

CANoe

The Multibus Development and Test Tool for ECUs and Networks

What is CANoe?

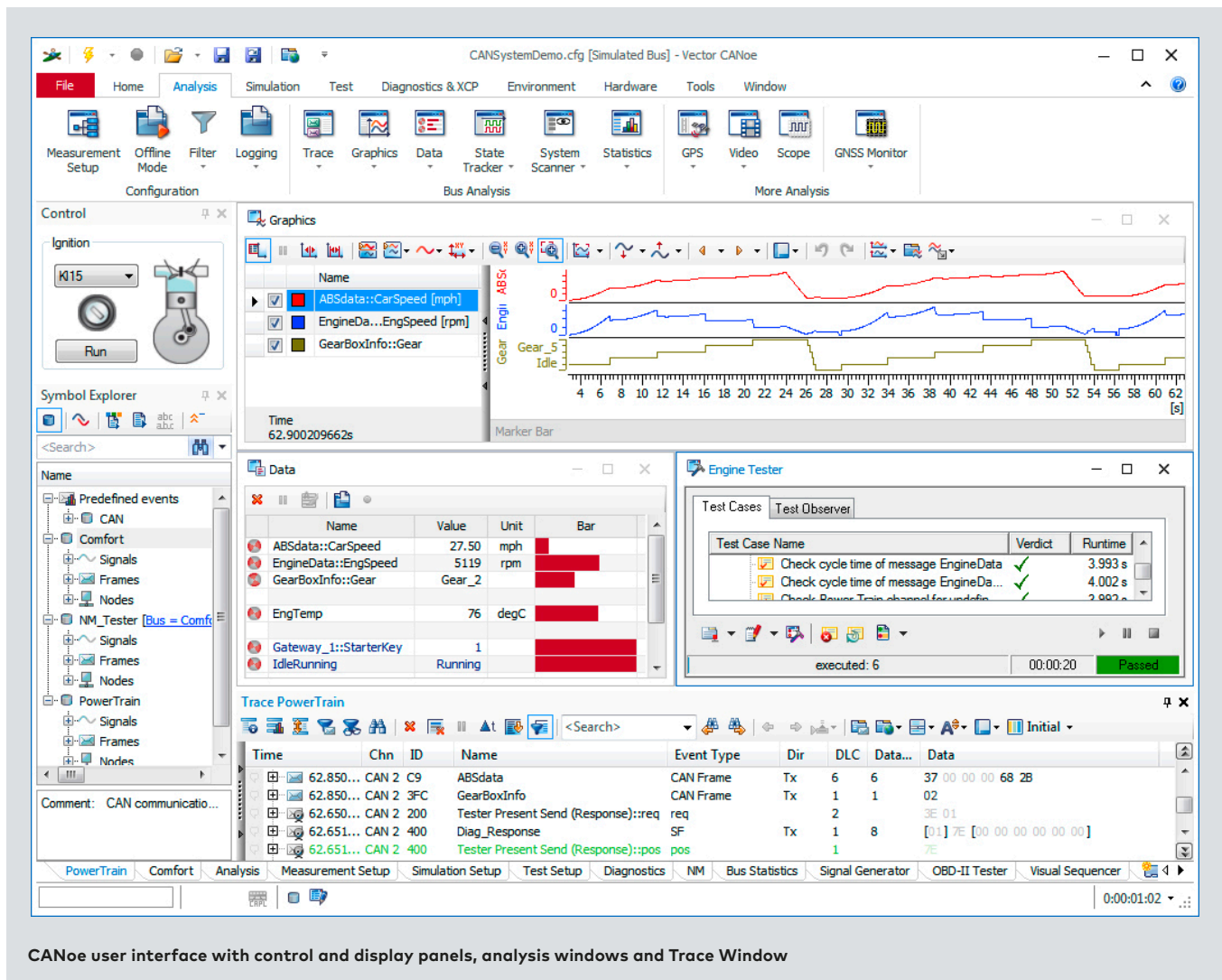
CANoe is the comprehensive software tool for development, test and analysis of individual ECUs and entire ECU networks. It supports network designers, development and test engineers at OEMs and suppliers throughout the entire development process – from planning to system-level test.

