



3.5 HDD DATA SHEET

The Power of Agility for Home,
SOHO and SMB NAS enclosures



IronWolf™ is designed for everything NAS. Get used to tough, ready and scalable 24x7 performance that can handle multi-drive environments across a wide range of capacities.



Best-Fit Applications

- 1- to 8-bay network attached storage (NAS)
- Desktop RAID and servers
- Multimedia server storage
- Private cloud

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

Rotational Vibration (RV) mitigation. 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 10TB. More capacity options mean 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 180TB/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 24x7 performance. Access data on your NAS any time, remotely or on site.

1M hours MTBF, 3-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 Included on 4, 6, 7, 8 and 10TB models.



Specifications	10TB ¹	8TB ¹	7TB ¹	6TB ¹	4TB ¹	3TB ¹	2TB ¹	1TB ¹	
Standard Model Numbers	ST10000VN0004	ST8000VN0022	ST8000VN0004	ST7000VN0002	ST6000VN0041	ST4000VN0008	ST3000VN0007	ST2000VN0004	ST1000VN0002
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Features and Performance									
Number of Drive Bays Supported	1 to 8	1 to 8	1 to 8	1 to 8	1 to 8	1 to 8	1 to 8	1 to 8	1 to 8
Multi-User Technology (TB/yr)	180	180	180	180	180	180	180	180	180
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
IronWolf Health Management ²	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Dual-Plane Balance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Error Recovery Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max Sustained Data Transfer Rate OD (MB/s)	210	210	210	210	195	180	180	180	180
Spindle Speed (RPM)	7200	7200	7200	7200	7200	5900	5900	5900	5900
Cache (MB)	256	256	256	256	128	64	64	64	64
Reliability/Data Integrity									
Load/Unload Cycles ³	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Power-On Hours (per year)	8760	8760	8760	8760	8760	8760	8760	8760	8760
Workload Rate Limit (WRL) (TB/year)	180	180	180	180	180	180	180	180	180
Mean Time Between Failures (MTBF) (hours)	1M	1M	1M	1M	1M	1M	1M	1M	1M
Warranty, Limited (years)	3	3	3	3	3	3	3	3	3
Power Management									
Startup Current, Typical (12V,A)	1.8	2.0	1.8	2.0	2.0	2.0	2.0	2.0	1.2
Average Operating Power (W)	6.8	9.0	6.8	9.0	9.0	4.8	5.6	5.0	3.6
Idle Average (W)	4.42	7.2	4.42	7.2	7.2	3.95	4.9	3.7	2.5
Standby Mode/Sleep Mode, Typical (W)	0.8/0.8	0.6/0.6	0.8/0.8	0.6/0.6	0.6/0.6	0.5/0.5	0.6/0.6	0.8/0.8	0.8/0.8
Voltage Tolerance (5V)	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%
Voltage Tolerance (12V)	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%
Environmental									
Temperature (°C)									
Operating (ambient, min)	5	5	5	5	5	5	5	5	5
Operating (drive case, max) ⁴	70	70	70	70	70	70	70	70	70
Nonoperating (ambient, min)	-40	-40	-40	-40	-40	-40	-40	-40	-40
Nonoperating (ambient, max)	70	70	70	70	70	70	70	70	70
Halogen Free	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shock, Operating/Nonoperating: 2ms (max, Gs)	70/250	70/250	70/250	70/250	70/250	80/300	80/300	80/300	80/300
Acoustics									
Idle (typical, bels) ⁵	2.8	2.7	2.8	2.7	2.7	2.3	2.3	1.9	2.1
Operating (typical, bels)	3.2	2.8	3.2	2.8	2.8	2.5	2.5	2.1	2.3
Physical									
Height (mm/in, max)	26.11/1.028	26.11/1.028	26.11/1.028	26.11/1.028	26.11/1.028	26.11/1.028	26.11/1.028	26.11/1.028	20.17/0.795
Width (mm/in, max)	101.85/4.01	101.85/4.01	101.85/4.01	101.85/4.01	101.85/4.01	101.85/4.01	101.85/4.01	101.85/4.01	101.85/4.01
Depth (mm/in, max)	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787
Weight (g/lb, typical)	650/1.43	780/1.72	650/1.43	780/1.72	780/1.72	610/1.345	610/1.345	535/1.18	415/0.915
Carton Unit Quantity	20	20	20	20	20	20	20	20	25
Cartons per Pallet/Cartons per Layer	40/8	40/8	40/8	40/8	40/8	40/8	40/8	40/8	40/8

1 One terabyte, or TB, equals one trillion bytes when referring to drive capacity.
 2 Only available on Synology NAS enclosures. Synology models may vary. Please contact your Seagate sales representative for further information.
 3 Load/Unload tested to 600,000 cycles.
 4 Seagate does not recommend operating at sustained case temperatures above 60°C. Operating at higher temperatures will reduce useful life of the product.
 5 Idle measured in Idle1 state.

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