

# TOSHIBA LAUNCHES ITS FIRST 3TB HDD WITH 1TB PER PLATTER TECHNOLOGY

Toshiba re-enters 3.5-inch form factor HDD market with new range of drives

**O8 August, 2012, Dusseldorf** – <u>Toshiba Electronics Europe (TEE)</u>, <u>Storage Products Division</u> has today announced its first family of HDDs with a 1TB per platter capacity<sup>1</sup>. The new range will deliver high capacity of up to 3TB with uncompromised performance for PCs and consumer electronic applications such as gaming PCs and external HDDs. A video stream model will also be available for set–top boxes and digital video recorders.

Consumers worldwide are becoming data hoarders, it's estimated that last year alone 3.6 billion song downloads were purchased<sup>2</sup>. Growth in video consumption means that the global market for set top boxes is now 228 million devices annually<sup>3</sup>, a figure that doesn't include the fact there is also an increased trend towards consuming content on other 'connected devices' such as games consoles, computers and tablets.

Original equipment manufacturers (OEMs) need the storage to match this ever increasing demand. The DT01ABA range provides up to 3TB of capacity with a spindle speed of 5,940 or 5,700 RPM. This combined with the 6Gb/s SATA for higher data transfer speed and 32MB cache buffer, means that even terabytes of data can be accessed quickly.

These will be the first Toshiba products to demonstrate new technologies acquired from the successful takeover of Western Digital's 3.5-inch HDD manufacturing equipment and related intellectual properties earlier in the year. The new range of drives uses 4KB Advanced Format, to fully utilise valuable disk real estate and deliver 1TB per platter.

<sup>&</sup>lt;sup>1</sup> \*Definition of Capacity: TOSHIBA defines a megabyte(MB) as 1,000,000bytes, a gigabyte(GB) as 1,000,000,000 bytes, and a terabyte(TB) as 1,000,000,000bytes.

<sup>&</sup>lt;sup>2</sup> http://www.ifpi.org/content/library/DMR2012.pdf

<sup>&</sup>lt;sup>3</sup> http://www.vodprofessional.com/news/3q12/global-set-top-box-shipments-to-reach-228-million-units-in-2012/



Throughout its 25 years in the European storage market, Toshiba has demonstrated on-going commitment to environmental responsibility. As such, the new drives boast low power consumption when idle, with spindle speed dropping to 5940 RPM (maximum). Not only this, but the HDDs will utilise quiet seek operation to decrease noise to only 25 dB.

"OEMs don't want to have to choose between capacity and performance. In the face of this data deluge it's essential that they have high capacity storage devices to meet their requirements. The DT01AxA range offers 3TB of capacity in a high performance drive, that doesn't drain power resources". Said Martin Larsson, vice president, Toshiba Electronics Europe. "We pride ourselves on being able to offer storage devices to meet our customer every requirement. The new DT01AxA range further cements Toshiba's position as the only vendor to develop and supply a complete storage product line up of SSDs and 2.5-inch and 3.5-inch HDDs."

The DT01ABA300 (5,940 RPM), DT01ABA200 (5,700 RPM) and DT01ABA150 (5,700 RPM) boast capacities of 3TB, 2TB and 1.5 TB respectively. DT01ABA300V, DT01ABA200V and DT01ABA150V are the video streaming optimised models. The 7,200 RPM drives will be available as DT01ACA300, DT01ACA200 and DT01ACA150, at 3TB, 2TB and 1.5TB respectively. The video streaming range will include the: DT01ACA300V, DT01ACA200V and DT01ACA150V. Volume production of the DT01AxA family of drives will start in August 2012.

