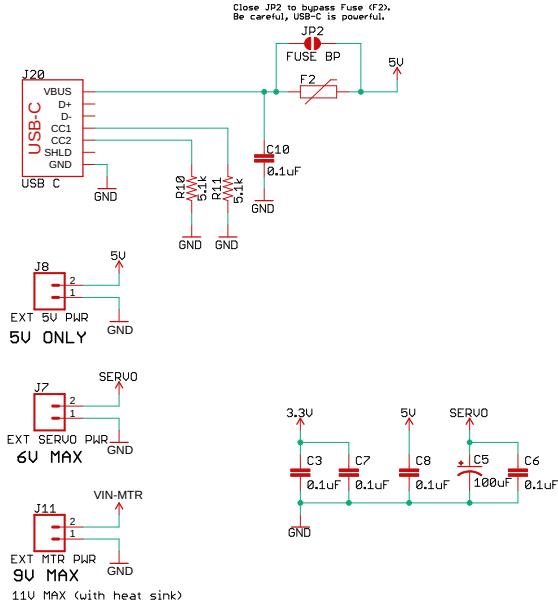
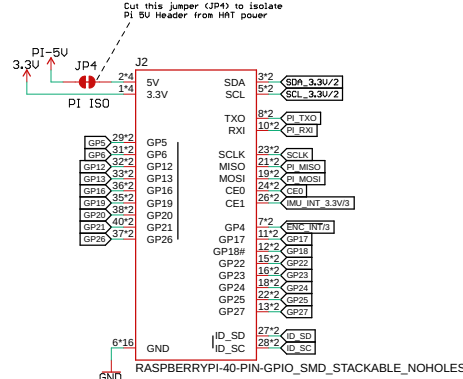


Power Inputs

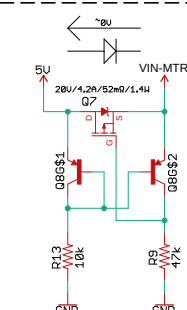
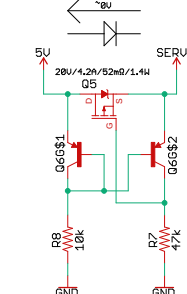
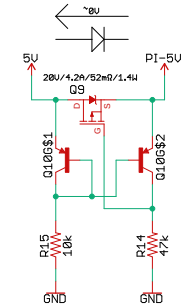
UCC RANGE: 5V only
(via USB or J8)



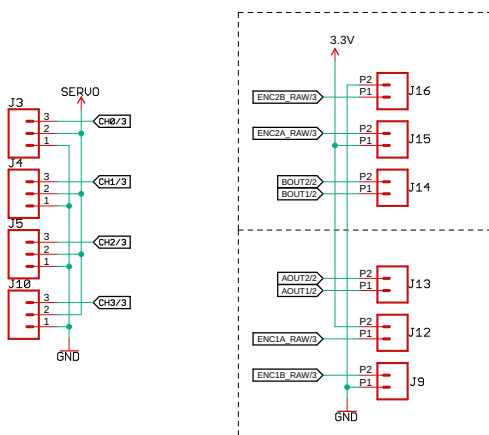
Raspberry Pi Header



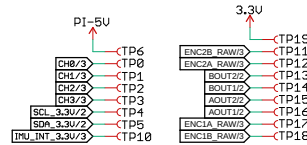
Reverse Current Protection



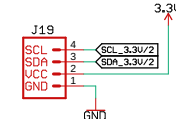
Servo, Motor & Encoder Connections



Test points



QWIIIC



Servo Controller based on a design by Mike Hord
Serial Controlled Motor Driver based on designs by Marshall Taylor, Alex Wende
ICM-20948 based on a design by Owen Lyke
ATTINY84 Encoder based on a design by Nathan Seidle

