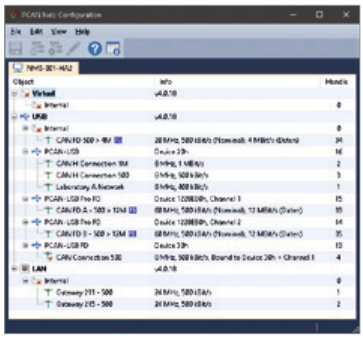
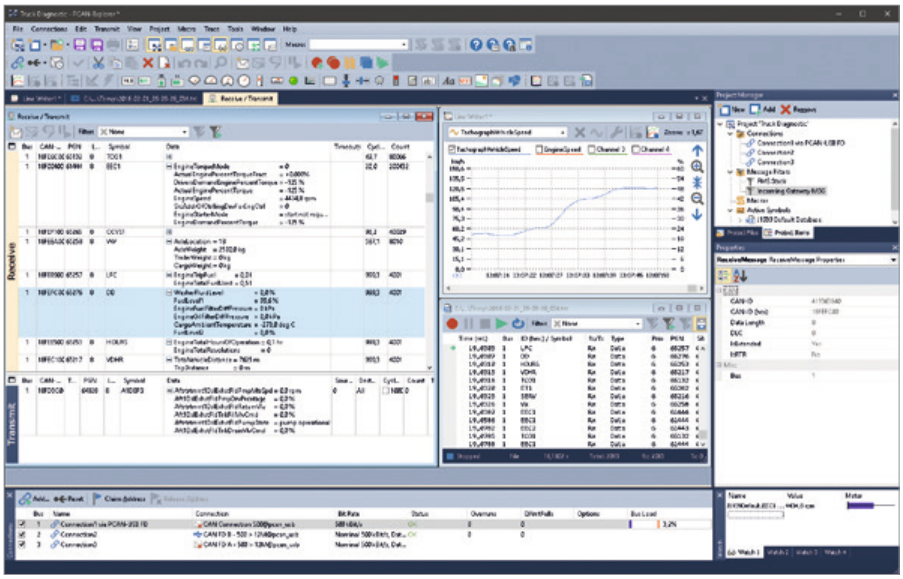
PCAN-Explorer 6

Professional Windows Software to Communicate with CAN and CAN FD Busses





The PCAN-Explorer 6 is a versatile, professional program for working with CAN and CAN FD networks. The user is not just limited to the observation of the CAN traffic. Manual or periodic transmission of messages or entire transmission lists allows him a direct influence, for example, for control purposes or simulations.

The PCAN-Explorer 6 can connect to several CAN and CAN FD busses at the same time. Unlike previous versions, the hardware type of used CAN adapters is no longer a limiting factor.

A central point in the use of the program is the symbolic representation of the CAN messages and their payload. With the help of symbol files, the hexadecimal information is transformed into a readable and vivid format.

Since version 6, the trace function, in addition to recording the data traffic, allows also the playback of existing traces. The recordings and incoming CAN messages can be filtered using various criteria.

Special requirements, as well as the automation of complex processes can be implemented using macros. The sophisticated implementation of VBScript accesses the extensive object model of the PCAN-Explorer 6.

Furthermore, the functionality of the PCAN-Explorer can be extended by add-ins. PEAK-System offers add-ins that provide even better opportunities to analyze and influence data. The Plotter produces a graphical representation of the signals' time course by live recording or on the basis of traces. The Instruments Panel is used for an own arrangement of various displays, controls, and switches. Further add-ins enable the import of third-party configurations based on the CANdb format and add the support for the J1939 protocol.

