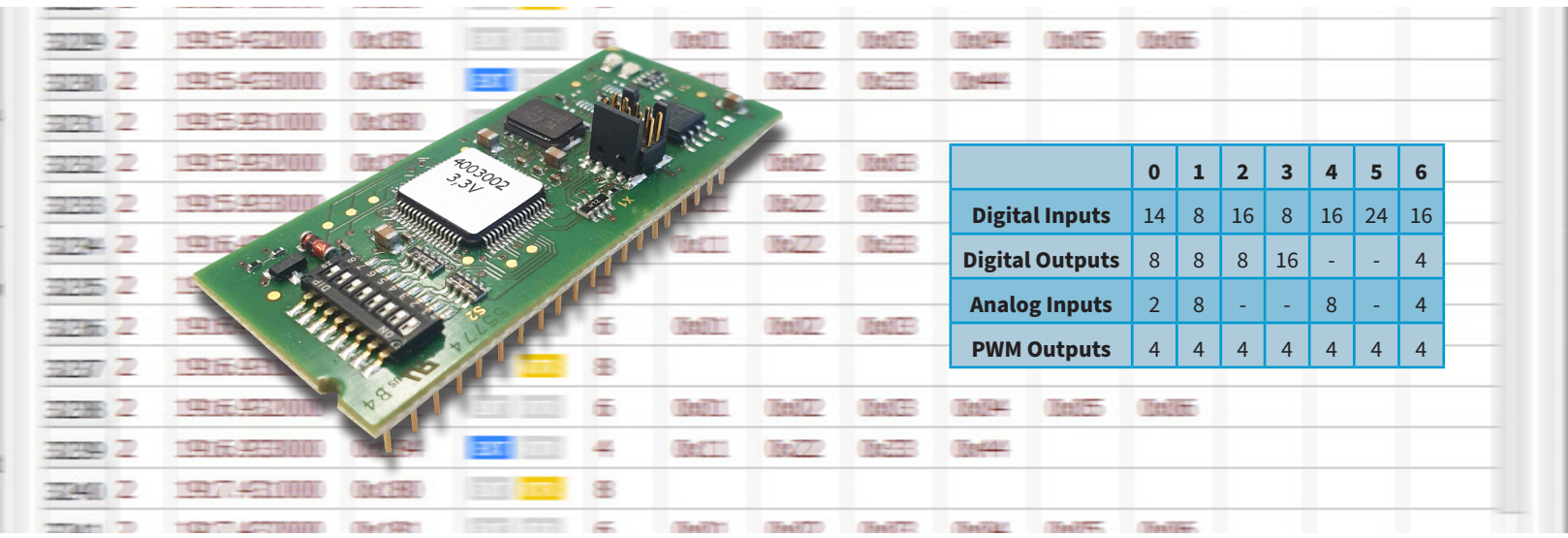
# CANopen Chip

## Powerful SoM for CANopen I/O devices

### sysWORXX CoC-100




| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| **Digital Inputs** | 14 | 8 | 16 | 8 | 16 | 24 | 16 |
| **Digital Outputs** | 8 | 8 | 8 | 16 | - | - | 4 |
| **Analog Inputs** | 2 | 8 | - | - | 8 | - | 4 |
| **PWM Outputs** | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

The CANopen chip sysWORXX CoC-100 is a ready-to-use plug-on module with CANopen firmware for easy implementation of user-specific CANopen devices. With its seven different I/O configurations, it offers a comprehensive selection of digital inputs and outputs, analog inputs as well as PWM outputs. Due to its DIP-40 pin header, the SoM can be easily integrated into user-specific designs. The connection of the periphery to be controlled is done on TTL level. The sysWORXX CoC-100 supports either 3.3V or 5V designs. The on-board setting options allow a flexible module configuration. The CANopen chip sysWORXX CoC-100 is a managed node (slave device) according to the CANopen device profile CiA DSP 401 V3.1.0 and CANopen communication profile CiA 301 V4.2.0. LEDs indicate the device status according to CiA 303-3 V1.4.

