

# 7,200 RPM 2.5-Inch SATA Hard Disk Drives

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Leading Innovation >>>

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*High Performance and Lower  
Power Consumption Across Broad  
Line of Capacity Points*

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MK1661GSYN  
MK2561GSYN  
MK3261GSYN  
MK5061GSYN  
MK6461GSYN

Designed for optimal performance and high durability, the Toshiba MKxx61GSYN series of 7,200 RPM hard disk drives deliver 160 to 640GB<sup>1</sup> of storage capacity in the 2.5-inch form factor. The MKxx61GSYN family of Serial ATA drives offers extreme power efficiency and superior operating acoustics over 3.5-inch drives for today's high-end notebook PCs, gaming laptops, and mobile workstations as well as Energy Star<sup>®</sup> all-in-one and slimline desktop PCs.

Toshiba couples greater power efficiency of the MKxx61GSYN drives with other environmentally-conscious solutions including RoHS-compliance and utilization of components that reduce PVC (polyvinyl chloride) and BFRs (brominated flame retardants) as well as meet halogen-free<sup>2</sup> standards.

An optional free-fall sensor responds to drop events and securely locks the recording heads in place off the media before system impact. This provides an additional level of ruggedness and durability to the MKxx61GSYN drives and is particularly suitable for mobile applications.

- Up to 640GB<sup>1</sup> of Storage Capacity
- Optimal Performance at 7,200 RPM
- Serial ATA 3.0 Gb/sec, Revision 2.6 / ATA-8
- 16MB Cache Buffer
- Optional Free-fall Sensor

# Hard Drive

# 7,200 RPM

## 2.5-Inch SATA Hard Disk Drives



### Series Overview

	MK1661GSYN	MK2561GSYN	MK3261GSYN	MK5061GSYN	MK6461GSYN
Drive Capacity	160GB <sup>1</sup>	250GB <sup>1</sup>	320GB <sup>1</sup>	500GB <sup>1</sup>	640GB <sup>1</sup>
Drive Interface	Serial ATA 3.0 Gb/sec, Revision 2.6 (ATA-8)				
Number of Platters (disks)	1	1	1	2	2
Number of Data Heads	1	2	2	4	4
RoHS Compliant	Yes				
Transfer Rate to Host	3 Gb/sec				

### Performance

Track-to-track Seek	1ms
Average Seek Time	12 ms
Rotational Speed	7,200 RPM
Average Latency	4.16ms
Buffer Size	16MB

### Power Requirements

Voltage	5V (+/-5%)
Spin up (start) Power	5.5 watts
Seek Power	2.3 watts
Read/Write Power	2.1 watts
Low Power Idle	0.8 watts
Standby Power	0.16 watts
Sleep Power	0.13 watts

### Physical Size

Dimensions (W) x (D) x (H)	69.85 mm (2.75") x 100 mm (3.94") x 9.5 mm (0.37")				
Weight	98 g (3.46 oz)	98 g (3.46 oz)	98 g (3.46 oz)	115 g (4.06 oz)	115 g (4.06 oz)

### Environmental

Temp - Operating	5° to 55°C (41° to 131°F)
Temp - Non-Operating	-40° to 65°C (-40° to 149°F)
Vibration - Operating	9.8 m/s <sup>2</sup> (1.0G) 5 to 500 Hz
Vibration - Non-Operating	49 m/s <sup>2</sup> (5.0G) 15 to 500 Hz
Shock - Operating	3,185 m/s <sup>2</sup> (325G) 2ms
Shock - Non-Operating	8,820 m/s <sup>2</sup> (900G) 1ms

### Acoustics

Acoustics (idle)	23 dB	23 dB	23 dB	26 dB	26 dB
Acoustics (seek)	23 dB	23 dB	23 dB	26 dB	26 dB

### Limited Warranty

Limited Warranty	3 years (from date of purchase)
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<sup>1</sup>One Gigabyte (1 GB) means 10<sup>9</sup> = 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<sup>30</sup> = 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.

<sup>2</sup>Products are considered "Halogen-free" when each homogeneous material in the product consists of a maximum bromine or chlorine concentration of 900 parts per million for weight percentage. Group VIIA halogens, fluorine, iodine and astatine, are not restricted in the industry-standard, ENV0199 description. Toshiba also restricts concentrations of red phosphorus and antimony trioxide in its Halogen-free HDD products.

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