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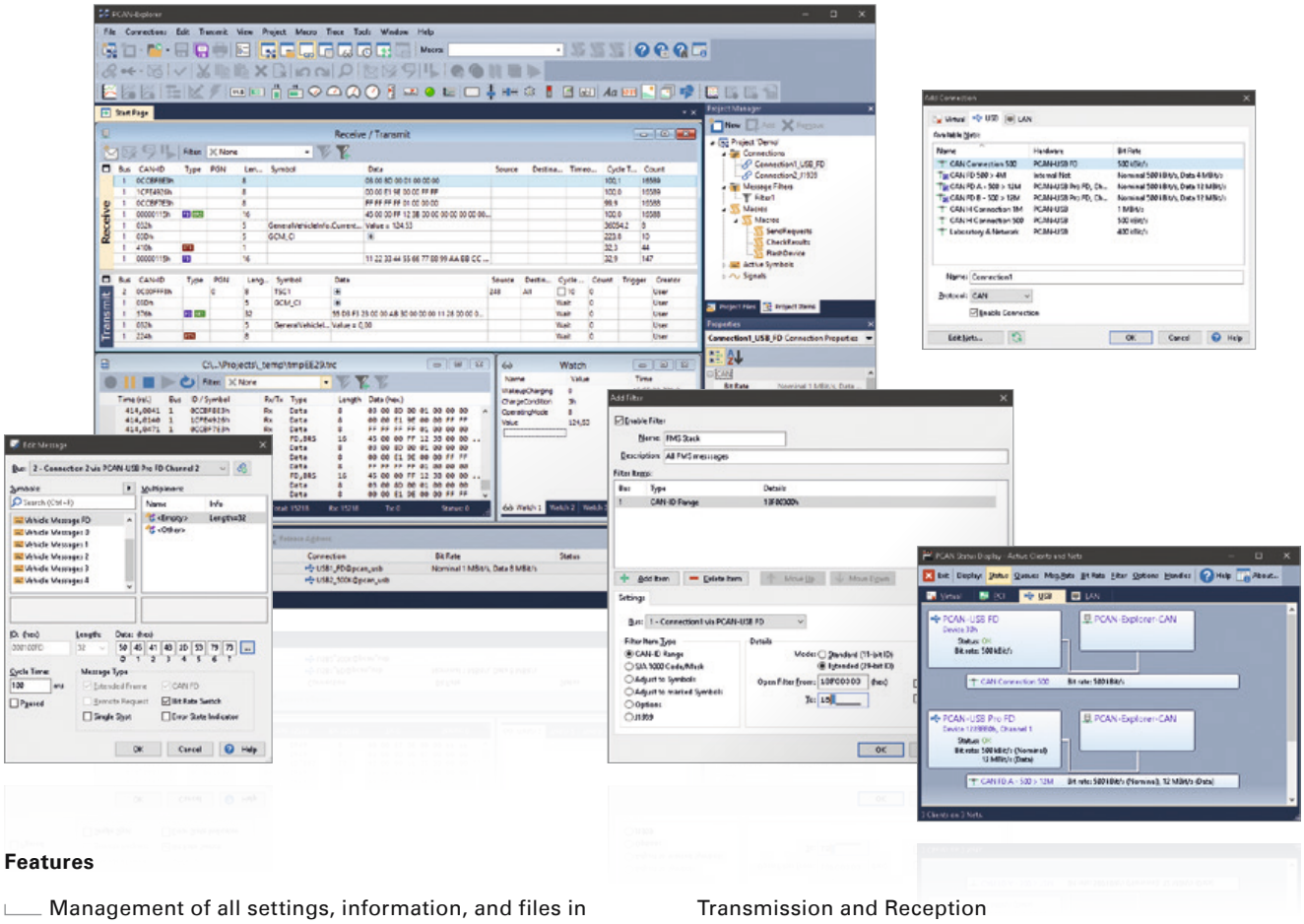

Features

- Management of all settings, information, and files in projects
- Exporting entire projects including linked files to handy packets for archiving or sharing
- Extensive revision of the user interface with improved dialogs for creating transmit messages and managing signals
- Automatic notification about new software versions and support with the update process
- Integrated text editor with syntax highlighting for creating and editing of symbol files, macros and VBScript
- User interface language can be switched (German/English)
- Integration of add-ins to upgrade functionality

