T4216A

SYSGO and STMicroelectronics Demonstrate Secure Vehicle Connectivity at CES 2020

Geneva, Switzerland, and Klein-Winternheim, Germany, December 17, 2019 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, and SYSGO, the European leader in real time operating systems (RTOS) for certifiable embedded systems, have cooperated to demonstrate secure telematics solutions for the automotive market at CES 2020 in Las Vegas, NV (Jan 7-10, 2020).

The jointly developed Automotive Secure Gateway is based on ST's Telemaco3P system-on-chip (SoC), a specialized automotive processor for secure telematics and connectivity, and SYSGO`s PikeOS hypervisor-based RTOS, which brings avionics-grade safety and security to the automotive market.

The Telemaco3P platform provides a cost-effective solution for ensuring a secure connection between the vehicle and the cloud. Its asymmetric multi-core architecture is built upon powerful application processors as well as an independent CAN control subsystem with optimized power management. Its ISO 26262 silicon design, embedded Hardware Security Module, and automotive-grade qualification up to 105°C ambient temperature enable developers to implement a wide range of secure [telematics applications](#) supporting high-throughput wireless connectivity and [over-the-air firmware upgrades](#).

PikeOS extends the concept of secure telematics by encapsulating all communications channels and all applications in individual partitions, using a positive-security concept. This concept means that individual partitions cannot communicate with each other unless explicitly allowed and configured by the developer. The strict separation on the kernel level ensures that any malfunction or malicious attack will not impact the software running in partitions other than the one originally affected. PikeOS is currently the only RTOS/hypervisor certified to Common Criteria (EAL 3+). It has been used in a range of critical safety and security applications in the avionics, railway, and automotive industries.

The Automotive Secure Gateway implements a comprehensive security concept including a virtualized firewall, an Intrusion Detection System (IDS), fast and secure

boot capabilities, and a secure over-the-air update process. It supports secure cloud communications via LTE, as well as secured Wi-Fi®, Bluetooth®, Ethernet, and CAN connectivity within the car. At CES 2020, ST and SYSGO will demonstrate how the Automotive Secure Gateway can detect and effectively mitigate over-the-air attacks.

"Secure telematics are a main building block of [Advanced Driver Assistance Systems](#) *and security certification will become a major issue for OEMs and suppliers alike,"* said Luca Rodeschini, General Manager Automotive and Discrete Group Strategy and Automotive Processors Division at STMicroelectronics. *"In addition to their technology, SYSGO has a tremendous certification expertise, and we are glad to work with them to achieve the next step towards certifiable automotive solutions."*

SYSGO's VP of Marketing and Alliances Franz Walkembach said: *"STMicroelectronics has been a pioneer in automotive safety and security, and we are proud to work with them to supply solid telematics solutions for next-generation vehicles. We share with ST the commitment to bring our security expertise to the automotive market, and our joint demonstration at CES 2020 is the first step."*

The Automotive Secure Gateway will be demonstrated on the Automotive Grade Linux showcase in the Smart City exhibition (Westgate Booth 1815) and in SYSGO's hospitality suite in the Westgate Hotel (floor 18, suite 1830).

About SYSGO
SYSGO is the leading European manufacturer of embedded operating systems, supporting safety and security-critical applications in the aerospace, automotive, railway and IIoT industries for more than 25 years. The company develops and maintains PikeOS, the world's first SIL 4 certified real-time operating system with multi-core support. The hypervisor (Type 1), which runs directly on the hardware, is certified according to the strictest safety standards such as IEC 61508, EN 50128 and ISO 26262. In terms of security, PikeOS is currently the only separation kernel certified to Common Criteria (EAL3+). In addition, PikeOS offers a fully certified programming interface and thus enables application development according to the "Safe & Secure by Design" principle. For less critical systems, SYSGO also offers ELinOS, an industrial grade Linux distribution with real-time extensions for embedded systems.

SYSGO works closely with customers throughout the product life cycle and supports clients such as Samsung, Airbus, Thales, Continental, etc. in the formal certification of software according to international standards for functional safety and IT security. Headquartered in Klein-Winternheim near Frankfurt, Germany, SYSGO has subsidiaries

in France, the Czech Republic and the UK and maintains a world-wide distribution network. The company is part of the European Thales Group.

Follow SYSGO
- SYSGO on [Twitter](#)
- SYSGO on [LinkedIn](#)
- Certified RTOS Group on [LinkedIn](#)
- Latest news about SYSGO on the SYSGO [Blog](#)

About STMicroelectronics

ST is a global semiconductor leader delivering intelligent and energy-efficient products and solutions that power the electronics at the heart of everyday life. ST's products are found everywhere today, and together with our customers, we are enabling smarter driving and smarter factories, cities and homes, along with the next generation of mobile and Internet of Things devices.

By getting more from technology to get more from life, ST stands for life.augmented.

In 2018, the Company's net revenues were $9.66 billion, serving more than 100,000 customers worldwide. Further information can be found at https://www.st.com

For further information, please contact:

Markus Jastroch
Director Marketing Communication
SYSGO
Markus.jastroch@sysgo.com
+49-6136-9948-652

Agency: Prolog Communications
sysgo@prolog-pr.com
+49-89-800-770

Michael Markowitz
Director Technical Media Relations
STMicroelectronics
Tel: +1 781 591 0354
Email: michael.markowitz@st.com