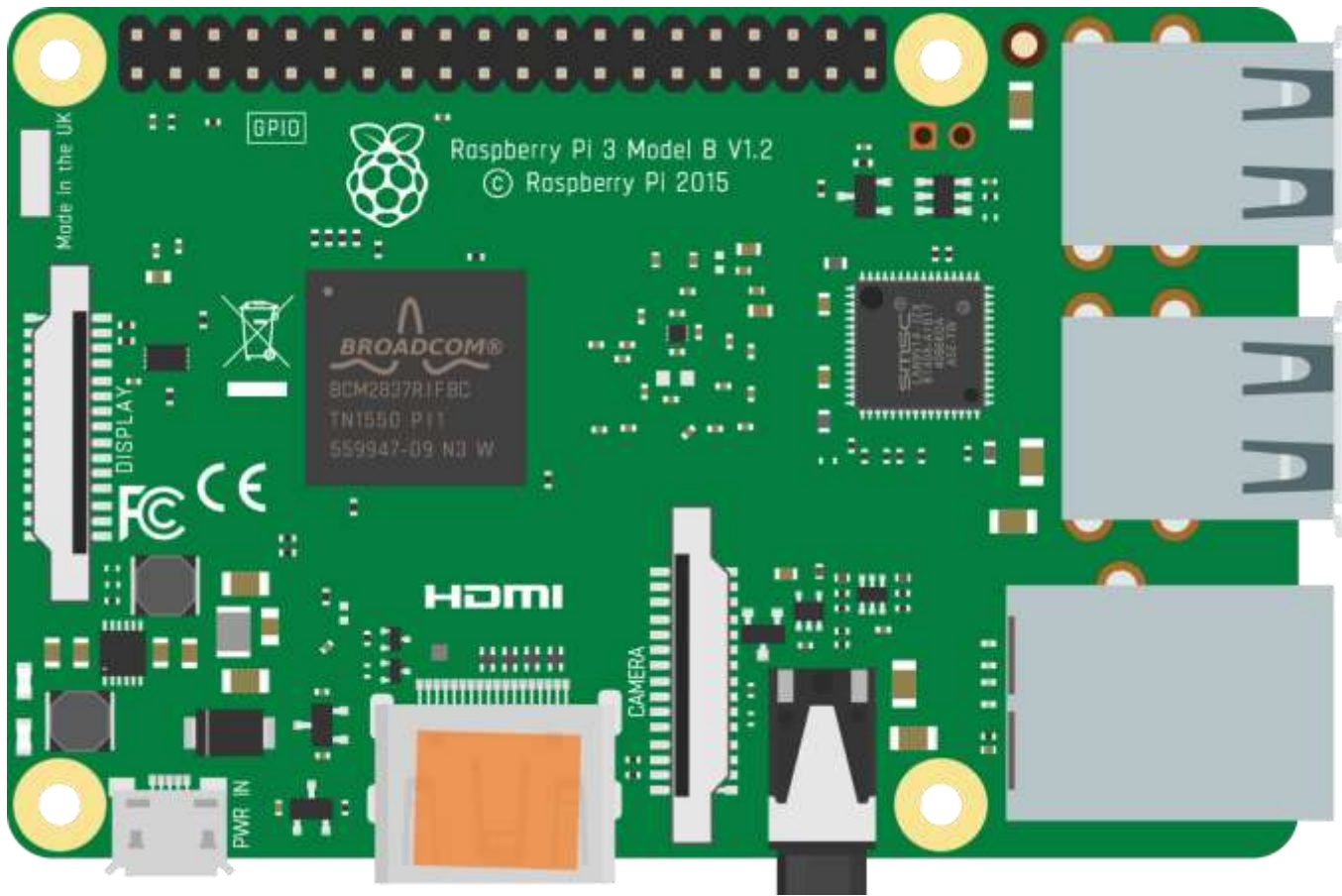


SCUTTLE Wiring Guide (Pi version 2020.09.04)

