

Press Release

May 22, 2019

eSOL Co., Ltd.

eSOL has been Promoted to Premium Membership of the Autoware Foundation

**eSOL to Participate in Technology Strategy Formulation at the Technical Steering Committee,
to Accelerates Development for Autoware Practical Use**

Tokyo, Japan. May 22, 2019 - eSOL, a leading developer of real-time embedded software solutions, today announced that it has been promoted to Premium membership of the Autoware Foundation (AWF), an international alliance dedicated to establishing industry standards for autonomous driving technology.



Jointly established by Tier IV, Inc., Apex.AI, Inc. (USA), and Linaro (UK) as an international alliance dedicated to establishing industry standards for autonomous driving technology, AWF has three levels of membership (Premium, Industry & Government, and Academic & Non-Profit Members). As one of the founding members of AWF, eSOL initially joined as an Industry member. eSOL is now extending its participation by promoting itself to Premium membership, the highest membership level.

As a consequence, eSOL will take on a greater role in projects aimed at the practical use of Autoware, including participation in the formulation of future technology directions and strategy at the AWF's Technical Steering Committee.



eSOL has been involved in the project to develop the Autoware open source software for autonomous driving systems since its inception, and participated in testing and demonstrations of actual vehicles using many-core processors and its eMCOS scalable real-time operating system (RTOS). Furthermore, eSOL has had considerable past involvement with eMCOS and ROS/ROS 2^{*1}, and has gained extensive experience and knowledge through work on embedded systems that demand high levels of reliability. By drawing on these resources to actively participate in development work aimed at the practical implementation of Autoware, eSOL will push ahead with the Autoware Foundation and its other partners from around the world on solutions that incorporate its own OSs that are already in practical use.



“We are excited to welcome eSOL to the premier membership of the Autoware Foundation. eSOL is a recognized embedded software company, developing new technology with ROS 2. We hope that we facilitate together a grander vision of Autoware with Functional Safety capability based on ROS 2.” said Shinpei Kato, Chairman of The Autoware Foundation. (Founder and Director/CTO of Tier IV, Inc.; Associate Professor, University of Tokyo)

“We are proud to be promoted to a Premium Autoware Foundation member. This will enable us to join the Technical Steering Committee of AWF, to get directly involved in the technical strategies, and also accelerates our collaboration with other AWF member companies. This will further strengthen our leadership in providing our safety-critical and scalable RTOS eMCOS to enable Autoware to support heterogeneous many-core computing.” said Masaki Gondo, CTO and Vice President of eSOL.

*1: Robot Operating System: A scalable open-source framework for robot control that is ideal for building complex distributed processing systems.

It is attracting interest in a variety of different fields, including autonomous driving systems and applications in manufacturing that demand advanced robot control.

■ For Reference

Autoware

Autoware enables autonomous driving along a route given by a car navigation system by using environmental sensors that include laser radar, cameras, and global navigation satellite systems (GNSSs) while identifying vehicle positions and surrounding objects. Although Autoware started out as autonomous driving software developed to run on Linux and ROS, the adoption of eSOL's eMCOS scalable RTOS in place of Linux ensures high-level real-time performance and reliability needed for widespread deployment.

eMCOS

eMCOS is a scalable RTOS for embedded systems that was the first such commercially available product to provide support from single-core to multi/many-core processors. The use of a distributed microkernel architecture totally different from any previous RTOS provides eMCOS with 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 its 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 the use of existing application development practices with the same programming models and interfaces as 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.

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