Xilinx Announces Defense-Grade 7 Series FPGAs and Zynq-7000 All Programmable SoCs with Fourth Generation Secure Capabilities

Xilinx, Inc. - October 29, 2012

Fail safe capabilities extend Xilinx secure leadership with the industry's only defense-grade FPGAs and SoCs for demanding applications

PR Newswire

SAN JOSE, Calif., Oct. 29, 2012

SAN JOSE, Calif., Oct. 29, 2012 /PRNewswire/ -- Xilinx, Inc. (NASDAQ: XLNX) today announced its fourth generation secure architecture with Information Assurance and Anti-Tamper IP core support for defense-grade 7 series FPGAs and Zynq™-7000 All Programmable SoCs. These unique high reliability, defense-grade devices reduce the risk and cost of deploying the latest Aerospace and Defense (A&D) systems by utilizing off-the-shelf reprogrammable Xilinx® FPGAs and SoCs. Manufactured with state-of-the-art 28nm process technology, all devices are optimized for high performance and the lowest total power. Xilinx defense-grade products are fully pin-compatible to commercial-grade equivalents for low cost prototyping and are offered off-the-shelf.

(Video: http://photos.prnewswire.com/prnh/20121029/SF01231)

(Logo: http://photos.prnewswire.com/prnh/20020822/XLNXLOGO)

Xilinx's more than 20-year legacy working with both government and major defense contractors, combined with Xilinx's fourth generation secure silicon, Information Assurance methodology and
DoD 5000 Series compliant Anti-Tamper Security Monitor IP core (SECMON), forms the basis for Xilinx's 'fail safe heritage'. This fail safe heritage removes any single point of failure in systems that may compromise a mission, a key attribute in assuring secure applications functionality.

"Xilinx is the only major FPGA vendor offering a distinct defense-grade product line with fail safe heritage," said Yousef Khalilollahi, senior director, Aerospace and Defense at Xilinx. "In addition to the secure capabilities, the defense-grade 7 series FPGAs and Zynq-7000 All Programmable SoCs offer mask set control, ruggedized packaging with fully-leaded (Pb) content for harsh environmental operation, full extended temperature range testing, long term availability and anti-counterfeiting features."

Extensive testing and experience from previous generations of devices has resulted in Xilinx's latest defense-grade offering to provide the lowest cost, lowest power and most flexible solution to developers who need to meet the demanding requirements of a variety of applications in military communications, avionics, electronic warfare (EW), Intelligence Surveillance Reconnaissance (ISR) systems and missiles and munitions.

An example of a defense-grade application for the Xilinx 7 series FPGAs and Zynq-7000 All Programmable SoCs for secure communications solutions is a device with Single-chip cryptography (SCC) capability with Security Monitor 3.0 IP core for physical design security. SCC combines the functionality of multiple FPGAs into a single device, enabling A&D product developers to reduce SWaP-C of systems through higher levels of integration. Additionally, the inherent reprogrammability of these devices overcome the limitations of traditional long lead-time ASIC and ASSP approaches by allowing multiple capabilities that have the same hardware configuration. These devices specifically address the demands of modern portable wireless A&D systems that must run on battery power while being absolutely secure.

**All Programmable FPGAs, SoCs and Tools**

System designers are empowered to maximize system performance, lower power, preserve design flexibility, provide superior programmable systems integration and reduce BOM costs with Xilinx's All Programmable, production available defense-grade FPGAs and SoCs including Virtex®, Kintex™ and Artix™ FPGA families and the Zynq-7000 All Programmable SoCs.

Delivering unchallenged industry leadership in logic, memory, and DSP capacity, 7 series FPGAs with DSP capabilities combine massive DSP processing bandwidth and low power with easy-to-use design flows to insure designs are delivered on-time and on-spect, while providing peak performance, the highest performance DSP at any price to price-optimized performance for volume applications at the right price. And with FPGA co-processing, traditional DSP device acceleration is given an unparalleled performance boost.

System designers can realize a major breakthrough in SoC-level integration with the All Programmable Zynq-7000 devices and gain ASIC levels of performance and power consumption with the flexibility of an FPGA and ease of programming of a microprocessor.

With the Vivado™ Design Suite, Vivado High-Level Synthesis (HLS) accelerates design implementation by enabling C, C++ and SystemC specifications to be directly targeted into Xilinx All Programmable FPGAs, SoCs and 3D ICs without the need to manually create RTL. Advanced algorithms used today in A&D applications, as well as a wide variety of other market applications, are more sophisticated than ever before. Vivado HLS provides system and design architects with a faster and more robust way of delivering quality designs.
Availability

The Xilinx All Programmable families of defense-grade FPGAs and SoCs are available in I-temperature (-40 degrees to +100 degrees C), Q-temperature (-40 degrees to +125 degrees C) and M-temperature (-55 degrees to +125 degrees C). The devices will be in production Q1 of 2013. For more information, visit: http://www.xilinx.com/applications/aerospace-and-defense/index.htm.

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.

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