

Multilog

The Data Recorder for Multibus Systems with CAN, LIN, FlexRay, and MOST

Do you need a professional tool for logging of messages from different buses for later evaluation? With Multilog Vector is offering you a multibus data recorder for a wide range of logging tasks.

Features and Advantages

Multilog is a programmable data logger for a wide range of multibus systems involving CAN, LIN, FlexRay and MOST. Messages from various buses can be received, saved, and evaluated according to the loaded configuration. Multilog's low current consumption in sleep mode makes Multilog especially well-suited for in-vehicle testing and use in test fleets.

Your advantages with Multilog at a glance:

- > Use as a standalone tool for a wide range of logging tasks with CAN, LIN, FlexRay and MOST
- > Data transfer by wireless LAN
- > Use in test fleets (sleep mode with low current consumption)
- > Comprehensive trigger conditions and analysis functions
- > Prelogging of CAN, LIN and FlexRay during system start after approx. 50 ms
- > Saving data to Compact Flash Cards possible
- > Flexible configuration with configuration tool
- > Offline analysis in CANoe, CANalyzer and CANgraph
- > Customized adaptations are possible (hardware, software)

Application Area

The main functionalities can be used simultaneously:

- > **Data Logger**
With Multilog you can easy filter, receive, and log CAN, LIN and FlexRay messages and signals. CAN messages can also be sent out. The Control Frames of the MOST bus can be logged, too. Further more you can record received data of the serial interface.
- > **Classing Device**
Multilog is especially well-suited for processing and editing the logged data and for creating classing tables.
- > **Gateway**
If an ECU should not be connected directly to the CAN bus, alternatively Multilog can be used as a gateway for indirect bus coupling. Multilog also supports gateways between LIN and CAN.

Common Functions

- > Saving data in compressed format during logging either in internal memory (100 MB) or on Compact Flash Cards (currently up to 8 GB)
- > Transferring logged data via wireless LAN
- > Configuration update via wireless LAN, Compact Flash Card or external memory device (USB 2.0)
- > Export of log files in various data formats for CANoe, CANalyzer and CANgraph or Microsoft Excel
- > Offline analysis of logged data in CANoe or CANalyzer with familiar analysis functions
- > Optional: either FlexRay or MOST



Project Work

As part of our support and services program we offer customized solutions for Multilog. Such work is contracted as a project-specific job. You can get additional information per E-Mail: logger@vector-informatik.de

- > Optional: expansion by adding an analog card
- > Optional: diagnostics upon request

Functions for CAN

Every Multilog contains the following CAN functions:

- > Message filter
- > Triggering on messages, signal values, error frames and message timeouts
- > Classing, Rainflow analysis
- > Gateway functionality
- > Integration of CAN databases (DBC format) for selection of trigger conditions
- > Sleep mode and WakeUp over CAN
- > Drive recorder function
- > Transmit messages
- > Logging approx. 50 ms after system start
- > Optional: CCP/XCP on CAN

Expansion LIN

Multilog supports your logging tasks at LIN buses with LIN-specific functions:

- > Expansion of Multilog with up to 8 LIN channels with LINprobe instead of 1 CAN channel
- > Close coupling of LINprobe to the LIN bus
- > Message filter
- > Triggering on messages, signal values, message timeouts
- > Classing, Rainflow analysis

- > Gateway functionality
- > Integration of LIN databases (LDF format) for trigger conditions
- > Logging approx. 50 ms after system start

Expansion FlexRay

Multilog offers the following functions for the use at FlexRay buses:

- > Expansion to record up to 2 FlexRay channels
- > Very close coupling to the FlexRay bus via the adapter FlexRay-Probe
- > Frame filter
- > Triggering on frames, signal values, frame timeouts
- > Classing, Rainflow analysis
- > Analysis of bus states
- > Integration of system description in FIBEX format for selection of trigger conditions
- > Logging approx. 50 ms after system start
- > Optional: XCP on FlexRay (expected availability: Q4/2007)

Expansion MOST

Multilog is used for logging MOST messages, too:

- > Expansion with one MOST interface to record the control channel
- > MOST interface as spy
- > Automatic hardware synchronization of CAN and MOST
- > Logging after approx. 1.8 s after system start
- > Option USB already included

Included in the Delivery

- > Multilog with the selected options
- > 70-pin automotive connector with contacts
- > Remote control with 2 keys (red, black) and 2 programmable LEDs for connection to the event plug
- > Null modem cable for the configuration of the Multilog system settings
- > Configuration program, CardReader software
- > Server software for WLAN for 2 simultaneous connections
- > Option WLAN: glass mount antenna with 3m connecting lead

Multilog ML Server

Optionally, a fleet administration software is available for Multilog which offers you the following functions:

- > Server for WLAN; the number of connections is not limited
- > Encoding over WLAN with the means of SSL
- > Monitoring program for vehicle administration, display of connection and statistics
- > Software for CardReader
- > Requires Win 2000, XP

Additional Accessories

- > For WLAN: sealed glass mount antenna, 4.5 m connecting lead
- > Remote control with 1 key, 3 LEDs and 1 sound for connection to AUX plug
- > Toshiba Compact Flash Card 1 GB (industrial grade)

Technical Data

Channels	8 user-configurable CAN channels
Optional channels	1 MOST channel (Control Frames); max. 8 LIN channels (external) instead of 1 CAN channel; max. 2 FlexRay channels (external)
CAN interfaces	Piggyback boards
Memory	Internal: 100 MByte flash (expandable) Externally accessible: 1 Compact Flash, Type 1
Data transfer	WLAN, IEEE 802.11b/g, USB for external memory media.
Logger capacity	From 6.7 million CAN messages (for DLC 8) to 100 MB 15 million CAN messages (for DLC 0)
Data export	CANalyzer, CANoe, CANgraph, MS Excel
Display	5 user-configurable red LEDs Display: 1 line with 8 characters
Control inputs & outputs	8 digital inputs and 8 digital outputs Optional: card with 8 analog inputs
Connectors	70-pin socket connector (AMP automotive) for supply voltage, CAN, inputs/outputs, RS232; Optional: WLAN socket for WLAN antenna Optional: MOST plug connector MOST 2+0
Supply voltage	5,8 V..32 V (32 V..36 V at higher power consumption)
Sleep mode	Current consumption max. 700 µA (CAN)
Temperature range	CAN/FR: -40 °C..+70 °C (without WLAN operation) MOST: -20 °C..+70 °C (without WLAN operation)
Dimensions	approx. 190 × 240 × 88 mm

The following plug-in boards (Piggybacks) are available for CAN:

- > Highspeed: 80C251
TJA1050
TJA1041
- > Lowspeed: TJA1054
- > Single Wire: TLE6255G
- > Truck & Trailer: upon request

Optionally, a Multilog analog extension A8I is offered.

Details:

- > 8 analog inputs
- > Measurement range 0 V..18 V
- > Resolution 12 bit
- > Precision 0,2%
- > Sampling rate 1 kHz