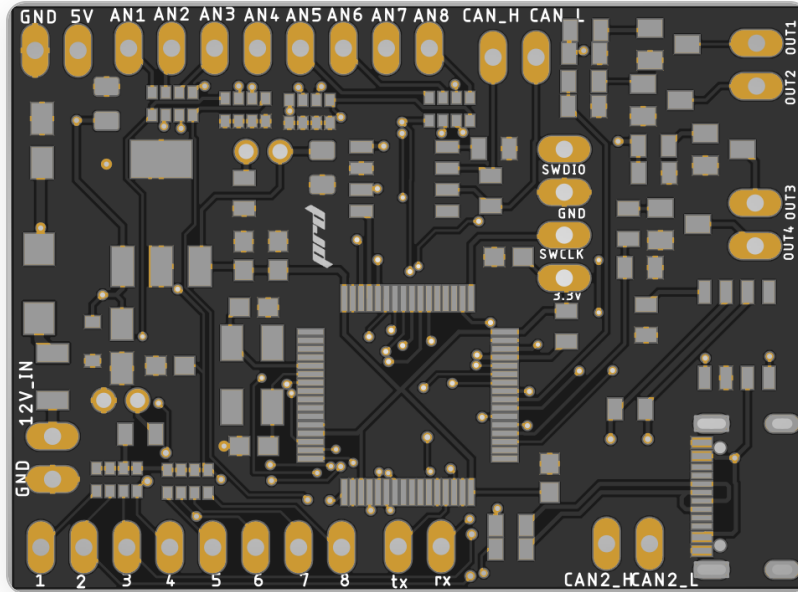


CAN Switcher CAN I/O Device

CAN Switcher Specifications



Overview

The **CAN Switcher** is a flexible and robust CAN I/O module designed for industrial and automotive applications.

It features 8 analog inputs (0-5V, 12-bit resolution), 8 digital inputs, and 4 digital on/off outputs, all accessible and configurable via the CAN bus. The device supports a wide range of CAN speeds and can be fully configured through CAN messages, allowing for easy integration into any CAN-based system.

- **8 analog inputs** (0-5V, 12-bit, IDs: 0x002, 0x003, 0x004)
- **8 digital inputs** (bit mask, ID: 0x002)
- **4 digital outputs** (on/off, ID: 0x003)
- All configuration (switch IDs, output IDs, CAN speed, extended flag, EEPROM reset) is performed via CAN messages
- Wide operating temperature range (-40°C to +120°C)
- Power supply: 12-24V DC
- High-speed CAN communication

How it works:

The CAN Switcher reads analog and digital signals from its input pins and transmits their values over the CAN bus using predefined CAN message IDs. Outputs can be controlled remotely via CAN messages. All device settings, such as CAN speed, output mapping, and special functions, are also set through CAN messages, making the device highly adaptable and easy to integrate into complex systems.

Typical use cases:

Industrial automation, automotive signal acquisition and control, remote sensor/actuator management over CAN.

CAN Messages & Parameters

DEFAULT_CAN_MSG_ID 0x002

ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x002	8	Analog#1		Analog#2				Switch	

DEFAULT_CAN_MSG_ID 0x003

ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x003	8	Analog#3		Analog#4		Analog#5		Analog#6	

DEFAULT_CAN_MSG_ID 0x004

ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x004	8	Analog#7		Analog#8					

DEFAULT_CAN_OUT_ID 0x003

ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x003	8	out 1	out 2	out 3	out 4				

Parameter	Description
Analog#1	Voltage value from analog #1 input 0-5V, 12-bit, big endian
Analog#2	Voltage value from analog #2 input 0-5V, 12-bit, big endian
Analog#3	Voltage value from analog #3 input 0-5V, 12-bit, big endian
Analog#4	Voltage value from analog #4 input 0-5V, 12-bit, big endian

Analog#5	Voltage value from analog #5 input 0-5V, 12-bit, big endian
Analog#6	Voltage value from analog #6 input 0-5V, 12-bit, big endian
Analog#7	Voltage value from analog #7 input 0-5V, 12-bit, big endian
Analog#8	Voltage value from analog #8 input 0-5V, 12-bit, big endian
Switch	bit mask of pressed switches (1 means pressed)

OUT	Description
OUT	bit mask of pressed switches (1 means pressed)

Input/Output

Analog Inputs	8 analog inputs (0-5V, 12-bit), IDs: 0x002, 0x003, 0x004
Digital Inputs	8 digital inputs, bit mask (ID: 0x002)
Digital Outputs	4 on/off outputs, ID: 0x003

Configuration (CAN Settings)

Settings to setup switch id									
ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x001	8	1					switch id (0)	switch id (1)	switch id (2)

Settings to setup out id									
ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x001	8	4					out id (0)	out id (1)	out id (2)

Settings to setup extended flag 0=11bit 1=29bit

ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x001	8	2							extended flag

Settings to setup Reset EEPROM

ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x001	8	8	EE	EE					

SETTINGS TO CAN SPEED (0 = 50kbps, 1 = 100kbps, 2 = 125kbps, 3 = 250kbps, 4 = 500kbps, 5 = 1000kbps)

ID	DLC	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x001	8	3							CAN SPEED

Operating Conditions

Communication	High-speed CAN
Power Voltage	12-24V DC
Temperature Range	-40°C to +120°C
Warranty	2 years

Kit Components

- CAN Switcher cable: standard connectors for Power, CAN, and un-terminated wires for analog inputs
- CAN Switcher configuration software
- PRD technical support

Contact & Support

Eleusis Athens
Greece

Tel.: +30 215 215 1765
Email: info@prd.com.gr

MEASURE • CALIBRATE • DEVELOP • OPTIMIZE • SUCCEED
www.prd.com.gr