

CANalyzer Fundamentals

Agenda VectorAcademy

Delivery Format:	This course is offered in Classroom or in Remote Format
Duration:	Classroom: 2 days Remote: 12 hours
Target Group:	CANalyzer users (controller development)
Prerequisites:	None
Goal:	Knowledge about serial bus systems in motor vehicles, physical characteristics of a CAN network and characteristics of the CAN. Basics of a CAN network description. Understanding the application areas as a measurement and analysis tool, diagnostic basics, logging, offline analysis, send methods and panels

1. Introduction to CAN

- > Electronification of motor vehicles
- > Primary tasks in bus networking
- > Standards and implementation
- > Node architecture, bus-connection and termination
- > Voltage levels and corresponding bit values

2. Characteristics of the CAN Protocol

- > Addressing, message transmission and reception
- > Bus access method and arbitration
- > Message types, detailed description of the structure and functions
- > Increase noise immunity, neutralize errors
- > Error detection mechanisms
- > Error treatment & tracking
- > Motivation for the bit time interval
- > Relation of baud rate and length of the CAN bus
- > Synchronization and resynchronization

3. CAN Network Description

- > Usage and content of Network Description
- > Tools and Examples

4. Introduction to CANalyzer

- > Differentiation CANoe/CANalyzer
- > Application areas
- > License model and registration
- > Creating a configuration in CANalyzer

5. Measurement and Analysis

- > Introduction into the graphical user interfaces

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- > Dataflow and measurement setup
- > Measurement and analysis windows for CAN
- > Filter and trigger blocks

6. Data Logging and Offline Analysis

- > Recording data traffic with trigger conditions
- > Offline analysis

7. Diagnostics

- > Application areas
- > Configuration
- > Diagnostic windows

8. Send Options

- > Interactive Generator Block
- > Replay Block