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TALK TO US

Startup Aims to Improve Chiplet Packaging

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EVENTS

Silicon Chip Industry Seminar

-March 2023– London UK

Industry Forecast Briefing

– January 2023– London UK

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Smarter Edge Equals Smarter Living Using AIoT

When smart homes began growing in popularity at the turn of the century, living smart meant using internet-connected devices with clever features. Two decades later, smart living has entered a new era of intelligent devices on the edge that are increasingly designed to make decisions.

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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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TATA Elxsi has opened a Digital Engineering center in Frankfurt, Germany, which will serve as a platform to bring together the company's talent and expertise in providing digital Engineering solutions for next-generation mobility, media and communications, and healthcare sectors.

Tata Elxsi's Frankfurt center will work closely with its OEMs, Tier 1, European technology companies, and universities to discover and develop new software (SW) and hardware (HW) design and engineering concepts driving business outcomes and adding value to customers across Europe.

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The new RISC-V CPU core is the centerpiece of a compute chiplet solution with chiplets supplied by different companies. Ventana's Veyron platform solution also enables integration of a flexible domain specific accelerator for hardware/software codesign. Ventana said the Veyron V1 is the first RISC-V processor to provide single thread performance that is competitive with the latest incumbent processors for data center, automotive, 5G, AI, and client applications. It said the Veyron V1's efficient microarchitecture also enables the highest single socket performance among competing architectures.

Sonic Lift-Off Tech Aims to Reduce Semiconductor Costs

Semiconductor device manufacturing requires the availability of high-quality wafers with perfectly flat and smooth surfaces. The quality of a wafer's surface is fundamental to ensuring high-performing and reliable devices. It is necessary to prevent the formation of impurities or surface irregularities that could introduce defects in the final component and lead to increased costs.

An innovative device lift-off and substrate reuse technology based on the power of sound, under development at Crystal Sonic, Inc., aims to lower per-device manufacturing costs substantially.

Today, nearly 50% of wide bandgap (WBG) device manufacturing costs are attributed to the substrate material. At the same time, WBG substrate wafer demand is ramping up, mainly driven by applications including automotive, solar inverters, motor, and wind inverters, particularly for silicon carbide (SiC).

Startup Aims to Improve Chiplet Packaging

Chiplets are getting a lot of interest as of late, so much so that a Universal Chiplet Interconnect Express (UCIe) consortium recently formed to corral best practices into a standard. Now, a Silicon Valley startup, Eliyan Corporation, is coming out of stealth mode to show it can contribute to the chiplet ecosystem with a more efficient approach to packaging.

Eliyan's high-performance chiplet interconnect addresses what the company believes is a critical need for a cost-effective way of connecting homogeneous and heterogenous architectures on a standard organic substrate, Eliyan CEO Ramin Farjadrad said in an interview with EE Times.

The "bunch of wires" (BoW) chiplet system can achieve similar bandwidth, power efficiency and latency as die-to-die implementations using advanced packaging technologies by using standard packaging, he said. "It opens up the door to significant possibilities and eliminates all the drawbacks and limitations of advanced packaging."

Smarter Edge Equals Smarter Living Using AIoT

When smart homes began growing in popularity at the turn of the century, living smart meant using internet-connected devices with clever features. Two decades later, smart living has entered a new era of intelligent devices on the edge that are increasingly designed to make decisions. That's according to the experts who spoke during a November panel talk titled "How Smart Can We Live?" as part of the Embedded Forum at electronica 2022 in Munich. Nitin Dahad, editor-in-chief of embedded.com, moderated the session.

"Smart devices started off with a lot of what now would be categorized as clever features," said Ali Osman Ors, director of artificial intelligence and machine-learning strategy and technologies for edge processing at NXP Semiconductors. "Now we're moving into the new definition where 'smart' means you have a lot of info coming from a very wide range of inputs coming to these devices, and with all of these inputs and data, the devices make a decision by themselves."