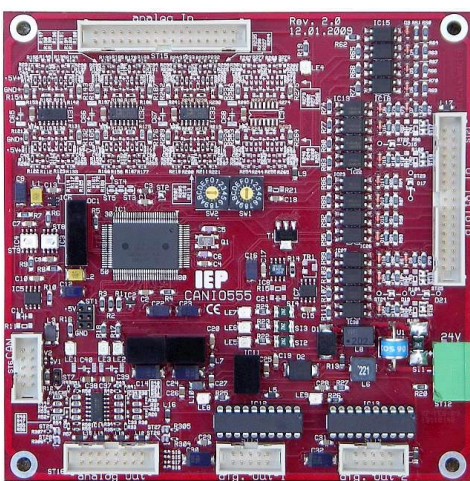


# CAN-I/O

## Input/Output for the CAN bus



The **CAN-I/O** is designed as inexpensive, universal I/O expansion board for systems with a CAN interface. By flexible configuration of the signal connections it integrates itself into even fastidious environments without hassle.

The **CAN-I/O** provides:

- 1 CAN interface, optionally galvanically isolated
- 16 differential analog inputs, 10 bit resolution, input ranges are adaptable for measurements of temperature, current and voltage
- 16 opto-isolated digital outputs with counter operation, 24 V, 12 of them usable for external lowside switches
- 4 analog outputs, 10 bits resolution, 0-20mA (adaptable)
- 16 digital outputs with PWM, high side, 24 V / 0.3 A
- Power supply 24 V
- Configured by hex rotary switches

## CAN-I/O

## Features

---

## Digital inputs

All 16 digital inputs are isolated by opto-couplers. 12 inputs can read external low-side switches, 4 inputs can be configured to read either low-side switches or active 24 V signals.

The **CAN-I/O** scans all inputs with 20 ms cycle time and counts the number of level changes. When reading the input values, the number of level changes since last readout is given in addition to the actual input state.

## Analog inputs

The 16 analog inputs of the **CAN-I/O** provide a resolution of 10 bits. Each differential input is amplified and optionally filtered by an operational amplifier. Therefore, the measuring range of each channel can be configured separately.

## Digital outputs

16 digital high-side outputs are split in 2 groups. Each single output delivers upto 24 V / 0.3 A with a maximum current of 0.8 A per group. Each group is protected from overcurrent and over-temperature. In case of overload, an error signal is raised. This signal is shown by a LED and can be read back by software. The outputs are capable of driving inductive loads, e.g. relays.

Each output of the **CAN-DIO** can give a 0%... 100% PWM-signal for quasi-analog control of e.g. solenoid valves. The minimum PWM switching time is 20 ms.

## Analog Outputs

4 analog current outputs 0...20 mA with a resolution of 10 bits are provided to control external actuators. The **CAN-I/O** generates the desired output values using PWM channels and on-board operational amplifiers to filter and normalize the resulting pulse train.

## CAN interface

The **CAN-I/O** supports Baud rates of 50 kB upto 1 MB and uses 16 consecutive identifier on the CAN Bus. Baud rate as well as basis identifier are configured by 2 hex rotary switches.

## Size and supply

The **CAN-I/O** comes as ready assembled PCB in the dimensions 232x140 mm. All connections are made by header posts.

The **CAN-I/O** uses a supply of 24 V<sub>DC</sub>. Power is supplied by a 3 pin pluggable screw terminal. The module is protected from power supply polarity reversal; an EMV protection circuit assures troublefree operation in an industrial environment.

## Variants

Customization of the **CAN-I/O** is feasible even for small order lots. This affects in particular:

- Range adaptations for inputs and outputs
- application specific firmware

Our application department gives advise and support during development of specialised solutions.