



## Micron Accelerates Breakthrough Platform Innovation With Advancements Across Industry's First 176-Layer NAND and 1-Alpha DRAM

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### Volume ramp of memory and storage portfolio additions power innovation across data center, intelligent vehicles and consumer devices

TAIPEI, Taiwan, June 01, 2021 (GLOBE NEWSWIRE) -- **Computex** -- Micron Technology, Inc. (Nasdaq: MU), today unveiled memory and storage innovations across its portfolio based on its industry-leading 176-layer NAND and 1 $\alpha$  (1-alpha) DRAM technology, as well as the industry's first Universal Flash Storage (UFS) 3.1 solution for automotive applications. The new portfolio additions deliver on the company's vision of accelerating data-driven insights through innovations in memory and storage that enable new capabilities from the data center to the intelligent edge. Micron President and CEO Sanjay Mehrotra made the announcements during a Computex keynote, in which he shared a sweeping vision for computing innovation and the central role memory and storage play in enabling enterprises to seize the full potential of the data economy.

Micron announced volume delivery of its first PCIe® Gen4 solid-state drives (SSDs) built with [the world's first 176-layer NAND](#). The company is also shipping the world's first 1 $\alpha$  node-based LPDDR4x DRAM this month. LPDDR4x is the latest JEDEC specification for fourth-generation low-power DRAM with improved input/output voltage for substantially lower power, making it ideal for mobile computing devices. Together, these latest releases reinforce Micron's leadership position in both DRAM and NAND technology, established this year.

"As artificial intelligence and 5G reach mainstream deployment, they are creating dramatic new potential for data in the post-pandemic world," Mehrotra said. "This transformation presents an opportunity for accelerating innovation to address customer needs. Today we are debuting new memory and storage solutions that accelerate innovation, from powerful data center servers and faster client devices to intelligent vehicles at the edge."

### Micron PCIe Gen4 SSD portfolio is designed to tackle demanding client applications

The company's latest SSDs, the Micron 3400 and 2450, deliver high performance and design flexibility with low power consumption to enable all-day use from professional workstations to ultrathin notebooks. The Micron 3400 SSD provides twice the read throughput and up to 85% higher write throughput,<sup>1</sup> unleashing demanding applications like real-time 3D rendering, computer-aided design, gaming and animation. For customers seeking the best value with PCIe Gen4 performance, the Micron 2450 SSD delivers a highly responsive user experience for everyday use. The 2450 SSD is available in three form factors, as small as the 22 x 30mm M.2, to deliver immense design flexibility.

"AMD was first to adopt PCIe 4.0 desktop processor and chipset support. As the ecosystem of AMD-supported platforms continues to grow, we are delighted to see partners like Micron expand their Gen4 SSD portfolio," said Chris Kilburn, corporate vice president and general manager of the Client Component Business Unit at AMD. "In partnership with leading memory and storage companies like Micron, we are committed to delivering new levels of performance and efficiency to the PC market."

Due to their advanced power efficiency, the Micron 3400 and 2450 are listed on the Intel® Modern Standby Partner Portal Platform Component List and meet the open labs' SSD test requirements of Intel Project Athena®. Additionally, both Micron SSDs have been validated for AMD's PCIe Power Speed Policy and Microsoft Windows Modern Standby.

### Micron ships world's first 1 $\alpha$ -based LPDDR4x and DDR4, now in volume production

Micron is shipping LPDDR4x in volume on its leading 1 $\alpha$  node this month, quickly following [the introduction of initial 1 \$\alpha\$  node DRAM products](#) in January 2021. The company has also completed validation of its 1 $\alpha$ -based DDR4 on leading data center platforms, including 3rd Generation AMD EPYC. Both are in volume production in Micron's advanced DRAM fabrication facilities in Taiwan, including its newly established A3 facility in Taichung.

The swift market delivery of Micron 1 $\alpha$ -based memory provides advanced technology to power innovation from data-centric workloads on server platforms to consumers' slim notebooks. 1 $\alpha$  enables power-efficiency improvements for memory, bringing mobility advantages for notebooks by enabling longer battery life both for the work- and study-from-home environments. Amid rising remote work and schooling trends, Micron has partnered closely with leading system providers around the globe to meet the soaring demand for PCs. These efforts include deep collaboration with leading Taiwan OEM Acer on integrating 1 $\alpha$ -based LPDDR4x and DDR4 into Acer systems.

