PRESS RELEASE

NI Launches Next-Generation Control Systems Optimized for the Industrial Internet of Things (IIoT)

New CompactRIO, FlexRIO and Single-Board RIO controllers help companies build smart industrial systems and machines faster

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NI (Nasdaq: NATI), the provider of platform-based systems that enable engineers and scientists to solve the world's greatest engineering challenges, announced today new embedded systems hardware based on the open, flexible LabVIEW reconfigurable I/O (RIO) architecture. This hardware includes the high-performance CompactRIO Controller for integrators with rugged, industrial applications, Controller for FlexRIO for designers with high-performance embedded applications and Single-Board RIO Controller for designers who require more flexibility in their embedded applications. These controllers integrate the latest embedded technologies from Intel and Xilinx to deliver unparalleled performance and flexibility, empowering system designers and machine builders to address the most demanding control and monitoring challenges. The controllers are fully supported by LabVIEW software, the LabVIEW FPGA Module and NI Linux Real-Time, now based on Security-Enhanced Linux, which enables advanced security features for Industrial IoT applications.

"As the Industrial Internet of Things (IIoT) continues to impact the way the world connects, communicates and optimizes smart systems, embedded engineers face growing and evolving networking, performance and security demands and increased pressure to get to market faster, all while reducing development costs," said Jamie Smith, director of embedded systems at NI. "NI's LabVIEW RIO architecture delivers a complete platform so engineers can quickly design,

prototype and deploy embedded systems for advanced monitoring and control applications in the IIoT."

To meet the evolving requirements of the IIoT, NI's platform brings together intelligent systems, connectivity and system-to-system communications, coupled with analytical software tools designed to deliver business insights and customer value.

"NI's LabVIEW RIO architecture, with its real-time processors, user-programmable FPGAs and modular I/O, gives us the performance and flexibility to build complex control systems for our smart agricultural machines," said Steve Aposhian, president and chief engineer at FireFly Equipment. "Programming all elements of the system with LabVIEW speeds our development process, allowing us to deliver our innovations to the market faster."

Key Features

High-performance CompactRIO Controller

- *Intel Atom processor*: Close the loop faster, tackle more tasks with the same controller and process data with greater precision, accuracy and speed with the fastest quad-core 1.91 GHz processor available in a CompactRIO controller.
- *Kintex-7 FPGA:* Perform inline processing on more channels and implement more complex filtering and control algorithms.
- *NI Linux Real-Time*: Access an extensive community of applications and IP with a secure and robust Linux-based real-time 64-bit OS.
- *Embedded UI*: Incorporate a local HMI and use the control system to customize and handle HMI tasks, drastically cutting component costs as well as development and integration time.
- *Secure Digital (SD) storage:* Customize how you store, manage and access data.

Controller for FlexRIO

- *Kintex-7 FPGA:* Implement high-speed control algorithms and advanced signal processing with support for over 30 high-performance I/O adapter modules.
- *Compact size:* Scale faster and transition from prototyping on PXI to deploying on the 1.75 x 5.5 x 9.2 in. controller with minimal software changes.
- *Dual-Core ARM processor:* Reap the benefits of stand-alone operation when paired with the NI Linux Real-Time OS.

Single-Board RIO Controller

- *Zynq system-on-a-chip (SoC) with NI Linux Real-Time:* Experience increased performance with a dual-core, 667 MHz ARM processor, Artix-7 FPGA and a robust real-time OS.
- *Optimized for your system:* Take advantage of a more flexible, board-level form factor to embed intelligence into smart industrial systems.
- *Code reuse:* Minimize investments as you move from prototype to deployment and scale systems over time to meet evolving application requirements.

To learn more about the newest additions to NI's embedded systems platform, visit www.ni.com/embedded-systems/products/hardware/.

Follow the conversation around NI embedded systems: #NIWeek.

As a leader in measurements, NI is helping create the architectures that connect, capture and communicate all of the pieces of the IIoT as an active member of the Industrial Internet Consortium (IIC), an Associate Member of the Intel Internet of Things Solutions Alliance and a Silver Member of The Linux Foundation.

About National Instruments

Since 1976, NI (ni.com) has made it possible for engineers and scientists to solve the world's greatest engineering challenges with powerful, flexible technology systems that accelerate productivity and drive rapid innovation. Customers from a wide variety of industries – from healthcare to automotive and from consumer electronics to particle physics – use NI's integrated hardware and software platform to improve the world we live in.