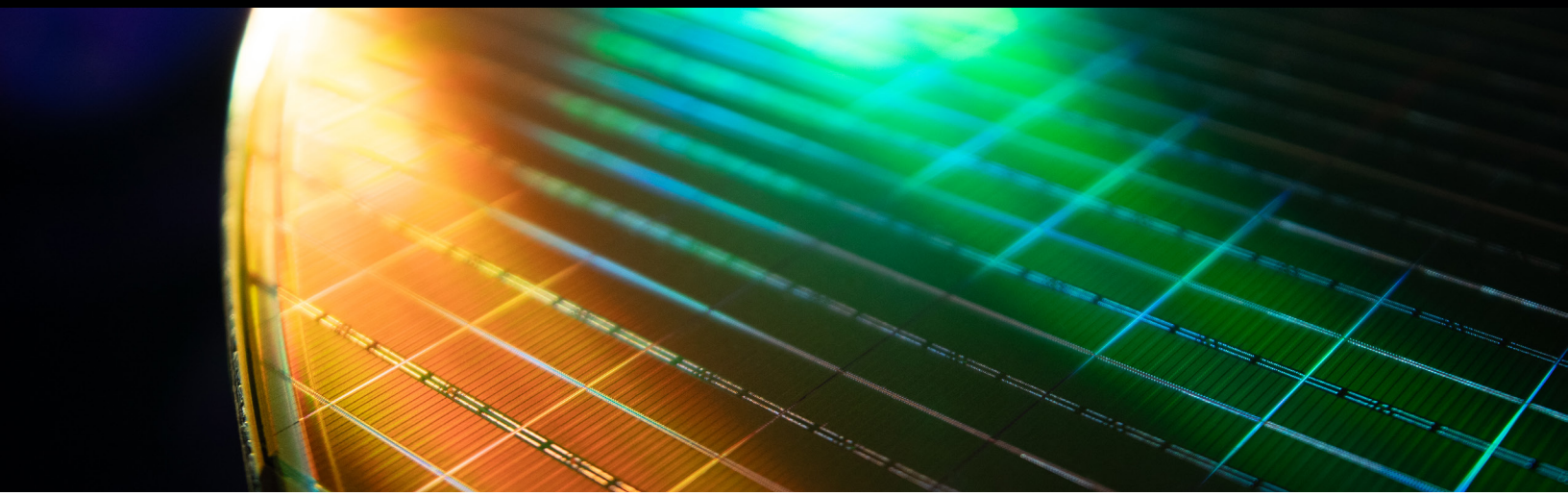


Micron is the first to ship the world's most advanced 6th generation DRAM built with 1γ (1-gamma) process node

Micron has achieved mass production readiness and begun shipment of 1γ (1-gamma) DRAM. Built with the world's most advanced technology node, this DRAM delivers significant gains across performance, bit density and power efficiency.

Micron 1γ technology node is a new manufacturing process that uses extreme ultraviolet (EUV) lithography — with extremely short wavelengths of 13.5nm — to print much finer features on a silicon wafer. By printing smaller features, we can further decrease the size of the transistors, reducing the size of DRAM chips. As a result, Micron 1γ 16Gb DDR5 product shows a better than **30%** increase in bits per wafer over our 1β (1-beta) 16Gb DDR5 product.

The 1γ node also leverages Micron next-gen high-K metal gate (HKMG) CMOS technology to improve both transistor performance and circuit area scaling.

By pairing this new CMOS technology with a carefully optimized design — which includes improvements to the circuit schematics and layout — Micron 1γ 16Gb DDR5 can simultaneously achieve speeds up to **9200 MT/s** and reduce power by more than **20%** over the prior node.

By introducing EUV into the manufacturing process and adopting next-gen HKMG CMOS, the 1γ node not only improves DRAM in terms of performance, power and bit density, but it also optimizes DRAM production to improve fab capacity and more efficiently supply the growing demand for memory.

These capabilities position Micron to drive next-gen memory innovation for AI across the data center, mobile, automotive and client segments.

9200 MT/s

Micron 1γ 16Gb DDR5 achieves speeds up to 9200 MT/s, a 15% increase over 1β 16Gb DDR5.

