

IAR Systems: The functional safety edition of IAR Embedded Workbench for Arm

Case Study



Application Areas

- + Automotive
- + Industrial
- + Medical
- + Railway

Links

- + [IAR Systems Functional Safety](#)
- + [IAR Embedded Workbench for Arm](#)
- + [Arm Functional Safety Partnership Program](#)

Goal

Proving compliance with functional safety standards for tools increases both cost and time of development. To solve this problem, IAR Systems provides certified versions of the complete compiler and debugger toolchain IAR Embedded Workbench for Arm.

Challenge

High-integrity standards today frequently require you to provide extensive justification for selecting a particular development tool. An appropriate tool qualification done on project level, with a non-certified/pre-qualified tool, requires a significant effort for the user in collecting the information needed to reach the required level of tool trustworthiness.

Solution

The functional safety versions of IAR Embedded Workbench are certified by TÜV SÜD for IEC 61508 (the international umbrella standard for functional safety), ISO 26262 (used for automotive safety-related systems), EN 50128 and EN 50657 (European railway standards derived from IEC 61508) and IEC 62304 (used for medical device software).

Benefits

- + Certified as a qualified tool for development of safety-related applications according to the above mentioned standards
- + The user does not have to evaluate the tool vendors development processes
- + The user does not have to prove that the compiler fulfils the C/C++ standard requirements
- + Prioritized technical support
- + Validated service packs ("frozen version" support)
- + Regular reports of known problems
- + Comes with a Safety Guide that describes issues, constraints and advice to consider when using the tool for functional safety development.

How does IAR Systems support Arm technology?

1. Full support for Arm Cortex-M0, Cortex-M0+, Cortex-M1, Cortex-M3, Cortex-M4, Cortex-M7, Cortex-M23, Cortex-M33, Cortex-R4, Cortex-R5, Cortex-R7, Cortex-R8, Cortex-R52, Cortex-A5, Cortex-A7, Cortex-A8, Cortex-A9, Cortex-A15 and SecurCore
2. Static code analysis available with add-on product C-STAT
3. Runtime analysis available with add-on product C-RUN
4. The functional safety edition of IAR Embedded Workbench for Arm, together with the partnership with Arm and their [Safety Ready Portfolio](#), offers customers the solutions they need for their functional safety-related applications.