

# CANalyzer.LIN 7.1

The Professional Development, Measurement and Analysis Tool for LIN and J2602

### Highlights

- > Full support of all LIN protocol versions including J2602
- > Easy simulation of Master node according to LDF
- > Advanced LIN timing analysis functions

LIN (Local Interconnect Network) is a cost-effective and deterministic communication system for connecting ECUs with smart sensors, actuators and controls. The popular Vector software tool CANalyzer.LIN provides you with professional measurement and analysis features for the specifications **LIN1.x**, **LIN2.0**, **LIN2.1**, **SAE-J2602 (US-LIN)** and **Cooling-Bus**.

### Applications

CANalyzer.LIN is capable of analyzing up to 32 LIN networks in parallel. Together with its integrated CAN features, it is the ideal tool for simultaneously analyzing LIN and CAN networks.

### Analysis Features

CANalyzer.LIN offers you professional LIN analysis features:

- > Network analysis according to LDF
- > Interpretation of LIN2.0/LIN2.1 configuration commands
- > Detailed error and event detection
- > Numerical and graphical visualization of signals
- > Configurable display panels
- > Network Management Window
- > Network and node statistics with new LIN Network Monitor

- > Logging, replay, filter and trigger blocks
- > Programmable oscilloscope trigger

### Node Simulation

A Master (or Slave node) can be easily simulated according to LDF definition. You can control a Master's scheduler either interactively using the LIN Interactive Master block or by programming a CAPL script.

### Timing Analysis

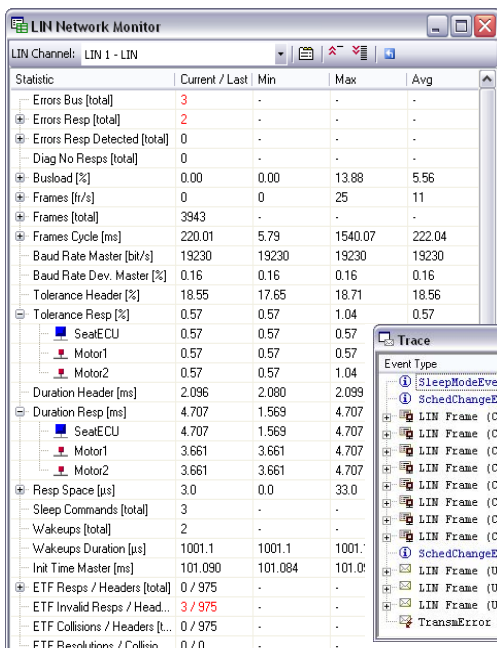
Via special LIN Trace Columns and the LIN Analysis Feature Set, you can directly access highly accurate timing information, e.g.:

- > Header, response and total frame transmission time
- > Schedule slot delay time, interframe space and bus idle time
- > Sync break, sync delimiter and interbyte space
- > Header and response tolerance
- > Wakeup signal length
- > Baud rate of header and response

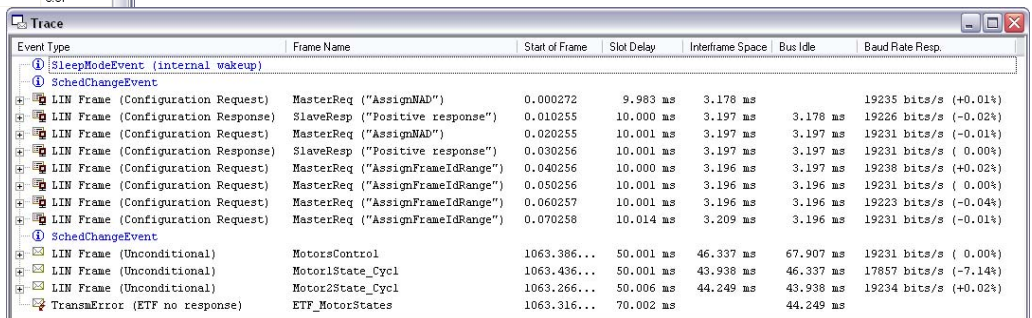
### Database Utilities

The following LIN database utilities are delivered with CANalyzer.LIN:

- > The **LIN File Editor** is a text-based editor for LDFs/NCFs with an integrated consistency checker
- > The **LIN Network Viewer** provides a graphical view of your LDF



New LIN Network Monitor



New LIN Trace Columns

### Hardware Interfaces for CAN and LIN

CANalyzer.LIN supports Vector's XL-Interface Family of high performance and flexible PC-interfaces for CAN and LIN. For detailed information, please see the data sheet 'CAN and LIN hardware interfaces'.

### Development and Test Tool for LIN

CANoe.LIN provides you with CANalyzer.LIN's analysis features as well as highly sophisticated development, stress and test features for LIN and J2602. For detailed information please see this product's data sheet.

### Trace Window for LIN

The Trace Window for LIN not only displays LIN frames, errors and events, but also shows all relevant LIN timing information. The following information can be displayed for LIN:

- > Unconditional frames as well as their raw/encoded signals values
- > Event-triggered frames, i.e. no response, single response, collision and collision resolution
- > LIN2.0/2.1 configuration commands and their interpretation
- > All types of errors e.g. no response, illegal header/response, checksum error, synch error, long dominant signal, spike event
- > Network management commands i.e. Go-to-Sleep, wakeup request
- > Special events for network management, schedule table change, baud rate change, frame length detection, checksum model detection, etc.
- > LIN diagnostic frames interpreted at TP level, i.e. Single Frame, First Frame, Consecutive Frame
- > LIN timing information such as: start of frame, slot delay, interframe space, bus idle time, sync break/delimiter length, response/interbyte/interframe space, wakeup signal length, etc.

### LIN Network Management Window

This window not only displays the network management state for all configured LIN networks, but also allows you to modify the state of each network either before or after measurement start.

### Programmable Scope Trigger

The sync port of the XL-hardware, which is normally used for hardware synchronization, can also be programmed as a fast scope trigger. All sorts of LIN trigger conditions can be programmed using a CAPL script function.

### LIN Replay Block

The following LIN events can be replayed from a logging file:

- > Unconditional frames
- > Event-triggered frames: no response, single response
- > Dynamic frames
- > Configuration requests and responses
- > Diagnostic requests and responses
- > Sleep commands and wakeup requests
- > No responses

You can also configure which responses shall be sent:

- > All responses
- > Only responses published by the Master
- > No responses

For more information about Vector's LIN solutions please visit:  
[www.lin-solutions.com](http://www.lin-solutions.com)

### New Functions in Version 7.1

#### New LIN Network Monitor Window

- > Displays LIN-specific network and node statistics
- > Detailed error statistics with color-highlighting
- > Relevant node timings e.g. response space and response tolerance
- > Statistics for event-triggered and diagnostic frames
- > Statistics for network management

#### Other Improvements

- > New Trace columns for Slot Delay, Interframe Space, Bus Idle, Baudrate Master (measured), Baudrate Response (measured)
- > New functions added to LIN Analysis Feature Set for configuring the max. tolerated header length and response tolerance