



CANLY-AVR

Standalone programmable I/O controller for the CAN bus

Datasheet Rev.: 1.2.
Date: 12.02.2006

Features

- Atmel **ATmega32** RISC CPU @ 16MHz
- Microchip **MCP2515** CAN controller
- **4 optocoupled digital inputs**, configurable for switch to GND or 12V to 24V voltage input
- **4 digital open drain outputs**, 50V/2.3A
- **4 analog inputs**, configurable to 0..5V, 0..10V, 0..20mA and programmable gain
- 1 **RS-232** interface
- **32Kbytes** nonvolatile storage in **FRAM**
- An **expansion** connector with SPI, I2C, Interrupt and Reset signals.
- **Voltage regulator** with input protection, suitable for vehicle operation

Ordering Information

Art.-No. 01.0029

CANLY-AVR in aluminium enclosure

Art.-No. 01.0030

CANLY-AVR Standlone Programmable CAN I/O Controller, OEM board

Contact:

Elektronik-Atelier Kallen

Steinackerweg 14
CH-3075 Rüfenacht / Switzerland

Web: www.avrcard.com

Email: info@avrcard.com

Tel: +41-31-832 1441

Fax: +41-31-832 1442

Specifications

CAN Bus

Meets CAN specifications 2.0A (11 bit ID) and 2.0B (29 bit ID)

Bit Rate	Up to 1Mbit/s
Controller	Microchip MCP2515 @ 20MHz clock
Transceiver	Philips PCA82C251, for 24V systems
Connector	Standard 9-pin D-Sub connector for CAN bus, as per CiA DS102-1
Termination	On-board 120Ohm selectable

I/O

Digital Inputs	AC optocoupler
Outputs	4 x 50V/2.3A, open drain
Analog Inputs	0..5V, 0..10V or 0..20mA, 10 bit resolution, configurable with on-board resistors
RS-232	TXD/RXD, RTS/CTS lines on RJ45

Power Supply

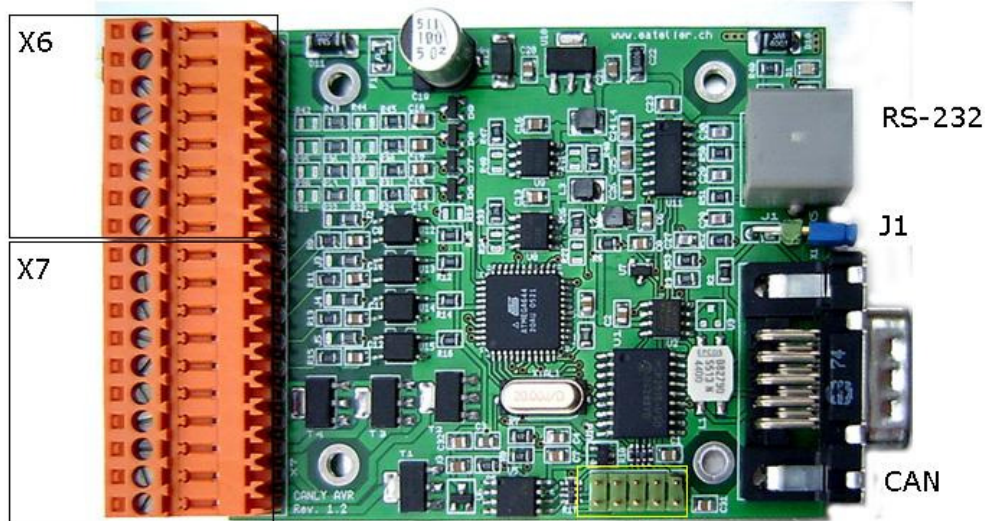
Requirement	7...24VDC
Source	Supplied via CAN bus cable or dedicated DC supply

Mechanical

Size (L x W)	80 x 65 mm
Weight	65 g

Connector Specifications

Application connector



Expansion

CAN Bus

X1: CAN Bus Interface	
No.	Function
1	
2	CANL
3	CAN GND
4	
5	
6	AUX GND
7	CANH
8	
9	VCAN+

CAN GND should be connected to shield of bus cable only.

The CANLY-AVR module can be powered either from X6 or from X1. On X1, the positive voltage is applied to VCAN+, negative to AUX GND.

Expansion

M1: Expansion		
No.	Function	Alt. Function
1	MISO	SPI Bus
2	+5V	Connected to PC6
3	SCK	SPI Bus
4	MOSI	
5	RESET	
6	GND	Ground
7	CS	
8	INT	Connected to PD3
9	SCL	I2C Bus
10	SDA	

Application Interface

X6/7: Application Interface			
No.	Schema	Function	Configuration
1	X6.8	DC Input +	9...24VDC
2	X6.7	GND	
3	X6.6	Analog Input 3	0...5V
4	X6.5	Analog Input 2	0...5V
5	X6.4	Analog Input 1	0...5V
6	X6.3	Analog Input 0	0...5V
7	X6.2	Reference voltage out	4.096V
8	X6.1	Optocoupler common	VPP
9	X7.10	Optocoupler common	AGND
10	X7.9	Digital Input 0	12...24V
11	X7.8	Digital Input 1	12...24V
12	X7.7	Digital Input 2	12...24V
13	X7.6	Digital Input 3	12...24V
14	X7.5	GND	
15	X7.4	Digital Output 3	50V/2.3A, open drain
16	X7.3	Digital Output 2	50V/2.3A, open drain
17	X7.2	Digital Output 1	50V/2.3A, open drain
18	X7.1	Digital Output 0	50V/2.3A, open drain

Jumper Settings

Jumper on CAN bus			
No.	Des.	ON	OFF
J1	TERM	120 Ohm Resistor between CANH and CANL	N.C.