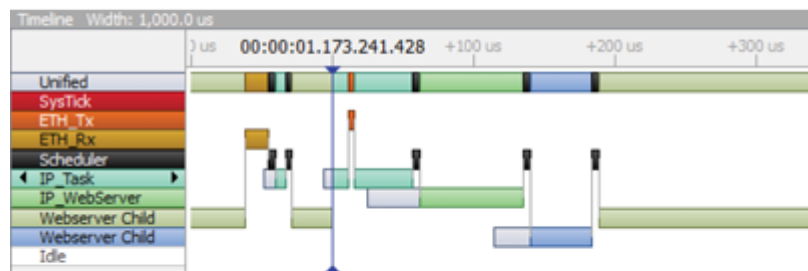


Renesas Electronics Europe and SEGGER Collaboration Accelerates Expansion of RX Ecosystem

SEGGER's New SystemView Offering Facilitates RX Microcontroller-Based Application Development via More Effective Data Visualization

Hilden/ Düsseldorf, Germany, July 19, 2016 –

Renesas Electronics Europe and SEGGER today announced their collaboration to facilitate expansion of the ecosystem of Renesas' RX Family of 32-bit microcontroller units (MCUs) through adoption of SEGGER's newly-released SystemView software. Forthwith SystemView will support streaming over J-Link, as well as real-time analysis and visualization, in relation to any Renesas RX-based embedded design.



SEGGER's new SystemView solution gives complete insight into the behavior of a program, with minimal side effects on the embedded system being observed. It offers cycle accurate tracing of interrupts and task start/stop, plus task activation and API calls when an RTOS is used. It visualizes and analyzes CPU load by task, interrupts and software timers. By using SEGGER's J-Link debug probe with SystemView streaming data transfer can be benefited from - with analysis in real-time. This enables an in-depth understanding of the application's runtime behavior to be derived. Real-time analysis is particularly advantageous when dealing with complex systems consisting of multiple threads and events, and also in bare-metal systems without any RTOS.

Renesas' RX Family of 32-bit MCUs are built around Renesas' proprietary RXv1/RXv2 CPU core and combine excellent operation performance with superior power efficiency. The RX Family consists of four product series: the flagship RX700 series, with the fastest performance and most advanced functions; the standard RX600 series; the RX200 series, which delivers an optimal balance of power efficiency and high performance; and the entry-level RX100 series, with extremely low power consumption. These four series encompass a range of products for solutions within fields such as industry automation, security, home appliance, healthcare and human interface that provide seamless scalability from small-scale to large-scale applications.

"With the addition of SystemView to the RX ecosystem, our customers will have access to a higher degree of development support", said Mohammed Dogar, Senior Manager for MCU/MPU Solution Marketing, Industrial & Communications Business Group, at Renesas Electronics Europe. "SystemView demonstrates the power and efficiency of modern debug tools, where the latest technology ensures an efficient embedded design process. With SEGGER's support, we can now offer an expanded ecosystem to our customers using the powerful and scalable RX microcontroller family."

"As a Renesas Global Platinum Partner, we are proud to be able to help showcase the efficiency of the RX Family. Complementing the RX ecosystem with SystemView will open up modern debug functionality to developers using these MCUs in their designs," said Dirk Akemann, Partnership Marketing Manager, SEGGER.

In order to ensure real-time delivery of data and minimal intrusiveness on the system - that means less than 1 μ s overhead per call on a 200 MHz Renesas RX MCU - SystemView makes use of SEGGER's unique Real-Time Transfer (RTT) technology. RTT enables up to 2 Mbyte per second data transfer for continuous acquisition of real-time data, requiring no hardware



other than a J-Link and the standard debug interface. SystemView records the data retrieved from the target and visualizes the results in different ways. Data recordings can also be saved for later documentation and analysis. Evaluating a system in this manner expedites the finding and eliminating of problems, as well as allowing greater optimizing of the system. It is an essential part of quality management in any professional software development. SystemView interacts seamlessly with SEGGER's RTOS embOS, which features all the recording capabilities needed. SystemView's operation does not require any OS involvement.

For further information on SystemView and the functionality of the different modules in the package as well as download, please visit <https://www.segger.com/systemview.html>.

Full J-Link product specifications are available at: www.segger.com/jlink.html

About SEGGER

SEGGER Microcontroller develops and distributes hardware and software development tools as well as software components for embedded systems. An "embedded system" is one in which a microprocessor and associated components are incorporated into a device helping to accomplish difficult and complex tasks in products such as cell phones, medical instruments, instrument clusters, measurement instruments, satellite radios, digital cameras etc. SEGGER was founded in 1997, is privately held, and is growing steadily. Based in Hilden with distributors in all continents and a local office in Massachusetts, SEGGER offers its full product range worldwide. SEGGER software products include: embOS (RTOS), emWin (GUI), emFile (File System), emUSB (USB host and device stack) and embOS/IP (TCP/IP stack). With emSecure, a unique software to generate and verify digital signatures, and the TLS-solution emSSL, SEGGER is also offering software for the growing field of data and product security. With the experience in programming efficiently on embedded systems, SEGGER created highly integrated, cost-effective programming and development tools, such as the Flasher (stand-alone flash programmer) and the industry leading J Link/J Trace emulator. SEGGER cuts software development time for embedded applications by offering affordable, high quality, flexible and easy-to-use tools and software components allowing developers to focus on their applications. Find out more at www.segger.com

Contact information:

Dirk Akemann

Marketing Manager

Tel: +49-2103-2878-0

E-mail: info@segger.com

About Renesas Electronics Europe

Renesas Electronics Europe, with its business operations centre located in Dusseldorf, Germany, is a wholly owned subsidiary of Renesas Electronics Corporation (TSE: 6723). As the world's number one supplier of microcontrollers and a premier supplier of advanced semiconductor solutions, Renesas enables "Big Ideas for Every Space" by providing complete solutions that integrate microcontrollers and microprocessors, SoC, ASIC, analog & power devices and software. Renesas was established in 2010 and is headquartered in Japan. With over 800 hardware and software alliance partners worldwide, it has the industry's largest local support network. Renesas Electronics' European structure is comprised of two business groups – automotive and industrial – as well as the global ADAS solution group and the engineering group.

Further information about Renesas Electronics Europe is available at www.renesas.eu. Renesas Electronics Europe is also on social media at http://twitter.com/Renesas_Europe, <http://facebook.com/RenesasEurope> and <http://youtube.com/RenesasPresents>.

Remarks

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Company contact for reader and customer inquiries:

Oliver Lüttgen

Renesas Electronics Europe GmbH, Arcadiastr. 10, 40472 Düsseldorf

Tel.: +49 211 65 03-1469

Email: Oliver.Luettgen@renesas.com

Web: www.renesas.eu