

Press Release

April 23, 2018

Press release

eSOL Co., Ltd.

eMCOS AUTOSAR, an AUTOSAR-Compliant Scalable RTOS, Receives ISO 26262 Functional Safety Standard Certification at Highest ASIL D Safety Integrity Level

Certified RTOS and Safety Documents Reduce Cost of Compliance with Automotive Safety Standards



Tokyo, Japan. April 23, 2018 -eSOL, a leading developer of real-time embedded software solutions, today announced that eMCOS AUTOSAR has received product certification for compliance with the highest ASIL D safety integrity level of the ISO 26262 functional safety standard for road vehicles. eMCOS AUTOSAR is the AUTOSAR Classic Platform-compliant profile for eMCOS, a real-time operating system (RTOS) that was the first such product available on the market to provide scalable support that extends from single-core to multi/many-core processors. This certification contributes to shorter product time-to-market and to reducing the cost of compliance with functional safety standards for automotive systems that range from control ECUs to advanced driver assistance systems (ADASs) and autonomous driving systems.

Functional safety now plays a core role in the development of automotive software. Achieving functional safety requires a system safety design, the establishment and execution of a development process that can faithfully implement this design, and the ability to demonstrate that the product itself can be used in a safe manner. By relieving the user of the task of demonstrating the safety of the OS, use of the pre-certified eMCOS AUTOSAR and its safety-related documents helps users focus their efforts on their own product development and on adding value.

In addition to making eMCOS AUTOSAR itself suitable for safe system development, the certification of eMCOS AUTOSAR also confirmed that eSOL's own product development processes comply with functional safety standards. Along with the development processes established by eSOL, this certification was also facilitated by use of eSOL's eWeaver support tool for the efficient operation of development processes.

The safety-related documents provided by eSOL are made up of a safety manual and safety reports. The safety manual documents the safety concepts used by eMCOS AUTOSAR, the measures used to implement these and perform validation, and how to use eMCOS AUTOSAR with reference to the influence this has on system safety. Safety reports record the results of validation conducted using the validation measures documented in the safety manual.

In addition to providing eMCOS AUTOSAR and the safety-related documents, eSOL also offers the support that users need for safety processes and application implementations that use eMCOS AUTOSAR. The safety-related documents and support are also available in English to facilitate use outside Japan. Other products available from eSOL include eWeaver, a useful tool for achieving functional safety compliance that also ensures the traceability of deliverables and supports the implementation of software development processes. eSOL also provides a support service for functional safety that includes consulting and contract development, providing a boost to user business activities by offering comprehensive assistance to software development workplaces that need to adopt functional safety.

eSOL is committed to continuously improving and maintaining the quality and reliability of its software products and services. It received the ISO 9001 international quality management system certification in August 2006 and has been continuing to develop software based on ISO 9001. eSOL also developed and abides by its advanced quality management systems (QMS).

■ For Reference

eMCOS

eMCOS is a scalable RTOS for embedded systems that was the first in the world such product available on the market to provide support that extends from single-core to multi/many-core processors. The use of a distributed microkernel architecture unlike that of previous RTOSs enables eMCOS to provide the scalability to support not only different numbers of cores, but also heterogenous hardware configurations with different architectures such as microcontrollers, GPUs, and FPGAs. eMCOS also incorporates eSOL's proprietary semi-priority-based scheduling algorithm (patent numbers 5734941 and 5945617) that combines the real-time capabilities required for embedded systems with the high performance and scalability demanded by many-core processors. It also supports use of existing application development practices with the same programming model and interfaces for single-core and multi-core processors.

▽ For more information about eMCOS, please visit: <https://www.esol.com/embedded/emcos.html>

About eSOL Co., Ltd.

Founded in 1975, eSOL is a leading company in the embedded systems and IoT sector 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: <https://www.esol.com/>

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