

Data Sheet

Barracuda® ES.2

High-capacity, business-critical
Tier 2 enterprise drives

**1 TB, 750 GB, 500 GB and 250 GB • 7,200 RPM •
SATA 3Gb/s, SATA 1.5Gb/s and SAS 3Gb/s**

Key Advantages

- 1-TB drive delivers 33 per cent more capacity than the Barracuda® ES drive.
- The industry's highest-reliability 7,200-RPM drive, designed for 24x7 operation
- Best-in-class rotational vibration tolerance ensures unrivalled performance in high-spindle-density applications, and multi-drive firmware maximises system availability.
- Seagate® PowerTrim™ technology dynamically optimises power consumption by improving GB/watt by 55 per cent and by reducing overall drive power consumption by 20 per cent over prior-generation Barracuda ES drives.
- Choose SAS for the seamless Tier 2 enterprise experience, with improved data integrity and a 135 per cent average performance boost over SATA. SAS also reduces integration complexity and optimises 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 per cent more capacity than its predecessor.
- With a choice of either SATA or SAS interfaces, the Barracuda ES.2 drive uses perpendicular recording technology to deliver the industry's highest-capacity 4-platter drive. SAS delivers up to a 38 per cent IOPS/watt improvement over SATA.
- The best 7,200-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 maximise system availability and performance in multi-drive systems. Seagate proprietary Workload Management technology helps systems keep drives cool.

Seagate Global Customer Support

- Get pre-sales and technical support at support.seagate.com.
- Visit our knowledge base for answers to common support questions.
- Find documentation for current and legacy drives.
- Use our online troubleshooting and diagnostic tools.
- Download DiscWizard™ to help migrate data from an older drive.
- Seagate Design Service Centres (DSC) help companies transform innovative ideas into viable products.

www.seagate.com
00-800-6890-8282

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)	1,287	1,287	1,287	1,287
Maximum Sustained (MB/s)	105	105	105	105
Cache, Multi-segmented (MB)				
SATA	32	32	32	32
SAS	16	16	16	—
Average Latency (msec)	4.16	4.16	4.16	4.16
Spindle Speed (RPM)	7,200	7,200	7,200	7,200
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/Organisation				
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%
Non-recoverable Read Errors per Bits Read	1 sector per 10 ¹⁵	1 sector per 10 ¹⁵	1 sector per 10 ¹⁵	1 sector per 10 ¹⁵
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, Non-operating (°C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock, Operating: 2 ms (Gs)	63	63	63	63
Shock, Non-operating: 2 ms (Gs)	300	300	300	300
Acoustics Idle (bels—sound power)	2.7	2.7	2.5	2.5
Rotational Vibration @ 1,500 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.

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