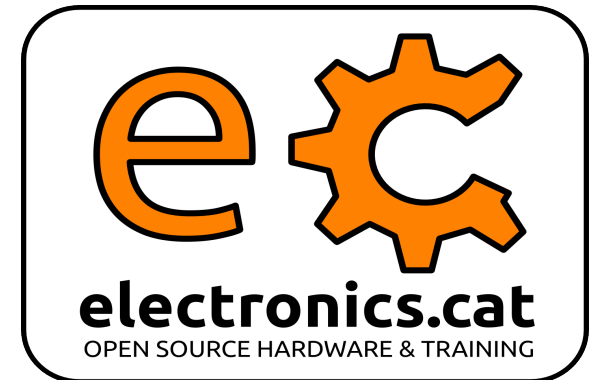
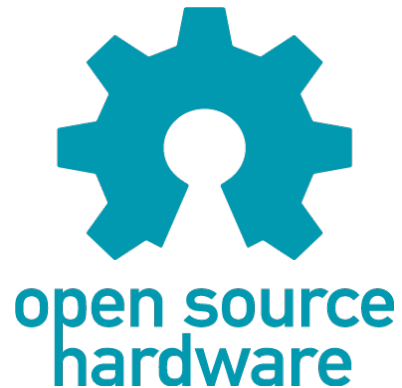


Maquinari lliure (uC de 8 bits)



Jordi Binefa i Martínez

Responsable d'R+D+i a

Professor de cicles formatius a

21 / juny / 2014





Material

Contingut de les dues bosses

Bossa d'accessoris

- 1 cable 4x2 (comunicacions)
- 3 cables 5x2 (dades)
- 1 cable USB d'alimentació
- 1 cable USB A / miniUSB
- 1 placa de 4 relés
- 1 mòdul H (placa vermella)
- 1 joystick
- 1 sensor ultrasònic
- 1 motor amb roda
- 1 tornavís

Bossa de plaques

- 0518 (entrades optoacobrades)
- 0104 (entr./sort. uSW/LEDs)
- 0515 (sortides PNP)
- 0303 (expansor entr./sort. I2C)
- 0105 (miniUSB / TTL 232 / I2C)
- 0101 (nano-eCat + nanoArduino)
- 0517 (matriu d'entr./sort.)
- 0512 (entrades analògiques)
- 0502 (adaptadora a mòduls relés)
- 0520 (adaptadora a mòduls H)
- 0519 (adaptadora LCD + LCD)
- 0522 (adaptadora a prototipus)

CABLE DE DADES

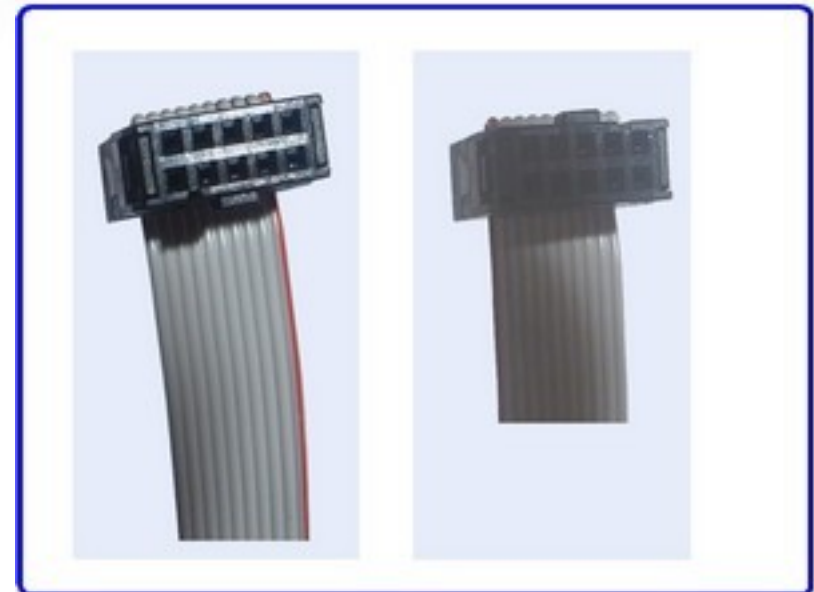
GND b7

b6 b5

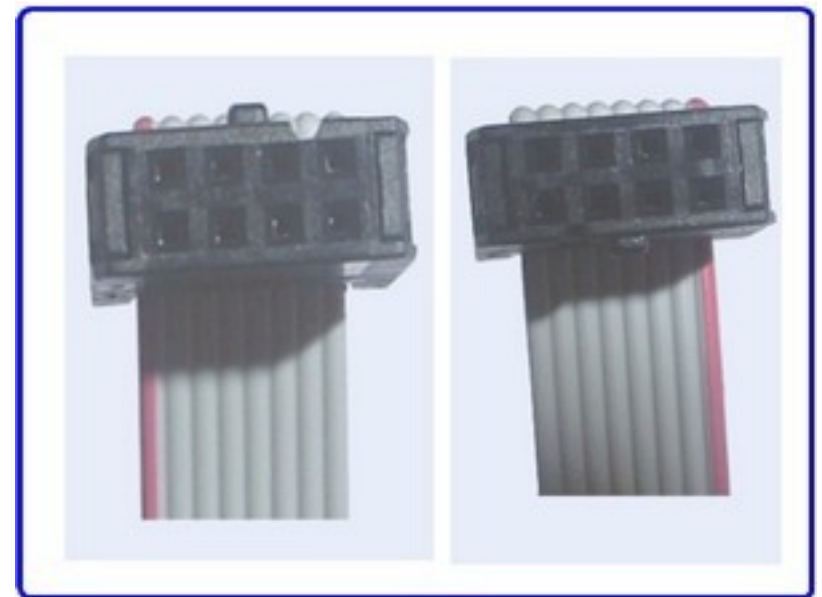
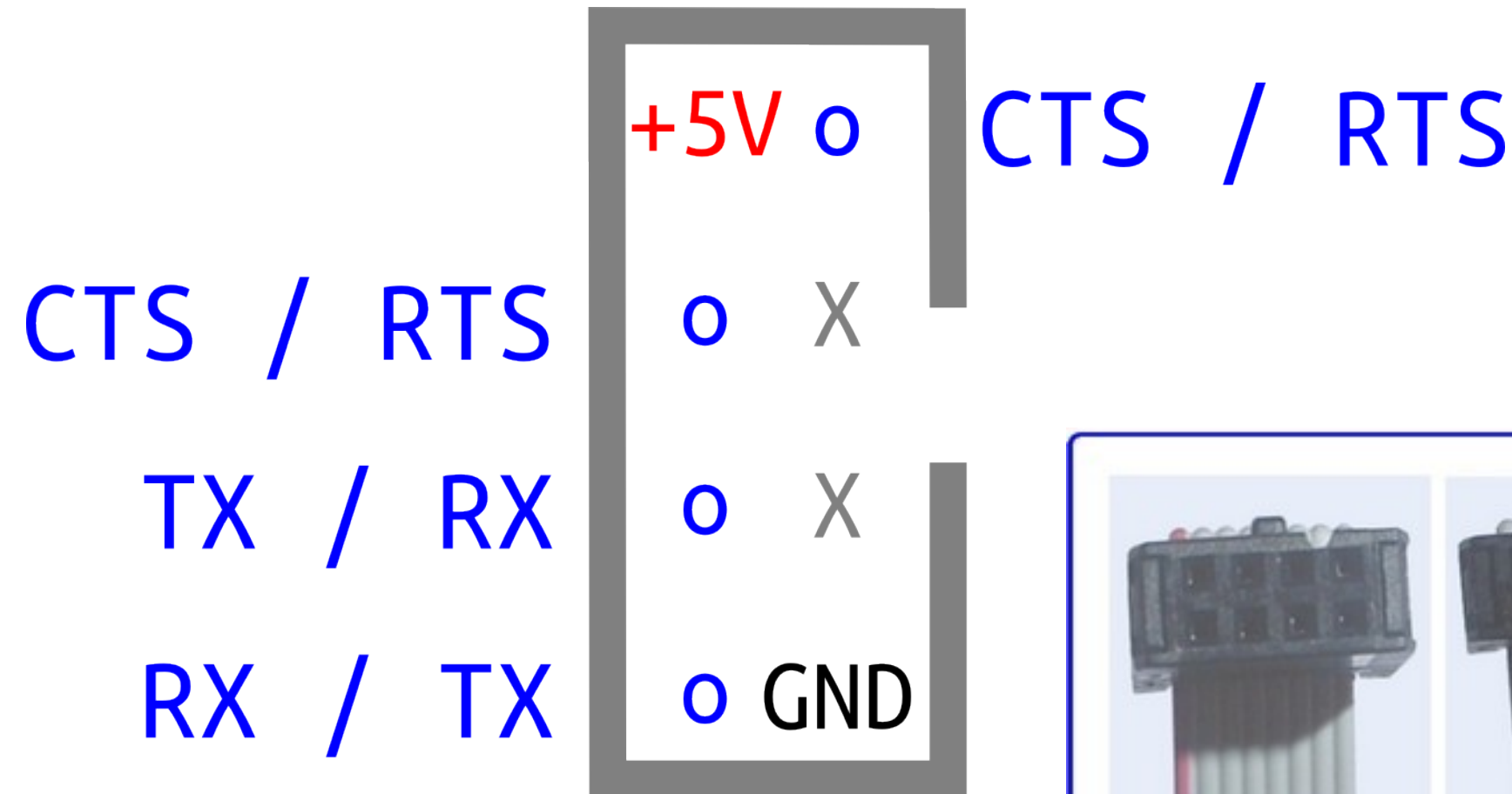
b4 b3

