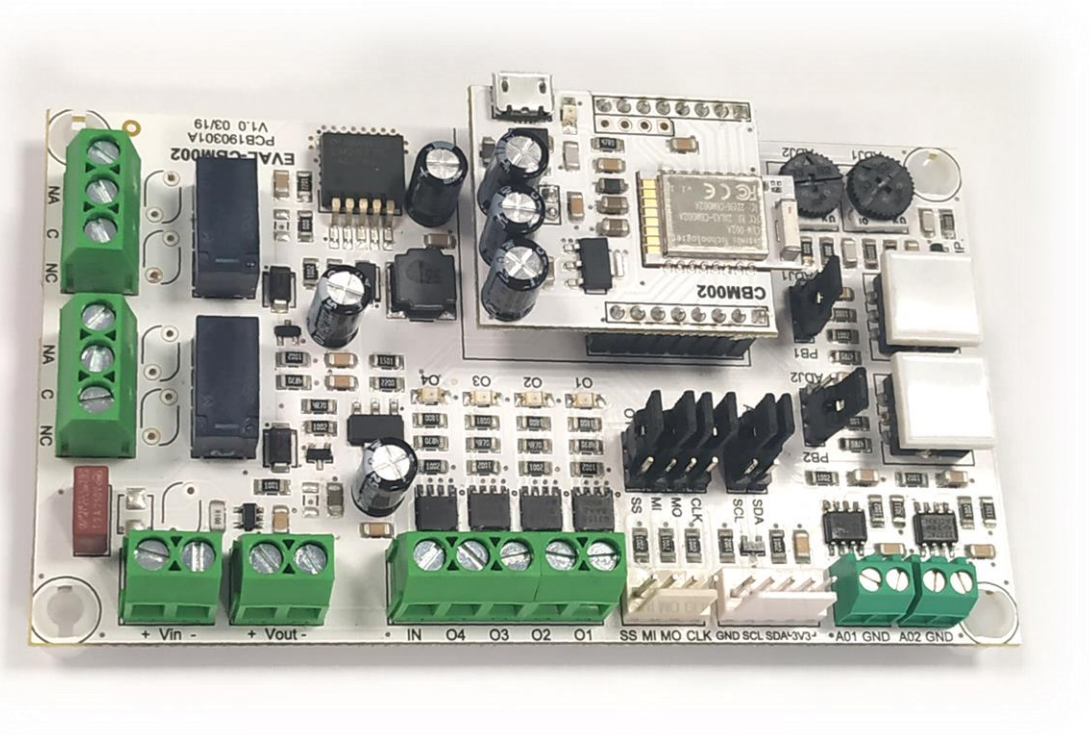


CASAMBI INSIDE

Description

This evaluation board has been designed to show and test the diverse features and output/input configurations of CASAMBI CBM-002 module.

The top PCB of EVB-CBM002A incorporates a CBM-002 module and a MicroUSB input connector (5V) input.

A power-ON LED will turn on when the evaluation board is powered by the MicroUSB. EVB-CBM002A incorporates a voltage boost type converter in order to provide power for the 0-10V analog outputs.

