SupremeRAID™ SR-1010

FOR PCIe GEN 4

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 Gen4 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.

GRAID

Unbeatable Performance

Chosen by CRN as one of the Ten Hottest Data Storage Startups of 2021 and a 2022 Emerging Vendor in the Storage & Disaster Recovery category, GRAID Technology Inc. has developed the world's fastest NVMe and NVMeoF RAID card to unlock the full potential of enterprise SSDs for high performance applications: SupremeRAID™ SR-1010 NVMe/NVMeoF PCIe Gen 4 RAID card.

OPTIMAL

	Linux Environment			Windows Environment		
	RAID 5	RAID 6	RAID 10	RAID 5	RAID 6	RAID 10
4k Random Read IOPS	19 M IOPS	19 M IOPS	19 M IOPS	2 M IOPS	2 M IOPS	2 M IOPS
4k Random Write IOPS	1.5 M IOPS	1 M IOPS	6 M IOPS	600 k IOPS	450 k IOPS	1 M IOPS
1M Sequential Read THROUGHPUT	110 GB/s	110 GB/s	110 GB/s	74 GB/s	68 GB/s	70 GB/s
1M Sequential Write THROUGHPUT	22 GB/s	21 GB/s	25 GB/s	15 GB/s	15 GB/s	35 GB/s

REBUILD
REBUILD_SPEED=LOW

	Linux Environment			Windows Environment		
4k Random Read IOPS	5.5 M IOPS	5.5 M IOPS	9 M IOPS	300 k IOPS	350 k IOPS	2 M IOPS
4k Random Write IOPS	1.1 M IOPS	800 k IOPS	5 M IOPS	500 k IOPS	500 k IOPS	1 M IOPS
1M Sequential Read THROUGHPUT	23 GB/s	24 GB/s	55 GB/s	21 GB/s	21 GB/s	15 GB/s
1M Sequential Write THROUGHPUT	21 GB/s	21 GB/s	25 GB/s	12 GB/s	12 GB/s	13 GB/s

BASED ON TESTING SPECIFICATIONS LISTED ON SIDE 2   BASED ON TESTING SPECIFICATIONS LISTED ON SIDE 2

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SupremeRAID™ SR-1010

FOR PCIe GEN 4

Test Environment Specifications | Software: Linux Version: CentOS 8.5; Windows Version: Windows Server 2019 | **Hardware:** CPU: Intel(R) Xeon(R) Gold 6338 CPU 32-Core with 2.0GHz x 2, Memory: SK Hynix HMA82GR7CJR8N -XN DIMM DDR4 3200 MHz 16GB x 16, SSD: INTEL SSDPF2KX038TZ 3.8TB | **RAID Configuration:** Random performance based on a drive group with 12 physical drives and 1 virtual drive; sequential performance based on a drive group with 20 physical drives and 1 virtual drive

SR-1010 Software Specs

Supported RAID levels	RAID 0, 1, 5, 6, 10
Max Physical Drives	32
Max Drive Groups	4
Max Virtual Drives per Drive Group	8
Max Drive Group Size	Defined by physical drive size
OS Support	Linux: AlmaLinux 8.5 Rocky Linux 8.5 CentOS 7.9, 8.4, 8.5 openSUSE Leap 15.2, 15.3 RHEL 7.9, 8.4, 8.5 SLES 15 SP2, SP3 Ubuntu 20.04 Windows Server 2019 x86-64 Windows Server 2022 x86-64

SR-1010 Card Specs

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

SupremeRAID™ SR-1010 increases read performance to up 19M IOPS and 110GB/s throughput and write performance up 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

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SupremeRAID™ SR-1000

FOR PCIe GEN 3

Introducing the world's first NVMe and NVMeoF RAID card to unlock the full potential of your SSD performance. SupremeRAID™ cutting edge technology eliminates the traditional RAID performance bottleneck to deliver world-record performance, comprehensive data protection, and unmatched flexibility at the lowest TCO on the market.

Unbeatable Performance

Chosen by CRN as one of the Ten Hottest Data Storage Startups of 2021 and a 2022 Emerging Vendor in the Storage & Disaster Recovery category, GRAID Technology Inc. has developed the world's first NVMe and NVMeoF RAID card to unlock the full potential of enterprise SSDs for high performance applications: SupremeRAID™ SR-1000 NVMe/NVMeoF PCIe Gen 3 RAID card.

OPTIMAL

	Linux Environment			Windows Environment		
	RAID 5	RAID 6	RAID 10	RAID 5	RAID 6	RAID 10
4k Random Read IOPS	16 M IOPS	16 M IOPS	16 M IOPS	2 M IOPS	2 M IOPS	2 M IOPS
4k Random Write IOPS	820 k IOPS	450 k IOPS	6 M IOPS	500 k IOPS	450 k IOPS	1 M IOPS
1M Sequential Read THROUGHPUT	110 GB/s	110 GB/s	110 GB/s	65 GB/s	60 GB/s	70 GB/s
1M Sequential Write THROUGHPUT	11 GB/s	11 GB/s	25 GB/s	9 GB/s	9 GB/s	35 GB/s

REBUILD
REBUILD_SPEED=LOW

	Linux Environment			Windows Environment		
4k Random Read IOPS	3 M IOPS	3 M IOPS	9 M IOPS	350 k IOPS	350 k IOPS	2 M IOPS
4k Random Write IOPS	600 k IOPS	400 k IOPS	5 M IOPS	400 k IOPS	370 k IOPS	1 M IOPS
1M Sequential Read THROUGHPUT	12 GB/s	13 GB/s	55 GB/s	12 GB/s	13 GB/s	15 GB/s
1M Sequential Write THROUGHPUT	11 GB/s	11 GB/s	25 GB/s	8 GB/s	8 GB/s	13 GB/s

BASED ON TESTING SPECIFICATIONS LISTED ON SIDE 2   BASED ON TESTING SPECIFICATIONS LISTED ON SIDE 2

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SupremeRAID™ SR-1000

FOR PCIe GEN 3

Test Environment Specifications **Software:** Linux Version: CentOS 8.5; Windows Version: Windows Server 2019 | **Hardware:** CPU: Intel(R) Xeon(R) Gold 6338 CPU 32-Core with 2.0GHz x 2; Memory: SK Hynix HMA82GR7CJR8N-XN DIMM DDR4 3200 MHz 16GB x 16; SSD: INTEL D7-P5510 SSDPF2KX038TZ 3.8TB x 20 | **RAID Configuration:** Random performance based on a drive group with 12 physical drives and 1 virtual drive; sequential performance based on a drive group with 20 physical drives and 1 virtual drive

SR-1000 Software Specs

Supported RAID levels	RAID 0, 1, 5, 6, 10
Max Physical Drives	32
Max Drive Groups	4
Max Virtual Drives per Drive Group	8
Max Drive Group Size	Defined by physical drive size
OS Support	Linux: AlmaLinux 8.5 Rocky Linux 8.5 CentOS 7.9, 8.4, 8.5 openSUSE Leap 15.2, 15.3 RHEL 7.9, 8.4, 8.5 SLES 15 SP2, SP3 Ubuntu 20.04 Windows Server 2019 x86-64 Windows Server 2022 x86-64

SR-1000 Card Specs

Host Interface	x16 PCIe Gen 3.0
Max Power Consumption	50 W
Form Factor	2.713" H x 6.137" L, Single Slot
Product Weight	132.6 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

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

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