

Data Sheet

Barracuda 7200.10

Where performance and reliability unite. Experience the industry's most reliable, comprehensive and highest-capacity hard drive product line.

80 GB to 750 GB • SATA 1.5Gb/s or 3Gb/s and PATA 100

Key Advantages

- The highest available capacity—up to 750 GB—enables new solutions for data-intensive applications.
- “One-stop shopping” with a broad range of capacity, cache and interface options for all your computing needs
- Best-in-class environmental specifications and reliability features
- New perpendicular recording technology enables best-in-class lifetime cost of ownership.
- Adaptive Fly Height offers consistent read/write performance from the beginning to the end of your computing workload.
- Clean Sweep automatically calibrates your drive.
- Directed Offline Scan runs diagnostics when storage access is not needed.
- RoHS Directive-compliant design assures an environmentally conscious product.
- Enhanced G-Force Protection defends against handling damage.
- Seagate® SoftSonic motor enables whisper-quiet operation.
- Backed by the Seagate 5-Year Warranty

Best-Fit Applications

Desktop and High-Performance PCs

- Gamer PCs
- Workstations
- High-end PCs
- Desktop RAID
- Mainstream PCs
- Point-of-sale devices/ATMs

Low-Cost Servers and External Storage

- SATA/xATA servers
- USB/FireWire/eSATA external storage



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Specifications	750 GB ¹	500 GB ¹	400 GB ¹	320 GB ¹	250 GB ¹	200 GB ¹	160 GB ¹	80 GB ¹
Model Number	ST3750640A ST3750640AS	ST3500630A ST3500630AS	ST3400620A ST3400620AS	ST3320620A ST3320620AS	ST3250620A ST3250620AS ST3250820A ST3250820AS	ST3200820A ST3200820AS	ST3160815A ST3160815AS ST3160215A ST3160215AS	ST380815AS ST380215A ST380215AS
Interface Options	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ	Ultra ATA/100 SATA 3Gb/s NCQ SATA 1.5Gb/s NCQ
Performance								
Transfer Rate, Max Ext (MB/s)	100/300	100/300	100/300	100/300	100/300	100/300	100/300	100/300
Cache (MB)	16	16	16	16	16, 8	8	8, 2	8, 2
Average Latency (msec)	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16
Spindle Speed (RPM)	7200	7200	7200	7200	7200	7200	7200	7200
Configuration/Organization								
Heads/Disks ²	8/4	6/3	5/3	4/2	3/2	3/2	2/1	1/1
Bytes per Sector	512	512	512	512	512	512	512	512
Reliability/Data integrity								
Contact Start-Stops	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Nonrecoverable 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	1 per 10 ¹⁴	1 per 10 ¹⁴
Annualized Failure Rate (AFR)	0.34%	0.34%	0.34%	0.34%	0.34%	0.34%	0.34%	0.34%
Limited Warranty (years)	5	5	5	5	5	5	5	5
Power Management								
+12 VDC +/-10% (amps peak)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Power Management (watts)								
Seek Avg	12.6	12.6	12.6	12.6	12.6	12.6	9.0	9.0
Operating Avg	13.0	13.0	13.0	13.0	13.0	13.0	8.5	8.5
Idle Avg	9.3	9.3	9.3	9.3	9.3	9.3	5.3	5.3
Environmental								
Temperature, Operating (°C)	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Temperature, Nonoperating (°C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 75	-40 to 75
Shock, Operating: 2 msec (Gs)	68	68	68	68	68	68	63	63
Shock, Nonoperating: 1 msec (Gs)	300	300	300	350	350	350	350	350
Acoustics, Idle (bels—sound power)	2.8 ³	2.8 ³	2.7 ³	2.5 ³	2.5 ³	2.5 ³	2.8 ⁴	2.8 ⁴
Acoustics, Seek (bels—sound power)	3.7 ³	3.7 ³	3.4 ³	3.0 ³	3.0 ³	3.0 ³	2.9 ⁴	2.9 ⁴
Physical								
Height (in/mm)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	.787/19.99	.787/19.99
Width (in/mm)	4.000/101.6	4.000/101.6	4.000/101.6	4.000/101.6	4.000/101.6	4.000/101.6	4.000/101.6	4.000/101.6
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	5.787/146.99	5.787/146.99
Weight (lb/kg)	1.59/720	1.59/720	1.4/635	1.4/635	1.28/580	1.28/580	.838/380	.805/356

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

²Leading areal density enables fewer heads/disks.

³Measured in Performance Mode

⁴Measured in Quiet Mode

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