

3.5 HDD DATA SHEET

**Tough. Ready. Scalable.**  
Purpose-built for Creative Pro and Medium-to-Large Business NAS Environments



IronWolf™ Pro is designed for commercial and enterprise NAS. Delivering Tough, Ready and Scalable 24x7 performance in multi-bay, multi-user environments



### Best-Fit Applications

- Commercial and Enterprise NAS
- Video Production RAID and Shared Network Storage
- Workstations and Servers



## Key Advantages

**Optimised for NAS with AgileArray™.** AgileArray enables Dual-Plane Balancing and Time-Limited Error Recovery to deliver best-in-class RAID performance in multi-bay systems.

**Always On, Always Accessible** IronWolf Pro drives are designed for 24x7 usage, allowing users to access their data any time, anywhere.

**All-CMR Portfolio** All IronWolf Pro drives utilise Conventional Magnetic Recording (CMR) technology for consistent, best-in-class NAS performance.

**Up to 18 TB** Broad range of capacity options to deliver scalable and cost-efficient storage solutions.

**Built Tough** IronWolf Pro drives are rated for 300 TB/Y workload, allowing commercial and enterprise NAS users to seamlessly store, share and collaborate on large amounts of networked data.

**Class-Leading Reliability and Dependability** IronWolf Pro drives are rated for 1.2M hours MTBF and include a 5-year limited warranty for hassle-free data storage and best-in-class total cost of ownership (TCO).

**Rotational Vibration (RV) sensors.** Built-in RV sensors for vibration tolerance and consistent performance in multi-bay systems.

**IronWolf Health Management (IHM)** Actively protect your NAS data with Prevention, Intervention, and Recovery recommendations to ensure peak system health.<sup>1</sup>

**Peace of mind with Data Recovery** IronWolf Pro drives include 3 years of complimentary Rescue Data Recovery Services - in-house secure facilities, with an industry-leading recovery rate of 95% - so you do not have to incur high recovery costs in the event of accidental data corruption or drive damage.<sup>2</sup>

<sup>1</sup> IHM is enabled on all leading NAS systems. Please check with your NAS vendor or a Seagate sales representative for more details.

<sup>2</sup> Rescue Data Recovery Services not available in all countries. Contact your Seagate sales representative for further details.



Specifications	18 TB	16 TB	14 TB	12 TB	10 TB
Capacity	18TB	16TB	14TB	12TB	10TB
Standard Model Number	ST18000NE000	ST16000NE000	ST14000NE0008	ST12000NE0008	ST10000NE0008
Interface	SATA 6Gb/s				
<b>Features</b>					
Drive Bays Supported	Up to 24-bay				
Recording Technology	CMR	CMR	CMR	CMR	CMR
Drive Design (Air or Helium)	Helium	Helium	Helium	Helium	Helium
Workload Rate Limit (WRL)	300	300	300	300	300
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes	Yes
Cache (MB)	256	256	256	256	256
<b>Reliability/Data Integrity</b>					
Mean Time Between Failures (MTBF, hours)	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.73%	0.73%	0.73%	0.73%	0.73%
Non-recoverable Read Errors per Bits Read, Max	1 per 10E15				
Power-On Hours (per year)	8,760	8,760	8,760	8,760	8,760
Sector Size (Bytes per Logical Sector)	512E	512E	512E	512E	512E
Rescue Data Recovery Services (years) <sup>3</sup>	3	3	3	3	3
Limited Warranty (years)	5	5	5	5	5
<b>Performance</b>					
Spindle Speed (RPM)	7,200	7,200	7,200	7,200	7,200
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)	260MB/s	255MB/s	255MB/s	240MB/s	240MB/s
Rotational Vibration @ 10-1500 Hz (rad/s)	12.5	12.5	12.5	12.5	12.5
<b>Power Consumption</b>					
Startup Current, Typical (12V, A)	2	2	2	2	2
Idle Power, Average (W)	5.2	5	5	5	5
Average Operating Power (W)	8 W	7.6 W	7.6 W	7.8 W	7.8 W
Standby Mode, Typical (W)	1.25	1	1	1	1.17
Sleep Mode, Typical (W)	1.25	1	1	1	1.17
Power Supply Requirements	+12 V and +5 V				
<b>Environmental/Temperature</b>					
Operating Temperature (ambient, min °C)	0	0	0	0	0
Operating Temperature (drive reported, max °C) <sup>4</sup>	65	60	65	65	65
Non-operating Temperature (ambient, min °C)	-40	-40	-40	-40	-40
Non-operating Temperature (ambient, max °C)	70	70	70	70	70
<b>Environmental/Acoustics</b>					
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	2.27	2.27	2.27	2.27	2.27
Acoustics, Idle (typical, measured in Idle 1 state) (dBA)	28	28	28	28	28
Acoustics, Seek (typical) (dBA)	32	32	32	32	30
<b>Environmental/Shock</b>					
Shock, Operating 2 ms (Read/Write) (Gs)	50/50 Gs	50/50 Gs	50/50 Gs	50/50 Gs	70/40 Gs
Shock, Non-operating, 1 ms and 2 ms (Gs)	200	200	200	200	250
<b>Physical</b>					
Height (mm/in)	26.11 mm/1.028 in				
Width (mm/in, max)	101.85 mm/4.01 in				
Depth (mm/in, max)	146.99 mm/5.787 in				
Weight (g/lb, typical)	670 g/1.477 lb	670 g/1.477 lb	670 g/1.477 lb	670 g/1.477 lb	690 g/1.521 lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8	40/8

