

LET'S BREAK THE
VICIOUS CYCLE

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MEMPHIS
MEMORY
ESSENTIALS

Everything you need to know about the semiconductor memory industry, from legacy technologies to latest innovations.

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Let's break the Vicious Cycle

We're at an inflection point in the memory industry. For the first time, **the bit growth cycle has been broken**. It means that growth in memory doesn't come from shipping more chips with higher densities. That's another constant in the industry gone.

The 20% growth in memory we have seen over the past year was primarily due to higher prices. The actual bit volume shipped declined. The Yole report we are sharing in this newsletter estimates that the growth of conventional memory remains relatively flat.

It's only natural that manufacturers are going where the money is, and we are seeing the effect now: Manufacturers abandon legacy technologies at much faster rates than before.

Just remember: DDR3 was discontinued only at the end of 2024, and now, not even a year later, DDR4 is already being phased out by the big manufacturers. This led to the interesting effect that DDR4 module prices are higher than DDR5. With the eMMC discontinuations announced earlier this year, two major legacy technologies are seeing major supply issues.

It's a pace we've never seen before, but it's something we have to live with moving forward. Marco Mezger penned a commentary for eetimes in which he dives deeper into this topic and urges us to break the vicious cycle.

Responding to the market urgency, we are dedicating our next **webinar on September 10 to DDR4**. We will cover supplier dynamics and outline risk and mitigation strategies. Make sure you sign up!

Only when we are informed, we can break this vicious cycle.



Bringing back Common Sense

Announcements like the discontinuation of **eMMC** and **DDR4** trigger a series of events: companies stock up, prices rise, and uncertainty increases. Entering the vicious cycle of panic buying and cancelling excess orders is certainly not the way to go. So, can we please bring some common sense back to our supply chain? **For EE Times, Marco Mezger** took a look at the current market situation and points out some inconvenient truths.

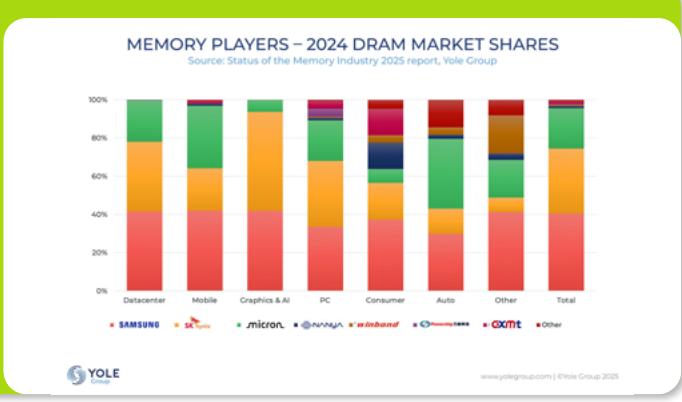
Read the full story [here](#).



Join us for our next webinar on DDR4

The transition from legacy nodes, such as **DDR3** and **DDR4**, towards newer technologies is happening at a pace previously unthinkable. This evolution brings with it not only technological challenges but also far-reaching implications for the global supply chain, particularly in terms of sustainability, cost structures, and product longevity strategies. **Join us for our next webinar on September 10** where we share supplier dynamics, transition opportunities, and recommended best practices for proofing memory designs.

Read now [here!](#)



Yole: Status of the Memory Industry 2025

AI-driven demand unleashed explosive growth across the memory sector, propelling high-bandwidth memory (HBM) into a dominant position that far outpaced the broader DRAM market. Yole Group projects a 33% CAGR for HBM through 2030, with revenue exceeding 50% of the DRAM market. While conventional DRAM, including DDR, LPDDR, and GDDR, will expand at a modest 3% CAGR through 20230.

For 2025, Yole sees record memory revenues exceeding \$190 billion.

Read the full press release [here](#).



DDR4 Module Prices Higher than DDR5

According to TrendForce's latest memory spot price trend report, regarding DRAM, prices of DDR4 modules have climbed above those of DDR5 modules. Looking ahead, if new U.S. tariffs are imposed on China, this could trigger another wave of panic buying.

However, another factor putting pressure on DDR4 pricing and availability is the plans of the major Chinese memory producer to gradually shift 60% of its product to DDR5.

Read more [here](#).

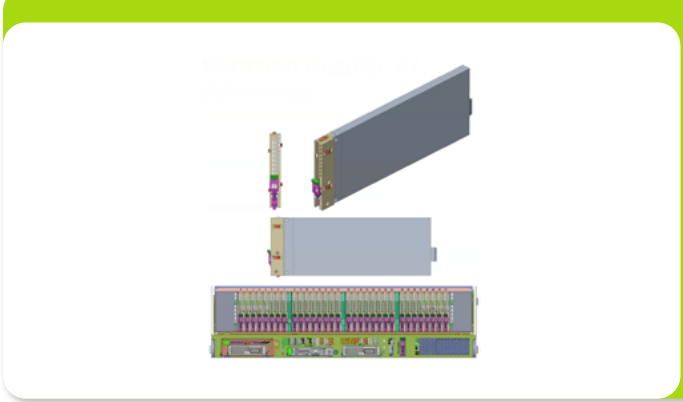


Memory in Safety-Critical Applications

As fire suppression and safety systems evolve toward greater intelligence and autonomy, memory components play a central role in ensuring system reliability, data integrity, and real-time responsiveness.

Our product marketing team examined Ferroelectric RAM (FeRAM) as an advanced non-volatile memory (NVM) technology for such systems. They compared it with other mainstream memory technologies like EEPROM, Flash, MRAM, SRAM, and DRAM, and defined the Critical-to-Quality (CTQ) attributes required in the context of fire suppression, especially gas-based suppression systems, which demand the highest reliability and compliance.

Check it out [here](#)



What can E2 do?

Emerging workloads across AI, big data, IoT, and hyperscale compute require a rethinking of storage infrastructure. As data volume surges, particularly in the "warm data" tier, where information is accessed frequently but not in real-time, existing storage form factors struggle to scale simultaneously in terms of capacity, density, power, and performance.

Will the new E2 form factor be the answer to all of these issues? We explored its potential and compare E2 with other storage technologies.

[Here's](#) our take, what you think?



DRAM Module Selection Criteria

What is the most important criterion for you when choosing a DRAM memory module for your industrial application? Stability in BOM? Longevity? Customization to your application? Sometimes these criteria complement each other, sometimes they seem mutually exclusive. **Intelligent Memory** outlines how its DRAM module lines, IM Original and IM Select, rank in these and other criteria.

Take a look [here](#)



Why Memory Matters in Smart Meters and Edge AI

Smart meters and AI-based edge data loggers continuously record data, transmit it wirelessly, and support over-the-air (OTA) updates. The memory embedded in these devices must offer not only non-volatility and fast access but also be highly durable. Find out how MRAM addresses these demands more effectively than traditional options and what a design with MRAM looks like in our latest Tech Paper.

Read more [here](#).

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