WE KNOW MEMORY

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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 specialist memory distributor.
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Goodbye Gordon Moore – Long live Moore's Law

Last month we said Farewell to Gordon Moore, who shaped the semiconductor industry like no other. His observation that the number of transistors doubles approximately every two years is known as Moore's Law and made him a legend in the industry. Because even today, almost 60 years later, it still holds true.

Memory technologies are a prime example. DRAM memory was invented 55 years ago and has remained a vital technology enabler until today. For example: in 1969 Apollo 11 flew to the moon with only 4,096 Byte of DRAM in its computer, the first embedded computer by the way. 50 years later iPhone 11 had 4GB RAM. That is more than a million times the RAM of the Apollo computer! Moore's Law has driven the reduction in the size of these memory cells, allowing for increased storage capacity in smaller form factors.

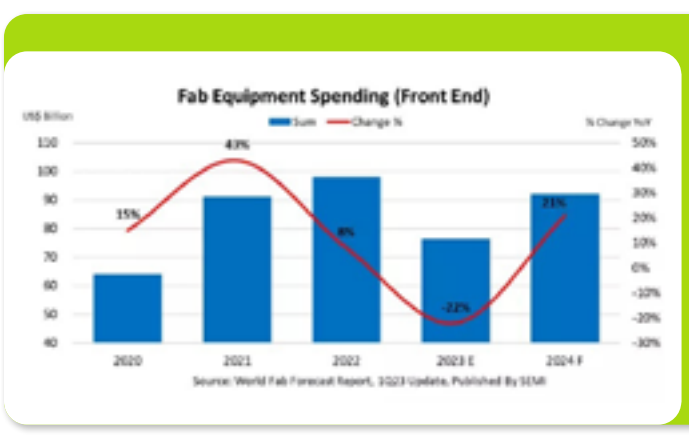
Miniaturization not only led to more complex memory products, but the applications are also getting smaller, more varied and more demanding. Memory is a commodity that no modern application can do without. And while they might look the same on paper, there are nuances in the manufacturing process that can have a negative impact on thermal management and signal integrity depending on the environment they are used in.

This is what we specialize in. With a portfolio of more than 18 memory menufacturers, our team of industry experts and engineers can help you find the best-suited memory with regard to performance, long-term availability and stable supply. Our focus on memory is our strength. How can we help you? Reach out and we will find out.

Samsung Cuts Production

Samsung announced that it is lowering the production of memory chips by a meaningful level, especially that of products with supply secured. Smartphone and personal computer makers had stocked up on chips during the pandemic when demand for consumer devices surged, but they are now running down inventories as shoppers cut back on purchases amid rising inflation.
Samsung did not disclose the size of the planned production cut, but it sent a strong signal since it previously said it would make only small adjustments like pauses for refurbishing production lines but not a full-blown cut.
Although cutting short-term production, Samsung said it was still making long-term investments in infrastructure and research to secure needed clean rooms for chip production and expand its technological lead.

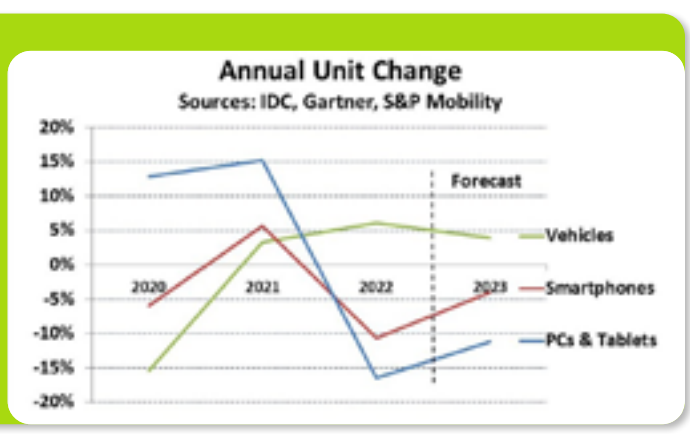
Read the full story here.



Global FAB Equipment spending on track for 2024

Global fab equipment spending for front-end facilities is expected to decrease 22% year-over-year (YoY) to US$76 billion in 2023 according to the latest SEMI World Fab Forecast report. But for 2024 SEMI sees a 21% YoY increase to US$92 billion to reclaim lost ground. The 2023 decline will stem from weakening chip demand and higher inventory of consumer and mobile devices.
Next year's fab equipment spending recovery will be driven in part by the end of the semiconductor inventory correction in 2023 and strengthening demand for semiconductors in the high-performance computing (HPC) and automotive segments.

