

## Product Overview

# Constellation™ ES

**High-capacity storage designed for seamless enterprise integration**

### Key Advantages

- Fourth-generation, enterprise, nearline drive designed for 24x7 operation
- Up to 2TB capacity for data-hungry enterprise business applications
- Best-in-class enhanced rotational vibration tolerance ensures unrivalled performance in high-density applications for continuous data access.
- Enhanced efficiencies with PowerChoice™ host-selectable power options for unprecedented savings (up to 35 percent) during slow or idle periods
- Proven reliability with multi-drive firmware maximized for enterprise system availability
- Robust performance with dual processor technology and ramp load technology
- Provides business sustainability with Seagate Unified Storage architecture
  - 6Gb/s SAS performance with error detection and correction (IOEDC/IOECC) capabilities for the ultimate in data integrity
  - Government-grade Self-Encrypting Drive (SED) option for TCG-compliant/AES-128 security cuts IT drive retirement costs while securely protecting data.<sup>1</sup>

### Best-Fit Applications

- High-capacity data center storage
- Storage area networks (SAN), network attached storage (NAS) and direct attached storage (DAS)
- Enterprise backup and restore—D2D, virtual tape
- Centralized surveillance
- Cloud storage



<sup>1</sup> SED option for SAS models only. Requires TCG-compliant host or controller support.

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## The Seagate Enterprise Advantage

The Seagate® Constellation™ ES drive is the fourth generation 3.5-inch hard drive for enterprise nearline 7200-RPM environments. It enables cost-effective, highly efficient enterprise storage solutions with the highest capacity, best-in-class reliability, leading 6Gb/s performance, optimized power and cooling, and government-grade data security—all backed by world-class Seagate enterprise service and support.

The Constellation ES drive is the highest capacity enterprise-class hard drive capable of storing an unprecedented 76TB per square foot (in its 2TB capacity), maximizing data center floor space at the lowest \$/GB. Be completely assured knowing this nearline drive optimizes your 3.5-inch chassis performance with the lowest power draw (less than 8W), running cooler in higher-temperature environments. This is perfect for enterprise tiered storage solutions or small-to-medium businesses, which lack the luxury of a temperature-controlled data center.

Specifications	
Capacities	2TB, 1TB, 500GB
Interface(s)	6Gb/s SAS, SATA 3Gb/s
Spindle Speed	7200 RPM
Power (SAS)	8.0W typical idle, 12.2W operating, as low as 5.4W with PowerChoice™ option
Power (SATA)	7.0W typical idle, 11.2W operating, as low as 4.4W with PowerChoice option
Mean Time Between Failures	1.2 million hours at 24x7
Max. Sustained Transfer Rate	150MB/s (SAS), 140MB/s (SATA)
Cache	Up to 64MB (2TB)

Employed by industry-leading enterprise OEMs, system builders and integrators who build cost-effective, high-capacity and eco-friendly enterprise-class server and storage solutions, the Constellation ES drive is the one and only drive that offers both the industry-leading 6Gb/s SAS interface—with its proven scalability, performance and enterprise features—and the traditional SATA 3Gb/s interface for seamless enterprise integration. It is the first enterprise drive with low halogen and complete RoHS compliance.

The Constellation ES drive extends the industry's best field-proven reliability into a high-capacity nearline drive based on world-renowned Seagate enterprise experience, including support, design, lifecycle management and eco-system compatibility. This nearline drive offers an MTBF of 1.2 million hours for economical, enterprise-grade reliability. The Constellation ES drive's implementation of 6Gb/s SAS improves scalability, which makes this drive ideally suited for use in high-end, high-capacity network storage solutions. It is the industry's first 3.5-inch nearline drive to implement the new SAS 2.0 feature set and is the world's first 3.5-inch nearline drive to operate at 6Gb/s transfer rates.

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

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