October 19th, 2009 – Frequently Asked Questions

XILINX AND ARM ANNOUNCE DEVELOPMENT COLLABORATION
Agreement sets the foundation for industry's next-generation programmable platforms

Q) What's today's news?
Xilinx and ARM have signed an agreement in which Xilinx has:
- Licensed ARM Cortex processor IP
- Adopted ARM Physical IP
- Engaged in the development of the next generation ARM® AMBA® interconnect technology

Q) Why are you making this announcement now?
Xilinx and ARM place high value on their ecosystems to drive and fuel innovation. Techcon3 this week was the ideal venue to communicate the news to the ARM Connected Community and the ecosystem at large. By announcing the alignment between ARM and Xilinx now, developers can begin considering architectural choices for implementation on future designs.

Q) How does the ARM/Xilinx agreement differ from other processor/FPGA agreements?
The agreement goes beyond the standard licensing of a processor core because it includes the adoption by Xilinx of ARM physical IP and a technical commitment by both companies to work together on defining the next version of the AMBA specification, the de-facto industry standard for on-chip communication.

Q) Why is Xilinx adopting ARM processor technology?
Xilinx has observed a number of market trends in recent years coinciding with key customer inputs that favored embracement of the ARM architecture. Top considerations by Xilinx included ARM's processor roadmap and breadth of ecosystem along with ARM's industry leadership position:
- As a proven supplier, ARM has over 200 silicon partners, over 500 licenses and designs accounting for over 10 billion units shipped worldwide.
- ARM has clearly captured a world-class position in processor architectures. It is proven in the markets and has offerings in embedded, mainstream and high performance applications.

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Q) Doesn't Xilinx already support ARM Cortex?

Yes. Support for Cortex-M1 on Virtex® FPGA and Spartan® FPGA series has already been announced by ARM and there are RealView Development Boards based on Xilinx devices that can be used to develop complete systems, validate custom IP and write device drivers.

Q) What physical IP from ARM is Xilinx adopting?

ARM delivers IP optimized for processor implementations at specific process nodes. In addition to leveraging ARM's leadership in microprocessor architectures, Xilinx will be using their optimized cell libraries and embedded memories.

Q) Why is joint work on the AMBA specification so important?

ARM and Xilinx have a shared vision of future processing needs that will require advanced processor and FPGA architectures working closely together. By working together on the specification, both companies are able to ensure that the needs of the processor systems, FPGA systems and any combination thereof will be met in a coherent and efficient manner.

Q) Have any third party EDA or IP providers been involved in the next generation AMBA?

Xilinx worked closely with ARM to define and include key elements in the next generation AMBA interconnect architecture to ensure it's optimized for FPGAs. While the details on the specification will not be disclosed until the spec is publicly announced, key EDA and IP vendors have been provided an advanced version of the specification under NDA. These vendors are currently defining their roadmap and development plans for products that will utilize this new open-standard interconnect for usage in Xilinx FPGAs. A complete list of the EDA and IP vendors is available in the press release and quote sheet.

Q) What influence will Xilinx adopting ARM technologies have on the development environment?

This move will complement the changes occurring at Xilinx over the past year. Xilinx is committed to the development and proliferation of a world class FPGA design environment. By moving to ARM technologies, Xilinx will provide customer and ecosystem developers with flexible computing platforms where their IP and software development can be shared and re-used on a broad scale.

Q) What impact will adopting ARM technologies have on the Xilinx ecosystem?
It will provide members of the Xilinx ecosystem with an open standard to develop and offer their IP to the broad AMBA-based user community. This also provides a direct path to the ARM Connected Community to develop on Xilinx platforms. Given the abundance of positive feedback from our current engagements, we expect customers and ecosystem partners to benefit and grow.

Q) How does this announcement tie into Xilinx Targeted Design Platforms?
It's a vital component to Xilinx's Targeted Design Platform success. When Xilinx announced its Targeted Design Platform Strategy in February 2009 with the introduction of the 40nm Virtex-6 FPGA and 45nm Spartan-6 FPGA families, it underscored the importance of IP standardization and ecosystem support as cornerstones to successful SoC implementations using FPGAs. The alliance with ARM reflects the commitment and investment Xilinx is making in these two areas.

Q) Does today's announcement affect Xilinx's support for the PowerPC® architecture?
No. Xilinx provides a wide range of embedded processing capabilities encompassing integrated hard cores in the high-performance Virtex FPGA families. While Xilinx is laying the foundation to meet future requirements for next-generation embedded processing technologies, it will continue to support the PowerPC architecture for customers using Virtex-II Pro FPGAs, Virtex-4 FX FPGAs and Virtex-5 FXT FPGAs.

Q) Will Xilinx continue to support the MicroBlaze soft core processor?
Yes. MicroBlaze processor support will continue and be an important component of the Xilinx embedded portfolio.

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