FutureHorizons

The Global Semiconductor Industry Analysts

FH MONDAY

22 July 2019

Eta Compute's Low-Power Machine Learning Platform

Eta Compute has developed a high-efficiency ASIC and new artificial intelligence (AI) software based on neural networks to solve the problems of edge and mobile devices without the use of cloud resources.

read more

Arm Launches New Service to Combat Open-Source Alternatives

Arm has introduced a new program empowering system-on-chip (SoC) designers to experiment, evaluate and undertake full projects with a wide range of Arm IP before having to license it. Through its Flexible Access engagement model, Arm will charge a fee of $75,000 a year for one tape-out annually, or $200,000 a year for unlimited tape-outs.

read more

Micro-convective Cooling Emerges to Take the Heat

Processing-intensive applications ranging from AI chips and hyperscale datacenters to aerospace applications and all those devices being integrated into electric cars are generating boat-loads of heat. As conventional thermal management techniques fail to keep pace up with all that hot air, an MIT spinoff has come up with a new way to cool electronics.

read more

FutureHorizons

TALK TO US

Diamond Dust Used in the Fight Against Counterfeiting

Typically, when thinking about security, organizations may put their focus on IT security or even physical plant security but supply chain security, especially in the military/aerospace sector, is becoming a critically important component of any organizations multi-layered and comprehensive security stance

read more

EVENTS

Silicon Chip Industry Seminar

10 June - 2019 – London UK

Industry Forecast Briefing

– 17 Sept 2019 – London UK

DON'T MISS OUT.- BOOK NOW BY CALLING

+44 1732 740440

OR EMAIL

mail@futurehorizons.com

High Luminosity, Printable, Single-Layer OLED

Scientists at the Max Planck Institute for Polymer Research (MPI-P) in Mainz, Germany, have developed a new organic light-emitting diode (OLED) prototype that consists of just a single layer yet enables higher luminosity and efficiency compared to current commercially available OLEDs.

read more

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

Eta Compute's Low-Power Machine Learning Platform

Eta Compute has developed a high-efficiency ASIC and new artificial intelligence (AI) software based on neural networks to solve the problems of edge and mobile devices without the use of cloud resources.

Future mobile devices, which are constantly active in the IoT ecosystem, require a disruptive solution that offers processing power to enable machine intelligence with low power consumption for applications such as speech recognition and imaging.

Arm Launches New Service to Combat Open-Source Alternatives

Arm has introduced a new program empowering system-on-chip (SoC) designers to experiment, evaluate and undertake full projects with a wide range of Arm IP before having to license it. Through its Flexible Access engagement model, Arm will charge a fee of $75,000 a year for one tape-out annually, or $200,000 a year for unlimited tape-outs.

The program is a well-structured defensive maneuver. Smaller companies have been exploring RISC-V, a new open-source alternative to ARM, enticed by the lower up-front costs. Typically, partners and companies license individual components from Arm and pay a license fee upfront before they can access the technology. By removing the obligation to license its IP first, Arm expects the new program will extend silicon design opportunities not only for startups and other new customers, but current partners as well.

Micro-convective Cooling Emerges to Take the Heat

Processing-intensive applications ranging from AI chips and hyperscale datacenters to aerospace applications and all those devices being integrated into electric cars are generating boat-loads of heat. As conventional thermal management techniques fail to keep pace up with all that hot air, an MIT spinoff has come up with a new way to cool electronics.

After nearly five years of development, JetCool Technologies recently emerged from stealth mode with an approach it calls micro-convective cooling. The technology uses small fluid jets the company's CEO said can be integrated into electronic devices.

JetCool CEO Bernie Malouin said the ability to place the fluid jets adjacent to where heat is being generated would yield a ten-fold increase in cooling efficiency compared with the current state of the art. The startup also claims comparable size and weight reductions for aerospace applications.

Diamond Dust Used in the Fight Against Counterfeiting

Typically, when thinking about security, organizations may put their focus on IT security or even physical plant security but supply chain security, especially in the military/aerospace sector, is becoming a critically important component of any organizations multi-layered and comprehensive security stance. Electronics OEMs are looking for new and better ways to trace the products, whether microchips or motherboards, as they move from procurement to manufacturing to delivery to customers.

DUST Identity is betting that nanodiamond dust may be an answer, combined with a scanner and blockchain technology, may be the answer to a wealth of component counterfeiting threats. "Many times, the data exists but it's not relatable to the object," said Ophir Gaathon, CEO and co-founder of DUST. "That's the fundamental problem of being able to trust objects. The ability to trust things is rooted in the ability to know the object."

Scientists Develop High Luminosity, Printable, Single-Layer OLED

Scientists at the Max Planck Institute for Polymer Research (MPI-P) in Mainz, Germany, have developed a new organic light-emitting diode (OLED) prototype that consists of just a single layer yet enables higher luminosity and efficiency compared to current commercially available OLEDs.

The single-layer OLED is supplied with electricity via two electrodes. This simplifies the production of OLEDs and paves the way for printable displays with an inkjet printer.

With their first prototype, the scientists were able to show that they can generate a brightness of emitted light of 10,000 candela/square meter at just 2.9 volts — this corresponds to about 100 times the luminosity of modern screens. They claim that achieving such high luminosity at this low voltage is a record for current OLEDs. The researchers were also able to measure an external efficiency of 19%, which means that 19% of the electrical energy supplied is converted into light that comes out in direction of the viewer. With this value, the OLED prototype can compete with current OLEDs consisting of five or even more layers.

In continuous operation, the researchers were able to measure a so-called LT50 lifetime of almost 2000 hours at a brightness equivalent to ten times that of modern displays. Within this time, the initial luminosity drops to 50% of its value.