eSOL's eT-Kernel Real-Time OS Platform Supports Renesas' Second Generation R-Car SoCs for In-Vehicle Infotainment Systems

Enables Blending of AMP and SMP on the ARM Cortex-A15 MPCore Multi-Core Processors to Ensure Flexibility and High System Reliability

Tokyo, Japan, October 7, 2013 – eSOL, a leading developer of real-time embedded software solutions, today announced that the eT-Kernel Real-Time OS Platform now supports Renesas Electronics Corporation's R-Car series of Systems-on-Chip (SoCs) with the ARM® Cortex™-A15 MPCore™ multi-core processor.

The eT-Kernel Platform has been selected for a wide range of applications across automotive, factory automation (FA), industrial, and consumer products. The eT-Kernel Platform, with proven real-time capability and reliability, and Renesas' R-Car series are ideal for high-end automotive infotainment systems. This combination enables manufacturers to ensure quality while equipping vehicles with advanced features such as Advanced Driver Assistance Systems (ADAS), high-level multimedia processing, and sophisticated user interfaces.

Renesas' second generation R-Car series, based on the ARM Cortex-A15 MPCore multi-core processor, includes the R-Car H2 and the newly-announced R-Car M2 SoCs. The new R-Car H2 and R-Car M2 integrate the PowerVR™ high-performance graphics core, an optional image recognition engine, and automotive I/O interfaces on a single chip, making them best suited for high-end car information systems with high-definition

displays, instrument clusters, and rear seat monitors. Since the new R-Car series is highly compatible with the first generation R-Car H1/M1/E1 SoCs, current customers and developers are able to easily reuse software assets to reduce development costs.

The eT-Kernel Platform fully supports the ARM Cortex-A15 MPCore quad-core processor on the R-Car H2. Since the R-Car H2 and the R-Car M2 share common peripheral controllers, the eT-Kernel Platform can be easily ported on the R-Car M2. The eT-Kernel platform, designed for the second generation R-Car SoCs, integrates the eT-Kernel Multi-Core Edition real-time OS, the eBinder IDE, plus middleware components including a file system, TCP/IP protocol stacks, USB host and device stacks, and graphics tools—all supported by professional services.

Thanks to eSOL's support of both the POSIX and T-Kernel open standards, developers can reuse software assets for Linux, uITRON, and T-Kernel OSes. eSOL's unique Blended Scheduling® technology, implemented on the eT-Kernel Multi-Core Edition, enables flexible system design by allowing symmetric-multiprocessing (SMP), which maximizes the superior performance of the ARM Cortex-A15 MPCore, and asymmetric-multiprocessing (AMP) subsystems, which ensure real-time determinism, to coexist in a single system. The eT-Kernel Temporal Partitioning and the eT-Kernel Multi-Core Edition Memory Partitioning ensure high system reliability. The eBinder IDE, tightly integrated with the eT-Kernel Multi-Core Edition, provides tools for multiprogramming, debugging, system analysis, and more, which facilitates the efficient development of high-quality, complex multi-core systems.

Besides the R-Car series, the eT-Kernel Platform already supports various Renesas MPU and SoCs including the RZ/A series, the R-Mobile series, the SuperH family, and the VR series. As a leading and long-time member of the Renesas Partner Program, eSOL is committed to support future Renesas CPUs. Developers can make maximum use of the ARM cores' performance and features with the eT-Kernel Platform, which supports the entire ARM Cortex-A series, including the Cortex-A15 and Cortex-A9.

"Renesas welcomes eSOL's eT-Kernel Multi-Core Edition real-time OS support for our second-generation R-Car series of SoCs," said Tatsuya Nishihara, Vice President, Chief of Automotive Solutions Business Division, Renesas Electronics Corporation. "The eT-Kernel Platform has supported many of Renesas MPU and SoCs and it is well known as a reliable real-time OS-based platform among our customers, which is why it has been adopted in so many automotive infotainment systems. eSOL, as one of our important OS partners, plays a major role in providing comprehensive and significant OS solutions to system manufacturers of Renesas SoC-based systems."

"Automotive infotainment systems inevitably demand more and more real-time performance to provide important driver assistance information using sophisticated graphics displays," said Hiroaki Kamikura, General Manager of the Embedded Products Division, eSOL. "eSOL is committed to strongly support R-Car-based software developers. Developers can incorporate its proven real-time capability and reliability into their own systems. The eT-Kernel Platform has been used in a variety of applications including car navigation systems, satellite systems, and consumer products"

About eSOL

eSOL is a leading embedded software developer that enables customers to accelerate the development of applications based on high-end embedded processors, including multi-core. eSOL's advanced, scalable, and multi-profiled real-time operating systems are tightly integrated with development tools and middleware components to create flexible development platforms used by OEMs and ODMs worldwide in competitive vertical markets such as automotive, consumer electronics, industrial and medical equipment, and aerospace. Founded in 1975, eSOL is based in Tokyo, Japan.

For more information, please visit http://www.esol.com/