

# Synopsys and TSMC Jointly Develop Interoperable Process Design Kit (iPDK) and Interoperable Ecosystem

TSMC Adopts Synopsys Galaxy Custom Designer as iPDK Development and Validation Platform

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MOUNTAIN VIEW, Calif., July 21 /PRNewswire-FirstCall/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced that Synopsys and TSMC have entered into a comprehensive multi-year agreement to jointly develop, validate, support and distribute interoperable process design kits (iPDKs) that are optimized for TSMC advanced semiconductor processes including the 65-nanometer (nm), 40-nm and 28-nm nodes. The agreement is the culmination of a two-year collaboration to establish an interoperable PDK ecosystem that can accelerate and broaden designer access to new process nodes, promote design reuse and enable greater analog, mixed-signal and RF design innovation. Additionally, TSMC has adopted Synopsys' Galaxy Custom Designer™ implementation solution as its iPDK development and validation platform.

"We are creating new business models and innovations such as iPDK under TSMC's Open Innovation Platform™," said ST Juang, senior director of Design Infrastructure Marketing at TSMC. "Synopsys has a highly skilled and dedicated team with expertise in developing advanced, high-quality interoperable PDKs, and offers the industry's most open custom design platform that supports iPDKs. This collaborative approach will help to more quickly deliver iPDKs to our mutual customers so that they can begin capitalizing on the benefits of an interoperable ecosystem."

Synopsys was lead developer in the collaborative effort to develop and validate a complete TSMC 65-nm iPDK. Working directly with the TSMC PDK development team and other EDA vendors, Synopsys developed an iPDK that supports the analog, mixed-signal and RF flow on multiple EDA vendor tools. Synopsys and TSMC also collaborated on implementing a comprehensive iPDK development and validation solution based on Custom Designer. TSMC validated its recently-announced 65-nm iPDK to work with Synopsys' custom design solution, including Custom Designer, HSPICE® circuit simulation, CustomSim™ circuit simulation, IC Validator/Hercules™ LVS/DRC and Star-RCXT™ extraction.

"Open standards are the catalyst for accelerating innovation, increasing competition and fostering growth in the electronics industry," said Paul Lo, senior vice president and general manager of the Analog/Mixed-Signal Group at Synopsys. "Synopsys' open-environment custom design platform and interoperable PDK expertise, coupled with TSMC's comprehensive PDK production capability, has enabled us to move the industry forward to realize the benefits of an interoperable custom design ecosystem. This is a major step for the entire semiconductor industry."

## About Synopsys

Synopsys, Inc. (NASDAQ: SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, software-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in

bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has more than 65 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <http://www.synopsys.com>.

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