AMF Photonics SiP Process Design Kit Available for Synopsys OptoDesigner Photonic IC Layout Solution

MOUNTAIN VIEW, Calif., Nov 5, 2018 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS) and Advanced Micro Foundry (AMF) today announced that a new, production-ready process design kit (PDK) based on AMF's silicon photonics (SiP) process is now available in the Synopsys OptoDesigner photonic integrated circuit (PIC) layout software.

Synopsys is driving the advancement of PIC technologies with its PIC Design Suite, which comprises the OptSim Circuit and OptoDesigner tools. The suite offers a seamless PIC design flow with photonic-aware physical layout capabilities enabled by support for foundry-specific PDKs. PDKs provide a crucial link between photonic circuit simulation and layout tools by supporting efficient design concept verification, signoff checks, and mask generation.

The AMF PDK includes passive and active photonic components optimized for 1550 and 1310 nm communications wavelengths, including high-speed modulators, low loss couplers, polarization components, and high-bandwidth photo detectors. AMF's silicon photonics offerings include MPW runs, customized platform development, 200-millimeter volume manufacturing, integrated MEMS optical assemblies, packaging, and opto-electric testing.

"We are excited to partner with AMF to help designers accelerate the development of advanced photonic applications using AMF's silicon photonics processes," said Tom Walker, group director of R&D for Synopsys' Photonic Solutions. "OptoDesigner users can quickly verify and synthesize SiP-based PIC layouts for fabrication to support high-speed data communications and advanced sensing applications."

"Our collaboration with Synopsys enables our customers to access a full suite of AMF's device library with ready-to-use passive and active functional blocks through decade long development efforts," said Dr. Tan Yong Tsong, CEO of AMF. "Our customers can look forward to shortening design cycles and time to market."

About Advanced Micro Foundry

Advanced Micro Foundry (AMF) specializes in customizable prototyping and volume wafer manufacturing services for silicon photonics integrated circuits. AMF manufacturing services are the backbone technology to a global customer base in the emerging markets of data centers, telecom, automotive, medical, and environmental sensors.

A spin-off from IME, A*STAR, AMF was incorporated in 2017. AMF's core technology has been globally acclaimed as technology par excellence over the last decade and widely deployed in multiple markets.

AMF offers foundry services which enable customers to develop and manufacture integrated photonics chips for a broad range of applications—cloud computing, cloud security, 5G communications, autonomous vehicles and diagnostic chips. AMF services are offered in the format of customizable technology platforms based on silicon, silicon on insulator (SOI), silicon nitride (SiN), and germanium materials. Learn more at http://www.advmf.com.

About Synopsys Photonic Solutions

Synopsys is driving the PIC revolution with design automation solutions for a wide range of application requirements, from data communications to sensors and biomedical devices. Synopsys' PIC Design Suite, which comprises the OptSim Circuit and OptoDesigner tools, offers a seamless PIC design flow from concept to manufacturable design, as well as access to a single, world-class support channel. Learn more at https://www.synopsys.com/photonic-solutions.html.

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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