

Data Sheet

## DiamondMax® 23

Maxtor Value with Seagate  
Quality 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

- Support popular entry and mainstream desktop PCs
- Capacities of 160 GB to 1 TB
- 3.0-Gb/s Serial ATA interface enables use of features such as Native Command Queuing
- Sustainable technology for a green world:
  - Typically 70 per cent or more of the materials used to build the drive can be recycled
  - Complies with RoHS directive and several non-regulatory restrictions
- 125-MB/s sustained data rate
- Up to 3-Gb/s instantaneous burst

### Designed for

- Home desktop PCs
- Office and business PCs
- General, non-PC, SATA storage applications



# DiamondMax<sup>®</sup> 23

Maxtor Value with Seagate Quality and Reliability



Specifications	1 TB <sup>1</sup>	750 GB <sup>1</sup>	500 GB <sup>1</sup>	320 GB <sup>1</sup>	250 GB <sup>1</sup>	160 GB <sup>1</sup>
Model Number	STM31000528AS	STM3750528AS	STM3500418AS	STM3320418AS	STM3250318AS	STM3160318AS
Interface	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
<b>Performance</b>						
Transfer Rate, Max Ext (MB/s)	300	300	300	300	300	300
Sustained Data Rate, Max Ext (MB/s)	125	125	125	125	125	125
Cache, Multi-segmented (MB)	32	32	16	16	8	8
Average Latency (ms)	4.17	4.17	4.17	4.17	4.17	4.17
Spin Speed (RPM)	7,200	7,200	7,200	7,200	7,200	7,200
<b>Configuration/Organisation</b>						
Bytes per Sector	512	512	512	512	512	512
<b>Reliability/Data Integrity</b>						
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 <sup>14</sup>	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>
Annualised Failure Rate (AFR):	0.34%	0.34%	0.34%	0.34%	0.34%	0.34%
Limited Warranty (years)	3	3	3	3	3	3
<b>Power Management</b>						
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
<b>Environmental</b>						
Temperature						
Operating (°C)	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Non-operating (°C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock						
Operating, 2 ms (Gs)	70	70	70	70	70	70
Non-operating, 2 ms (Gs)	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
<b>Physical</b>						
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)	5.87/146.99	5.87/146.99	5.87/146.99	5.87/146.99	5.87/146.99	5.87/146.99
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

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

Maxtor DiamondMax 23 hard drives follow the Maxtor tradition of delivering well-engineered, reliable value solutions for applications needing good performance and mainstream storage in capacities from 160 GB to 1 TB. DiamondMax 23 drives are ideal for home and business PCs and general storage applications.

DiamondMax 23 drives conform to the requirements of the European Union Directive on Restriction of Hazardous Substances (RoHS)

[www.seagate.com](http://www.seagate.com)

**Toll free: 00 8004 SEAGATE (732 4283)**  
**(non toll free: 001 405 324 4714)**

AMERICAS Seagate Technology LLC 920 Disc Drive, Scotts Valley, California 95066, United States, +1 831 438 6550  
 ASIA/PACIFIC Seagate Technology International Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, +65 6485 3888  
 EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 130-136, rue de Sully, 92773 Boulogne-Billancourt Cedex, France, +33 1 41 86 10 00

Copyright © 2009 Seagate Technology LLC. All rights reserved. Printed in USA. Seagate, Seagate Technology and the Wave logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. Maxtor, the Maxtor logo and DiamondMax are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to hard drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Seagate reserves the right to change, without notice, product offerings or specifications. DS1669.2-0902GB, February 2009