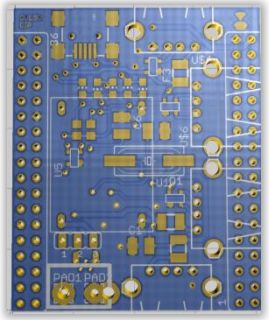
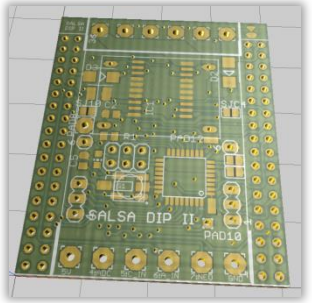
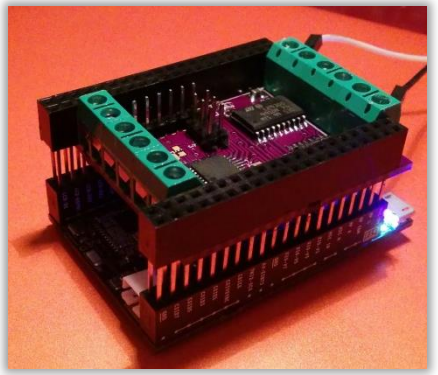
JKW boards – Confusion avoidance chart ☺

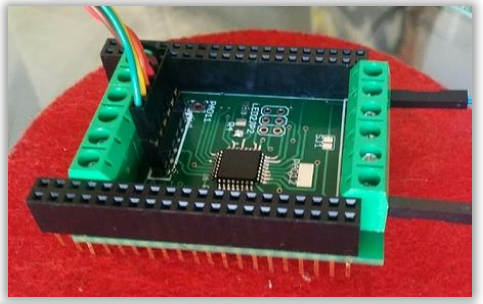
LEDv1.1 / Motor v1.1 / preSalsa / Salsa / Salsa II / Queso DIP

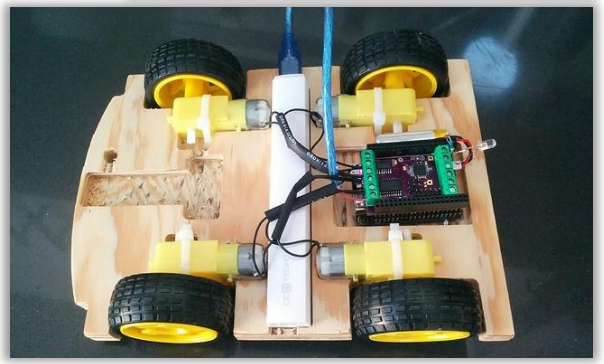
Function **X = possible** **- = not possible** *** = 'Or' .. E.g. Motor OR Mosfet / Optional**	Motor v1.1	LEDv1.1	PreSalsa	Salsa	Salsa II	Queso
Screw terminals that connects an external power supply to CHIP CHR-IN	X	X	X	X	X	X
Controller connected via I2C	-	X	X	X	X	-
Pins for driving ws2812 LEDs	-	X	X	X	X	-
Pins for analog reading	-	X	X	X	X	-
"Real-time" GPIOs	-	X	X	X	X	-
Mosfets to dim a lot of LEDs	-	4	4*	4*	4*/2X	-
Motor driver Channels	2	-	2*	2*	2*/1X	-
Input for "High voltage" (~7V for the Motor)	X	-	-	-	X	-
Internal connection to CHIP power button pin, e.g. to start the CHIP from power off, or to shut the CHIP down	-	-	-	X	X	-
"Seamless power" (run on CHIP battery, with CHIP powered down)	-	-	-	-	X	-
Option for onboard power supply (DC in 7-28V)	-	-	-	-	X	X
CHIP pins used by board (besides I2C bus which is not exclusively used)	*4	*1	*5	*6	*6	-
On board Ws2812 LED option	-	-	-	*	*	-
On board general purpose button (e.g. shutdown for CHIP?)	-	-	-	-	*	-
On board general purpose LED	-	-	X	*	*	-
4x USB Hub	-	-	-	-	-	X











preSalsa, Salsa and Salsa II can all be assembled as Dual-channel (4 outputs) Motor driver OR 4-channel Mosfet - PWM Driver

(Salsa II can be configured as 1 channel motor AND 2 channel Mosfet – PWM)

Salsa II DIP

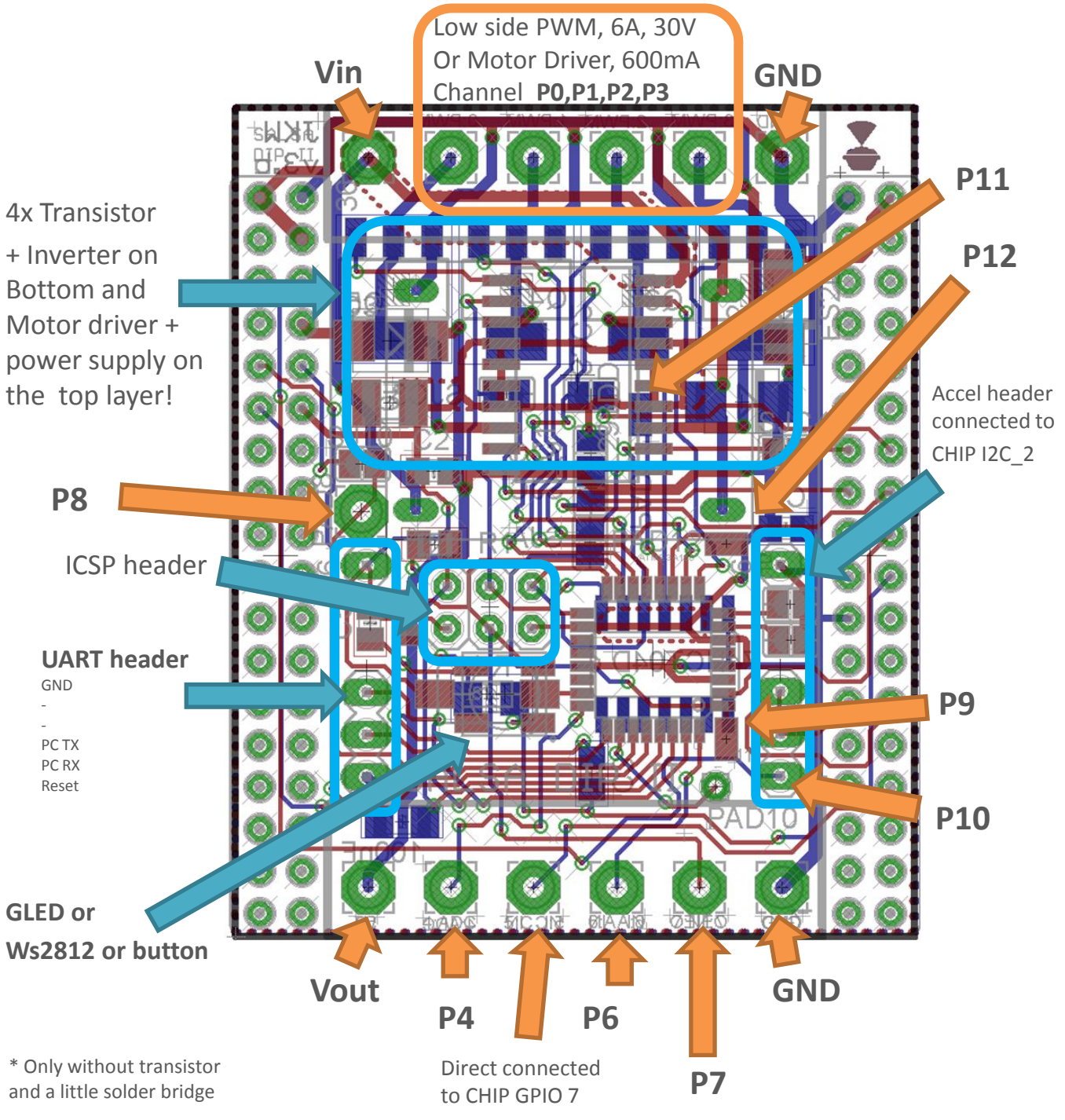
Photos

ORDERED 2016/03/03

Configuration PWM dimmer
Configuration Motor driver

Salsa II DIP PinOut

Atmega pin	DIP pin	Arduino Pin	Digital IN/OUT	Analog IN	PWM out	WS2812 support	C.H.I.P. pin	Motor Pins
PC0	P16	14	X	-	-	-	-	-
PD4	P15	4	X	-	-	-	-	-
PB5	P14	13	X	-	-	-	-	DL
PB4	P13	12	X	-	-	-	-	DR
PD7	P12	7	X	-	-	X	-	-
PB0	P11	8	X	-	-	X	-	-
PC3	P10	17	X	X	-	-	-	-
PD3	P9	3	X	-	X	X	-	ER
PC2	P8	16	X	X	-	-	-	-
PB3	P7	11	X	-	X	X + On board	-	-
PD2	P6	2	X	-	-	X	-	-
-	P5	-	-	-	-	-	X	-
PC1	P4	15	X	X	-	-	-	-
PD5	P3	5	*/X	-	X	*	-	-
PD6	P2	6	*/X	-	X	*	-	-
PB1	P1	9	*/X	-	X	*	-	-
PB2	P0	10	*/X	-	X	*	-	EL

