Seagate®

Product Overview

High-Capacity Storage Designed for Seamless Enterprise Integration
Constellation® ES

What you get.

- Fifth-generation, enterprise, nearline drive designed for 24×7 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-saving feature for unprecedented savings during slow or idle periods

- Seagate RAID Rebuild™ development platform significantly reduces hours of lost productivity.

High-Capacity Storage Designed for Seamless Enterprise Integration

Constellation® ES

Seagate®

The Seagate Enterprise Advantage

The Seagate® Constellation® ES drive is the fifth-generation 3.5-inch hard drive for capacity-optimized 7200-RPM enterprise environments. It enables cost-effective, highly efficient enterprise storage solutions with high capacities, 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 drives are a family of high-capacity enterprise-class hard drives capable of storing an unprecedented 76TB per square foot (in its 2TB capacity), maximizing data center floor space at a low $/GB. Be completely assured knowing this nearline drive optimizes your 3.5-inch chassis performance with the lowest power draw (less than 7.3W), 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.

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 first drive that offers both the industry-leading 6Gb/s SAS interface—with its proven scalability, performance and enterprise features—and the traditional SATA interface for seamless enterprise integration. With large capacity drives comes longer RAID rebuild times, but with the new Seagate RAID Rebuild™ development platform, customers can significantly shorten rebuild times and minimize productivity losses while protecting critical data.

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 capacity-optimized drive offers an MTBF of 1.2 million hours for economical, enterprise-grade reliability. The Constellation ES 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 in both SAS and SATA interfaces.

The Constellation ES drive's improved data security comes from enterprise-proven, industry-standard Self-Encrypting Drive (SED) technology based on the AES-256 standard and with FIPS 140-2[1] solutions that protect data where it lives—on the drive. Seagate Instant Secure Erase eliminates the need to overwrite or physically destroy drives, enables secure return of drives for warranty or expired lease purposes, and allows organizations to securely repurpose or sell drives.[2]

1 See FIPS 140-2 Level 2 Certificate at
   http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401val2011.htm#1636
2 Self-Encrypting Drives and FIPS 140-2 SED security options may require TCG-compliant host or controller support. Not available in all countries.

Specifications	
Capacities[1]	2TB, 1TB, 500GB
Interface	6Gb/s SAS, SATA 6Gb/s
Spindle Speed	7200 RPM
Power (SAS)	7.3W typical idle, 10.43W operating, as low as 1.34W with PowerChoice™ option
Power (SATA)	Under 7.0W typical idle, 9.03W operating, as low as 0.53W with PowerChoice option
Mean Time Between Failures	1.2 million hours at 24×7
Max. Sustained Transfer Rate	150MB/s (SAS),140MB/s (SATA)
Cache	64MB
Limited Warranty[2]	5 years

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 Nearline products shipped between December 31, 2011, and June 30, 2012, have a 3-year limited warranty. Nearline products shipped before December 31, 2011, or after June 30, 2012, have a 5-year limited warranty.

www.seagate.com

FIPS VALIDATED 140-2

FIPS 140-2 Inside