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5G, Cellular IoT Step Ahead

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TALK TO US

Aquantia Rolls Second-Gen AQrate Chips

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IBM, Samsung Put New Spin on MRAM

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Future Horizons Ltd, • 44 Bethel Road • Sevenoaks • Kent TN13 3UE • England
Tel: +44 1732 740440 • Fax: +44 1732 740442
e-mail: mail@futurehorizons.com• http://www.futurehorizons.com/
Affiliates in Europe, India, Israel, Japan, Russian, San Jose California, USA

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The news comes on the heels of the 3GPP finalizing standards for an ultra-low power version of LTE for the Internet of Things. With new IoT specs out, support is growing in 3GPP to accelerate the pace of getting out a first phase of 5G standards focusing on mobile broadband applications, likely saving 5G IoT specs and other issues for a follow up second phase, expected about 2020.

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The deal marks SMIC's first expansion of manufacturing beyond China and will also move the company into the global electronics market, SMIC (Shanghai) said.

Tzu-Yin Chiu, the SMIC's CEO and executive director, said through a statement that the acquisition marks an important step in SMIC's global strategy. "In the future SMIC will continue to enhance, strengthen and further expand leadership in the global semiconductor.

Startup Aims To Simplify Networks

Martin Izzard and 80 colleagues want to upend the multi-billion dollar industry of network hardware. They hope the chips they will tape out soon provide a strategic wedge that does the job.

Izzard is chief executive of Barefoot Networks, a rare microprocessor startup that has attracted a whopping $130 million in funding to date including strategic backers that include Google, Goldman Sachs and Hewlett-Packard Enterprise. Its Tofino chips aim to make the job of programming complex networks as easy as writing C++ code in an emerging open-source language it helped create called P4.

Barefoot is at the bleeding edge of a trend generally called software-defined networking. SDN represents an effort to cut through what's become a rat's nest of competing, often proprietary APIs, protocols and ASICs.

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Aquantia (San Jose, Calif.), which owns the market for multi-Gigabit NBASE-T chips, also announced that the first generation of its AQrate NBASE-T PHY devices have shipped more than 1 million units in less than one year since they hit in the market.

Faraj Aalaei, Aquantia's president and CEO, said in an interview with EE Times that Aquantia believes that the milestone is significant. Aalaei added that the NBASE-T Alliance, the group founded by Aquantia to standardize the technology it developed for 5/2.5 Gigabit networking, has now grown to nearly 50 members. Aquantia is still the only vendor shipping products in this space and is about two to three years ahead of competitors in bringing products to market,

IBM, Samsung Put New Spin On MRAM

On the 20th anniversary of its invention at IBM Research, fabled nonvolatile "universal" magnetic random access memory (MRAM) is getting an upgrade. IBM announced today (July 7) that, in collaboration with foundry-giant Samsung, it is using a spin-transfer torque (STT) design on its MRAM.

Faster than flash and as dense as dynamic random access memory (DRAM), this universal memory genre is now being readied for manufacturing with a final round of material optimization and engineering finesse at IBM (Yorktown Heights, N.Y.). IBM says its STT MRAM access clocks at 10 nanoseconds and ultra-low-power (7.5 microamps), claiming its MRAM outperforms flash at the speed of DRAM. Applications include everything from tiny Internet of Things (IoT) system-on-chips (SoCs) to vast mass storage systems for servers.