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### 3.5-type for Desktop Computing DT01ACA300/200/150

ITEM	DT01ACA300	DT01ACA200	DT01ACA150	
Basic specification				
Interface	Seria	Serial ATA 3.0 / ATA8		
Interface speed		6Gb/s		
Formatted capacity	3ТВ	2TB	1.5TB	
Environmental compliance	RoHS compatible			
Performance				

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Buffer size	64MiB**			
Rotation speed	7,200rpm			
Single track seek time (read)	0.5 ms			
Single track seek time (write)	0.6 ms			
Power consumption				
Random Read/Write	6.4 W	6.4 W	5.8 W	
Idle	5.2 W	5.2 W	4.4 W	
Dimension				
Height		26.1mm		
Width		101.6mm		
Depth	147mm			
Weight	680g(Max)			
Vibration/Shock				
Vibration (op)	6.57m/s² { 0.67 G } (RMS 5 to 500 Hz)			
Vibration (non-op)	10.2 m/s <sup>2</sup> { 1.04 G } (RMS 2 to 200 Hz)			
Shock (op)	686 m/s² { 70G } (2ms half sine)			
Shock (non-op)	2940 m/s² { 300G } (2ms half sine)	2940 m/s² { 300G } (2ms half sine)	3430 m/s² { 350G } (2ms half sine)	
Acoustics				
Idle (Typ.)	27dB	27dB	25dB	
Seek (Typ.)	28dB	28dB	26dB	

# 3.5-type for Desktop Computing DT01ABA300/200/150

ITEM	DT01ABA300	DT01ABA200	DT01ABA150
Basic specification			
Interface	Serial ATA 3.0 / ATA8		
Interface speed	6Gb/s		
Formatted capacity	3TB 2TB 1.5TB		
Environmental compliance	RoHS compatible		
Performance			
Buffer size	32MiB**		
Rotation speed	5,940 rpm	5,700 rpm	5,700 rpm
Single track seek time (read)	0.5 ms		
Single track seek time (write)	0.6 ms		
Power consumption			
Random Read/Write	5.4 W	4.7 W	4.7 W
Idle	4.2 W	3.3 W	3.3 W
Dimension			
Height	26.1mm		
Width	101.6mm		
Depth	147mm		

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Weight	680g(Max)			
Vibration/Shock				
Vibration (op)		6.57m/s² { 0.67 G } (RMS 5 to 500 Hz)		
Vibration (non-op)		10.2 m/s² { 1.04 G } (RMS 2 to 200 Hz)		
Shock (op)	686 m/s² { 70G } (2ms half sine)			
Shock (non-op)	2940 m/s² { 300G } (2ms half sine)	3430 m/s² {350G } (2ms half sine)	3430 m/s² { 350G } (2ms half sine)	
Acoustics				
idle (Typ.)	24dB	22dB	22dB	
Seek (Typ.)	25dB	24dB	24dB	

# 3.5-type for Set Top Boxes DT01ACA300V/200V/150V

ITEM	DT01ACA300V	DT01ACA200V	DT01ACA150V	
Basic specification				
Interface	Ser	Serial ATA 3.0 / ATA8		
Interface speed		6Gb/s		
Formatted capacity	3TB	2TB	1.5TB	
Environmental compliance	F	RoHS compatible		
Performance				
Buffer size		64MiB**		
Rotation speed		7,200rpm		
Average latency time	4.17 ms			
Single track seek time (read)	0.5 ms			
Single track seek time (write)	0.6 ms			
Random Read/Write	6.4 W	6.4 W	5.8 W	
Idle	5.2 W	5.2 W	4.4 W	
Dimension				
Height		26.1mm		
Width	101.6mm			
Depth	147mm			
Weight	680g(Max)			
Vibration/Shock				
Vibration (op)	6.57m/s² { 0.67 G }			
Vibration (op)	(RMS 5 to 500 Hz)			
V:h	10.2 m/s <sup>2</sup> { 1.04 G }			
Vibration (non-op)	(RMS 2 to 200 Hz)			
St. 1.7. \	686 m/s² { 70G }			
Shock (op)	(2ms half sine)			



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Shock (non-op)	2940 m/s² { 300G } (2ms half sine)	2940 m/s² { 300G } (2ms half sine)	3430 m/s² { 350G } (2ms half sine)
Acoustics			
idle (Typ.)	27dB	27dB	25dB
Seek (Typ.)	28dB	28dB	26dB

