GF and Synopsys Deliver New Reference Flows for GF 22FDX Process: Cloud-Qualified and First Automotive Flow for ASIL-D Designs

Process Design Kit and Qualified Reference Flows Accelerate Development of High-Performance Automotive, Edge AI and 5G SoCs

SANTA CLARA, Calif. and MOUNTAIN VIEW, Calif., Sept. 15, 2021 /PRNewswire/ -- GlobalFoundries® (GF), the global leader in specialty semiconductor manufacturing, and Synopsys, Inc. (Nasdaq: SNPS) today announced that GF has qualified two key Synopsys reference flows for its 22FDX™ process:

- The qualification of the Synopsys reference flow on Amazon Web Services (AWS) enables scalable execution of in-system test, implementation, verification, timing and physical signoff, providing a seamless path to creating high-growth applications such as 5G mmWave, edge AI and internet of things (IoT) in the cloud
- The demonstration of an automotive reference flow that enables the efficient development of Automotive Safety Integrity Level (ASIL) D-Compliant design components is the first of its kind for the GF 22FDX process and helps accelerate time-to-market for ISO 26262-compliant products

Designing in the public cloud offers speed and efficiency advantages by overcoming compute capacity bottlenecks and utilizing dynamic scaling at all stages of the design. The qualified reference flow on cloud is a result of a multi-year collaboration on co-optimized tools and methodologies that maximize the power, performance and area benefits of the GF 22FDX process.

The automotive reference flow enabling ASIL-D designs on GF's 22FDX process provides designers with a comprehensive solution for functional safety analysis, implementation and verification of ADAS, powertrain, 5G and radar systems. The flow utilizes the Synopsys RTL-to-GDSII native functional safety design implementation solution and DesignWare® ARC® Processor IP.

"Built for highly scalable workloads, the reference flow for GF's 22FDX process is proven on fast, secure and efficient cloud infrastructure for a broad spectrum of SoC applications," said Jacob Avidan, senior vice president of engineering for the Digital Design Group at Synopsys. "Designers will be able to address growing computational demands for design and verification, accelerating their innovation on the cloud."

Avidan also said, "As for automotive designs, the longstanding collaboration between Synopsys and GF has delivered the platform and IP needed for seamless adoption of the 22FDX process for automotive designs. Deploying the industry's first automotive reference flow for 22FDX enables designers to accelerate time to silicon success and meet their stringent ASIL and reliability targets."

"With its optimized performance, low power consumption, automotive-grade temperature offering and broad feature integration capability, GF's 22FDX platform is the solution of choice for designers and innovators working at the forefront of technology," said Mark Ireland, vice president of Ecosystem and Design Solutions at GF. "Our collaboration with Synopsys helps our customers quickly and easily develop innovative solutions now certified to work on public cloud and is one of many design enablement collaborations with Synopsys that help ensure design platform readiness for our customers."

Reference Flow Resources

- Design tools used for the RTL-to-GDSII reference flow include Synopsys Design Compiler® synthesis solution, IC Compiler™ II place-and-route solution, Formality® RTL equivalence checking tool, StarRC™ parasitic extraction solution, PrimeTime® signoff solution and IC Validator physical verification solution
- Open-source RISC core was designed using the foundry-sponsored Synopsys DesignWare® 9-Track Logic Library IP for GF 22FDX
- Secure cloud environment setup on AWS
- Automotive reference flow utilizes DesignWare ARC® EM Processor IP featuring automated safety mechanism insertion using Synopsys TestMAX FuSa static analysis for functional safety, Design Compiler, IC Compiler II and Formality

For more information on silicon design in the cloud, visitwww.synopsys.com/cloud.

For more information on GF's 22FDX platform,click here.

About GF

GlobalFoundries (GF) is the world's leading specialty foundry. GF delivers differentiated feature-rich solutions that enable its clients to develop innovative products for high-growth market segments. GF provides a broad range of platforms and features with a unique mix of design, development and fabrication services. With an at-scale manufacturing footprint spanning the U.S., Europe and Asia, GF has the flexibility and agility to meet the dynamic needs of clients across the globe. GF is owned by Mubadala Investment Company. For more information, visit www.globalfoundries.com.

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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