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Rambus Taps RISC-V for Root of Trust

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Nvidia Moves Into Top 10 in Chip Sales

Nvidia cracked the list of top 10 semiconductor vendors by sales for the first time in 2017, joining Qualcomm as the only other strictly fabless chip supplier to attain that distinction last year,

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Image Fusion Startup Lands Funding. Plans SoC

U.K.-based image fusion technology firm Spectral Edge announced an infusion of \$5.3 million in funding from existing investors. The firm — co-founded by Robert Swann, who previously co-founded Alphamosaic — plans to use the funding to expand its R&D team to 12, with expertise in image processing, machine learning, and embedded software development

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TALK TO US



China Startup Packs AI in Camera

SAN JOSE, Calif. — An ambitious startup in Beijing has started shipping systems using its own designs for machine-learning SoCs. Horizon Robotics ultimately aims to power millions of cars and smart cameras with its AI chips.

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ARM Under Attack in AI

Nearly a dozen processor cores for accelerating machine-learning jobs on clients are racing for spots in SoCs, with some already designed into smartphones. They aim to get a time-to-market advantage over processor-IP giant Arm that is expected to announce its own soon.

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Rambus Taps RISC-V For Root Of Trust

SAN JOSE, Calif. — Rambus announced a security block based on the RISC-V core aimed, in part, to plug the Meltdown/Spectre flaws revealed earlier this year. The CryptoManager Root of Trust targets use in a wide spectrum of ASICs, microcontrollers, and SoCs in embedded systems.

Rambus claims that the new block sports several advantages over root-of-trust functions already integrated in most existing embedded processors. It suggested that OEMs should move this fundamental hardware-security function out of mainstream x86 and ARM embedded processors that Spectre/Meltdown showed are vulnerable to side-channel attacks.

However, an NXP security expert said that the root-of-trust function ideally should be implemented in a standalone chip, a practice that high-security systems use. The trend of integrating the function into larger chips helped save costs, but it was a step backward in security, said Sami Nassar, vice president of cybersecurity solutions at NXP Semiconductors.

Nvidia Moves Into Top 10 In Chip Sales

Nvidia cracked the list of top 10 semiconductor vendors by sales for the first time in 2017, joining Qualcomm as the only other strictly fabless chip supplier to attain that distinction last year, according to market research firm IHS Markit.

Nvidia's 2017 sales total of \$8.57 billion was good enough for the company to secure the 10th position among chip vendors last year, IHS said. Ironically, Nvidia edged out fellow fabless chip supplier MediaTek of Taiwan to crack the top 10, according to Len Jelinek, director and chief analyst for technology, media and telecommunications at IHS.

Qualcomm, Nvidia and MediaTek are the only strictly fabless chip vendors to ever crack the top 10 list of chip suppliers in a calendar year. MediaTek was among the top 10 chip vendors in 2014 and again in 2016. Qualcomm first cracked the top 10 list in 2007 and has remained a fixture on the list ever since.

Image Fusion Startup Lands Funding, Plans SoC IP

U.K.-based image fusion technology firm Spectral Edge announced an infusion of \$5.3 million in funding from existing investors. The firm — co-founded by Robert Swann, who previously co-founded Alphamosaic — plans to use the funding to expand its R&D team to 12, with expertise in image processing, machine learning, and embedded software development.

Spectral Edge CEO Rhodri Thomas told EE Times that it also plans to commercialize its IP and, longer-term, build the system-on-chip (SoC) IP for applications in key areas of focus. Those areas include smartphones, webcams, and security applications alongside its existing products for the TV and display industries.

China Startup Packs AI In Camera

SAN JOSE, Calif. — An ambitious startup in Beijing has started shipping systems using its own designs for machine-learning SoCs. Horizon Robotics ultimately aims to power millions of cars and smart cameras with its AI chips.

The startup adds fuel to China's claims that it will take a leading role in machine learning. Horizon's chief executive sits on the country's committee driving a national initiative in AI.

Founded in July 2015, Horizon's top executives come from AI groups at Baidu and Facebook and the chip division of Huawei. They have received more than \$100 million in venture funding from more than a dozen investors including Intel Capital, Sequoia Capital, and Sinovation Ventures.

ARM Under Attack In AI

SAN JOSE, Calif. — Nearly a dozen processor cores for accelerating machine-learning jobs on clients are racing for spots in SoCs, with some already designed into smartphones. They aim to get a time-to-market advantage over processor-IP giant Arm that is expected to announce its own soon.

The competition shows that much of the action in machine-learning silicon is shifting to low-power client blocks, according to market watcher Linley Gwennap. However, a race among high-performance chips for the data center is still in its early stages, he told EE Times in a preview of his April 11 keynote for the Linley Processor Conference.

“Arm has dominated the IP landscape for CPUs and taken over for GPUs as well, but this AI engine creates a whole new market for cores, and other companies are getting a head start,” said Gwennap.