

# Synopsys and UMC Expand 14-nm FinFET Collaboration to Include DesignWare Embedded Memory and Test Solutions

Collaboration Follows Silicon Success of Synopsys DesignWare Logic Libraries and Tools in First UMC 14-nm FinFET Process Qualification Vehicle

MOUNTAIN VIEW, Calif. and HSINCHU, Taiwan, June 21, 2015 /PRNewswire/ --

## Highlights:

- UMC and Synopsys develop second UMC 14-nm process qualification vehicle (PQV), demonstrating both companies' ongoing investment in accelerating DesignWare IP adoption on UMC's 14-nm FinFET process
- Second UMC 14-nm FinFET PQV includes DesignWare Embedded Memories and DesignWare STAR Memory System
- Expanded collaboration follows silicon success of 14-nm FinFET PQV containing Synopsys DesignWare Logic Library IP and utilizing StarRC parasitic extraction tool

Synopsys, Inc. (Nasdaq:SNPS) and United Microelectronics Corporation (NYSE:UMC;TWSE: 2303) ("UMC") today announced an expanded collaboration to include Synopsys [DesignWare® Embedded Memory IP](#) and the [DesignWare STAR Memory System® test and repair solution](#) on UMC's second 14-nanometer (nm) FinFET process qualification vehicle (PQV). The PQV provides additional silicon data, enabling UMC to further tune its 14-nm FinFET process for optimal power, performance and area. This PQV follows the successful tapeout and silicon bring-up of the first UMC 14-nm FinFET PQV containing Synopsys [DesignWare Logic Libraries](#) and utilizing the StarRC™ parasitic extraction tool.

"Our expanded collaboration with UMC demonstrates our mutual goal to help designers incorporate DesignWare IP into their SoCs on UMC processes," said John Koeter, vice president of marketing for IP and prototyping at Synopsys. "With more than 45 FinFET test chip tapeouts, Synopsys continues to make significant investments in providing high-quality IP for FinFET processes, enabling designers to lower integration risk and speed their time to volume production."

"In addition to developing a competitive 14-nanometer process for the most advanced IC applications, UMC is creating a highly comprehensive support infrastructure to accelerate the design-in process for 14-nanometer customers," said Steve Wang, vice president of UMC's IP and Design Support division. "Following our success with Synopsys on the previous 14-nanometer process qualification vehicle, this collaboration to bring Synopsys' high-quality DesignWare IP to our most advanced node will help our mutual customers realize additional power, performance and cost benefits."

## Availability

UMC's 14-nm FinFET process has demonstrated favorable 128Mb SRAM yields and is expected to be ready for customer tapeout by late 2015.

## 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 28nm gate-last High-K/Metal Gate technology, ultra-low power platform processes specifically engineered for Internet of Things (IoT) applications and the highest-rated AEC-Q11 Grade-0 automotive industry manufacturing capabilities. UMC's 10 wafer fabs are located throughout Asia and are able to produce over 500,000 wafers per month. The company employs over 17,000 people worldwide, with offices in Taiwan, mainland China, Europe, Japan, Korea, Singapore, and the United States. UMC can be found on the web at <http://www.umc.com>.

## 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 a leader in software quality and security testing with its Coverity® solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest quality and security, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at [www.synopsys.com](http://www.synopsys.com)

### **Note from UMC Concerning Forward-Looking Statements**

Some of the statements in the foregoing announcement are forward looking within the meaning of the U.S. Federal Securities laws, including statements about future outsourcing, wafer capacity, technologies, business relationships and market conditions. Investors are cautioned that actual events and results could differ materially from these statements as a result of a variety of factors, including conditions in the overall semiconductor market and economy; acceptance and demand for products from UMC; and technological and development risks. Further information regarding these and other risks is included in UMC's filings with the U.S. Securities and Exchange Commission, including its registration statements and reports on Forms F-1, F-3, F-6 and 20-F and 6-K, in each case as amended. UMC does not undertake any obligation to update any forward-looking statement as a result of new information, future events or otherwise, except as required under applicable law.

### **Editorial Contacts:**

UMC  
Richard Yu  
(886) 2-2658-9168 ext. 16951  
[richard\\_yu@umc.com](mailto:richard_yu@umc.com)

Monica Marmie  
Synopsys, Inc.  
650-584-2890  
[monical@synopsys.com](mailto:monical@synopsys.com)

Stephen Brennan  
MCA, Inc.  
650-968-8900, ext.114  
[sbrennan@mcapr.com](mailto:sbrennan@mcapr.com)

SOURCE Synopsys, Inc.

---