

MICROSAR Cyber Security

Agenda VectorAcademy

Duration:	8 hours (4 sessions of 2 hours each)
Target Group:	ECU Developers
Prerequisites:	AUTOSAR Fundamentals
Goal:	Obtain an overview on the usage of Cyber Security 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 Cybersecurity

3.0 h

- > Hash functions
- > Symmetric Cryptography
- > Message Authentication Code (MAC)
- > Asymmetric Cryptography
- > Digital Signature
- > Certificates
- > Transport Layer Security (TLS)
- > UDS Service 29

3 | AUTOSAR Crypto Stack

1.0 h

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

4 | Secure Onboard Communication

1.0 h

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

5 | Configuration of the MICROSAR Cyber Security Solution

2.0 h

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