5,400 RPM
1.8-Inch Hard Disk Drives

TOSHIBA
Leading Innovation >>>

Industry-leading capacity and performance coupled with the benefits of low power consumption and ruggedness

MK1633GSG
MK2533GSG
MK3233GSG

The Toshiba MKxx33GSG Series of 1.8-inch hard disk drives (HDDs) feature industry-leading capacity and performance coupled with the benefits of low power consumption and ruggedness in a compact storage solution. Equipped with a high-performance 5,400 RPM rotational speed and 16MB buffer, the Serial ATA, MKxx33GSG family offers up to 320GB[1] of storage capacity and utilizes close to 25% less power than comparable 2.5-inch hard disk drives during seek operations.

Weighing only 62 grams and designed to withstand up to 1,500Gs of non-operating shock, these light weight and durable drives provide an ideal solution for today's demanding mobile applications. The small footprint and large storage capacity of the MKxx33GSG Series are well-suited for a variety of on-the-go computing needs, including laptop PCs, mini-notebooks, printers, and external add-on storage applications.

- 1.8-inch Footprint
- 5,400 RPM Spindle Speed
- Up to 320GB[1] of Capacity
- Disk Transfer Rates up to 830 Mb/sec
- 3 Gb/sec SATA
- 16MB Cache Buffer

Hard Drive

5,400 RPM
1.8-Inch Hard Disk Drives

TOSHIBA
Leading Innovation >>>

	MK1633GSG	MK2533GSG	MK3233GSG
Series Overview			
Drive Capacity	160GB[1]	250GB[1]	320GB[1]
Drive Interface	Serial ATA Revision 3.0		
Number of Platters (disks)	1	2	2
Number of Data Heads	2	4	4
RoHS Compliant	Yes		
Transfer Rate to Host	3 Gb/sec		
Performance			
Track-to-track Seek	3ms		
Average Seek Time	15ms		
Rotational Speed	5,400 RPM		
Average Latency	5.6ms		
Buffer Size	16MB		
Power Requirements			
Voltage	3.3V (+/- 5%)		
Spin up (start) Power	2.5 watts		
Seek Power	1.3 watts		
Read/Write Power	1.3 watts		
Low Power Idle	0.40 watts		
Standby Power	0.18 watts		
Sleep Power	0.13 watts		
Physical Size			
Dimensions (W) x (D) x (H)	54.0 mm (2.13”) x 78.5 mm (3.0”) x 8.0 mm (0.31”)		
Weight	60 g (2.12 oz)	62 g (2.19 oz)	62 g (2.19 oz)
Environmental			
Temp - Operating	5° to 65°C (41° to 149°F)		
Temp - Non-Operating	-40° to 65° C (-40° to 149°F)		
Vibration - Operating	9.6 m/s² (2.0G) 15 to 500 Hz		
Vibration - Non-Operating	49 m/s² (5.0G) 15 to 500 Hz		
Shock - Operating	4,900 m/s² (500G) 2ms		
Shock - Non-Operating	14,700 m/s² (1,500G) 1ms		
Acoustics			
Acoustics (idle)	16 dBA	18 dBA	18 dBA
Acoustics (seek)	17 dBA	19 dBA	19 dBA
Limited Warranty			
Limited Warranty	1 year (from date of purchase)		

Visit us at: **www.toshibastorage.com**

[1]One Gigabyte (1 GB) means 10^9 = 1,000,000,000 bytes using powers of 10. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 2^{30} = 1,073,741,824 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the computer includes one or more pre-installed operating systems, pre-installed software applications, or media content. Actual formatted capacity may vary.

Subject to Change: While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice.

© 2009 Toshiba America Information Systems, Inc. All rights reserved.