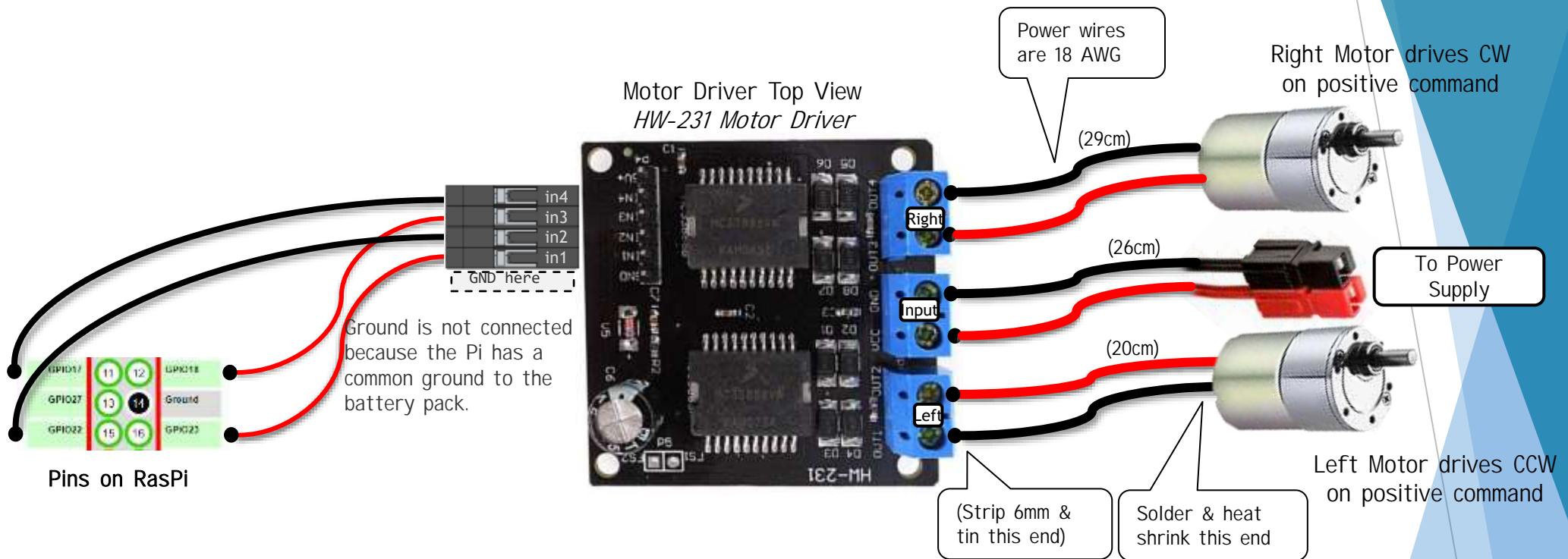


Pin Number Convention

All Models			
3V3 Power	1	2	5V Power
GPIO2 SDA (I2C)	3	4	5V Power
GPIO3 SCL (I2C)	5	6	Ground
GPIO4	7	8	GPIO14 PWM0 (PWM)
Ground	9	10	GPIO15 PWM1 (PWM)
GPIO17	11	12	GPIO18
GPIO27	13	14	Ground
GPIO22	15	16	GPIO23
3V3 Power	17	18	GPIO24
GPIO19 SPI MISO	19	20	Ground
GPIO9 SPI MOSI	21	22	GPIO25
GPIO11 SPI CS0	23	24	GPIO8 SPI CS1
Ground	25	26	GPIO7 SPI CS2
IO SD IO 40	27	28	IO 5C IO 40
GPIO5	29	30	Ground
GPIO6	31	32	GPIO12
GPIO13	33	34	Ground
GPIO19	35	36	GPIO16
GPIO26	37	38	GPIO20
Ground	39	40	GPIO21
40-pin models only			
USB Ports			

