

Data Sheet

Barracuda 7200.10

Experience the industry's proven flagship perpendicular 3.5-inch hard drive

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

Key Advantages

- First 3.5-inch drive to utilize capacity- and reliability-boosting perpendicular recording technology
- First drive to reach 750 GB—a full year ahead of competition—enabling new solutions for data-intensive applications.
- Industry's most proven and established desktop hard drive available today—more than 16 million shipped to date*
- “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
- 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-compliant design assures an environmentally conscious product.
- Enhanced G-Force Protection™ defends against handling damage.
- Seagate® SoftSonic™ motor enables whisper-quiet operation.
- Backed by a 5-year limited warranty

Best-Fit Applications

Desktop and High-Performance PCs

- Gamer PCs
- Workstations
- High-end PCs
- Desktop RAID
- Mainstream PCs
- Point-of-sale devices/ATMs
- USB/FireWire/eSATA personal external storage



*16 million Barracuda 7200.10 drives shipped as of 4/18/07

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Experience the industry's proven flagship
perpendicular 3.5-inch hard drive



Specifications	750 GB ¹	500 GB ¹	400 GB ¹	320 GB ¹	250 GB ¹		160 GB ¹	80 GB ¹	
Model Number	ST3750640A ST3750640AS	ST3500630A ST3500630AS	ST3400620A ST3400620AS	ST3320620A ST3320620AS	ST3250620A ST3250620AS ST3250820A ST3250820AS	ST3250410AS ST3250310AS	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	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	16, 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	2/1	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	
Mean Time Between Failures (MTBF, hours)	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	
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	2.0	2.0	2.0	
Power Management (watts)									
Seek Avg	12.6	12.6	12.6	12.6	12.6	9.0	9.0	9.0	
Operating Avg	13.0	13.0	13.0	13.0	13.0	8.5	8.5	8.5	
Idle Avg	9.3	9.3	9.3	9.3	9.3	5.3	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	63	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	2.7 ⁴	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	2.8 ⁴	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	.787/19.99	.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	.805/365	.838/380	.805/365	

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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