

Embedded AI Toolchain

Deploy AI models to embedded systems with high quality

Our solution



Harness the power of **Embedded AI** to develop **advanced ECU functions** with greater speed and accuracy than traditional methods, moving beyond rigid, hand-coded rules. Reduce your bill of materials by leveraging **machine learning** for cost-effective solutions like **virtual sensors** and **predictive maintenance**. By delivering **superior performance** in complex applications—from object detection to battery management—Embedded AI unlocks a new generation of intelligent, efficient, and safer vehicle capabilities.

ETAS provides a comprehensive solution for bringing AI models into safety critical embedded systems:

For customers without experience in AI modeling:

The all-in-one solution with **ETAS ASCMO** and **Embedded AI Coder** enables an easy entry into AI-based applications.

Embedded AI Coder as a standalone product:

For customers with experience in AI modeling who only need an optimized and safety focused code generator for series production projects.

Features & benefits



Features

- **Latest models** from Machine Learning for high-precision modeling (RNN, CNN, MLP)
- **Hardware Aware Automated Machine Learning** to tailor the model to the target device
- **Broad hardware support** from tiny microcontrollers to powerful microprocessors with various architectures (ARM Cortex-M, Cortex-A, vendor-specific architectures)
- **MISRA-C Compliance**
- **Easy integration** as plain code or Simulink block into any development toolchain



Benefits

- **Enabling AI on today's microcontrollers & microprocessors.** No need for specialized AI hardware
- Usable in safety-relevant projects (subject to **ISO-26262**)
- **Minimizing resource consumption** on highly constrained embedded systems
- **Best-in-class memory efficiency** (RAM & ROM)
- **Proven in use:** Functions are deployed to series products with Embedded AI Coder widely at Bosch



Any hardware, any tool chain

No need for special libraries and hardware accelerators, Embedded AI Coder generated code can be deployed to any device



Resource-efficient and cost effective

Minimizing resource consumption on highly constrained embedded systems



Compliant with relevant safety requirements

ISO26262 and MISRA