b2 b1

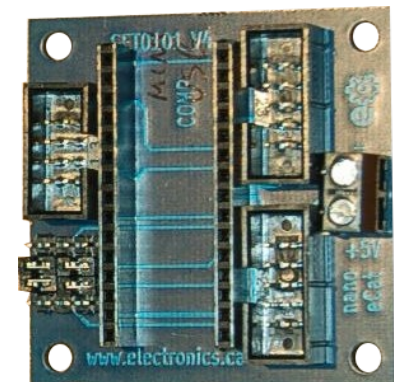
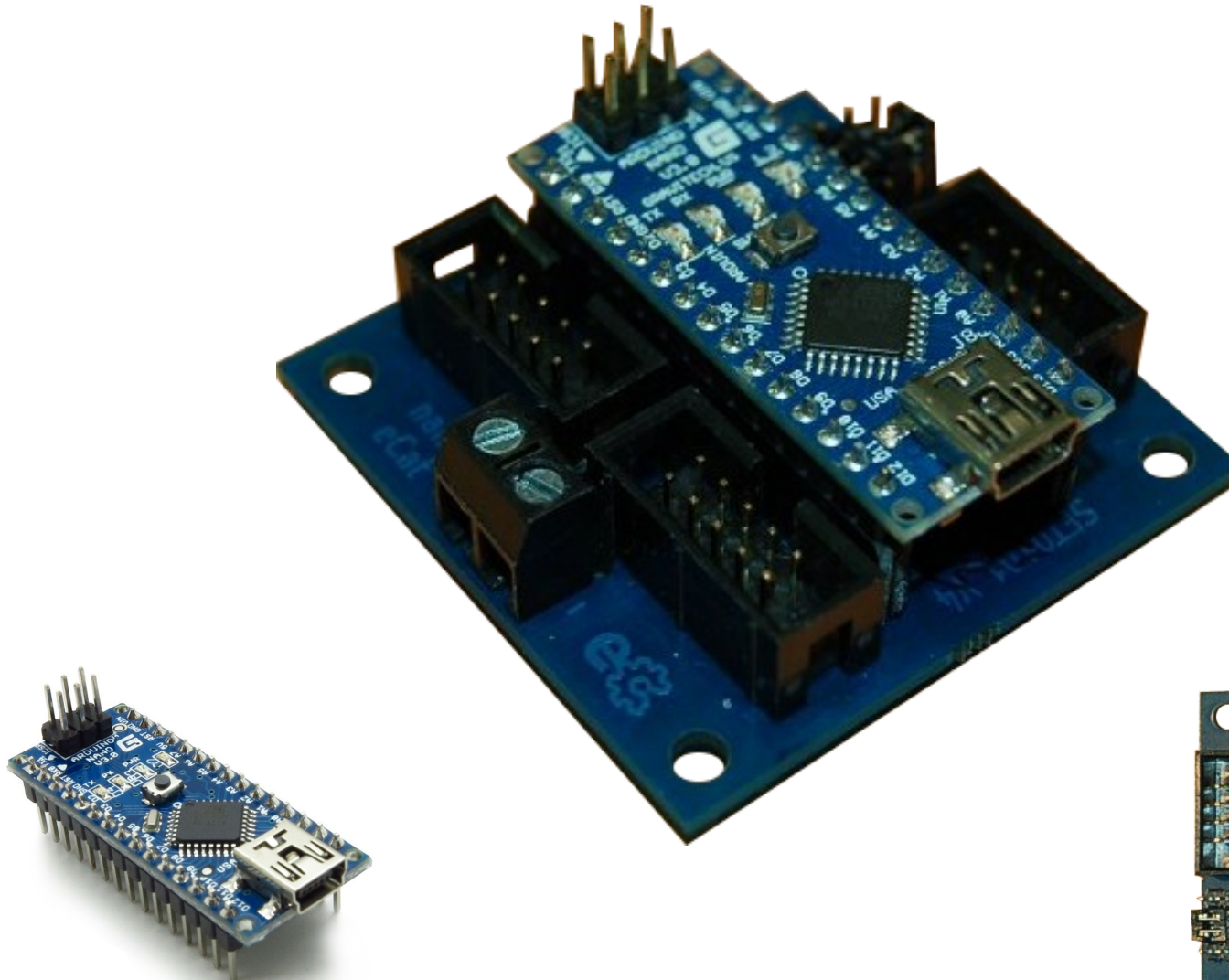
b0 +5V



