

## AUTOSAR in practice

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| <b>Duration:</b>      | 3 days   |
| <b>Target Group:</b>  | ECU developers of automobile suppliers and OEMs                |
| <b>Prerequisites:</b> | Participation in the AUTOSAR seminar or good AUTOSAR knowledge |

### **1 Overview and introduction (0,75 h)**

Objective: Combinations of AUTOSAR, MICROSAR, DaVinci

Topics: Mapping between AUTOSAR methodology and the Vector tool chain

### **2 Operating system (1,00 h)**

Objective: Basic understanding of the mediums and mechanisms of the AUTOSAR operating system

Topics: Tasks, alarms, events, AUTOSAR SCs

### **3 Software components (with exercises) (2,25 h)**

Objective: Handling of DaVinci developer and RTE

Topics: Design of software components, ports, connections, task mapping and creation of the RTE

### **4 Input and output (with exercises) (3,50 h)**

Objective: Data exchange with I/O modules

Topics: Configuration of the basic software for the I/O with the MICROSAR configuration suite

### **5 Communication (with exercises) (3,25 h)**

Objective: Data exchange over CAN

Topics: Configuration of the basic software for the communication with the MICROSAR configuration suite

### **6 State management and system services (with exercises) (2,25 h)**

Objective: Sleep and wake up of ECUs and bus

Topics: Roles of the ComM and EcuM, Mode Management concept and mechanisms

### **7 Bus Systems (material for reference) (0,00 h)**

Objective: Understanding the conceptual differences of the bus systems and the importance of the configuration of the basic software

Topics: CAN, LIN, FlexRay

## **8 Nonvolatile Memory access (with exercises)**

**(3,50 h)**

Objective: Nv Memory accesses with AUTOSAR

Topics: Configuration of the basic software for nonvolatile memory access

## **9 Diagnostics (with exercises)**

**(4,50 h)**

Objective: Diagnostics with AUTOSAR

Topics: Configuration of the diagnostics basic software by the MICROSAR configuration suite