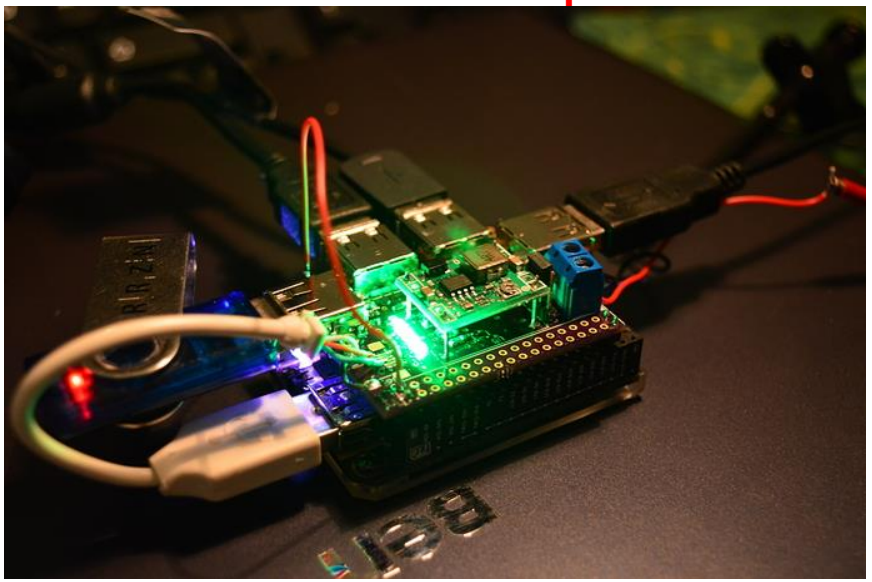


* Only without transistor and a little solder bridge

Queso DIP v4.3

Photos

ORDERED 2016/03/01
EXPECTED 2nd Week of April



Test-board-photos

Queso DIP v4.3

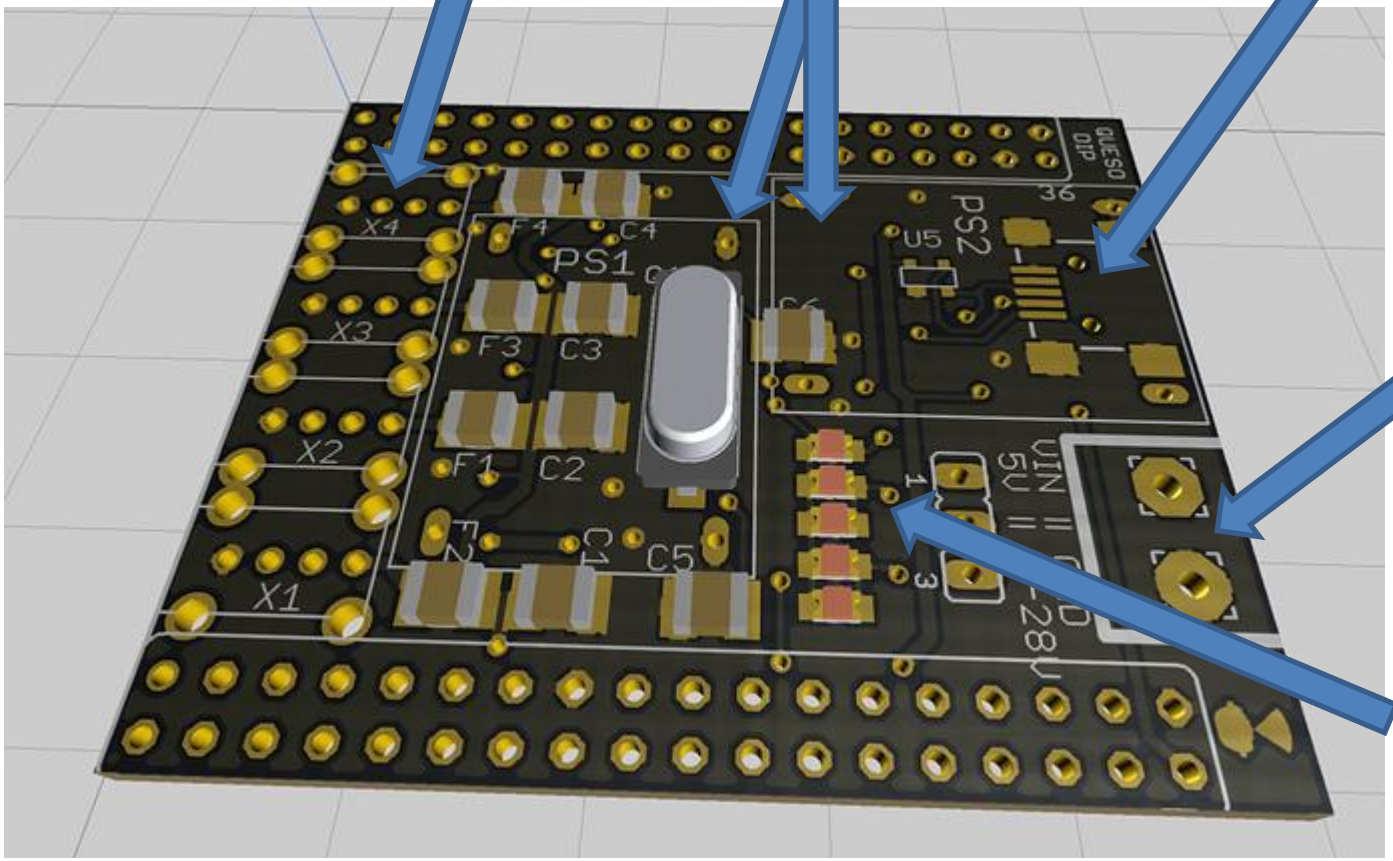
PinOut

ORDERED 2016/03/01

4x USB-A to the bottom of the board

Can carry one (recommended) or up to two DCDC regulator

Micro USB Input jack



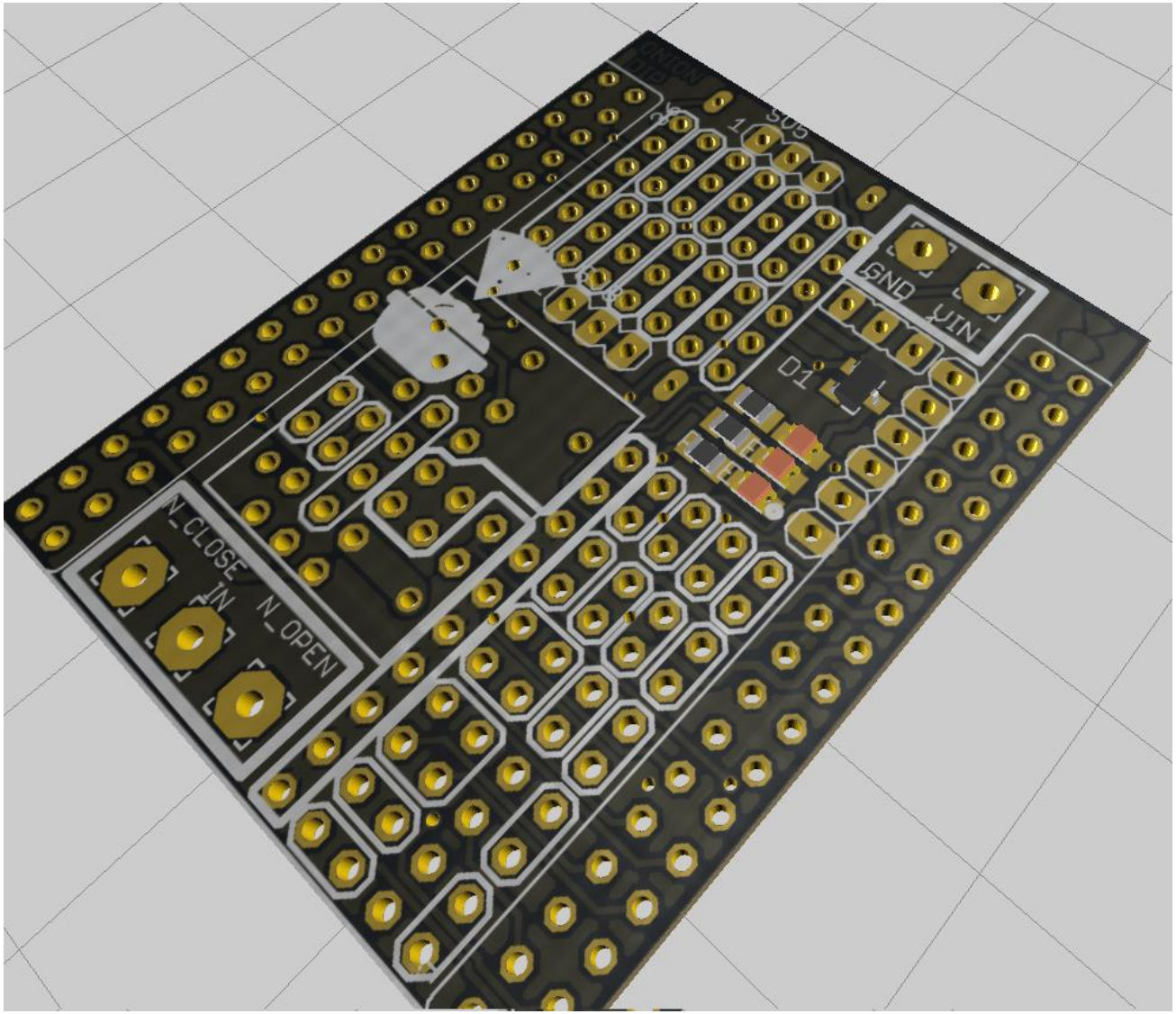
Power IN via Screw-Terminals 7-28V DC in, 5V 3A out

