

Intel, Micron join forces

Flash memory venture to produce chips for iPods

- Matthew Yi, Chronicle Staff Writer

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Intel Corp. and Micron Technology Inc. have formed a joint venture to make flash memory for consumer tech gadgets, and the newly formed company has already signed a \$500 million deal to provide chips for Apple Computer Inc.'s iPods, the firms said Monday.

Each chipmaker will pitch in \$1.2 billion in cash to start IM Flash Technologies LLC. Intel and Micron each will invest an additional \$1.4 billion over the next three years, they said.

The new firm will manufacture what is known as NAND flash memory, chips that are commonly used in digital cameras and portable music players like Apple's iPod Shuffle and iPod Nano.

Flash memory is a form of rewritable computer memory that doesn't require power to maintain data. The technology is commonly used in memory cards for digital cameras, mobile phones or MP3 players. While both Intel and Micron are already large, established chipmakers, they are new entrants to the world of NAND flash memory.

The partnership allows the two firms to more quickly get into a market that already has very strong players, analysts say.

The NAND flash market is dominated by South Korea's Samsung, which commanded 54 percent of the global market share in 2004, followed by Toshiba at 21 percent and Sunnyvale's Sandisk at 14 percent.

The joint venture "enables us to rapidly enter a fast-growing portion of the flash market segment," Paul Otellini, Intel's president and chief executive officer, said in a written statement.

Jim Handy, an analyst at the industry research firm Semico, said the NAND flash market is by far the fastest-growing segment of the overall semiconductor market.

Makers of such chips are on pace to finish 2005 with \$11 billion in revenue, up 55 percent from last year.

Part of that growth has been fueled by Apple's iPods. While iPods have their roots in tiny hard drives, it was in January of this year that the firm introduced iPod Shuffle, Apple's first portable music player to use flash memory.

Then in September, Apple replaced its popular line of iPod Minis with the iPod Nano, a slim, flash memory-based version of the music player with a color screen.

Now, Apple wants to make sure it has ample supply of flash memory through 2010. The firm said it has agreed to prepay a total of \$1.25 billion to Intel, Micron, Hynix, Samsung Electronics and Toshiba for its flash memory chips.

"We want to be able to produce as many of our wildly popular iPods as the market demands," Steve Jobs, Apple's chief executive officer, said in a written statement.

While the move is unusual, it's not unprecedented, especially at Apple.

The firm in 1999 invested \$100 million in Samsung to ensure Apple would get a steady supply of displays for its iBook laptop computers.

Also, Apple has experienced the difficulty of not having enough key components for its popular products, including a shortage of micro hard disk drives for its earlier iPods.

"It's really an interesting development and a very bold move on Apple's part," said Roger Kay, an analyst at Endpoint Technologies Associates.

As for the new joint venture between Intel and Micron, Handy said it gives both parent companies new opportunities to increase revenue.

At Intel, Otellini's mandate has been to expand the company, Handy said.

"And one way to make that happen is to pick a market that grows like gangbusters," he said.

As for memory chipmaker Micron, NAND flash is something that the firm's executives have been trumpeting for a year as a business the company will jump into, Handy said.

On Monday, Intel shares dropped 5 cents, or 0.2 percent, to close at \$25.25, while Micron shares rose 2 cents, or 0.14 percent, to finish at \$14.20. Apple shares rose 40 cents, or 0.62 percent, to close at \$64.96.

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