Synopsys and Samsung Foundry Collaboration Delivers High-Performance Physical Signoff on Samsung SAFE Cloud Design Platform

IC Validator Delivers 30 Percent Compute Savings with Dynamic Elastic CPU on Cloud

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Highlights:

- Collaboration enables on-demand IC Validator physical signoff on Samsung SAFE Cloud Design Platform
- Synopsys IC Validator cloud optimized technology enables massive scaling and efficient resource usage for fast design closure
- Rescale and Microsoft Azure provide cloud-based, high-performance computing platform to instantly scale out computationally complex physical verification jobs

Synopsys, Inc. (Nasdaq: SNPS) today announced that its IC Validator physical verification solution has been deployed on Samsung's SAFE Cloud Design Platform (SAFE-CDP). This collaboration enables designers targeting Samsung Foundry advanced process nodes to achieve significant compute resource savings of up to 30 percent and faster signoff.

Mutual customers of Synopsys and Samsung Foundry can leverage IC Validator and Samsung Foundry process technology on the SAFE CDP platform, powered by the high-performance computing (HPC) resources from Rescale and Microsoft Azure. IC Validator, an integral part of the Synopsys Fusion Design Platform™ and Custom Design Platform™, delivers advanced distributed processing and elastic CPU technologies to accelerate physical verification closure, drastically increasing productivity with the highest accuracy on Samsung advanced process technology.

"Turnaround time for physical verification has become critical at advanced nodes and our mutual customers need a cloud-based solution to accelerate physical verification productivity and overall design closure," said Sangyun Kim, vice president of Foundry Design Technology Team at Samsung Electronics. "Synopsys IC Validator is optimized for on-demand physical signoff on Samsung SAFE Cloud Design platform, delivering significantly improved turnaround time and efficient resource usage."

"Rescale is proud to provide the HPC infrastructure that powers the SAFE platform for fabless design in the cloud," said Joris Poort, CEO of Rescale. "We share Samsung's vision that the cloud can accelerate product innovation and provide superior usability and economics across so many EDA workflows, and we're very excited to see that Synopsys brought its leading physical verification solution to Samsung SAFE, giving designers an on-demand access to HPC cloud computing to accelerate physical signoff and significantly reduce compute resources costs."

IC Validator is a comprehensive and highly scalable physical verification solution that includes design rule checking, layout-versus-schematic, programmable electrical rule checks, dummy metal fill and design-for-manufacturability enhancement capabilities. IC Validator is architected for high performance and scalability, which maximizes utilization of mainstream hardware, using smart memory-aware load scheduling and balancing technologies. It uses both multi-threading and distributed processing across multiple machines to provide scalability benefits that extend to thousands of CPUs. IC Validator's elastic CPU technology dynamically assigns and releases CPU resources, delivering optimal resource utilization and reduced compute costs.

"As designers adopt advanced technology nodes, physical verification closure within schedule is becoming a major challenge, and tapeout delays can dramatically impact our customers' product profitability," said Raja Tabet, senior vice president of engineering, Custom Design and Physical Verification Group at Synopsys. "By partnering with Samsung Foundry, Synopsys makes it easier for our mutual customers by enabling a new go-to-market cloud-based access to our leading physical verification solution."

Mujtaba Hamid, Head of Silicon and Electronics Industry at Microsoft Azure added, "Microsoft Azure enables silicon design teams to tape out chips with ever increasing transistor counts in a secure and cost-effective manner through an EDA-optimized, scalable cloud infrastructure. Synopsys IC Validator is optimized to run on Microsoft Azure cloud and able to scale to thousands of cores, accelerating overall physical verification closure."

Learn more about this collaboration and Synopsys IC Validator's new technologies in the Samsung Foundry and Synopsys webinar, "Efficient and Fast Physical Verification on the Cloud."

About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As an S&P 500 company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and offers the industry's broadest portfolio of application security testing tools and services. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing more secure, high-quality code, Synopsys has the solutions needed to deliver innovative products. Learn more at www.synopsys.com.

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