Synopsys Delivers VDK for Renesas RH850 MCUs

Joint Center of Excellence Produces Virtualizer Development Kit Enabling Early Software Development, System Integration and Test for RH850-based Automotive Designs

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Highlights:

- New VDK for Renesas' RH850 MCU accelerates software development, system integration and test for a broad range of automotive applications
- Seamless integration with tools such as Mathworks' Simulink® product, Synopsys' Saber and Vector's CANoe enables virtual Hardware-in-the-Loop (HIL) and fault testing
- VDK can be customized to represent any RH850 MCU including the F1x, E1x, C1x and P1x series with the Synopsys Virtualizer™ tool set

Synopsys, Inc. (Nasdaq:SNPS), a global leader providing software, IP and services used to accelerate innovation in chips and electronic systems, today announced the availability of the Virtualizer Development Kit (VDK) for Renesas RH850 MCUs to accelerate software development, system integration and test for RH850-based automotive applications such as body, powertrain/hybrid and chassis/safety control. VDKs are software development kits integrating design-specific virtual prototypes with software debug and analysis tools. The new VDK is the first commercial deliverable from the Center of Excellence collaboration between Renesas and Synopsys. The VDK enables automotive engineers designing RH850-based electronic control units (ECUs) to start developing, integrating and testing software months before ECU hardware is available, resulting in higher product quality and reduced development cost.

"The availability of the Synopsys VDK for Renesas' RH850 MCU marks a key milestone in our long-term collaboration and provides developers of RH850-based applications a productive software development solution," said Akihiko Watanabe, Department Manager of Automotive Electronics Core Technology Department, Automotive Solutions Business Division, 1st Solution Business Unit at Renesas Electronics Corporation. "As software content and complexity in automotive ECUs continues to grow, our customers can take advantage of leading virtual prototyping technology that has been adapted for the RH850 family, so they can start their software development tasks earlier and accelerate system integration, test and validation."

Renesas' RH850 MCUs are an advanced family of scalable, 32-bit microcontrollers that have been specially tuned for the performance and reliability requirements of a wide variety of automotive applications such as safety, body and engine control, driver interfaces and infotainment. The VDK for RH850 MCU includes reference virtual prototypes representing a microcontroller, including single and multicore versions of the RH850, timers, memories, communication blocks such as LIN, CAN and Ethernet and analog and error control modules. The initial release of the new VDK includes a virtual prototype following the F1x MCU memory map. The virtual prototype can be modified to represent other RH850 MCU series and to create additional VDKs, such as E1x, C1x and P1x, with the Virtualizer tool set. The VDK for RH850 MCU readily integrates with tools such as Mathworks Simulink, Synopsys Saber, Vector CANoe and third party debuggers, enabling system integration and test using a virtual Hardware-in-the-Loop environment and fault and coverage testing in support of the ISO 26262 safety standard.

"It's gratifying to see two industry leaders like Renesas and Synopsys commit their unique expertise to deliver a solution that improves the productivity of design teams doing software development as well as system integration and test," said John Koeter, Vice President of Marketing for IP and Systems at Synopsys. "The new VDK for Renesas' RH850 MCU seamlessly integrates into existing software development flows, making it easy for engineering teams throughout the automotive supply chain to deploy and achieve higher levels of product reliability, reduce overall development cost and shorten design cycles."

Availability & Resources

The VDK for Renesas RH850 MCU is available immediately from Synopsys.

Learn more about the Renesas RH850 VDK:

- https://www.synopsys.com/verification/virtual-prototyping/vdk/vdk-for-renesas.html

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) accelerates innovation in the global electronics market. As a leader in electronic design automation (EDA) and semiconductor IP, its software, IP and services help engineers address their design, verification, system and manufacturing challenges. Since 1986, engineers around the world have been using Synopsys technology to design and create billions of chips and systems. Learn more at https://www.synopsys.com.

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