IRONWOLF™

SEAGATE

Tough. Ready. Scalable.
IronWolf 525 SSD

Seagate® IronWolf® 525 enables fast caching and tiered storage for best-in-class NAS performance. Designed with PCIe Gen 4 support and class-leading endurance and reliability. IronWolf 525 is the ideal choice for creative pros and businesses with demanding performance needs.

Best-Fit Applications

- Commercial and Entry-Level Enterprise NAS
- High performance Workstations and PCs
- U.2 to M.2 adapters for U.2 NVMe SSD drive bays

Key Advantages

Future-Proof Speed IronWolf 525 boosts NAS caching and tiered storage solutions to the next level with PCIe Gen 4 speeds up to 5000MB/s [1], while maintaining backward compatibility with PCIe Gen 3 systems

Always On, Always Accessible Designed to deliver performance in demanding 24x7 low latency, multi-user environments, enabling fast access to data any time, anywhere.

Built Tough Endurance rating of 0.7 DWPD [2] ensures robust performance in NAS and other intensive client workloads.

Class-Leading Reliability and Dependability Rated for 1.8M hours MTBF and includes a 5-year limited warranty for best-in-class total cost of ownership (TCO).

Purpose-Built Capacities Choose from 500GB, 1TB and 2TB, ideal for primary storage or fast caching

IronWolf Health Management (IHM) [3] Actively monitor and protect your NAS data with error Prevention, Intervention and Recovery recommendations.

Peace of mind with Data Recovery Includes 3-year complimentary Rescue Data Recovery Services [4] in the event of accidental data corruption or drive damage

1 Fresh Out of Box (FOB) sequential read, measured using CrystalDiskMark v.8.0.1 ×64 with Windows 10 PCIe Gen 4 system

2 Calculated from Total Bytes Written over 5 years. Refer to specifications table on page 2 for Total Bytes Written (TB).

3 IHM is enabled on all leading NAS systems. Please check with your NAS vendor or a Seagate sales representative for more details.

4 Rescue Data Recovery Services not available in all countries. Contact your Seagate sales representative for further details.

![IRONWOLF logo]

Specifications	2TB	1TB	500GB
Standard Model	ZP2000NM30002	ZP1000NM30002	ZP500NM30002
Interface	PCIe Gen4 ×4, NVMe 1.3	PCIe Gen4 ×4, NVMe 1.3	PCIe Gen4 ×4, NVMe 1.3
NAND Flash Type	3D TLC	3D TLC	3D TLC
Form Factor	M.2 2280-D2	M.2 2280-D2	M.2 2280-D2
Performance (PCIe Gen4 x4)			
Sequential Read (MB/s) FOB, 128KB QD32[5]	5000	5000	5000
Sequential Write (MB/s) FOB, 128KB QD32[5]	4400	4400	2500
Random Read (IOPS) FOB, 4KB QD32 T8[5]	740,000	760,000	420,000
Random Write (IOPS) FOB, 4KB QD32 T8[5]	700,000	700,000	630,000
Sequential Read (MB/s) Sustained, 128KB QD32[6]	4300	4350	3300
Sequential Write (MB/s) Sustained, 128KB QD32[6]	965	995	525
Random Read (IOPS) Sustained, 4KB QD256[6]	425,000	445,000	230,000
Random Write (IOPS) Sustained, 4KB QD256[6]	19,500	19,500	10,800
Performance (PCIe Gen3 x4)			
Sequential Read (MB/s) FOB, 128KB QD32[5]	3400	3400	3400
Sequential Write (MB/s) FOB, 128KB QD32[5]	3200	3200	2500
Random Read (IOPS) FOB, 4KB QD32 T8[5]	640,000	640,000	420,000
Random Write (IOPS) FOB, 4KB QD32 T8[5]	565,000	565,000	550,000
Sequential Read (MB/s) Sustained, 128KB QD32[6]	3300	3300	3250
Sequential Write (MB/s) Sustained, 128KB QD32[6]	965	995	525
Random Read (IOPS) Sustained, 4KB QD256[6]	425,000	445,000	230,000
Random Write (IOPS) Sustained, 4KB QD256[6]	19,500	19,500	10,800
Endurance/Reliability			
Total Bytes Written (TB)	2,800	1,400	700
Nonrecoverable Read Errors per Bits Read	1 per 10E16	1 per 10E16	1 per 10E16
Mean Time Between Failures (MTBF, hours)	1,800,000	1,800,000	1,800,000
Rescue Data Recovery Services (years)[7]	3	3	3
Warranty, Limited (years)	5	5	5
Power Management			
Power Supply	3.3V	3.3V	3.3V
Active Max Average Power (W)	6.5	6.5	5.6
Average Idle Power PS3 (mW)	30	20	20
Environmental			
Temperature, Operating Internal (°C)	0°C – 70°C	0°C – 70°C	0°C – 70°C
Temperature, Nonoperating (°C)	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C
Shock, Nonoperating: 0.5ms (Gs)	1500	1500	1500
Physical			
Height (mm/in, max)	3.58mm/0.140in	3.58mm/0.140in	3.58mm/0.140in
Width (mm/in, max)	22.15mm/0.872in	22.15mm/0.872in	22.15mm/0.872in
Length (mm/in, max)	80.15mm/3.156in	80.15mm/3.156in	80.15mm/3.156in
Weight (g/lb)	8.7g/0.019lb	8.5g/0.018lb	8.0g/0.017lb

5 Fresh Out of Box (FOB) performance of newly formatted drive measured with CrystalDiskMark v.8.0.1 ×64 on Windows 10 host. Performance may vary based on SSD firmware version, system hardware, and configuration.

6 Sustained performance measured with FIO on Linux host. Performance is based on testing under certain workload conditions and may vary based on SSD firmware version, system hardware, and configuration.

7 Rescue Data Recovery Services not available in all countries. Contact your Seagate sales representative for further details.

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Specifications

Retail Packaging	Box Dimensions	Master Carton Dimensions	Pallet Dimensions
Length (in/mm)	0.945in/24mm	6.024in/153mm	47.992in/1219mm
Width (in/mm)	4.291in/109mm	11.496in/292mm	20in/508mm
Depth (in/mm)	6.102in/155mm	5.512in/140mm	27.795in/706mm
Weight (lb/kg)	0.139lb/0.063kg	1.984lb/0.9kg	104.808lb/47.54kg
Quantities			
Boxes per Master Carton	10		
Master Cartons per Pallet	48		
Pallet Layers	4		

System Requirements	What's Included

- M.2 (M key) slot, PCIe® Gen4 ×4, PCIe Gen3 x4
- Windows® 10
- Linux

- Seagate® IronWolf® 525 SSD

Region	Model Number	Capacity	Limited Warranty (years)	UPC Code	EAN Code	Multi-Pack UPC
WW	ZP500NM3A002	500GB	5	763649170748	8719706427883	10763649170745
WW	ZP1000NM3A002	1TB	5	763649170755	8719706427890	10763649170752
WW	ZP2000NM3A002	2TB	5	763649170762	8719706427906	10763649170769

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