# Synopsys' PSM Technology Adopted by Sony Corporation for Production of High-Performance System LSIs

Synopsys' PSM Technology Enables Higher Yield for High-Performance Products

PRNewswire-FirstCall
MOUNTAIN VIEW, Calif.

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced that Sony Corporation has adopted Synopsys' alternating aperture phase-shift mask (AA-PSM) technology to enhance manufacturability of its high-performance chips. AA-PSM technology, which is part of Synopsys' comprehensive design for manufacturing (DFM) product family, enables manufacturability improvements through increased lithography resolution, enhanced yields, decreased leakage current and better chip performance.

Synopsys' phase-shifting software and technology has been validated with production silicon since the 130-nanometer (nm) node and is the only commercially available strong phase-shifting technology being used by several leading-edge semiconductor companies in IC production. For designers, the benefit of this technology is tighter control of critical dimension (CD), the width of feature sizes on the silicon, and enhanced lithography resolution which is critical at the 65-nm node and beyond. This tighter CD results in increased chip performance and higher yield, which means more dies on the wafer meet design specifications.

"Our ability to support Sony's industry-leading production ramp of their advanced process nodes demonstrates our PSM technology's continued value in a production environment," said Anantha Sethuraman, vice president of marketing for DFM, Synopsys. "This validates Synopsys' leadership position in providing a comprehensive DFM solution for high-yield designs."

About Synopsys DFM

Synopsys offers the industry's most comprehensive design for manufacturing (DFM) solution that spans from RTL to silicon. Its DFM product family addresses critical manufacturability and yield issues with the following DFM products: Hercules™ physical verification, Proteus mask synthesis, CATS® mask data preparation, SiVL® lithography verification, patented PSM technology, and physics-based TCAD suite of simulation products. Its production-proven phase-shifting technology and software enables semiconductor manufacturers to more reliably and cost-effectively fabricate subwavelength integrated circuits (ICs) using available optical lithography equipment. This technology has been used to fabricate transistors as small as 9 nanometers using 248-nm lithography equipment -- dramatically smaller than the 30-nm transistors used at the 65-nm process node. Synopsys' Manufacturing Yield Management (MYM) solutions extend directly into the fab, providing customers real time access to the yield data and the analysis capability needed to reduce random, systematic and parametric defects. This accelerates the introduction of new designs by significantly reducing the time it takes to get from concept to manufacturing. Synopsys takes a systematic approach to design for manufacturing that makes intelligent use of design and manufacturing data throughout its entire flow to help ensure that designs at 65 nanometers (nm) and smaller geometries will achieve desired yield goals.

About Synopsys

Synopsys, Inc. is a world leader in EDA software for semiconductor design. The company delivers technology-leading semiconductor design and verification platforms and IC manufacturing software products to the global electronics market, enabling the development and production of complex systems-on-chips (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time-to-market for its customers. Synopsys is headquartered in Mountain View, California and has offices in more than 60 locations throughout North America, Europe, Japan and Asia. Visit Synopsys online at http:/www.synopsys.com.

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