

# NAS HDD

Data Sheet

## Ultra-Reliable 8TB Drives for NAS, Cloud, Servers and RAID

- 8, 6, 5, 4, 3, 2 and 1TB capacity options
- Seagate® NAS HDDs are built and tested to provide industry-leading performance for small NAS systems.
- NASWorks™ technology supports customised error recovery controls, power management and vibration tolerance for optimal performance and reliability with workloads up to 180TB/year workload rate limit (WRL).
- NAS error recovery controls optimise drive health by helping to ensure drives are not dropped from the NAS and sent into a RAID rebuild.
- Improved vibration tolerance and emission in multi-drive systems with dual-plane balance.
- Advanced power management supports multiple power profiles for low-power, 24x7 performance.  
Quiet drive operation enhances customer experience in living room or office environments.
- Optional 3-year Rescue recovery service plan protects against data loss from viruses, software issues, or mechanical and electrical breakdowns in a NAS or RAID environment.

## Best-Fit Applications

- Home/SOHO NAS desktop towers
- Desktop RAID and servers
- Backup and disaster recovery
- Print and file servers
- Multimedia server/storage
- Archival
- Virtualisation
- Small-business file sharing
- Backup servers
- Personal cloud



# NAS HDD



Specifications	8TB	6TB	4TB
Model Number	ST8000VN0002	ST6000VN0021	ST4000VN000
Rescue Model Number	ST8000VN0012	ST6000VN0031	ST4000VN003
Halogen-free	Yes	Yes	Yes
<b>NASWorks</b>			
Drive bays supported	1 to 8	1 to 8	1 to 8
Dual-Plane Balance	Yes	Yes	Yes
Error Recovery Control	Yes	Yes	Yes
<b>Performance</b>			
Cache	256MB	128MB	64MB
Max Sustainable Transfer Rate	216MB/s	216MB/s	180MB/s
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
<b>Power Management</b>			
Startup Power (12V, A)	2.0	2.0	2.0
Average Operating Power	9.0W	9.0W	4.8W
Idling Average	7.2W	7.2W	3.95W
Standby/Sleep Mode (,)	0.6W/0.6W	0.6W/0.6W	0.5W/0.5W
<b>Environmental/Temperature</b>			
Temperature, Operating (°C)	0°C ~ 60°C	0°C ~ 60°C	0°C ~ 70°C
Temperature, Non-operating (°C)	-40°C ~ 60°C	-40°C ~ 60°C	-40°C ~ 70°C
Temperature Gradient, Operating/Non-operating (max)	20°C per hour/30°C per hour	20°C per hour/30°C per hour	20°C per hour/30°C per hour
<b>Environmental/Shock</b>			
Shock, Operating/Non-operating: 2ms (max)	70Gs/250Gs	70Gs/250Gs	80Gs/300Gs
<b>Environmental/Acoustics</b>			
Idle (typical) <sup>1</sup>	2.5bels	2.5bels	2.3bels
Operational (typical)	2.6bels	2.6bels	2.5bels
<b>Reliability</b>			
Load/Unload Cycles <sup>2</sup>	600,000	600,000	600,000
Non-recoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15
Power-on Hours	8760	8760	8760
Mean Time Between Failures	1,000,000hr	1,000,000hr	1,000,000hr
Warranty, Limited (years)	3	3	3
<b>Physical</b>			
Height (mm/in)	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in
Width (mm/in, max)	101.60mm/4.0in	101.6mm/4.0in	101.60mm/4.000in, 101.6mm/4.0in
Depth (mm/in, max)	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in
Weight (lb/g)	780g/1.72lb	780g/1.72lb	610g/1.345lb
Carton Unit Quantity	20	20	20
Cartons per Pallet / Cartons per Layer	40 / 8	40 / 8	40 / 8

<sup>1</sup> Idle measured in Idle1 state

<sup>2</sup> Load/Unload tested to 600,000 cycles

Specifications	3TB	2TB	1TB
Model Number	ST3000VN000	ST2000VN000	ST1000VN000
Rescue Model Number	—	ST2000VN001	ST1000VN001
Halogen-free	Yes	Yes	Yes
NASWorks			
Drive bays supported	1 to 8	1 to 8	1 to 8
Dual-Plane Balance	Yes	Yes	No
Error Recovery Control	Yes	Yes	Yes
Performance			
Cache	64MB	64MB	64MB
Max Sustainable Transfer Rate	180MB/s	180MB/s	180MB/s
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Power Management			
Startup Power (12V, A)	2.0	2.0	1.2
Average Operating Power	5.6W	5.0W	3.6W
Idling Average	4.9W	3.7W	2.5W
Standby/Sleep Mode (,)	0.5W/0.5W	0.8W/0.8W	0.8W/0.8W
Environmental/Temperature			
Temperature, Operating (°C)	0°C ~ 70°C	0°C ~ 70°C	0°C ~ 70°C
Temperature, Non-operating (°C)	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 70°C
Temperature Gradient, Operating/Non-operating (max)	20°C per hour/30°C per hour	20°C per hour/30°C per hour	20°C per hour/30°C per hour
Environmental/Shock			
Shock, Operating/Non-operating; 2ms (max)	80Gs/300Gs	80Gs/300Gs	80Gs/300Gs
Environmental/Acoustics			
Idle (typical) <sup>1</sup>	2.3bels	2.3bels	2.1bels
Operational (typical)	2.4bels	2.4bels	2.3bels
Reliability			
Load/Unload Cycles <sup>2</sup>	600,000	600,000	600,000
Non-recoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15
Power-on Hours	8760	8760	8760
Mean Time Between Failures	1,000,000hr	1,000,000hr	1,000,000hr
Warranty, Limited (years)	3	3	3
Physical			
Height (mm/in)	26.11mm/1.028in	26.11mm/1.028in	19.98mm/0.787in
Width (mm/in, max)	101.60mm/4.0in	101.60mm/4.0in	101.60mm/4.0in
Depth (mm/in, max)	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in
Weight (lb/g)	610g/1.345lb	535g/1.181lb	400g/0.881lb
Carton Unit Quantity	20	20	25
Cartons per Pallet / Cartons per Layer	40 / 8	40 / 8	40 / 8

<sup>1</sup> Idle measured in Idle1 state

<sup>2</sup> Load/Unload tested to 600,000 cycles

SEAGATE.COM

AMERICAS Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, 408-658-1000

ASIA/PACIFIC Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888

EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 16-18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00

© 2015 Seagate Technology LLC. All rights reserved. Printed in USA. Seagate, Seagate Technology and the Spiral logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. PowerChoice, Seagate Secure and SeaTools are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes; and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors. The export or re-export of Seagate hardware or software is regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit [www.bis.doc.gov](http://www.bis.doc.gov)), and may be controlled for export, import and use in other countries. Seagate reserves the right to change, without notice, product offerings or specifications. DS1789.5-1510US