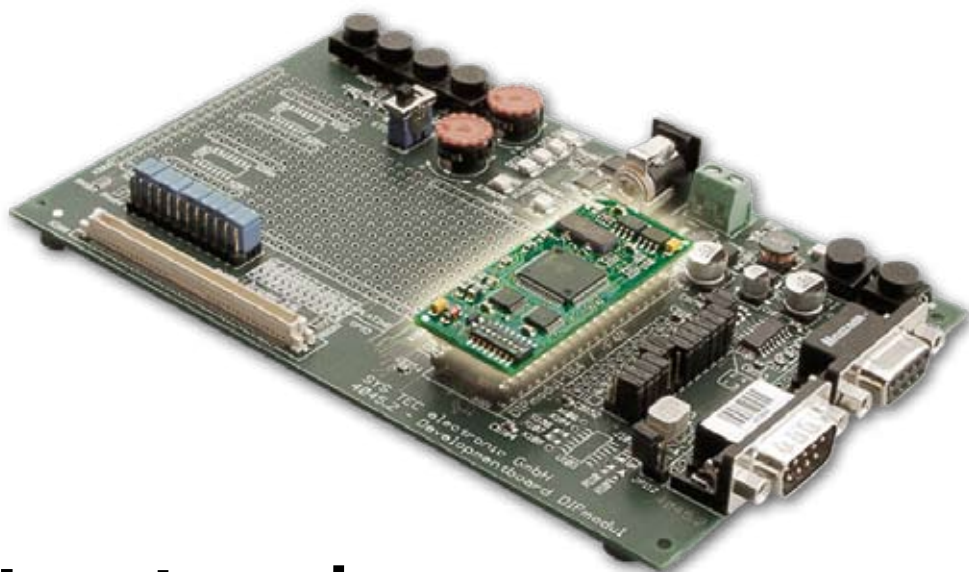


# CANopen Core

**CANOPEN  
CHIP F40**

**SYS TEC**  
ELECTRONIC



## Order Information

Order number: MM-217-Y  
Contact: sales@systec-electronic.com

## Insert-ready CANopen solution

### The easy way to integrate CANopen into your application.

The CANopen Chip is an insert-ready, yet highly cost-effective single board computer subassembly with latest CANopen firmware pre-programmed. A standardized DIP40 connector forms the interface to the target peripherals and transforms the CANopen Chip into a versatile utilizable communications interface. Up to seven user-selectable I/O profiles provide a variation of digital inputs and outputs, analog inputs as well as PWM outputs. On-board switches enable configuration of node-ID and I/O profile at deployment time.

### Customizable

Do you require manufacturer specific functions or do you need vendor specific object dictionary entries? We support you with customized firmware adaptations to make the CANopen Chip suitable for your application!

**For more information please visit:**

**[WWW.SYSTEC-ELECTRONIC.COM/CANOPENCHIP](http://WWW.SYSTEC-ELECTRONIC.COM/CANOPENCHIP)**

# Made for:

**Sensor applications**

**Embedded I/O extensions**

**Laboratory applications**

**Educational**

### Highlights

- cost-effective insert-ready core module
- pre-programmed CANopen firmware
- no software development required
- simplified board pinout - easy to integrate into own schematics
- Standard compliant CANopen I/O device according to CiA 401
- very fast; <1ms cycle time
- completely remote configurable
- Error control via heartbeat and emergency messages; error history
- parameter storage to on-board EEPROM

# SYS TEC products and services are available worldwide through our partners and distributors.

For a complete list visit: [www.systec-electronic.com/distributors](http://www.systec-electronic.com/distributors)

## Flexible I/O configurations

The CANopen Chip provides 7 different I/O profiles, selectable via on-board DIP-switch or remotely via SDO access.

Profile	DI	DO	AI	PWM
0	14	8	2	4
1	8	8	8	4
2	8	16	-	4
3	16	8	-	4
4	16	-	8	4
5	24	-	-	4
6	16	4	4	4

## Ready for OEM Deployment

The CANopen Chip has been optimized for insertion as an OEM subassembly into an end product. OEM implementation of the CANopen Chip frees engineers from the routine design of a microcontroller core and enables him or her to focus on the specific target application. Purchase of the CANopen Chip jump-starts your development cycle. By sparing yourself the task of developing your own CANopen firmware, you can instead concentrate on your target peripherals, thereby reducing the time-to-market of your product. No orientation into the CANopen protocol internal workings is necessary.

## Rapid Development

We offer a Development Kit for the CANopen Chip to facilitate fast and efficient orientation to the CANopen Chip. In addition to a base board and an USB-CAN interface, the kit also includes all necessary software components for getting started immediately. Of course we are pleased to discuss with you the possibilities of custom specific adaptations. Call us to discuss!

## Technical Specification

### CANOPEN FEATURES

- Communication profile according to CiA 301 V4.02
- CANopen device profile according to CiA 401
- State indicators according CiA 303-3 V1.0
- Layer Setting Service (LSS) CiA 305
- 4 TPDO and 4 RPDO
- Dynamic PDO linking and -mapping
- 2 SDO server
- Life guarding, node guarding, heartbeat
- 5 heartbeat consumers
- Emergency producer

### DEVICE SPECIFICATION

- Operating voltage: 5V  $\pm$ 10%
- Current consumption(I/O inactive): typ. 70mA
- Non-volatile memory for storage of configuration data
- On-board CAN transceiver supports up to 110 CAN-nodes on the same bus segment
- DIP switches for configuration of node-ID, baud rate and I/O profile
- CAN-bus signals (TTL level) separately available on socket connector for easy implementation of galvanic isolated CAN-bus connection
- Seven different I/O profiles on 28 I/O pins, selectable via DIP-switch and via SDO
- Digital inputs/outputs TTL level
- Analog inputs, 0...5 V, 10-bit resolution
- PWM outputs, TTL level, max. frequency 15kHz, 16-bit resolution
- Operating temperature: -40°C to +85°C
- Dimensions (LxWxH): 58.7mm x 24.0 mm x 11,8  $\pm$ 0.3mm
- Weight: ca. 10,5g
- Socket connector: 40-pin Dual-Inline-IC socket, grid dimension 2,54 x 15,24