



### Re-Enters NOR Flash Business

On February 9, 2010, Micron announced that the company had signed a definitive agreement to acquire Numonyx in an all-stock transaction. Micron will issue 140 million shares of the company's common stock, worth approximately \$1.27 billion, to Numonyx shareholders Intel, STMicroelectronics, and Francisco Partners.

#### Micron Re-Enters NOR

The NOR flash market has been a difficult one for nearly all participants. Leaders Numonyx and Spansion have suffered losses for several years, with Spansion recently turning a profit through a strategy largely focused upon markets for low-density parts used by markets outside of cell handsets, the largest consumer of NOR flash. Micron itself participated in NOR starting in the late 1990s, but abandoned this effort in 2006.

By acquiring Numonyx, Micron is buying the current leader in the market, a position Numonyx is believed to have held for the past two quarters. Numonyx should add roughly \$1.5 billion to Micron's revenue stream at today's run rate, increasing the company's share of the semiconductor memory market. Objective Analysis projects for the memory market to explode in 2010, and this is likely to amplify the impact of this acquisition.

#### What Does Micron Get?

Numonyx is first and foremost a manufacturer of high-density NOR flash. NOR flash has been a large market, but not a profitable one. High-density NOR competes against NAND for camera phone designs, and NAND prices have been depressed for the last three years, dragging NOR prices down with them.

The company has strong technology, a good IP portfolio (which may have strings tied back to parents Intel and ST), one production 200mm fab, and a shell built for a 300mm fab in Sicily.

One key difference between Numonyx and both Spansion and Samsung, the other two competitors in the high-density NOR market, is that Numonyx has been ardently pursuing the phase-change memory (PCM) market, which is expected to take off once NOR flash hits its scaling limit. Interestingly, Numonyx' PCM is licensed from Ovonyx, a company founded by former Micron executive Tyler Lowrey. With the acquisition Micron will gain significant experience in this technology, for which Numonyx had first revenue shipments in late 2008.

#### What About Hynix?

It is unclear what this means to the Hynix/Numonyx relationship. Numonyx was using Hynix as a NAND and DRAM foundry under a deal in which Numonyx provided flash technology to Hynix. Numonyx also has a 21% stake in a Hynix wafer fab in Wuxi, China. We will be watching this to see what develops.

## **Executing a Typical Strategy**

Micron has a penchant for acquiring companies at a low point in the market using depressed Micron stock to fund the transaction. Perhaps the most notable example is the company's acquisition of Texas Instruments' DRAM business in 1998. Although Intel, STmicroelectronics, and Francisco Partners today will receive \$1.27 billion worth of Micron stock at today's prices, this stock is quite likely to increase in value by the end of next year, leading to gains for the parent companies, while allowing Micron to perform the purchase at a relative bargain. This projection is based on Objective Analysis' projection that DRAM prices will behave in their typical manner, remaining roughly level through the end of 2011, when the next overcapacity should begin.

All in all Objective Analysis anticipates that this will be a good deal for both buyer and sellers. This is the kind of deal we expected to see more of during the current downturn, a kind of hallmark for Micron.

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