

C-to-FPGA Compiler Accelerates PowerPC Image Processing Applications in Xilinx Virtex-5 FXT

Impulse C compiler allows software programmers to create hardware processor accelerators without low-level FPGA programming

Kirkland Washington — April 9, 2008 — Impulse Accelerated Technologies Inc., the leader in ANSI C to FPGA optimizing compiler technology, today announced that its Impulse C™ compiler fully supports Xilinx Virtex™-5 FXT field programmable gate arrays (FPGAs). Full support in the Impulse C-to-FPGA tools allows embedded systems designers to easily create hardware-accelerated image processing, DSP and other applications, using the Virtex-5 FXT's embedded PowerPC® 440 processors and custom, C-language hardware accelerators.

"Impulse C makes it easy to create processor hardware accelerators for image processing and other streaming applications," said Ed Trexel, Senior Applications Engineer at Impulse. "The Impulse tools generate VHDL or Verilog from C-language, and also create the necessary hardware/software interfaces for direct connection to the embedded PowerPC."

The Virtex-5 FXT platform comes equipped with up to two on-chip PowerPC 440 processors, high-performance DSP blocks and high-speed serial capabilities. These new FPGA devices are ideal for high-performance applications such as image compression and filtering, machine vision, medical imaging, military, aerospace and many others.

Impulse C provides a powerful development and debug environment that is fully compatible with Xilinx Virtex-5 FPGAs and with the Xilinx ISE™ and EDK™ tools. Impulse C can be used with or without an embedded processor.

For accelerated software/hardware applications, the Impulse tools export hardware results directly into Xilinx Platform Studio™. This allows software programmers to optimize their code and obtain a high degree of acceleration through parallel processing. Accelerated applications developed using the Impulse tools have included image processing, DSP, data security, network traffic analysis, radar, and other processing-intensive algorithms. Impulse users have reported embedded algorithm acceleration ranging from 5X to over 400X when compared to software-only implementations.

According to Brian Durwood, CEO of Impulse, "Impulse customers have reported that they save up to 50% of their design times on complex image processing projects, and are able to try algorithms in the FPGA that they would not have even attempted using HDLs. For users of the new PowerPC 440-based Virtex-5 FXT, Impulse provides the only C-language solution that takes full advantage of Xilinx high-speed processor interfaces while remaining compatible with standard C development tools."

The Impulse tools include a number of ready-to-run examples and sample algorithms including image processing, DSP, random number generation and others. The tools also include a Design Assistant and tutorials that allow software programmers to more easily adapt legacy C applications for FPGA acceleration. The Impulse tools and libraries are fully

compatible with popular C development tools, including Microsoft Visual Studio®, Eclipse and other IDE environments.

Pricing and Availability

The Impulse C-to-FPGA Version 3.1 tools are available now, with perpetual license prices starting at \$16,500. Annual and floating licenses are also available. Current Impulse customers on active maintenance agreements receive the 3.1 upgrade at no additional charge.

About Impulse

Impulse C allows developers of advanced embedded and image processing systems to rapidly and cost-effectively move applications originating in ANSI C to FPGA coprocessors. Impulse tools are in use by software and hardware application developers worldwide. For more information on Impulse C-to-FPGA software, or to register for a free web seminar, visit www.ImpulseC.com.

###

Impulse C, Impulse CoDeveloper, the stylized Impulse logo, specific product designations and all other words that are identified as trademarks and/or service marks are, unless noted otherwise, the trademarks and service marks of Impulse Accelerated Technologies, Inc. in the U.S. and other countries.

Editor Contacts:

Brian Durwood
Impulse Accelerated Technologies, Inc.
(425) 605-9543 ext 109
brian.durwood@ImpulseC.com