Connection to CAN and CAN FD

- Simultaneous connections with multiple CAN interfaces independent of the hardware type
- Support for CAN specifications 2.0 A/B and FD
- CAN bit rates (nominal) up to 1 Mbit/s
- Data bit rates up to 12 Mbit/s (only when using a CAN FD interface)
- Optional use of custom bit rates
- Listen-only mode can be activated
- Clear overview of connections with their bit rate, status, error counter, and bus load
- Function to execute a hardware reset of the CAN controller

Transmission and Reception

- Representation of the CAN data traffic in sortable receive and transmit lists with configurable columns display
- Display of messages showing the ID, length, data bytes, time-outs, number of messages received, and receiving interval
- Display of error frames can be activated for each connection
- Representation of CAN IDs in hexadecimal or decimal format
- Display of receive, transmit, and error states
- Message reception with a maximum resolution of 100 µs
- Manual and periodic transmission of messages with a maximum resolution of 1 ms
- Transmission of CAN messages in response to remote frames (only with CAN 2.0 A/B)
- Messages can be grouped as transmit lists, stored and loaded as desired, e.g. in order to emulate CAN nodes
- Multiple flexible filters can be configured and, for example, assigned to the transmit/receive window or to various different tracers

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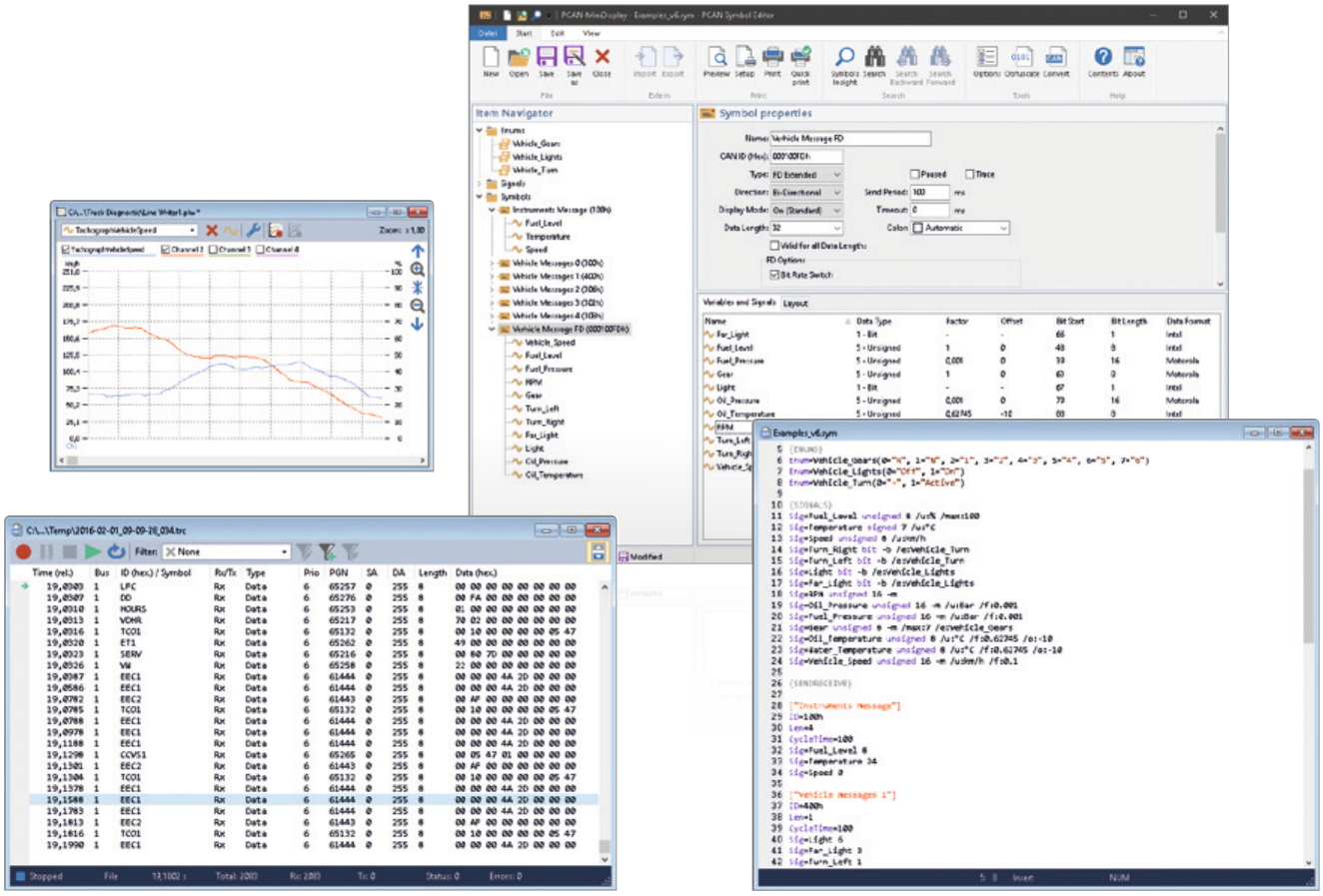