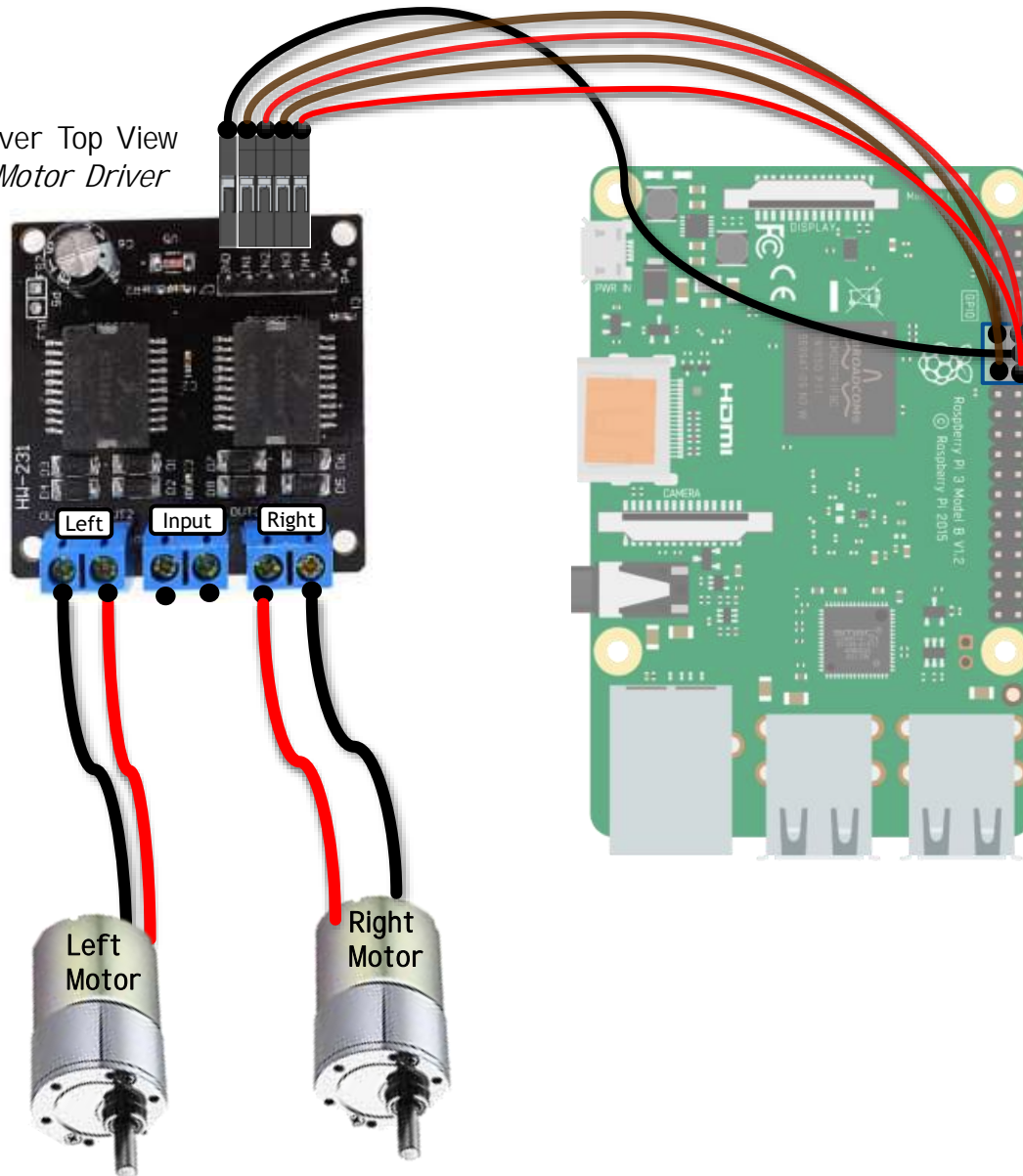


Motor Driver Signal Cables



Motor Driver Signal Cables

Motor Driver Top View
HW-231 Motor Driver



GPIO17	11	12	GPIO18
GPIO27	13	14	Ground
GPIO22	15	16	GPIO23

Pins on RasPi

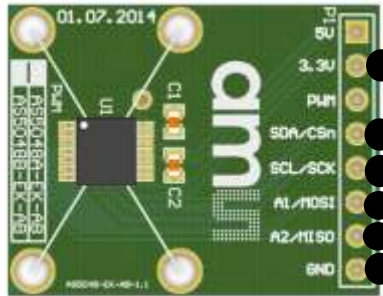
Encoder AMS AS5048 (I2C)