### Your advantages

- CAN FD tolerant - can be used in CAN FD networks
- layer Setting Services (LSS) according to CANopen standard CiA DSP 305 integrated
- analog inputs with 12 bit resolution
- design optimized in terms of production technology

### KPIs & Key Features

- future-proof use through use of the NXP S32K142 controller
- CAN FD tolerant - can be used in a mix with CAN FD devices
- available in 5V or 3.3V design
- higher accuracy of the AD converter - 12 bit
- CANopen bootloader for firmware update via CAN bus

### Use Cases

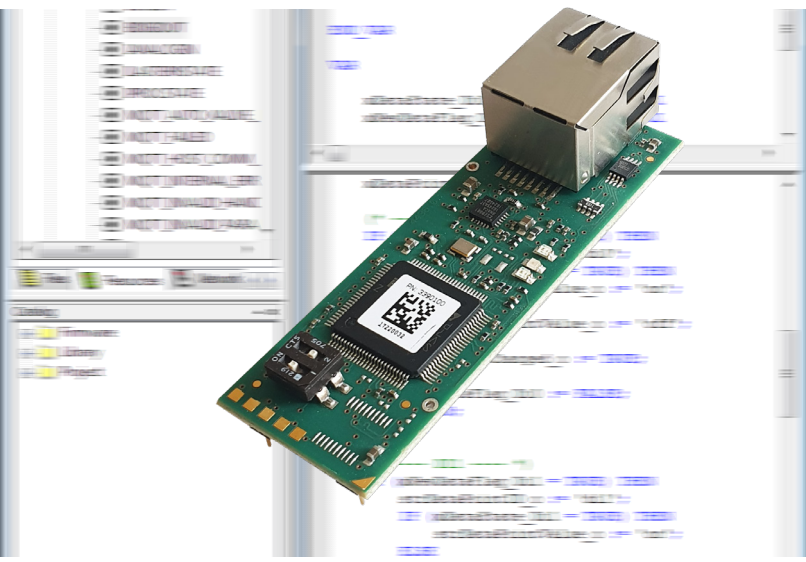
- connection of decentralized IO's over large distances
- reduction of cabling effort (especially for mobile use)
- simple realization of operator interfaces

**https://www.systec-electronic.com/en/products/interfaces-gateways-amp-controls/sysworxx-canopen-chip-coc-100**

# IoT-Chip

## Powerful SoM for smart IoT devices with MQTT

### sysWORXX CTR-100



| function | number |
|---|---|
| Digital Inputs | 10 |
| Digital Outputs | 6 |
| Analog Inputs | 4 |
| Analog Outputs | 2 |
| PWM | 2 (*) |
| SPI | 1 (*) |
| I2C | 1 (*) |
| A/B Encoder | 1 (*) |
| ETH | 1 |
| CAN | 1 |
| UART | 3 |

The IoT chip sysWORXX CTR-100 is a ready-to-use plug-on module with PLC firmware for easy realization of user-specific IoT devices with MQTT support. It offers a comprehensive selection of digital and analog inputs and outputs, as well as serial interfaces. Due to its DIP-40 pin header, the SoM can be easily integrated into user-specific designs. The connection of the periphery to be controlled is done on 3.3V TTL level. The Ethernet socket is already placed on the SoM, so that no critical high-speed signals have to be routed to the baseboard via connectors.
The on-board PLC firmware allows easy programming of the IoT chip in IEC 61131-3. The integrated firmware block libraries support MQTT, UDP, CAN layer2, CANopen, Modbus and serial communication via UART.

### Your advantages

- user application freely programmable
- connection of sensors and actuators possible
- high-speed Ethernet interface already on-board
- design optimized in terms of production technology

### Key Features

- support of external peripherals via GPIO, SPI and I2C
- supports communication protocols: MQTT, UDP, CAN (Layer2), CANopen (Master/slave), Modbus (RTU/TCP each as master/slave), SIO (RS-232 and RS-485)
- inputs for high-speed counter and A/B encoders

### Use Cases

- connection of sensors and actuators to IoT platforms
- connection of CANopen networks to IoT platforms
- connection of Modbus smart meters to IoT platforms

(*) Alternative functions for digital I/O's: The use of alternative functions reduces the number of available digital I/O's, details see manual.

**https://www.systec-electronic.com/en/produkte/industrial-internet-of-things/sysworxx-ctr-100**