Recording and Playback

- Logging of the CAN data traffic along with the errors that have occurred as an option
- Playback of trace files with optional loop function
- Operation of multiple tracers at the same time
- Representation of the logged messages with details such as time stamp, type, ID, length, and data bytes
- Representation of the data bytes in hexadecimal, decimal, or ASCII format
- Filtering of the messages for logging through message filters
- Recording of CAN data traffic directly to files or to the RAM (in linear, dynamic, or circular buffer mode)
- Playback of logged CAN messages directly from files or the buffer
- Storing of the logged data to readable text files or CSV files for further processing in Excel or similar
- Enhanced processing of huge trace files compared to PCAN-Explorer version 5
- Subsequent examination of the logged data in the buffer via different symbol files

Symbolic Representation

- Clear and readable representation of CAN messages based on the symbol format from PEAK-System:
  - Easy allocation of CAN messages by assigning alphanumeric names
  - Bit-exact division of the data into variables for assigning names, data type, etc.
- Comfortable symbol file creation with the supplied Windows software PCAN-Symbol Editor or with the integrated text editor
- User-friendly real-time monitoring of several signals via the Watch window
- Graphical display of up to 4 signals with a simple line writer (Line Writer Add-in)

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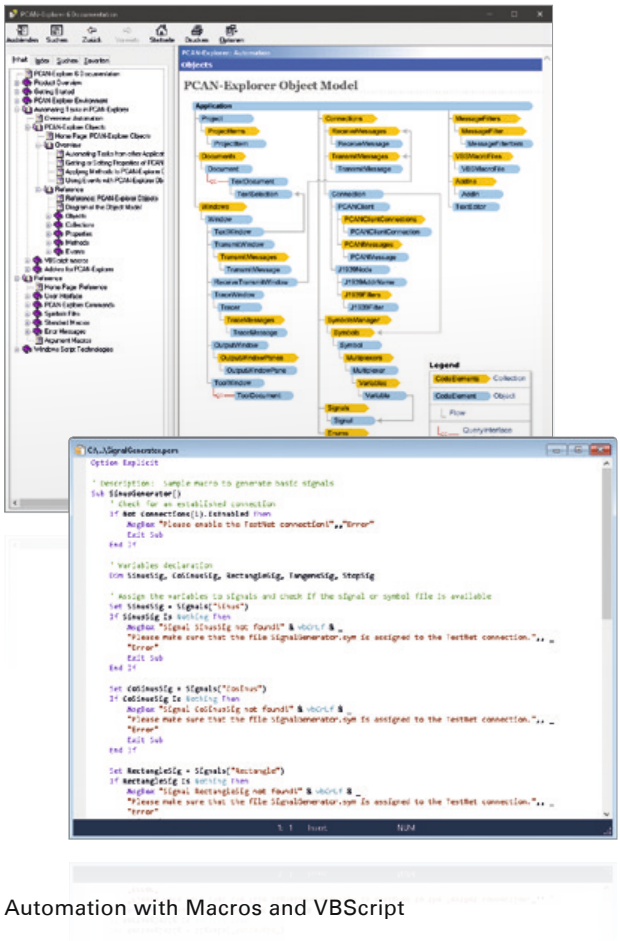