Port activity LEDs

ONION DIP v1.0

Photos

ORDERED 2016/03/16
NOT YET RECEIVED



ONION DIP v1.0

PINOUT1/2

ORDERED 2016/03/16
NOT YET RECEIVED

Screw terminal for power in

Battery pins

Standard USB-UART Connector

Stand-alone tinker area for DIL ICs with power rails left & right

Optional: MOSFET on P0 (active high) to drive the relay

Optional: DC-DC regulator to power the CHIP from 7-28V DC, covering tinker area

3x LED, P0 &P3 active low, On Relay closed

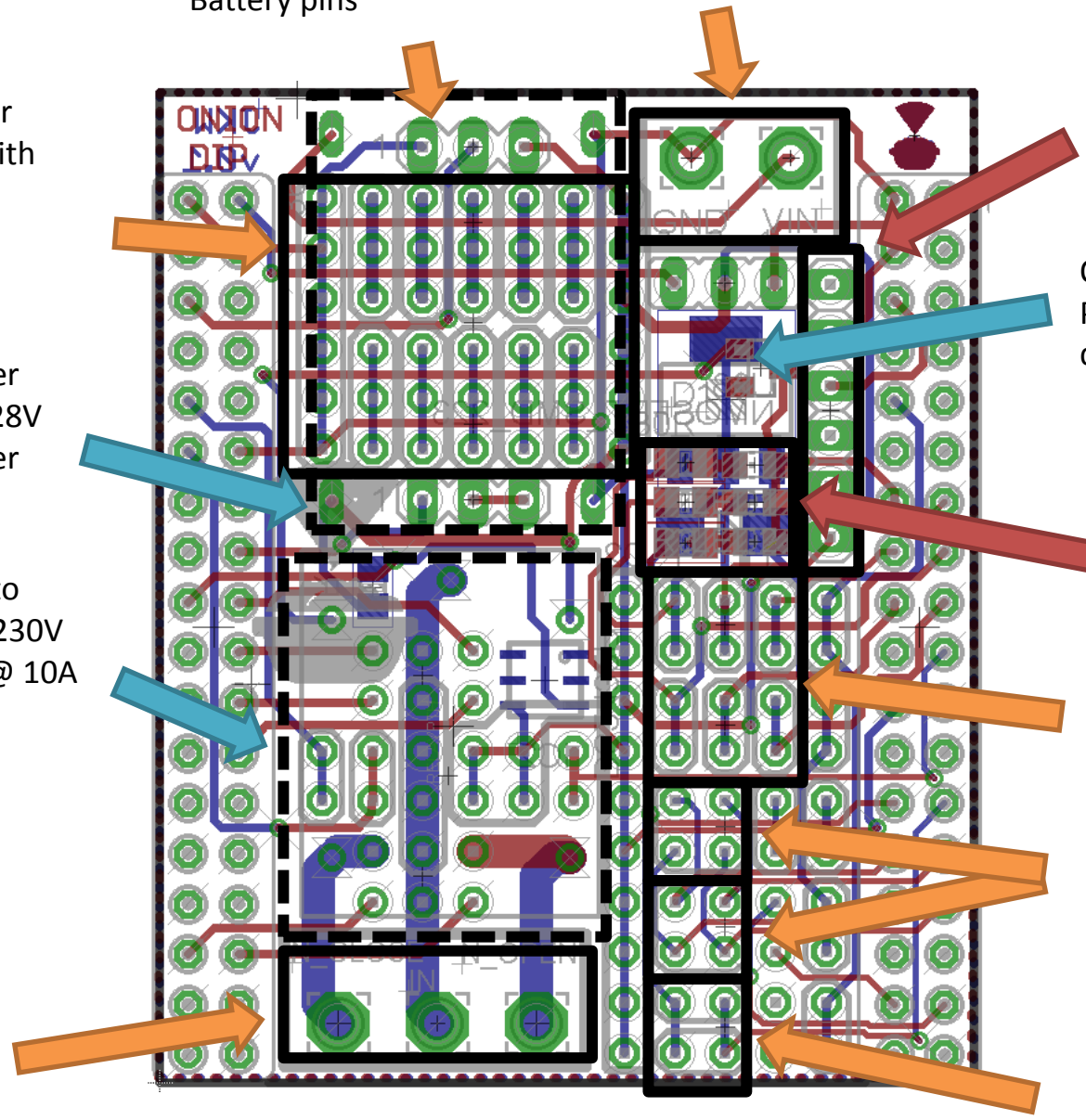
Optional: Relay to switch e.g. 110/230V AC Power lines @ 10A

