eT-Kernel Real-Time Operating System Supports ARM®v8-M Architecture for Next-Generation ARM® Cortex®-M Family

Incorporating Security Features that Use the New ARM TrustZone® Technology

Tokyo, Japan. March 13, 2017 - eSOL, a leading developer of real-time embedded software solutions, today announced that the eT-Kernel real-time operating system (RTOS) now supports the latest ARM®v8-M architecture for the ARM® Cortex®-M family. This includes support for the new ARM TrustZone technology that has been implemented in the ARMv8-M architecture. Use of eT-Kernel ensures security in automobiles, industrial equipment, medical devices, and other products that make up IoT systems and use microcontrollers with next-generation ARM Cortex-M family cores.

eT-Kernel supports all of the ARM Cortex-A, Cortex-M, and Cortex-R series. eT-Kernel offers three profiles to suit different system sizes and applications: eT-Kernel Compact, which is ideal for migration from a µITRON-compliant RTOS, eT-Kernel Extended, which includes support for process models and a memory protection function, and eT-Kernel POSIX, which features comprehensive POSIX compliance to facilitate use of Linux resources. eT-Kernel integrates with the eBinder development tool and with network protocol, file system, USB stack, GUI, and other middleware. Professional services are also available that have been optimized to suit the needs of developers.

The newly added support for the ARMv8-M architecture is provided on eT-Kernel Compact, which features excellent real-time capabilities and a small memory footprint. eT-Kernel Compact has received third-party certification of compliance with the ISO 26262 ASIL D standard for automotive applications, IEC 61508 SIL 4 standard for industrial equipment. Moreover, it has been widely used since its commercial release in 2005 in such applications as automotive systems, industrial equipment, medical devices, and consumer electronics. Along with systems that need to comply with functional safety, it is also ideal for systems that require excellent real-time capabilities and reliability.

“Protecting the security of individual systems is vital in IoT systems that interconnect a wide variety of devices,” said Nobuyuki Ueyama, Executive Vice President, eSOL Co., Ltd.. “As an RTOS vendor, eSOL has been quick to support the

ARMv8-M architecture announced in November of 2015, and we have implemented security functions that use ARM TrustZone, a technology that has recently been added to the architecture. Through the supply of a software platform with the widely used eT-Kernel at its core, we are helping not only to maintain the security of IoT systems but also to enable real-time capabilities, and reliability."

About eSOL

Founded in 1975, eSOL is a leading developer of real-time embedded software solutions that seeks to create a rich IoT society using its innovative computer technologies. eSOL's software platform products and professional services, centered around its real-time operating system technology, are used worldwide in every field, starting with automotive systems, which conform to the most stringent quality standards, and including industrial equipment, satellites, and digital consumer electronics. In addition to the research and development of its own leading-edge products, and joint research with major manufacturers and universities, eSOL is actively engaged in AUTOSAR and Multi-Many-Core technology standardization activities. For more information, please visit http://www.esol.com/