

# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

1 November 2021

### BrainChip Launches Event-Domain AI Inference Dev Kits

BrainChip, the neuromorphic computing IP vendor, launched two development kits for its Akida neuromorphic processor during this week's Linley Fall Processor Conference. Both kits feature the company's Akida neuromorphic SoC: an x86 Shuttle PC development kit and an Arm-based Raspberry Pi kit.

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### TI Rolls 3D Hall Sensor for Real-Time Control

Texas Instruments has introduced TMAG5170, the first device in a new family of 3D Hall-effect position sensors for real-time control in factory automation and motor-drive applications. The sensor is promoted as providing integrated functions and diagnostics to maximize design flexibility and system safety while saving energy.

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### Keysight Acquires Scalable Network Technologies

Keysight Technologies Inc. has acquired Scalable Network Technologies, a leader in communications network simulation and modeling solutions for design, test and analysis, as well as cyber assessment and training. Based in Culver City, California, Scalable Network Technologies provides best-in-class network simulation solutions to model and visualize communications networks and cyber threats.

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## TALK TO US



### Infinion introduces next-generation automotive security controller SLI37

Munich, Germany – 26 October, 2021 – With increasing electrification and connectivity, vehicles are at greater risk of cyberattacks, which can have serious consequences. For this reason, it is crucial that automotive manufacturers provide adequate protection of telematics data.

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## EVENTS

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

-November 2021- London UK

### [Industry Forecast Briefing](#)

- January 2022- London UK

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### Ericsson's Laser-Powered Wireless 5G Ambitions

Ericsson aspires to deliver 5G connectivity without linking to the power grid by wirelessly powering base stations with lasers. To that end, the infrastructure vendor has teamed up with laser specialist PowerLight Technologies to develop the first base station wirelessly powered by a laser.

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## **BrainChip Launches Event-Domain AI Inference Dev Kits**

BrainChip, the neuromorphic computing IP vendor, launched two development kits for its Akida neuromorphic processor during this week's Linley Fall Processor Conference. Both kits feature the company's Akida neuromorphic SoC: an x86 Shuttle PC development kit and an Arm-based Raspberry Pi kit. BrainChip is offering the tools to developers working with its spiking neural network processor in hopes of licensing its IP. Akida silicon is also available.

BrainChip's neuromorphic technologies enables ultra-low power AI for analyzing data in edge systems where extremely low-power, real-time processing of sensor data is sought. The company has developed a neural processing unit (NPU) designed to process spiking neural networks (SNNs), a brain-inspired neural network that differs from mainstream deep-learning approaches. Like the brain, an SNN relies on "spikes" that convey information spatially and temporally. That is, the brain recognizes both sequences and the timing of spikes. Referred to as the "event domain," spikes typically result from changes in sensor data (for example, changes in pixel colors in an event-based camera).

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Magnetic sensors, including Hall-effect sensors and other technologies, have design benefits and drawbacks. One constraint is the trade-off between obtaining extremely high accuracy and 3D device throughput. Stable sensors, for example, do not wander in response to changes in temperature, ambient conditions or even magnetic fields. It is usually simple to enhance one of the two ways, but not both.

## **Keysight Acquires Scalable Network Technologies**

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Based in Culver City, California, Scalable Network Technologies provides best-in-class network simulation solutions to model and visualize communications networks and cyber threats.

Scalable's unique offerings provide accurate, at scale digital models of heterogeneous communications networks to include 5G, enterprise, IoT and satellite networks to ascertain problems, risks, vulnerabilities and gaps. Scalable's simulation and modeling tools offer solutions to many everyday challenges faced by commercial enterprises,

## **Infineon Introduces Next-Generation Automotive Security Controller SLI37**

Munich, Germany – 26 October, 2021 – With increasing electrification and connectivity, vehicles are at greater risk of cyberattacks, which can have serious consequences. For this reason, it is crucial that automotive manufacturers provide adequate protection of telematics data. Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) therefore introduces the SLI37 automotive security controller: an easy to design in and reliable trust anchor to secure safety-critical automotive applications like 5G-ready eUICC (eCall), V2X communication, car access or SOTA updates.

The unique and robust chip design of the SLI37 offers an extended temperature range as well as a lifetime of 17 years. While it comes with benchmark quality resulting in very low failure rates, its biggest advantage is the ability to be used for multiple applications. For this reason, OEMs can focus on a single qualification and design-in process.

## **Ericsson's Laser-Powered Wireless 5G Ambitions**

Ericsson aspires to deliver 5G connectivity without linking to the power grid by wirelessly powering base stations with lasers. To that end, the infrastructure vendor has teamed up with laser specialist PowerLight Technologies to develop the first base station wirelessly powered by a laser. The pair have demonstrated a proof-of-concept (PoC) test in Seattle.

The demonstration used PowerLight's optical beaming laser powering a Streetmacro 6701, one of Ericsson's 5G millimeter wave (mmWave) base stations. Speaking with EE Times, Paul Challoner, head of network product solutions for Ericsson North America said of the test, "we're delivering hundreds of watts of power over hundreds of meters... that's the innovation."