

# Measurement and Calibration with CANape

<b>Duration:</b>	2 Days
<b>Target group:</b>	Controller developers, calibration engineers
<b>Prerequisites:</b>	none

## 1 Introduction to Interface Standards (2,5 h)

Goal: Provide general foundation in the CCP and XCP protocol

Contents: CCP functionality, data acquisition modes, resource requirements, XCP functionality

## 2 Introduction to CANape (0,5 h)

Goal: Introduce CANape functionality

Contents: System overview, integrating additional measurement hardware

## 3 Application Concept (0,5 h)

Goal: Introduce CANape application concept

Contents: Controller memory allocation, mirror memory, flash programming, application procedure

## 4 Creating a New Project (0,5 h)

Goal: Procedure for creating a new project

Contents: Adding a new controller (CANister) to the device list, configuring the driver, putting the controller into operation, exercises

## 5 Measurement (2,5 h)

Goal: Fundamentals of measurement data acquisition in CANape

Contents: Data acquisition modes, discussion of the Graphic, Bar Chart, Numeric, Text and Calibration windows, exercises

## 6 Calibration (1,5 h)

Goal: Calibration with CANape

Contents: Online / Offline calibration, direct-/ indirect- calibration, mirror memory, exercises

## 7 Controller Database (0,5 h)

Goal: Overview of the ASAP2-compatible Database Editor

Contents: Working with the integrated ASAP2-compatible Database Editor, characteristic curves, characteristic maps, storage schemes, common axes

## **8 Offline Evaluation (2,0 h)**

Goal: Use CANape as an offline evaluation tool

Contents: XY display, Measurement cursor, Difference cursor, Global cursor, expanded search functionality, analysis of MDF files, Insert virtual file channel, exercises

## **9 Data Management (2,0 h)**

Goal: Introduce data management functionality

Contents: Loading, saving and comparing parameter set files; storage and flash programming; user-defined parameter list , exercises

## **10 Functions and Scripts (0,5 h)**

Goal: Overall overview regarding the programming environment

Contents: Allocating and compiling of functions, instantiating functions, examples of scripts, exercises

## **11 New Functions of CANape (0,5 h)**

Goal: Overview of new features of CANape

Contents: GPS window, Video window

## **12 Questions, Feedback, Suggestions (0,5 h)**

Goal: Clarification of open issues and open discussion as feedback for Vector