# FutureHorizons

The Global Semiconductor Industry Analysts

## **FH MONDAY**

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Dixon and Rexxam Ink to Form JV for Startup Gets £1.5m To Develop Imec Spinoff Wants to Turn Every Manufacture of PCBs for AC Units Multi-Band Frequency Agile RF Phone into a Spectrometer Chin Dixon Technologies (India) Smartphones of the near A Cambridge, UK-based Ltd has entered into future will be able to detect fabless semiconductor Memorandum of malignant melanoma from company that has developed Understanding (MOU) with benign skin lesions. a frequency agile, tunable RF Rexxam Co. Ltd to form a joint front-end chip addressing Spectricity, a spinoff of Imec venture (JV) that will (Interuniversity Microelectronics multiple mobile handset undertake manufacturing of Center), claims it has developed frequency bands has printed circuit boards (PCBs) chip-size hyperspectral sensor announced £1.5 million for air-conditioners for and imager solutions that could funding to further develop its domestic and international turn any smartphone into a real chip. pocket lab. markets. read more read more read more FutureHorizons TALK TO US Semiconductor Chip Delivery Times Extend to Record 20 NAND Directs the Future of Weeks **Memory Controllers EVENTS** Silicon Chip Industry The semiconductor shortages The future of the memory continue to worsen, according to controller is irrevocably tied to Seminar a recent Bloomberg report, Lead the memories they control. times, which is the amount of time -November 2021– London UK Similarly, they are governed it takes for a customer, like an by Moore's Law. And while Industry Forecast Briefing OEM or chip designer (like AMD storage class memories or Nvidia), to receive their chip (SCMs) may gain traction - September 2021- London UK has stretched out to a whopping thanks to new architectures, 20.2 weeks for more advanced DON'T MISS OUT.the memory controller market semiconductors, and 26.5 weeks BOOK NOW BY for microcontrollers and logic is still very much dictated by NAND flash. chips. CALLING +44 1732 740440 read more read more OR EMAIL mail@futuraharizana aam

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### Imec Spinoff Wants to Turn Every Phone into a Spectrometer

Smartphones of the near future will be able to detect malignant melanoma from benign skin lesions. Spectricity, a spinoff of Imec (Interuniversity Microelectronics Center), claims it has developed chip-size hyperspectral sensor and imager solutions that could turn any smartphone into a real pocket lab.

"A camera phone can do more than just take a picture and could be used as a spectrometer to detect things you can't see with your eyes and things that are done by professional spectrometers," Vincent Mouret, CEO of Spectricity, told EE Times Europe. Such cameras with spectral analysis of the image can find applications in areas such as precision agriculture, food analysis, skin health, cosmetics, security and automotive.

#### Startup Gets £1.5m To Develop Multi-Band Frequency Agile RF Chip

A Cambridge, UK-based fabless semiconductor company that has developed a frequency agile, tunable RF front-end chip addressing multiple mobile handset frequency bands has announced £1.5 million funding to further develop its chip.

Forefront RF was established in 2020 based on research by Leo Laughlin at the University of Bristol. Laughlin and his co-founder Julian Hildersley met through mutual contacts last year and set up the company in Cambridge, where he said there is a strong talent pool of RF expertise. The company expects to double the team to 10 people by the end of the year, looking to recruit engineers with experience in RF system architecture, software algorithms, and physical design and layout.

#### Dixon and Rexxam Ink to Form JV for Manufacture of PCBs for AC Units

Dixon Technologies (India) Ltd has entered into Memorandum of Understanding (MOU) with Rexxam Co. Ltd to form a joint venture (JV) that will undertake manufacturing of printed circuit boards (PCBs) for air-conditioners for domestic and international markets. The JV also proposes to file necessary applications with Department for Promotion of Industry and Internal Trade (DPIIT) or any other nodal agency to avail benefits under the PLI Scheme of Government of India.

Post execution of mutually acceptable agreements by the parties, the JV company will be 60% owned by Rexxam and 40% owned by Dixon.

"We share a long standing relationship with Rexxam as we have been manufacturing AC-PCBs for their Indian partner for more than seven years. We are confident that our relationship with Rexxam will further deepen its roots with this strategic partnership," said Atul B. Lall, Vice Chairman and Managing Director, Dixon Technologies. "Under this JV, we will not only be serving to Indian customers of Rexxam but shall also be serving international clients.

#### **Semiconductor Chip Delivery Times Extend to Record 20 Weeks**

The semiconductor shortages continue to worsen, according to a recent Bloomberg report, Lead times, which is the amount of time it takes for a customer, like an OEM or chip designer (like AMD or Nvidia), to receive their chip has stretched out to a whopping 20.2 weeks for more advanced semiconductors, and 26.5 weeks for microcontrollers and logic chips. According to the Susquehanna Financial Group, a firm that researches semiconductor shortages, this is the longest wait time recorded since the firm started tracking data in 2017.

Effectively this means the chip shortage is getting worse as a whole, despite reduced GPU scalper prices and decent CPU stock we're experiencing right now. If lead times continue to get worse, we could see more price hikes for CPUs and GPUs in the future as demand intensifies as we get closer to this year's holiday season.

#### NAND Directs the Future of Memory Controllers

The future of the memory controller is irrevocably tied to the memories they control. Similarly, they are governed by Moore's Law. And while storage class memories (SCMs) may gain traction thanks to new architectures, the memory controller market is still very much dictated by NAND flash.

"Everyone's used to the flash's density-doubling every couple of years or so, but they don't consider the fact that the controller gets increasingly complex at a similar rate," said Jim Handy, principal analyst at Objective Analysis. This has allowed them to go from SLC, to MLC, to TLC, to QLC while getting faster, wearing better, and adding features. "I often quip that controllers are getting so good so quickly that soon you will be able to hook a controller to a completely non-functional flash chip and still be able to pull out good data.