



# OBJECTIVE ANALYSIS

## Semiconductor Market Research

### OBJECTIVE ANALYSIS ALERT!

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#### Micron/Nanya MOU – Qimonda’s Bane or Boon?

On Monday March 3 Micron and Nanya announced the signing of an MOU that had already been anticipated for a couple of weeks. Under their agreement the companies will explore potential technology sharing, and a joint technology program for DRAM development and design to focus on sub-50nm technologies.

Many in the investment community nervously anticipate that this move works against the Inotera joint venture between Nanya and Qimonda. We believe that the opposite is more likely – that Nanya’s agreement with Micron may prove to bolster the Qimonda JV.

One week earlier Qimonda took the unusual step of announcing their DRAM road map for the next three process generations. The company showed off a new DRAM cell architecture that allows the company to achieve the ultimate goal for any memory technology – a 4f<sup>2</sup> cell. This new approach marries Qimonda’s unique trench know-how with the stacked capacitors used by most other DRAM makers. The trenches will be used to construct bit lines rather than capacitors, allowing the circuitry to run under the DRAM cell, cutting chip area by about 30% compared to the industry-standard 8f<sup>2</sup> cell or 15% compared to the 6f<sup>2</sup> DRAMs made by Micron and Samsung.

Nanya understands how to make trench technology, but we suspect that their stacked-capacitor expertise is lacking – thus it makes perfect sense for the company to team up with a stacked-capacitor expert. If the company can marry Micron’s stacked capacitor technology with Qimonda’s trench capability they may be able to ramp the 4f<sup>2</sup> technology more rapidly, cutting costs and gaining a competitive edge.

It is less clear why Micron would be interested in such a deal. We also cannot tell what this means to Qimonda, who may have to fend for themselves to develop stacked-capacitor expertise. During Qimonda’s conference call company officers explained that Qimonda understands stacked capacitors, having manufactured them in their SOC products for the last 15 years.

As far as the MOU indicating the end of the Qimonda/Nanya Inotera JV, we do not embrace this viewpoint, and anticipate further cooperation in the future.

**Jim Handy**  
+1 (408) 356-2549  
**Objective Analysis**  
PO Box 440  
Los Gatos, CA 95031-0440  
USA  
[www.Objective-Analysis.com](http://www.Objective-Analysis.com)