



AUTOSAR

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RTI AUTOSAR Package 1.0

Now Boosts Rapid Prototyping and HIL

The AUTOSAR standard is increasingly being applied in the early prototyping and test phases, not just in developing production components. The new RTI AUTOSAR Package from dSPACE makes it easy to integrate AUTOSAR software components and compositions into the MATLAB®/Simulink® environment and execute them on dSPACE real-time hardware.

A Powerful Package

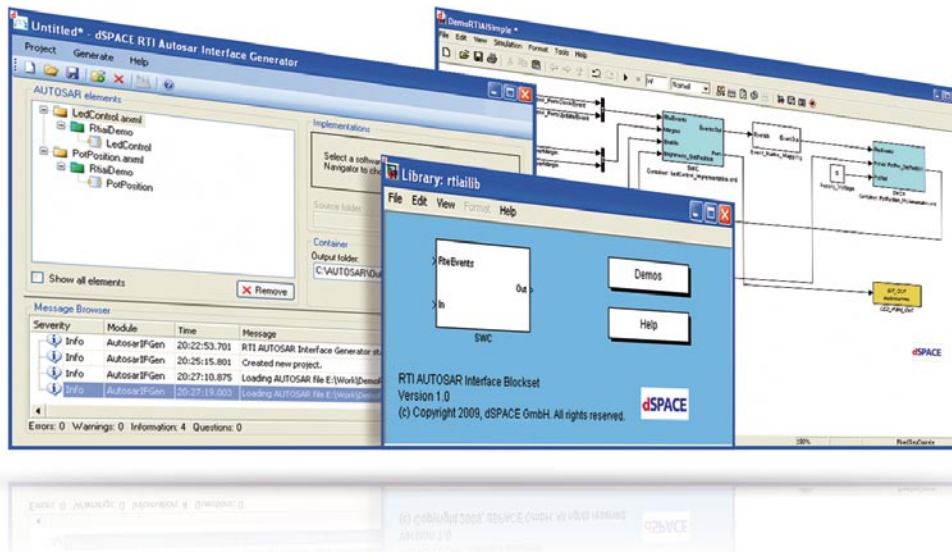
The new RTI AUTOSAR Package gives embedded software developers a fast, convenient method to integrate AUTOSAR components from different sources (SystemDesk, TargetLink, handcode) into the MATLAB®/Simulink® environment, combine them with other Simulink blocks, and simulate them on a PC. The components can be executed on the dSPACE real-time hardware

using Real-Time Interface (RTI) in the usual way. This provides an enormous range of opportunities. For example, when new control functions are being developed in MATLAB/Simulink, they can be linked with existing AUTOSAR components and tested together with them. Moreover, new AUTOSAR components can be quickly loaded to the dSPACE prototyping hardware components with the RTI AUTOSAR

Package to perform tests in the actual vehicle. For hardware-in-the-loop (HIL) test scenarios, AUTOSAR-compliant software components can be implemented on application level as soft ECUs on dSPACE HIL simulators.

Behind the Scenes

As part of the of the RTI AUTOSAR Package, the RTI AUTOSAR Interface Generator is the user's "first

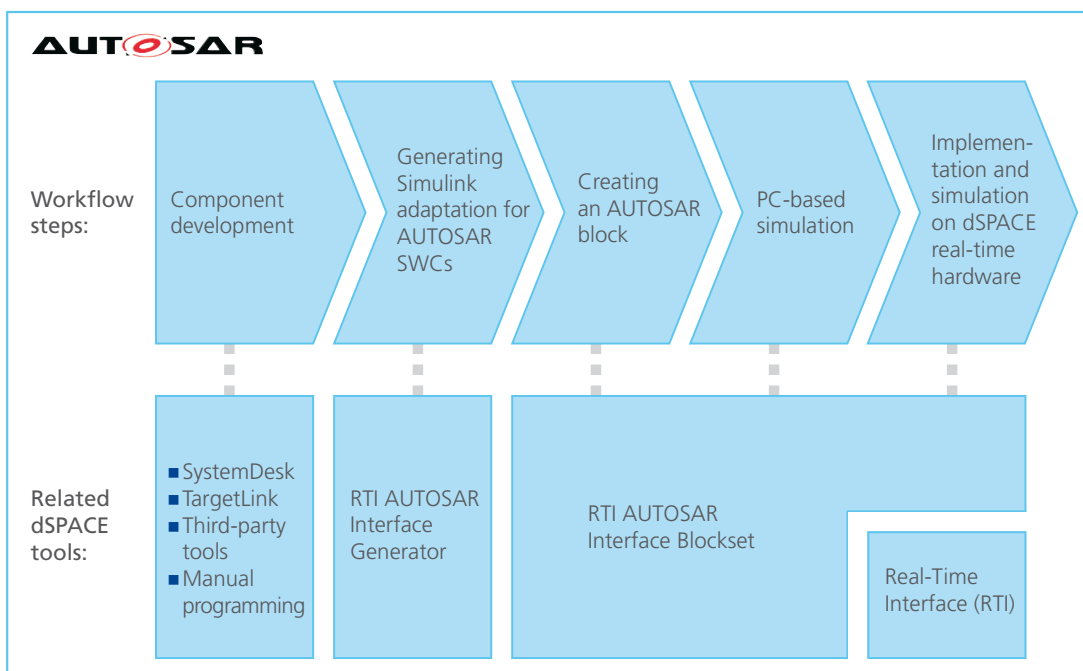


Work in the familiar MATLAB/Simulink environment: Import AUTOSAR software components, and combine them with Simulink and RTI blocks.

contact" with the AUTOSAR software components and its associated C source files. With just a few clicks, it generates an RTI SWC container holding the imported components, already prepared for Simulink. It can also be automated via a command line interface. The RTI SWC con-

tainer can be loaded to MATLAB/Simulink via the RTI AUTOSAR Interface Blockset. The generated blocks represent the specific behavior and the interfaces of the original AUTOSAR software components. To help you get started, the RTI AUTOSAR Package contains a

descriptive, easily expandable demonstration example, which you can use as the basis for further projects. ■



Workflow: With the RTI AUTOSAR Package, it is just a few short steps from AUTOSAR file import to Simulink integration, PC-based simulation, and implementation and simulation on the dSPACE real-time platform.