GPIO P0-P5, each pin twice

2x SPI-2

Screw terminal for Relay contacts: N_close, In, N_out

2x I2C-2



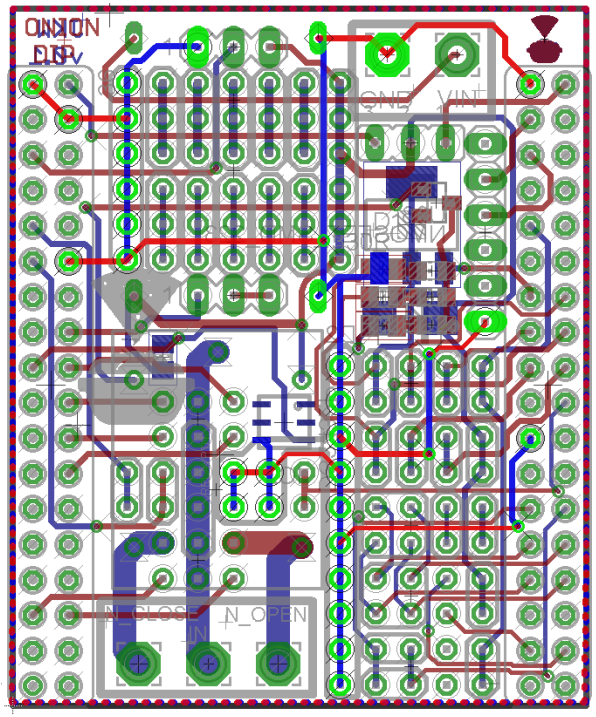
ONION DIP v1.0

PINOUT2/2

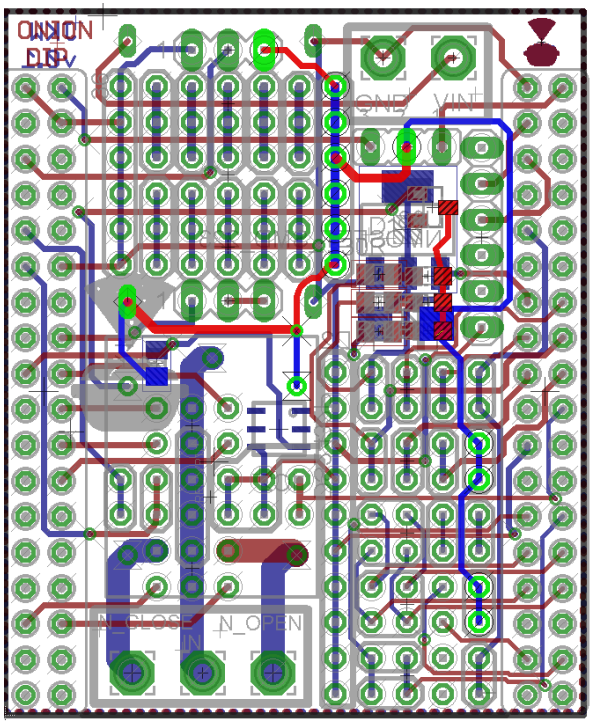
ORDERED 2016/03/16

NOT YET RECEIVED

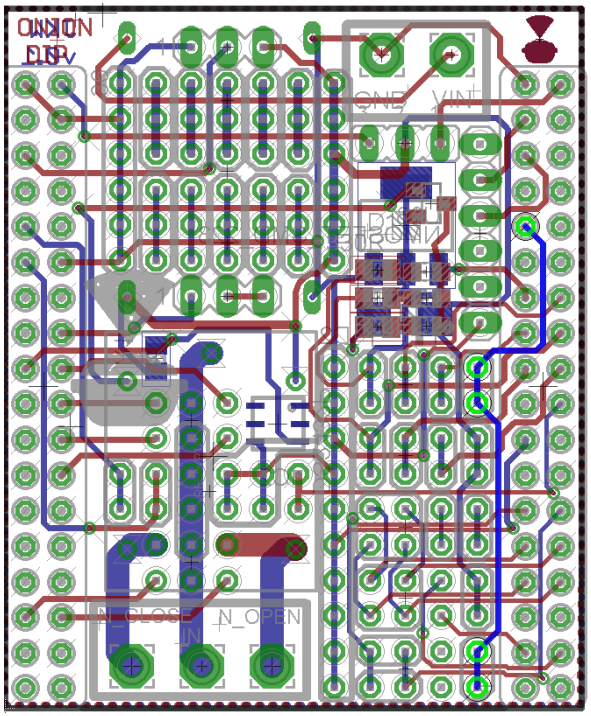
GND Rails highlighted



5V Rails highlighted



CHIP 3.3V Rails



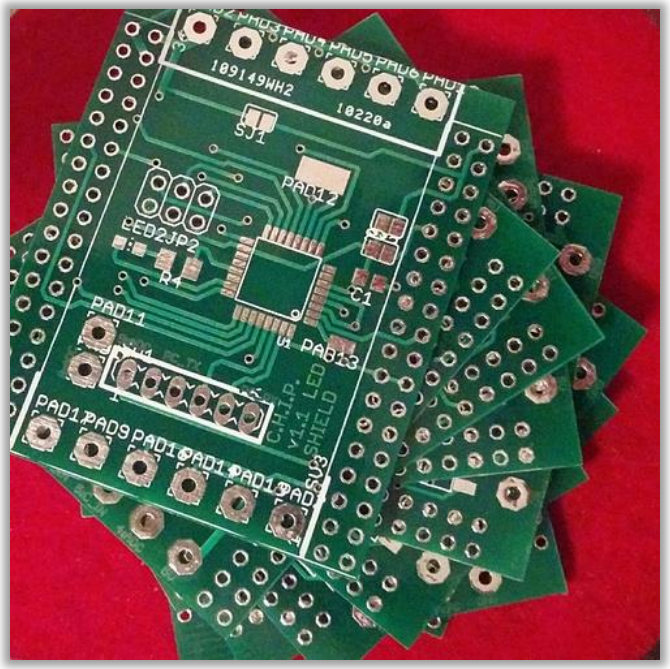
Old boards

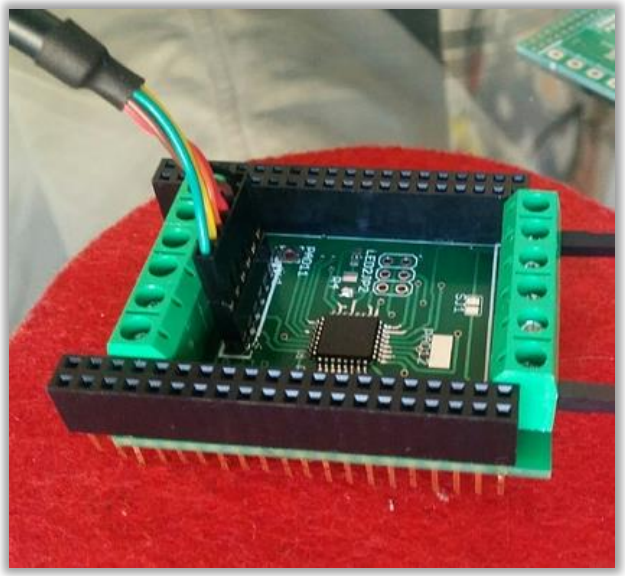
The following pages show old boards, which are not longer produced:

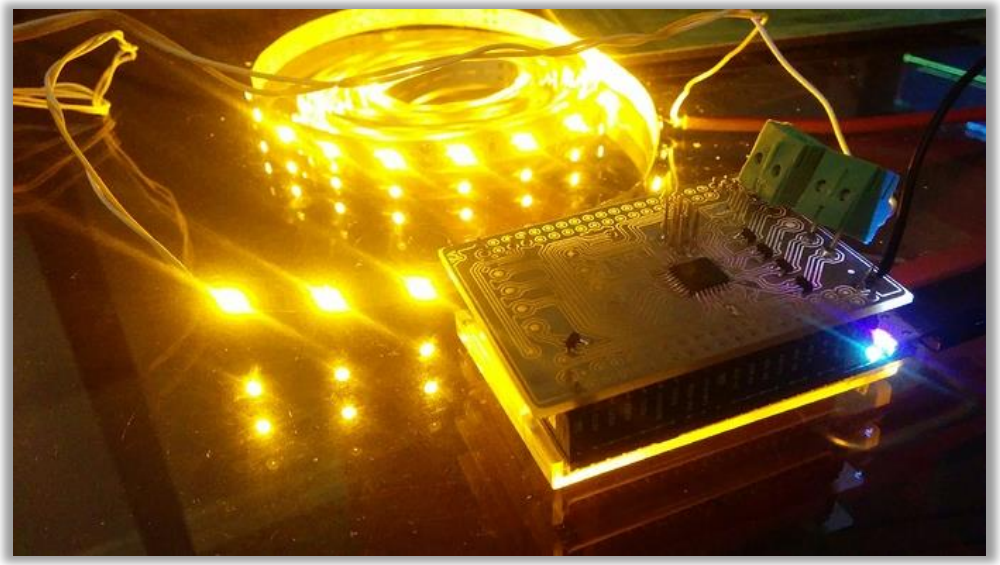
- LED DIP v1.1
- preSalsa DIP
- Salsa I
- Motor Dip v1.1

