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TALK TO US

IBM Lab on Chip Detects Cancer

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Samsung Debuts 3D XPoint Killer

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Renesas' microwave enterprise was a part of its larger effort to push compound semiconductive devices that use such materials as GaAs or SiGe.

Among the main microwave devices Renesas has been selling are low-noise amplifiers (LNA), RF switches, mixers and RF transistors used for wireless equipment.

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MediaTek, Qualcomm's largest rival in the smartphone silicon business, said it is unable to meet demand for 3G and 4G smartphone products because it underestimated the supply of chips it would need from its foundry partners.

Taiwan Semiconductor Manufacturing Co. (TSMC) is MediaTek's largest supplier. For MediaTek, demand has been better than the company expected earlier this year.

"For the third quarter and the fourth quarter, we most likely will be facing supply constraints," said MediaTek ChiefFinancial Officer David Ku on a conference call to announce the company's second-quarter results. "Probably into the fourth quarter, we won't be able to fulfill all of our demand."

Intel Acquires Artificial Intelligence Start-Up In Tech Expansion

Intel has staked out another part of the new computing landscape that is taking shape around artificial intelligence, following the acquisition of Nervana, an ambitious AI start-up that will extend its reach into software as well as chips.

The purchase, for an undisclosed amount, adds to the range of technologies Intel has been developing to deal with the computing tasks required by AI. These include the machine learning techniques used to train AI systems, as well as processing the large amounts of data such systems work with.

The deal comes a week before Intel's annual developer event, where it is expected to outline its plans for developing new systems that will power future generations of intelligent systems.

IBM Lab On Chip Detects Cancer

IBM Research (Yorktown Heights, N.Y.) has designed a microfluidic lab-on-a-chip that can separate biological particles down to sizes as small as 20-nanometers. If successful, the chip will make it possible to detect cancer markers before a tumor has even started to grow. The Mount Sinai Ichan School of Medicine (Manhattan, New York) is collaborating with IBM on the project.

 "The idea is to take a fluid sample—a blood sample or a urine sample—to be used for diagnostic purposes, separate out the materials within the sample with very very fine resolution," said Josh Smith, an IBM research scientist and silicon fabrication expert at IBM's Thomas J Watson Research Center (see video above). "A lot of people are sorting at the cellular level, but we are separating at a scale of 2-to-3 orders of magnitude [100 to 1000 times] below that limit where we are at the true nanoscale, separating interesting materials like exosomes, DNA [deoxyribonucleic acid], proteins et cetera."

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Samsung lobbed a new variant of its 3D NAND flash into the gap Intel and Micron hope to fill with their emerging 3D XPoint memory. The news came one day after Micron showed at the Flash Memory Summit performance figures for its version of the XPoint solid-state drives (SSDs) under a new Quantx brand.

Samsung announced plans for what it called Z-NAND chips that will power SSDs with similar performance but lowercosts and risk than the 3D XPoint drives. However, it was secretive about the details of the technology that will appear in products sometime next year.

By contrast, a Micron engineer leading its XPoint SSD program was surprisingly candid in an interview with EE Times. She described current prototypes using early XPoint chips and an FPGA-based controller for the SSDs expected to ship in about a year.