CABLE DE COMUNICACIONES

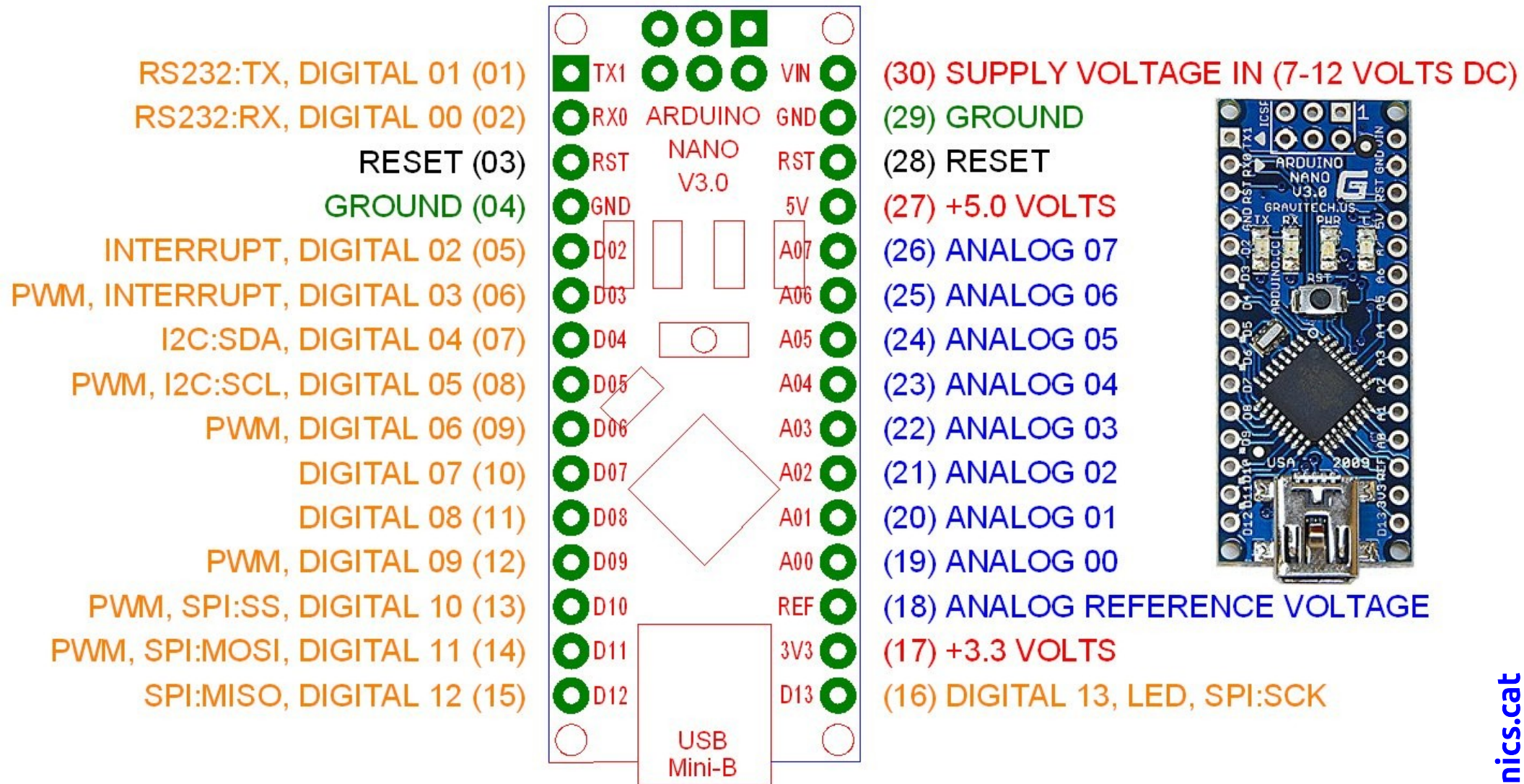


nano-eCat

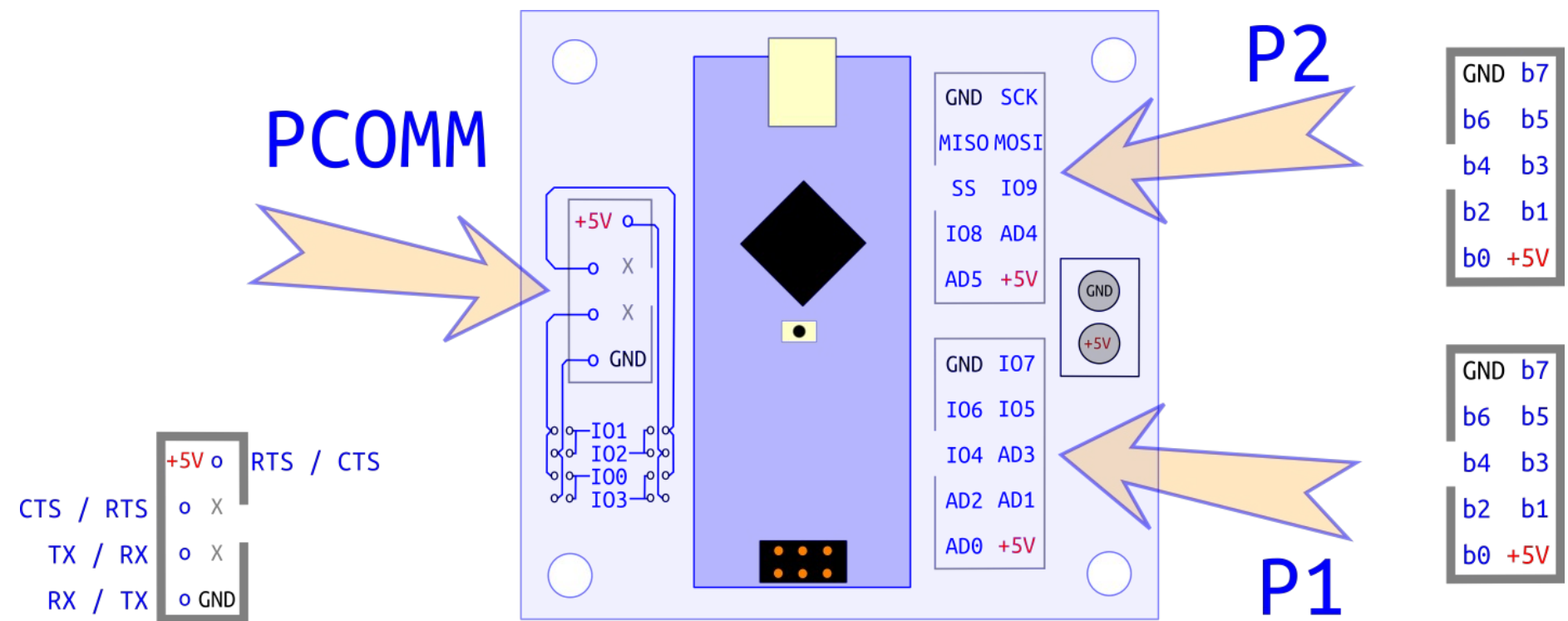




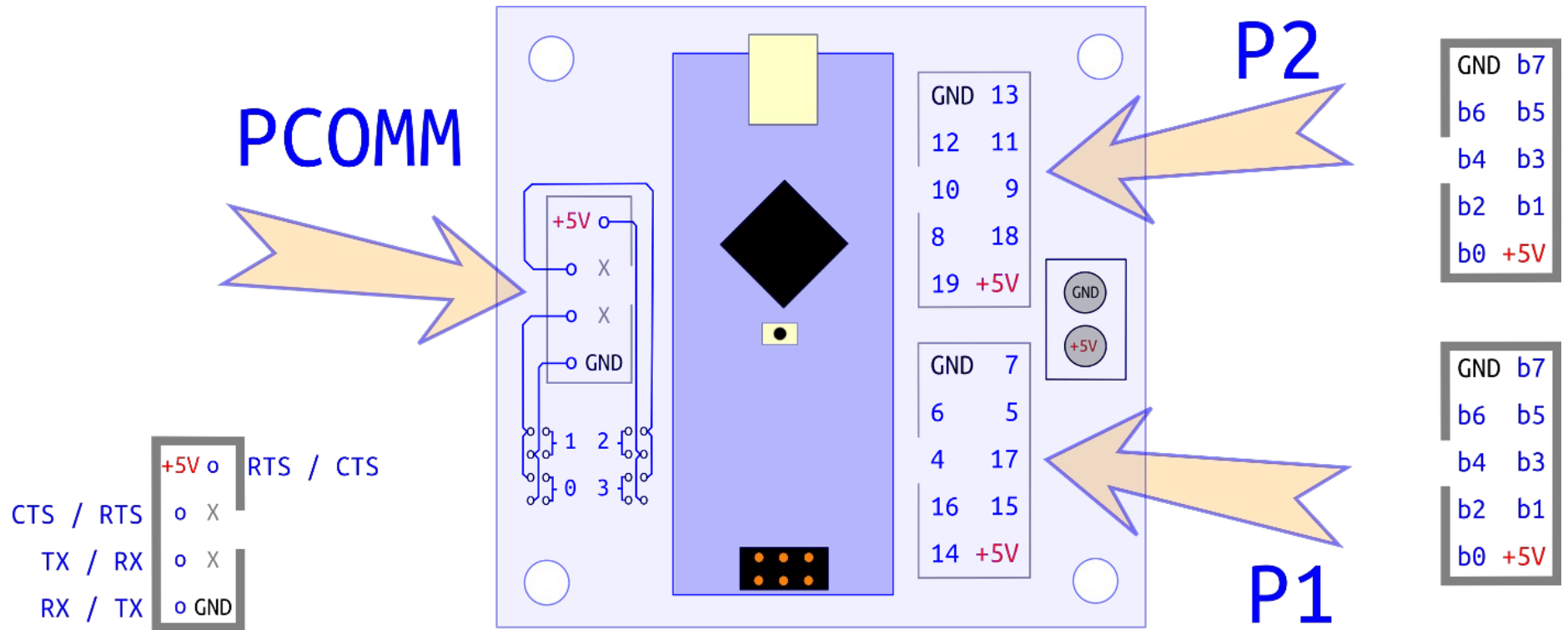
Arduino Nano



nano-eCat



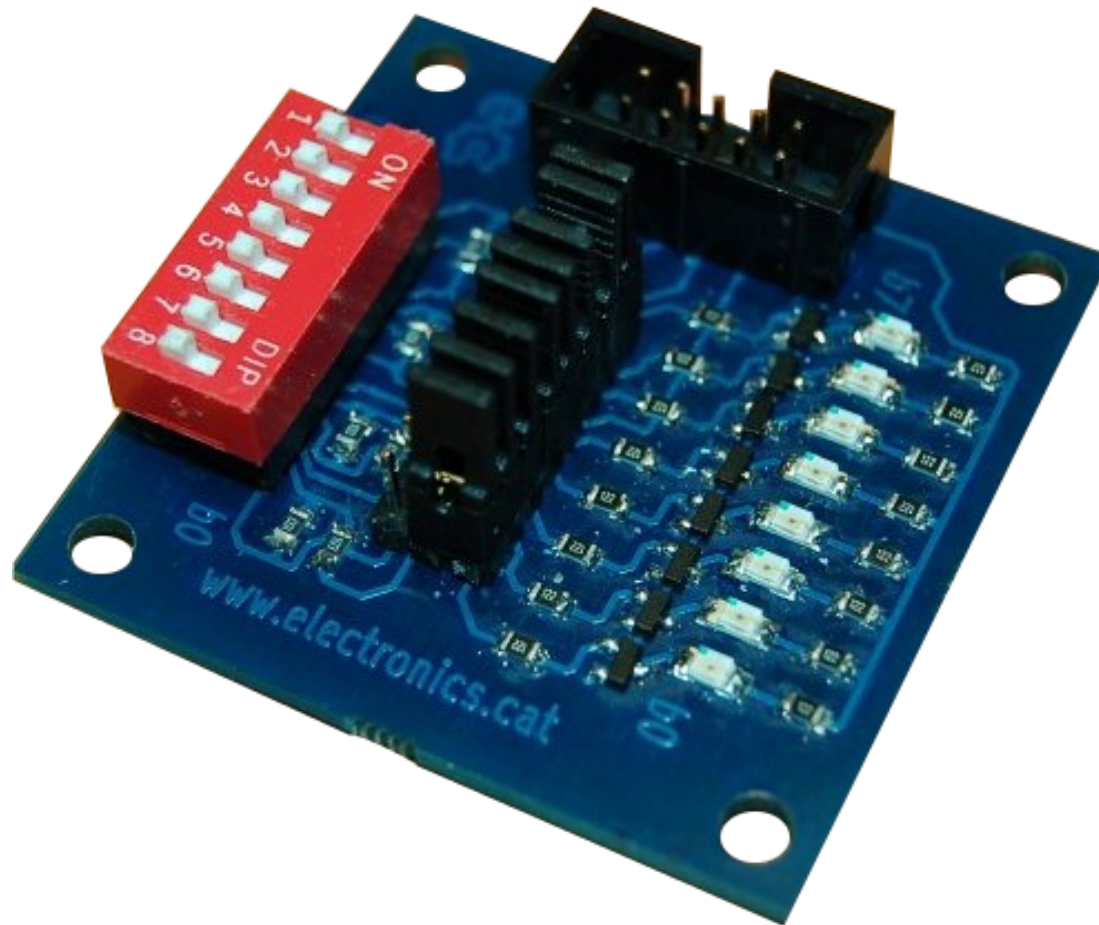
nano-eCat





uSW – LEDs

