

Data Sheet

DiamondMax® 23

Maxtor Value With Seagate
Quality and Reliability

**1 TB, 750 GB, 500 GB, 320 GB, 250 GB, 160 GB •
7200 RPM • SATA 3Gb/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 percent 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



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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	STM31000528AS	STM3750528AS	STM3500418AS	STM3320418AS	STM3250318AS	STM3160318AS
Interface	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ
Performance						
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, Multisegmented (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)	7200	7200	7200	7200	7200	7200
Configuration/Organization						
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
Nonrecoverable Read Errors per Bits Read	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Annualized Failure Rate (AFR)	0.34%	0.34%	0.34%	0.34%	0.34%	0.34%
Limited Warranty (years)	3	3	3	3	3	3
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						
Operating (°C)	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Nonoperating (°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
Nonoperating, 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
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)	5.87/146.99	5.87/146.99	5.87/146.99	5.87/146.99	5.87/146.99	5.87/146.99
Weight (lb/g)	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.

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 in Restriction of Hazardous Substances (RoHS).

www.seagate.com

1-800-SEAGATE (1-800-732-4283)

AMERICAS Seagate Technology LLC 920 Disc Drive, Scotts Valley, California 95066, United States, 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 Silly, 92773, Boulogne-Billancourt Cedex, France 33 1-4186 10 00

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