LED DIP v1.1

Photo



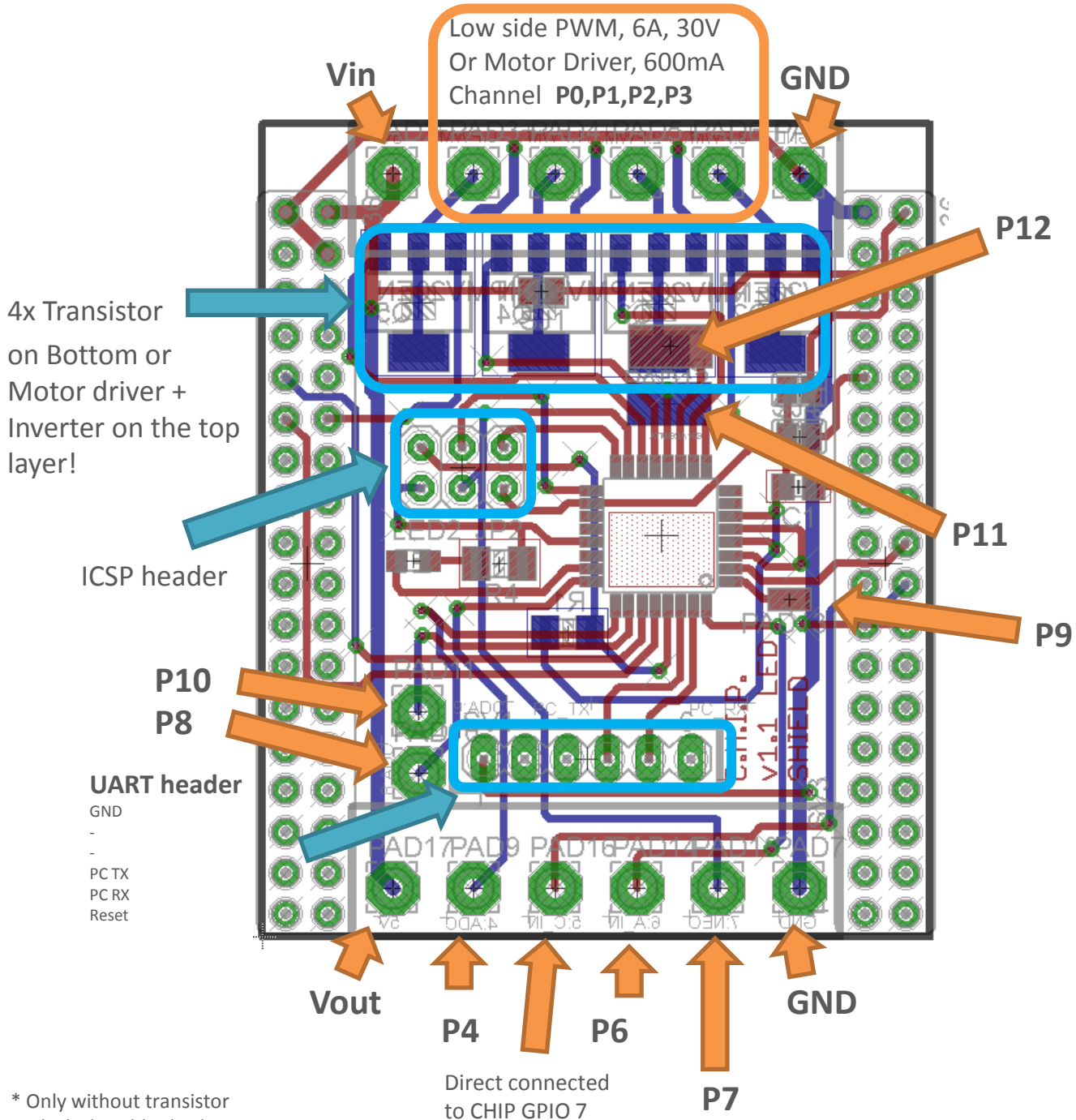




LED DIP v1.1

PinOut

Atmega pin	DIP pin	Arduino Pin	Digital IN/OUT	Analog IN	PWM out	WS2812 support	C.H.I.P. connection
PD7	P12	7	X	-	-	X	-
PB0	P11	8	X	-	-	X	-
PC3	P10	17	X	X	-	-	-
PD3	P9	3	X	-	X	X	-
PC2	P8	16	X	X	-	-	-
PB3	P7	11	X	-	X	X	-
PD2	P6	2	X	-	-	X	-
-	P5	-	-	-	-	-	X
PC1	P4	15	X	X	-	-	-
PD5	P3	5	*/X	-	X	*	-
PD6	P2	6	*/X	-	X	*	-
PB1	P1	9	*/X	-	X	*	-
PB2	P0	10	*/X	-	X	*	-

