



CanEasy

The analysis- and testing environment for CAN (FD), LIN and Automotive Ethernet

Detailed function overview

Automotive Bus Systems

Up to 99 configurable CAN / CAN FD channels

Up to 99 configurable LIN channels

Up to 99 [Automotive] Ethernet channels

Vehicle Description Files and Editors

DBC file importer/editor/exporter for CAN / CAN FD

LDF file importer/editor [text based] / explorer for LIN

ARXML AUTOSAR System Descriptions [CAN, CAN FD, Ethernet, FlexRay]

Display of AUTOSAR files for CAN, CAN FD and FlexRay

Supported Hardware

HMS Ixxat

Vector

Intrepid

Peak

Softing

Melexis

Kvaser

MHS

National Instruments

Integrated or external programming capabilities

Visual Basic for applications

CAPL functions for bus access [CAN, CAN FD, LIN, ISO11783 [ISOBUS], J1939]

Visual Sequencer

C-API for developing application-specific code

.NET programming [C#] for implementing simulated network nodes, test modules or Snippets

Ethernet TCP/IP stack support [Ethernet]

Central database with events

Changing communication matrix at simulation time

Create panels via API

Run as windows service

Panels for extending the graphic user interface

Create/execute display panel elements

Create/execute control panel elements

ActiveX panel elements [OCX, .NET]

Auto generated panels

Graphically accelerated panels

Ability to extend panels by own controls

Functions for bus analysis and monitoring

Central configuration of analysis windows and logging

Reuse of measurement setups from other CANalyzer or CANoe configurations

Trace Window: Detail, Difference and Statistics views for displaying the time flow of events

Display bus statistics at the node or frame level [CAN, CAN FD, LIN]

Display bus statistics on channel level

Display bus statistics in histogram representation and statistics report [CAN, CAN FD, LIN, ISO11783 [ISOBUS], J1939]

Trigger: Control data logging [CAN, CAN FD, LIN, ISO11783 [ISOBUS], J1939]

Symbol mapping: Link system variables/environment variables/signals

Momentary display of bus signals, environment and system variables

Graphic display of signal responses

Display of physical bus level and logical interpretation [CAN, CAN FD, LIN]

Display of system states, discrete values and CAN frames/bursts

Trace Window Temporarily reduce the displayed data

Channel Filter: Reduction of the displayed data

Variables Filter: Reduction of the displayed data

Signal Filter: Reduction of displayed data

Offline Mode: Replay a logged measurement

Data Export: Use the logged data in other programs

Functions for simulation and modeling
Automated remaining bus simulation
Interactive Generator (CAN, CAN FD, LIN, etc.)
Interactive Generator (Ethernet)
Signal Generator (CAN, CAN FD, LIN, Ethernet (AUTOSAR PDUs))
Graphically create command sequences for stimulation and testing
Generate messages for sending (CAN, CAN FD, LIN)
Macros: Tool automation
Start Value Window: Predefined values for system variables/environment variables/signals, which are used for measurement start
.NET Snippets Tool automation
LIN Interactive Master (LIN)
LIN Node Simulation (Master/Slave)
Replay a logged measurement in parallel to a running simulation
Variables with global validity, can be applied to all analysis windows and logging
Symbolic display of the network
Simulation Setup: Filters for messages and channels, dependent on bus systems
Define/access Environment Variables
Model design/generation/execution out of the network description (CAN, CAN FD, LIN, ISO11783 [ISOBUS], J1939)
Execute simulation models
Modeling libraries (e.g. transport protocol, interaction layer, network management), DEM-specific extensions

Integration of other interfaces or additional options
Implement your own functions in C
Link analog/digital measurement hardware from third-party suppliers
COM Server: Automation interface for remote control
Integrate Simulink models in the simulation
Data exchange with LabVIEW
AMD/XCP Read or write to memory locations in the ECU and analysis of ECUs
Signal protocol DLL (Ethernet): Interpret signals in proprietary protocols
TCP/IP socket access with CAPL
RS232 access with CAPL

AMD/XCP
XCP/CCP Window for configuration
Online access to internal ECU values in RAM over XCP on CAN(FD), XCP on Ethernet (TCP and UDP), XCP on LIN and CCP
Writes scalar, multi-dimensional, and complex variables to the ECU's RAM via Download
Supports ASAM MCD-2 MC (A2L) databases
Support of scalar CCP/XCP data types [(UBYTE, SBYTE,...)]
Secure access via Seed & Key
Parallel access to multiple ECUs
Address Update for ECU symbols from Linker Map file

Diagnostic Feature Set
TP Observer (CAN, FlexRay, J1939, ISO11783)
TP Observer (Ethernet)
Diagnostic Observer: Symbolically interpret diagnostic messages
Diagnostic Tester: Consists of Diagnostic Console and Fault Memory Window
Diagnostics Parameters Window
UDS/KWP2000 support
Diagnostics with CAPL
Basic Diagnostics: Diagnostic support without description file
Display diagnostic description files (ODX/CDD)
.NET diagnostics scripting
Diagnose Simulation

Diagnostic Functions
Import and export from/to different exchange formats (ODX, AUTOSAR DEXT, CSV, RTF, HTML, A2L, XML, CDI)
Supports document templates
Support of different protocols on different networks (UDS, KWP2000, OBD, WWH-OBD, CAN, CAN FD, LIN, DoIP)
Comparison views between two versions
Documentation and display of descriptions of DTCs at the error memory processing
Different views of diagnostic trouble codes
Structured operation concepts
Single source data base
Simple editing of Text-ID (TID)
Graphical telegram overview for request and response data for visualization of bit and byte positions

XCP Details

Online calibration via CCP, XCP

Online calibration of hex and other binary files

Diagnosis via KWP2000, UDS, DoIP

Support of CDD and ODX files

Offline data analysis

Run-time environment for "Software in the Loop"

Automation interface (via C-API, COM, ASAP3, ASAM MCD-3 MC, iLinkRT)

Function library, e.g. for calculating several signals or filtering noisy signals

Visualize Simulink and Stateflow models

Creation and integration of user-specific display and operating elements

Recording CAN bus data

Analysis of bus communication in the trace window

Triggering options for targeted data recording

Standalone data logger

CCP and XCP measurements incl. Seed & key handling

Support the buses CAN (FD), Ethernet, Broad'R Reach, SOME/IP, FlexRay, LIN, SAE J1939, CANopen, GMLAN, K-Line

Signal display over time or in XY display

Automatic evaluation of measured data

Export sequences from measurement files with synchronous video editing

Characteristic variable adjustment parallel to the measurement data acquisition

Offline mode for ECU parameters

Editors for ASAP2, DBC

Viewer for Fibex, LDF, ODX, CDD, ARXML

Diagnostic Data Exchange

Import of layers and services from ODX descriptions (data presentation with ODXStudio View)

Diagnostic specification export (RTF, HTML)

Service overview export (CSV)

Import of signals and conversions from an AUTOSAR System Description

Import of data in A2L-format