IRONWOLF PRO NAS

SEAGATE

3.5 HDD DATA SHEET

The Power of Agility for Creative Pro and SME NAS Enclosures

IronWolf™ Pro is designed for everything business NAS. Get used to tough, ready, and scalable 24×7 performance that can handle multi-drive environments across a wide range of capacities.

Best-Fit Applications

- Commercial and enterprise network-attached storage (NAS)
- 1- to 24-bay network attached storage (NAS)
- Backup, archiving, and disaster recovery
- On-premise private cloud
- Virtual storage

Rescue DATA RECOVERY SERVICES

Key Advantages

Optimized for NAS with AgileArray™. AgileArray enables dual-plane balancing and RAID optimization in multi-bay environments, with the most advanced power management possible.

Actively protect your NAS with IronWolf Health Management focusing on prevention, intervention, and recovery.[1]

High performance means no lag time or downtime for users during workload traffic for the NAS. Seagate leads the competition with the highest-performing NAS drive portfolio.[2]

Seagate® Rescue Data Recovery.[3] IronWolf Pro comes with extra peace of mind for any mechanical, accidental, or natural disaster. With a 90% success rate of in-house recovery, Seagate has your back with a 2-year included Rescue Data Recovery plan.

Rotational Vibration (RV) sensors. First in its class of drives to include RV sensors to maintain high performance in multi-drive NAS enclosures.[3]

Range of capacities up to 14TB. More capacity options means more choices that will fit within the budget. Seagate provides a scalable solution for any NAS use-case scenario.

Do more in multi-user environments. IronWolf provides a workload rate of 300TB/year. Multiple users can confidently upload and download data to the NAS server, knowing IronWolf can handle the workload, whether you are a creative professional or a small business.

Designed for always on, always accessible 24×7 performance. Access data on your NAS any time, remotely or on site.

1.2M hours MTBF, 5-year limited warranty represents an improved total cost of ownership (TCO) over desktop drives with reduced maintenance costs.

1 Contact your Seagate sales representative for further information.

2 Performance may vary depending on user's hardware configuration and operating system.

3 Registration required to activate. Rescue recovery services not available in all countries. Contact your Seagate sales representative for further details.

IRONWOLF PRO NAS

Specifications	14TB	12TB	10TB	8TB	8TB
Capacity	14TB	12TB	10TB	8TB	8TB
Standard Model Number[1]	ST14000NE0008	ST12000NE0008	ST10000NE0008	ST8000NE001	ST8000NE0008
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Features					
Drive Bays Supported	Up to 24-bay	Up to 24-bay	Up to 24-bay	Up to 24-bay	Up to 24-bay
Multi-User Technology (TB/yr)	300	300	300	300	300
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes	Yes
Hot-Plug Support[2]	Yes	Yes	Yes	Yes	Yes
Cache (MB)	256	256	256	256	256
Reliability/Data Integrity					
Mean Time Between Failures (MTBF, hours)	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Reliability Rating @ Full 24×7 Operation (AFR)	0.73%	0.73%	0.73%	0.73%	0.73%
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15
Power-On Hours per Year (24×7)	8760	8760	8760	8760	8760
Sector Size (Bytes per Logical Sector)	512E	512E	512E	512E	512E
Rescue Services[3]	Yes	Yes	Yes	Yes	Yes
Limited Warranty (years)	5	5	5	5	5
Performance					
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD (MB/s)	250MB/s	250MB/s	214MB/s	214MB/s	214MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single	Single
Rotational Vibration @ 10-1500 Hz (rad/s^2)	12.5	12.5	12.5	12.5	12.5
Power Consumption					
Startup Current, Typical (12V, A)	2.0	2.0	2.0	2.0	2.0
Idle Power, Average (W)	5.0	5.0	5.0	5.9	4.4
Average Operating Power (W)	7.6W	7.8W	7.8W	9.8W	7.4W
Standby Mode (W)	1.0	1.0	0.8	0.9	0.8
Sleep Mode (W)	1.0	1.0	0.8	0.8	0.8
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental/Temperature					
Operating (ambient, min °C)	5	5	5	5	5
Operating (drive case, max °C)	60	60	60	60	60
Nonoperating (ambient, min °C)	-40	-40	-40	-40	-40
Nonoperating (ambient, max °C)	70	70	70	70	70
Environmental/Acoustics					
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	2.27	2.27	2.27	2.27	2.27
Idle (typical)[3]	2.8bels	2.8bels	1.8bels	1.8bels	1.8bels
Seek (typical)	3.2bels	3.2bels	2.8bels	2.8bels	2.8bels
Environmental/Shock					
Shock, Operating 2ms (Read/Write) (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, 1ms and 2ms (Gs)	250	250	250	250	250
Physical					
Height (mm/in)	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in
Width (mm/in, max)	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in
Depth (mm/in, max)	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in
Weight (g/lb)	690g/1.521lb	690g/1.521lb	690g/1.521lb	722g/1.59lb	650g/1.433lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet/Cartons per Layer	40/8	40/8	40/8	40/8	40/8