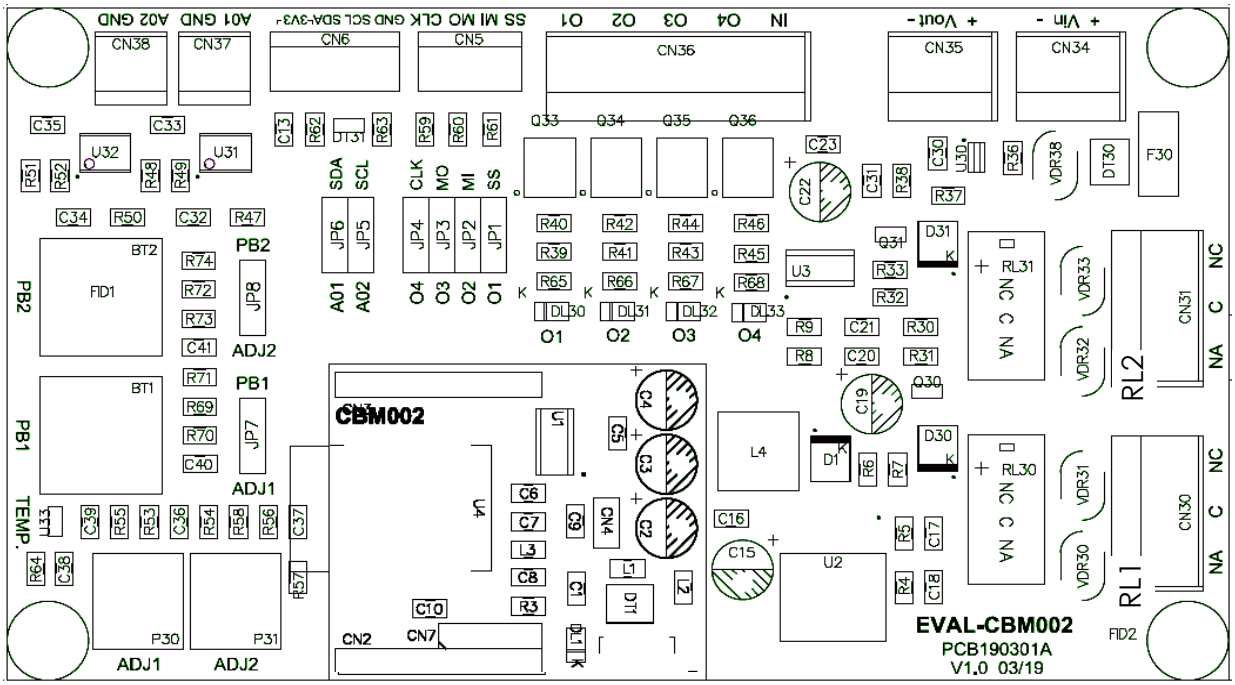
When any of the outputs (O1, O2, O3, O4) is going to be used, an additional power supply is required to be connected to Vin input. Rating (U, I) and type (Constant current, Constant voltage) of this power supply must be selected according to the type of load that will be connected to O1-O4 outputs.

Note that the negative pole of this power supply will be connected to the negative pole of the microUSB input through the evaluation board.

Incorporated features:

- 2 trimmers for simulation of analogic signals (sensors, etc).
- 2 pushbuttons.

