VMETRO has released a new CAML-MOD3 Camera Link adapter module for the company's Xilinx Virtex II Pro-based PMC-FPGA03 PCI mezzanine card (PMC) module. Capable of capturing video from two base-mode cameras or one base-, medium-, or full-mode camera, the CAML-MOD3/PMC-FPGA03 combination merges data acquisition with the benefits of a local user programmable FPGA.

The FPGA can be used to implement functions such as edge detection, FFTs, digital filtering, and correlation for applications including target tracking, feature recognition, and real-time filtering. The CAML-MOD3 uses the Mini Camera Link (MiniCL) HDR26 connector standard and is compatible with traditional Camera Link equipment employing the MDR26 connector.

In base mode, as many as two cameras can be attached via separate cables; in medium and full modes, a single camera connects via two cables. The module supports the maximum Camera Link clock rate of 85-MHz, allowing real-time transfer of sustained data rates up to 680 Mbytes/s into the FPGA (full mode). With full-bandwidth video data streamed directly to a large user-programmable Xilinx Virtex II Pro XC2VP50 FPGA, real-time parallel processing of the video stream(s) is possible with minimal latency. Fast QDR SRAM and deep DDR SDRAM memory devices attached directly to the FPGA provide the local storage required for image-processing algorithms. An efficient 64-bit PCI interface supplies the bandwidth necessary to transfer processed or raw video to the PMC host carrier.

Example firmware and host software for capturing Camera Link data, provided in VHDL and C++, respectively, allow developers to concentrate on implementing their own proprietary processing algorithms. Comprehensive PMC-FPGA03 library firmware for communicating with PMC-FPGA03 board resources, and host library software for implementing register and DMA-based board communication, further simplify the development process. Price: CAML-MOD3--$995 (single-unit price).

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