

Terascale™ HDD

Data Sheet

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

- Affordable storage for 24x7 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 24x7 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 ^{1,2} |
|---|----------------------|
| Seagate Instant Secure Erase (ISE) Model | ST4000NC000 |
| Non-ISE Model ³ | ST4000NC001 |
| Interface | SATA 6Gb/s |
| Performance | |
| 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 ²) | 12.5 |
| Linear Random Vibration @ 10Hz to 500Hz (G _{rms} ref) | 4.9 |
| Configuration | |
| Heads/Disks | 8/4 |
| Bytes per Sector (512-byte emulation) | 4096 |
| Reliability/Data Integrity | |
| 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) |
| Power Management | |
| 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% |
| Environmental | |
| 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 | |
| Height (mm/in) ⁴ | 26.1/1.028 |
| Width (mm/in) ⁴ | 101.85/4.010 |
| Depth (mm/in) ⁴ | 147.00/5.787 |
| Weight (g/lb) | 606/1.33 |
| Carton Unit Quantity | 20 |
| Cartons per Pallet | 40 |
| Cartons per Layer | 8 |
| Special Features | |
| 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. For connector-related dimensions, see SFF-8323.

www.seagate.com



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