"At Acer, our mission has always been to break the barriers between people and technology," said Jason Chen, chairman and CEO of Acer. "We are working closely with Micron to introduce their most advanced 1 $\alpha$  DRAM process node in Acer's systems and provide high-performance, power-efficient personal computers for more people to stay connected across the world."

The 1 $\alpha$  node process also provides a 40% improvement in memory density and up to 20% improvement in power savings for mobile use cases when compared to previous 1z node LPDDR4x. This power savings is ideal for mobile phones that must preserve battery life, particularly with memory-intensive use cases like capturing photos and video.

### Micron delivers ruggedized storage engineered for data-intensive automotive systems

Bringing innovation to the intelligent edge, Micron announced that it is sampling 128GB and 256GB densities of its 96-layer NAND as part of its new portfolio of UFS 3.1 managed NAND products for automotive applications. With infotainment systems evolving to include high-resolution displays and human-machine interface capabilities based on artificial intelligence (AI), Micron's UFS 3.1 portfolio provides much-needed high-throughput and low-latency storage.

Micron UFS 3.1 offers two times faster read performance than UFS 2.1, enabling fast boot times and minimizing latency for data-intensive in-vehicle

infotainment and advanced driver-assistance systems (ADAS). UFS 3.1 also provides 50% faster sustained write performance to keep pace with real-time local storage needs of growing sensor and camera data for Level 3+ ADAS systems and black box applications.<sup>2</sup>

Market research and strategy consulting firm Yole Développement (Yole) projects the market for NAND in automotive to grow to \$3.6 billion in 2025, nearly quadrupling from \$0.9 billion in 2020.<sup>3</sup> As vehicles become more software-centric, these new centers of data require high-performance storage to make large volumes of information readily available for near-instant processing. ADAS-enabled vehicles now contain over 100 million lines of code that must be stored and quickly read for snappier user experiences and quick decision-making at the edge.

“The new engine of the modern car utilizes centralized, high-performance compute to drive data-rich AI, computer vision and multi-sensor processing capabilities, resulting in a need for advanced storage and memory solutions,” said Vasanth Waran, senior director of product management at Qualcomm Technologies, Inc. “Micron’s UFS 3.1 portfolio is uniquely engineered and designed to meet the rigorous reliability and performance requirements of automotive environments, which equips OEMs to raise the bar for personalized, adaptive and context-aware digital cockpits. We look forward to working with Micron Technology to optimize its leading storage and memory solutions for use across our automotive platforms.”

#### **Micron speeds broad market adoption of DDR5 with Technology Enablement Program**

Micron has also made significant momentum with its Technology Enablement Program (TEP) for DDR5, [launched in 2020](#) to speed market adoption of the latest DRAM and prepare the ecosystem for the broad introduction of DDR5-enabled platforms, expected over the next year. The program has now engaged more than 250 design and technical leaders from more than 100 industry leaders, including system and silicon enablers, channel partners, cloud service providers and OEMs.

#### **Resources**

- Blog: [Micron Advances Client SSDs With 176-Layer NAND PCIe Gen4 Portfolio](#)
- Blog: [Automotive-Grade UFS 3.1 Brings the Latest Smartphone Performance to Your Car](#)
- Blog: [Micron’s DDR5 Technology Enablement Program Empowers an Ecosystem](#)

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<sup>1</sup> Compared to Micron’s prior-generation SSD, the Micron 2300

<sup>2</sup> Compared to its predecessor UFS 2.1

<sup>3</sup> Source: [NAND Market Monitor Q1 2021](#) – Yole Développement

#### **About Micron Technology, Inc.**

We are an industry leader in innovative memory and storage solutions transforming how the world uses information to enrich life *for all*. With a relentless focus on our customers, technology leadership, and manufacturing and operational excellence, Micron delivers a rich portfolio of high-performance DRAM, NAND and NOR memory and storage products through our Micron® and Crucial® brands. Every day, the innovations that our people create fuel the data economy, enabling advances in artificial intelligence and 5G applications that unleash opportunities — from the data center to the intelligent edge and across the client and mobile user experience. To learn more about Micron Technology, Inc. (Nasdaq: MU), visit [micron.com](http://micron.com).

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