

MICROSAR Cybersecurity Advanced Course

Agenda VectorAcademy

Delivery Format:	This Course is offered in Classroom or in Remote Format
Duration:	Classroom: 1 day Remote: 6 hours
Target Group:	ECU Developers
Prerequisites:	Participation in the "AUTOSAR Classic Platform Basic Course" Training or good knowledge about AUTOSAR Classic Platform
Goal:	Obtain an overview on the usage of Cybersecurity in an AUTOSAR based ECU and acquire practical skills to configure a MICROSAR Cybersecurity Basic Software

1. Introduction to Basics in Automotive Cybersecurity | 3.0 h

- > Motivation for Cybersecurity in the vehicle
- > Goals of Cybersecurity
- > Security principles and General approaches
- > Basics of crypto primitives
- > Solutions for implementing security primitives
- > Use cases

2. Basic Concepts | 1.0 h

- > Basic concepts primitives
- > Basic concepts keys
- > Basic concepts jobs
- > Basics AUTOSAR crypto stack

3. Walk-through Example: Cipher-based Message Authentication Code (CMAC) | 1.0 h

- > Show detailed configuration of crypto jobs for CMAC generation and verification
- > Show configuration of the crypto stack (Csm, Crylf and Crypto driver)

4. Use Cases | 1.0h

- > Secure Onboard Communication (SecOC) in detail, including freshness value management
- > Configuration of Security Manager in CANoe
- > MICROSAR KeyM component, including certificate handling
- > Overview in Secure Diagnostics
- > Overview in Transport Layer Security (TLS)