



Pico Computing Unveils FPGA Library for Signal Processing and Video Analytics

FPGA-based hardware/firmware accelerates image filtering and object tracking

Seattle, WA – July 26, 2010 – Pico Computing today announced the availability of its Signal Processing Library (SPL), a set of FPGA firmware components and related tools that speed the development and deployment of advanced video and network analytics for security, defense and aerospace applications.

The library, which includes flexible components for signal analysis, feature detection, scale-space generation, correlation and filtering, has been validated and optimized for Pico Computing platforms based on the latest-generation Xilinx Virtex-5 and Virtex-6 FPGA devices.

“Our customers in the defense and security domain are seeking high performance as well as fast development times,” said Mark Hur, Pico Computing Director of Marketing. “We have responded to this demand by providing a library of components optimized for our reduced form-factor, FPGA-accelerated products.”

FPGA-based video and network security processing has many advantages over other approaches. According to the company, by implementing critical filtering and analysis algorithms directly in programmable hardware it is possible to detect and rapidly respond to threats while consuming much less power than is typical using CPUs for equivalent tasks.

High-performance, low-latency processing for security has many applications. These include network packet inspection, event logging, and a wide range of video analytics. In the video domain, accurate and fast detection of vehicles, people and other objects is increasingly important for national defense and public security.

“Object recognition and tracking is particularly well suited for FPGA implementation,” said Kent Gilson, Pico Computing Director of Advanced Research. “By pipelining and parallelizing video processing in programmable hardware, we can perform complex, multi-frame analytics with elements such as Gaussian pyramid, blob detection, Fourier analysis and advanced statistical modeling, and achieve real-time performance at greatly reduced power.”

The Pico Computing Signal Processing Library is compatible with Pico FPGA computing platforms that include small form-factor, laptop-compatible cards as well as rack-mounted systems containing dozens or hundreds of FPGA modules.

Pico Computing will demonstrate FPGA-based video processing for security using a Pico Computing E-17 FPGA card with CameraLink interfaces at the Black Hat Technical Security event being held on July 24-29, 2010, at Caesars Palace in Las Vegas, Nevada. Pico will also be showing accelerated cryptography applications at this event, using an FPGA cluster for algorithm acceleration.

About Pico Computing

Pico Computing offers scalable, FPGA-based platforms for embedded and high performance computing as well as training and design services. Customer applications include security, cryptography, bioinformatics, signal processing, and financial computing. The company is headquartered in Seattle, Washington and has customers and resellers worldwide. For more information about Pico Computing products and services, visit www.picocomputing.com.

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