>30%

The use of EUV enables fabs to print smaller features onto the silicon, decreasing transistor size and increasing bits per wafer by more than 30% over 1β 16Gb DDR5.[1]

>20%

Micron 1γ 16Gb DDR5 has more than 20% lower power compared to the previous node.[2]

[1] Calculated based on overall bits per wafer comparing 1β and 1γ process.
[2] Calculated based on power used in Watts by 1γ based DDR5 compared to 1β DDR5.

1z
First node to support production of 16Gb DDR4 products.

Speeds up to **5600** MT/s

1α (1-alpha)
Introduced in early 2021, the 1α node combined computational lithography and multiple patterning to circumvent inherent lithographic limitations.

Speeds up to **6400** MT/s

1β (1-beta)
Announced in November 2022, 1β was designed to support highly responsive applications, real-time services, and advanced smartphone experiences.

Speeds up to **8500** MT/s

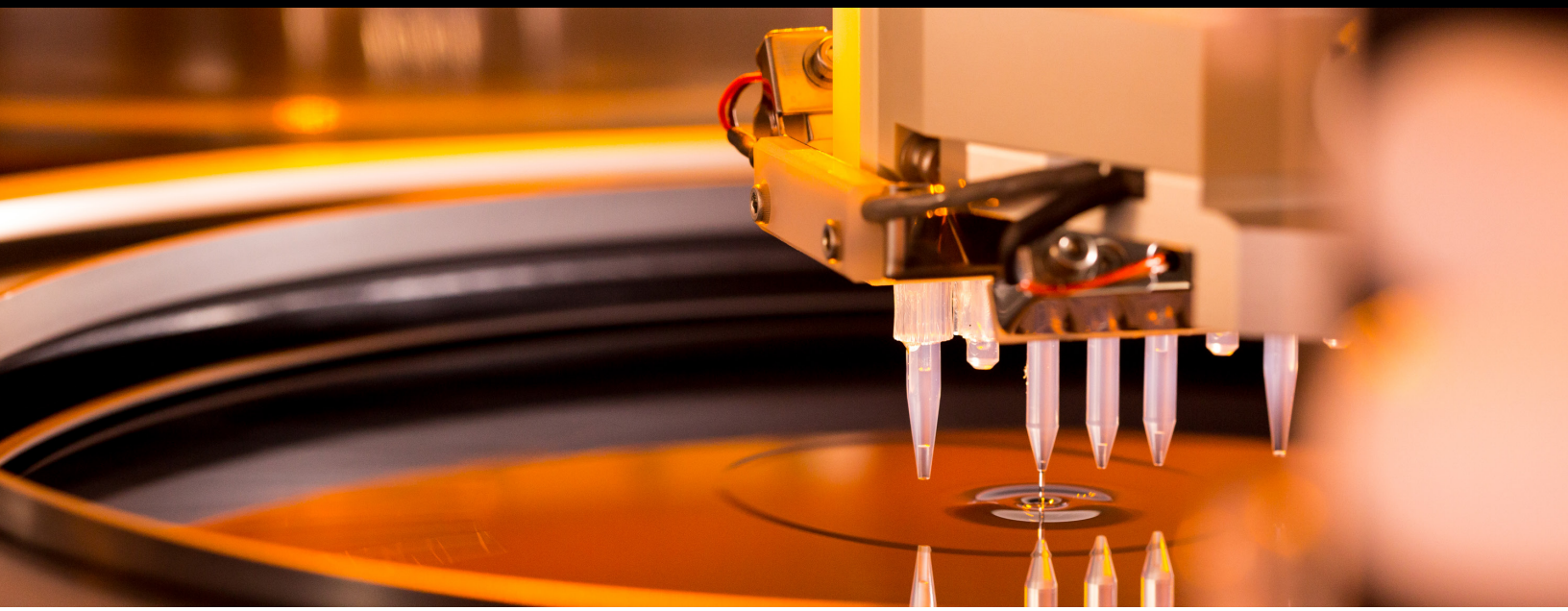
1γ (1-gamma)
1γ uses EUV technology for further miniaturization and efficiency improvements to support emerging technologies and applications.

