eSOL's Functional Safety-Compliant RTOS Platform Supports Renesas' RZ/T Series with an Industrial Ethernet Accelerator

Tokyo, Japan. June 11, 2015 – eSOL, a leading developer of real-time embedded software solutions, today announced that eSOL's eT-Kernel real-time operating system (RTOS)-based software platform now supports Renesas Electronics Corporation's RZ/T Series microprocessors with a built-in industrial Ethernet accelerator R-IN engine. The eT-Kernel RTOS has been certified for IEC 61508 Safety Integrity Level 4 (SIL 4) and ISO 26262 Automotive Safety Integrity Level D (ASIL D). The eT-Kernel Platform, which has been adopted in a wide variety of embedded systems including FA, industrial and in-vehicle devices, and satellite systems, ensures high real-time performance and reliability in software development for industrial equipment such as industrial motor control and actuators using the RZ/T Series.

ARM® Cortex®-R4F-based RZ/T Series enables excellent real-time response by its TCM (Tightly Coupled Memory) that allows direct access from the processor core to the memory interface without passing through cache memory. A Built-in ECC (Error Check and Correct) memory improves reliability by detecting errors in memory and rewriting the correct values. Furthermore, the RZ/T Series is equipped with a built-in industrial Ethernet accelerator R-IN engine for accelerating Ethernet processing. This enables high real-time performance, stable high-speed communications, and low power consumption, and thus, the RZ/T Series is perfect for high-end industrial equipment systems that require hard real-time capability.

eT-Kernel is a core part of the eT-Kernel Platform that integrates the eBinder IDE,

middleware components – including network protocols, file systems, USB host/device stacks, and graphics tools – and professional services. eT-Kernel offers three scalable profiles to choose from, depending on application size and purpose – among them is a compact RTOS with real-time capabilities and a POSIX-compliant RTOS with high Linux compatibility. eT-Kernel for the RZ/T Series supports the MPU (Memory Protection Unit) on ARM Cortex-R4F, and protects the kernel itself from user applications. The eBinder IDE, which is tightly integrated with eT-Kernel, is available for application development. eBinder is designed specifically for software development using RTOSes to facilitate efficiency and high quality.

eT-Kernel has been certified for IEC 61508 Safety Integrity Level 4 (SIL 4) and ISO 26262 Automotive Safety Integrity Level D (ASIL D) – the most stringent level defined in these functional safety standards, which demonstrates the applicability of eT-Kernel for safety-critical system development. Together with eT-Kernel, eSOL provides the eT-Kernel Platform Safety Package, which includes safety-related documents to contribute to reducing the cost of conformance to the functional safety standards, and accelerating the time to market.

The eT-Kernel Platform supports Renesas' various microprocessors and system LSIs including the RZ Family such as RZ/T and RZ/A Series, R-Car, and the SuperH Family. As a Renesas' Platinum Partner, eSOL, jointly with Renesas, continues to offer products to meet a market need by developing the eT-Kernel Platform for various microprocessors and system LSIs of Renesas.

 "eSOL, whose products are used worldwide and is known for its excellent skills, is an

important real-time operating system partner for Renesas Electronics," said Akira Denda, Vice President of Industry & Appliance Business Division, 2nd Solution Business Unit, Renesas Electronics Corporation. "Now that the eT-Kernel Platform supports our RZ/T Series, we expect that a high-quality software development environment will be provided for development of industrial equipment systems using the RZ/T Series."

 "We are pleased to announce that our eT-Kernel Platform now supports the RZ/T Series," said Hiroaki Kamikura, General Manager of the Embedded Products Division, eSOL. "The eT-Kernel Platform for the RZ/T Series will help software developers to develop hard real-time systems requiring high processing and response performance, such as industrial motor control, actuators, and AC servo drives. As a Platinum Partner for Renesas, we will give comprehensive support for system development using Renesas' various CPUs including the RZ/T Series."

About eSOL

eSOL is a leading embedded software developer that enables customers to accelerate development of applications based on high-end single-core, multi-core, and many-core embedded processors. eSOL's advanced, scalable, 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/