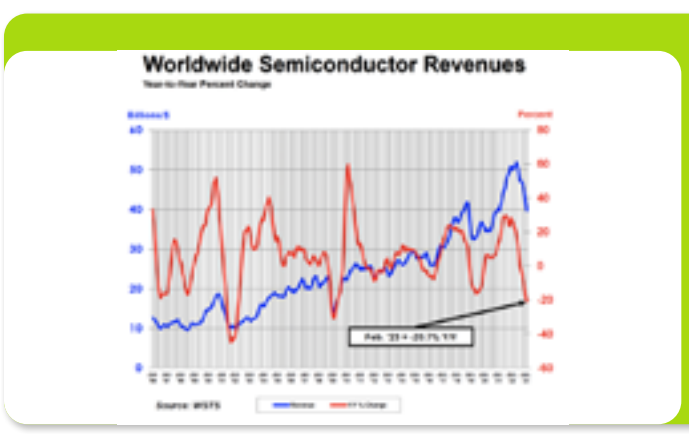
Read the full story here.



Automotive the Bright Spot for Semiconductors?

Automotive appears to be about the only bright spot in the semiconductor market for 2023. Semiconductor companies generally have bleak outlooks for the start of 2023, citing excess inventories ad weak end market demand.

The automotive semiconductor market should show healthy growth in 2023, in contrast to most of the rest of the semiconductor market. Semiconductor Intelligence is forecasting 14% growth for the automotive semiconductor market in 2023. Read the full forecast here.



Semiconductor Sales Decrease 4% in February

SIA confirmed what we have seen in the market: Global semiconductor industry sales totaled $39.7 billion during the month of February 2023. This is a decrease of 4.0% compared to the January 2023 total of $41.3 billion and 20.7% less than in February 2022 ($50.0 billion).

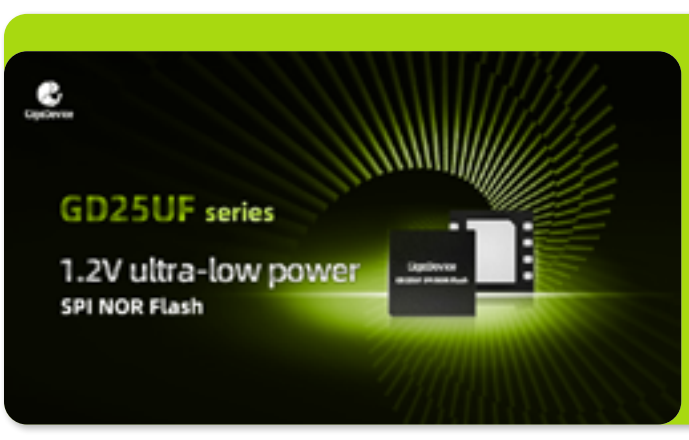
Despite the continued slow month-over-month, the market's medium- and long-term prospects remain bright, thanks to growing demand across a range of end markets.
Read the SIA summary here.

Manufacturer Spotlight: Winbond

Some of our colleagues had the opportunity to visit the new Winbond DRAM Fab in Kaohsiung in Taiwan last month. With this fab, Winbond added new waver capacity to expand its DDR3 offering. In 2022, Winbond's DDR3 shipments already represented 30% of its total DRAM revenue. The new fab is expected to increase the share to 50%.

Our team was very thrilled to see the latest developments and get insights into the strategy that underlines Winbond's commitment to longevity and the high quality that the global industrial and automotive markets require.

Are you familiar with Winbond's portfolio? Reach out to learn more and get the latest updates.



High Performance at ultra-Low Power: 1.2V SPI NOR Flash from Gigadevice

GigaDevice, one of the Flash memory manufacturers in our line card, has introduced its GD25UF series of 1.2V SPI NOR Flash that are optimized for applications that require ultra-low power consumption or a small board footprint.

The GD25UF products operate at a supply-voltage range of 1.14V - 1.26V. This is ideal for devices built on advanced process nodes and operating at a core voltage of 1.2V, as it provides for a simpler power system architecture, and for direct interfacing between the I/O pins of the SoC or processor and the GD25UF device.

The 64Mbit GD25UF64E is in production now. It is supplied in SOP8, 3mm x 4mm or 4mm x 4mm USON8 and WLCSP packages, or as a known good die. The 128Mbit GD25UF128E is sampling. Products with a memory capacity of 32Mbits and 256Mbits are in development. Read the full press release here.

Save the Date – Upcoming Events

If you didn't have a chance to meet us at embedded world in March, you have the following opportunities to catch up with MEMPHIS in May and June:

We are exhibiting at **Engineering of Tomorrow** (EOT) in Denmark from **May 9-11**. Here are all details about the show and you can book a meeting with us directly: http://bit.ly/3GGLVm6

Based in the U.S.? Then join us at **Sensors Converge 2023**, North America's largest electronics event for design engineers, from **June 20-22** in Santa Clara: https://bit.ly/3A4zDjX

Last but not least, we are participating again in **Evertiq Expo Berlin**, a one-day event for people working in electronics design and purchasing, on **June 29**. https://bit.ly/3mCszIj

Looking forward to meeting you at one of these events. But of course, we are always there for you. Don't wait for an event if you are designing a new product or are looking for long-term available memory options. Reach out. We are always happy to help.

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