

CANalyzer.FlexRay 7.2

The Professional Analysis Tool for FlexRay

Highlights

- > Full AUTOSAR PDU support (including Update Bit)
- > Ready for use under all official FIBEX versions
- > Gateway operation: Simultaneous analysis and testing of CAN and FlexRay networks

FlexRay is a scalable, flexible high-speed communication system that fulfills growing technical requirements in the automotive field. High-performance analysis tools are needed in this area of safety-critical applications with FlexRay. The CANalyzer.FlexRay from Vector gives you an universal tool for analyzing distributed real-time systems.

Application Areas

CANalyzer.FlexRay covers all applications from simple network analysis to focused troubleshooting of complex problems. The multibus approach enables simultaneous operation of the CAN, LIN, MOST, Ethernet and FlexRay bus systems.

Analysis Functions

The basic functions that are provided give you a wide variety of possible uses. They include:

- > Listing the bus data traffic (Tracing)
- > Graphic and text displays of signal values
- > Interactive sending of pre-defined PDUs und frames
- > Statistics on nodes and messages with the Cluster Monitor

- > Logging messages for later replay or offline evaluation
- > Well-organized display of cycle multiplexing, in-cycle repetition and PDUs in the analysis windows

Database Support

The FlexRay system description is saved in FIBEX format. CANalyzer.FlexRay reads in these databases and provides you with the information for analysis and for automatically configuring the hardware.

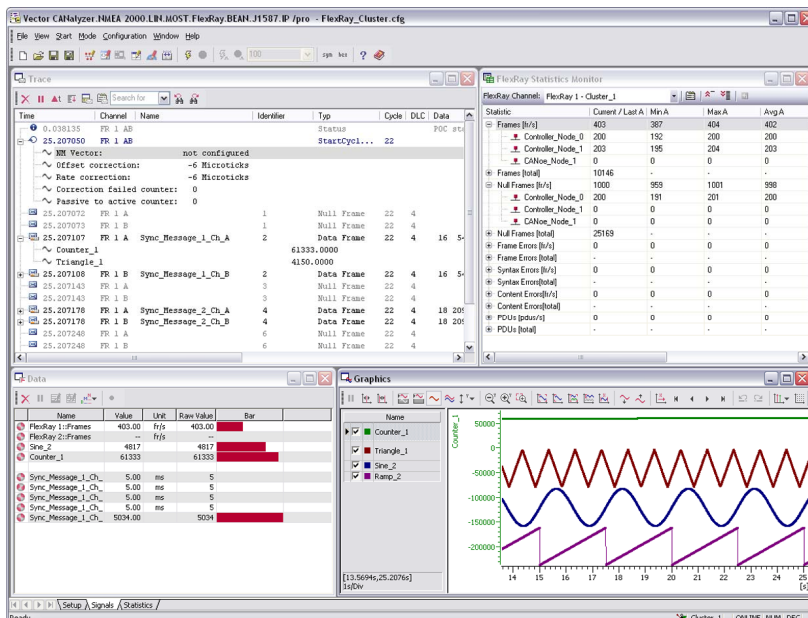
FIBEX Explorer View

The supplied FIBEX Explorer View tool gives you a quick and detailed understanding of the FIBEX data and its interrelationships.

CAPL Interface

The CAPL script language is used in all areas of CANalyzer usage, from analysis to simulation and testing. CAPL offers functions tailored to the FlexRay protocol:

- > Event Handler for bus events and controller states (e.g. error, symbols, synchronization status)
- > CAPL objects for frames, PDUs, signals to be sent and for network configuration
- > Specific functions for such tasks as sending and receiving the wake-up pattern and configuring the communication controller



CANalyzer.FlexRay configuration for analyzing a FlexRay system with Trace window and Statistics Monitor

Stress Module for FlexRay

FRstress is a special tool for error simulation and manipulation of FlexRay frames on the protocol and bit levels. Besides disturbing the bus physics, it is also possible to manipulate, delay or delete specific data.

For more information please refer to the 'FRstress' datasheet.

Hardware Interfaces

CANalyzer.FlexRay supports the Vector's VN interface product line and the FlexCard. These high-performance and flexible PC interfaces for FlexRay give you optimal interfaces for your application. For detailed information please refer to the 'Hardware Interfaces for FlexRay and CAN' datasheet.

Stimulation

In network stimulation, the FlexRay Frame Panel gives you a convenient way to send out FlexRay frames. FlexRay-specific parameters such as header flags and cycle multiplexing can also be conveniently adapted to the payload data.

The FlexRay PDU Panel lets you send PDUs interactively. Besides modifying the signal values, the Update Bit and Update Counter can also be modified.

Hardware Time Synchronization

Bus interfaces of the XL product line make it possible to perform time-synchronized multibus analysis in CANalyzer.FlexRay. The devices to be synchronized are interconnected via a simple 'Partyline'.

Supported Hardware

CANalyzer.FlexRay supports FlexCard Cyclone II SE as well as the Vector interfaces VN3300, VN3600 and VN7600. These flexible PC interfaces offer optimal interfaces for your application. You will find detailed information in the 'Hardware Interfaces for FlexRay and CAN' datasheet.

Software Interface

The Windows-supported interface for program communication (Microsoft COM) lets you:

- > Conveniently exchange data with standard software, such as for measurement data analysis or for more in-depth evaluation of the observed bus traffic
- > Control the measurement flow by external applications
- > Automate recurring test sequences

Other Useful Auxiliary Programs

CANalyzer.FlexRay contains auxiliary programs for the following purposes:

- > Programming CAPL scripts
- > Creating user-defined display panels

New Functions of Version 7.2

FlexRay Filter Block

- > Simple configuration of FlexRay-specific filters
- > Filtering of PDUs, frames and nodes
- > Filtering of FlexRay-specific fault and status events

FlexRay Statistics Monitor

- > Display of statistics on the network and node levels
- > Statistics for PDUs, frames and null frames
- > Detailed evaluation of bus errors (e.g. syntax error)

Extended PDU Support

- > Convenient PDU selection from Symbol Explorer
- > Symbolic representation of raw frames (name, PDU, signal)
- > PDU qualification for frames and signals in CAPL

Diagnostic Interpretation

- > Visualization of diagnostics in Trace window via an Observer
- > Parameterization via CANdela database or ODX
- > Supported transport protocol: AUTOSAR, ISO 10681-2, OEM-specific

Other Functions

- > Configuration of 2 key slots, control of key slots via CAPL
- > Descriptions of error, warning and information messages with unique numbering scheme