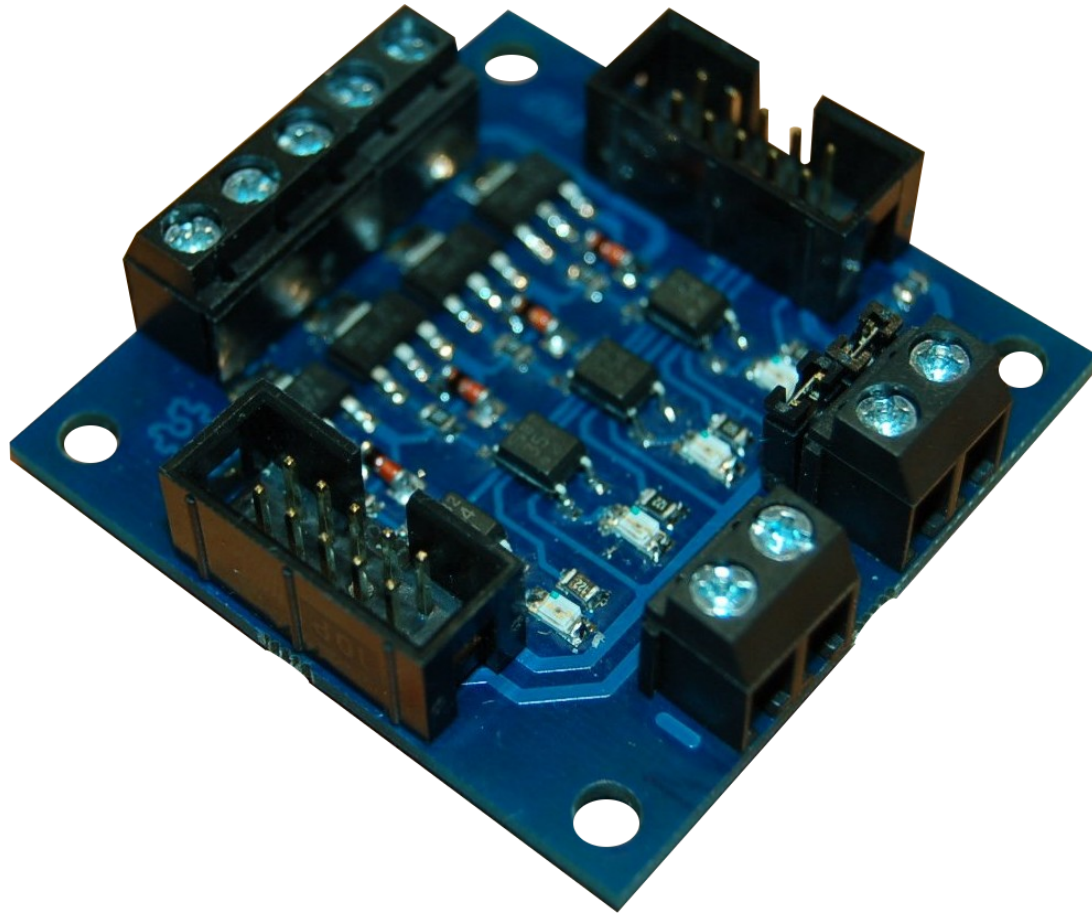
01_04 v3



b0	b2	b4	b6	GND
+5V	b1	b3	b5	b7

Sortides PNP

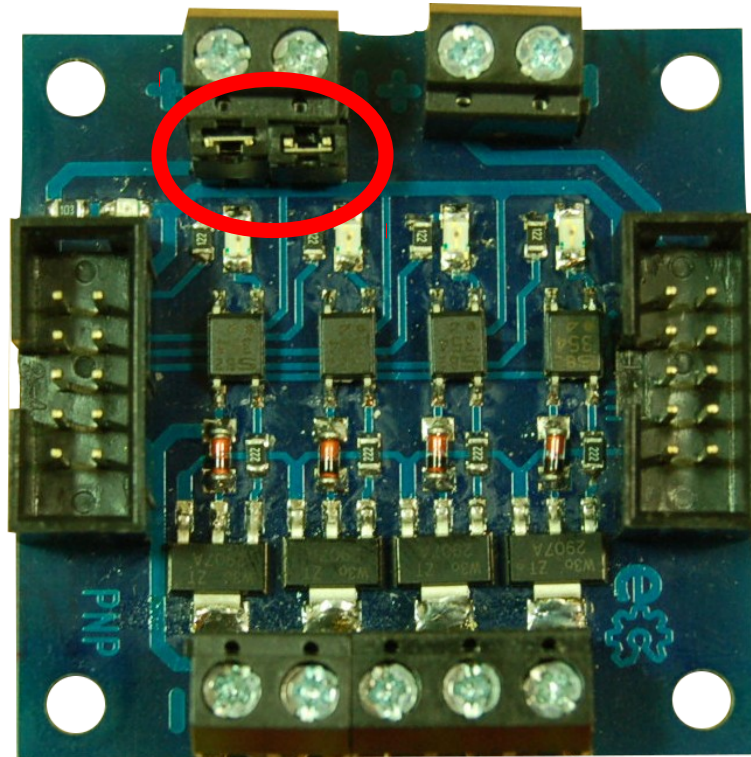
SET0515





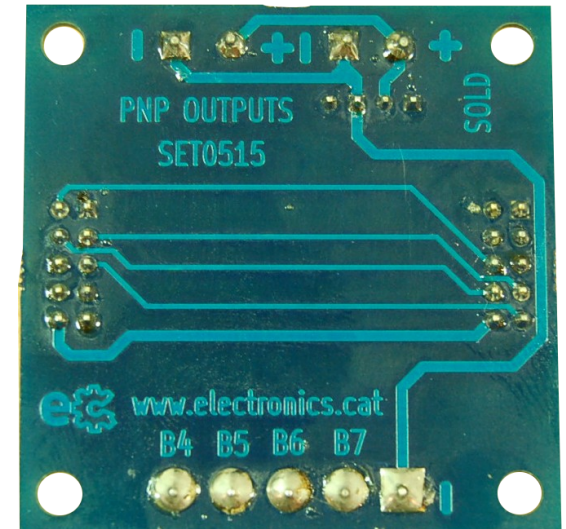
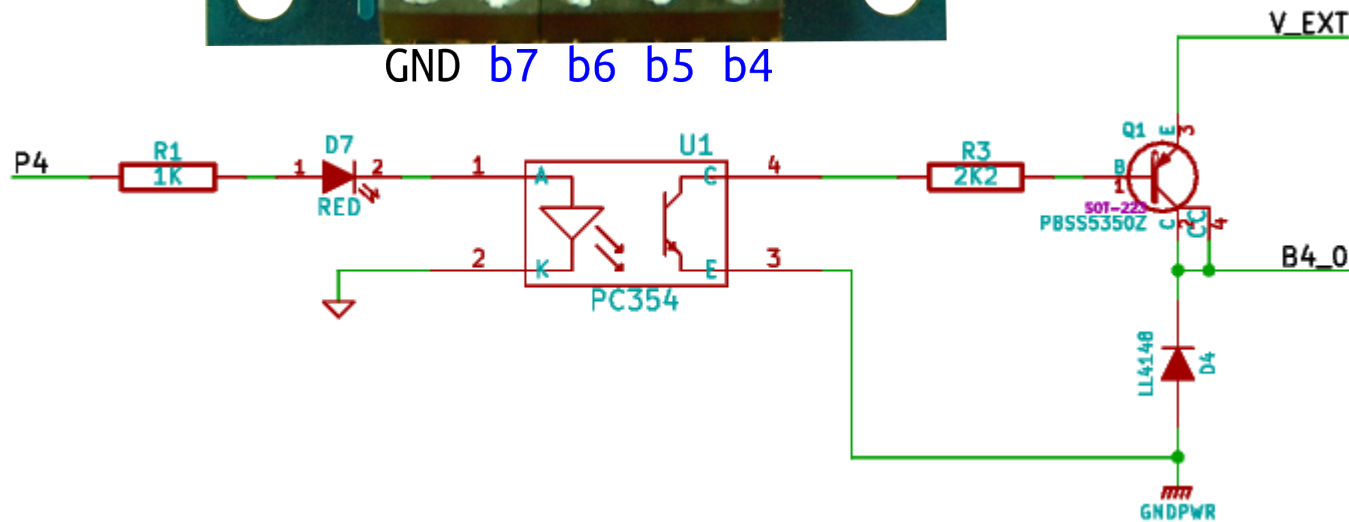
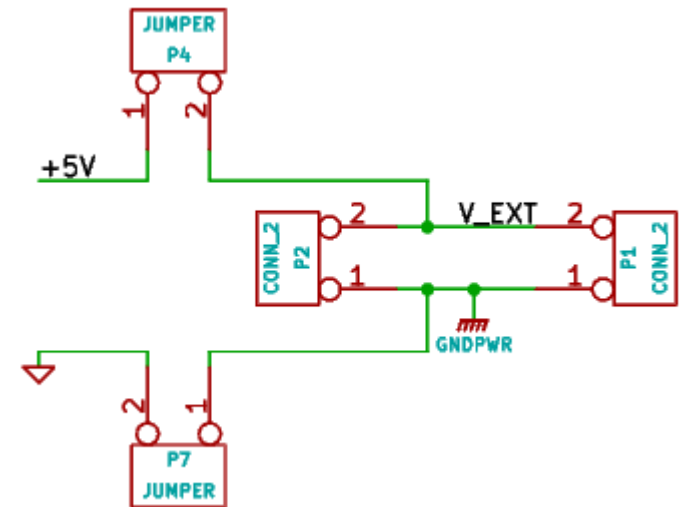
Sortides PNP

