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What should the main focus be for the new iMac?

- ☐ Speed
- ☐ Affordability
- ☐ Good looks
- ☐ Technical innovation
- ☐ Giant screen
- ☐ Multiple models
- ☐ Wireless everything
- ☐ Massive hard disk

Macworld Daily News

Wednesday - August 04, 2004

Toshiba 60GB 1.8-inch drive 'in Q4'

By Martyn Williams

Toshiba will begin mass-producing a 60GB, 1.8-inch hard-disk drive before the end of the year, it said today.

Such drives are commonly used in digital music players and sub-notebook computers. The new drive offers a 50 per cent improvement in storage space over Toshiba's current highest capacity 1.8-inch hard-disk drive yet manages this without being physically larger. The major factor that contributed to this increase was an advancement made in a thin-film technology used for both the head and platter, said Midori Suzuki, a spokeswoman for Toshiba in Tokyo.

This enabled Toshiba to increase the density at which data can be stored on the disk's surface: the areal density of the new disks is 93.5Gbits per square inch versus 61.2Gbits per square inch on the current models, she said. This means each disk platter in the new drives can accommodate 30GB of data compared with 20GB in the current highest capacity drive.

Smaller, bigger, faster

As a result a two-platter drive can hold up to 60GB of data. The jump in density is also having a positive effect at the middle of Toshiba's 1.8-inch drive range. The company's current 30GB model relies on two disk platters and so is 8 millimetres thick but this capacity can now be accomplished with a single platter, allowing the drive thickness to be reduced to 5 millimetres.

Toshiba has also reduced the size of the sliders that keep the drive's read/write head at the correct distance above the disk surface, Suzuki said. The new "femto" sliders are 35 per cent smaller than current "pico" sliders and that means the head assembly can get closer to the outer edge of each platter and access more of the disk surface for data storage.

Another advantage of the new drive is lower power consumption. It has been cut by an average 20 per cent over current drives because of an adaption in the way the disk spindle motor is controlled, Toshiba said.

Mass production is due to begin in the fourth quarter of the year. Toshiba declined to provide prices for the drives but said initially they will likely be sold at a premium in terms of price-per-bit over the current drives.

Apple a customer?

For companies like Toshiba that manufacture drives for consumer electronics products such advances in technology are one of the few ways they can answer customer demands for more storage space. Without them Toshiba would have been forced to add an extra disk platter to get to 60GB and that

It's

Wan

Ord
iPo

The
iPo
for

☐ Two-button mouse (yeah, right...)

☐ Something else (tell us)

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would have made the drive thicker. In turn, this would have made any products based on the drive bulkier and that's going against the trend amongst music player and computer makers for smaller and lighter products.

Last month, for example, Apple Computer announced the fourth generation version of its iPod music player that is 1 millimetre thinner than its previous models. Apple uses the Toshiba drives in its iPods.

Wednesday's official announcement of the new drive is no surprise. Not only are hard-disk drive makers constantly pushing technology to increase the storage capacity but a Toshiba representative at the Computex trade show in Taiwan in June said the company was planning such a drive.

At the time Cindy Lee, deputy manager of Toshiba Digital Media Network Taiwan's hard disk drive division technical department, said Apple had already placed an order for the drives. Apple declined to comment.

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