Micron Samples Next-Gen Graphics Memory for Gaming and AI

Micron GDDR7 delivers the unparalleled graphics experience with over 1.5 TB/s of system bandwidth

TAIPEI, Taiwan, June 5, 2024 — Computex — Micron Technology, Inc. (Nasdaq: MU), today announced the sampling of its next-generation GDDR7 graphics memory with the industry's highest bit density.[1] Leveraging Micron's 1β (1-beta) DRAM technology and innovative architecture, Micron GDDR7 delivers 32 Gb/s high-performance memory in a power-optimized design. With over 1.5 TB/s of system bandwidth,[2] which is up to 60% higher bandwidth than GDDR6,[3] and four independent channels to optimize workloads, Micron GDDR7 memory enables faster response times, smoother gameplay and reduced processing times. GDDR7 also provides a greater than 50% power-efficiency improvement compared to GDDR6[4] to better thermals and lengthen battery life, while the new sleep mode reduces standby power by up to 70%.[5] Advanced reliability, availability and serviceability (RAS) features on Micron GDDR7 enhance device dependability and data integrity without compromising performance — broadening the spectrum of applications for Micron GDDR7 to AI, gaming and high-performance computing workloads.

Micron GDDR7 memory offers high performance that increases throughput by up to 33% and reduces response time by up to 20% for generative AI workloads[6] such as text to image creation. Moreover, Micron expects that graphics cards built with GDDR7 will provide a greater than 30% improvement in frames per second (FPS) for ray tracing and rasterization over current

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1 Bit density extrapolated based on Gb per wafer across GDDR7 vendors.

2 1.5 TB/s bandwidth is based on a 384-bit memory bus width.

3 Component pin speed between GDDR7 and GDDR6 specification.

4 Burst read power-efficiency comparison between GDDR7 and GDDR6.

5 Standby power comparison between GDDR7 and GDDR6.

6 GDDR7 inference-workload expected improvements from higher bandwidth.

GDDR6 and GDDR6X trends across 1080p, 1440 and 4K resolutions.[7] The addition of GDDR7 completes Micron's industry-leading product portfolio for edge AI inference applications on CPU, NPU and GPU components with DDR, LPDDR and GDDR memory options. For gaming applications, Micron GDDR7 memory enables AI-enhanced gameplay with adaptable landscapes, players and storylines through performance and frame buffer scaling.

"Micron is once again at the forefront of memory innovation, developing the highest bandwidth solutions available, built with advanced process and interface technology to enable continued graphics performance leadership," said Praveen Vaidyanathan, vice president and general manager of the Compute Products Group at Micron. "The best-in-class capabilities of Micron GDDR7 memory help bring new levels of realism and performance to the most demanding applications."

With over five years of successful high-volume manufacturing of GDDR6X, Micron has consistently delivered world-class performance and quality. These same attributes — along with mature technology, design and test experience — will help accelerate the adoption of GDDR7 and provide full spectrum support for the product's manufacturing ramp. Micron introduced PAM4 signaling on GDDR6X, delivering leadership performance of more than a 20% improvement over GDDR6.[8] Success with PAM4 forms the basis for Micron's continued GDDR7 portfolio leadership with PAM3. Engineering advancements, such as measuring the industry's first 40 Gb/s PAM3 performance, pave the path to higher performance on future GDDR7 products.

Ecosystem partners on the Micron GDDR7 memory solution

"At AMD we are committed to creating the most immersive gaming experiences. Our work with Micron on GDDR7 advances our shared goal," said Joe Macri, senior vice president and corporate fellow at AMD. "We are excited about Micron's launch of GDDR7, and we look forward to leveraging this technology to make gaming even more responsive and lifelike."

"Cadence has a strong history of collaboration with Micron to develop industry-leading memory IP subsystem solutions for GDDR, HBM, DDR and LPDDR," said Boyd Phelps, senior vice president and general manager of the Silicon Solutions Group at Cadence. "We are using

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7 GDDR7 expected FPS for rasterization and ray tracing benchmarks.

8 Performance based on GDDR6 and GDDR6X component specs.

samples of Micron's leading 1β DRAM technology-based GDDR7 to test and validate GDDR7 PHY IP operating at speeds up to 36 Gb/s."

Micron GDDR7 memory will be available directly from Micron and through select global channel distributors and resellers in the second half of calendar year 2024. For more information, visit the [Micron GDDR7 page](#).

Additional resources:

- [Micron Graphics Memory](#)
- [Blog post](#)
- [Micron image gallery](#)
- [Micron product brief](#)

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](#).

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