Versatile variants and functions provide the appropriate project support. Therefore, its versatile functions and configuration options are used worldwide by OEMs and suppliers.

Overview of Advantages

- > Only one tool for all development and testing tasks
- > Easy automated testing
- > Simulate and test ECU diagnostics
- > Detect and correct error situations early in the development process
- > User-friendly graphic and text-based evaluation of results

This means savings in time and effort while enhancing the quality of ECU development at the same time.



CANoe user interface with control and display panels, analysis windows and Trace Window

Highlights of Version 11.0

New Communication Concept

Adaptation of the internal communication concept for:

- > Service-oriented communication (SOA)
- > AUTOSAR Adaptive systems

Security

Secure communication with the System under Test based on:

- > Transport Layer Security (TLS)
- > Secure Onboard Communication (SecOC)

Simulink Integration

- > Support of multi-tasking models
- > Emulation of a RT-OS scheduler

VT System


- > Setup and configuration of VT Systems without physical connection

VH6501 CAN/CAN FD Disturbance Interface

- > Graphical panel for configuration of trigger and sequences to disturb CAN/CAN FD networks

New Licensing and Installation Concept

- > Program characteristics is determined by available license only
- > Activation and licensing in a single process
- > Easy installation with MSI-compliant installer

 Details in the webinar recording (50 min.): www.vector.com/cc_11.0

Application Areas

Analysis

Analysis of the multi-bus communication of ECUs and entire systems at the developer's desk as well as directly in the vehicle.

Simulation

Manually or automatically simulation from the underlying communication data base. This remaining bus simulation of communication behavior is the basis for the subsequent analysis and testing phases.

Via specific OEM Packages the CANoe simulation can be adjusted to the requirements of the respective OEM.

In combination with the hardware CANoe RT Rack you execute real-time relevant simulation and test functions on a dedicated platform, i.e. separate from the graphic user interface.

Testing

CANoe represents the state-of-the-art test environment. It is the ideal testing tool as well for the entire system as for individual ECU testing:

- > ECU tests
- > Module tests
- > Integration tests
- > Conformance tests

> Regression tests

> Testing of ECU prototypes

With increased real time requirements, you may also operate CANoe as a HIL (Hardware-in-the-Loop) system.

Stimulation

CANoe offers many different ways to stimulate ECUs in the network: the bandwidth ranges from pre-defined user interfaces to different programming options.

Diagnostics / Diagnostic Tester

The Diagnostic Feature Set included with CANoe supports you in analyzing diagnostic communication via the KWP2000 and UDS standards. CANoe may be used both as a diagnostic tester and to simulate ECU diagnostics. In addition a complete OBD-II Tester is integrated.

CANoe Variants

CANoe Full Version

Full range of functional features. Simulation models are created with CAPL; test cases are easy to model with the Test Feature Set. This variant is intended for users who want to use CANoe's full functionality.

CANoe Run

As a 'Runtime' variant with unchangeable configurations, full analysis functions and simple connection and disconnection of network nodes. This variant is intended for users who need to test their ECU quickly and easily in interaction with a prescribed remaining bus simulation.

CANoe Pex

As a 'Project Execution' variant with an exclusively graphic user interface. Simulation, test cases and results are easy to control without requiring special evaluation of the underlying messages.

Supported Bus Systems, Protocols and Options

> Bus systems:

CAN, CAN FD, LIN, MOST, FlexRay, Ethernet, WLAN, Car2x ITS G5, AFDX®, J1708 and ARINC 429

> Protocols:

TCP/IP, SOME/IP, CANopen, J1939, ISO 11783, J1587, GMLAN, K-Line, CANaerospace and ARINC 825. Others upon request.

> Options:

.AMD/XCP, .Scope, .Sensor and .DiVa

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More information: www.vector.com/canoe