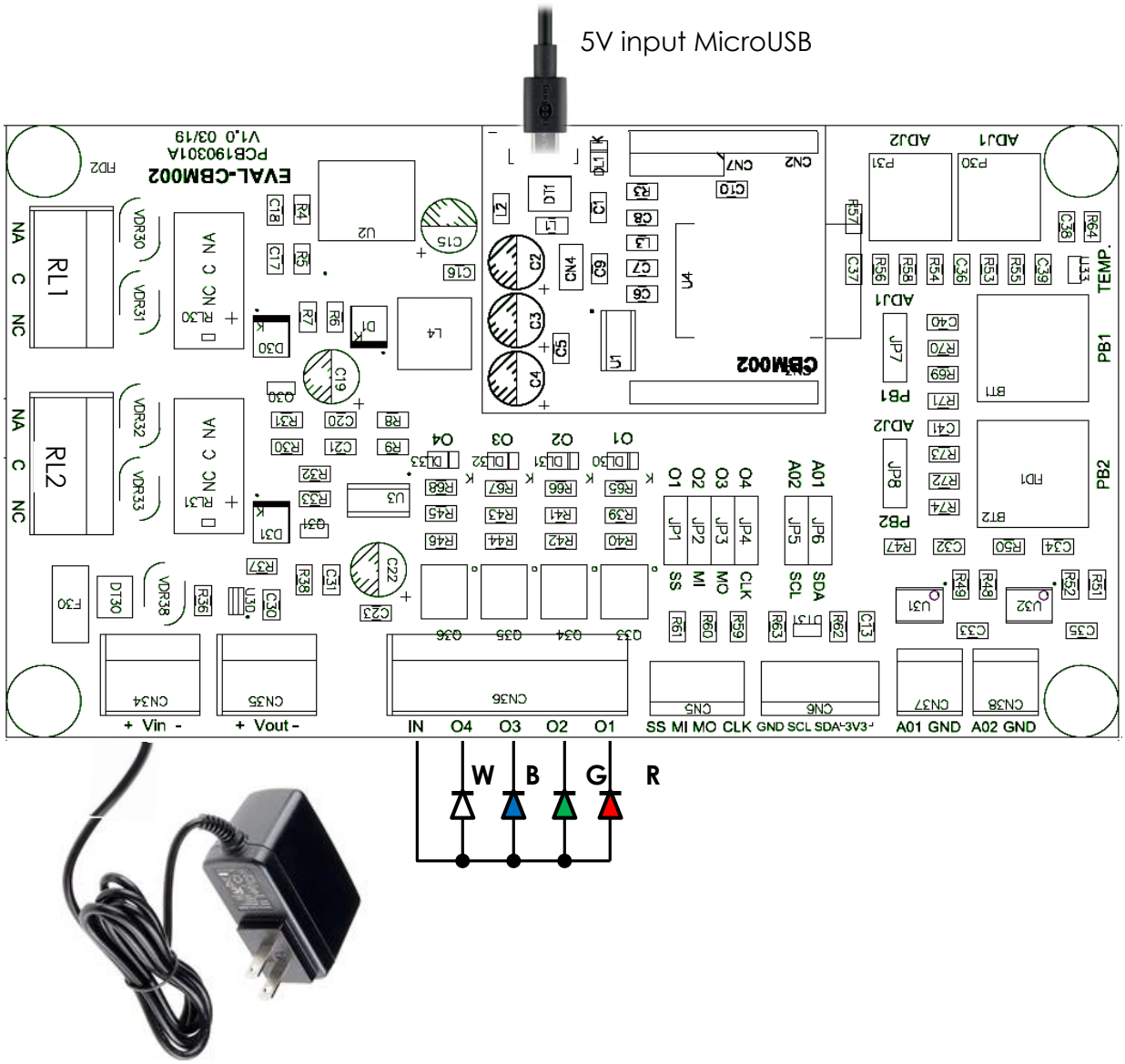
▪ Board layout



Alternative uses for some of CBM-002 general purpose input/output pins (GPIOs) are provided by use of jumpers:

GPIO	JUMPER	Jumper position 1 function	Jumper position 2 function
GPIO0/AIN0	-		
GPIO1/AIN1	JP7	PB1 Pushbutton	ADJ1 Trimmer (0-3,3V analogic input)
GPIO2/AIN2	JP8	PB2 Pushbutton	ADJ2 Trimmer (0-3,3V analogic input)
GPIO3/AIN3	-		
GPIO4	-	Relay control (RL1 contacts)	
GPIO5	-	Relay control (RL2 contacts)	
GPIO6	JP1	O1 PWM output control	SPI port SS
GPIO7	JP2	O2 PWM output control	SPI port MISO
GPIO8	JP3	O3 PWM output control	SPI port MOSI
GPIO9	JP4	O4 PWM output control	SPI port SCLK
GPIO10	JP5	A02 0-10V output control	I²C (two wire) port SCL
GPIO11	JP6	A01 0-10V output control	I²C (two wire) port SDA

- **Basic wiring diagram**



▪ Technical data

MicroUSB input voltage	5VDC
MicroUSB input Power consumption	<0,5W
Vin Input voltage range	5-35V
Vin Input current (I)	0-2A
Vout voltage	Vin voltage - $0.1*I^2$
Vout maximum current	2A
A01, A02 outputs maximum voltage	12VDC
A01, A02 outputs maximum current	50mA
RL1, RL2 contact rating	2A, 220VDC
O1-O4 output voltage	Vin voltage - $0.1*I^2$
O1-O4 output maximum current	Total current of all outputs < 2A. Single output <2A.
RF communication interface	Bluetooth 4.0 Low energy (BLE)
RF communication protocol	Casambi
RF spectrum	2402–2483 MHz
Dimensions (L*W*H)	120 x 60 x 40mm

▪ Available configuration fixtures

ID 11731	4xPWM + 2xRelays
ID 11858	0-10 VDC
ID 11860	2xPush Button
	Other profiles available on request. Please contact info@olfer.com