Automation with Macros and VBScript

- Automation of small tasks or complex processes with macros or VBScript like for example:
  - Test procedures for the implementation or development of CAN systems
  - Send an e-mail if a temperature is exceeded
  - Start an action when a particular message is received
  - Open an Excel sheet when an event occurs and save the data in individual cells
  - Calculate variables from the data of incoming CAN messages
- Creation of macros and scripts with the integrated text editor
- Assignment of function keys to individual macros
- Access with VBScript to almost all program elements via the PCAN-Explorer object model
- VBScript macros also run in the background even without the PCAN-Explorer interface

PCAN Explorer 6 Training:

We offer a training session for the PCAN-Explorer, which includes an introduction to the main features of the software, the work with the PCAN-Symbol Editor, and a demonstration of the add-ins. If you are interested and for further information, please contact training@peak-system.com.

PCAN-Explorer 6 Licenses:

Single Computer License - With this license you get an installation CD and a license file. With that you are allowed to install, activate, and use the software on a single computer exclusively. The activation of the software is done online, by phone, or e-mail.

Portable License + USB Copy Protection Dongle - With this type of license, you get an USB copy protection dongle for each purchased license in addition to the installation CD. You can install PCAN-Explorer 6 on several computers. In order to unlock and use the software, you must plug the copy protection dongle into a free USB port.

Ordering information

Designation	Part No.
PCAN-Explorer 6 Single Computer License	IPES-006000
PCAN-Explorer 6 Portable License + Copy Protection Dongle	IPES-006000 + IPES-006090

Scope of supply

- PCAN-Explorer installation CD
- Single computer license or portable license with USB copy protection dongle
- PCAN-Symbol Editor for Windows (details on page 104)
- Documentation in HTML help format

System requirements

- Windows 10, 8.1, 7 (32/64-bit)
- At least 512 MB RAM and 1 GHz CPU
- For the CAN bus connection:
  PC CAN interface from PEAK-System
- Free USB port for copy protection dongle (only for portable license)

