

# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

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### Sfera Labs Launches Sensor Module Based on Raspberry Pi 4

Sfera Labs has launched a multi-function module based on Raspberry Pi Compute with several environmental sensors and connectivity options to help engineers develop products for residential and commercial installations.

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### 3D DRAM on the Horizon

It may take a few years, but DRAM is likely to follow the footsteps of NAND and go 3D, which means it will need new manufacturing equipment and materials to do it cost-effectively.

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### Startup Unisantis Proposes DRAM Alternative

Singapore-based DRAM specialist Unisantis Electronics revealed at this week's (virtual) IEEE International Memory Workshop (IMW) advances in its work on dynamic flash memory (DFM) that it claims is a faster and denser technology than DRAM or other types of volatile memory

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## TALK TO US



### Shift from 8" Wafer Fabs to 12" Could Ease IC Shortages

To put it mildly, the 8-inch (200mm) wafer supply chain is somewhat struggling. As one headline from December read, "8-inch wafer capacity is in short supply to unimaginable levels", with the article stating "wafer production capacity is so tight that customers' demand for production capacity has reached a panic level

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## EVENTS

### [Silicon Chip Industry Seminar](#)

-November 2021- London UK

### [Industry Forecast Briefing](#)

- September 2021- London UK

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### Dialog Semiconductor Extends Partnership with SiFive

Dialog Semiconductor plc has extended its partnership with RISC-V processor and silicon solutions provider SiFive Inc. Dialog is SiFive's preferred power management partner for its HiFive Unmatched, a PC form-factor RISC-V Linux Development Platform for the SiFive Freedom U740 RISC-V SoC.

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## **Sfera Labs Launches Sensor Module Based on Raspberry Pi 4**

Sfera Labs has launched a multi-function module based on Raspberry Pi Compute with several environmental sensors and connectivity options to help engineers develop products for residential and commercial installations. The Exo Sense Pi board integrates temperature and humidity sensors, air quality, light and PIR-based motion detection sensors, as well as a microphone for ambient noise measurements and audio recording.

In an interview with EE Times Europe, Giampiero Baggiani, founder, Maria Chizzali, COO, and Ulderico Arcidiaco, CEO & founder, at Sfera Labs, illustrate the potential of the Exo Sense Pi board for the industrial market. Typical applications include environmental monitoring and data gathering, BLE positioning, indoor people and assets tracking, rooms management and access control as well as voice control.

## **3D DRAM on the Horizon**

It may take a few years, but DRAM is likely to follow the footsteps of NAND and go 3D, which means it will need new manufacturing equipment and materials to do it cost-effectively.

Applied Materials' latest materials engineering solutions are all about supporting DRAM scaling in the near term and positioning customers for the longer term. Aimed at accelerating improvements in chip performance, power, area, cost, and time to market, the company's new offerings target three areas of DRAM chips: storage capacitors, interconnect wiring, and logic transistors.

## **Startup Unisantis Proposes DRAM Alternative**

Singapore-based DRAM specialist Unisantis Electronics revealed at this week's (virtual) IEEE International Memory Workshop (IMW) advances in its work on dynamic flash memory (DFM) that it claims is a faster and denser technology than DRAM or other types of volatile memory.

The inventors of the technology, Koji Sakui and Nozomu Harada, claim a "leap forward" in the industry's search for alternatives to DRAM for next-generation low-cost and high density embedded or standalone memory applications.

Unisantis was founded in 2008 by the inventor of flash technology, Fujio Masuoka, who patented surround gate transistor (SGT) technology, a 3D transistor design that offers significant system design and performance advantages to the manufacturers of memory and image sensor semiconductors and scales to very small nodes.

## **Shift from 8" Wafer Fabs to 12" Could Ease IC Shortages**

To put it mildly, the 8-inch (200mm) wafer supply chain is somewhat struggling.

As one headline from December read, "8-inch wafer capacity is in short supply to unimaginable levels", with the article stating "wafer production capacity is so tight that customers' demand for production capacity has reached a panic level." And that from mid 2021 "to the second half of 2022, the logic and DRAM markets will be out of stock."

This is not a new problem, Trends Force stated around the same time that "8-inch wafer capacity has been in severe shortage since 2H19". And EE Times reported in February 2020 that "Shortages loom after 8-inch fabs run at 99% capacity in Q1".

## **Dialog Semiconductor Extends Partnership with SiFive**

Dialog Semiconductor plc has extended its partnership with RISC-V processor and silicon solutions provider SiFive Inc. Dialog is SiFive's preferred power management partner for its HiFive Unmatched, a PC form-factor RISC-V Linux Development Platform for the SiFive Freedom U740 RISC-V SoC.

The new HiFive Unmatched platform uses Dialog's highly integrated DA9063 system PMIC which incorporates 6 DC-DC Buck Regulators and 11 LDOs. The device enables the SiFive platform to achieve maximum performance by optimally meeting all power supply requirements. In addition, the DA9063 supports Dynamic Voltage Scaling (DVS) which dramatically reduces the power dissipation and thermal footprint of the platform.

"Our partnership with SiFive is delivering cost effective, power efficient platforms for the benefit of SiFive's customers and eco system partners," said Tom Sandoval, Senior Vice President, Automotive Business Segment, Dialog Semiconductor. "The HiFive Unmatched platform is a great example of the power efficiency and performance our DA9063 device can enable."