Renesas Electronics, Express Logic, and IAR Systems Collaborate to Extend Renesas Synergy™ Secure IoT Platform Solution Based on the New ARMv8-M Architecture

Technology Leaders in Embedded Solution Space Bring Strong Security to IoT; Will Showcase Leading-Edge Technologies at ARM TechCon 2016

ARM TechCon, Santa Clara, California, October 25, 2016 – Renesas Electronics Corporation (TSE: 6723), a premier supplier of advanced semiconductor solutions, Express Logic, Inc., the worldwide leader in royalty-free real-time operating systems (RTOS), and IAR Systems, world-leading provider of embedded development tools, today announced their collaboration on the development of the next-generation Renesas Synergy™ Internet of Things (IoT) platform solution based on the new ARM®v8-M architecture. The innovative platform solution will enable a wider number of developers to rapidly create secure connected IoT devices by reducing the complexity of designing and deploying advanced security technologies in embedded systems.

Three leading companies in the IoT space have collaborated on embedded platform development using Express Logic's ThreadX® RTOS with the IAR Embedded Workbench® software development environment – all supporting the ARMv8-M architecture and leveraging ARM TrustZone® security technology. These technologies will be a foundation for the next-generation Renesas Synergy Platform.

Renesas and Express Logic will jointly showcase a technology demonstration featuring the new platform solution from October 25 to 27, at ARM TechCon 2016 (booth #412)..

The demonstration of the IoT platform development consists of a field-programmable gate array (FPGA) sub-system using two newly-announced ARMv8-M based CPU cores, the ARM Cortex®-M23 and the Cortex-M33. Using IAR Embedded Workbench®, the ThreadX® RTOS was ported to the new cores bringing to life the mechanism separating secure and non-secure zones. With this capability as a foundation, these market leading partners will create innovative solutions to the pain points brought on by challenges to deliver the IoT. The ARMv8-M architecture in the new cores announced today provides a new key security technology for these partners to leverage in changing how embedded systems support inventive business models in the age of the smart society.

"ThreadX® was the first commercial RTOS to support TrustZone for ARMv8-M, which we announced February of this year. Today, we are very pleased to reveal that this support is now executing on an ARMv8-M based FPGA from Renesas," said William E. Lamie, president of Express Logic. "With our TrustZone support and certified-safe and secure NetX Duo™ IPv4/IPv6 TCP/IP stack, Renesas customers now have access to the most safe and secure commercial IoT run-time solution in the market."

"As security breaches of connected devices is a real threat these days, we can see that our customers are looking for easy-to-use solutions with strong security features in both hardware and software," said Stefan Skarin, CEO, IAR Systems. "The Synergy Platform and its associated tools running on the TrustZone-enabled ARMv8-M architecture is a typical example for such a solution, and will enable companies worldwide to deliver secured IoT solutions to market faster."

"We're pleased to preview some of the coming additions to the Synergy Platform with our valued partners, Express Logic and IAR Systems," said Peter Carbone, Vice President, Synergy IoT Platform Business Division, Renesas Electronics Corporation. "By combining a feature-rich RTOS with powerful embedded development tools and a full hardware and software platform for IoT development with the power and security of ARM's latest cores, Renesas and its partners continue to address the design challenges facing today's IoT developers: time-to-market, security and cost-effective performance."

To learn more about the Renesas Synergy Platform, please visit www.renesassynergy.com.

About Express Logic, Inc.
Headquartered in San Diego, CA, Express Logic offers the most advanced run-time solution for deeply embedded applications, including the popular ThreadX® RTOS, the high-performance NetX™ TCP/IP stack, the FileX® embedded FAT file system, the new GUIX™ GUI development toolkit, and the USBX™ Host/Device USB protocol stack. All products from Express Logic include full source-code and have no run-time royalties. For more information about Express Logic solutions, please visit our web site at http://www.rtos.com, call 1-888-THREADX, or email inquiries to sales@expresslogic.com.

About IAR Systems
IAR Systems provides developers of embedded systems with world-leading software tools for developing competitive products based on 8-, 16-, and 32-bit processors. Established in

Sweden in 1983, the company has over 46,000 customers globally, mainly in the areas of industrial automation, medical devices, consumer electronics, telecommunication, and automotive products. IAR Systems has an extensive network of partners and cooperates with the world's leading semiconductor vendors. IAR Systems Group AB is listed on NASDAQ Stockholm. For more information, please visit www.iar.com.

About Renesas Electronics Corporation

Renesas Electronics Corporation ([TSE: 6723](#)) delivers trusted embedded design innovation with complete semiconductor solutions that enable billions of connected, intelligent devices to enhance the way people work and live—securely and safely. The number one [global](#) supplier of microcontrollers, and a leader in Analog & Power and SoC products, Renesas provides the expertise, quality, and comprehensive solutions for a broad range of Automotive, Industrial, Home Electronics (HE), Office Automation (OA) and Information Communication Technology (ICT) applications to help shape a limitless future. Learn more at [renesas.com](#).

<div align="center">###</div>

(Remarks)
ARM and Cortex are registered trademarks of ARM Limited (or its subsidiaries) in the EU and/or elsewhere. ThreadX is a registered trademark of Express Logic, Inc. IAR Embedded Workbench is a registered trademark of IAR Systems Group AB. Renesas Synergy is a trademark of Renesas Electronics Corporation. All registered trademarks or trademarks are the property of their respective owners.

Media Contacts:

Express Logic, Inc.
Janice Hughes
Hughes Communications, Inc.
+1-705-751-9740
janice@hughescom.net

IAR Systems
AnnaMaria Tahlén, Media Relations
+46-18-16-78-00
annamaria.tahlen@iar.com

Stefan Skarin, CEO and President
+46-18-16-78-00
stefan.skarin@iar.com

Renesas Electronics Corporation
Kyoko Okamoto
+ 81-3-6773-3001
kyoko.okamoto.sx@renesas.com