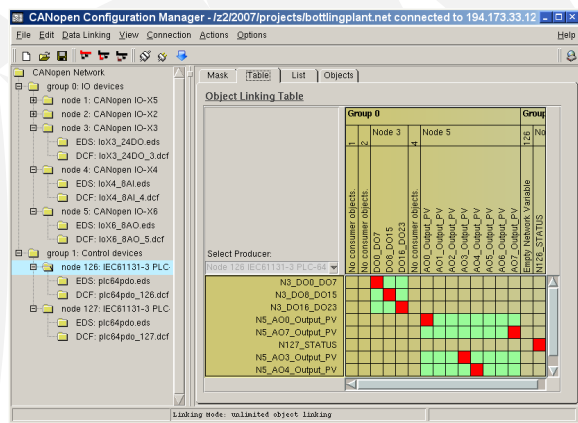


# CANopen Configuration Manager

## Overview

Large CANopen networks with several devices and a multiplicity of inputs and outputs can have a complexity, that is hard to manage without powerful tools. The *CANopen Configuration Manager* is such a tool that simplifies the configuration of CANopen networks.

Using the *CANopen Configuration Manager* connections between devices and their configuration settings can be configured conveniently. So the PDO linking is simplified enormously.



## Description

Each network is managed as a project within the *CANopen Configuration Manager*. Within a project the devices can be combined to different groups. Groups can be assigned arbitrarily according to device properties e.g. I/O devices, drives, according to node-ID ranges or with regard to their physical arrangement. Devices can be added to a group via their EDS files or a network scan (PC-CAN-Interface required). *CANopen Configuration Manager* project files can be reused by the *CANopen Device Monitor*.

### Object links

Configuration of the object links is done by simply marking the objects shown in the table view. Internals of the CANopen protocol are hidden from the user and the presentation is application-specific. CANopen notations like node 3, object 0x6040, subindex 0x00 are replaced by the more descriptive parameter name from the EDS file, e.g. statusword. The selection of invalid combinations of application variables due to incompatible datatypes is not possible

and so errors are eliminated in the preliminary stages of the configuration. Further attributes like priorities or SYNC intervals can be assigned to the links. These attributes are evaluated by the linking algorithm.

### PDO linking

Based on the object links the *CANopen Configuration Manager* computes the PDO mapping entries and sets the COB-IDs for the PDOs of each device. Thereby attributes and special cases like static mapping, constant COB-IDs or a restricted COB-ID range are considered. A direct configuration of the PDO parameter is also possible. The program ensures consistency of project settings and device settings.

PDO	COB-ID	Trans Type	Event Timer ...	Mappings
1	0x000001A1	0xff - async	500	0x71300110 - AI0_Input_PV 0x71300210 - AI1_Input_PV 0x71300310 - AI2_Input_PV 0x71300410 - AI3_Input_PV
2	0x000002A1	0xff - async	500	0x71300510 - AI4_Input_PV 0xf - RTR - asyn 0xf - RTR - asyn 0x71300710 - AI6_Input_PV 0xf - async 0xf - async

*direct PDO configuration*

### Timing Configuration

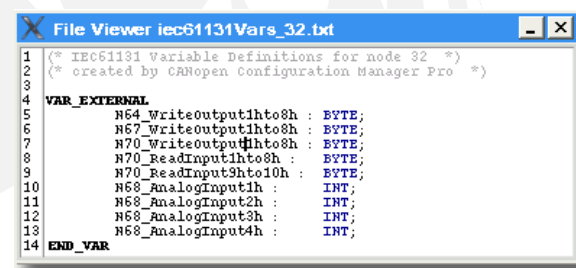
Further features of the *CANopen Configuration Manager* are its ability to configure and to coordinate timing parameters like e.g. SYNC or Heartbeat.

### Object Configuration

All manufacturer or device profile objects of each device can be parametrized without restrictions.

### CANopen-PLC support

Devices according to CiA 405 (CANopen-PLC) with dynamic network variables are supported by the *CANopen Configuration Manager*. When connecting an object of another device to the PLC, the network variable is created automatically. Thereby appropriate data types and attributes are assigned to the network variable.



*IEC61131 Variable declarations*

## Program outputs

The following files are generated after completion of the configuration:

- DCF files
- Concise DCF files
- IEC61131 Variable declarations for PLCs,
- a detailed project documentation

## Parameter download

When the computer is connected via a CAN interface to the network the complete configuration or only changes of a single node can be sent directly to the devices on the network. Similarly it is possible to read the configuration of a node or even a complete network. Additionally the *CANopen Configuration Manager* is able to control devices with NMT commands.

## Advantages

- simplified PDO linking
- consistency of the configuration throughout the network
- direct parameter download possible
- support of CANopen-PLCs
- detailed project documentation
- reuse of the project files by *CANopen Device Monitor* is possible

## CAN-Interfaces

The functionality of the parameter download requires a CAN interface. CAN interfaces are currently available for USB, ISA, PCI, parallel port, serial port and PC-104 or an Ethernet interface like the standalone CANopen-Gateway-Server EtherCAN of *port*.

## System Environment

The *CANopen Configuration Manager* runs on PC's with

- Operating System: Windows™ 2000, XP, Vista and LINUX™
- Processor: Pentium IV or later
- RAM: 512 MByte
- Harddisk Space: >24 MByte available

## Ordering Information

0545/10	CANopen-CMbasic-W (Windows™)
0545/11	CANopen-CMplus-W (Windows™)
0545/30	CANopen-CMpro-W (Windows™)
0545/20	CANopen-CMbasic-L (LINUX™)
0545/21	CANopen-CMplus-L (LINUX™)
0545/31	CANopen-CSpro-L (LINUX™)

Functional demo versions of the software tools are available for download on [www.canopen-tools.com](http://www.canopen-tools.com).

## Engineering Services

*port* is providing engineering services and trainings for our business activities:

- CAN and CAN-based protocols: CANopen, J1939, DeviceNet
- Industrial Ethernet Protocols: POWERLINK, EtherNet/IP, EtherCAT
- Implementation of devices according to CANopen device profiles
- VHDL based solutions for industrial applications
- application specific implementations or enhancements
- embedded LINUX projects

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