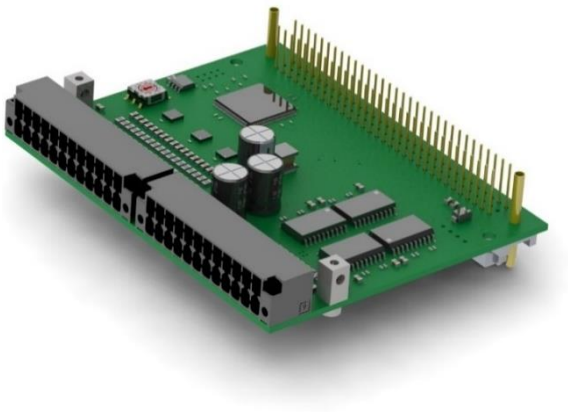
# 19. COP-IO (Digital IO)

COP-IO 611042400

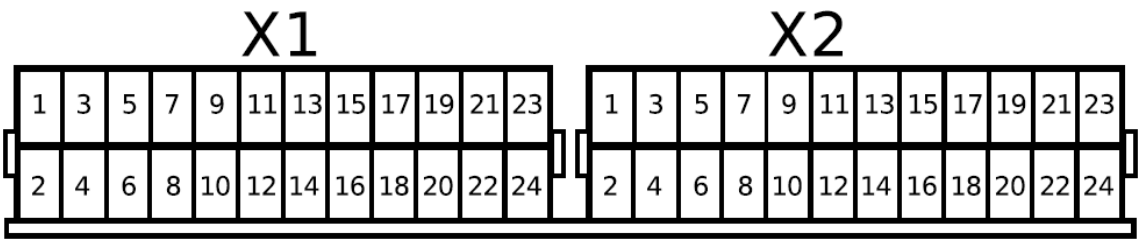
The COP-IO card has 16 digital inputs and 16 digital outputs. The I/Os are not galvanically isolated and the reference potential is at GND of the COP node power supply. The digital high side outputs are supplied from an external power source. The input status is visible in the software.



## 19.1. Technical Specifications

| | | |
|---|---|---|
| **Digital Inputs** | | |
| Number of inputs | 16 | |
| Rated voltage | 24 ± 30% | $V_{DC}$ |
| Switching threshold | approx. 11.5 | $V_{DC}$ |
| Input low-pass filter cut-off frequency | 1.6 | kHz |
| Input impedance | 12 | kΩ |
| **Digital Outputs** | | |
| Number of outputs | 16 | |
| Maximum output current per output | 1 | A |
| Maximum output current per output when every second output is loaded | 2 | A |
| Protection | Short-circuit proof | |
| **Module** | | |
| Maximum power consumption at 24V node power supply | 200 | mA |

## 19.2. Pin Assignment




| X1 | | | | | |
|---|---|---|---|---|---|
| No. | Dir | Id. | Id. | Dir | No. |
| 2 | Out | +24V | +24V | Out | 1 |
| 4 | Out | +24V | +24V | Out | 3 |
| 6 | | GND | GND | | 5 |
| 8 | | GND | GND | | 7 |
| 10 | In | D 08 | D 00 | In | 9 |
| 12 | In | D 09 | D 01 | In | 11 |
| 14 | In | D 10 | D 02 | In | 13 |
| 16 | In | D 11 | D 03 | In | 15 |
| 18 | In | D 12 | D 04 | In | 17 |
| 20 | In | D 13 | D 05 | In | 19 |
| 22 | In | D 14 | D 06 | In | 21 |
| 24 | In | D 15 | D 07 | In | 23 |

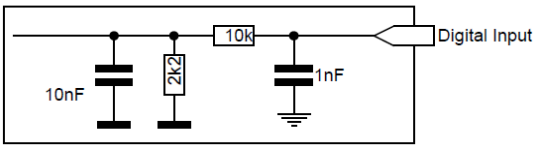
| X2 | | | | | |
|---|---|---|---|---|---|
| No. | Dir | Id. | Id. | Dir | No. |
| 2 | In | VccIO2[1)] | Vcc IO1[1)] | In | 1 |
| 4 | In | VccIO2[1)] | Vcc IO1[1)] | In | 3 |
| 6 | | GND | GND | | 5 |
| 8 | | GND | GND | | 7 |
| 10 | Out | D08 | D00 | Out | 9 |
| 12 | Out | D09 | D01 | Out | 11 |
| 14 | Out | D10 | D02 | Out | 13 |
| 16 | Out | D11 | D03 | Out | 15 |
| 18 | Out | D12 | D04 | Out | 17 |
| 20 | Out | D13 | D05 | Out | 19 |
| 22 | Out | D14 | D06 | Out | 21 |
| 24 | Out | D015 | D07 | Out | 23 |

Two separate output power supply sources:

- Vcc IO1 for D 00 to D07
- Vcc IO2 for D 08 to D15

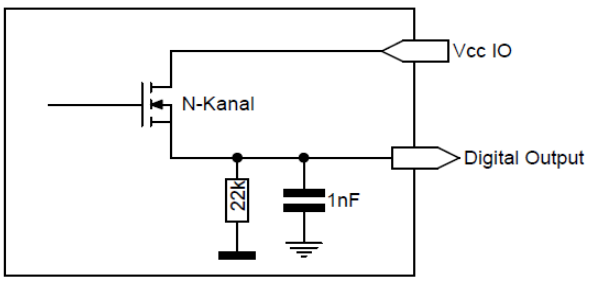
## 19.3. Hardware Description

**Digital inputs**




**Digital outputs**

The digital high side outputs are supplied from an external power source. There are two separete power supply sources.
Vcc IO1 supplies power to D 00 to D 07
Vcc IO2 supplies power to D 08 to D 15



## 19.4. Available Options

| Item Number | Label | Option | Description |
|---|---|---|---|
| 611042400 | COP-IO | | 16 digital inputs, 16 digital outputs,<br>2A max, short-circuit proof |