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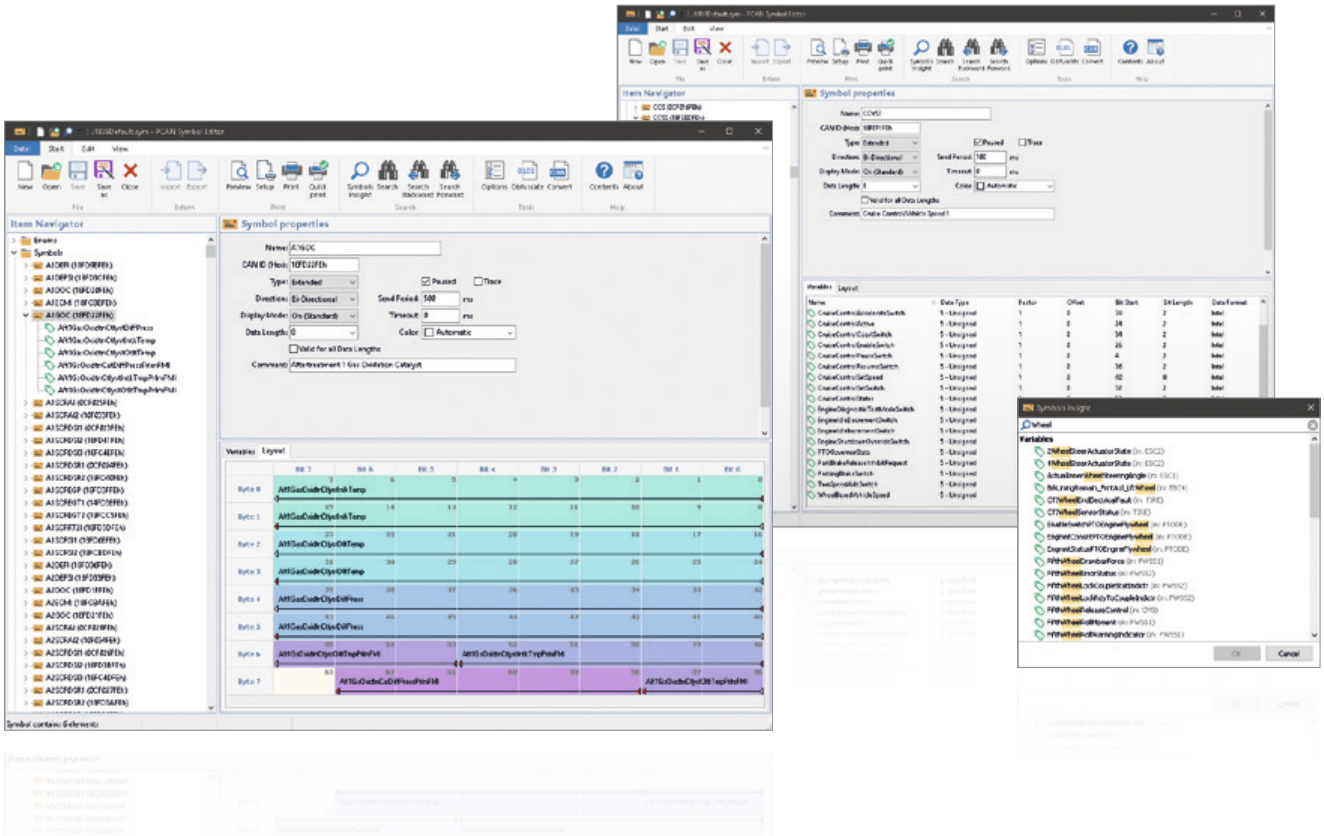
PCAN-Symbol Editor

Windows Software for Creating and Editing Symbol Files



The symbol format developed by PEAK-System translates the hexadecimal display used for CAN data traffic into a format that the user can understand.

To create a symbol, names are first assigned to the individual CAN IDs. The interpretation and presentation of CAN data is defined using variables with various parameters, such as name and output format. The symbol created in this manner enables easy allocation of incoming and outgoing CAN messages and ensures that the CAN data is readable.

The free PCAN-Symbol Editor uses clearly structured menus and a graphical representation of symbols to enable convenient creation and editing of symbol files.

Features

- Symbolic representation of CAN messages through the assigning of alphanumeric names
- Bit-exact division of the data into variables for assigning name, data type, list of values, scaling, offset, etc.
- Support for CAN specifications 2.0 A/B and FD
- Supports data processing in accordance with IEEE 754 as well as the Intel and Motorola format
- Set up user-defined outputs using lists of values (Enums)
- Use of multiplexers for outputting CAN data of a single CAN ID with different symbol definitions
- Allows the creation of signals in symbol files
- With a signal, the representation of CAN data can be defined and used for multiple symbols
- The graphic representation of symbols and the automatic error detection allow easy creation of symbol files
- Revised user interface with Quick Start function and dynamic text search for symbols, signals, menu commands, recently opened files, etc.
- The Item Navigator and the search function allow targeted access to all elements of the symbol files

