

Data Sheet

Barracuda® 7200.12

The industry's leading combination of capacity, performance and reliability

**1 TB, 750 GB, 500 GB, 320 GB, 250 GB, 160 GB •
7,200 RPM • SATA 3-Gb/s with NCQ**

Key Advantages

- Sustainable technology for a green world:
 - Typically 70 per cent or more of the materials used to build the drive are recycled
 - Complies with the RoHS directive and several non-regulatory restrictions
- Twelfth generation of the world's most popular desktop hard drive
- Ships with the most reliable and proven perpendicular magnetic recording technology
- Delivers high performance:
 - 125-MB/s maximum sustained data rate
 - Up to 3-Gb/s instantaneous burst
 - 32-MB cache on 1-TB and 750-GB drives, 16-MB cache on 500-GB and 320-GB drives, 8-MB cache on 250-GB and 160-GB drives

Best-fit Applications

- Workstations
- Desktop RAID
- Gamer PCs
- High-end PCs
- Mainstream PCs
- USB/FireWire/eSATA personal external storage



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Specifications	1 TB ¹	750 GB ¹	500 GB ¹	320 GB ¹	250 GB ¹	160 GB ¹
Model Number	ST31000528AS	ST3750528AS	ST3500418AS ST3500410AS	ST3320418AS	ST3250318AS	ST3160318AS
Interface Options	SATA 3-Gb/s NCQ	SATA 3-Gb/s NCQ	SATA 3-Gb/s NCQ	SATA 3-Gb/s NCQ	SATA 3-Gb/s NCQ	SATA 3-Gb/s NCQ
Performance						
Transfer Rate, Max Ext (MB/s)	300	300	300	300	300	300
Sustained Data Rate OD (MB/s)	125	125	125	125	125	125
Cache (MB)	32	32	16	16	8	8
Average Latency (ms)	4.17	4.17	4.17	4.17	4.17	4.17
Spindle Speed (RPM)	7,200	7,200	7,200	7,200	7,200	7,200
Configuration/Organisation						
Bytes per Sector	512	512	512	512	512	512
Reliability/Data Integrity						
Contact Start-Stops	50,000	50,000	50,000	50,000	50,000	50,000
Non-recoverable Read Errors per Bits Read	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴	1 per 10 ¹⁴
Annualised Failure Rate	0.34%	0.34%	0.34%	0.34%	0.34%	0.34%
Power Management						
Startup Current +12V Peak (A, ± 10%)	2.0	2.0	2.0	2.0	2.0	2.0
Operating, Average (W)	<9.4	<9.4	<8.0	<8.0	<8.0	<8.0
Idle, Average (W)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Environmental						
Temperature (°C)						
Operating	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)						
Operating: 2 ms	70	70	70	70	70	70
Non-operating: 1 ms	300	300	350	350	350	350
Acoustics (bels – sound power)						
Idle	2.5	2.5	2.6	2.6	2.6	2.6
Seek	2.7	2.7	2.75	2.75	2.75	2.75
Physical						
Height (in/mm)	1.02/26.1	1.02/26.1	0.78/20	0.78/20	0.78/20	0.78/20
Width (in/mm)	4.00/101.6	4.00/101.6	4.00/101.6	4.00/101.6	4.00/101.6	4.00/101.6
Depth (in/mm)	5.787/146.99	5.787/146.99	5.787/146.99	5.787/146.99	5.787/146.99	5.787/146.99
Weight (lb/kg)	1.4/0.64	1.4/0.64	1.2/0.54	1.2/0.54	1.2/0.54	1.2/0.54

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

The Eco-friendly Choice

The Seagate® Barracuda 7200.12 drive delivers power savings without sacrificing performance. Customers can manufacture eco-friendly PC and external storage systems that meet energy-saving requirements.

The drive combines proven technology with expert manufacturing to deliver up to 1 TB of desktop storage. Customers can have the best of both worlds – top hard-drive performance and a high-capacity drive with a very small eco-footprint. At Seagate we minimise the environmental impact of our products and operations with

efficiency measures, such as replacing or renovating less-efficient equipment, resulting in a 20 per cent increase in production efficiency on a per-hard-drive basis. This delivered a saving of 158.93 million kWh in six months, or enough energy to power nearly 15,000 US homes for one year. We have also deployed aggressive waste reduction and recycling programmes in facilities worldwide.

The Barracuda product family complies with the RoHS directive on hazardous materials.

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