

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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