Welcome to ETAS

We excel in providing innovative solutions that drive the development of embedded systems for the automotive industry and related sectors. As a systems provider, we offer a comprehensive portfolio of integrated tools and tool solutions as well as engineering services, consulting, training, and support. Our subsidiary ESCRYP'T provides holistic security solutions for the Internet of Things (IoT).

From left to right: Christopher White, Friedhelm Pickhard, Bernd Hergert
ETAS Executive Board of Management
Corporate philosophy and values

The world of embedded systems is where we are at home. At every development stage, we strive to make workflows faster and complex processes more manageable.

Everything we do is based on our customers’ needs. Transforming ideas into successful products with perfectly tailored, high quality solutions – that’s what we do best. Our customers rely on us to make their development processes more efficient and to provide the stimulus they need to tap into new opportunities and become a leader in their respective fields. That’s our mission, and we put all our dedication and expertise into achieving it. We are the perfect team, always looking to make new connections, focused on driving forward embedded excellence, and determined to help our customers reach the pinnacle of their industry.

Our roots

ETAS had its start in the pre-development department at Robert Bosch GmbH. There, as early as the 1980s, engineers were designing concepts and creating prototypes for products that would later be part of the ETAS GmbH portfolio. On June 1, 1994, a team from the pre-development department joined associates from various other Bosch divisions to found what is today’s ETAS GmbH. Thanks to this background, the initial 42 associates of the young company could already offer a host of marketable products, including the LABCAR test system, the ASCET software product family, ETK electronic control unit interfaces, VS100 calibration software, the VME measurement and calibration system, and the MAC interface module.
Milestones in ETAS history

Starting with those 42 highly motivated associates, ETAS built up a powerful global sales and service organization. Adding several strategic acquisitions, the company has become a global enterprise with a workforce of more than 1,100 associates.

Over the past years, ETAS has made a name for itself with a range of products that were the first of their kind on the market, such as the ETAS ASCET automatic code generator and the ETAS INCA software for measurement, calibration, and diagnostics. That’s why software developed with ASCET can now be found in over 500 million electronic control units (ECUs), and why there are more than 35,000 INCA users worldwide. The universal ETAS ETK/XETK ECU interfaces, which allow for rapid acquisition of measurement data in applications for measuring, calibrating, and rapid prototyping also significantly contributed to our success.

Since ETAS’ earliest days, the company has been active in numerous consortiums concerned with the development and distribution of automotive industry standards.

*adopted from Bosch
Location expansion
ETAS began expanding abroad just a year after it was founded in 1994. The timeline shows how we have established direct lines of contact to our customers in all key automotive regions. We started with local industry partners, and over time we devoted more attention to building up our own sales and service organizations.

Acquisitions
In 2003, ETAS acquired the York-based company LiveDevices. LiveDevices was founded in 1997 as a University of York spin-off, and quickly grew to become a leading provider of embedded software solutions for the automotive and industrial sectors. The York location is ETAS’ Center of Embedded Excellence for embedded software systems. That same year, ETAS also acquired Vetronix Corporation in Santa Barbara, California. Up until now, it was incorporated into Bosch’s Automotive Aftermarket division in 2012, Vetronix offered diagnostic tools for all phases of the vehicle lifecycle. By acquiring ESCRYPt GmbH, a spin-off of the Ruhr University Bochum’s Horst Görtz Institute for IT Security, ETAS integrated a leading provider of security solutions for embedded systems. The acquisition of the Canadian company TrustPoint Innovation Technologies, Ltd. in 2017 has expanded our security know-how with the addition of new technologies for secure machine-to-machine communication (M2M) in the Internet of Things (IoT). Moreover, tried-and-true cyber security expertise from the Bosch group has also been systematically integrated into the portfolio of subsidiary ESCRYPt. As a provider of holistic IoT security solutions, ESCRYPt now covers the entire security process for additional vertical markets worldwide – from prevention and detection to response.
An international presence

Our customers are facing demands for reduced time-to-market cycles. They need fast local support – and that’s why we strive to be close to our customers wherever they are. ETAS now has more than 1,100 associates working in 12 countries in Europe, Asia, and the Americas. In addition to our corporate headquarters in Germany, we have offices in Brazil, Canada, China, France, Great Britain, India, Italy, Japan, Korea, Sweden, and the USA. We are constantly working to expand our international network.