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TITLE: SparkFun_Auto_pHAT

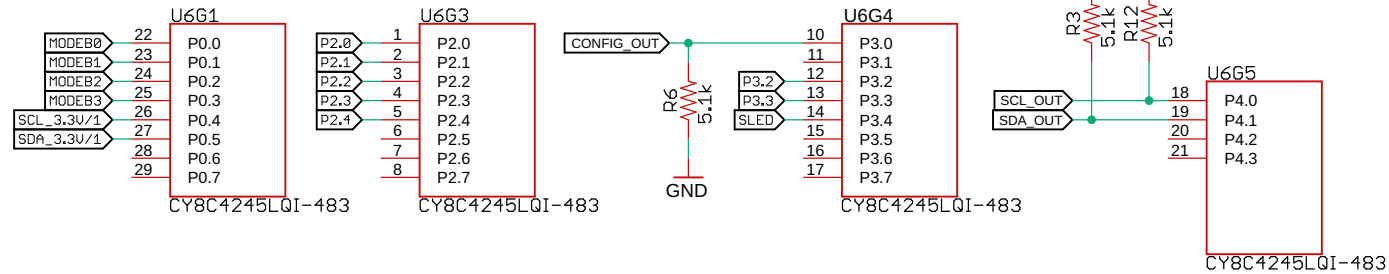
Design by: Pete Lewis

REV:
v12

Date: 3/22/2020 12:10 PM

Sheet: 1/3

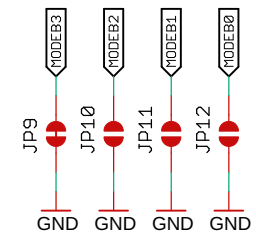
Motor Driver IC - PSoC I/O



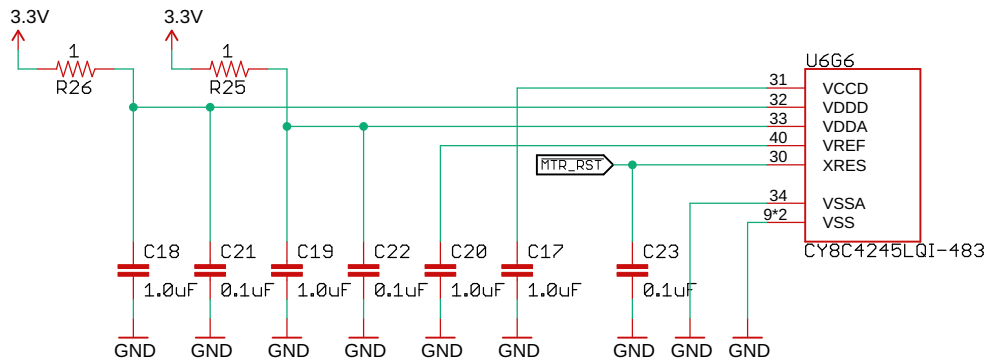
Config Jumpers

The default (1000) sets the I2C address to 0x5D. A '1' indicates the jumper is bridged.

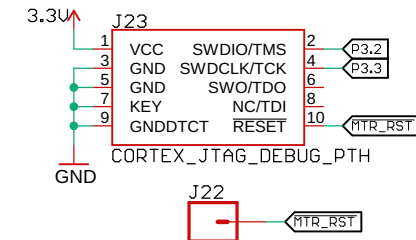
0011: I2C addr 0x58
 0100: I2C addr 0x59
 0101: I2C addr 0x5A
 0110: I2C addr 0x5B
 0111: I2C addr 0x5C
 1000: I2C addr 0x5D
 1001: I2C addr 0x5E
 1010: I2C addr 0x5F
 1011: I2C addr 0x60
 1100: I2C addr 0x61



