AUTOSAR Basics

Duration: 1 day

Target Group: Project leader, developer, user

Prerequisites: Knowledge about software development for automotive systems

1 Overview and Aims (0,5 h)

Target: General view of AUTOSAR and its aims

Contents: E/E-development today and tomorrow, basics, background, motivation, aims, features, organisation, schedule

2 Introduction to AUTOSAR (1,0 h)

Target: Understand the basic principals and technical concepts of AUTOSAR

Contents: Software components, VFB (Virtual Functions Bus), RTE (Runtime Environment), BSW (Basic Software Modules), demonstration of a completed model

3 Methodology of AUTOSAR (1,0 h)

Target: Understand the AUTOSAR methodology

Contents: Overview, system configuration, ECU configuration, software component development, methodology from the view of an OEM and supplier, data exchange formats

4 AUTOSAR RTE (1,0 h)

Target: Understand the basic principles of the RTE (Runtime Environment)

Contents: Interfaces with applications and basic software, mode of operation of the RTE, communication mechanisms

5 AUTOSAR BSW (0,5 h)

Target: Overview of the AUTOSAR BSW (Basic Software Modules)

Contents: Explanation of the most important BSW concepts (Operating system, communication, mode management, diagnostics, IO), concrete example of a CAN-ECU

6 AUTOSAR in Practice (1,0 h)

Target: Demonstration of an AUTOSAR tool

Contents: Development support by tool on AUTOSAR systems demonstrated with DaVinci Tool Suite, presentation of the Vector AUTOSAR Demonstrators

7 Implications and Migration (1,0 h)

Target: Implications of AUTOSAR as well as the presentation of different migration scenarios

Contents: Which implications and repercussions does the employment of AUTOSAR have? Presentation of different migration scenarios from the point of view of the application and the BSW