SET0515



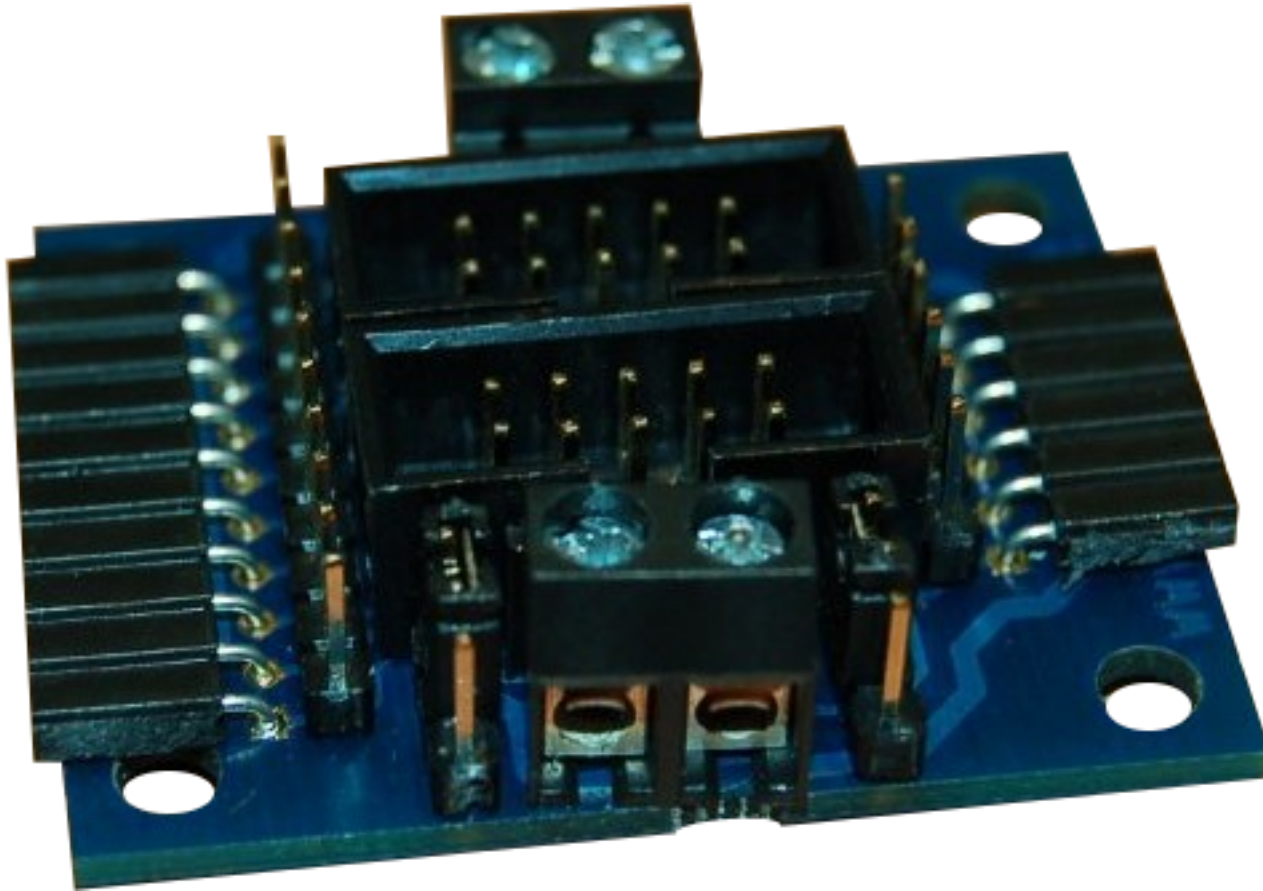
GND	b7
b6	b5
b4	b3
b2	b1
b0	+5V

GND	b3
b2	b1
b0	X
X	X
X	+5V



Sortida a mòdul de relés

SET0502

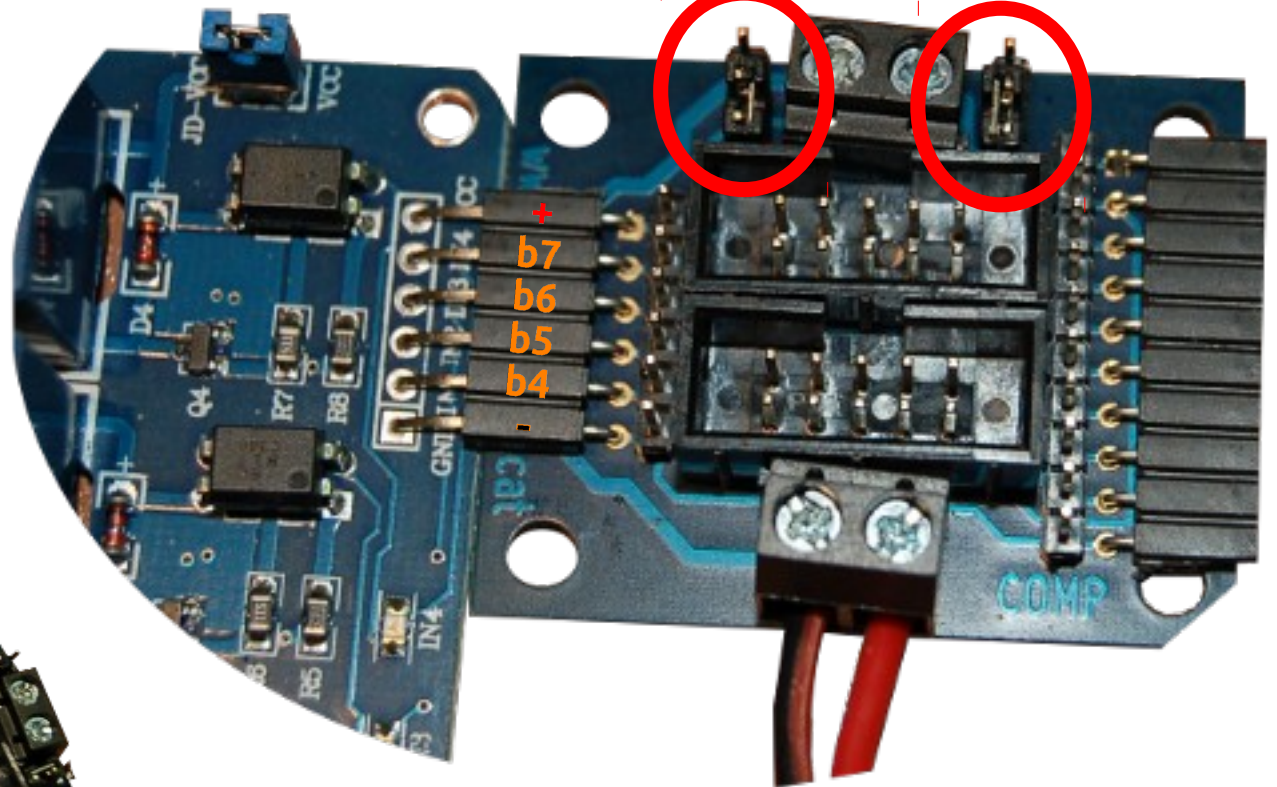




Sortida a mòdul de relés

SET0502

X	X	b0	b2	GND
+5V	X	X	b1	b3

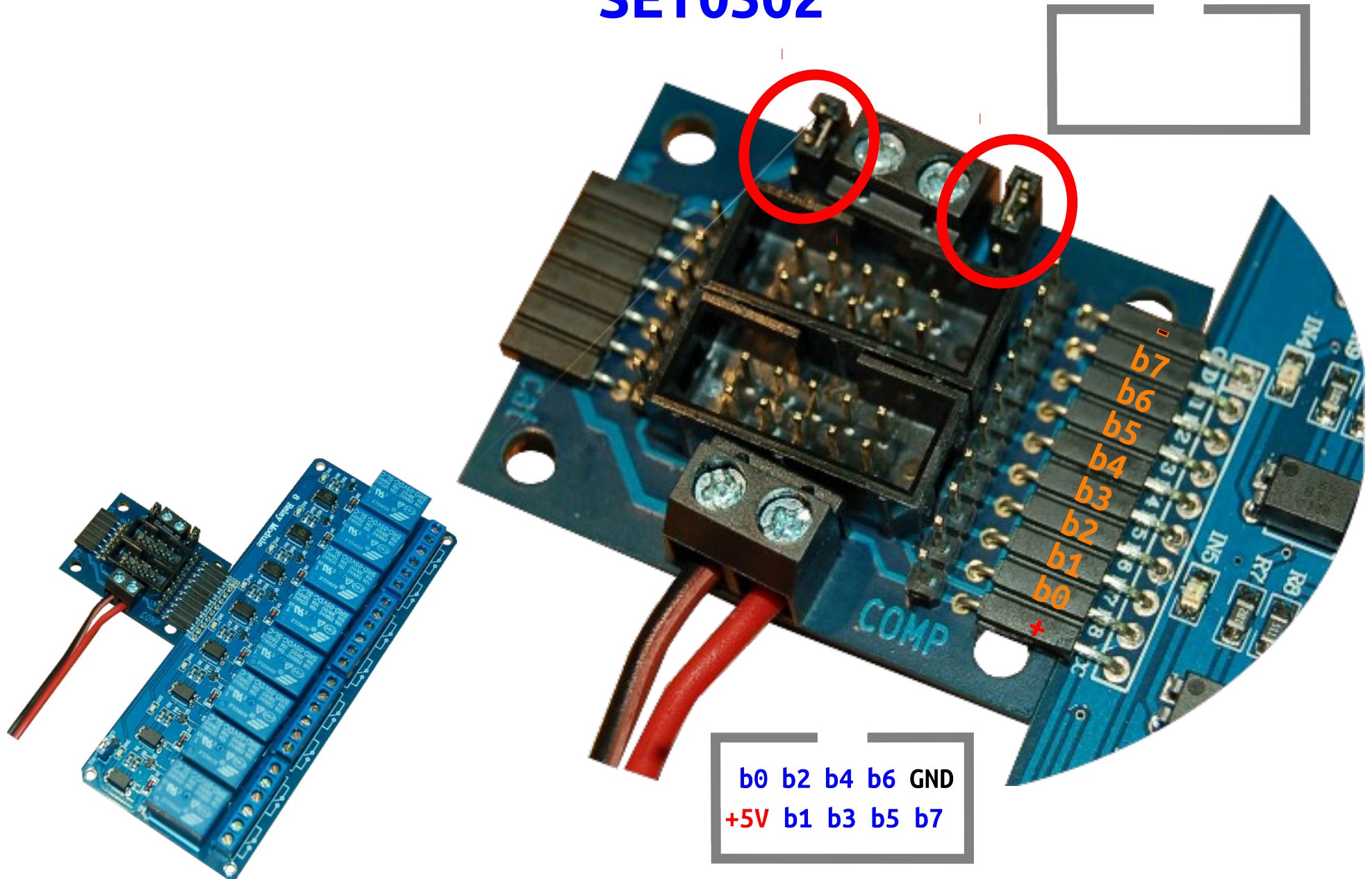


b0	b2	b4	b6	GND
+5V	b1	b3	b5	b7



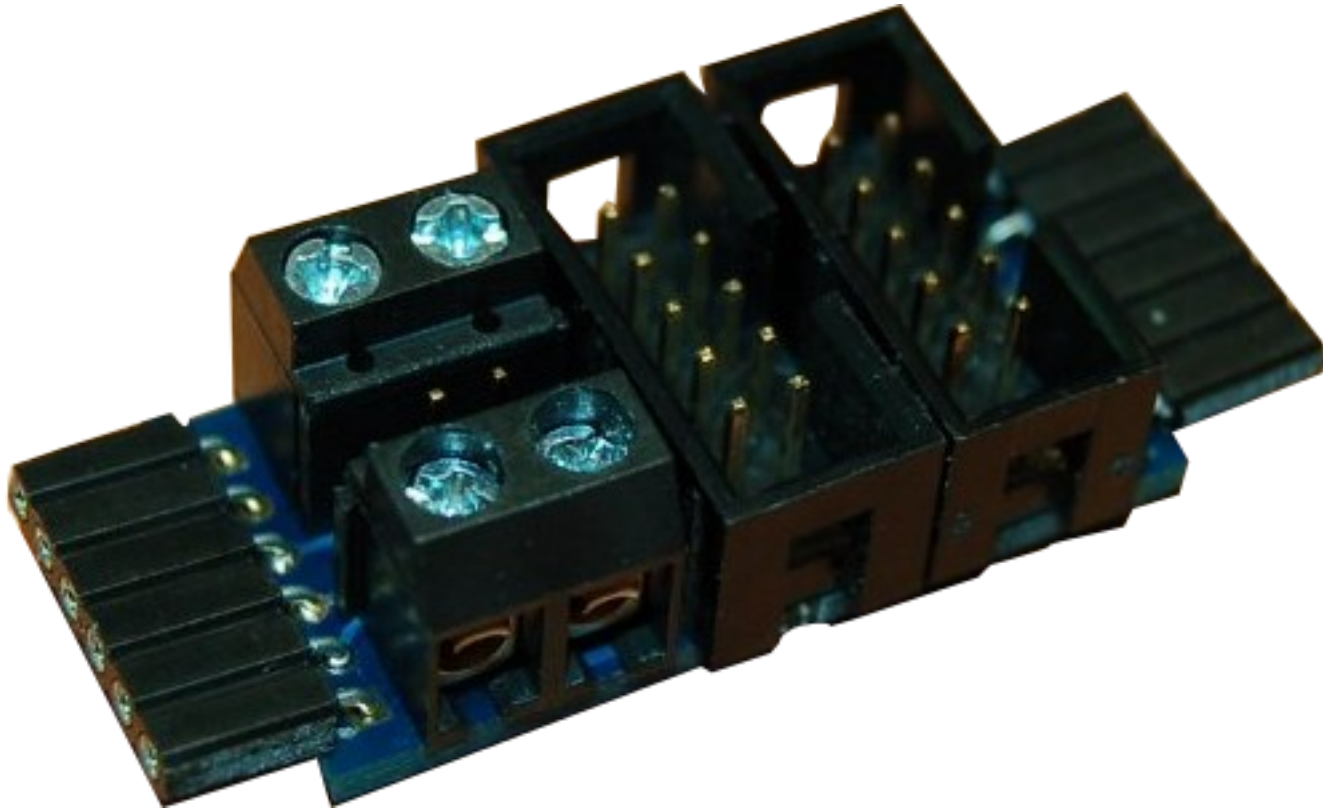
Sortida a mòdul de relés

SET0502



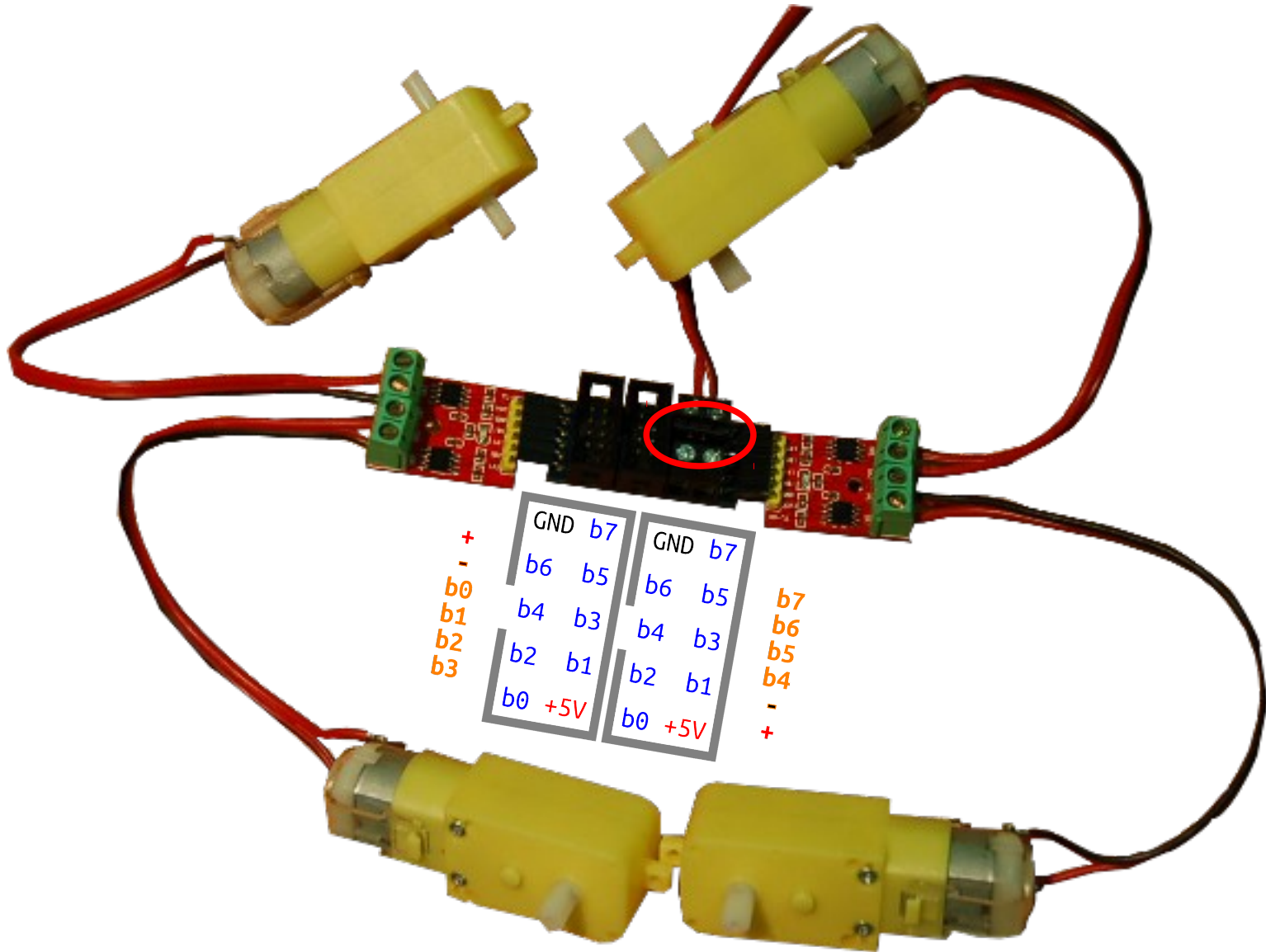
Sortida a mòdul H

SET0520



Sortida a mòdul H

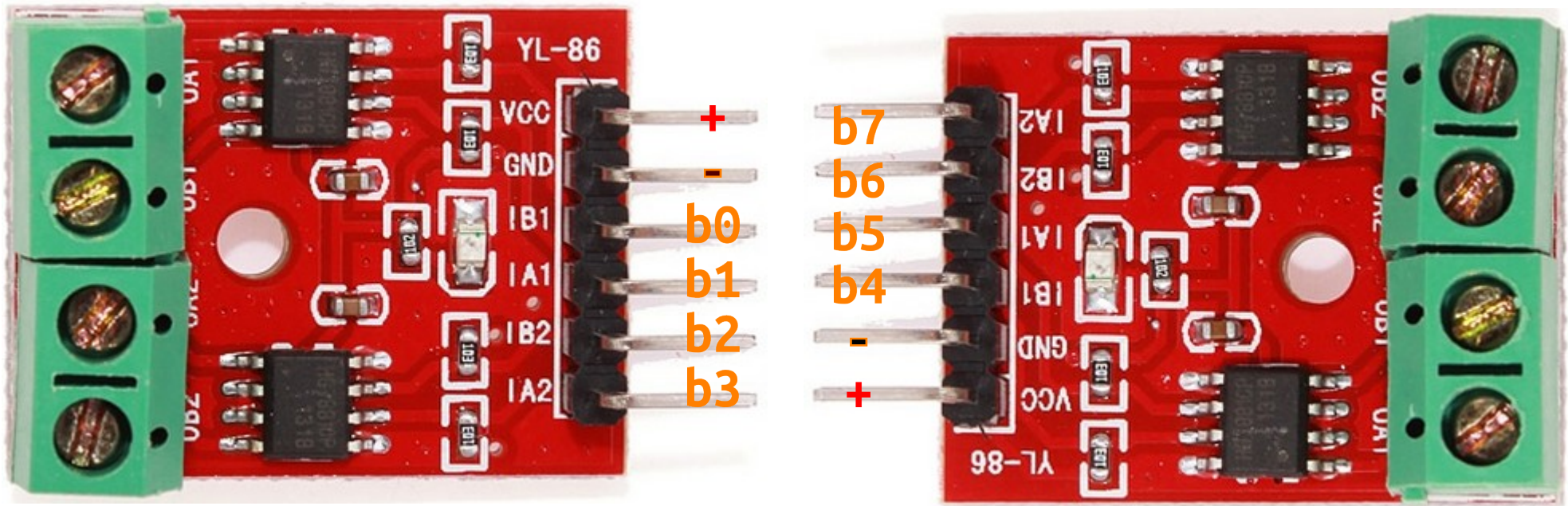
SET0520





Sortida a mòdul H

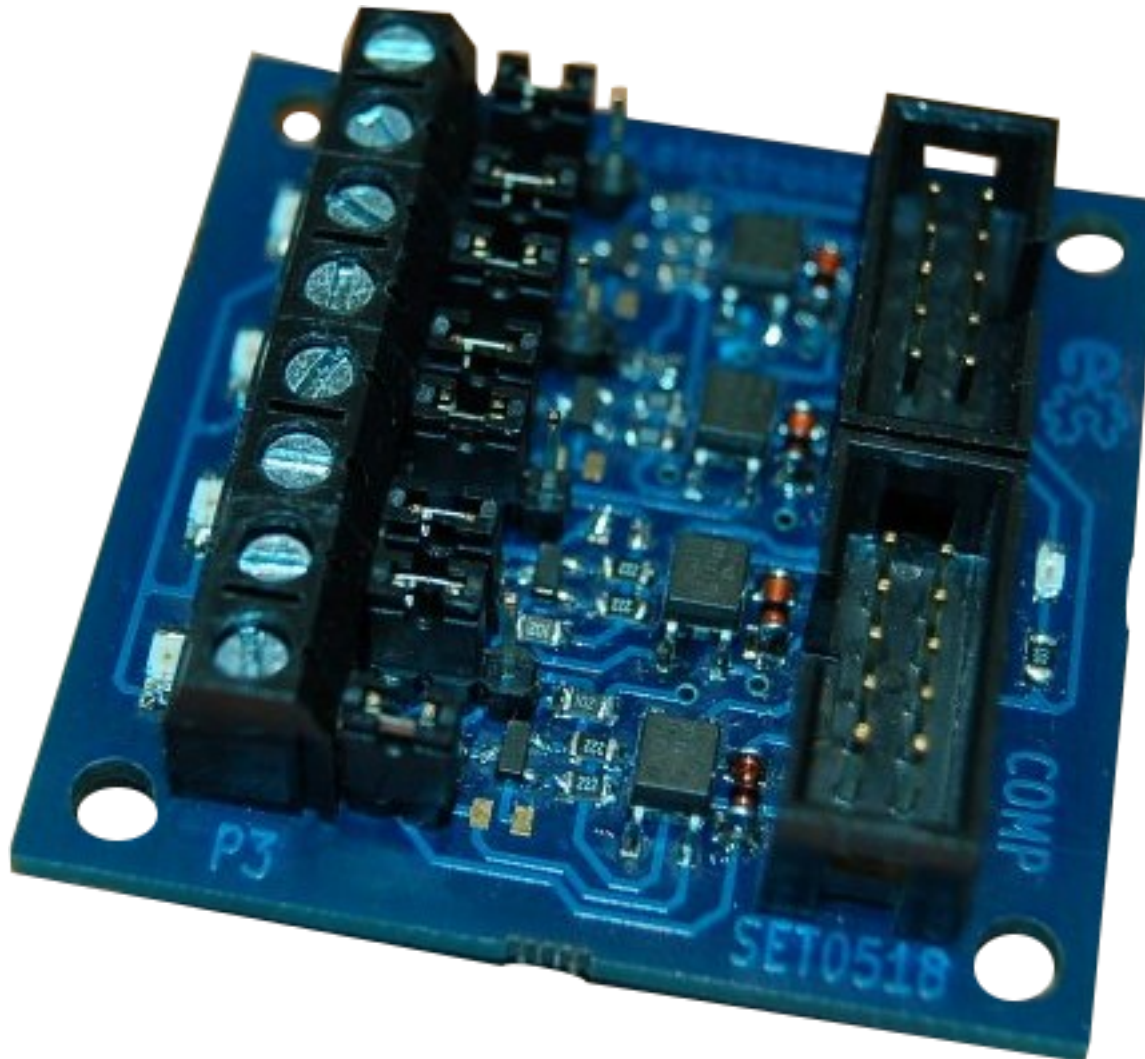
