



DATA SHEET—SEAGATE CONFIDENTIAL

Scalable. Responsive. Innovative.

Exos X18

Seagate manufactures hard drives that specifically address the demand for hyperscale cloud scalability. As the flagship of the Seagate® X class, the Exos® X18 enterprise hard drives are the highest-capacity hard drives in the fleet.



Best-Fit Applications

- Scalable hyperscale applications/cloud data centers
- Massive scale-out data centers
- Big data applications
- High-capacity density RAID storage
- Mainstream enterprise external storage arrays
- Distributed file systems, including Hadoop and Ceph
- Enterprise backup and restore—D2D, virtual tape
- Centralized surveillance

Maximum Storage Capacity for Highest Rack Space Efficiency

Market-leading 18TB HDD offering the highest capacity available for more petabytes per rack¹

Highly reliable performance with enhanced caching, making it the logical choice for cloud data center and massive scale-out data center applications

Hyperscale SATA model tuned for large data transfers and low latency

PowerBalance™ feature optimizes Watts/TB

Maximize total cost of ownership savings through lower power and weight with helium sealed-drive design

Proven helium side-sealing weld technology for added handling robustness and leak protection

Digital environmental sensors to monitor internal drive conditions for optimal operation and performance

Data protection and security— Seagate Secure™ features for safe, affordable, fast, and easy drive retirement

Proven enterprise-class reliability backed by **5-year limited warranty and 2.5M-hr MTBF rating**

¹ Compared to 14TB competitive product



| Specifications | SAS 12Gb/s | SATA 6Gb/s | SAS 12Gb/s | SATA 6Gb/s |
|---|--------------------|--------------------|--------------------|--------------------|
| Capacity | 18TB | 18TB | 16TB | 16TB |
| Standard Model 4Kn | ST18000NM008J | ST18000NM003J | ST16000NM008J | ST16000NM003J |
| Features | | | | |
| Helium Sealed-Drive Design | Yes | Yes | Yes | Yes |
| Conventional Magnetic Recording (CMR) | Yes | Yes | Yes | Yes |
| Protection Information (T10 DIF) | Yes | — | Yes | — |
| SuperParity | Yes | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes | Yes |
| PowerChoice™ Idle Power Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Power/Performance Technology | Yes | Yes | Yes | Yes |
| Hot-Plug Support ¹ | Yes | Yes | Yes | Yes |
| Cache, Multisegmented (MB) | 256 | 256 | 256 | 256 |
| Organic Solderability Preservative | Yes | Yes | Yes | Yes |
| RSA 3072 Firmware Verification (SD&D) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Mean Time Between Failures (MTBF, hours) | 2,500,000 | 2,500,000 | 2,500,000 | 2,500,000 |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.35% | 0.35% | 0.35% | 0.35% |
| Nonrecoverable Read Errors per Bits Read | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 |
| Power-On Hours per Year (24x7) | 8760 | 8760 | 8760 | 8760 |
| 4Kn Sector Size (Bytes per Sector) | 4096 | 4096 | 4096 | 4096 |
| Limited Warranty (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spindle Speed (RPM) | 7200RPM | 7200RPM | 7200RPM | 7200RPM |
| Interface Access Speed (Gb/s) | 12.0, 6.0, 3.0 | 6.0, 3.0 | 12.0, 6.0, 3.0 | 6.0, 3.0 |
| Max. Sustained Transfer Rate OD (MB/s, MiB/s) | 270/258 | 270/258 | 261/249 | 261/249 |
| Random Read/Write 4K QD16 WCD (IOPS) | 170/550 | 170/550 | 170/550 | 170/550 |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Dual | Single | Dual | Single |
| Rotation Vibration @ 20-1500 Hz (rad/sec ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idle A (W) Average | 5.6W | 5.3W | 5.6W | 5.3W |
| Max Operating, Random Read/Write 4K/16Q (W) | 9.8, 7.0 | 9.4, 6.4 | 9.8, 7.0 | 9.4, 6.4 |
| Power Supply Requirements | +12 V and +5 V | +12 V and +5 V | +12 V and +5 V | +12 V and +5 V |
| Environmental | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Vibration, Nonoperating: 2 to 500Hz (Grms) | 2.27 | 2.27 | 2.27 | 2.27 |
| Shock, Operating 2ms (Read/Write) (Gs) | 50 | 50 | 50 | 50 |
| Shock, Nonoperating 2ms (Gs) | 200 | 200 | 200 | 200 |
| Physical | | | | |
| Height (in/mm, max) ² | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm |
| Width (in/mm, max) ² | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm |
| Depth (in/mm, max) ² | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm |
| Weight (gm/lb) | 670g/1.477lb | 670g/1.477lb | 670g/1.477lb | 670g/1.477lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 |
| Cartons per Pallet/Cartons per Layer | 40/8 | 40/8 | 40/8 | 40/8 |

¹ Supports Hotplug operation per Serial ATA Revision 3.3 specification

² 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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