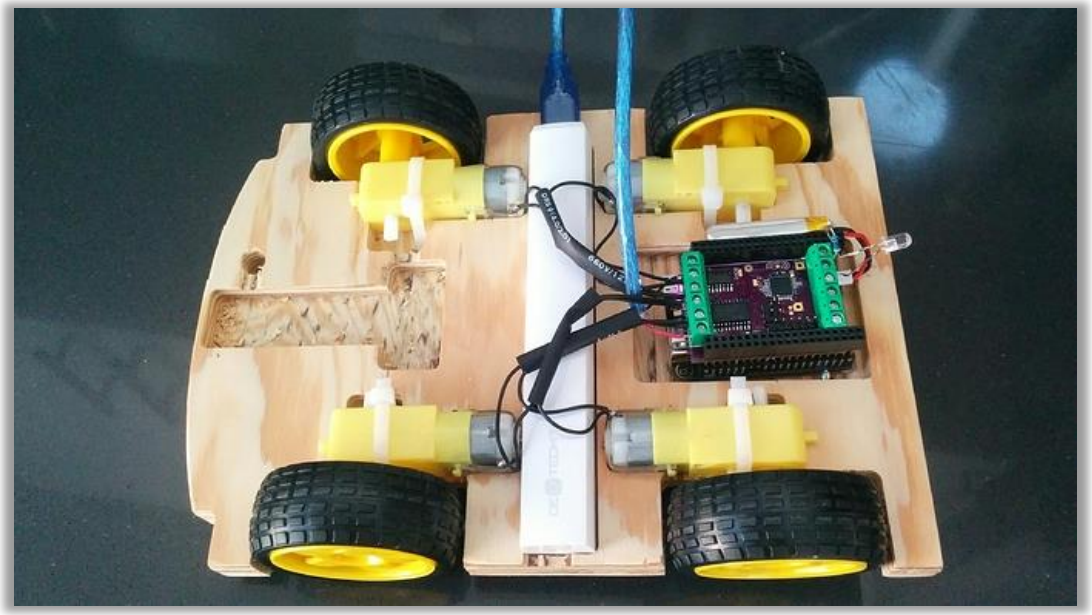


* Only without transistor
And a little solder bridge

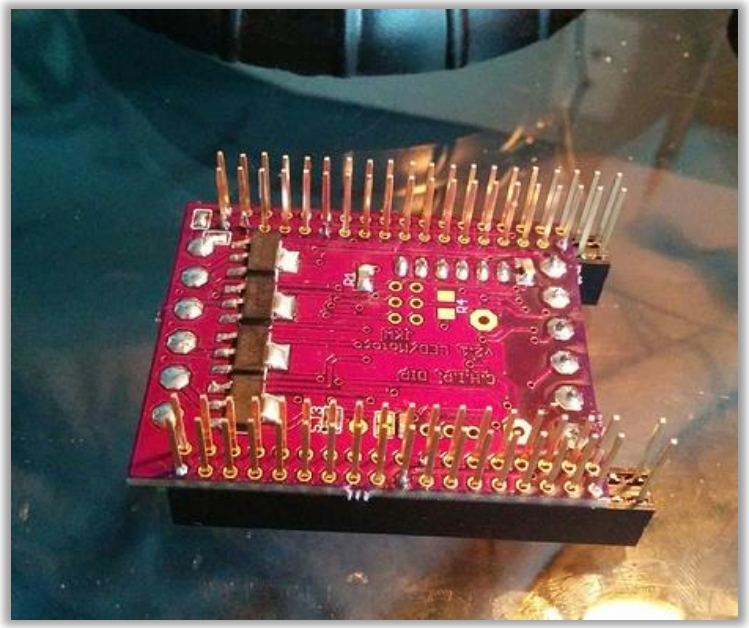
preSalsa DIP

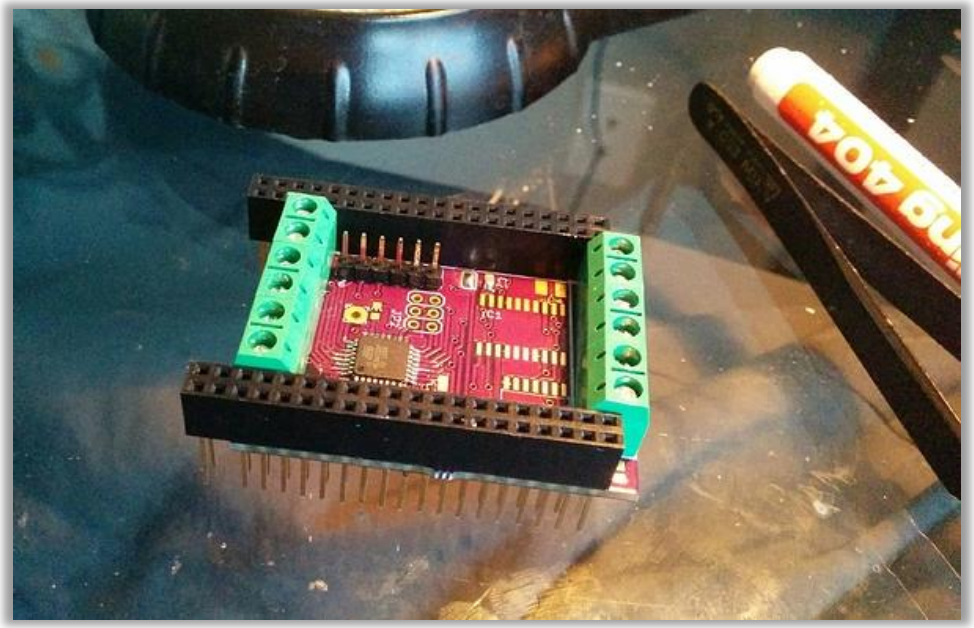
Photo

Motor Version ->



LED Driver / Mosfet Version

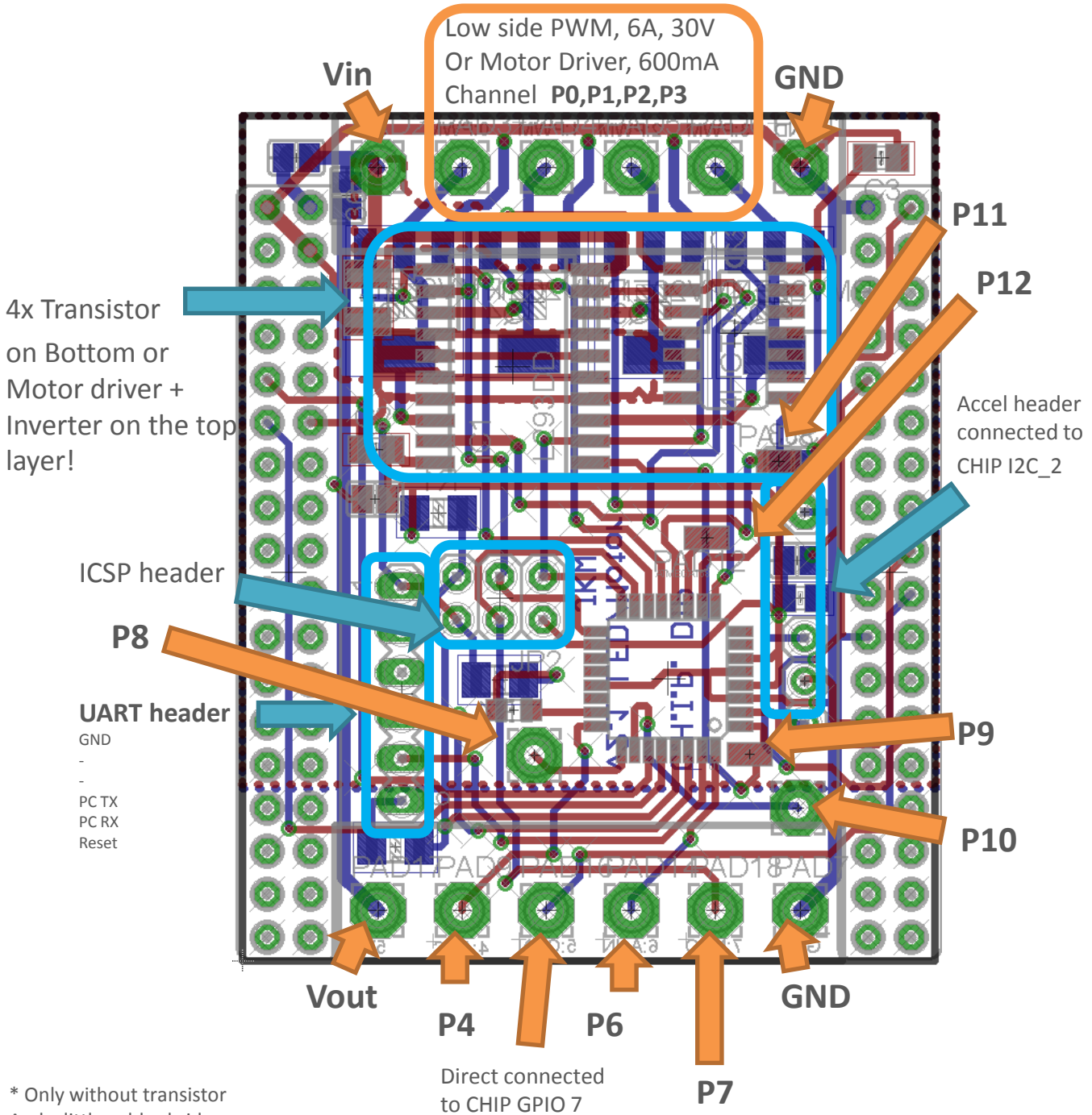




preSalsa DIP

PinOut

Atmega pin	DIP pin	Arduino Pin	Digital IN/OUT	Analog IN	PWM out	WS2812 support	C.H.I.P. connection
PD7	P12	7	X	-	-	X	-
PB0	P11	8	X	-	-	X	-
PC3	P10	17	X	X	-	-	-
PD3	P9	3	X	-	X	X	-
PC2	P8	16	X	X	-	-	-
PB3	P7	11	X	-	X	X	-
PD2	P6	2	X	-	-	X	-
-	P5	-	-	-	-	-	X
PC1	P4	15	X	X	-	-	-
PD5	P3	5	*/X	-	X	*	-
PD6	P2	6	*/X	-	X	*	-
PB1	P1	9	*/X	-	X	*	-
PB2	P0	10	*/X	-	X	*	-



* Only without transistor
And a little solder bridge

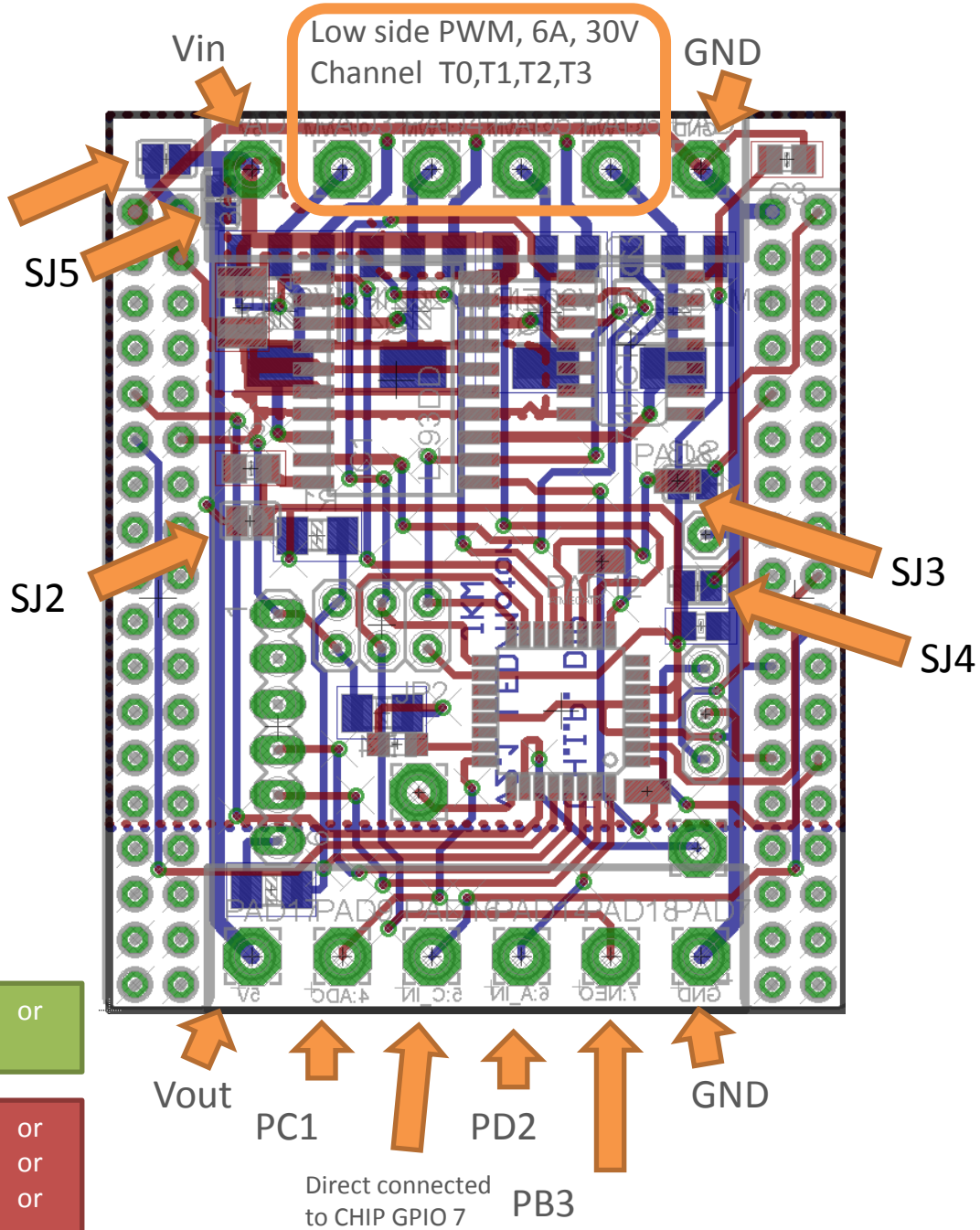
PreSalsa

Jumper Config

SJ	Function
1	Vin to Charge in • If your input voltage is 5V close this jumper. Your Vin will charge your Battery
2	Vout to Vcc • If your Vin is **not** 5V close it, to get CHIPs 5V on the output • If your Vin is 5V and you close SJ5, close this one to power the DIP from the VIN, in this case you must leave SJ3 and SJ4 **open**!
3	CHIP 5V to Vcc (bot) • If you won't power the DIP via VIN, close this jumper to supply 5V power via the CHIP • If you've destroyed your CHIP onboard 5V, close it to supply power to the USB ☺
4	CHIP 3.3V to Vcc (bot) • If you want to work the DIP on the (limited) 3.3V of the CHIP
5	Vin to Vout • To forward your input to the output

