UML Based Software Development for Embedded Systems

Develop high-quality products, including safety-critical systems, for a broad range of target systems with the combined solutions of SodiusWillert and Arm KEIL.

EVERYTHING YOU NEED FOR SUSTAINABLE SUCCESS IN EMBEDDED SOFTWARE ENGINEERING

Augment and increase your value from the investment into Arm KEIL tools with the proven add-on modules from SodiusWillert for a robust and flexible, future-proof development environment.

Integrate your Arm KEIL tools into the context of your product development lifecycle tools and processes. Benefit from the advantages of visual software modeling, linkage to test management and execution, clarity on requirements, awareness of change requests, and comprehensive support of mandatory safety-relevant specifications.

USE CASES

- **Safety-critical systems:** simplify development with built-in support for common safety standards in regulated industries.
- **Manage complexity:** software architecture and extensive state behavior are significantly easier to maintain in UML.
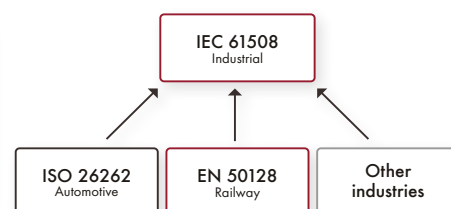
EMBEDDED UML FOR ARM
Starter Pack

The Starter Pack unlocks the benefits of UML modeling for embedded software development, even for embedded systems with limited memory and tight processor capacity.

The Embedded UML for Arm Starter Pack includes the KEIL MDK and SodiusWillert Embedded UML Studio.

EMBEDDED UML FOR ARM
TestPro Pack

Choose the TestPro Pack to add automated test execution and management to your environment.

The Embedded UML for Arm TestPro Pack includes IBM TestConductor in addition to the Starter Pack.

EMBEDDED UML FOR ARM
Safety Pack

The Safety Pack enables you to seamlessly demonstrate coverage of safety-relevant terms from requirements to architecture, and on to implementation and quality assurance.

The Embedded UML for Arm Safety Pack includes Embedded UML RXF-Cert by SodiusWillert and the Keil FuSa MDK (optional) in addition to the TestPro Pack.

PRODUCT FEATURES

Leverage UML modeling for Arm controller applications

SodiusWillert Embedded UML for Arm packages enable you to fully exploit the advantages of visually designing architecture and behavior of your embedded software. Work with visual non-ambiguous representations of your system under development and avoid misunderstandings, gaps, and interface errors.

Simulate and debug your UML model

Verify model behavior by simulating model execution within your development environment. Debug your model on the target system. Monitor real-time behavior of the system under development while still in the model stage and take early action to fix errors occurring.

Automatically include RTOS functions

Develop with no trade-offs to accommodate the limited language scope of C or C++ and without including RTOS specific elements in your model. Embedded UML for Arm automatically includes the necessary functions and adapters and generates code with only minimal overhead in terms of memory, runtime, and efficiency.

BENEFITS

Simplify maintenance and ongoing development

Clarity and non-ambiguity of UML models make it easier to understand how the product works. Ongoing maintenance becomes easier, even if the original authors have moved on. Automatic code generation from UML models ensures high-quality code compliant to applicable rules and guidelines.

Use with all popular microcontrollers

Develop application for the most popular microcontrollers with KEIL toolkits. Your investment in tools, know-how and, if necessary, integration is secured in the long term.

Reduce time-to-market

Accelerate development of your advanced embedded applications without compromising quality with the SodiusWillert Embedded UML for Arm integrated development environment.

Simplify development of satefy critical systems

Benefit from pre-configured processes, documentation and model elements for development and certification of safety critical systems for highly regulated industries.

Integrate into lifecycle

See your microcontroller development projects in context of the overarching system and product lifecycle. Integrate Embedded UML for Arm with requirements & change management, workflow management, configuration management to increase quality and efficiency.

Save time and money through reuse

Heritage modules available as source code or UML models can easily be included into new projects. Time-to-market is reduced, past investments and existing IP are preserved.

Flexible and modular

The Embedded UML for Arm packages are completely modular and can be individually enhanced and customized to meet your individual demand.

About SodiusWillert

SodiusWillert designs and distributes software solutions for Enterprise Interoperability, Data Transformation, and Model-Based Code Generation to improve traceability, exchange, and sharing of engineering data for the Aerospace, Automotive, Transportation, Defense and Medical industries. For more information, visit sodiuswillert.com.