Our customers

ETAS provides solutions for the development of embedded systems. Our customers represent a cross-section of the global automotive industry and related sectors. They include automakers, automotive component suppliers, ECU suppliers, and engineering service providers.

For years, ETAS has also worked successfully with higher education and research institutes, providing not only traditional ETAS products and solutions, but also higher-education packages tailored to each facility’s needs. Moreover, professors can use a range of documents provided by ETAS for their university teaching and lecturing. ETAS also makes its entire product portfolio available to support numerous teams worldwide in the Formula Student engineering competition, which sees student teams design, build, and race a formula style racing car.
Market challenges – ETAS solutions

The automotive industry is undergoing fundamental change. New, energy-efficient vehicle powertrains, (partially) autonomous driving, digitalization, connectivity, and cyber security – the list of innovations has never been so long. At the same time, new systems must be brought to market faster. Key technologies are electronics and software, which is exactly where ETAS’ strengths lie. With our expert knowledge and the right tools, we enable the development of security-relevant software.

Our solutions are used at all stages of embedded software development. ETAS tools are open, scalable, flexible, and based on standards. They can be easily integrated into existing tool and process environments. Customers also benefit from ETAS’ collaboration in various standardization committees such as ASAM, AUTOSAR, ISO, Open Alliance, and SAE. We leverage innovative and safe solutions for embedded systems to make vehicles more environmentally friendly, fuel-efficient, and more economical. Millions of drivers place their trust in our expertise and products every day.

The increasing connectivity of vehicle electronics requires protection against unauthorized access – after vehicles are purchased, too. Moreover, it is no longer sufficient to secure just one component in a connected world. Attackers search for vulnerabilities in entire systems and throughout infrastructure. The ETAS subsidiary ECRYPT consequently offers holistic solutions for embedded security, operational technology security, and enterprise IT security.

ESCRYPT pools and continuously adds to its portfolio of security expertise in the pioneering fields of smart mobility, smart industry, and smart city. The company protects its customers’ data and products from unauthorized access, manipulation, or theft by means of innovative solutions that include intrusion detection and prevention systems (IDPS) or secure V2X, as well as with Computer Emergency and Product Security Incident Response Teams, its own cyber defense center, and strategic security consultants.
Our portfolio

We have divided our products and services into five key segments to reflect our customers’ application areas:

- Software Engineering
- Test and Validation
- Measurement, Calibration, and Diagnostics
- Cyber Security Solutions
- Real Time Applications

Software Engineering

Due to the increasing numbers of ECUs and the increased networking of functions, developers must be able to continuously optimize all development activities. This means most of all being able to gain a quick overview, carry out automatic security checks and be relieved of routine tasks. Using simulation and rapid prototyping, new and modified functions can be demonstrated in vehicles at an early stage of development. The tools and solutions provided by the Software Engineering segment enable developers to securely describe even complicated real-time systems with the highest safety requirements, develop them using model-based methods, generate efficient and secure code as well as easily integrate the functions into AUTOSAR.

The following product families are available for this: SCODE for description and optimization, ASCET for secure modeling and code generation, and ISOLAR for AUTOSAR integration.

ETAS tools and solutions facilitate compliance with standards such as IEC 61508 and ISO 26262. For rapid prototyping, EHOOKS supports bypass hook insertion, and the integration and configuration platform INTECRIO supports the use of functional models from a remarkable variety of modeling tools.

Test and Validation

Model-in-the-loop (MiL), Software-in-the-Loop (SiL), and Hardware-in-the-Loop (HiL) test systems play a key quality assurance role in the early stages of ECU development. They simulate the Driver-Vehicle-Environment (DVE) system, enabling developers to test the functions or diagnostic behavior of electronic control units, either on a PC or in the lab.