Left Hand Encoder

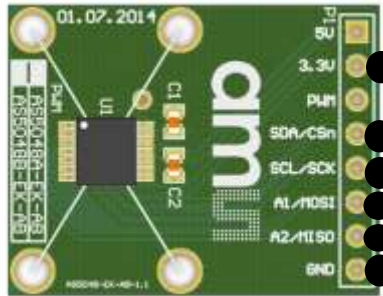
A1 is pulled **down** to GND

I2C address is 0x40

Left



Right



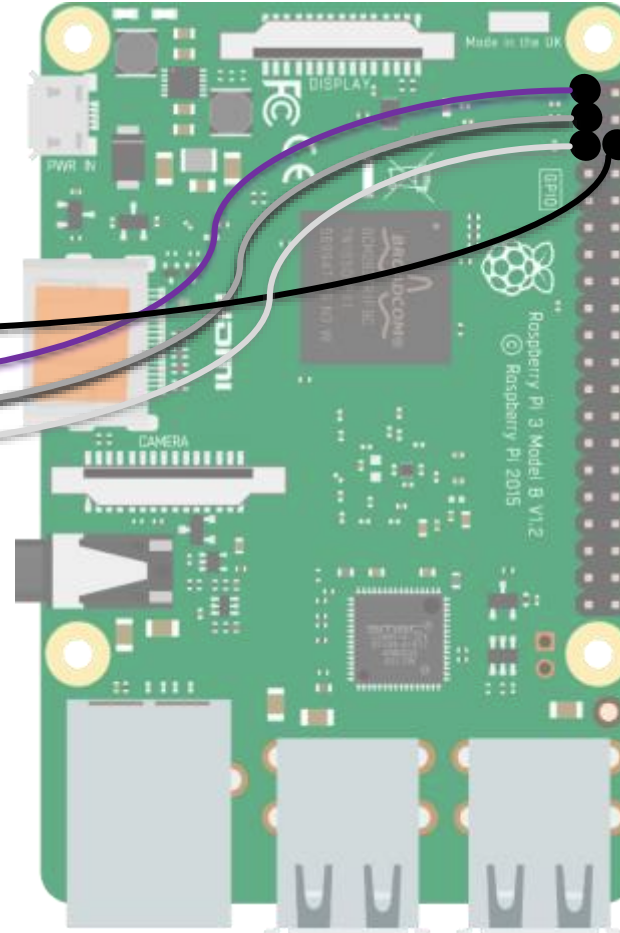
Right Hand Encoder

A1 is pulled **up** to 3.3v

I2C address is 0x41

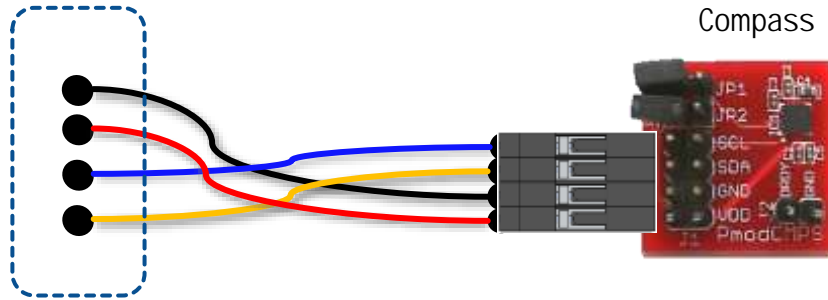
Nodes on the I2C bus board
are indicated here

Gnd
3.3v
SCK
SDA
3.3v
Gnd



Compass CMPS or CMPS2 (I2C)

Plugs Into I2C Bus Board



This compass is not necessary since you can access the compass on the beaglebone blue. Be sure to calibrate the compass on the blue since it lies within close proximity of magnetic hardware on the robot.



Power

