Philips and Xilinx deliver world's first low-cost programmable PCI Express solution

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Royal Philips Electronics and Xilinx, Inc. today demonstrated the world's first programmable PCI Express endpoint silicon solution offered at 1/10th the cost than traditional solutions. Leveraging expertise in third-generation PCI semiconductor technology, the Philips-Xilinx programmable PCI Express solution costs less than $15.00 USD (in high volumes).

PCI Express is a high-speed, point-to-point serial connection that offers a 2.5 to 80 Gigabit transfer rate. It has a dedicated link to each device instead of a shared bus, and delivers advanced features with scalable performance that gives manufacturers the flexibility needed to quickly bring PC, peripheral and consumer electronic products to market.

Comprised of the Philips PX1011A PCI Express PHY and a Xilinx Spartan™-3-based FPGA with an optimised Xilinx PCI Express LogiCORE IP™ core, the flexible Philips-Xilinx PCI Express offering can be used in many high-volume applications including add-in cards, host bus adapters, graphics cards and high-end servers. The PCI Express solution is also packaged in a low-profile form factor, supporting ExpressCard technology applications for space-constrained modular expansion platforms, and it is fully compliant to the PCI Express 1.0a specification.

"The Philips-Xilinx programmable PCI Express solution is making it possible to develop a cost-effective, PCI Express compliant card in significantly less time," said Keith Odom, director, Engineering

Architecture and Technology, National Instruments. “Further, the programmable flexibility allows National Instruments to use this solution in multiple product offerings which greatly leverages development time and lowers costs.”

“This new PCI Express solution draws on the expertise of two industry leaders that enables manufacturers to bring a wide variety of video and audio applications to consumers everywhere,” said Paul Marino, general manager and vice president, Business Line Connectivity, Philips Semiconductors. “Working with Xilinx, we offer a flexible, two-chip solution to customers who are looking to take full advantage of the simple, fast connection applications PCI Express will bring to the connected consumer.”

Flexible Solution at Competitive Price Points

According to Electronic Trend Publications (ETP), the number of PCI Express ports is expected to exceed 2 billion in 2008. “The industry leaders are pricing their PCI Express offerings quite low, responding to market demand for PCI Express based product offerings,” said Steve Berry, principal analyst, ETP. “The aggressive pricing of the Philips-Xilinx PCI-Express solution will help accelerate the adoption of this interface in many different high-volume applications by providing a flexible solution at competitive price points compared to fixed devices.”

About the Programmable PCI Express Solution

This robust solution includes the Philips PCI Express PHY that delivers the SERDES serializer / deserializer and the Physical Coding Sub-Layer (PCS) and offers excellent bit rate performance. The Philips PHY consumes little power and features a small form factor that makes it ideal for ExpressCard applications. The Xilinx 90nm Spartan-3 FPGA

portion features an industry-leading combination of block and distributed RAM, up to 784 I/Os, MicroBlaze™ 32-bit RISC soft processors and embedded XtremeDSP™ functionality supporting multiply and accumulates (MAC) functions (dedicated 18x18 multipliers deliver up to 330 billion MACs per second).

“It was an easy decision to work with Philips, an industry leader with a proven, fully compliant PCI Express solution. This joint effort gives our respective customers immediate access to a low-risk solution that has demonstrated successful interoperability regarding a wide variety of PCI Express based devices,” said Mark Aaldering, vice president, IP Solutions and Embedded Processing Division at Xilinx.

Availability

The Philips PX1011A-EL1 PCI Express PHY will start sampling this month, with general availability in June. Philips and Xilinx semiconductor devices can be obtained through a common distributor Avnet, providing cost-effective services and solutions vital to a broad base of more than 100,000 customers and 250 suppliers.

The LogiCORE intellectual property product provides a pre-defined, 100 percent compliant PCI Express endpoint solution suitable for a broad range of high volume computing and communication applications.