

Press Release

December 12, 2018

Press Release

eSOL Co., Ltd.

eSOL to be a Founding Member of the Autoware Foundation: An International Alliance Dedicated to Establishing Industry Standards for Autonomous Driving Technology

eSOL to Contribute its Extensive Knowledge of RTOSs and ROS/ROS 2 to R&D Work on Practical Implementation of Autoware

Tokyo, Japan. December 12, 2018 – eSOL, a leading developer of real-time embedded software solutions, today announced that it will be a founding member of the Autoware Foundation (AWF), an international alliance dedicated to establishing industry standards for autonomous driving technology that was established on Monday December 10.



Jointly established by Tier IV, Inc., Apex.AI, Inc. (USA), and Linaro (UK) as an open alliance for autonomous driving technology, AWF announced it will commence with 18 founding members, including both companies and industry organizations. AWF intends to embark on a variety of Autoware-related projects in the three categories of Autoware.AI, Autoware.Auto, and Autoware.IO through which it will promote joint technical research.

eSOL has been involved in the project to develop the Autoware open source software for autonomous driving systems since its start and participated in testing and demonstrations of actual vehicles using many-core processors and its eMCOS scalable real-time operating system (RTOS). Similarly, eSOL will be a founding member of the new Autoware Foundation and will contribute to the promotion of its projects.

eSOL has had considerable past involvement with eMCOS and ROS/ROS 2 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.



● Board of Directors

- Chairman Shinpei Kato : Founder and Director/CTO of Tier IV, Inc.; Associate Professor, University of Tokyo
- Director Jan Becker : CEO of Apex.AI, Inc.
- Director Yang Zhang : Director, Linaro 96Boards

● Founding members

Tier IV, Linaro/96Boards, Apex.AI, ARM, AutoCore, AutonomouStuff, eSOL, Huawei/HiSilicon, Intel Labs, Kalray, LG Electronics, Nagoya University, Open Robotics (OSRF), Parkopedia, RoboSense, SEMI Japan, SiFive/RISC-V Foundation, StreetDrone, Toyota Research Institute-Advanced Development (TRI-AD), Velodyne LiDAR, Xilinx (21 organizations at the time of establishment)

For more information, please refer to the press release issued by Tier IV to announce the establishment of AWF on Monday December 10, and to the AWF website (<https://www.autoware.org/>).



“We are honored to be chosen as a founding member of AWF. eSOL has for more than three years been engaged in joint research with the originator of Autoware, Associate Professor Kato of the University of Tokyo. We are also involved in previously announced trials of autonomous driving using many-core processors as well as other new initiatives. Based around our eMCOS scalable OS that delivers high levels of computing and safety performance, eSOL intends to contribute to AWF by drawing also on our expertise in ROS/ROS2.” said Masaki Gondo, eSOL CTO and General Manager, Engineering Division.

■ 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.

* Other company or product names are trademarks or registered trademarks of their respective companies.

■ Contact for inquiries relating to this press release



Marketing Office, Embedded Products Division, eSOL Co., Ltd.

Tel : +81-3-5302-1360 / Fax : +81-3-5302-1361

e-mail : media@esol.co.jp

URL : <https://www.esol.com/>