

Editor Contact: Hilary Marchbanks, (512) 683-5937
Reader Contact: Ernest Martinez, (800) 258-7022

National Instruments Announces Module for Camera Link FPGA Image Processing *The New NI 1483 Adds Camera Link Connectivity to the NI FlexRIO Platform*

AUSTIN, Texas – June 7, 2010 – National Instruments (Nasdaq: NATI) today announced the release of a new vision module for the [PXI](#) platform that provides a high-performance parallel processing architecture for hardware-defined timing, control and image pre-processing. The new [NI 1483](#) Camera Link adapter module, in combination with an [NI FlexRIO](#) field-programmable gate array (FPGA) board, offers a solution for embedding vision and control algorithms directly on FPGAs. Engineers and scientists can use FPGAs to process and analyze an image in real time with little to no CPU intervention. Additionally, using FPGAs helps eliminate the need to design custom hardware.

"We see the speed and flexibility of FPGAs as a crucial technology to perform intensive image processing at high speeds," said James Cotton, a graduate researcher in neuroscience at Baylor College of Medicine. "NI LabVIEW FPGA graphical programming tools along with NI FlexRIO FPGA hardware for PXI technology, allowed us to quickly develop a high quality eye tracking solution that can resolve fixation position to within tenths of a degree at up to 500 Hz."

Engineers and scientists can use FPGAs to perform operations by pixel, line and region of interest. The FPGAs can implement many image processing algorithms that are inherently parallel, including fast Fourier transforms (FFTs), thresholding and filtering. The NI 1483 is ideal for optical coherence tomography (OCT) and high-speed control systems for applications such as laser alignment and sorting. The module is also suitable for acquisition from Camera Link devices with custom tap configurations and high-resolution sensors measuring more than 10 megapixels (MP) requiring hardware-based pre-processing.

The new module supports base-, medium- and full-configuration Camera Link devices as well as 80-bit 10-tap configurations, all up to 85MHz. This design gives engineers and scientists the ability to customize the image acquisition when using custom image sensors. The 85MHz measurement supports the Camera Link standardized specification to its fullest, creating an excellent fit for those working on applications with high frame rates. The module also integrates several I/O options including four TTL I/O lines, two opto-isolated inputs and one quadrature encoder input in addition to the many modular I/O and industrial communication options available for the PXI platform. Engineers and scientists can customize the NI FlexRIO hardware using the [LabVIEW FPGA Module](#) without knowledge of low-level hardware description languages or board-level design. By using the

LabVIEW graphical programming environment, engineers and scientists vastly reduce their development time while making use of existing VHDL IP.

Readers can view the [FPGA vision white paper](#) on www.ni.com to learn more about the NI-1483 Camera Link Adaptor Module. Readers also can visit www.ni.com/vision to learn more about NI vision hardware and software products.

About National Instruments

National Instruments (www.ni.com) is transforming the way engineers and scientists design, prototype and deploy systems for measurement, automation and embedded applications. NI empowers customers with off-the-shelf software such as NI LabVIEW and modular cost-effective hardware, and sells to a broad base of more than 30,000 different companies worldwide, with no one customer representing more than 3 percent of revenue and no one industry representing more than 15 percent of revenue. Headquartered in Austin, Texas, NI has more than 5,000 employees and direct operations in more than 40 countries. For the past 11 years, FORTUNE magazine has named NI one of the 100 best companies to work for in America. Readers can obtain investment information from the company's investor relations department by calling (512) 683-5090, e-mailing nati@ni.com or visiting www.ni.com/nati.

Pricing and Contact Information

NI 1483

Priced* from \$999; €929; ¥125,000

Web: www.ni.com/vision

**All prices are subject to change without notice.*

11500 N Mopac Expwy, Austin, Texas 78759-3504

Tel: (800) 258-7022, Fax: (512) 683-9300

E-mail: info@ni.com

LabVIEW, National Instruments, NI, ni.com and NI FlexRIO are trademarks of National Instruments. Other product and company names listed are trademarks or trade names of their respective companies.

###