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# TOSHIBA ANNOUNCES NEXT-GENERATION 10,000 RPM-CLASS ENTERPRISE STORAGE HARD DISK DRIVE SERIES

2.5-Inch HDDs Offer up to 900GB Capacity, 6Gb/s SAS Interface with Improved Performance and Reliability for Mission-Critical Server and Storage Applications

**IRVINE, Calif., July 11, 2012** –Toshiba's Storage Products Business Unit, a division of Toshiba America Electronic Components, Inc., and a committed technology leader, today announced the AL13SE series of 2.5-inch 6Gb/s SAS interface hard disk drives (HDDs), which offer enterpriseclass performance in capacities ranging from 900GB<sup>1</sup> to 300GB.

The AL13SE is the first 10,000 RPM class model enterprise drive from Toshiba to achieve 900GB capacity and is also the first of Toshiba's 10,000 RPM drives to employ a dual-stage head positioning actuator that provides additional performance gains, including a 32% increase in sustained transfer rate.

Designed for even the most demanding mission-critical applications, the AL13SE series features an operating reliability rating of 2,000,000 power-on hours<sup>2</sup>, a 25% increase over prior-generation drives. System compatibility is also assured through usage of the industry-standard 512 byte sector size.

In keeping with Toshiba's leadership in power efficiency design, the AL13SE Series uses Supported Enhanced Power Condition State technology to lower RPM idle speed.

"The AL13SE Series provides enterprise customers with capacities up to 900GB that support a broad range of enterprise applications," said Joel Hagberg, vice president of marketing at Toshiba's Storage Products Business Unit. "The increased performance and reliability of the AL13SE reflect our collaboration with our key partners to deliver small form-factor hard disk drives that address market requirements for mission-critical storage."

### TOSHIBA ANNOUNCES 900GB 10K RPM ENTERPRISE DRIVES

The AL13SE series is also available mounted in a 3.5-inch bracket<sup>3</sup> for use in legacy based 3.5-inch servers and storage enclosures, providing the same 10,000 RPM class spin speed, 6 Gb/sec SAS interface, and reduced power consumption benefits available with small form factor drive technology.

For more information on Toshiba's line of industry-leading enterprise-class small form factor hard drives, visit <u>www.toshibastorage.com</u>.

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# **Product Specifications\***

|                                     |                             | AL13SEB900  | AL13SEB600 | AL13SEB450 | AL13SEB300 |
|-------------------------------------|-----------------------------|---|------------|------------|------------|
| Capacity                            |                             | 900GB   | 600GB      | 450GB      | 300GB      |
| Average seek<br>time                | Read (typ.)                 | 3.7ms   |            |            |            |
|                                     | Write (typ.)                | 4.1ms   |            |            |            |
| Interface                           |                             | SAS 2.0   |            |            |            |
| Interface speed                     |                             | 6 Gb/s  |            |            |            |
| Rotation speed                      |                             | 10,500 RPM  |            |            |            |
| Buffer memory                       |                             | 64 MB   |            |            |            |
| External dimensions (W) x (D) x (H) |                             | 69.85 mm (2.75") x 100.45 mm (3.95") x 15.00 mm (0.59") |            |            |            |
| Weight                              |                             | 240 g. or less  |            |            |            |
| Power                               | Idle (ready)                | 4.7 watts (max)   |            |            |            |
| Consumption                         | Idle (low rotational speed) | 2.7 watts (max)   |            |            |            |
| Acoustic (Ready)                    |                             | 30 dB   |            |            |            |
| Vibration                           | Operating                   | 9.8 m/s <sup>2</sup> (1.0G) 20 to 300 Hz                |            |            |            |
|                                     | Non-operating               | 49 m/s <sup>2</sup> (5.0G) 20 to 300 Hz                 |            |            |            |
| Shock                               | Operating                   | 980 m/s <sup>2</sup> (100G) 1ms                         |            |            |            |
|                                     | Non-operating               | 3,920 m/s <sup>2</sup> (400G) 2ms                       |            |            |            |

\*Specifications for the AL13SE Series 3.5-inch mounted bracket models are available at www.toshibastorage.com.

To connect with Toshiba Storage, follow <u>@ToshibaStorage</u> on Twitter and visit the corporate blog at <u>http://storage.toshiba.com/corporateblog/</u>.

## **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

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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 <u>www.toshibastorage.com</u>

### 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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<sup>1.</sup> One Gigabyte (1GB) 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  $1GB = 2^{30} = 1,073,741,824$  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.

<sup>2.</sup> MTTF is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products, which may not accurately reflect actual operation.

<sup>3.</sup> The AL13SE 3.5-inch bracket mounted models will be available in September 2012.