/s	24 GB/s	130 GB/s
1M Sequential Write THROUGHPUT	21 GB/s	21 GB/s	70 GB/s

	Windows Environment		
	RAID 5	RAID 6	RAID 10
	300 K IOPS	350 K IOPS	2 M IOPS
	500 K IOPS	500 K IOPS	1 M IOPS
	21 GB/s	21 GB/s	15 GB/s
	12 GB/s	12 GB/s	13 GB/s

BASED ON TESTING SPECIFICATIONS LISTED ON PREVIOUS PAGE

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