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
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.

Workflow steps:

- Component development
- Generating Simulink adaptation for AUTOSAR SWCs
- Creating an AUTOSAR block
- PC-based simulation
- Implementation and simulation on dSPACE real-time hardware

Related dSPACE tools:

- SystemDesk
- TargetLink
- Third-party tools
- Manual programming
- RTI AUTOSAR Interface Generator
- RTI AUTOSAR Interface Blockset
- Real-Time Interface (RTI)