1 Seagate recommends validating your configuration with your HBA/RAID controller manufacturer to ensure full capacity capabilities.
2 Supports Hot-Plug operation per Serial ATA Revision 2.6 specification.

3 Rescue recovery services not available in all countries. Contact your Seagate sales representative for further details. Register an IronWolf Pro drive to activate your 2-year Rescue plan at seagate.com/register.

IRONWOLF PRO NAS

Specifications	6TB	6TB	4TB	4TB	2TB
Capacity	6TB	6TB	4TB	4TB	2TB
Standard Model Number[1]	ST6000NE0023	ST6000NE000	ST4000NE001	ST4000NE0025	ST2000NE0025
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Features					
Drive Bays Supported	Up to 24-bay	Up to 24-bay	Up to 24-bay	Up to 24-bay	Up to 24-bay
Multi-User Technology (TB/yr)	300	300	300	300	300
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes	Yes
Hot-Plug Support[2]	Yes	Yes	Yes	Yes	Yes
Cache (MB)	256	256	128	128	128
Reliability/Data Integrity					
Mean Time Between Failures (MTBF, hours)	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Reliability Rating @ Full 24×7 Operation (AFR)	0.73%	0.73%	0.73%	0.73%	0.73%
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15
Power-On Hours per Year (24×7)	8760	8760	8760	8760	8760
Sector Size (Bytes per Logical Sector)	512E	512E	512E	512E	512
Rescue Services[3]	Yes	Yes	Yes	Yes	Yes
Limited Warranty (years)	5	5	5	5	5
Performance					
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD (MB/s)	214MB/s	214MB/s	214MB/s	214MB/s	195MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single	Single
Rotational Vibration @ 10-1500 Hz (rad/s^2)	12.5	12.5	12.5	12.5	12.5
Power Consumption					
Startup Current, Typical (12V, A)	2.0	2.0	2.0	2.0	2.0
Idle Power, Average (W)	7.5	7.5	5.5	5.45	4.61
Average Operating Power (W)	8.1W	8.1W	9.0W	8.5W	6.5W
Standby Mode (W)	0.6	0.6	0.6	0.6	0.8
Sleep Mode (W)	0.6	0.6	0.6	0.6	0.8
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental/Temperature					
Operating (ambient, min °C)	5	5	5	5	5
Operating (drive case, max °C)	60	60	60	60	60
Nonoperating (ambient, min °C)	-40	-40	-40	-40	-40
Nonoperating (ambient, max °C)	70	70	70	70	70
Environmental/Acoustics					
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	3	3	3	3	3
Idle (typical)[3]	2.7bels	2.7bels	2.7bels	2.7bels	2.2bels
Seek (typical)	2.7bels	2.7bels	2.8bels	2.8bels	2.6bels
Environmental/Shock					
Shock, Operating 2ms (Read/Write) (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, 1ms and 2ms (Gs)	250	250	300	300	300
Physical					
Height (mm/in)	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in
Width (mm/in, max)	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in
Depth (mm/in, max)	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in
Weight (g/lb)	705g/1.55lb	705g/1.55lb	643g/1.42lb	680g/1.50lb	550g/1.21lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet/Cartons per Layer	40/8	40/8	40/8	40/8	40/8

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