Combine: SJ1 + SJ5 + SJ2 if your Vin is 5V or
SJ2 + SJ3 if you only draw a few mA to use the CHIPs 5V

Never combine: SJ3 and SJ4 or
SJ4 + SJ2 + SJ5 and supply power via Vin/Vout or
SJ3 + SJ2 + SJ5 and supply power via Vin/Vout or
SJ1 if your Vin is NOT ~5V or SJ2 + SJ5 if your **Vin > 5V**



Salsa DIP

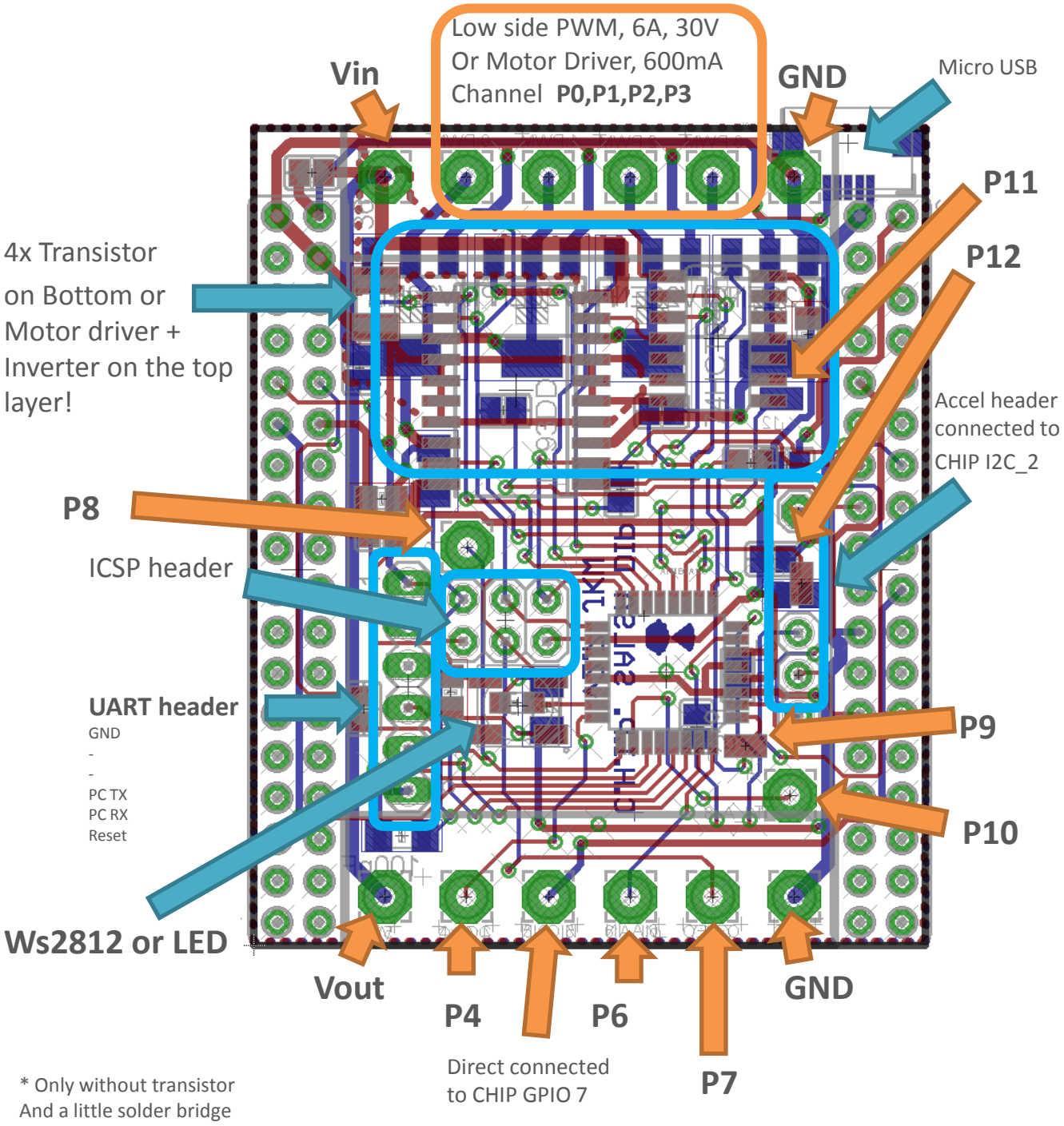
Photos

WAITING ON CHINA POST
ORDERED 2016/02/10

Configuration PWM dimmer
Configuration Motor driver

Salsa DIP PinOut

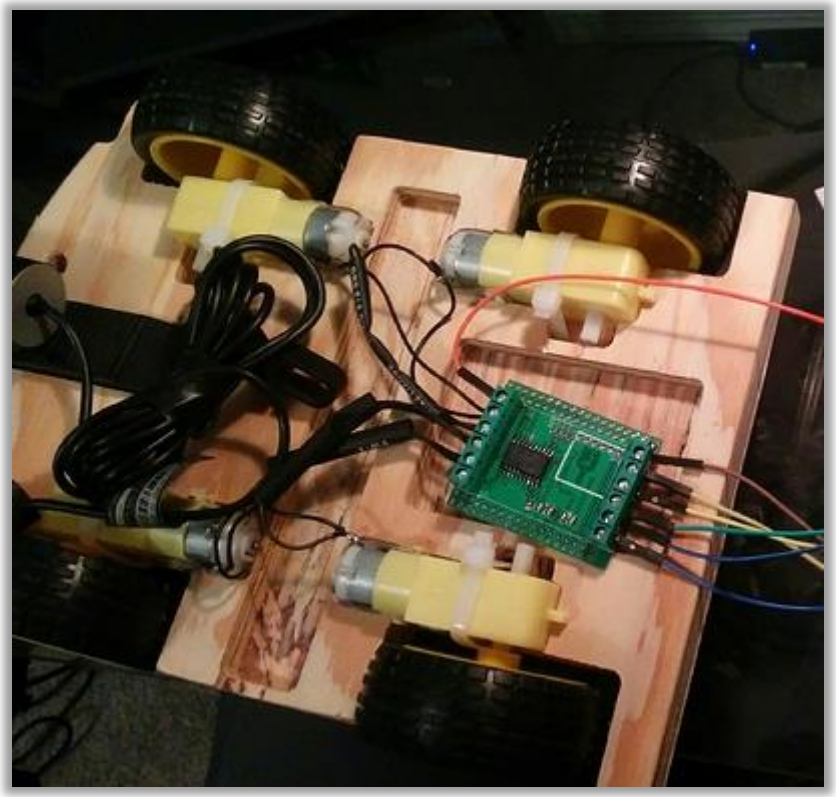
Atmega pin	DIP pin	Arduino Pin	Digital IN/OUT	Analog IN	PWM out	WS2812 support	C.H.I.P. pin	Motor Pins
PC0	P16	14	X	-	-	-	-	-
PD4	P15	4	X	-	-	-	-	-
PB5	P14	13	X	-	-	-	-	DL
PB4	P13	12	X	-	-	-	-	DR
PD7	P12	7	X	-	-	X	-	-
PB0	P11	8	X	-	-	X	-	-
PC3	P10	17	X	X	-	-	-	-
PD3	P9	3	X	-	X	X	-	ER
PC2	P8	16	X	X	-	-	-	-
PB3	P7	11	X	-	X	X	-	-
PD2	P6	2	X	-	-	X	-	-
-	P5	-	-	-	-	-	X	-
PC1	P4	15	X	X	-	-	-	-
PD5	P3	5	*/X	-	X	*	-	X
PD6	P2	6	*/X	-	X	*	-	-
PB1	P1	9	*/X	-	X	*	-	-
PB2	P0	10	*/X	-	X	*	-	EL



