

Enterprise NAS HDD

Data Sheet

The first 8TB drive optimized for mid-range NAS, server and scale-out cloud storage

- Enterprise-class reliability and performance for cloud-based storage and NAS applications in 1- to 16-bay enclosures
- Backed by the Seagate® 5-Year Limited Warranty
- 1.2 million hours MTBF for enterprise-class reliability
- 300TB-per-year workload rating for mid-range NAS and cloud-based storage
- 7200-RPM spindle speed performance
- Double the cache size—256MB multisegmented on 8TB capacity
- Dual-stage actuators to deliver precision seeks every time
- SATA 6Gb/s interface for easy integration into NAS and RAID rackmount systems
- RV sensor for sustained performance and reliability
- Optional 5-year Rescue Data Recovery Service plan protects against data loss in NAS and RAID environments.

Best-Fit Applications

- Cloud-based and NAS storage
- Backup and disaster recovery
- Multi-media server and storage
- File and print server sharing
- Archiving and cloud replication
- On-premise private cloud
- Tiered storage
- Remote access
- Virtualization
- Auxiliary storage





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Specifications	8TB ^{1,2}	6TB ^{1,2}	5TB ^{1,2}	4TB ^{1,2}	3TB ^{1,2}	2TB ¹
Model Numbers (512E)	ST8000NE0001	ST6000VN0001	ST5000VN0001	ST4000VN0001	ST3000VN0001	ST2000VN0001
Rescue Model Number	ST8000NE0011	ST6000VN0011	ST5000VN0011	ST4000VN0011	ST3000VN0011	ST2000VN0011
Interface Options	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Features						
RV Sensors	Yes	Yes	Yes	Yes	Yes	Yes
5-Year Option with Rescue Model only	Yes	Yes	Yes	Yes	Yes	Yes
Humidity Sensor	Yes	Yes	Yes	Yes	Yes	Yes
Super Parity	Yes	Yes	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes	Yes	Yes
AcuTrac™ Technology	Yes	Yes	Yes	Yes	Yes	Yes
Power Balance Technology	Yes	Yes	Yes	Yes	Yes	Yes
Hot-Plug Support ³	Yes	Yes	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	256	128	128	128	128	128
Reliability/Data Integrity						
Mean Time Between Failures (MTBF, hours)	1.2M	1.2M	1.2M	1.2M	1.2M	1.2M
Reliability Rating @ Full 24x7 Operation (AFR)	0.63%	0.63%	0.63%	0.63%	0.63%	0.63%
Nonrecoverable Read Errors per Bits Read	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-On Hours per Year	8760 (24x7)	8760 (24x7)	8760 (24x7)	8760 (24x7)	8760 (24x7)	8760 (24x7)
Sector Size (Bytes per Logical Sector)	512/4096	512/4096	512/4096	512/4096	512/4096	512/4096
Limited Warranty (years)	5	5	5	5	5	5
Performance						
Spindle Speed (RPM)	7200	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	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD (MB/s)	230	216	216	216	216	216
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single	Single	Single
Rotation Vibration @ 1500 Hz (rad/s ²)	12.5	12.5	12.5	12.5	12.5	12.5
Power Consumption						
Startup Current, Average (12V, A)	1.8	1.8	1.8	1.8	1.8	1.8
Idle Power, Average (W)	TBD	6.9	6.9	6.0	6.0	4.5
Operating Mode, Typical (W)	9.0	9.0	9.0	6.7	6.7	6.4
Standby/Sleep Mode, Typical (W)	0.6	0.6	0.6	0.6	0.6	0.6
Power Supply Requirements	+12V and +5V	+12V and +5V	+12V and +5V	+12V and +5V	+12V and +5V	+12V and +5V
Environmental						
Temperature, Operating (°C)	5 to 60	5 to 60	5 to 60	5 to 60	5 to 60	5 to 60
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	5.0	5.0	5.0	5.0	5.0	5.0
Shock, Operating, 2ms (Read/Write) (Gs)	70/40	70/40	70/40	70/40	70/40	70/40
Shock, Nonoperating, 1ms and 2ms (Gs)	250	250	300	300	300	300
Physical						
Height (in/mm, max) ⁴	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Width (in/mm, max) ⁴	4.010/101.85	4.010/101.85	4.010/101.85	4.010/101.85	4.010/101.85	4.010/101.85
Depth (in/mm, max) ⁴	5.878/147.0	5.878/147.0	5.878/147.0	5.878/147.0	5.878/147.0	5.878/147.0
Weight (g/lb)	1.720/780	1.720/780	1.720/780	1.400/635	1.400/635	1.344/605
Carton Unit Quantity	20	20	20	20	20	20
Cartons per Pallet	40	40	40	40	40	40
Cartons per Layer	8	8	8	8	8	8

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 Seagate recommends validating your configuration with your HBA/RAID controller manufacturer to ensure full capacity capabilities

3 Supports Hotplug operation per Serial ATA Revision 2.6 specification.

4 These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org.

For connector-related dimensions, see SFF-8223.

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