

# Terascale™ HDD

## Data Sheet

### High-Capacity, Eco-Friendly, Cost-Effective Storage for Web-Scale Data Centers

- Affordable storage for 24×7 multi-drive replicated environments
- High vibration tolerance for reliable enterprise-class performance
- Low power and cooling costs with the lowest 3.5-inch enterprise drive operating power
- Advanced format logical block management for industry-leading data integrity
- 4TB per drive enables scalable high-capacity storage in 24×7 environments.
- Lower TCO with Seagate® Instant Secure Erase for simple drive repurposing or disposal
- SATA 6Gb/s interface optimizes burst performance.

### Best-Fit Applications

- Web-scale computing
- Cloud storage servers
- Cloud storage arrays
- Cloud backup storage
- Direct-attached external storage devices (DAS)
- Network-attached storage devices (NAS)



Specifications	4TB <sup>1,2</sup>
Seagate Instant Secure Erase (ISE) Model	ST4000NC000
Non-ISE Model <sup>3</sup>	ST4000NC001
Interface	SATA 6Gb/s
<b>Performance</b>	
DDR2 Cache, Multisegmented (MB)	64
SATA Transfer Rates Supported (Gb/s)	6.0/3.0/1.5
Burst Data Transfer Rate (MB/s)	600
Seek Average, Read/Write (ms)	12.0/12.0
Max Sustained Data Rate, OD Read (MB/s)	140 to 170
Rotational Vibration Tolerance @ 20Hz to 1500Hz, w/RVFF (rad/s <sup>2</sup> )	12.5
Linear Random Vibration @ 10Hz to 500Hz (G <sub>rms</sub> ref)	4.9
<b>Configuration</b>	
Heads/Disks	8/4
Bytes per Sector (512-byte emulation)	4096
<b>Reliability/Data Integrity</b>	
Load/Unload Cycles (25°C, 50% relative humidity)	300,000
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E14
Mean Time Between Failures (MTBF)	800,000
Power-On Hours	8760 (24×7)
<b>Power Management</b>	
Operating Mode (typical, W)	6.49
Idle Power (W)	4.59
Standby/Sleep Mode (W)	0.77
Voltage Tolerance (including noise)	5V ± 5% 12V ± 10%
<b>Environmental</b>	
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
<b>Physical</b>	
Height (mm/in) <sup>4</sup>	26.1/1.028
Width (mm/in) <sup>4</sup>	101.85/4.010
Depth (mm/in) <sup>4</sup>	147.00/5.787
Weight (g/lb)	606/1.33
Carton Unit Quantity	20
Cartons per Pallet	40
Cartons per Layer	8
<b>Special Features</b>	
Seagate Instant Secure Erase	Optional
Flagged Write Uncorrectable (Logical Block Management)	Yes
PowerChoice™ On-Demand Power Savings	Yes
SeaTools™ Diagnostic Software	Yes
S.M.A.R.T. Drive Monitoring and Reporting	Yes
Hotplug Operation (per SATA Rev. 3.0 Specifications)	Yes
Enterprise CS Phone Support	Limited
Limited Warranty (years)	3

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 Non-ISE models for exception only and may not be readily available through your distribution network.

4 These base deck dimensions conform to the Small Form Factor Standard (SFF-8301) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8323.

[www.seagate.com](http://www.seagate.com)



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