* Only without transistor
And a little solder bridge

Motor DIP v1.1

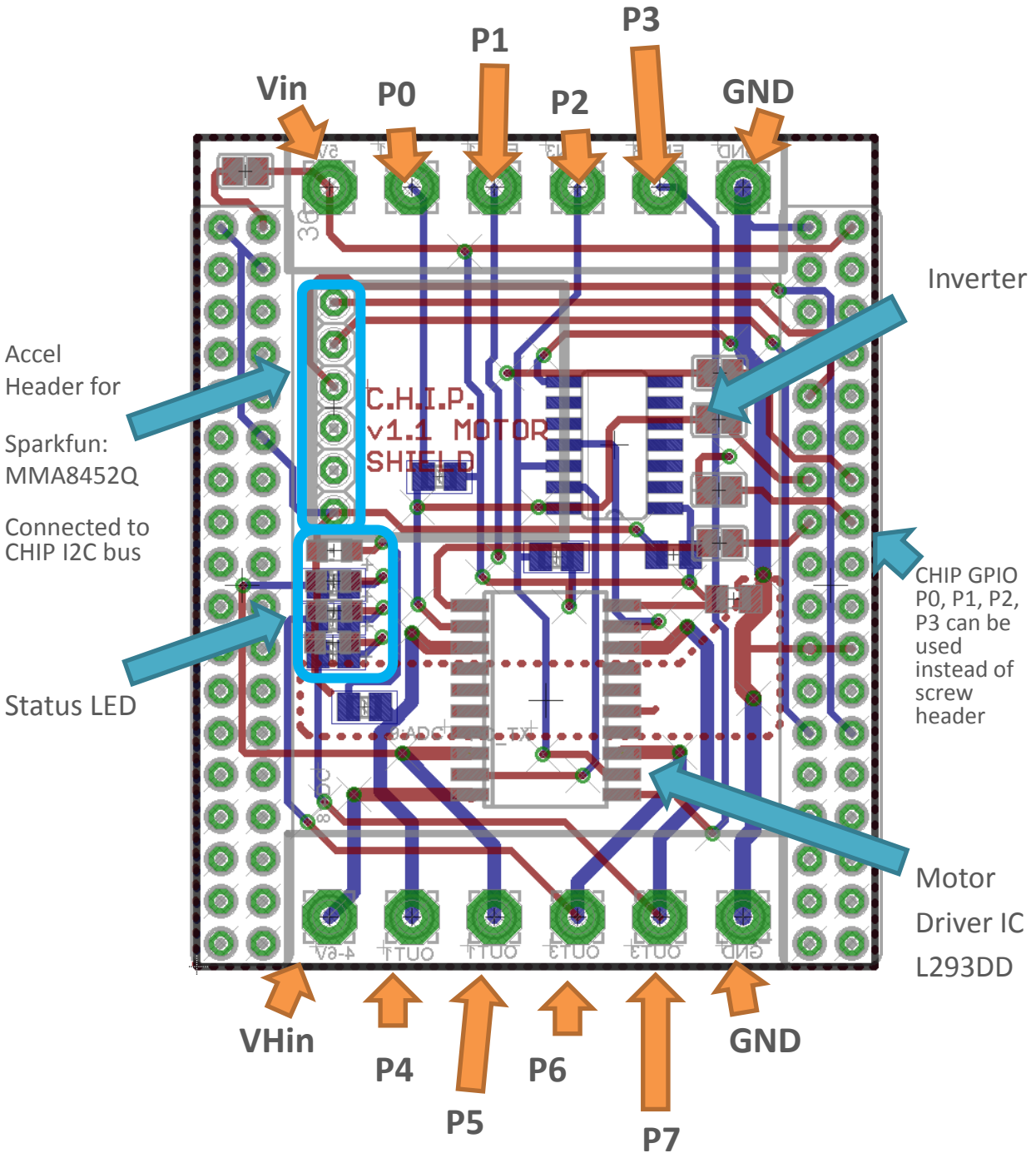
Photos



Motor DIP v1.1

Pin Out

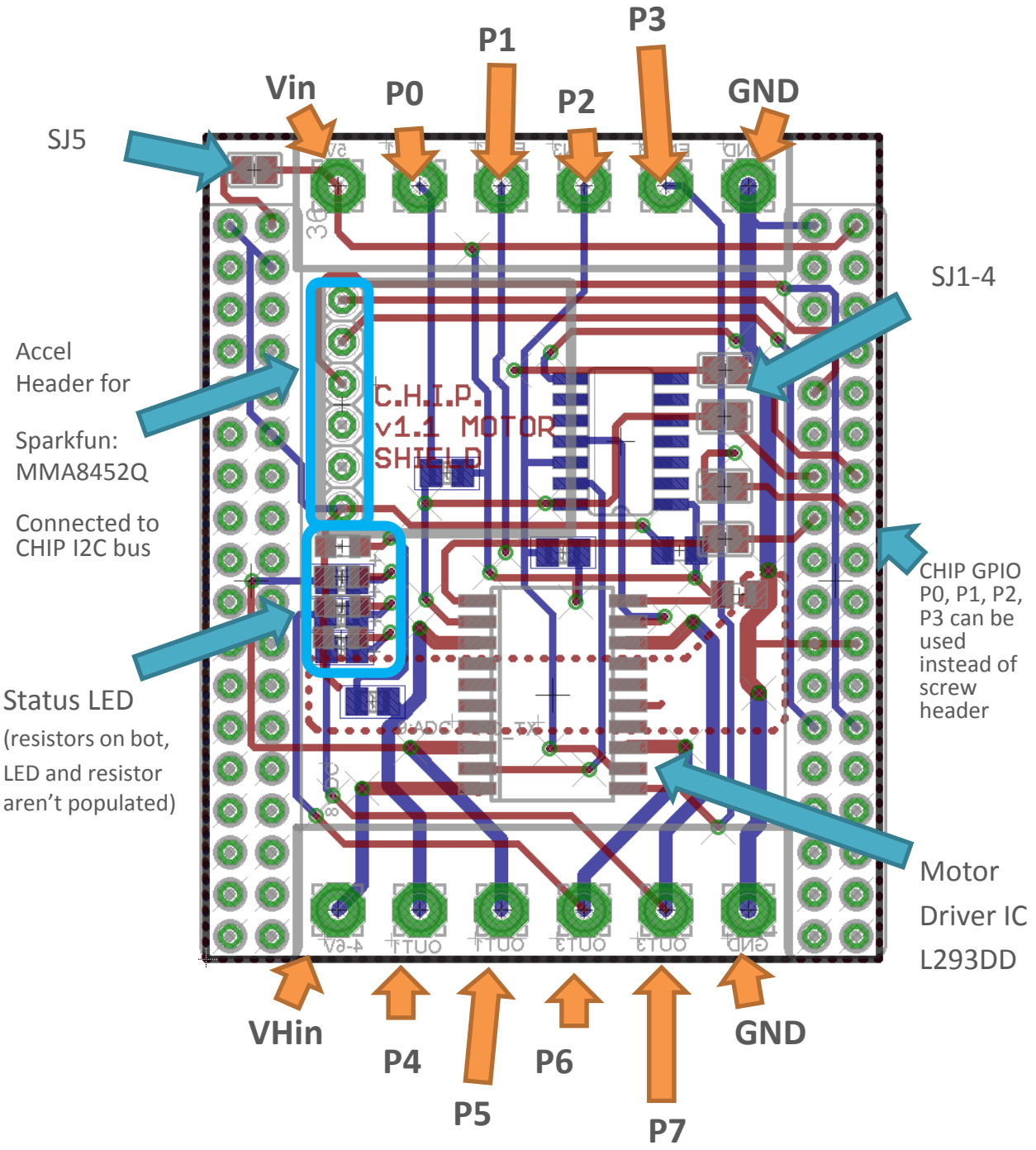
#	Function
Vin	Logic voltage, 5V
P0	Channel **1 direction**
P1	Channel **1 enable**
P2	Channel **3 direction**
P3	Channel **3 enable**
GND	Ground for logic voltage
VHin	“High” voltage for Motor (5-36 Volt), can be connected to Vin
P4	Channel **1 output**
P5	Channel **2 output** (inverse of channel 1)
P6	Channel **3 output**
P7	Channel **4 output** (inverse of channel 3)
GND	Ground for “high” voltage



Motor DIP v1.1

Jumper Config

SJ	Function
1-4	Use CHIP GPIO as input • **Close** them, if you use the CHIP GPIO to generate the control signals. • Leave them **open** if you want to use the screw header
5	Vin to Charge in • **Close** it if you Vin is 5V from a power supply or external battery to power this CHIP over this pin as well • Leave it **open**, if you feed the CHIP 5V to the Vin



More photos