Empowering Tomorrow's Automotive Software
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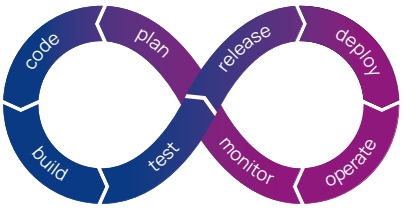
Efficient development of automated driving systems **ETAS Middleware Solution for ADAS/AD**

To accelerate your ADAS/AD development cycle

ETAS supports and facilitates the development of Software-defined Vehicles (SDV). The ETAS Middleware Solution for ADAS/AD comes with a combination of the following characteristics:



Areas of application

- Accelerating the development cycle of ADAS/AD software with faster iterations
- Efficient development and validation of software for advanced driver assistance systems (ADAS) and automated driving (AD) with:
  - High data rates,
  - high requirements for functional safety and
  - different virtual and real targets
- Use of recorded data for debugging and validation (replay and recomputing)

Characteristics

- Dedicated middleware solution for the special challenges of ADAS/AD systems
- Consistent Software Development Kit with
  - specification language,
  - development tools for architecture design and replay and
  - runtime components
- Seamless integration in "DevOps" environments with customer-specific adaptations if necessary
- Complements AUTOSAR Adaptive
- Training and consulting

Benefits

- Significant reduction of real test drives through reproducible, simulation-based validation with recorded real data
- Enhanced debugging with recorded real data (forensic recomputing)
- Increased performance of the overall system through fast communication between software applications of more than 10 gigabytes per second (GB/s)
- Realization of functional safety up to ISO 26262 ASIL D for microprocessor-based systems

Components of the ETAS Middleware Solution for ADAS/AD

The ETAS Middleware Solution for ADAS/AD is a supplement to the existing AUTOSAR middleware solutions. In addition to the runtime components on the ECU, the solution includes development tools for design and recomputing.

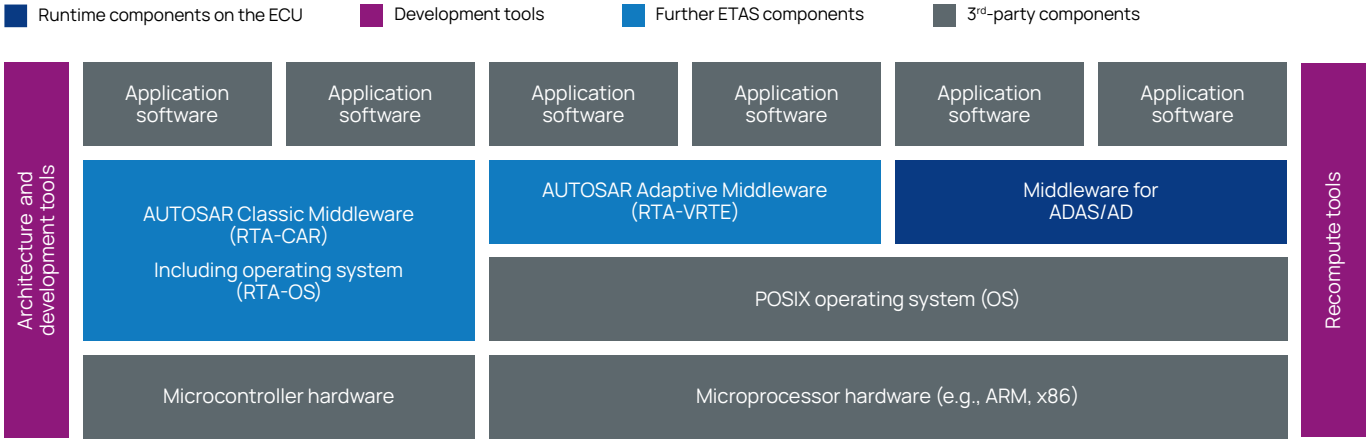


Figure 1: The ETAS Middleware Solution for ADAS/AD in the overall system

More information

- The ETAS Middleware for ADAS/AD was developed at Bosch over many years. It is used in projects that go into series production at the end of 2024.
- Use in automated CI/CD pipelines is possible.
- Thanks to deterministic behavior, many of today's very complex development steps can be carried out virtually with recorded real data. The reproducible simulation-based validation reduces the number of costly test kilometers in real road traffic.

Real system

Simulated system

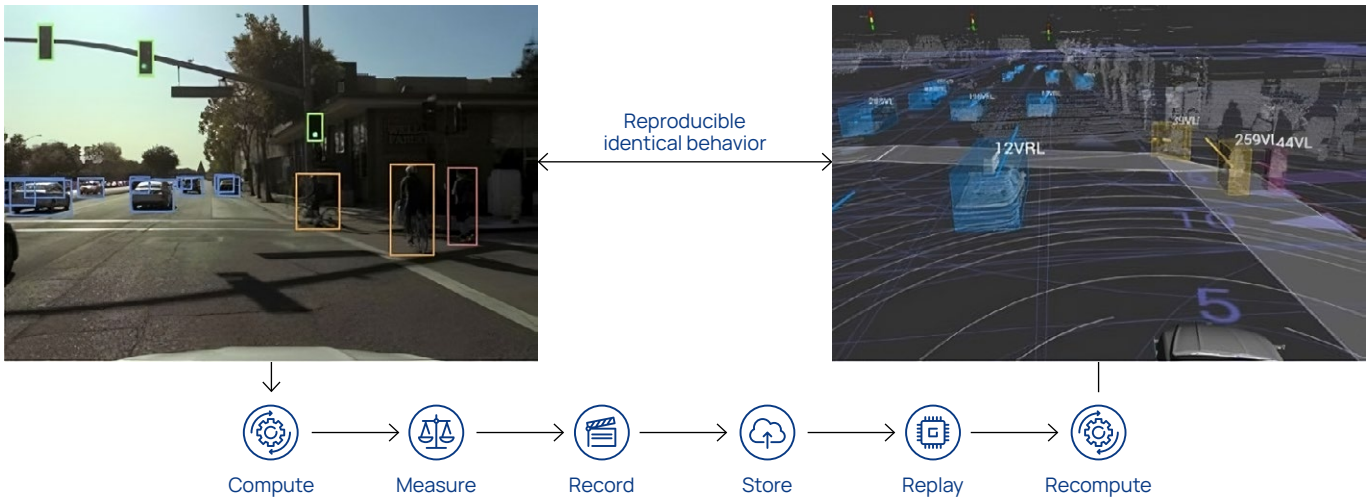


Figure 2: The simulation can only be used for validation if the real and simulated systems behave in a reproducibly identical manner.

Are you interested in ETAS products and solutions?
Please write to us at: **info@etas.com**

Further product information:
www.etas.com/middleware

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