

Data Sheet

Barracuda® LP

Low power that won't slow you down

2TB, 1.5TB, 1TB and 500GB • SATA 3Gb/s

Key Advantages

- Power consumption has been reduced by up to 44 percent over standard desktop drives to provide power savings over the life of the drive.
- Best-in-class acoustic performance means whisper-quiet operation.
- Cool, low-power drives can reduce more than electricity costs, reducing costs of fans and power supply units.
- Sustainable technology for a green world:
 - 70 percent or more of the materials used to build the drive can be recycled.
 - Complies with the RoHS directive and several non-regulatory restrictions
 - Designed and built to the highest international environmental standards
 - Brought to you by Seagate, a company that has earned recognition for implementation of green practices worldwide

Best-Fit Applications

- Personal Attached Storage—USB/FireWire/eSATA
- Small office and home data storage appliances
- Low-power PCs



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The company that has provided the world with product innovation over 12 generations of desktop drives has turned its focus to the increasing customer needs for low-power drives. Meet the Seagate® Barracuda LP family, the low-power drive with rock-solid performance and whisper-quiet, super-cool operation.

Low Power

- Low-power drives provide immediate cost savings during operation.
- Reduced power consumption and heat generation enable systems to run cooler and can increase their useful life.

Performance

- Low power doesn't mean slow power with the Barracuda LP drive.
- The drives enable a faster, more energy-efficient system.

Capacity

- A range of capacities up to 2TB for greatest flexibility in building drives and systems for ever-expanding, storage-hungry applications

Acoustics

- Whisper-quiet acoustics for a quiet PC environment

Reliability

- Low-power, super-cool drives increase reliability
- Ships with the world's most reliable and proven perpendicular magnetic recording technology
- Thirteenth generation of the most widely used Barracuda desktop line

Sustainable Technology for a Green World

- Meets rigorous green design and manufacturing standards that are built into every Seagate drive
- Low power consumption enables eco-friendly systems.
- Complies with RoHS directive and all major non-regulatory restrictions

Specifications	2TB ¹	1.5TB ¹	1TB ¹	500GB ¹
Model Number	ST32000542AS	ST31500541AS	ST31000520AS	ST3500412AS
Interface Options	SATA	SATA	SATA	SATA
Performance				
Transfer Rate, Max Ext (MB/s)	300	300	300	300
Sustained Data Rate OD (MB/s)	95	95	95	95
Cache (MB)	32	32	32	16
Average Latency (ms)	5.5	5.5	5.5	5.5
Spindle Speed (RPM)	5900	5900	5900	5900
Configuration/Organization				
Bytes per Sector	512	512	512	512
Reliability/Data Integrity				
Contact Start-Stops	50,000	50,000	50,000	50,000
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Annualized Failure Rate (AFR)	0.32%	0.32%	0.32%	0.32%
Power Management				
Startup Current +12V Peak (A±10%)	2.0	2.0	2.0	2.0
Operating, Average (W)	6.8	6.8	5.7	4.0
Idle, Average (W)	5.5	5.5	3.0	3.0
Environmental				
Temperature				
Operating (°C)	0 to 60	0 to 60	0 to 60	0 to 60
Nonoperating (°C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock,				
Operating, 2ms (G)	70	70	70	70
Nonoperating, 1ms (G)	300	300	350	350
Acoustic (bels-sound power)				
Idle	2.5	2.5	1.9	1.9
Seek	2.6	2.6	2.0	2.0
Physical				
Height (in/mm)	1.028/26.1	1.028/26.1	1.028/26.1	0.795/20.20
Width (in/mm)	4.010/101.85	4.010/101.85	4.010/101.85	4.010/101.85
Depth (in/mm)	5.787/146.99	5.787/146.99	5.787/146.99	5.787/146.99
Weight (lb/kg)	1.44/0.66	1.44/0.66	1.4/0.64	0.838/380

¹One 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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