MICROSAR Cybersecurity Advanced Course

Agenda VectorAcademy

Delivery Format:	This course is offered in Classroom **or** in Remote Format
Duration:	Classroom: 1 day
	Remote: 2 remote sessions of 3 hours each
Target Group:	ECU Developers
Prerequisites:	Participation in the Training "AUTOSAR Classic Platform Basic Course" or a good knowledge about AUTOSAR Classic Platform
Goal:	Obtain an overview on the usage of Cyber in an AUTOSAR based ECU. Acquire practical skills to configure a MICROSAR Cyber Security Basic Software.

1. **Overview and introduction | 1.0 h**

    > Motivation for Cyber Security in the vehicle
    > Cyber Security vs. Functional Safety
    > Vector MICROSAR Cyber Security Solution

2. **Basics of Cyber Security | 2.0 h**

    > Hash Functions
    > Symmetric Cryptography
    > Message Authentication Code (MAC)
    > Asymmetric Cryptography
    > Digital Signature
    > Certificates
    > Transport Layer Security (TLS)

3. **AUTOSAR Crypto Stack | 1.0 h**

    > Crypto Service Manager (CSM), Crypto Interface (CRYIF), Crypto Driver (SW/HW)

4. **Secure Onboard Communication | 1.0 h**

    > Secure Onboard Communication (SecOC)
    > Freshness Value Manager (FvM)

5. **Configuration of the MICROSAR Cyber Security Solution | 1.0 h**

    > Configuration of the MICROSAR Cyber Security Stack (Crypto-Stack / SecOC)
    > Setup of a test environment in CANoe