## 3.5-type for set-top boxes DT01ABA300V/200V/150V

ITEM	DT01ABA300V	DT01ABA200V	DT01ABA150V	
Basic specification				
Interface	Seria	al ATA 3.0 / ATA8		
Interface speed		6Gb/s		
Formatted capacity	3TB 2TB 1.5TB			
Environmental compliance	Ro	RoHS compatible		
Performance				
Buffer size		32MiB**		
Rotation speed	5,940 rpm	5,700 rpm	5,700 rpm	
Average latency time	5.06 ms	5.27 ms	5.27 ms	
Single track seek time (read)		0.5 ms		
Single track seek time (write)	0.6 ms			
Power consumption				
Random Read/Write	5.4 W	4.7 W	4.7 W	
Idle	4.2 W	3.3 W	3.3 W	
Dimension				
Height	26.1 mm			
Width	101.6mm			
Depth	147mm			
Weight		680g(Max)		
Vibration/Shock				
Vibration (op)	6.57m/s² { 0.67 G } (RMS 5 to 500 Hz)			
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Acoustics				
Idle (Typ.)	24dB	22dB	22dB	

<sup>\*</sup>Definition of Capacity: TOSHIBA defines a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes, and a terabyte (TB) as 1,000,000,000 bytes.

<sup>\*</sup>Energy Consumption Efficiency: Energy consumption efficiency is calculated based on power



consumption divided by formatted capacity, as defined by Japanese law \*\* One Mebibyte (1MiB) is calculated as 1,048,576bytes

#### **About Toshiba Europe Storage Products Division**

Toshiba Europe Storage Products Division (SPD) has remained at the forefront of the storage industry for over 40 years and is the world's only storage supplier that owns design, development, manufacturing, sales and other infrastructure functions spanning the enterprise, mobile and retail environments for both HDD and SSD products. Customers are original equipment manufacturers (OEMs), system integrators and distributors within the EMEA region.

As a leading provider of integrated storage solutions and as the principal inventor of NAND flash storage, Toshiba sets many of today's industry standards for storage technology. Throughout its history, Toshiba SPD has revolutionized the design and development of storage devices and its drives can be found inside the world's leading GPS navigation systems, consumer electronics, computers and enterprise solutions. In addition, Toshiba Storage Products Division offers an extensive range of advanced technology drives such as high durability 24/7, extended temperature and SSDs for the consumer, industrial, enterprise and automotive sector.

For more information visit www.storage.toshiba.eu

### **About Toshiba Electronics Europe**

Toshiba Electronics Europe (TEE) is the European electronic components business of Toshiba Corporation, which is ranked among the world's largest semiconductor vendors. TEE offers one of the industry's broadest IC and discrete product lines including high-end memory, microcontrollers, ASICs, ASSPs and display products for automotive, multimedia, industrial, telecoms and networking applications. The company also has a wide range of power semiconductor solutions as well as HDD and SSD solutions for embedded applications. TEE was formed in 1973 in Neuss, Germany, providing design, manufacturing, marketing and sales and now has headquarters in Düsseldorf, Germany, with subsidiaries in France, Italy, Spain, Sweden and the United Kingdom. TEE employs approximately 300 people in Europe. Company president is Mr. Takashi Nagasawa.

#### **About Toshiba**

Toshiba is a world-leading diversified manufacturer, solutions provider and marketer of advanced electronic and electrical products and systems. Toshiba Group brings innovation and imagination to a wide range of businesses: digital products, including LCD TVs, notebook PCs, retail solutions and MFPs; electronic devices, including semiconductors, storage products and materials; industrial and social infrastructure systems, including power generation systems, smart community solutions, medical systems and escalators & elevators; and home appliances.

Toshiba was founded in 1875, and today operates a global network of more than 550 consolidated companies, with 202,000 employees worldwide and annual sales surpassing 6.1 trillion yen (US\$74 billion). Visit Toshiba's web site at www.toshiba.co.jp/index.htm

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