

Kinetic HDD

Data Sheet

Revolutionizing Cloud Data Storage

- The world's first Ethernet-connected HDD with an open source object API
- Reduces TCO by simplifying cloud and data center storage hardware and software stacks
- Improves performance by eliminating layers of antiquated file system software
- Enables flexible and independent scaling of compute and storage growth
- Supports hyperscale 24×7 environments with up to 800 drives in a 40U rack
- Connects storage directly to existing data center data communications fabric
- State-free key/value object store with provided Kinetic API libraries

Best-Fit Applications

- · Object data storage
- Hyperscale and scale-out storage
- Cloud storage arrays
- Cloud backup storage







Model Number ST4000NK001 Interface Dual SRMII Ethernet 1Gb/s	Specifications	4TB1.2
	Model Number	ST4000NK001
DDR2 Cache, Multisegnented (MB)	Interface	Dual SGMII Ethernet 1Gb/s
SAM (MB)	Performance	
VO Data Transfer Rate (MB/s max) 60 Rotational Vibration (Description & 20Hz to 1500Hz, w/RVFF (rad/s²) 12.5 1	DDR2 Cache, Multisegmented (MB)	64
Rotational Vibration Tolerance	RAM (MB)	512
Linear Random Vibration	I/O Data Transfer Rate (MB/s max)	60
Configuration	Rotational Vibration Tolerance @ 20Hz to 1500Hz, w/RVFF (rad/s²)	12.5
Heads/Disks 8/4 1024 1	Linear Random Vibration @ 10Hz to 500Hz (G _{rms} ref)	4.9
Diject Size (KB)	Configuration	
Guaranteed Objects per Drive 3,906,250 Reliability/Data Integrity 300,000 Load/Unload Cycles (25°C, 50% relative humidity) 300,000 Norrecoverable Read Errors per Bits Read, Max 1 per 10E14 Mean Time Between Failures (MTBF) (hours) 800,000 Power-On Hours 8760 (24×7) Power Management 50/19.2 Maximum Spin-up Mode (W) (+5V+12V) 4.2573.6 Voltage Tolerance (including noise) 50 ± 5% Ervironmental 12V ± 10% Ervironmental 50 ± 5% Operating Temperature (*C) 5 to 60 Nonoperating Temperature (*C) -40 to 70 Relative Humidity, Operating/Nonoperating (%) 5 to 90/5 to 95 Acoustics (typical/max, bels) 2.8/3.0 Physical 4 Height (mm/in)³ 26.1/1.028 Width (mm/in)³ 101.85/4.010 Depth (mm/in)³ 101.85/4.010 Depth (mm/in)³ 20 Cartons per Pallet 40 Cartons per Pallet 40 Cartons per Pallet 40 Cartons per Pallet	Heads/Disks	8/4
Reliability/Data Integrity 300,000	Object Size (KB)	1024
Load/Unload Cycles (25°C, 50% relative humidity) 300,000	Guaranteed Objects per Drive	3,906,250
Nonrecoverable Read Errors per Bits Read, Max	Reliability/Data Integrity	
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Power-On Hours 8760 (24×7)	Nonrecoverable Read Errors per Bits Read, Max	1 per 10E14
Power Management Maximum Spin-up Mode (W) (+5V/+12V) 5.0/19.2	Mean Time Between Failures (MTBF) (hours)	800,000
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12V ± 10%	Average Put/Get Operation Mode (W) (+5V/+12V)	4.25/3.6
Environmental Operating Temperature (°C)	Voltage Tolerance (including noise)	
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Limited Warranty (years) 3	. ,	
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- 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 manufacturer to ensure full 4TB capacity capabilities.
- 3 These base deck dimensions conform to the Small Form Factor Standard (SFF-8301) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8323.





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AMERICAS ASIA/PACIFIC EUROPE, MIDDLE EAST AND AFRICA Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, 408-658-1000 Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888 Seagate Technology SAS 16–18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00