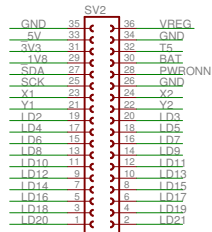


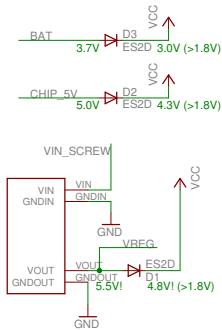
# Left connector

Pin	Signal	Pin	Signal
35	GND	36	SV
36	SV	37	V3
37	V3	38	1V8
38	1V8	39	SDA
39	SDA	40	SCK
40	SCK	41	Y1
41	Y1	42	Y1
42	Y1	43	I D2
43	I D2	44	I D4
44	I D4	45	I D6
45	I D6	46	I D8
46	I D8	47	I D10
47	I D10	48	I D12
48	I D12	49	I D14
49	I D14	50	I D16
50	I D16	51	I D18
51	I D18	52	I D20
52	I D20	53	36
53	36	54	VREG
54	VREG	55	GND
55	GND	56	TS
56	TS	57	BAT
57	BAT	58	PWRONN
58	PWRONN	59	GND
59	GND	60	Y2
60	Y2	61	Y2
61	Y2	62	I D3
62	I D3	63	I D5
63	I D5	64	I D7
64	I D7	65	I D9
65	I D9	66	I D11
66	I D11	67	I D13
67	I D13	68	I D15
68	I D15	69	I D17
69	I D17	70	I D19
70	I D19	71	I D21



# Power selection

The diagram illustrates a power selection circuit. It features two input paths at the top: one for 'RAT' (3.7V) and one for 'CHIP' (5.0V). Each path includes a diode (D3 and D2 respectively) and a resistor (ES2D) connected to a common VCC line. The output of these paths is 3.0V (>1.8V) for RAT and 4.3V (>1.8V) for CHIP. Below these, a main power path is shown with 'VIN\_SCREW' connected to 'VIN' and 'GNDIN'. The output of this path is 'VOUT' (5.5V) and 'GNDOUT' (GND). A diode (ES2D) is connected between 'VOUT' and 'VCC', with a voltage of 4.8V! (>1.8V) indicated. The circuit is powered by a 5V source.

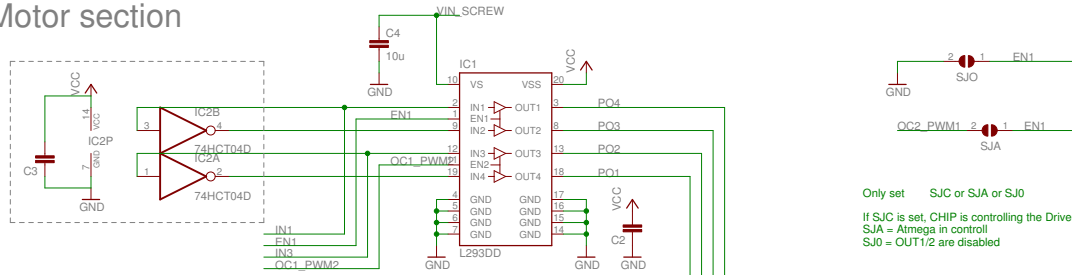


### Motor section

The diagram shows a motor section circuit. It includes a 74HCT04D inverter, a 74HCT04D buffer, and a 74HCT04D driver. The circuit is powered by VCC and GND. The input signals are IN1, IN2, IN3, and IN4. The output signals are OUT1, OUT2, OUT3, and OUT4. The motor is connected to the output of the driver. The circuit also includes a 10uF capacitor (C4) and a 10k resistor (R1).

Only set SJC or SJA or SJ0

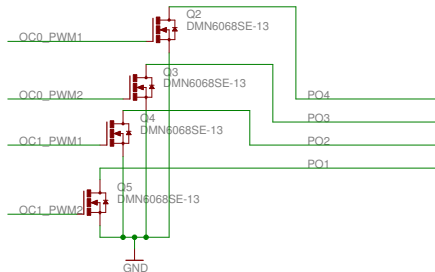
If SJC is set, CHIP is controlling the Driver  
 SJA = Atmega in controll  
 SJ0 = OUT1/2 are disabled



If SJC is set, CHIP is controlling the Driver  
SJA = Atmega in controll  
SJO = OUT1/2 are disabled

## LED section

The diagram shows the LED section of the circuit. It consists of four MOSFETs (Q2, Q3, Q4, Q5) of type DMN6068SE-13. The gates of these MOSFETs are driven by the PWM signals OC0\_PWM1, OC0\_PWM2, OC1\_PWM1, and OC1\_PWM2. The drains of the MOSFETs are connected to the LEDs PO1, PO2, PO3, and PO4. The sources of the MOSFETs are connected to a common GND point.



# IN-/OUTPUTS

The diagram illustrates the wiring for the IN-/OUTPUTS section. It shows connections for Vin (upper), Vout (lower), VCC, and GND. It also shows connections for various pins (Pin0 to Pin12) to specific components like PC1, INT1, PD2, OC2\_PWM2, PC2, OC2\_PWM1, PC3, PAD1\_5/0,9, PD7, and PAD12. The diagram includes labels for 'Lower GND (out)', 'Upper GND (in)', and 'GND'.

