

Data Sheet

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



Barracuda® ES.2

High-capacity, business-critical Tier 2 enterprise drives



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) | 1287 | 1287 | 1287 | 1287 |
| Maximum Sustained, SATA (MB/s) | 105 | 105 | 105 | 105 |
| Maximum Sustained, SAS (MB/s) | 116 | 116 | 116 | 116 |
| Cache, Multisegmented (MB) | | | | |
| SATA | 32 | 32 | 32 | 32 |
| SAS | 16 | 16 | 16 | — |
| Average Latency (msec) | 4.16 | 4.16 | 4.16 | 4.16 |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 |
| Seek Time | | | | |
| Average Read/Write (msec) | 8.5/9.5 | 8.5/9.5 | 8.5/9.5 | 8.5/9.5 |
| Track-to-Track Read/Write (msec) | 0.8/1.0 | 0.8/1.0 | 0.8/1.0 | 0.8/1.0 |
| Configuration/Organization | | | | |
| Bytes per Sector | | | | |
| SATA | 512 | 512 | 512 | 512 |
| SAS | 512, 520, 524, 528 | 512, 520, 524, 528 | 512, 520, 524, 528 | — |
| 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 | Single | Single | Single | Single |
| SAS | Dual | Dual | Dual | — |
| Limited Warranty (years) | 5 | 5 | 5 | 5 |
| Power Management | | | | |
| Typical (W) | | | | |
| SATA | 11.6 | 11.6 | 10.6 | 10.6 |
| SAS | 12.5 | 12.5 | 12.5 | — |
| Idle Average (W) | | | | |
| SATA | 8.0 | 8.0 | 8.0 | 8.0 |
| SAS | 9.0 | 9.0 | 9.0 | — |
| 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/sec²) | 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.

AMERICAS Seagate Technology LLC 920 Disc Drive, Scotts Valley, California 95066, United States, 831-438-6550
 ASIA/PACIFIC Seagate Technology International Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888
 EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 130-136, rue de Silly, 92773, Boulogne-Billancourt Cedex, France 33 1-4186 10 00

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