

***Inside Micron: major goals, and last quarter's progress.***

***Apr. 6, 2021***

Micron posted strong results last quarter, with revenue increasing 30% from a year ago. That's impressive enough—but earnings per-share grew a spectacular 117%. When the cycle turns up for good manufacturing companies, that kind of explosive growth is always the result.

On the DRAM side, revenue was 44% higher. The market fell into a severe shortage of chips as demand strengthened in almost every single end market. On the NAND side, revenue increased only 9% as Micron shipped more product but saw prices fall due to oversupply in the market. While all end markets were strong, mobile and automotive led the pack, as Micron hit record revenues in those segments (the second quarter in a row for record auto revenue).

Micron sees no slowdown in DRAM demand in 2021. If anything, it may not be able to produce enough product to meet all the demand. For NAND, it does see some price stabilization, although warns that companies should be prudent in their production of NAND to allow for price recovery. There are too many NAND chips out there right now, and Micron is slowing down spending and production for the rest of the year. If other companies do the same, the market will improve.

Micron maintained its industry leading technology position for both DRAM and NAND with the introduction of the newest generation of DRAM, called 1-alpha, this quarter. Its latest NAND technology that it introduced last quarter, the 176-layer, is performing well. The next 3 biggest NAND competitors will start 176-layer production between 2 and 4 quarters after Micron.

One of the most impressive things Micron's CEO, Sanjay Mehrotra, has done has been the company's sprint into technology leadership in the memory industry. It will bring great and continuing benefits to Micron for many years to come.

# 1 $\alpha$ nm: Industry's Most Advanced DRAM

Volume production in 1H-CY21



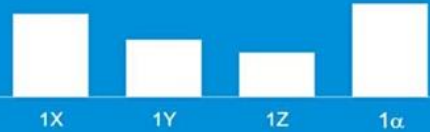
1 $\alpha$ nm DRAM: 8Gb DDR4

- ✓ Lowest power mobile DRAM with 15% improvement vs. prior gen
- ✓ Roadmap for highest speed DRAM available across comprehensive portfolio

## Achieved with Leading Design Efficiency and Process Technology

- ✓ Industry's most advanced lithography
- ✓ 40% improvement in density vs. 1Z with ~10% driven by design efficiency

DDR4 % Gb/Wafer Increase from Prior Node



Micron

Source: Micron

The biggest news of the quarter came when CEO Mehrotra announced Micron's exit from 3D XPoint production. This was a new technology that was a sort of hybrid DRAM/NAND memory product that Micron had been developing with Intel for the past 5 years. It is going to sell its 3D XPoint factory and use the resources and proceeds to invest in the upcoming Compute Express Link (CXL) technology, which helps accelerate data center memory and was started just a couple of years ago. As data center workloads have evolved to include more artificial intelligence, CXL has become more useful and promising than the XPoint technology. Cutting off a business segment 5 years deep—and before it's even produced meaningful products—is one of those tough decisions CEOs face. The problem isn't that it's bad technology or couldn't eventually become profitable; the problem is that Micron believes jumping on the CXL bandwagon will be more profitable. It takes strength to make a move like that, and we believe it will pay off for Micron.

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