

Product Overview

Barracuda® ES.2

The highest capacity drives in nearline, business-critical storage

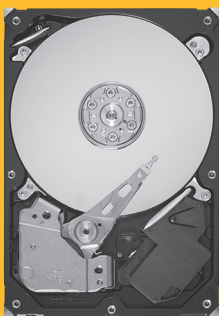
**1-TB, 750-GB, 500-GB and 250-GB capacities •
SATA 3Gb/s, SATA 1.5Gb/s and SAS 3Gb/s**

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 7,200-RPM drive, designed for 24x7 operation
- Seagate® PowerTrim™ technology dynamically optimises power consumption by improving GB/watt by 55 per cent over prior generation of Barracuda ES drives.
- Best-in-class rotational vibration tolerance provides unrivalled performance in high spindle-density systems.
- Available with SATA or SAS interfaces
- Full internal IOEDC/IOECC* data integrity protection on SAS models
- Dual-ported, multi-initiator SAS provides full-duplex compatibility and a 135 per cent average** performance improvement over SATA.

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
** Averaged from random/sequential, read/write activities with write cache off

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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 7,200-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 optimises 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.

The Seagate Advantage

Specifications	
Capacity SATA 3Gb/s, 1.5Gb/s SAS 3Gb/s	1 TB, 750 GB, 500 GB, 250 GB 1 TB, 750 GB, 500 GB
Spindle Speed (RPM)	7,200
Cache, Multi-segmented (MB) SATA 3Gb/s, 1.5Gb/s SAS 3Gb/s	32 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 (SATA), 116 (SAS)
Power Consumption (W, idle) SATA 3Gb/s, 1.5Gb/s SAS 3Gb/s	8.0 10.2
Rotational Vibration @ 1,500 Hz max (rad/sec ²)	12.5
Limited Warranty (years)	5

- 1-TB capacity and second-generation perpendicular recording technology provide 33 per cent more storage than the previous highest-capacity nearline drive, while substantially improving value in £/GB and GB/W.
- Highest-reliability 7,200-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 and backed by a 5-year limited warranty
- Industry's only nearline SAS drive provides 135 per cent average* performance boost over SATA drives and superior data integrity with full IOECC/IOEDC.

Enabling new Opportunities

- Seagate has applied its unparalleled enterprise technology and manufacturing expertise to deliver a 7,200-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 ageing 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.

* Averaged from random/sequential, read/write activities with write cache off

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