UMC and Synopsys Collaboration Speeds 14-nm Custom Design

Custom Compiler Visually-Assisted Technology Reduces FinFET Layout Effort for UMC Customers

MOUNTAIN VIEW, Calif. and HSINCHU, Taiwan, March 14, 2017 /PRNewswire/ --

Highlights:

- Custom Compiler support brings visually-assisted automation to UMC customers
- New industry-standard interoperable process design kit (iPDK) and tool flow validated for UMC's 14-nm process
- 14-nm FinFET iPDK joins a broad set of iPDKs available for other UMC processes

Synopsys, Inc. (Nasdaq: SNPS) and United Microelectronics Corporation (NYSE: UMC; TWSE: 2303) (UMC) today announced that the two companies have worked together to enable Synopsys Custom Compiler™ and Laker® custom design tools to be used with UMC's 14-nanometer (nm) FinFET process. The enablement collaboration included creating and validating a UMC 14-nm industry-standard iPDK. This iPDK enables full support of the Custom Compiler visually-assisted layout flow, including groundbreaking features that reduce the time it takes for users to layout and connect FinFET devices. The Custom Compiler solution integrates with Synopsys circuit simulation, physical verification and digital implementation tools to provide UMC 14-nm process users with a complete custom design solution.

"We have a long history of working with Synopsys to provide iPDKs for our customers," said T.H. Lin, director of the IP Development and Design Support division at UMC. "This new 14-nanometer iPDK enables layout designers, including our own internal team, to use Synopsys' custom design tools for FinFET layout productivity. We are pleased to offer this resource to help customers streamline their design-in process on our volume-production 14-nanometer technology."

"FinFET process technology is becoming very popular with our customers, but FinFET layout can be a challenge," said Bijan Kiani, vice president of product marketing at Synopsys. "We collaborated with UMC to enable Custom Compiler for their 14-nanometer process, so UMC customers can use Custom Compiler's visually-assisted layout to improve FinFET layout productivity."

Availability

The 14-nm and other process iPDKs for Synopsys Laker and Custom Compiler design tools are available on request from UMC.

About Custom Compiler

Custom Compiler provides an open environment spanning schematics, simulation analysis and layout. Unified with Synopsys' circuit simulation, physical verification and digital implementation tools, Custom Compiler provides a comprehensive custom design solution. Custom Compiler shortens the time it takes to complete FinFET design tasks from days to hours. Its visually-assisted automation leverages the graphical use model familiar to layout designers while eliminating the need to write complicated code and constraints. With Custom Compiler, routine and repetitive tasks are dealt with automatically without extra setup. Custom Compiler's visually-assisted automation provides four types of assistants: Layout, In-Design, Template and Co-Design. Layout Assistants speed layout with user-guided automation of placement and routing. In-Design Assistants reduce design iterations by catching physical and electrical errors before signoff verification. Template Assistants help designers reuse existing know-how by making it easy to apply previous layout decisions to new designs. Co-Design Assistants combine the IC Compiler™ place-and-route solution and Custom Compiler into a unified solution for custom and digital implementation. Custom Compiler is based on the industry standard Open Access database. For more information about Custom Compiler, visit https://www.synopsys.com/implementation-and-signoff/custom-implementation/custom-compiler.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.

About UMC

UMC (NYSE: UMC, TWSE: 2303) is a leading global semiconductor foundry that provides advanced IC production for applications spanning every major sector of the electronics industry. UMC's robust foundry solutions enable chip designers to leverage the company's sophisticated technology and manufacturing, which include high volume production 28nm gate-last High-K/Metal Gate technology, ultra-low power platform processes specifically engineered for Internet of Things (IoT) applications and the automotive industry's highest-rated AEC-Q100 Grade-0 manufacturing capabilities for production of ICs found in cars. UMC's 11 wafer fabs are strategically located throughout Asia and are able to produce over 500,000 wafers per month. The company employs nearly 19,000 people worldwide, with offices in Taiwan, China, Europe, Japan, Korea, Singapore, and the United States. UMC can be found on the web at http://www.umc.com.

Editorial Contacts:
Carole Murchison
Synopsys, Inc.
650-584-4632
carolem@synopsys.com

Richard Yu
UMC
(886) 2-2658-9168 ext. 16951
richard_yu@umc.com

SOURCE Synopsys, Inc.