eSOL licences SEGGER emCompress for accelerating automotive firmware updates

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Leading Japanese embedded engineering supplier eSOL has licensed SEGGER's emCompress compression software to enable faster firmware updates in Electronic Control Units (ECUs) for automotive customers.

emCompress is the ideal product choice for drastically reducing update times by offering solutions to compress data for all kinds of applications where size matters. Designed for embedded systems, emCompress can compress and decompress data even on the smallest microcontrollers. In the automotive industry, slow bus systems like CAN (Controller Area Network) are a common standard. To address the speed limitations imposed by the communication bus, the best option is to reduce the amount of data to be transferred. As the information in a firmware update needs to stay complete, compression is the logical choice.

emCompress supports the Lempel–Ziv–Markov chain algorithm (LZMA) to perform lossless data compression as well as other algorithms (e.g. LZMA2). Typical compression rates for firmware images range from 2 to 4, reducing the update time between 50 and 75 percent. The decompression algorithm also supports files that were created by PC-based tools such as "7-ZIP" or "Lzip" which use LZMA as well.

"Thanks to the highly effective implementation of the state-of-the-art compression algorithms in SEGGER's emCompress, we can significantly speed up ECU firmware updates to the delight of our customers," says Bob N. Ueyama, Executive Vice President of eSOL. "Time spent in the garage for a firmware update now can be reduced to an absolute minimum."

"While the firmware of automotive ECUs is getting more and more comprehensive with each vehicle generation, updates in the garage are very often still done using existing tools for the CAN-bus," explains SEGGER CEO Ivo Geilenbruegge. "We are very pleased to see that our emCompress is a key component for eSOL to drastically reduce their update times."

The emCompress software is written in well-commented ANSI C and is both compiler and target independent. emCompress is not covered by an open-source or required-

attribution license and can be integrated into any commercial or proprietary product, without the obligation to attribute the vendor or disclose the combined source. In addition SEGGER supports the special needs of automotive customers – e.g. MISRA compliance and extensive regression tests — which makes emCompress an ideal solution for ECU firmware updates.

You can find more information about emCompress here:
https://www.segger.com/products/compression/emcompress/

About SEGGER

SEGGER Microcontroller has over twenty-eight years of experience in Embedded Computing Systems, producing state-of-the-art software libraries, and offering a full set of hardware tools (for development and production) and software tools.

SEGGER's all-in-one solution emPower OS provides an RTOS plus a complete spectrum of software libraries including communication, security, data compression and storage, user interface software and more. Using emPower OS gives developers a head start, benefiting from decades of experience in the industry.

SEGGER's professional software and tools for Embedded System development are designed for simple usage and are optimized for the requirements imposed by resource-constrained embedded systems. The company also supports the entire development process with affordable, high-quality, flexible, easy-to-use tools.

The company was founded by Rolf Segger in 1992, is privately held, and is growing steadily. SEGGER also has a U.S. office in the Boston area and branch operations in Silicon Valley, Shanghai and the UK, plus distributors on most continents, making SEGGER's full product range available worldwide.

Why SEGGER?

In short, SEGGER has a full set of tools for embedded systems, offers support through the entire development process, and has decades of experience as the Embedded Experts.

In addition, SEGGER software is not covered by an open-source or required-attribution license and can be integrated in any commercial or proprietary product, without the obligation to disclose the combined source.

Finally, SEGGER offers stability in an often volatile industry making SEGGER a very reliable partner for long-term relationships.

For additional information please visit: www.segger.com

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