

AI & HBM HYPE OR REALITY?

NO.08 AUG24 MEMPHIS MEMORY ESSENTIALS

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

Brought to you by MEMPHIS Electronic, your Memory Competence Center and DRAM module configurator. We are posting similar stories regularly on [LinkedIn](#), so follow us there to stay on top of the news.

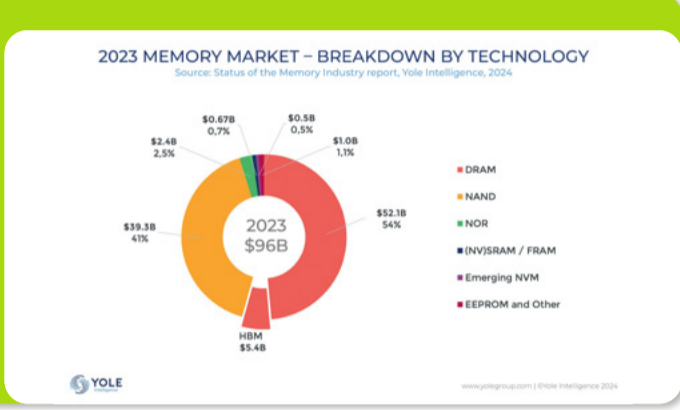
AI & HBM Hype or Reality?

Are you getting tired of hearing and reading about AI all the time? Then you are in line with [Gartner's latest Hype Cycle](#) for Emerging Technologies, which sees generative AI transitioning from the Peak of Inflated Expectations to the Trough of Disillusionment. This is an indication that it will get quieter around gen AI moving forward.

Still, we can't deny that AI is what's driving the memory market at the moment. We are seeing the big three memory manufacturers shifting manufacturing capabilities to high-bandwidth memory (HBM) which goes into AI servers.

Although industrial or specialty manufacturers don't necessarily need HBM, the shift will have an effect on them as well, as it comes at the expense of DDR3 and DDR4. While there are alternatives to those technologies from specialized vendors (speak with us), we are also seeing [increases in DDR5 prices](#) by 15-20%. Good timing that Nanya has recently started mass production of its DDR5 components.

Do you have questions about memory technologies or market developments? Then speak with us. You can meet us in September at SIDO in France and evertiq expo Gothenburg. Drop by and meet us there!



Memory Industry is Recovering

After a challenging downturn, the memory industry is recovering at a faster pace than previously forecasted, and revenues are poised to soar in 2024 and 2025. After rising to \$98B for DRAM (+88% YoY) and \$68B for NAND (+74% YoY) in 2024, revenues are expected to keep growing to a new record-high of \$220B in 2025

Driven by robust bit demand growth long-term revenues are expected to keep growing.

Read more [here](#).



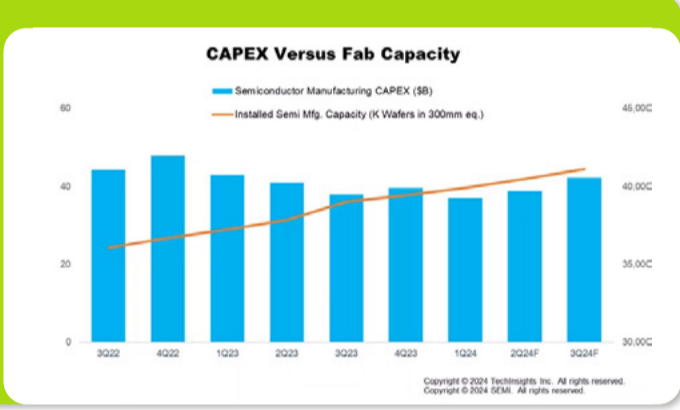
DRAM Revenue Increased by 24.8%

According to Trendforce, the DRAM industry saw a 24.8% revenue increase in the second quarter of 2024. This surge was driven by expanded shipments of mainstream products that boosted revenue for most manufacturers.

Consequently, TrendForce has revised the Q3 contract price increase for conventional DRAM to 8%-13%, approximately 5 percentage points higher than the previous forecast.

Although suppliers increase their capacity utilization rate, the market expects an undersupply in 2024.

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



SEMI Sees Stabilizing Capital Expenditure

In its Q2 2024 Semiconductor Manufacturing Monitor Report, SEMI saw significant growth of IC sales, stabilizing capital expenditure, and increased installed wafer fab capacity.

Semiconductor capital expenditures remained conservative in the first half of 2024 but are expected to turn positive in Q3 2024. Memory CapEx is leading this growth at 16% quarter-on-quarter (QoQ).

Foundry and Logic-related capacity showed stronger growth in Q2 2024 at 2.0% with Memory capacity up 0.7% in Q2 2024 and a projected 1.1% growth in Q3 2024.

Read more [here](#).



Nanya Started Mass Production of DDR5

Did you know that Nanya recently started mass production of DDR5?

Nanya has begun shipping its 16Gb DDR5 chips and is developing 16Gb LPDDR4, 16Gb LPDDR5, and 4Gb DDR3. These will enter trial production over the next couple of months.

To support the transition to the 1B process and the construction of new facilities, Nanya Technology's capital expenditure for this year is approximately TWD 26 billion (roughly USD 805.2 million), with less than half of the budget allocated to production equipment.

Read more [here](#).

Winbond brings 1Gb QspiNAND Flash for wearable & low-power IoT devices

Sometimes Size Matters
Serial NAND

*Continuous Read**

VBGA 48 Package
Smaller Footprint
Lower Pin Count

Data Buffer, Data Out, Page 0, Main Memory, Last Page, Page 11

*Continuous Read the same as TopFlash

Winbond's New QspiNAND

Winbond has unveiled a 1Gb 1.8V QspiNAND flash, the W25N01KW, that features low standby power, a small-form-factor package, and continuous read for fast boot and instant-on support.

This new NAND solution is designed to meet the increasing demands of wearable and battery-operated IoT devices as well as smart cameras such as IP cameras, surveillance systems, battery-powered Wi-Fi cameras, and smart doorbells.

Read more [here](#).

FIPS Certified SSDs

IM INTELLIGENT MEMORY

FIPS Certified SSDs from Intelligent Memory

Looking for unparalleled protection of your data? Then take a look at the new SSDs from Intelligent Memory that have been certified to the Federal Information Processing Standard (FIPS) 140-2 for storage encryption from the US National Institute of Standards and Technology (NIST).

This standard ensures that valuable information remains safe from unauthorized access and tampering. Plus, it comes with the quality and longevity that you have come to expect from IM.

Read more [here](#).



Who is Who in Semiconductor?

Did you know that 150 years ago German physicist Karl Ferdinand Braun invented what is widely considered to be the first-ever semiconductor diode?

Around 70 years later, William Bradford Shockley and scientists John Bardeen and Walter Houser Brattain invented the world's first transistor at Bell Labs.

SK hynix has put together an overview of the most influential figures in semiconductor history. Do you know all of them?

Check it out [here](#).

Meet us at these events!

LYON
sido

evertiq
eXpo

electronica 2024
World's leading trade fair and conference for electronics

Meet us at SIDO, evertiq expo or electronica

On September 18 and 19, MEMPHIS is participating at this year's SIDO in Lyon, France.

We will showcase brand-new high-performance SSDs from Huawei, high-speed DDR5 and GDDR components from Samsung as well as a range of longevity flash memory products from Intelligent Memory.

Not in France? Then come and meet us at evertiq expo in Gothenburg at the Swedish Exhibition and Congress Center on September 19.

Also, mark your calendar for electronica in Munich from November 12 to 15. More news on that soon!

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