SET0520





Entrades opto-acoblades

SET0518

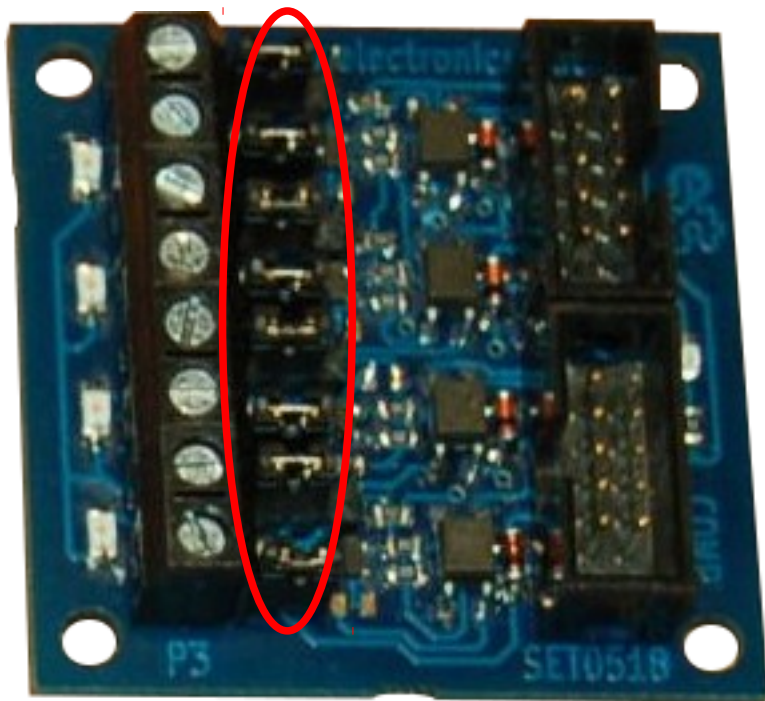


P0 b4

P1 b5

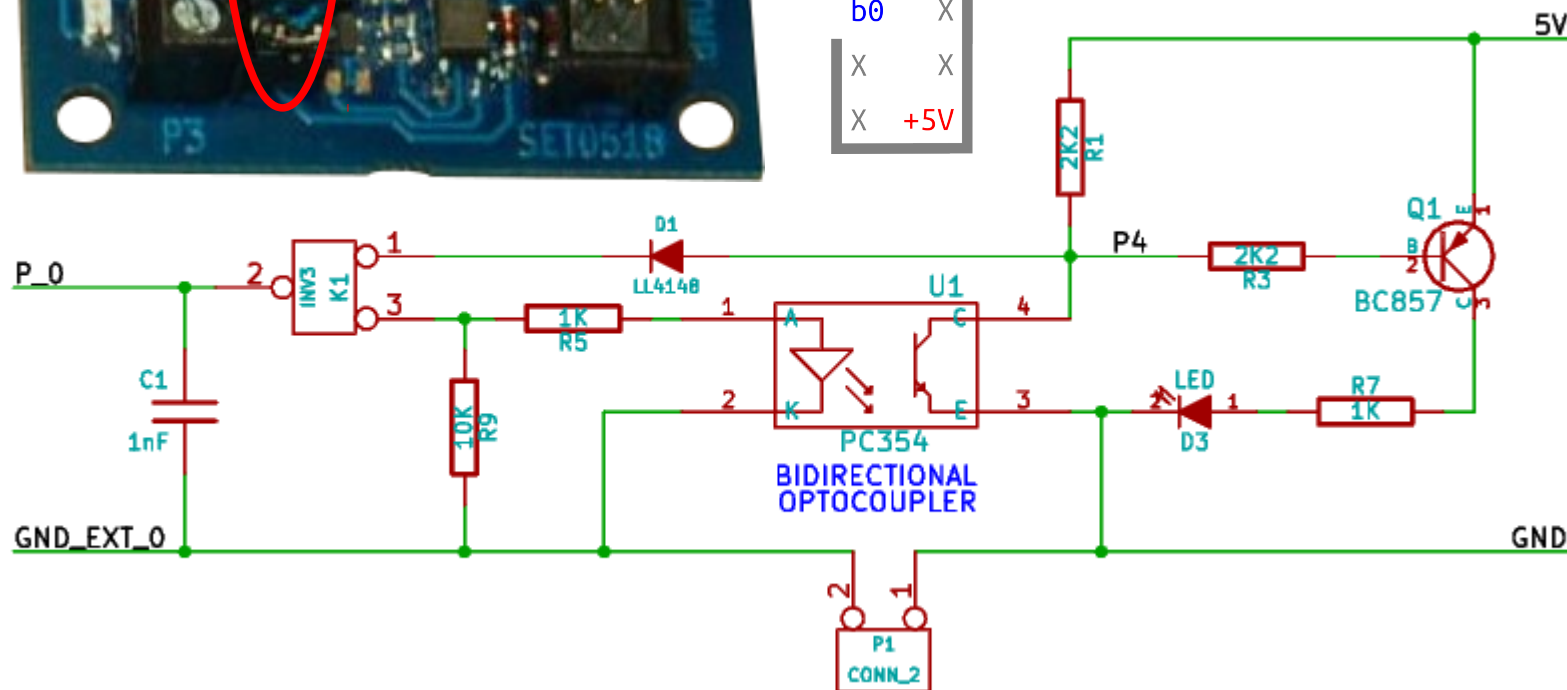
P2 b6

P3 b7



+5V	b0
b1	b2
b3	b4
b5	b6
b7	GND

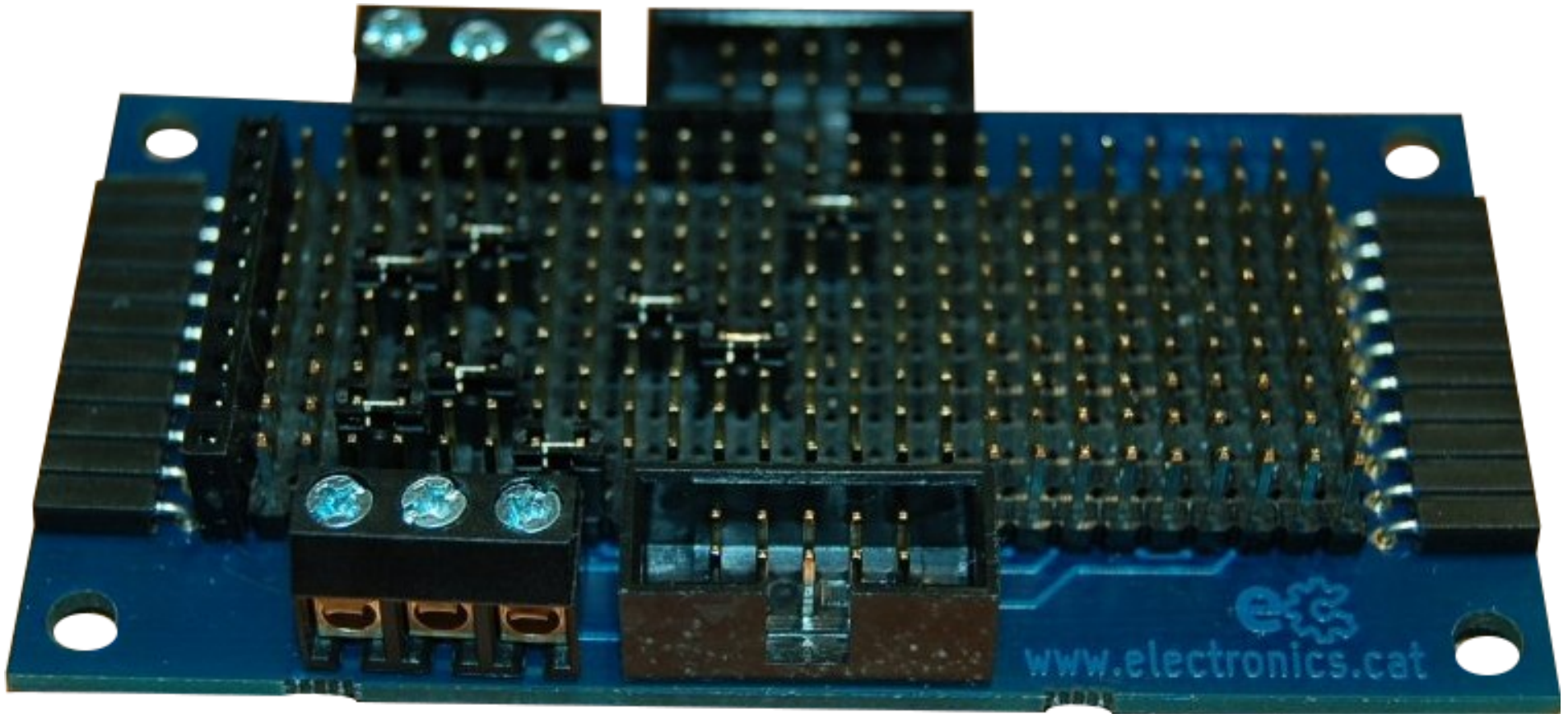
GND	b3
b2	b1
b0	X
X	X
X	+5V





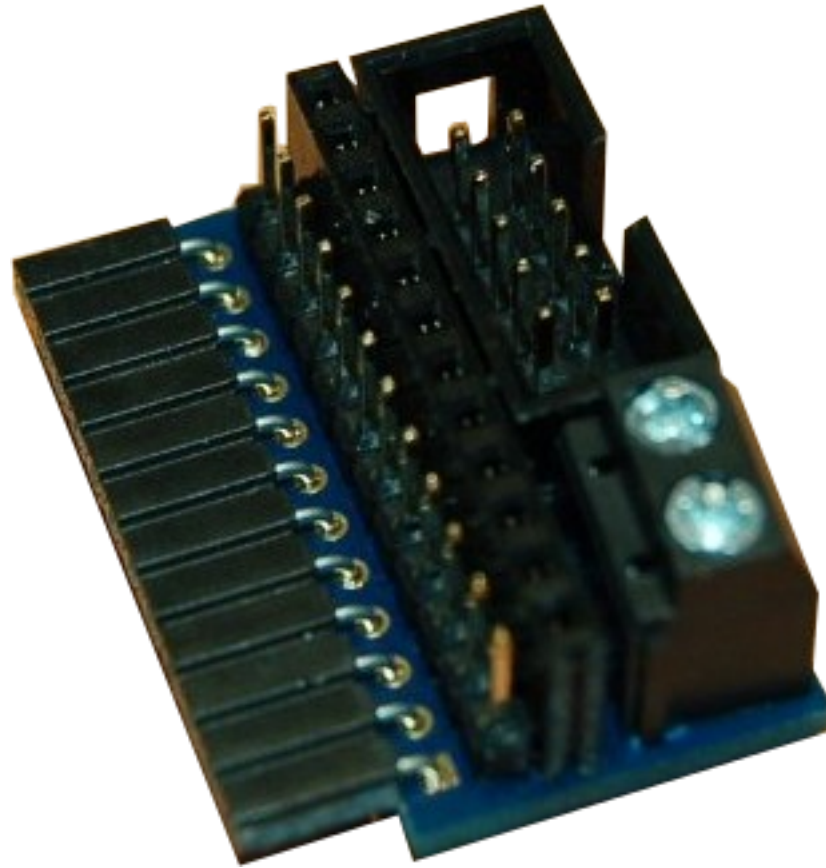
Matriu d'entrades/sortides

SET0517



e⚙️ Placa d'entrades/sortides

SET0522



e⚙️ Placa d'entrades analògiques

SET0512

+5V A3 GND +5V A2 GND +5V A1 GND +5V A0 GND



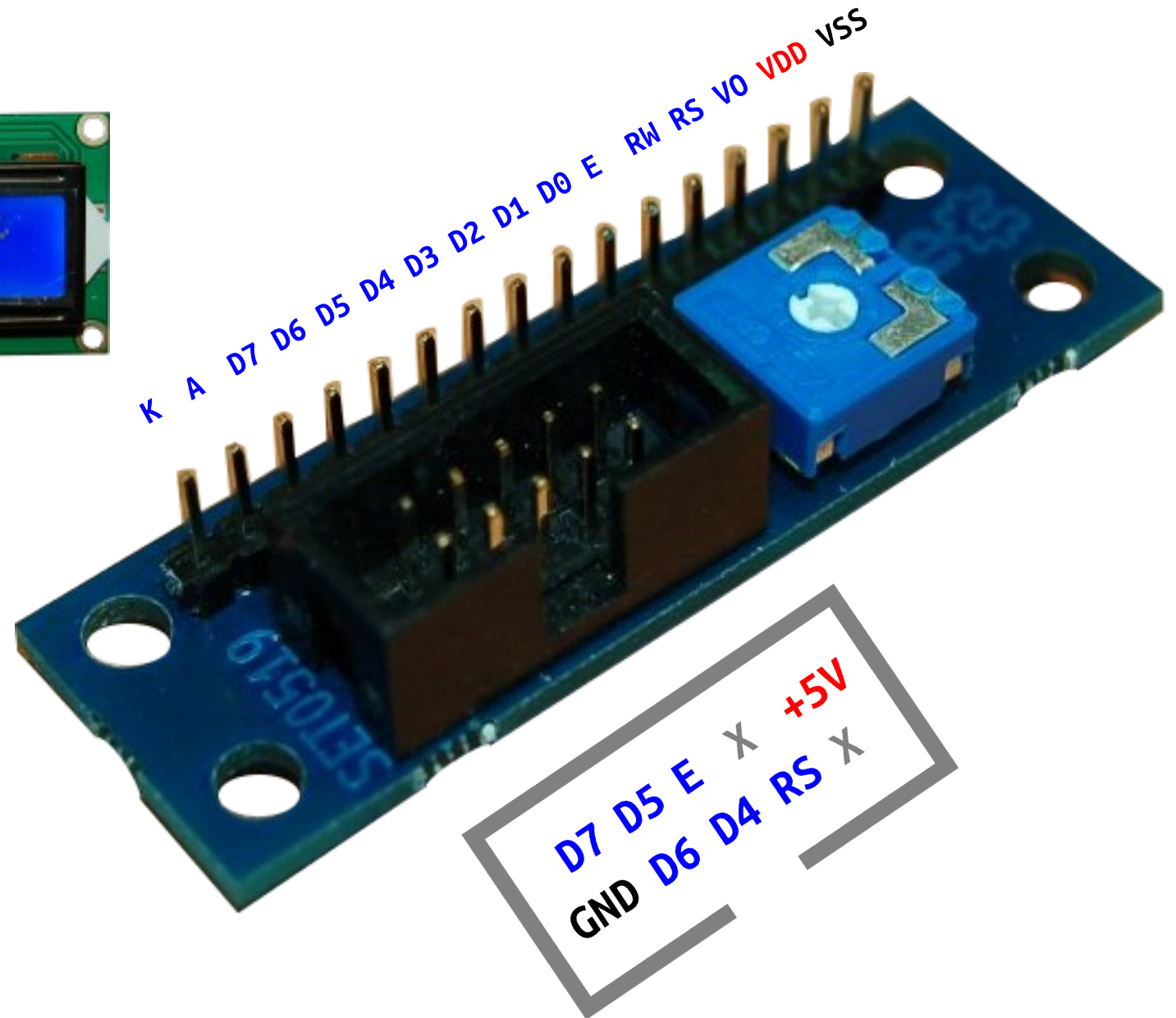
X	X	b4	b6	GND
+5V	X	X	b5	b7

b7	b5	A3	A1	+5V
GND	b6	b4	A2	A0



Placa LCD

