

# CANalyzer.CANaerospace 7.2

Universal Analysis Tool for CAN-based Avionics Networks

## Properties Overview

- > Easy observation of data traffic and comprehensive network analysis
- > Flexible configuration of the measurement setup
- > Time-synchronous analysis of multiple buses
- > Support of the protocols ARINC 825, 826, 810, 812, CANaerospace and optional CANopen
- > Open interfaces and database concept offer optimal support for proprietary protocols as well

Over the years, a number of bus systems have become established in aerospace engineering. CAN is playing an increasingly important role here. CANalyzer.CANaerospace is the universal analysis tool for CAN-based avionics networks and distributed systems. Besides offering monitoring and analysis, it also makes it easy for you to stimulate the data traffic.

## Application Areas

CANalyzer.CANaerospace covers all use areas from simple network analysis to focused troubleshooting of complex problems. The multibus approach lets you simultaneously operate multiple channels, different bus systems such as CAN, Ethernet and FlexRay as well as different protocols.

## Functions

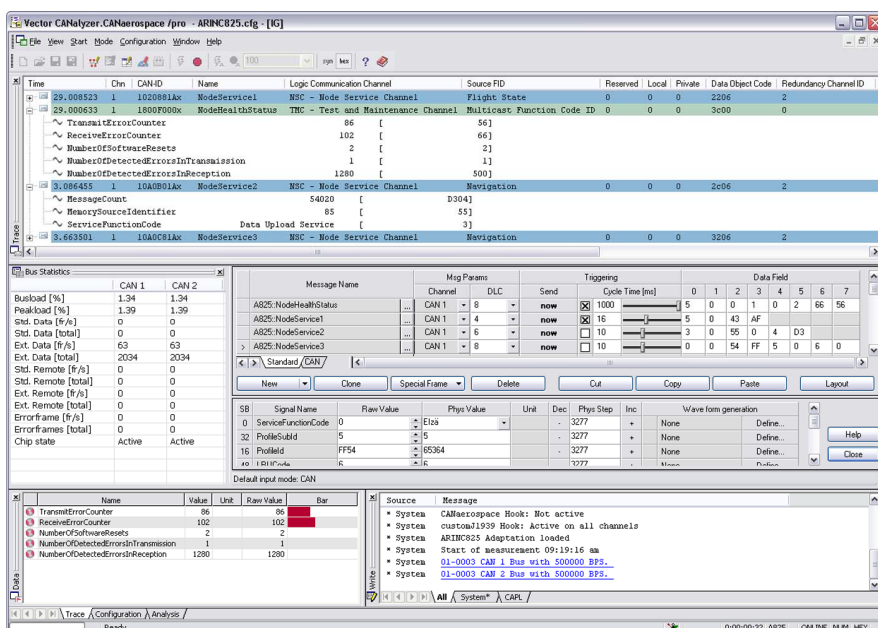
Basic functions offer an abundance of capabilities such as:

- > Tracing of the bus data traffic
- > Graphic and text displays of signal values
- > Interactive sending of messages
- > Statistics on nodes, messages, bus loading and faults
- > Logging of messages for later replay or offline evaluation with versatile triggering options
- > Generation of bus disturbances

## Database Support

In a project database, messages and their data segments may be assigned project-specific names, conversion formulas and physical units. The database is set up and maintained with the CANdb++ data management program that is supplied with the product. ARINC 825 profile files can be read-in and exported.

Building upon this database, it is possible to represent messages and their data contents on the system level, service level and message level. Examples are: Cabin Pressure Control, Water Waste, Body Pitch Angle, Boiler Water Temperature and much more. This is also how you parameterize sending of messages and their data contents.



Display of ARINC 825 specific data in the Trace, Data and Statistics windows. Interactive generation of messages.

### Programmability

User programmability lets you extend CANalyzer functionality as desired. The programming language used here is the application-oriented C-like language CAPL (Communication Access Programming Language). CANalyzer contains an interactive development environment that makes it easy to create, modify and compile CAPL programs.

### Hardware Interfaces

CANalyzer.CANaerospace supports all hardware interfaces available at Vector. Thanks to the large selection of different PC interfaces (PCMCIA, ExpressCard, USB, PCI, PCI-Express, PXI) and of bus transceivers, optimal bus access is possible for any use case.

### Training

As part of our training program, we offer a range of classes and workshops on CANalyzer in our classrooms and on-site at our customers.

For more information and the dates of our training courses, please visit our homepage on the Internet at: [www.vector-academy.com](http://www.vector-academy.com)

### Supported Protocols

#### > ARINC 825 (from V7.2 SP4)

The "General Standardization of Controller Area Network Bus Protocol for Airborne Use" defines fundamental communication concepts for the use of CAN. It supports the IMA approach and offers addressing mechanisms that extend beyond system boundaries such as AFDX.

#### > ARINC 826 (from V7.2 SP4)

Based on ARINC 825, ARINC 826 specifies the "Software Data Loader via CAN Interface". This is a variant of ARINC 615 with optimizations for use under CAN.

#### > ARINC 810/812 (from V7.2 SP4)

These documents specify communications for the on-board Galley Inserts (GAIN). The focus is on power management.

#### > CANaerospace

This protocol from Stock Flight Systems is typically used in development simulators, simulator cockpits, UAVs, and much more. NASA refers to this bus as the "NASA AGATE data bus".

#### > CANopen

This protocol is used in many subsystems that are based on industrial components. CANopen support is available as a separate option for CANalyzer.

#### > Proprietary protocols

Because of its database approach and open interfaces, CANalyzer.CANaerospace can be extended to handle proprietary protocols.