

## Product Overview

# Barracuda ES.2

**The highest-capacity drives in nearline, business-critical storage**

**1-TB, 750-GB, 500-GB and 250-GB capacities •  
SATA 3Gb/s, SATA 1.5Gb/s and SAS 3Gb/s**

### Key Features and Benefits

- Specifically designed for Tier 2 nearline applications, with one terabyte of second-generation perpendicular recording available on a single, four-platter drive
- The industry's highest-reliability 7200-RPM drive, designed for 24x7 operation
- Seagate® PowerTrim™ technology dynamically optimizes power consumption by improving GB/watt by 55 percent over prior generation of Barracuda ES drives.
- Best-in-class rotational vibration tolerance provides unrivalled performance in high spindle-density systems.
- Full internal IOEDC/IOECC\* data integrity protection
- Available with SATA or SAS interfaces
- Dual-ported, multi-initiator SAS provides full-duplex compatibility with any SAS mission-critical host in single-system or clustered applications.

### Best-Fit Applications

- Storage-hungry business applications
- Network attached storage (NAS)
- Storage area networks (SAN)
- Maximum capacity servers
- Rich media content storage—audio, video, image
- Reference and compliance data storage
- Enterprise backup and restore—D2D, virtual tape
- Collaboration—email, messaging
- Infrastructure—Web, print, file



\*Input/output error detection code; input/output error correction code

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## Product Description

The Seagate® Barracuda® ES.2 drive uses second-generation Seagate perpendicular recording technology to provide up to one terabyte of storage in a single, 4-platter hard drive. This 7200-RPM drive with best-in-class reliability and rotational vibration tolerance was developed for 24x7 availability in high-density, nearline storage applications. The drive's integrated workload management feature aids in drive cooling during periods of prolonged activity. The integrated PowerTrim™ technology optimizes power consumption during operation and idle without any host interaction or performance loss. The Barracuda ES.2 drive comes with in-drive data integrity protection guaranteed through Seagate IOEDC/IOECC technology and is available with a choice of either SATA or SAS interfaces for convenient system integration.

The SAS interface allows Barracuda ES.2 drives to be freely attached to any SAS host in single- or dual-ported configurations and provides full-duplex support, with two active data channels, to as many as 16 concurrent initiators.

Specifications	
Capacity	
SATA 3Gb/s, 1.5Gb/s	1 TB, 750 GB, 500 GB, 250 GB
SAS 3Gb/s	1 TB, 750 GB, 500 GB
Spindle Speed (RPM)	7200
Cache, Multisegmented (MB)	
SATA 3Gb/s, 1.5Gb/s	32
SAS 3Gb/s	16
Seek Time, Read/Write (average, msec)	8.5/9.5
Mean Time Between Failures (MTBF) (hours)	1.2 million
Reliability Rating at Full 24x7 Operation (AFR)	0.73%
Transfer Rate, Sustained (MB/s)	105
Power Consumption (W, idle)	
SATA 3Gb/s, 1.5Gb/s	8.0
SAS 3Gb/s	10.2
Rotational Vibration @ 1500 Hz max (rad/sec <sup>2</sup> )	12.5
Limited Warranty (years)	5

## The Seagate Advantage

- 1-TB capacity and second-generation perpendicular recording technology provide 33 percent more storage than the previous highest-capacity nearline drive while substantially improving value in \$/GB and GB/W.
- Highest-reliability 7200-RPM drive with best-in-class rotational vibration tolerance to maintain performance in densely packed, multi-drive system designs.
- Proprietary Seagate internal data protection features from a trusted source, backed by a 5-year limited warranty
- Seagate is a trusted leader in enterprise storage.

## Enabling New Opportunities

- Seagate has applied its unparalleled enterprise technology and manufacturing expertise to deliver a 7200-RPM drive that meets the needs of 24x7, multi-drive, nearline applications.
- The Barracuda ES.2 drive now makes SAS available for seamless migration of aging Tier 1 transactional data to Tier 2 nearline storage.
- With breakthrough capacity enabled by perpendicular recording technology, Barracuda ES.2 drives ensure maximum cost-effectiveness for capacity-intensive storage applications.

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

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