Faraday Enhances 3D-IC Design Service with Ansys Multiphysics Analysis

October 2, 2024

Ansys' certified semiconductor solutions will enable Faraday to shorten design cycles of 2.5D/3D-ICs and ensure designs meet signal integrity and performance goals

/ Key Highlights

- Faraday Technology Corporation will use Ansys RaptorX™ on-chip electromagnetic (EM) modeling solution to enhance the development of advanced packaging designs for 2.5D/3D integrated circuits (ICs)
- Ansys solutions will enable Faraday to optimize its interposer and multi-die designs, supporting better memory bandwidth, signal integrity, and performance of end applications

PITTSBURGH, Oct. 2, 2024 /PRNewswire/ -- Faraday Technology Corporation, a leading company in the semiconductor industry, is expanding its use of Ansys (NASDAQ: ANSS) technology to enhance its capabilities in developing advanced designs for multi-die 2.5D/3D-ICs — critical for artificial intelligence (AI), IoT, and 5G applications. With support from Ansys, Faraday will empower its customers to explore more robust design options for more innovative products.

Faraday, a leading application specific integrated circuits (ASIC) design service and IP provider, supports customers with chip design projects. Recently, Faraday announced a 2.5D/3D-IC advanced package service to address exploding demand for multi-die designs that target products with better performance and lower power consumption. To meet this demand, engineers need the right multiphysics analysis tools to verify that chip designs include reliable signal and structural integrity and reliable power distribution before it goes to fabrication. This challenge is compounded by the trend toward developing denser chips that are more vulnerable to EM issues.

Adding RaptorX into the design flow will enable Faraday to increase precision and efficiency in its development process. Moreover, it enables predictively accurate EM modeling and analysis for advanced 3D-IC products, ensuring data transfer meets stringent modern standards. This will improve the design's fidelity, enhance performance and reliability, and accelerate time-to-market.

"Our extensive silicon IP allows our customers to start designing from a solid foundation, enabling them to focus solely on innovation and differentiating themselves in the market," said C.H. Chien, vice president of R&D at Faraday. "Fabrication is exceptionally expensive and there is no room for error. So, keeping the overall project cost low is paramount, and it starts with the initial design. With the addition of RaptorX in this phase, we can offer customers an efficient workflow that includes design verification and signoff as well as access to top-tier test and fabrication services, removing doubts about the chip's performance and longevity."

"Ansys' focus on multiphysics platforms enables innovators like Faraday to address key challenges for 3D-IC and accelerate their time-to-market," said John Lee, vice president and general manager of the semiconductor, electronics, and optics business unit at Ansys. "Our industry-leading tools facilitate meticulous modeling and analysis of electromagnetic phenomena, helping our customers remain at the forefront of technological advancements in 5G, AI and IoT."

/ About Ansys

Our Mission: Powering Innovation that Drives Human Advancement™

When visionary companies need to know how their world-changing ideas will perform, they close the gap between design and reality with Ansys simulation. For more than 50 years, Ansys software has enabled innovators across industries to push boundaries by using the predictive power of simulation. From sustainable transportation to advanced semiconductors, from satellite systems to life-saving medical devices, the next great leaps in human advancement will be powered by Ansys.

Inc. or its subsidiaries in the United States or other countries. All other brand, product, service and feature names or trademarks are the property of their respective owners.

/ About Faraday Technology Corporation

Faraday Technology Corporation (TWSE: 3035) is dedicated to the mission of benefiting humanity and upholding sustainable values in every IC it handles. The company offers a comprehensive range of ASIC solutions, including total 2.5D/3D IC packaging, Arm Neoverse CSS design, FPGA-Go-ASIC, and design implementation services. Furthermore, its extensive silicon IP portfolio encompasses a wide array of offerings, such as I/O, Cell Library, Memory Compiler, ARM-compliant CPUs, LPDDR5/4/4X, DDR5/4/3, MIPI D-PHY, V-by-One, USB 3.1/2.0, 10/100 Ethernet, Giga Ethernet, SATA3/2, PCIe Gen4/3, and SerDes. For further information, visit http://www.faraday-tech.com/or follow Faraday on LinkedIn.

ANSS–C

/ Contacts

Media	Mary Kate Joyce 724.820.4368 marykate.joyce@ansys.com
Investors	Kelsey DeBriyn 724.820.3927 kelsey.debriyn@ansys.com

View original content to download multimedia:https://www.prnewswire.com/news-releases/faraday-enhances-3d-ic-design-service-with-ansys-multiphysics-analysis-302264792.html

SOURCE Ansys