



**Media Inquiries:**  
Liz Kelley  
Waggener Edstrom Worldwide  
(512) 527-7027  
[LKelley@waggeneredstrom.com](mailto:LKelley@waggeneredstrom.com)

## **TOSHIBA EXPANDS BUSINESS CRITICAL ENTERPRISE HARD DRIVE OFFERINGS WITH LARGE CAPACITY MG SERIES**

*The new drive series provides enterprises with up to 4TB of cost-effective data storage capacity for servers and shared storage systems with optional encryption features*

**IRVINE, Calif. — Nov. 28, 2012** — Toshiba’s Storage Products Business Unit of Toshiba America Electronic Components Inc., a committed technology leader, announces four new large capacity nearline hard disk drives (HDDs), including the first self-encrypting models in the company’s enterprise capacity-optimized storage lineup. The 3.5-inch 7,200 rpm MG Series includes both SATA models — the MG03ACA400 and the MG03ACA400Y — and SAS models — MG03SCA400 and the MG03SCP400 — and all deliver 4TB<sup>1</sup> of storage, the company’s largest capacity to date.

As businesses work to keep up with the explosion of unstructured data, large capacity HDDs are crucial for IT systems designed to organize and access the growing pools of valuable information. The massive capacity of the MG Series is perfectly suited for RAID storage and arrays, tiered virtual infrastructures for public and private cloud deployments, archives, and disk-based backup and data protection solutions. The robust 24x7 design and massive capacity provide the cost-effectiveness required for business-critical servers and external storage systems, including NAS, SAN and tiered storage deployments for large enterprises, as well as for direct-attached storage in general purpose servers and SMB-oriented systems and applications.

“Organizations of all sizes continue to be challenged by the exponential growth of big data and information they need to protect and maintain,” said Joel Hagberg, vice president of marketing, Toshiba Storage Products Business. “Toshiba’s new 4TB drives provide the high-capacity and enterprise-class reliability required to keep up with rapid data growth.”

Utilizing Toshiba’s latest five-platter mechanical design, the new 4TB models provide a 100

percent increase in capacity over Toshiba’s prior business-critical models while improving the power-profile and operational efficiency in the industry-standard 3.5-inch form factor. The new 4TB models also deliver an 18 percent increase in sustained transfer rates for both the SATA and SAS interface versions. In addition, the MG Series includes power management features designed to reduce power consumption during off-peak activity periods, helping to reduce operating costs and environmental impact.

The optional SATA self-encrypting (SED) models support fast and secure cryptographic-erase using both the latest T13 SANITIZE crypto-scramble protocol and the older T13 ATA Security Erase command protocol. The optional SAS SED models support both the T10 SANITIZE crypto-erase feature and the Trusted Computing Group Enterprise Security Sub-Classification protocols. These proven, industry-standard security technologies support “nearly instantaneous” cryptographic-erase of user data to enable fast and secure device retirement or re-deployment. Using SEDs can eliminate the need for lengthy data overwrite cycles and reduce IT department expenses associated with secure data destruction and device sanitization.

Sample shipments of the MG 4TB series models will start in December, with volume shipments scheduled to begin early next year.

For more information on Toshiba’s industry-leading HDDs and SSDs, visit [www.toshibastorage.com](http://www.toshibastorage.com). To connect with Toshiba Storage, visit the corporate blog at <http://storage.toshiba.com/corporateblog/> and follow [@ToshibaStorage](https://twitter.com/ToshibaStorage) on Twitter.

## Specifications

SATA 6Gbps Models				
Standard	MG03ACA400	MG03ACA300	MG03ACA200	MG03ACA100
Encryption T13 SANITIZE crypto- scramble & T13 ATA security erase	MG03ACA400Y	MG03ACA300Y	MG03ACA200Y	MG03ACA100Y
6Gbps SAS (2.0) Models				
Standard	MG03SCA400	MG03SCA300	MG03SCA200	MG03SCA100
Encryption T10 SANITIZE crypto-erase & TCG-Enterprise SSC	MG03SCP400	MG03SCP300	MG03SCP200	MG03SCP100
Capacity				
Capacity	4TB	3TB	2TB	1TB

<b>Performance</b>	
Buffer size	64MiB FIFO ring buffer
Rotation speed	7,200 rpm
Average latency time	4.17 ms
Average seek time (read)	8.5 ms
Average seek time (write)	9.5 ms
Sustained transfer rate (maximum)	165 MB/s (4TB models); 155 MB/s (1TB, 2TB, 3TB models)
<b>Reliability</b>	
Load/Unload	600,000 times
MTTF	1,200,000 hours
Operating condition	24 hours/day, 7 days/week, 100% duty
<b>Supply Voltage</b>	
Allowable voltage	5V $\pm$ 5%, 12V $\pm$ 5%
<b>Power consumption</b>	
Read/Write	11.3 W*
Low power idle	6.0 W*
<b>Dimension</b>	
Height	26.1 mm
Width	101.6 mm
Depth	147 mm
Weight	720 g (max.)
<b>Temperature</b>	
Operating	5~55°C
Nonoperating	-40~70°C
<b>Vibration/Shock</b>	
Vibration resistance (operating)	7.35 m/s <sup>2</sup> {0.75G, 5~300Hz} 2.45 m/s <sup>2</sup> {0.25G, 300~500Hz}
Vibration resistance (nonoperating)	49 m/s <sup>2</sup> {5G, 5~500Hz}
Shock (operating)	686 m/s <sup>2</sup> {70G, 2ms duration}
Shock (nonoperating)	2,940 m/s <sup>2</sup> {300G, 2ms duration}
<b>Acoustics</b>	
Acoustics	31 dB
<b>Warranty</b>	
Limited Warranty	5 years (from date of purchase)

### About Toshiba Storage Products

Toshiba Corporation and its affiliates offer one-of-a-kind global storage solutions, offering hard disk drives (HDDs), solid state drives (SSDs) and NAND flash memories — technologies that drive a wide range of consumer electronics, computer and automotive applications, as well as enterprise solutions for the global marketplace. Toshiba is a leader in the development, design and manufacture of mobile, consumer and enterprise hard disk drives and solid state drives. In North America, the Storage Products Business Unit of

Toshiba America Electronic Components, Inc. markets high-quality storage peripherals to original equipment manufacturers, original design manufacturers, value-added resellers, value-added dealers, systems integrators and distributors worldwide. Inherent in the Toshiba storage family are the high-quality engineering and manufacturing capabilities that have established Toshiba products as innovation leaders worldwide. For more information, visit [www.toshibastorage.com](http://www.toshibastorage.com)

**About Toshiba Corp. and Toshiba America Electronic Components Inc. (TAEC)**

Through proven commitment, lasting relationships and advanced, reliable electronic components, Toshiba enables its customers to create market-leading designs. Toshiba is the heartbeat within product breakthroughs from OEMs, ODMs, CMs, VARs, distributors and fabless chip companies worldwide. A committed electronic components leader, Toshiba designs and manufactures high-quality flash memory-based storage solutions, solid state drives (SSDs), hard disk drives (HDDs), discrete devices, advanced materials, medical tubes, custom SoCs/ASICs, imaging products, microcontrollers and wireless components that make possible today's leading smartphones, tablets, MP3 players, cameras, medical devices, automotive electronics, enterprise solutions and more.

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1. One Terabyte (1 TB) means  $10^{12} = 1,000,000,000,000$  bytes using powers of 10. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 TB =  $2^{40} = 1,099,511,627,776$  bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, such as Microsoft operating system and/or pre-installed software applications, or media content. Actual formatted capacity may vary.