Mentor Graphics Announces Softing Industrial Automation EtherNet/IP and OPC UA Support in Nucleus RTOS and Mentor Embedded Linux Runtimes

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NEWS HIGHLIGHTS:

- The Mentor Graphics® Nucleus® Real-time operating system (RTOS) and Mentor® Embedded Linux® runtime are integrated with the Softing EtherNet/Industrial Protocol (IP) and Open Platform Communication (OPC) Unified Architecture (UA) industrial automation protocol stacks.

- The Mentor Graphics solution, integrated with the Softing OPC UA stacks, streamlines the development of device integration to enable applications to easily access subsystem data.

- Targets next-generation industrial automation applications by providing a comprehensive suite of services including control, safety, synchronization, motion, configuration and information for increased industrial quality, production, and flexibility.

- The Softing Industrial Automation stacks can be deployed throughout the factory floor to integrate the Nucleus RTOS-based devices requiring real-time performance, as well as resource-rich machines running the Mentor Embedded Linux software.

For more information, go to: www.mentor.com/embedded-software/nucleus/

Mentor Graphics Corporation (NASDAQ: MENT) today announced the availability of Softing Industrial Automation stacks for the Nucleus real-time operating system (RTOS) and Mentor Embedded Linux products. Targeting next-generation embedded devices for industrial automation applications, the Mentor Graphics runtime solutions with Softing Industrial Automation stacks provide a standards-based solution to integrate devices throughout the factory and enterprise using Ethernet technology. The combination of Mentor runtimes with the Softing industrial middleware stacks makes interoperability possible between automation and control systems, field devices, and enterprise applications. The Mentor Graphics embedded operating system (OS) runtimes with Softing Industrial Automation IP-based protocols provide an integrated solution for fast and efficient deployment of EtherNet/IP and Open Platform Communication Unified Architecture Object Linking and Embedding for Process Control-Unified Architecture (OPC UA) based solutions to move data between devices from different vendors.

The future for industrial automation includes a production environment in which devices, machines, and materials are connected with sensors, and communication technology that can be leveraged to increase quality, production efficiency and flexibility. The Mentor Graphics Nucleus RTOS is a real-time deterministic operating system that is both full-featured and scalable. The Nucleus RTOS is ideal for resource-constrained industrial sensors and devices as well as resource-rich real-time embedded systems. The Mentor Embedded Linux platform is a complete Yocto Project-based Linux distribution that has been fully tested for reliability and optimized for industrial performance. The addition of Softing's industrial stacks to Mentor Graphics' runtime solutions provides users with access to decades of embedded and industrial automation and runtime expertise.

OPC UA
Open Platform Communications (OPC) is the interoperability standard for the secure and reliable exchange

of data in the industrial automation space and in other industries. It is platform independent and ensures the seamless flow of information among devices from multiple vendors. The OPC UA client/server integrated solution is high performance and 100% OPC compliant with proven interoperability, and comes complete with a range of functionality, including extended security, data access, complex data, eventing and historical access. The Mentor Graphics solution, integrated with the Softing OPC UA Development Toolkits, streamlines the development of device integration to enable applications to easily access subsystem data.

The Softing Industrial Automation EtherNet/IP
The emergence of Ethernet connectivity as a standard for connecting devices on the factory floor has been enabled by both the increasing bandwidth speed and reduced cost of deployment. The Mentor Graphics EtherNet/IP integrated solution is a platform-independent solution that uses a proven standard application layer and common object model. The EtherNet/IP stack provides the developer with a complete set of functions for Control and Information Protocol (CIP) connectivity over TCP/IP as defined in the EtherNet/IP standard. The low overhead implementation and efficient use of resources for protocol processing make the Mentor Graphics solution ideal for field devices.

Faster Time to Market
The introduction of a fully integrated solution with industrial automation stacks and embedded runtimes provides system developers with the tools needed for fast deployment. Because the solution is IP based, deployment can occur on existing Ethernet networks without a need to change existing infrastructure. The industrial automation stacks are clearly structured and the code is extensively documented.

Commentary:

Softing Industrial Automation

"As the specialist for industrial communication and Open Platform Communication (OPC), Softing provides a flexible, field tested solution for Industrial Ethernet Communication like PROFINET, Ethercat, Modbus TCP, EtherNet/IP and OPC UA. With Softing's protocol stacks on board, customers will significantly reduce the development and verification effort on their way to an Industrial Ethernet capable product." says Hans-Werner Auberg, Managing Director Softing Industrial Automation GmbH. "Even with the pre-integrated OPC UA libraries development engineers benefit from Softing's long-standing technical expertise and a lower cost of ownership."

ARC Advisory Group

"The industrial automation marketplace seeks solutions that help enable factory OT and enterprise IT convergence, as well as provides the connectivity that is required to access data and intelligently manage all devices and assets in an Industrial Internet of Things world, leveraging proven manufacturing industry standards, such as EtherNet/IP and OPC", according to Craig Resnick, vice president, ARC Advisory Group. "The combination of Mentor Graphics' RTOS

runtime solutions embedded into a variety of these devices and assets, along with Softing's industry standard EtherNet/IP and OPC asset connectivity solutions, brings real-time data from a broad portfolio of equipment that is diverse in technology, supplier, age and function to the enterprise. This real-time data can now be processed by analytic software and converted into information that helps manufacturers operations make more intelligent decisions that increase their global competitiveness, productivity, and profitability."

Mentor Graphics

"The addition of EtherNet/IP and OPC-UA to the Mentor Embedded runtime portfolio gives developers an integrated solution to create next-generation industrial automation products that are standards-based and interoperable," stated Scot Morrison, general manager, platform business unit, Mentor Graphics Embedded Systems Division. "The extension of Mentor's comprehensive industrial automation solutions with these new capabilities demonstrates our ongoing commitment to the industrial market."

About Mentor Embedded

The Mentor Graphics Embedded Systems Division enables embedded development for a variety of applications including automotive, industrial, smart energy, medical devices, and consumer electronics. Embedded developers can create systems with the latest processors and micro-controllers with commercially supported and customizable Linux®-based solutions including the industry-leading Sourcery™ CodeBench and Mentor Embedded Linux products. For real-time systems, developers can take advantage of the small-foot-print and low-power-capable Nucleus RTOS. For more information, visit www.mentor.com/embedded

About Softing Industrial Automation

Softing Industrial Automation is a world leading provider of industrial communication products and technologies for manufacturing and process automation. The company's products and services are tailored to the requirements of system integrators, device vendors, machine and equipment manufacturers or end users and are known for their ease of use and functional advantages. For more details:
http://industrial.softing.com

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ABOUT MENTOR GRAPHICS

Mentor Graphics Corporation is a world leader in electronic hardware and software design solutions, providing products, consulting services and award-winning support for the world's most successful electronic, semiconductor and systems companies. Established in 1981, the company reported revenues in the last fiscal year in excess of $1.24 billion. Corporate headquarters are located at 8005 S.W. Boeckman Road, Wilsonville, Oregon 97070-7777.