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TOSHIBA ANNOUNCES 5TB, 7,200 RPM ENTERPRISE HDD

Lower storage latency HDD suited for cloud-based workloads

IRVINE, Calif., May 21, 2014 – The Storage Products Business Unit of Toshiba America Electronic Components, Inc., a committed technology leader, announces the MC Series, Toshiba's first enterprise high-capacity hard disk drive (HDD) designed for bulk storage systems and servers supporting cloud-based applications and scale-out workloads. With a 3.5-inch form factor, the MC Series delivers up to 5TB[1] of storage with 7,200 rotations per minute (RPM) performance, making the MC Series suitable for workloads and storage requirements generated by cloud computing.

The MC Series is available in 2TB, 3TB, 4TB, and 5TB capacities and supports the industry-standard cloud use-case workloads rating of up to 180TB per year – more than three times the industry-standard workload rating of desktop class HDDs. The MC Series supports 1TB per platter areal density, thus saving rack space and reducing the footprint and operational burden of cloud workload servers and storage systems. With up to 5TB storage capacity per host connection, the newest Toshiba HDD series boosts capacity per SATA port and enables fewer disks to handle the same storage capacity, reducing power and cooling costs on a per TB basis when compared to prior generation models with lower capacity per spindle. The new series also boasts 6Gbit/s SATA interface speeds[2] and Advanced Format sector technology, allowing compatibility with legacy applications and operating environments using aligned writes.

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[1] 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 1,000,000,000,000 bytes. 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."

[2] Read and write speed may vary depending on the host device, read and write conditions, and file size.

“Our customers need efficient, high-capacity storage for their cloud-based servers and storage platforms,” said Don Jeanette, senior director of marketing at Toshiba Storage Products Business Unit. “With capacity points up to 5TB and 7,200 RPM performance, the Toshiba MC Series delivers the capabilities that today’s scale-out cloud architecture and use-cases require.”

Toshiba’s MC Series samples are available on a limited basis. For more information on Toshiba’s portfolio of industry-leading solid state drives, hard drives and hybrid storage solutions, visit www.toshibastorage.com. To connect with Toshiba Storage, visit the corporate blog at http://storage.toshiba.com/corporateblog/ and follow @ToshibaStorage on Twitter.

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Specifications

Model	MC04ACA500E	MC04ACA400E	MC04ACA300E	MC04ACA200E
Basic specification				
Interface	SATA-2.6/3.0			
Interface speed	1.5Gbit/s, 3.0Gbit/s, 6.0Gbit/s			
Formatted capacity*	5TB	4TB	3TB	2TB
Bytes per sector (Host)	512 B/sector			
Bytes per sector (Disk)	4,096 B/sector			
Performance				
Buffer size	128 MiB			
Rotation speed*	7,200 RPM			
Average latency time	4.17 ms			
Sustained transfer speed*	170 MiB/s	150 MiB/s		140 MiB/s
Reliability				
Error rate non-recoverable	$1/10^{14}$ bits read			
MTTF	800,000 hours			
24 x 7 operation	Yes			
Rated annual workload	180 TB/year			
Supply Voltage				
Allowable Voltage	+5V ±5% , +12V ±5%			
Power consumption				
Read/Write	11.3 W			
Low power idle	6.0 W (Typ.)			

Dimension	
Height	26.1 mm
Width	101.6 mm
Length	147 mm
Weight	720 g（Max.）
Temperature	
Operating	5 to 55 ℃
Non-operating	-40 to 70℃
Humidity	
Operating	5 to 90% R.H. (No condensation)
Non-operating	5 to 90% R.H. (No condensation)
Atmospheric Pressure	
Altitude (Operating)	-305 to 3,048m
Altitude (Non-operating)	-305 to 12,192m
Vibration/Shock	
Vibration (Operating)	$7.35m/s^2$ {0.75G} (5～300Hz, linear) or less $2.45m/s^2$ {0.25G} (300～500Hz, linear) or less
Vibration (Non-operating)	49 m/s^2 {5G} (5～500Hz) or less
Shock (Operating)	686 m/s^2 {70G} (2ms duration)
Shock (Non-operating)	2,940 m/s^2 {300G} (2ms duration)

*****_Read and write speed may vary depending on the host device, read and write conditions, and file size._

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.

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), solid state hybrid drives (SSHDs), discrete devices, custom SoCs/ASICs, imaging products, microcontrollers, wireless components, mobile peripheral devices, advanced materials and medical tubes that make possible today's leading smartphones, tablets, cameras, medical devices, automotive electronics, industrial applications, enterprise solutions and more.

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