What is vMeasure exp?
vMeasure exp is a flexible measurement software solution that provides you with efficient support in the laboratory, at the test stand, during test drives and endurance tests. With vMeasure exp, you can conveniently record physical values, internal ECU signals as well as signals sent via the vehicle bus. To provide an informative interpretation of the recorded data, the position data (GPS) and video data of the route traveled are also required. Typical tasks of the measurement engineer include measuring OBD signals to ascertain the status of the control unit.

With vMeasure exp, you can record all of this data simultaneously and efficiently. In just a few clicks, you create the measurement configuration, set up the measurement windows and get started with the actual measurement tasks. To make it easy to set up the measurement, configuration tools for the hardware of third-party manufacturers, such as CSMconfig by CSM, are integrated in vMeasure exp. For flexible data recording, use the multi-recorder concept with comprehensive trigger options as well as pre-trigger and post-trigger times.

Overview of Advantages
> Time-synchronous acquisition of physical values, ECU-internal data, video, GPS as well as bus data
> Optimum, user-friendly representation of signals in graphic, numerical and text windows as well as user-definable panels
> Simultaneous measurement of signals from different measurement hardware systems and bus technologies enables thorough analysis of the complete system
> Open platform for integration of measurement hardware from any manufacturer via DAIO interface
> Flexible, individual storage of recorded channels by multi-recorder concept enables efficient measurements and allows you to focus on relevant signals
> Diagnostics support by measurement of OBD-II
> Virtually no size restriction for measurement files; the MDF4 format allows for files greater than 4 GB and with over 100,000 measurement signals
> High efficiency due to automation via scripts
> Rapid inclusion of DBC files by drag & drop to expand measurement configurations
**Supported Interfaces**

- All Vector network interfaces for CAN (up to 2 Mbit/s baud rate), CAN FD, FlexRay and LIN
- Ethernet PC interface
- DAIO interface for connecting any measurement hardware
- Connection of the ECU via XCP on CAN, LIN, FlexRay or access to the control unit with XCP-on-Ethernet-based VX1000 measurement and calibration hardware and microcontroller-specific data trace and debug interfaces

**Measurement Data Analysis and Documentation**

- Signal display over time in various windows, user-definable panels or in XY display
- Manual investigation of signal processes by means of zoom, search functions and measurement cursor
- Insertion of comments for off-line analysis
- Exporting of signals from measurement data along with synchronized video
- Data export to ASCII, Excel and MATLAB
- Comprehensive printing function and PDF export, templates can be individually customized
- Convenient insertion of window content or entire display pages in Word and PowerPoint by means of drag & drop accelerates the documentation

**Supported Measurement Hardware**

- Analog and digital I/O of the Vector network interfaces
- CAN- and EtherCAT-based measurement modules by CSM
- Measurement hardware by CAETEC, ETAS, IMC, IPETRONIK, NI
- USB-based GPS devices
- Video cameras with DirectShow interface

**vMeasure Option**

- Thermodynamic State Charts option for displaying thermodynamic data and informative state charts

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**Highlights of Version 2.0**

- Thermodynamic state charts can be displayed for offline analysis using the new “Thermodynamic State Charts” option
- Indexing of MDF files on the local workstation for the fast, convenient search for measurement data
- Multiple measurement files recorded together are displayed as a contiguous measurement
- Display of two- and three-dimensional arrays, e.g. for the results of an FFT function calculated online
- Additional display options for time and value axes simplify analysis in the graphic window
- Faster operation thanks to user-defined ribbons and keyboard shortcuts

**Configuring the Measurement**

- Intuitive configuration of signal sources to be recorded and of the bus systems to be connected
- Easy sharing of measurement configurations with co-workers
- Simple creation of formulas for virtual signals via a graphic interface, with functions from the function library, with MATLAB/Simulink, C-DLL or custom functions

**Measuring**

- Start/stop/pause measurements based on defined measurement signal lists and recorder configurations
- Simultaneously measure the analog physical values, the ECU, the bus systems and record the environment using a camera and position data
- Store measurement data in the standardized ASAM-MDF4 format, even with files in excess of 4 GB
- Versatile options for visualizing measurement values in real time: graphics window, table, bar chart, numerical display, map, video window, etc.
- Live view of measurement values even if there are no current measurements makes it easy to check the wiring and sensors as part of the measurement configuration
- Mark signal values with comments during the measurement for easy identification of anomalies

**Visualizing Signals**

- The measured and recorded data can be visualized simultaneously in graphic windows, in the GPS window with saved map material, or in the video window.
- Virtual signals generated during the measurement are also displayed synchronously and can be used for analysis.

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More information: [www.vector.com/vmeasure_exp](http://www.vector.com/vmeasure_exp)