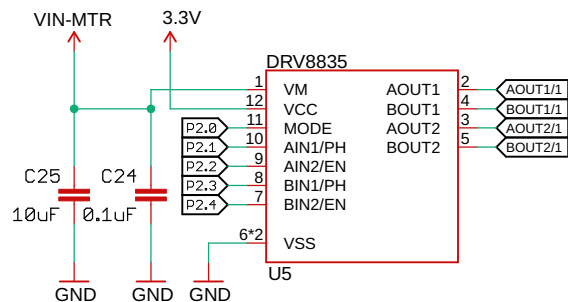
PSoC Power and Filtering



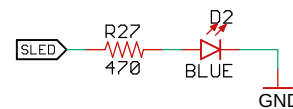
Programming Header



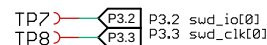
H-Bridge Driver



Status LED



Test Points



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TITLE: SparkFun_Auto_pHAT

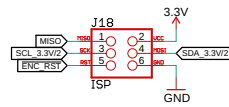
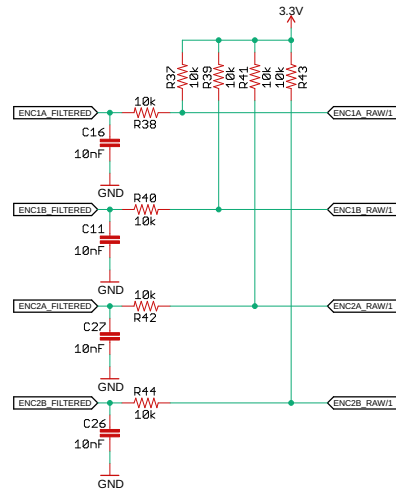
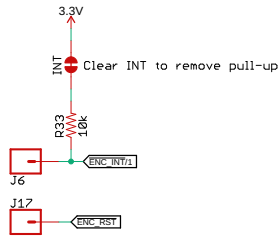
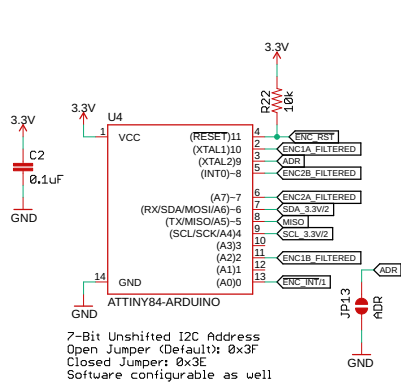
Design by: Pete Lewis

REV:
v12

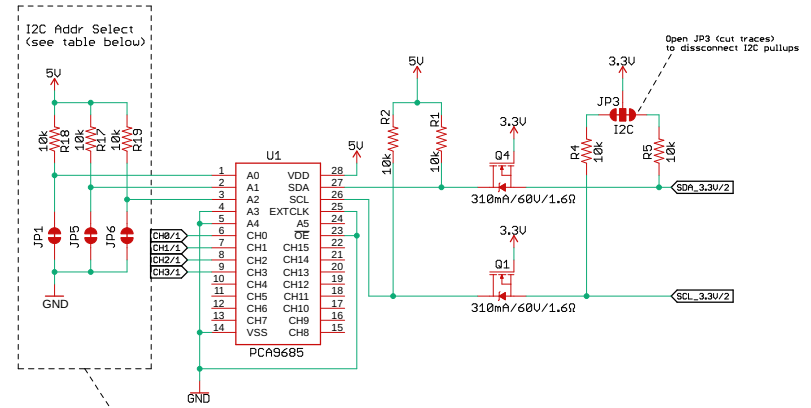
Date: 3/22/2020 12:10 PM

Sheet: 2/3

ATTiny84 (reading encoders)



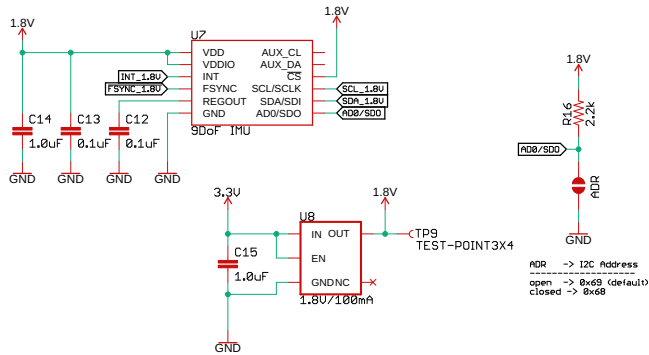
PWM Control (servos)



I2C Address Table
 '0' = GND (closed jumper)
 '1' = VCC (open/cut Jumper)

A2	A1	A0	I2C Addr
0	0	0	0x40 (default)
0	0	1	0x41
0	1	0	0x42
0	1	1	0x43
1	0	0	0x44
1	0	1	0x45
1	1	0	0x46
1	1	1	0x47

IMU (ICM-20948)



I2C Level Shifting (IMU)