Intelligent, electronically controlled functions that make the car automated, connected and environment-friendly must be totally safe and secure and must work reliably under all circumstances. ETAS test systems help to check these functions extensively and efficiently. Over the years, our customers have used our ETAS LABCAR Hardware-in-the-Loop system in numerous series production projects, and it has proven to be the perfect tool for integrating and testing control and diagnostic functions. Our solutions portfolio ranges from the compact DESK-LABCAR system, which enables developers to run real-time HiL tests at their desk, to full vehicle HiL testing with NETWORK-LABCAR, which combines HiL test systems for individual ECUs to form real-time capable cluster and network HiLs.
Measurement, Calibration, and Diagnostics

Vehicle manufacturers and systems suppliers rely on ETAS tools to acquire measurement data during test drives, calibrate power-train functions, and validate onboard diagnostics. With its hardware and software solutions, ETAS ensures that complex electronic control systems can be precisely calibrated and thoroughly tested both at the test bench and in the vehicle. Software tools from the INCA product family and vehicle-compatible hardware in the shape of measurement instruments, interfaces, and memory emulators for ECUs — all of which satisfy the most exacting requirements — enable complex electronically controlled systems to be efficiently adapted to the various vehicle models.

The INCA tool environment for measurement, ECU calibration, and diagnostics is used in all phases of development. Models of ECU functions that are embedded in a computer simulation or in an in-vehicle prototyping system can be calibrated with INCA in the same way that an ECU is calibrated. For model-based calibration, ETAS ASCMO is the ideal solution. This tool uses advanced algorithms to allow users to accurately model, analyze, and optimize the behavior of complex systems based on a relatively small amount of measurement data. ETAS ASCMO is used in numerous applications such as the optimization of fuel consumption.

Cyber Security Solutions

Increasing connectivity and the real-time communication of vehicle systems and other electronic systems makes comprehensive and cost-efficient protection necessary. ESCRYPt, a subsidiary of ETAS, has the expertise to provide customized and holistic IoT security solutions — with its security products for embedded devices, backend services, lifecycle management, and consulting. A pioneer of embedded security, ESCRYPt protects the Bosch Group and its products.

Real Time Applications

ETAS Real-Time Applications offers a comprehensive range of solutions to help customers obtain reliable and safe embedded software for real-time applications:

- RTA Engineering Services: A worldwide team of experts helps customers develop tailor-made embedded software.
- RTA Basic Software and Tools: These tools enable the efficient development and deployment of application software using AUTOSAR basic software including the operating system RTA-OS, the complete AUTOSAR basic software stack RTA-BSW, and the first automotive hypervisor RTA-LWHVR.
- RTA Consulting Services: ETAS experts provide professional support services to help customers optimize their development processes.
Expanding our portfolio

Our range of products is complemented by professional engineering and consulting services. Our engineering services help customers adapt ETAS solutions to their individual development requirements and existing infrastructures. Based on our engineers’ wide-ranging expertise and extensive knowledge of processes and tools, we can offer our customers tailor-made advice to ensure that development processes are optimally configured for embedded systems.

Our service portfolio is rounded out by premium-class customer service and training programs to ensure optimal use of our tools in the field. We also look to build strong partnerships with companies from the automotive industry in order to create added value for our customers, support additional use cases based on open interfaces, and enter new markets for further growth.

Working at ETAS

Stuttgart is the cradle of the German auto industry, location of the ETAS headquarters and, since 1886, the home of Bosch, ETAS’ parent company and the world’s largest supplier of automotive components. Most of our groundbreaking solutions first saw the light of day here, largely thanks to our outstanding inhouse development and test facilities. ETAS is a growing global company with a dynamic edge – and that opens up a wide array of opportunities. Depending on your previous experience and goals, ETAS offers a wealth of exciting career paths ranging from managers, engineers, and technical specialists to internships for undergraduate and graduate students.

Join ETAS and watch your career take off
Once you have completed your degree, you can join ETAS in a number of different roles. But whatever area you are working in, all our associates benefit from intensive training and plenty of support to ensure a smooth transition into our business. We believe in delegating responsibility from an early stage, giving people the chance to work in a team on exciting projects, and helping them to communicate freely and effectively with their colleagues across hierarchical levels.

Join ETAS and put theory into practice
Depending on your course of study, we can provide the practical skills you need. Our interns gain fascinating insights into the way our company works and obtain real-world experience in parallel to their studies. Working students at ETAS are given a steady flow of tasks in the department they are assigned to, and we also offer the opportunity to write your final dissertation on a practical subject with the support of in-house specialists.

We work in a connected, international, and cross-functional environment.