**Pin Connections:**

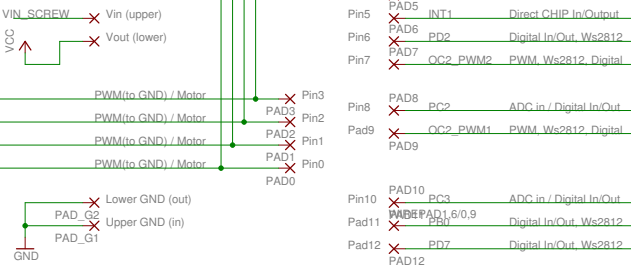
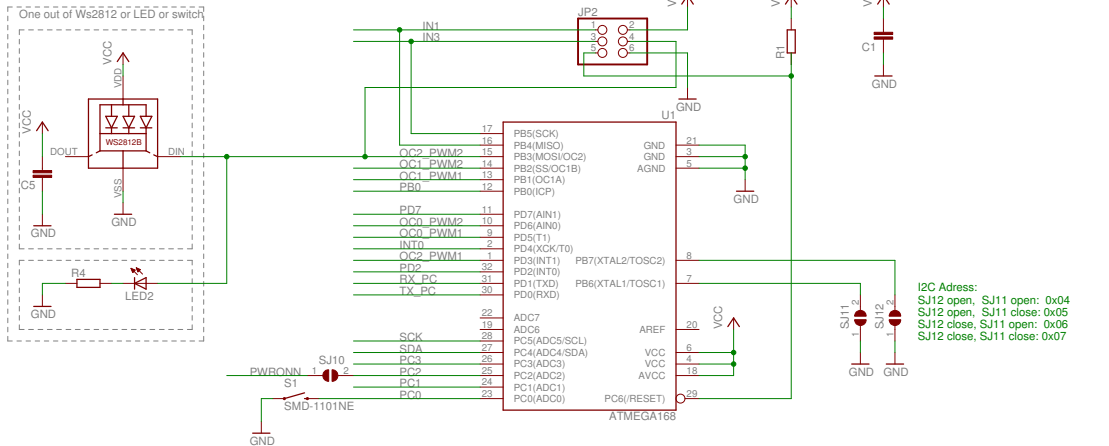
- Pin0: PAD0
- Pin1: PAD1
- Pin2: PAD2
- Pin3: PAD3
- Pin4: PAD4
- Pin5: PAD5
- Pin6: PAD6
- Pin7: PAD7
- Pin8: PAD8
- Pin9: PAD9
- Pin10: PAD10
- Pin11: PAD11
- Pin12: PAD12

**Component Connections:**

- PC1: ADC in / Digital In/Out
- INT1: Direct CHIP In/Output
- PD2: Digital In/Out, Ws2812
- OC2\_PWM2: PWM, Ws2812, Digital
- PC2: ADC in / Digital In/Out
- OC2\_PWM1: PWM, Ws2812, Digital
- PC3: ADC in / Digital In/Out
- PAD1\_5/0,9: Digital In/Out, Ws2812
- PD7: Digital In/Out, Ws2812
- PAD12: Digital In/Out, Ws2812

**Power and Ground Connections:**

- Vin (upper): VIN\_SCREW
- Vout (lower): VOUT\_SCREW
- VCC: VCC
- GND: GND
- Lower GND (out): Lower GND (out)
- Upper GND (in): Upper GND (in)

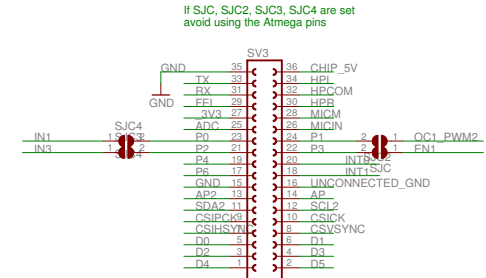
[illegible]

# Right connector

If SJC, SJC2, SJC3, SJC4 are set avoid using the Almega pins

The diagram shows a 36-pin connector with the following connections:

- SV3:** A 36-pin connector with pins 35 to 25 connected to GND. Pins 36 to 26 are connected to various peripheral pins.
- SJC4:** A 4-pin connector with pins 1 to 4 connected to IN1, IN3, IN2, and IN4.
- Peripheral Pins:**
  - 36: CHIP\_5V
  - 34: HPI
  - 32: HPCOM
  - 30: HPR
  - 28: MICM
  - 26: MICIN
  - 24: P1
  - 22: P3
  - 20: INT2
  - 18: INT3
  - 16: UNCONNECTED\_GND
  - 14: AP
  - 12: SCL2
  - 10: CSICK
  - 8: CSVSYN
  - 6: D1
  - 4: D3
  - 2: D5



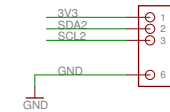
<https://www.sparkfun.com/products/12756>  
Triple Axis Accelerometer Breakout - MMA8452Q

# Accel connector

Diagram of an accelerometer connector with the following pins:

- 1: 3V3
- 2: SDA2
- 3: SCL2
- 6: GND

<https://www.sparkfun.com/products/12756>  
Triple Axis Accelerometer Breakout - MMA4552Q



# UART connector

RESET

C12 100nF

NS9

RX\_PC

TX\_PC

GND

1  
2  
3  
4  
5

