



July 14, 2014

## Cypress Licenses 55-Nanometer Embedded Flash IP to UMC

### Cost-Effective SONOS Embedded Nonvolatile Memory Delivers High-Yield, Scalable Process for Next-Generation Smart Cards, Microcontrollers and Internet of Things Applications

SAN JOSE, CA -- (Marketwired) -- 07/14/14 -- Cypress Semiconductor Corp. (NASDAQ: CY), a leading provider of embedded nonvolatile memory solutions, and United Microelectronics Corporation (NYSE: UMC) (TWSE: 2303) ("UMC"), a leading global semiconductor foundry, today announced that UMC licensed Cypress's SONOS (Silicon Oxide Nitride Oxide Silicon) embedded Flash memory intellectual property (IP) for the 55-nanometer process technology node. Cypress SONOS delivers an easy-to-integrate nonvolatile memory cell with unmatched scalability for future development. The primary applications include wearables, Internet of Things (IoT) applications, microcontrollers and logic-dominated products.

Cypress's 55-nm SONOS embedded nonvolatile memory (NVM) process provides significant advantages over other embedded NVM offerings. SONOS requires fewer additional mask layers to insert it into a standard CMOS process, specifically, three to four additional masks compared with the eleven to twelve additional masks generally needed for other embedded Flash technologies. SONOS does not alter standard device characteristics or models when added to baseline CMOS process, preserving existing design IP. SONOS delivers intrinsically high yields and reliability, 10 years of data retention, 100,000 program/erase endurance cycles, and robust resistance to soft errors. UMC qualified Cypress's S65™ 65-nm SONOS process technology back in 2013. Cypress and UMC have demonstrated the ability to scale SONOS to smaller nodes, expediting future IP development.

"With support from our semiconductor IP ecosystem partners, UMC plans to establish more value-added technology platforms to serve future low power, highly integrated IC designs, such as IoT and wearables," said S.C. Chien, vice president of Specialty Technology Development at UMC. "We are pleased to collaborate with Cypress to bring our customers the benefits of 55-nm SONOS, which include robust performance at favorable cost and proven high yields. Based on UMC's previous success for specialty processes such as RF, BCD, HV, CIS and eFlash technologies, we plan to leverage Cypress's easily integrated nonvolatile memory IP at 55nm to fulfill different application requirements for nonvolatile memory IP specifications."

"Cypress is committed to working with industry leaders such as UMC to enable the adoption of our SONOS IP as the embedded nonvolatile memory of choice," said Sam Geha, Vice President of the Technology and Intellectual Property Business Unit at Cypress. "The 55-nm SONOS process is ready at the right time to meet strong market demand from UMC's broad range of customers. Many new products that address rapidly growing markets, including smart cards, bank cards, wearables and the Internet of Things, can benefit from the low cost, high performance and reliability of SONOS."

#### **About UMC**

UMC (NYSE: UMC) (TWSE: 2303) is a leading global semiconductor foundry that provides advanced technology and manufacturing for applications spanning every major sector of the IC industry. UMC's robust foundry solutions allow chip designers to leverage the company's leading-edge processes, which include 28nm poly-SiON and gate-last High-K/Metal Gate technology, mixed signal/RFCMOS, and a wide range of specialty technologies. Production is supported through 10 wafer manufacturing facilities that include two advanced 300mm fabs; Fab 12A in Taiwan and Singapore-based Fab 12i. Fab 12A consists of Phases 1-4 which are in production for customer products down to 28nm. Construction has been completed for Phases 5&6, with future plans for Phases 7&8. The company employs over 15,000 people worldwide and has 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>.

#### **Follow Cypress Online**

- | Join the [Cypress Developer Community](#).
- | Follow @CypressSemi on [Twitter](#).
- | Visit us on [Facebook](#) and [LinkedIn](#).
- | View Cypress videos on our [Video Library](#) or [YouTube](#).

#### **About Cypress**

Cypress delivers high-performance, mixed-signal, programmable solutions that provide customers with rapid time-to-market

and exceptional system value. Cypress offerings include the flagship PSoC<sup>®</sup> 1, PSoC 3, PSoC 4 and PSoC 5LP programmable system-on-chip families. Cypress is the world leader in capacitive user interface solutions including CapSense<sup>®</sup> touch sensing, TrueTouch<sup>®</sup> touchscreens, and trackpad solutions for notebook PCs and peripherals. Cypress is a world leader in USB controllers, which enhance connectivity and performance in a wide range of consumer and industrial products. Cypress is also the world leader in SRAM and nonvolatile RAM memories. Cypress serves numerous major markets, including consumer, mobile handsets, computation, data communications, automotive, industrial and military. Cypress trades on the NASDAQ Global Select Market under the ticker symbol CY. Visit Cypress online at [www.cypress.com](http://www.cypress.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, 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.

Cypress, the Cypress logo, PSoC, CapSense and TrueTouch are registered trademarks and S65 is a trademark of Cypress Semiconductor Corp. All other trademarks are property of their owners.

***Contacts:***

Samer Bahou  
Cypress PR  
(408) 232-4552  
[Email Contact](#)

Richard Yu  
UMC Corporate Communications  
(886) 2-2658-9168 ext. 16951  
[Email Contact](#)

Source: Cypress Semiconductor Corp.

News Provided by Acquire Media