

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

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*Self-encrypting drive (SED)  
technology, well suited for security-  
sensitive client systems applications*



MK1661GSYG  
MK2561GSYG  
MK3261GSYG  
MK5061GSYG  
MK6461GSYG

Toshiba adds advanced access security, built-in hardware data encryption, and wipe technology features to its 2.5-inch, 7,200 RPM Serial ATA storage products with the MKxx61GSYG series hard disk drives. The self-encrypting drive (SED) provides government-grade AES-256 hardware encryption. Based on Opal Security Subsystem Class (Opal SSC) specification from Trusted Computing Group<sup>2</sup> (TCG), the MKxx61GSYG enables secure host authentication, data encryption and data-theft prevention features on such systems as notebooks, desktop PCs, multi-function printers, point-of-sale systems, thin clients and service kiosks. Toshiba expands on the Opal SSC by adding security features, which may be used to “wipe” protected data from the disk or deny access to data if access credentials are invalid.

The drive’s built-in hardware encryption reduces compatibility concerns associated with software encryption, while delivering transparent performance gains and a lower total cost of ownership.

Deployment is fast and secure because data is encrypted during normal write/read operations. Toshiba’s wipe technology features can significantly shorten re-purposing and data cleansing operations while helping to assure compliance with data security policy. The Toshiba AES-256 encryption algorithm is certified to FIPS 197 by the US National Institute of Standards and Technology (NIST). In addition, the Toshiba MKxx61GSYG SED provides features to enable secure remote administration, using such capabilities as Intel’s Active Management Technology (AMT).

The MKxx61GSYG is compatible with leading third party security management applications, allowing seamless deployment of SEDs alongside pre-existing software encryption. The MKxx61GSYG encrypts at full storage I/O speeds and scales seamlessly in multi-drive applications.

- AES-256<sup>3</sup> Bit Hardware-based Self-Encrypting Drive
- Toshiba Wipe Technology
- Trusted Computing Group Storage Security Subsystem Class: Opal SSC
- Secure Automatic Data Invalidation (ADI)
- Supported by Third Party Security Software Applications
- Up to 640GB<sup>1</sup> of Storage Capacity
- 9.5-millimeter High Profile
- 16MB Cache Buffer

# Hard Drive

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

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## Series Overview

	MK1661GSYG	MK2561GSYG	MK3261GSYG	MK5061GSYG	MK6461GSYG
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	2	2	2	4	4
RoHS Compliant	Yes				
Transfer Rate to Host	3 Gb/sec				

## Security Features

Encryption Algorithm	AES-256 <sup>3</sup>				
Security Modes / (Requirements)	TCG-Opal / (ISV managed) or ATA Security Password / (Secure BIOS)				
Security Capability Reference	TCG Storage Architecture Core Specification, v2.00				
Security Features Reference	TCG Storage Work Group Storage Security Subsystem Class: Opal v1.00				
Additional Technology	Automatic Data Invalidation, Wipe Technology				

## Performance

Track-to-track Seek	2ms				
Average Seek Time	12 ms				
Rotational Speed	7,200 RPM				
Average Latency	5.55ms				
Buffer Size	16MB				

## Power Requirements

Voltage	5V (+/-5%)				
Spin up (start) Power	4.5 watts				
Seek Power	2.2 watts				
Read/Write Power	1.5 watts				
Low Power Idle	0.65 watts				
Standby Power	0.18 watts				
Sleep Power	0.15 watts				

## Physical Size

Dimensions (W) x (D) x (H)	69.85 mm (2.7") x 100.0 mm (3.9") 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 60°C (-40° to 140°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	25 dB	25 dB
Acoustics (seek)	23 dB	23 dB	23 dB	25 dB	25 dB

## Limited Warranty

Limited Warranty	1 year (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>The Trusted Computing Group (TCG) is a not-for-profit organization formed to develop, define and promote open, vendor-neutral, industry standards for trusted computing building blocks and software interfaces across multiple platforms. For more information, visit [www.trustedcomputinggroup.org](http://www.trustedcomputinggroup.org)

Visit us at: [www.toshibastorage.com](http://www.toshibastorage.com)

<sup>3</sup>256-bit Advanced Encryption Standard (AES 256) is the selected encryption algorithm by the U.S. National Institute of Standards and Technology.

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. Product image may represent design model.