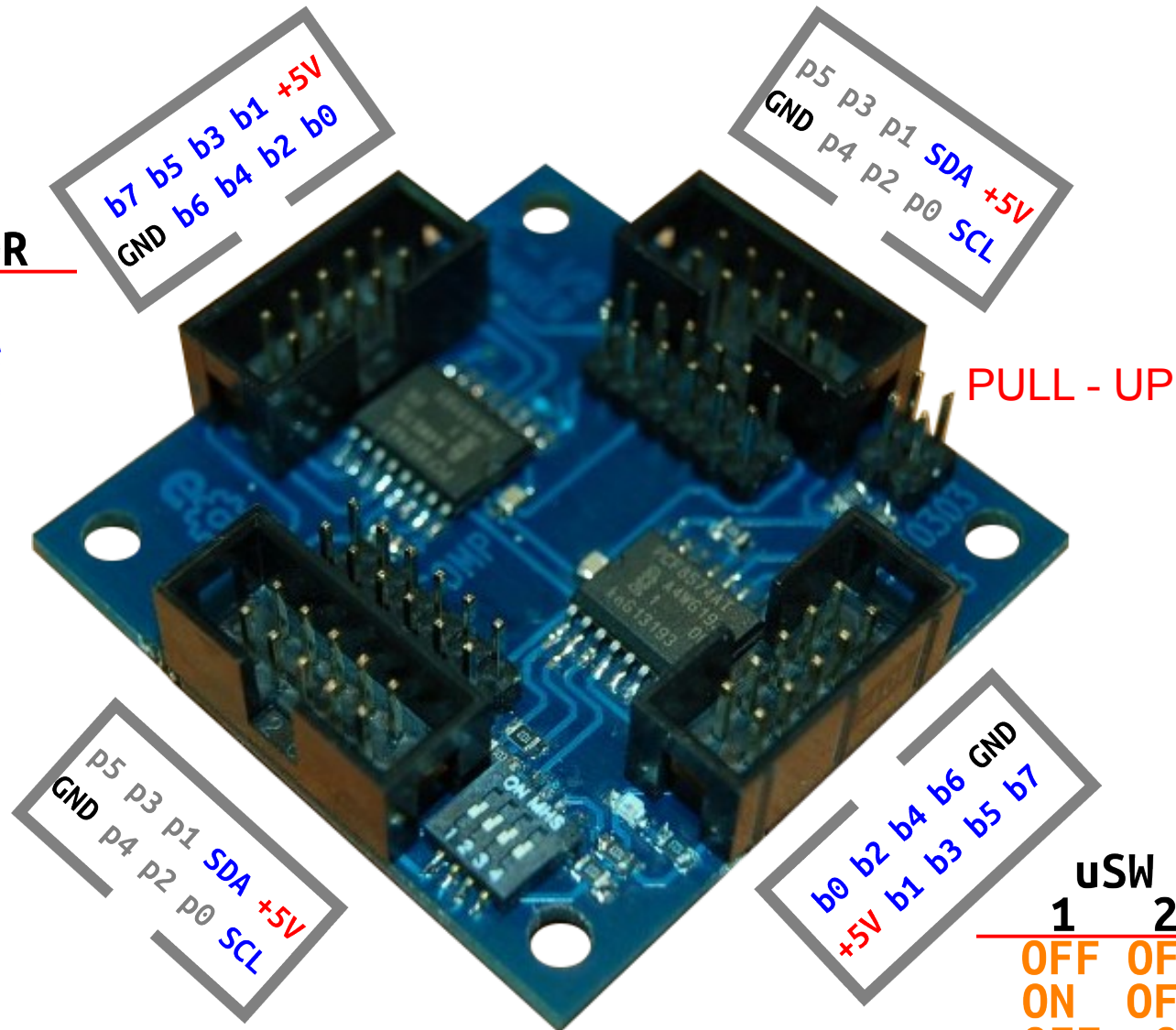
SET0519





Expansor I2C

SET0303



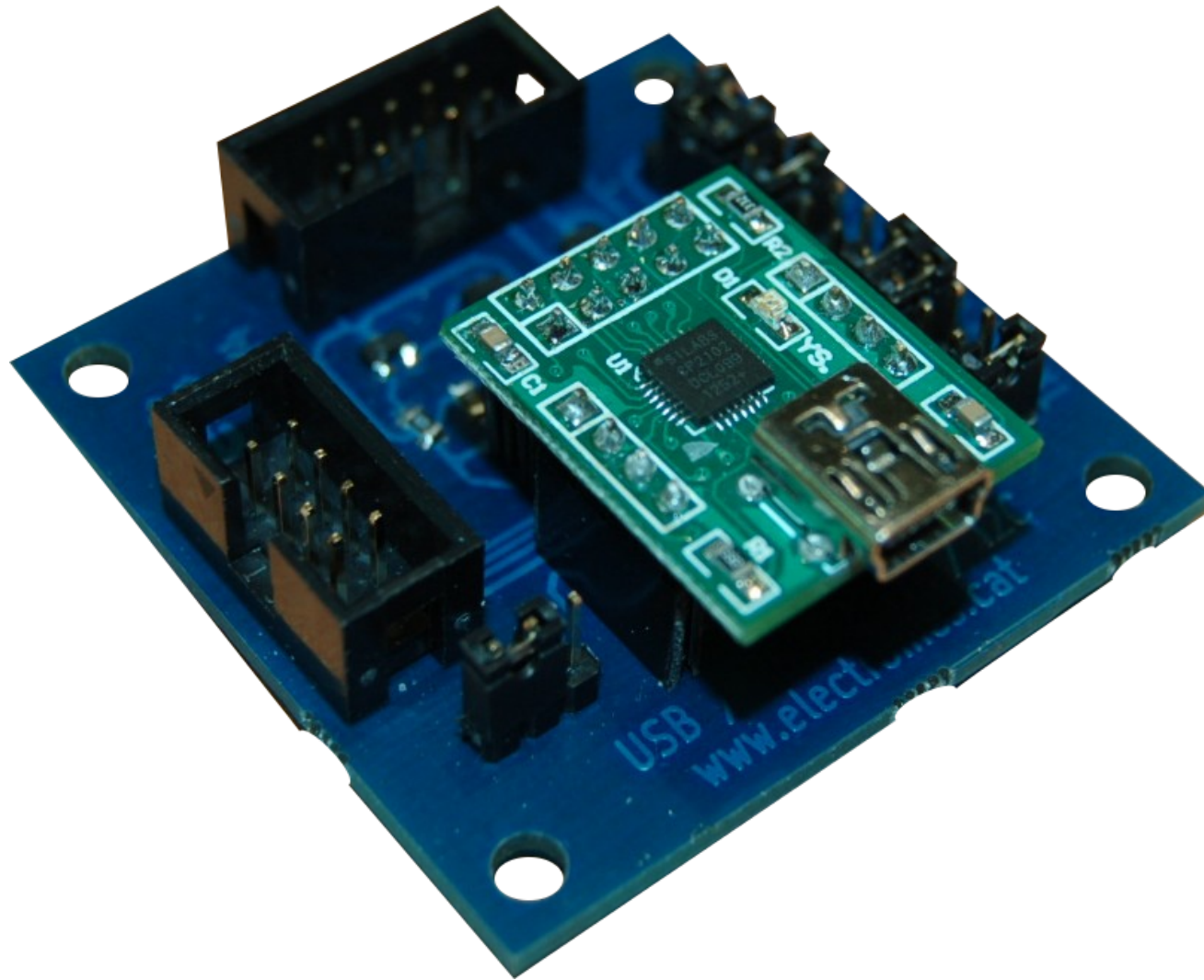
uSW		ADDR
3	4	
OFF	OFF	3E
ON	OFF	3A
OFF	ON	3C
ON	ON	38

uSW		ADDR
1	2	
OFF	OFF	3F
ON	OFF	3B
OFF	ON	3D
ON	ON	39



Placa de comunicaciones

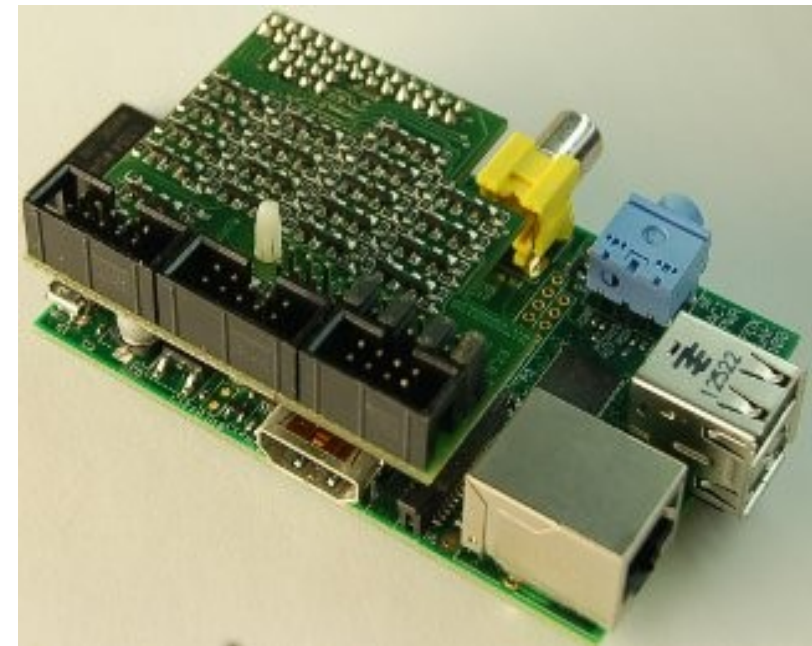
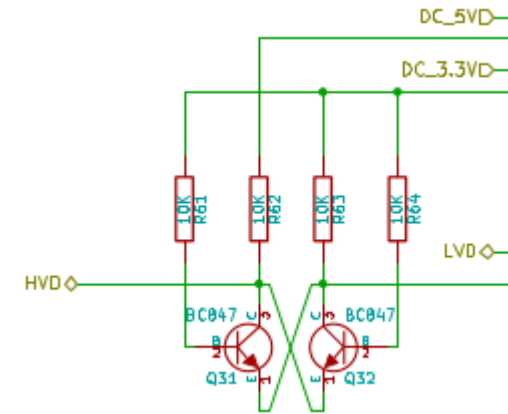
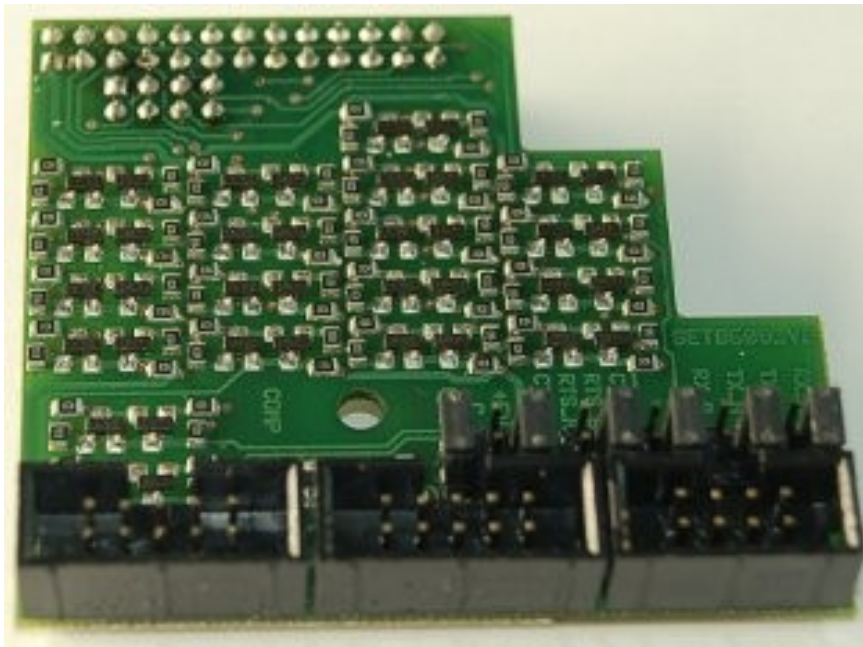
SET0105





3BPi : Placa traductora de nivells per a Raspberry Pi

SET0508



http://electronics.cat/ca/plaques/set05_08/

Presentació descarregable a : <http://ves.cat/lve3>

Correu electrònic de contacte : jordibinefa@electronics.cat

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<https://twitter.com/JordiBinefa>

<https://twitter.com/electronicscat>



<http://es.linkedin.com/pub/jordi-binefa/13/717/90b>

Plaques aviat disponibles a :

<http://suministros-industriales-barcelona.com>

<http://www.faelectronic.com>

<http://www.electronics.cat>

Seguint les indicacions donades des d'UPM, tot el material didàctic que es fa arribar als alumnes ha de tenir aquests logotips:



JESUÏTES El Clot
Escola del Clot



Fundación Tripartita
PARA LA FORMACIÓN EN EL EMPLEO



FUNDACIÓN DEL METAL
PARA LA FORMACIÓN,
CUALIFICACIÓN Y EL EMPLEO

