

ETAS GmbH

Borsigstraße 14
70469 Stuttgart, Germany
Phone +49 711 3423-2240Press and Public Relations:
Anja Krahlanja.krahl@etas.com
www.etas.com

Press Release

Safety and security for connected automotive systems

- Over-the-air updates (SOTA/FOTA) increase update speeds while offering comprehensive protection
- A new security solution for intrusion detection and prevention provides reliable protection from cyberattacks in the field
- Acquisition of TrustPoint strengthens the cybersecurity portfolio
- ETAS tools ensure safety in accordance with ISO 26262 standards
- ETAS tools are used to develop advanced driver assistance systems

Stuttgart, March 14, 2017 – Automotive electronics are interacting more and more with the outside world. For this reason, safety and security must be systematically interconnected: security as protection from unauthorized access and safety to ensure that systems function. This calls for solutions that cover the full process, from the start of product development to end of life. And these solutions must be compatible with increasingly complex software systems. ETAS and its subsidiary ESCRYPT are presenting comprehensive solutions at this year's embedded world Exhibition&Conference in Nuremberg.

Quick and flexible over-the-air updates

A key technology for future automotive business models in the Internet of Things (IoT) are software and firmware updates over-the-air (SOTA, FOTA),

which allow security or function updates to be carried out quickly and comfortably. The OEM always has an overview of the current software status of its vehicle fleet. Together, ETAS and ESCRYP T ensure quick and secure automotive software updates over the internet. While experts from ESCRYP T cover integrated solutions for cybersecurity, ETAS' embedded specialists provide the right architecture and software components for ensuring the software functions reliably; even in security- and time-critical systems.

New security solution defies cyberattacks

ESCRYP T has developed a solution that detects, analyzes, and defends against cyberattacks. Available starting in 2017, the Intrusion Detection and Prevention Solution (IDPS) for vehicles documents attempted attacks and can automatically forward the data to a cybersecurity backend for evaluation. There, teams of experts use the data in conducting forensic analysis of the event, so that they can define and implement appropriate countermeasures – for example, over-the-air security updates. With these methods of detecting and defending against attacks, automotive security is becoming a continuous process that covers prevention (e.g., a firewall), the monitoring, reporting, and analysis of attacks, and the constant rollout of specific countermeasures.

Protection in accordance with ISO 26262 standards

In addition to cybersecurity, it is necessary to ensure security in accordance with ISO 26262. For this purpose, it is advantageous to encapsulate individual software areas to protect them against unintended manipulation. The RTA-HRV hypervisor – available as an add-on to the RTA operating system – handles this task.

Coupled with the increasing complexity of connected closed-loop systems, these long update cycles also pose new challenges in the traditional development process, whether during testing or calibration. This calls for new ETAS tools that provide developers with even better support. Examples include the ISOLAR-EVE virtual ECU, the intelligent EHANDBOOK documentation, and integrated test methods with ETAS LABCAR, which combines the security test with a functional test environment simulation. Moreover, ASCET-SCODE and ASCET-CONGRA – recent additions to the Eclipse-based ASCET product family – enable clear

visualization of complex systems. These tools provide an early and quick understanding of complex systems, validate them efficiently, and thus serve to make them more secure overall.

Efficiency gains in ETAS' traditional portfolio

ETAS' traditional portfolio also addresses the current outlined challenges. With INCA V7.2 – the measurement, calibration, and diagnostics software for ECUs – plus the ES890-series interface modules and the FETK-T interface for high-performance ECUs, we offer a solution for ECU calibration and validation that stands out due to its higher level of efficiency. The lower demand for test vehicles means users can record up to ten times more data in a single attempt. The tools help to permanently record all key measurement data, which in turn reduces repetitions in test drives and limits sporadically occurring errors more easily.

ETAS tools support the development of advanced driver assistance systems (ADAS)

Assisted and autonomous driving is currently one of the biggest trends to impact the automotive industry. The ADAS solution space for fully automated vehicles is undergoing a radical change, from conventional development methods based on mathematical algorithms to neural networks for object recognition and classification, data fusion, localization, situational analysis, and decision making. Both ADAS approaches require measuring instruments that can record, visualize, save, and evaluate the large raw and object data streams. ETAS provides measurement, simulation, and test environments as well as data management and analysis tools. Teamed with powerful processors, data buses, and communication protocols, ETAS tools – such as the FETK ECU interface or the ECU and bus interface modules of the ES800 hardware – seamlessly and synchronously record vehicle and ECU data. ETAS' virtual ECU, ISOLAR-EVE, handles virtualization of individual ECUs or whole ECU networks on the PC. To meet the demanding needs of the next generation of connected and autonomous high-performance automotive systems, ETAS has also embarked upon a collaboration with the U.S. company Lynx Software Technologies. The goal is to jointly provide a reliable and secure ECU platform technology.

Strong growth rates through acquisition and expansion

These innovations in the product portfolio form the basis of strong growth rates, which ETAS recorded in all areas in 2016 and will continue to do in 2017. The acquisition of the Canadian company TrustPoint Innovation Technologies, Ltd. is part of ETAS' worldwide expansion strategy in the field of embedded security. TrustPoint develops innovative products and solutions that are tailored to security requirements in the IoT and M2M communication in connected vehicles, smart cities, and for critical infrastructure applications.

ETAS recorded its largest growth at its sites in Europe and in India. This positive development in 2016 is a continuation of the growth over the past few years. Today, ETAS has 23 sites and more than 1,000 associates. The latest site additions in Kitchener, Canada and Nagoya, Japan became operational just a few months ago.

ETAS GmbH

ETAS provides innovative solutions for the development of embedded systems for the automotive industry and other sectors of the embedded industry. As a systems provider, ETAS supplies a multifaceted portfolio that covers the range from integrated tools and tool solutions to engineering services, consulting, training, and support. Security solutions in the area of embedded systems are offered by the ETAS subsidiary ESCRYPT. Established in 1994, ETAS GmbH is a 100-percent subsidiary of the Bosch Group, with international subsidiaries and sales offices in Europe, North and South America, and Asia.

Further information can be found at www.etas.com