Synopsys Design Platform Certified by GLOBALFOUNDRIES for 22FDX Process Technology

Certification Enables Optimized Implementation and Predictable Signoff

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Highlights:

- Certified IC Compiler II, IC Validator, PrimeTime, and StarRC tools for implementation and signoff of 22FDX designs
- Based on silicon-proven RTL-to-GDS 22FDX Foundry Reference Flow, utilizing automated UPF-driven bias voltage support
- Certified with Synopsys' high-performance DesignWare Embedded Vision Processor IP; applies real-world requirements for optimal performance, power, and area

Synopsys, Inc. (Nasdaq: SNPS) today announced that GLOBALFOUNDRIES (GF) has certified the Synopsys Design Platform for the GF 22nm FD-SOI (22FDX™) process, ensuring designers achieve optimized implementation and predictable signoff results using industry leading digital design tools. This certification leveraged the silicon-proven GF Foundry Reference Flow for the Synopsys Design Platform, architected to realize the full potential of GF's 22FDX process. IEEE 1801 (UPF)-driven bias voltage support throughout the flow enables optimal power and performance tradeoff during design implementation.

"GF worked closely with Synopsys to complete the rigorous certification process of the Synopsys Design Platform on our 22FDX process platform," said Jai Durgam, vice president, Customer Design Enablement at GLOBALFOUNDRIES. "The Synopsys tools support 22FDX capabilities such as voltage dependent spacing rules, continuous-diffusion aware placement and optimal bias tap cell insertion in IC Compiler II. Having a reference flow with certified tools enables our mutual customers to take advantage of the technology differentiation, which offers FinFET-like performance and energy efficiency at a cost comparable to 28-nm planar technologies."

Key tools and features of the Synopsys Design Platform certified for the 22FDX process include:

- IC Compiler™ II layout with physical implementation support for non-uniform library floorplanning, implant-aware placement, multi-rail routing, and advanced power mesh creation
- IC Validator physical signoff tool for In-Design verification, enabling early and accurate timing-aware metal fill with support for high performance DRC- and LVS-aware short finder
- StarRC™ parasitic extraction for multi-rail signoff with support for multi-valued standard parasitic exchange format (SPEF)
- PrimeTime® timing analysis and signoff including DMSA static timing and noise analysis, using AOCV and POCV technology

"Our broad collaboration with GLOBALFOUNDRIES has been focused on delivering the platform and IP needed for seamless adoption of the FD-SOI technology at 22 nanometers and smaller geometries," said Michael Jackson, corporate vice president of marketing and business development for Synopsys' Design Group. "Together, Synopsys' full ecosystem solution and GLOBALFOUNDRIES' FDX technology are enabling designers to take advantage of the performance and power benefits offered by this process."

To certify their process platform with a real-world complex hierarchical design that requires the best performance in the smallest possible area and power budget, GF selected the DesignWare® EV61 Embedded Vision Processor with a convolutional neural network (CNN) engine configured for 880 MACs. DesignWare EV6x Vision Processor IP is a family of fully programmable and configurable vision processors that integrates scalar, vector DSP and CNN processing units for highly accurate and fast vision processing. Supported by a comprehensive software programing environment including the ARC® MetaWare EV Toolkit, the EV6x Vision Processors offer SoC designers a flexible, power-efficient embedded vision solution for a wide range of automotive, industrial and consumer applications.

Availability

Design enablement for the GF 22FDX process is available today from GF. For more information on the ongoing collaboration between Synopsys and GF, please visit www.synopsys.com/GLOBALFOUNDRIES.

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 the world's 15th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and is also growing its leadership in software security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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