Barracuda® ES.2

**High-capacity, business-critical
Tier 2 enterprise drives**

1 TB, 750 GB, 500 GB and 250 GB • 7200 RPM • SATA 3Gb/s, SATA 1.5Gb/s and SAS 3Gb/s

Key Advantages

- 1-TB drive delivers 33 percent more capacity than the Barracuda ES drive.

- The industry's highest-reliability 7200-RPM drive, designed for 24x7 operation

- Best-in-class rotational vibration tolerance ensures unrivalled performance in high spindle-density applications, and multi-drive firmware maximizes system availability.

- Seagate® PowerTrim™ technology dynamically optimizes power consumption by improving GB/watt by 55 percent and by reducing overall drive power consumption by 20 percent over prior-generation Barracuda ES drives.

- Choose SAS for the seamless Tier 2 enterprise experience, with improved data integrity and a 135 percent average performance boost over SATA. SAS also reduces integration complexity and optimizes system performance for rich media, reference data storage and enterprise backup applications.

Best-Fit Applications

- Storage-hungry business applications
- Network attached storage (NAS)
- 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

Seagate
5-Year
Warranty

Barracuda® ES.2

High-capacity, business-critical Tier 2 enterprise drives

Seagate®

Seagate Makes the Best Even Better With a 5-Year Limited Warranty

- 1-TB Seagate Barracuda ES.2 drive provides 33 percent more capacity than its predecessor.

- With a choice of either SATA or SAS interfaces, the Barracuda ES.2 drive utilizes perpendicular recording technology to deliver the industry's highest-capacity 4-platter drive. SAS delivers up to a 38 percent IOPS/watt improvement over SATA.

- The best 7200-RPM reliability for 24x7 business-critical applications from a trusted source, backed by a 5-year limited warranty

- Multi-drive firmware features and best-in-class rotational vibration (RV) tolerance maximizes system availability and performance in multi-drive systems. Seagate proprietary Workload Management technology helps systems keep drives cool.

Seagate Global Customer Support

- Get presales and technical support at support.seagate.com.

- Visit our knowledge base for answers to common support questions.

- Find documentation for current and legacy drives.

- Utilize our online troubleshooting and diagnostic tools.

- Download DiscWizard™ to help migrate data from an older drive.

- Seagate Design Service Centers (DSC) help companies transform innovative ideas into viable products.

www.seagate.com
1-800-SEAGATE (1-800-732-4283)

Specifications	1 TB[1]	750 GB[1]	500 GB[1]	250 GB[1]
Model Number	ST31000340NS ST31000640SS	ST3750330NS ST3750630SS	ST3500320NS ST3500620SS	ST3250310NS
Interface	SATA 3Gb/s, 1.5Gb/s SAS 3Gb/s	SATA 3Gb/s, 1.5Gb/s SAS 3Gb/s	SATA 3Gb/s, 1.5Gb/s SAS 3Gb/s	SATA 3Gb/s, 1.5Gb/s
External Transfer Rate (Gb/s)	3.0	3.0	3.0	3.0
Performance				
Transfer Rate Maximum Internal (Mb/s) Maximum Sustained, SATA (MB/s) Maximum Sustained, SAS (MB/s)	1287 105 116	1287 105 116	1287 105 116	1287 105 116
Cache, Multisegmented (MB) SATA SAS	32 16	32 16	32 16	32 —
Average Latency (msec)	4.16	4.16	4.16	4.16
Spindle Speed (RPM)	7200	7200	7200	7200
Seek Time Average Read/Write (msec) Track-to-Track Read/Write (msec)	8.5/9.5 0.8/1.0	8.5/9.5 0.8/1.0	8.5/9.5 0.8/1.0	8.5/9.5 0.8/1.0
Configuration/Organization				
Bytes per Sector SATA SAS	512 512, 520, 524, 528	512 512, 520, 524, 528	512 512, 520, 524, 528	512 —
Reliability/Data Integrity				
Mean Time Between Failures (MTBF, hours)	1.2 million	1.2 million	1.2 million	1.2 million
Reliability Rating at Full 24x7 Operation (AFR)	0.73%	0.73%	0.73%	0.73%
Nonrecoverable Read Errors per Bits Read	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Error Control/Correction (ECC)	10 bit	10 bit	10 bit	10 bit
Interface Ports SATA SAS	Single Dual	Single Dual	Single Dual	Single —
Limited Warranty (years)	5	5	5	5
Power Management				
Typical (W) SATA SAS	11.6 12.5	11.6 12.5	10.6 12.5	10.6 —
Idle Average (W) SATA SAS	8.0 9.0	8.0 9.0	8.0 9.0	8.0 —
Environmental				
Temperature, Operating (°C)	5 to 55	5 to 55	5 to 55	5 to 55
Temperature, Nonoperating (°C)	−40 to 70	−40 to 70	−40 to 70	−40 to 70
Shock, Operating: 2 ms (Gs)	63	63	63	63
Shock, Nonoperating: 2 ms (Gs)	300	300	300	300
Acoustics Idle (bels—sound power)	2.7	2.7	2.5	2.5
Rotational Vibration @ 1500 Hz max (Rad/sec^2)	12.5	12.5	12.5	12.5
Physical				
Height (in/mm)	1.02/26.11	1.02/26.11	1.02/26.11	1.02/26.11
Width (in/mm)	4/101.6	4/101.6	4/101.6	4/101.6
Depth (in/mm)	5.78/146.99	5.78/146.99	5.78/146.99	5.78/146.99
Weight (lb/kg)	1.493/0.677	1.396/0.633	1.199/0.543	1.141/0.518

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