



# Agenda VectorAcademy

## LIN FUNDAMENTALS

|                       |   |
|-----------------------|---|
| <b>Duration:</b>      | 1 Day   |
| <b>Target Group:</b>  | LIN Users   |
| <b>Prerequisites:</b> | None  |
| <b>Goal:</b>          | Knowledge about serial bus systems in motor vehicles, physical characteristics of LIN networks and the characteristics of the LIN protocol. |

### 1 | INTRODUCTION TO SERIAL BUS SYSTEMS IN VEHICLES | 1.0 H

- ▶ Electronics in vehicles, motivation for applying serial bus systems in vehicles
- ▶ Fundamentals of serial data transmission, communication architectures
- ▶ Serial bus systems and their application domains in vehicles

### 2 | FUNDAMENTALS OF THE LIN PROTOCOL | 3.0 H

- ▶ LIN network architecture, communication principal
- ▶ Synchronization, securing data
- ▶ LIN frame, frame transmission, frame types
- ▶ Frame slots, scheduling
- ▶ Network and status management

### 3 | LIN NETWORK DESCRIPTION | 0.5 H

- ▶ LIN Description Language, LIN Description File (LDF)



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## 4 | LIN NETWORK CONFIGURATION | 1.5 H

- ▶ Concept of LIN slave diagnostics, structure of diagnostic frames
- ▶ Concept of the LIN slave configuration with special services
- ▶ Node Capability File (NCF), system defining process

## 5 | LIN HARDWARE | 0.5 H

- ▶ LIN hardware interface (UART, LIN UART, LIN-Controller), LIN transceiver

## 6 | VECTOR LIN DRIVER | 0.5 H

- ▶ Generating drivers, configuration of a LIN Node