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Press Release

ETAS launches next-generation HSM firmware:
Cybersecurity for software-defined vehicles

- ESCRYPT CycurHSM 3.x covers all important onboard security functions and OEM use cases

- Ideal balance between security and performance requirements

- Support for dedicated hardware accelerators external to HSM

Stuttgart, Germany, February 29, 2024 – With the latest version of its cybersecurity firmware ESCRYPT CycurHSM, ETAS provides new, high-performance E/E architectures with robust protection against cyberattacks and unauthorized access. The software stack for hardware security modules (HSMs) on automotive microcontrollers supports hardware acceleration and virtualization via hypervisor. ESCRYPT CycurHSM 3.x thus meets the growing cybersecurity requirements of future software-defined vehicles.

The increasing number of external interfaces and frequent over-the-air (OTA) updates create new challenges for vehicle cybersecurity. At the same time, a growth in data traffic and the use of E/E architectures with a stronger focus on domain and zone controllers mean a growing need for secure onboard communication (SecOC). ESCRYPT CycurHSM 3.x is designed to meet these new security and performance requirements: the new HSM software stack from ETAS supports not only conventional accelerators but also dedicated hardware accelerators external to the HSM. Furthermore, it supports the use of virtual instances in multi-core, multi-user, and multi-session environments and already enables post-quantum cryptography.

As a plug-and-play solution, ESCRYPT CycurHSM 3.x can be easily embedded in the native IT infrastructure of OEMs and suppliers. The HSM firmware can be integrated into all common AUTOSAR and non-AUTOSAR stacks and is compliant with ISO 26262 ASIL-D, Automotive SPICE,

and ISO/SAE 21434. ESCRYPT CycurHSM 3.x supports all major security use cases – including secure lifecycle management, runtime tamper detection, secure data and key storage, and secure software updates – and enables OEMs to customize these according to their needs.

"New zonal E/E architectures and future software-defined vehicles mark a new chapter in automotive cybersecurity," says Rohan Pandit, Product Manager Onboard Security at ETAS. "With ESCRYPT CycurHSM 3.x, our customers have a security solution on board their vehicles that is geared towards these developments."

About ETAS

Founded in 1994, ETAS GmbH is a wholly owned subsidiary of Robert Bosch GmbH, represented in twelve countries in Europe, North and South America, and Asia. ETAS' portfolio includes vehicle basic software, middleware, development tools, cloud-based operations services, cybersecurity solutions, and end-to-end engineering and consulting services for the realization of software-defined vehicles. Our product solutions and services enable vehicle manufacturers and suppliers to develop, operate, and secure differentiating vehicle software with increased efficiency.
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Image:

(Topic image: Next-generation HSM)
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