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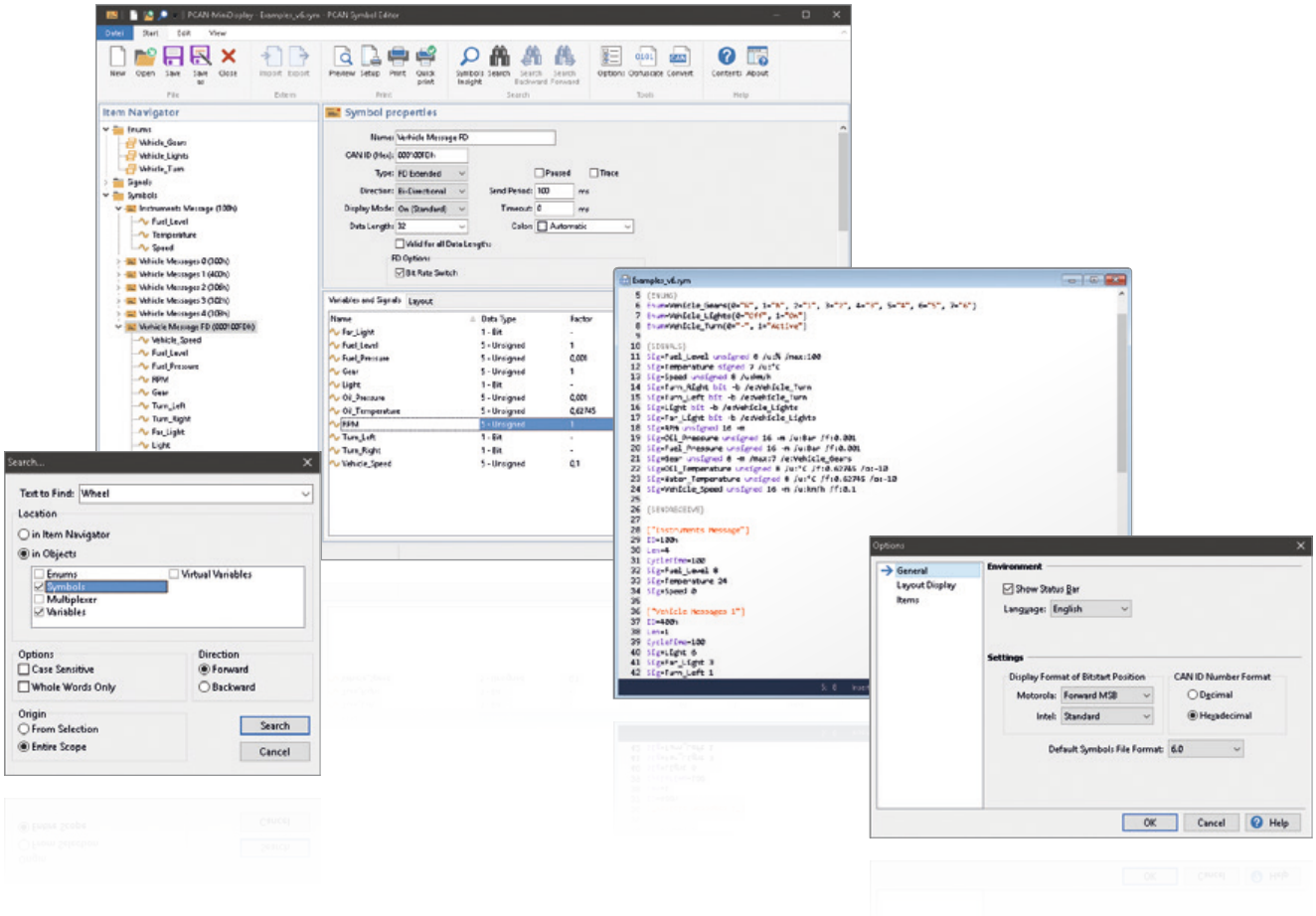

- Function to convert symbol files between file formats
- Create virtual variables for CAN-independent inputs and outputs and macro calculations (in conjunction with PCAN-Explorer only)
- Import CANdb files into the symbol data format and vice versa (requires the PCAN-Explorer Add-In CANdb Import)
- Supports symbols for J1939 message formats (requires the PCAN-Explorer Add-In J1939)

Ordering information

Designation

PCAN-Symbol Editor

Scope of supply

- PCAN-Symbol Editor software
- Documentation in HTML Help format

The current version ...

... is available on the product DVD (supplied with our hardware)

... can be downloaded from the Internet free of charge at www.peak-system.com

System requirements

- Windows 10, 8.1, 7 (32/64-bit)
- At least 512 MB RAM and 1 GHz CPU

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