Xilinx and TSMC Reach Volume Production on all
28nm CoWoSTM-based All Programmable 3D IC Families

Proven CoWoSTM technology to scale with Xilinx’s 20SoC and 16FinFET 3D ICs

SAN JOSE, Calif. and HSINCHU, Taiwan – Oct. 21, 2013 - Xilinx Inc. (NASDAQ: XLNX) and TSMC (TWSE: 2330, NYSE: TSM) today announced production release of the Virtex-7 HT family, the industry’s first heterogeneous 3D ICs in production. With this milestone, all Xilinx 28nm 3D IC families are now in volume production. These 28nm devices were developed on TSMC’s Chip-on-Wafer-on-Substrate (CoWoSTM) 3D IC process that produces significant silicon scaling, power and performance benefits by integrating multiple components on a single device. This achievement at 28nm positions Xilinx for further success with TSMC’s proven 20SoC and 16FinFET processes, enabling the company to extend its leadership in All Programmable 3D ICs.

“Collaborating with TSMC to successfully reach CoWoS volume production cements Xilinx’s position as both a pioneer and industry leader in 3D IC technology and products,” said Victor Peng, senior vice president and general manager of Products at Xilinx. “Working together, we have honed the procedures and technologies to produce the next generation of groundbreaking, CoWoS-based 3D ICs, and are now positioned to leverage TSMC’s 20SoC and 16nm FinFET process with our UltraScale architecture to further our industry lead.”

“TSMC continues to push Moore’s Law and system integration further with our leading-edge, turnkey CoWoS 3D IC process,” said Dr. Jack Sun, TSMC Vice President, Research & Development and Chief Technology Officer. “We have worked extensively with Xilinx to achieve these results and look forward to additional manufacturing and product breakthroughs in
Xilinx has utilized TSMC’s advanced technology CoWoS process to produce the world’s leading high-capacity and high-bandwidth programmable logic devices targeted at the next generation of wired communications, high-performance computing, medical image processing and ASIC prototyping and emulation applications.

The Xilinx Virtex-7 HT FPGAs are the world’s first heterogeneous, all programmable devices, and feature up to sixteen, 28Gbps and seventy–two, 13.1Gbps transceivers, making them the only single-package solution for high-bandwidth, high-speed Nx100G and 400G line card applications in optical transport networks.

In addition to the Virtex-7 HT FPGAs, two other homogeneous devices in the 3D IC family have been in volume production since early 2013. The Virtex®-7 2000T FPGA provides the equivalent of 20 million ASIC gates, making it an excellent candidate for system integration, ASIC replacement and ASIC prototyping and emulation. The Virtex-7 X1140T delivers ninety-six, 13.1Gbps 10GBASE-KR compliant transceivers for ultra high-performance wired communication applications with unparalleled levels of integration and performance.

About Xilinx

Xilinx is the world’s leading provider of All Programmable FPGAs, SoCs and 3D ICs. These industry-leading devices are coupled with a next-generation design environment and IP to serve a broad range of customer needs, from programmable logic to programmable systems integration.

For more information, visit www.xilinx.com.
About TSMC

TSMC is the world’s largest dedicated semiconductor foundry, providing the industry’s leading process technology and the foundry segment’s largest portfolio of process-proven libraries, IPs, design tools and reference flows. The Company’s owned capacity in 2013 is expected to be about 16.5 million (8-inch equivalent) wafers, including capacity from three advanced 12-inch GIGAFAB™ facilities, four eight-inch fabs, one six-inch fab, as well as TSMC’s wholly owned subsidiaries, WaferTech and TSMC China. TSMC is the first foundry to provide 28nm production capabilities. TSMC’s corporate headquarters are in Hsinchu, Taiwan. For more information about TSMC please visit http://www.tsmc.com.

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