<sup>3</sup> Rescue Data Recovery Services not available in all countries. Contact your Seagate sales representative for further details.

<sup>4</sup> Seagate does not recommend operating at sustained drive temperatures above 60C. Operating at higher temperatures may affect drive health.



Specifications	10 TB	8 TB	6 TB	4 TB
Capacity	10TB	8TB	6TB	4TB
Standard Model Number	ST10000NE000	ST8000NE001	ST6000NE000	ST4000NE001
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
<b>Features</b>				
Drive Bays Supported	Up to 24-bay	Up to 24-bay	Up to 24-bay	Up to 24-bay
Recording Technology	CMR	CMR	CMR	CMR
Drive Design (Air or Helium)	Air	Air	Air	Air
Workload Rate Limit (WRL)	300	300	300	300
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes
Cache (MB)	256	256	256	256
<b>Reliability/Data Integrity</b>				
Mean Time Between Failures (MTBF, hours)	1,200,000	1,200,000	1,200,000	1,200,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.73%	0.73%	0.73%	0.73%
Non-recoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15
Power-On Hours (per year)	8,760	8,760	8,760	8,760
Sector Size (Bytes per Logical Sector)	512E	512E	512E	512E
Rescue Data Recovery Services (years) <sup>3</sup>	3	3	3	3
Limited Warranty (years)	5	5	5	5
<b>Performance</b>				
Spindle Speed (RPM)	7,200	7,200	7,200	7,200
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
Max. Sustained Transfer Rate OD (MB/s)	240MB/s	240MB/s	220MB/s	220MB/s
Rotational Vibration @ 10-1500 Hz (rad/s)	12.5	12.5	12.5	12.5
<b>Power Consumption</b>				
Startup Current, Typical (12V, A)	1.8	2	2	2
Idle Power, Average (W)	7.8	7.1	7.1	5.5
Average Operating Power (W)	10.1 W	10.1 W	9.3 W	9.02 W
Standby Mode, Typical (W)	1	1	1	1
Sleep Mode, Typical (W)	1	1	1	1
Power Supply Requirements	+12 V and +5 V			
<b>Environmental/Temperature</b>				
Operating Temperature (ambient, min °C)	0	0	0	0
Operating Temperature (drive reported, max °C) <sup>4</sup>	65	65	65	65
Non-operating Temperature (ambient, min °C)	-40	-40	-40	-40
Non-operating Temperature (ambient, max °C)	70	70	70	70
<b>Environmental/Acoustics</b>				
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	2.27	2.27	2.27	2.27
Acoustics, Idle (typical, measured in Idle 1 state) (dBA)	28	28	28	28
Acoustics, Seek (typical) (dBA)	30	30	30	30
<b>Environmental/Shock</b>				
Shock, Operating 2 ms (Read/Write) (Gs)	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs
Shock, Non-operating, 1 ms and 2 ms (Gs)	300	300	300	300
<b>Physical</b>				
Height (mm/in)	26.11 mm/1.028 in	26.11 mm/1.028 in	26.11 mm/1.028 in	26.11 mm/1.028 in
Width (mm/in, max)	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in
Depth (mm/in, max)	146.99 mm/5.787 in	146.99 mm/5.787 in	146.99 mm/5.787 in	146.99 mm/5.787 in
Weight (g/lb, typical)	720 g/1.59 lb	720 g/1.59 lb	716 g/1.58 lb	650 g/1.431 lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8

<sup>3</sup> Rescue Data Recovery Services not available in all countries. Contact your Seagate sales representative for further details.

<sup>4</sup> Seagate does not recommend operating at sustained drive temperatures above 60C. Operating at higher temperatures may affect drive health.

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