

# **CANopen Tool Chain**

CANopen configuration software and tools

The complexity of configuration quickly raises if the communication structure within a CANopen network involves more than two devices. Especially when programmable devices with dynamically created communication objects come into play the complexity raises to a level that is nearly impossible to be handled manually. Specialized tools offer both, an automatic handling of the CANopen configuration and an user-friendly interface.



### Planning and Configuration

SYS TEC electronic CANopen Software Packages combine functionality with an intuitive operation and provides support in all project phases, including planning, development, startup and service. You can concentrate immediately on your application and the definition of system parameters.

**CANopen Configuration Suite** is an easy-to-use toolchain for efficient and project-oriented configuration of CANopen networks and devices.

**CANopen DeviceExplorer** is a versatile tool for development, testing, diagnostics and service tasks. It provides CANopen master functionalities and allows the analysis and configuration of CANopen devices.

#### Testing and Commissioning

When integrating CANopen networks in the field, powerful CAN-Bus monitors with protocol analysers help to minimize the time needed to localize possible problems significantly. The CANinterpreter tool is a CAN-Bus monitor and analyzing software that puts you in the position to observe, record and evaluate the CAN communication on a logical level. The CANopen plugin translates CANopen messages in human-readable format, indicating its precise meaning. The various CANopen message objects types are displayed in separate colours. Thanks to its extendable user interface its possible to adapt the CANinterpreter to specific applications and testruns. CAN messages can be registered for cyclically or manual transmission. Precise hardware timestamps, filtering functions and the automatic message logging to files supporting autonomous running tests and long-term observation.

#### **CANopen Software and Services**

	Planning & Configuration of networks	Planning & Configurati- on of devices	Testing & Integration	Operation & Maintanance
CANopen Configuration Suite - Configuration tool chain				
CANopen DeviceExplorer - Configuration tool				
CANinterpreter - CAN Bus Monitor				
Consulting and OEM Integration Services				

#### **Supported CAN interfaces**

The tools support a broad range of CAN-bus interfaces from SYS TEC electronic and others:

- USB-CANmodul (1/2/8/16)
- CAN-Ethernet Gateway

## **About SYS TEC electronic**

**SYS TEC electronic GmbH** is a system house for distributed automation technology. We provide an comprehensive service from consulting to OEM integration.

Founded in 1990 in Germany SYS TEC electronic has more than 25 years experience in customized development of microcontroller systems and industrial communication.



## Available software packages

#### CANopen DeviceExplorer

- Saving and loading of device and network configurations
- Project-oriented network configurations based on CANopen EDS and DCF files
- Online and offline access to object dictionary of CANopen devices
- Integrated CANopen master functionalities like: NMT commands (Start/Stop network), node guarding (Start/Stop Guarding and Heartbeat), configuration of PDOs (Mapping and Communication Parameter), reset of CANopen devices (Reset Communication, Reset Node)
- Integrated CAN-Analyzer for real time bus monitoring like display of CAN telegrams (Layer 2), Interpretation of CANopen messages (Layer 7), recording of CAN-Telegrams and interpretation afterwards
- Displaying and manually transmission of PDOs
- Interpretation of CAN data according to the user specifications
- Download of device and network configuration via CAN-Bus
- Network scan for device detection connected to the bus
- Transmission of CAN messages or sequences in single or periodic

#### **CANinterpreter- CAN-Bus Analyzer**

- Online monitoring of bus traffic in different
- Interpretation of CAN data according to user specifications
- Tracing of CAN telegrams and interpretation afterwards
- Flexible CAN-ID specific filtering
- Transmission of CAN-Messages sequences in single or periodic

## Available plug-ins

#### **CANopen DeviceExporer**

#### CANopen DeviceExplorer PDL (Process Data Linker) plug-in

interconnects Process Data Objects of different devices in appropriate PDOs. With just a few clicks linkage of devices to networks can be defined. Detailed knowledge of CANopen is not necessary.

#### CANopen DeviceExplorer LSS Master plug-in

provides all LSS master services and facilitates development of CANopen devices. Bit rate and node-ID of LSS slaves are adjustable by CAN-bus from a distance. Scan of network and semiautomatic allocation of node-IDs for entire network is also supported.

#### CANopen DeviceExplorer SRDO plug-in

contains an additional dialog for CANopen DeviceExplorer and provides a consistent configuration of CiA 304 compliant Safety Relevant Data Objects (SRDO) and secure transmission of process data.

#### CANopen DeviceExplorer CiA 402 plug-in

offers to control the state machine of a CANopen drive according to CiA 402. The Profile Position and Velocity Mode module allows for the configuration of parameters like acceleration, velocity, deceleration as well as target position.

#### CANopen DeviceExplorer Script plug-in

is based on JavaScript, expand with CANopen specific commands to send and receive SDOs, PDOs and NMT messages. Using a graphic UI Designer own user interfaces can be created. So user specific test or service applications can be implemented easily.

#### **CANinterpreter- CAN-Bus Analyzer**

#### CANopen Interpreter plug-in

provides the translation of CANopen messages into a plaintext format. The visualisation of CANopen messages objects is customizable by the user. The node list as well as the PDO mapping can be imported from DCF.

#### **CANinterpreter Script plug-in**

is based on JavaScript, expand with CANopen specific commands to send and receive SDOs, PDOs and NMT messages. Using a graphic UI Designer own user interfaces can be created. So user specific test or service applications can be implemented easily.

# LEARN MORE AT: www.systec-electronic. com/canopen

#### Maring Information



3930011 CANopen Configuration Suite<sup>(1)</sup> Win 3930005 CANopen DeviceExplorer<sup>(2)</sup> Win 3930007 CANinterpreter Win/Linux

3930010 CANopen DeviceExplorer Bundle <sup>(2) (3)</sup> Win 3930015 CANopen Configuration Suite Bundle<sup>(1) (3)</sup> Win 3930009 CANinterpreter Bundle<sup>(3)</sup> Win

3933001 CANopen DeviceExplorer PDL (Process Data Linker) plug-in<sup>(4)</sup>
3933000 CANopen DeviceExplorer LSS plug-in<sup>(4)</sup> 3933005 CANopen DeviceExplorer CiA 402 plug-in (3) 3933006 CANopen DeviceExplorer SRDO plug-in (4) 3933002 CANopen DeviceExplorer Script plug-in (4)

Plug-ins for CANinterpreter

3933003 CANopen Interpreter (5)
3933004 CANinterpreter Script plug-in (5)

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