

**MEMPHIS**  
WE KNOW MEMORY

SUPPLY CHAIN SOLUTIONS  
TECHNICAL KNOWHOW & MARKET EXPERTISE  
DESIGN-IN SERVICES  
LEGACY & EMERGING MEMORY  
2<sup>ND</sup> & 3<sup>RD</sup> SOURCES  
EOL MANAGEMENT  
CUSTOM MEMORY MODULES

**NO.03 MAR24**  
**MEMPHIS**  
**MEMORY**  
**ESSENTIALS**

**WANT TO UP YOUR GAME?**

**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.

**Want to up your game?  
Tap into our Memory Competence Center**

The world is getting more complex and faster. Artificial Intelligence, autonomous driving and (industrial) Internet of Things are just some examples of memory-hungry applications that are changing customer and industrial applications.

Technologies evolve at an incredible speed and lead to complex products that – in industrial applications – need to combine longevity and high-performance, an interdependency that requires a deeper know-how on memory and its nuances to avoid product failures in the field. But it doesn't take just technological know-how, the semiconductor market is going through unprecedented up- and downward cycles that are hard to navigate.

Our specialization in memory has made MEMPHIS an undisputed expert in all things memory and we can deliver just that – technology know-how and market expertise.

Visit us at embedded world 2024 and see for yourself! Some of the highlights at the show include:

- We are launching **the industry's first 100% lead-free MEMPHIS DRAM module family**
- **Samsung** is showcasing its LPDDR solutions that support speedy, high-bandwidth data transfer without compromising
- **Skyhigh Memory** presents its eMMC family that is available in Industry standard and small form factor packages, as well as its latest LPDDR4/x components.
- **Intelligent Memory** highlights its impressive range of managed NAND flash memory solutions.
- **Neumonda** is presenting its award-winning Rhinoceros tester as well as two upcoming test generations.

Book a meeting with us at embedded world today or just drop by our booth 1-340. With this code, you can [get your free entry ticket](#) with this **ticket code: ew24517722**

Looking forward to seeing you there!

**NAND Prices Up 24.5%**

**NAND Flash Prices are Going Up**

In Q4 2024 TrendForce saw a substantial 24.5% QoQ increase in NAND Flash revenue and expects to see a continued increase by another 20% in Q1 of 2024.

This is underpinned by improvements in inventory levels as well as clients ramping up their orders to sidestep potential supply shortages and escalating costs. For these reasons, TrendForce expects NAND Flash contract prices to rise by an average of 25%.

Read more [here](#).

**DRAM Prices Up +20%**

**DRAM Prices Up 20%**

TrendForce reported a 29.6% QoQ increase in DRAM industry revenue for 4Q23, reaching US\$17.46 billion. Although this is mainly due to DDR5 and HBM shipments, another reason is the still ongoing strategic production control by leading manufacturers.

Looking ahead to 1Q24, the intent to further enhance profitability is evident, with a projected near 20% increase in DRAM contract prices.

Read more [here](#).

**100% LEAD-FREE**

**FROM DDR1 TO DDR5**

**The Industry's First 100% Lead-Free DRAM Module Family**

We are launching 100% lead-free DRAM modules that range from DDR1 to DDR5. While others only cover the latest technology, we also have legacy DDR1 memory modules as completely lead-free option, so our customers don't have to rely on RoHS exemptions for their products. DDR1 modules are available today, DDR5 lead-free versions are sampling in Q2 and DDR3, DDR4 and DDR2 modules will follow in the course of the year.

Learn more at embedded world 2024 at our booth 1-340 or [here](#).

**10 years + Longevity**

**MicroSD cards with 10+ years longevity**

True to its commitment to tailor-made solutions for embedded and industrial applications, Intelligent Memory has introduced new microSD and SD cards in industrial temperatures with a guaranteed longevity of 10 years and more. This means industrial and embedded customers don't have to re-design or requalify their products as often. And since the memory cards come in densities of 512MB, 1GB and 2GB, they don't have to pay for densities they don't need.

More at embedded world 2024 at our booth 1-340 or [here](#).

**Technology that makes technology sustainable**

**Samsung Sustainable Mobile Memory for Industries**

Many industry applications are going mobile, and Samsung has the products for mobile industrial and specialty markets. At embedded world Samsung highlights its low power DRAM products as well as its UFS 3.1 flash memory product line. These solutions support speedy, high-bandwidth data transfer without compromising energy efficiency.

Read more [here](#).

**DRAM TESTING REVOLUTIONIZED**

**Trust is Good, But Application-Specific DRAM Testing is Better!**

Peter Pöschmüller, CEO of Neumonda, has been invited to explain the revolutionary new approach to DRAM testing that it has shown with its Rhinoceros DRAM Tester as part of the embedded world Conference Program. If you are attending the conferences, make sure you don't miss his presentation on April 11 at 9:30.

Find the full program [here](#).

**Neumonda's DRAM Tester Family**

INDUSTRY	MODULES	SPEED
<b>Rhinoceros</b> • Application-specific testing, speedy and low speed • FPGA based screening of DDR1-DDR5 • 15h hours long	<b>Octopus</b> • Component Screening for Module Building • Low temp and high speed screening DDR4 / LPDDR4 and higher • Based on Intel CPU • Available in Q4 2024	<b>Raptor</b> • High Speed testing >150ps • Based on intel ASIC • DDR5 / DDR4 / GDDR6 / GDDR7 • Available in 2025

**Meet the DRAM Testing Family – Rhinoceros, Octopus and Raptor**

Can't make it to the embedded world Conference? Then drop by our booth 1-340 to learn more about the Rhinoceros DRAM Tester that has scooped an Elektra Award. But Rhinoceros is only the first generation of DRAM testers that was developed for industry testing. Neumonda will provide details about its Octopus and Raptor testers designed for DRAM module and high-speed DRAM component testing.

Get your ticket [here](#).

**Did you know SkyHigh Memory has LPDDR4x?**

**Get to know SkyHigh Memory's LPDRAM**

SkyHigh Memory was founded in 2019 as joint venture of Cypress and Sk hynix. Initially it focused on non-volatile flash memory products such as SLC NAND and eMMCs. In late 2023, SkyHigh has entered a new field with the launch of its first LPDRAMs. At embedded world 2024, its 8Gb and 16Gb LPDDR4x components will be at display for the first time at the MEMPHIS booth 1-340.

Learn more at embedded world 2024 at our booth 1-340 or [here](#).

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