

## **Toshiba Introduces Super Speed USB 3.0-Compliant USB Flash Memory**



This week at International CES 2012, Toshiba America Electronic Components, Inc. (TAEC), will be demonstrating the latest additions to its lineup of flash memory offerings – the TransMemory-EX series of USB flash memory products. The new drives are compliant with the new USB 3.0 standards – known as Super Speed USB. Initial storage capacities include a 32GB model and a 64GB model.

Utilizing Toshiba's Double Data Rate (DDR) NAND , the new products offer maximum data transfer rates of 220 MB/sec\*(2) for reading and 94 MB/sec for writing\*(2) - or 22 times and 18 times faster transfer rates, respectively, when compared with Toshiba's previous models\*(3). Additionally, Toshiba achieved this level of performance with low power consumption of 300 mA or less - one of the lowest in the industry. Toshiba's new drives are fully backward-compatible with the USB 2.0 standard.

The new products can transfer 25GB of video content in approximately five minutes\*(4), which would take the previous model about 30 minutes. The new devices meet user needs for portability of video content and other large data and for high-speed data transfer between digital products. "Today's consumers have a need for speed, and they want a truly interactive experience," noted Brian Kumagai, senior business development manager, NAND flash memory products for TAEC. "Devices and peripherals are becoming faster and faster, and the USB transfer speed needs to increase in order to keep up. Eventually, all motherboards and laptops will be designed with USB 3.0 ports, allowing for consumers to take advantage of the increased speed and improved performance it offers."

In order to meet the needs of consumers looking for faster transfer rates and higher capacities, Toshiba will continue to promote innovations that widen the horizons of the NAND flash market and support the company's continued leadership in that market - including the introduction of new USB flash drives and memory cards.

## Key Features:

### 1. Compliant with the USB 3.0 Super Speed USB standard

Compliant with the USB 3.0 Super Speed USB standard established in 2008, maximum transfer rates of 220 MB/sec for reading and 94 MB/sec for writing are achieved. Also connectable to computers equipped with USB 2.0 hosts, maximum transfer rates of 34 MB/sec for reading and 30 MB/sec for writing are achieved.

### 2. One of the lowest power consumptions in the industry

Low power consumption is achieved thanks to Toshiba's original technology, such as multi-layering of high-speed NAND flash memory and a dedicated low-power-consumption ASIC controller. As a result, power consumption of notebook PCs is minimized even when using a USB flash memory.

### 3. Windows® ReadyBoost® capability

The new products support Windows ReadyBoost that allows use of external memory storage as a cache for a hard disk drive of a PC. Windows ReadyBoost capability contributes to enhanced PC performance, such as reduced time required for starting up PC software. This function is available for computers incorporating Windows® 7 or Vista.

### 4. Toshiba's original security software

The new products incorporate application software that allows protection of a particular block with a password lock so that data and files stored in that block cannot be accessed without the password.

\* The terms USB 1.1/ Hi Speed USB 2.0 and Super Speed USB 3.0 used herein are the names of specifications upon which these products are based; they do not guarantee the speed of their operation.

\* TransMemory-EX™ and TransMemory™ are trademarks of Toshiba Corporation.

\* Specifications are subject to change.

\* Product density is identified based on the density of memory chip(s) within the Product, not the amount of memory capacity available for data storage by the end user. Consumer-usable capacity will be less due to overhead data areas, formatting, bad blocks, and other constraints, and may also vary based on the host device and application.

## Notes:

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Published on Electronic Component News (<http://www.ecnmag.com>)

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1. USB 3.0 (Super Speed USB) is a new standard established in 2008 by USB Implementers Forum.
2. Maximum data transfer rates for reading and writing achieved in Toshiba's PC testing environment as of January 09, 2011. Actual data transfer rates may vary based on file type, file size, host device, and other factors.
3. Maximum transfer rates of the previous TransMemory model compliant with the USB 2.0 standard are 10 MB/sec for reading and 5 MB/sec for writing. Actual data transfer rates may vary based on file type, file size, host device, and other factors.
4. The data transfer time for full HD video (1920 x 1080, 16:9) was achieved in Toshiba's PC testing environment. Actual data transfer rates may vary based on file type, file size, host device, and other factors.

**Source URL (retrieved on 12/11/2013 - 12:12pm):**

<http://www.ecnmag.com/products/2012/01/toshiba-introduces-super-speed-usb-30-compliant-usb-flash-memory>