Ansys 3D-IC Power Integrity and Thermal Solutions Certified for TSMC 3Dblox Reference Flow

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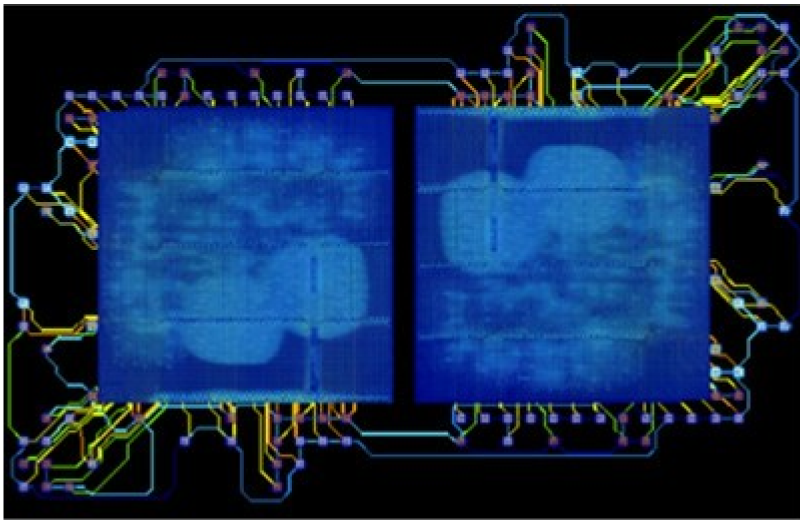
Ansys RedHawk-SC™ and RedHawk-SC Electrothermal™ are compliant with TSMC's 3Dblox™ for simpler and more efficient 3D-I implementation with TSMC 3DFabric™ technologies

/ Key Highlights

- **Ansys® Redhawk-SC™and Ansys® Redhawk-SC Electrothermal™ multiphysics power integrity and 3D-IC thermal integrity platforms are certified as compliant with TSMC's 3Dblox standard for 3D-IC design**
- **RedHawk-SC and RedHawk-SC Electrothermal are included in TSMC's 3Dblox Reference Flow for power integrity and thermal reliability signoff of designs using TSMC 3DFabric technologies**

PITTSBURGH, Oct. 26, 2022 /PRNewswire/ -- Ansys (NASDAQ: ANSS) has collaborated with TSMC to certify that Ansys RedHawk-SC™ and Ansys® Redhawk-SC Electrothermal™ are compliant with TSMC's 3Dblox™ standard for the exchange of design data between different tools in a 3D-IC design flow. The TSMC 3Dblox™ standard unifies its Open Innovation Platform® (OIP) design ecosystem with qualified EDA tools and flows for TSMC 3DFabric™, the world's most comprehensive family of 3D silicon stacking and advanced packaging technologies. RedHawk-SC and Redhawk-SC Electrothermal are also included in TSMC's Reference Flow for 3Dblox.



Many of the world's most advanced silicon systems for high performance computing, artificial intelligence, machine learning, and graphic processing are made possible thanks to 3D-IC. Both TSMC's 3Dblox standard and the reference flow will make it easier and more efficient for Ansys 3D-IC Multiphysics Power Integrity and Thermal solutions to interoperate seamlessly with tools from other vendors when designing multi-chip systems for TSMC 3DFabric™ technologies.

"TSMC's advanced 3DFabric technologies and manufacturing expertise have been on the forefront of enabling the industry-wide trend toward multi-chip 3D-IC semiconductor systems," said Dan Kochpatcharin, head of Design Infrastructure Management Division at TSMC. "3D-IC systems represent a significant leap in complexity and more multiphysics challenges that we are helping to address with our 3Dblox standard and a reference flow of certified tools. This joint effort with our ecosystem partners makes the system-level design using 3DFabric technologies easier and more efficient."

3Dblox is designed to make modular top-down design of complex 2.5D and 3D systems easier and also to promote chiplet reuse. As a standardized interface format for design data, it makes it easier for TSMC's customers to take full advantage of the many technology configurations available under TSMC's 3DFabric technologies, including CoWoS®, InFO, TSMC-SoIC™, and more. The reference flow provides strong guidance on multiphysics solutions like RedHawk-SC that are certified to address real design challenges in an open platform approach.

Ansys RedHawk-SC ElectroThermal is integrated within the high-capacity cloud-native SeaScape platform and supports multi-chip 2.5D/3D-IC packages thermal integrity analysis. It can be used for early-design exploration, post-layout design verification, and silicon signoff of multi-die systems.

"Designers taking on the multiphysics challenges of 3D-IC design have looked to Ansys for its unparalleled breadth and depth of analysis and simulation capabilities that provide proven solutions at both the chip level and the system level," said John Lee, vice president and general manager of the semiconductor, electronics, and optics business unit at Ansys. "Our partnership with TSMC keeps Ansys products at the forefront of silicon technology and helps designers realize the greatest possible benefit from the latest process and 3DFabric innovations."

/ About Ansys

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.
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/ Contacts

Media Mary Kate Joyce
724.820.4368
marykate.joyce@ansys.com

Investors Kelsey DeBriyn
724.820.3927
kelsey.debriyn@ansys.com

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