Speeds up to **9200** MT/s

Gen-to-gen leadership

Micron has consistently advanced DRAM technology across various nodes, demonstrating remarkable improvements with each generation. The 1z node set a new standard by markedly reducing power consumption by 40%, setting the stage for more efficient memory solutions. The subsequent 1-alpha node introduced a 28% improvement in bit density, combining computational lithography and multiple patterning to circumvent inherent lithographic limitations. The 1-beta node continued this trajectory of improvement by offering another leap in performance. It featured LPDDR5X mobile memory with top speeds of 8.5 Gbps, achieving further improvements in power efficiency and bit density.

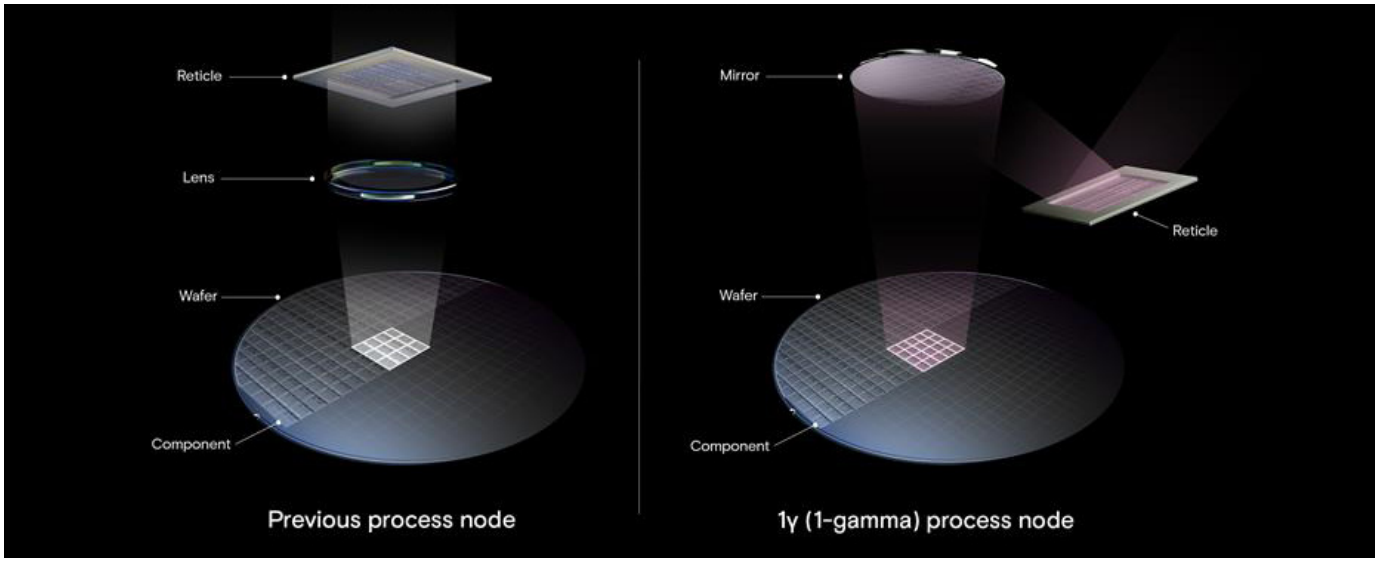
This year, customers can look forward to the upcoming launch of Micron 1γ 16Gb DDR5, which provides even greater improvements to DRAM performance, bit denisty, and power efficiency. The continued advancements in processing technology underscore Micron's commitment to innovation, addressing the growing demand for high-performance, energy-efficient memory solutions in diverse applications and solidifying its leadership in the industry.



EUV technology

EUV lithography works by using extremely short wavelengths of light to create detailed circuit patterns on silicon wafers. To generate EUV light (at a wavelength of 13.5nm), we use a high-power, pulsed carbon dioxide laser in a vacuum to impinge on tiny droplets of liquid tin 50,000 times per second. This process vaporizes the tin and creates a plasma that quickly cools and emits EUV light. This light is then controlled by a series of mirrors to scale down an image (pattern) and project it onto the wafer. With EUV, we can make transistors and logic gates tinier than ever, meaning that, for a given pattern, more data can be stored within the same surface area. This innovative technology advances the fabrication of DRAM wafers, enhancing performance and efficiency for next-gen DRAM products.

1γ delivers greater bit density, performance and lower power



micron.com/1gamma