

The Idaho Statesman

Micron and Intel pledge \$5.2 billion for joint venture

New company will make flash memory for iPods

Article published Nov 22, 2005

By Mike Maharry, The Idaho Statesman

<http://www.idahostatesman.com/apps/pbcs.dll/article?AID=/20051122/NEWS02/511220350/1001/NEWS>

Micron Technology Inc. and Intel Corp. will invest \$5.2 billion in a new joint-venture company to produce memory devices used in digital cameras, cell phones, cam corders and MP3 players.

The deal, announced Monday, will give Micron the cash it needs to ramp up production of NAND flash memory, which industry analysts call the hottest product in electronics.

As part of the deal, Apple Computer Inc. said it will prepay \$250 million each to Intel and Micron to supply flash memory for its iPods. Apple also announced long-term supply agreements with Micron competitors Hynix, Samsung Electronics and Toshiba. Including the deals with Micron and Intel, the Apple agreements are worth \$1.25 billion.

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

Steve Appleton, Micron's chairman, president and CEO, said the new company will help Micron accelerate efforts to diversify its product line by partnering with Intel, a company with deep pockets but limited experience in the NAND flash market.

Appleton said the new company, to be called IM Flash Technologies LLC, will use Micron facilities in Boise, Lehi, Utah, and Manassas, Va., with production expected to begin in early 2006.

Appleton said the joint-venture company will need to hire workers in Lehi, but he said there are no immediate plans to increase employment in Boise.

Appleton also said the joint venture was not directly related to Micron's long-awaited announcement about increasing capacity at its Boise location. "Boise is still very much in the running for that," he said. "We're just not ready to make a decision on that yet."

The increased capacity would come when Micron transitions from using silicon wafers that are 200 mm in diameter to ones that are 300 mm in diameter. The conversion requires millions of dollars in new equipment. The payoff is that 2.5 times more memory chips can be made from each of the larger wafers.

Micron has already installed 300 mm technology in its Manassas plant, and Appleton said Monday that the Lehi plant will also use 300 mm technology to make the joint venture's flash memory products.

The joint-venture agreement calls for each company to invest \$1.2 billion in cash or assets now and at least another \$1.4 billion each over the next three years.

The management team for the new company will be led by Intel's Dave Baglee, who previously served as manager of Intel's Fab 11 in New Mexico, and Micron's Rod Morgan, who most recently served as manager of Micron's fabrication facility in Manassas.

The NAND market is now about one-third the size of the dynamic random access memory (DRAM) market, which has been Micron's main product line, Appleton said. Current industry estimates say the flash memory market is growing in excess of 100 percent a year, while the DRAM is growing at a rate of 40 to 50 percent a year, Appleton said.

The Micron boss attributed the NAND flash growth to the advantages it has over earlier technologies, including greater storage capacities, lower power requirements and better reliability.

Flash products will eventually replace hard drive storage devices in laptop computers and expand the storage capacity and features of other portable devices, Appleton said.

"NAND is solid state," he said. "There are no moving parts, so it's much more reliable than a mechanical hard drive."

Micron will own 51 percent of the new company, while Intel will control 49 percent. The partnership would be good for both companies, according to analysts.

John Lau, who covers Micron for Jefferies & Co., said Micron will be able to take advantage of Intel's existing relationship with Apple, while Intel can use Micron's manufacturing plants.

Nam Hyung Kim, a senior analyst with iSuppli Corp. in El Segundo, Calif., stressed Micron's need for more cash to finance its expansion into the NAND market.

"From Micron's standpoint, they needed more NAND capacity to grow and compete, and to do this, they needed capital to invest. Intel gives them that capital," Kim said. "From Intel's perspective, they've been a leader in other flash products, but not in NAND flash. This joint venture will help them expand into NAND.

"And for customers, the more supply the better," Kim added. "NAND supplies are very tight right now. This will put more NAND products on the shelves. We're already expecting NAND flash prices to go down, and this will help make sure that happens. The major producers — Samsung and Toshiba — expect NAND flash prices to go down 50 percent next year."

Jim Handy, a Silicon Valley-based flash memory analyst for Semico Research, said Micron's previous efforts to expand into the flash memory market were impressive but not enough to make a significant dent in the market.

"Back in October 2004, they announced they were going to get into NAND in a big way," Handy said. "A year later, though, despite Micron's 400 percent increase in sales from the second to the third quarter, its share of the NAND market was just 3.4 percent."

Handy said that until now, Intel has concentrated on processor chips — chips that are the heart of a personal computer and available only from Intel. Micron, on the other hand, builds memory chips that are viewed as commodities, virtually interchangeable with chips made by their competitors.

But the NAND market is the fastest-growing semiconductor market in history, Handy said. "The question has always been, why hasn't Intel done this before?"

"Intel has been hesitant to get into the commodities side of the semiconductor market, but they're looking to expand beyond PCs, which are a segment growing more slowly than the heyday in the 1990s," Handy said.

The news of the joint venture caused a flurry of trading in the two stocks Monday on Wall Street, but Micron and Intel shares were relatively unchanged when the markets closed. Micron ended the day at \$14.20, up 2 cents for the day on heavy trading, while Intel closed down 5 cents at \$25.25.