

Raspberry Pi/Arduino Robot Wiring Diagram

Revision v1

8/7/2017

Raspberry Pi 3 Model B

Note: Software settings for RPi.GPIO use BOARD mode.



3.3V PWR	1		2	5V PWR
I2C1 SDA	3		4	5V PWR
I2C1 SCL	5		6	GND
GPIO 4	7		8	Reserved
GND	9		10	Reserved
SPI1 CS0	11		12	GPIO 18
GPIO 27	13		14	GND
GPIO 22	15		16	GPIO 23
3.3V PWR	17		18	GPIO 24
SPI0 MOSI	19		20	GND
SPI0 MISO	21		22	GPIO 25
SPI0 SCLK	23		24	SPI0 CS0
GND	25		26	SPI0 CS1
Reserved	27		28	Reserved
GPIO 5	29		30	GND
GPIO 6	31		32	GPIO 12
GPIO 13	33		34	GND
SPI1 MISO	35		36	GPIO 16
GPIO 26	37		38	SPI1 MOSI
GND	39		40	SPI1 SCLK

Software configuration:
LIDAR—I2C
Servo—PWM
Motor—GPIO
Ultrasonic—GPIO

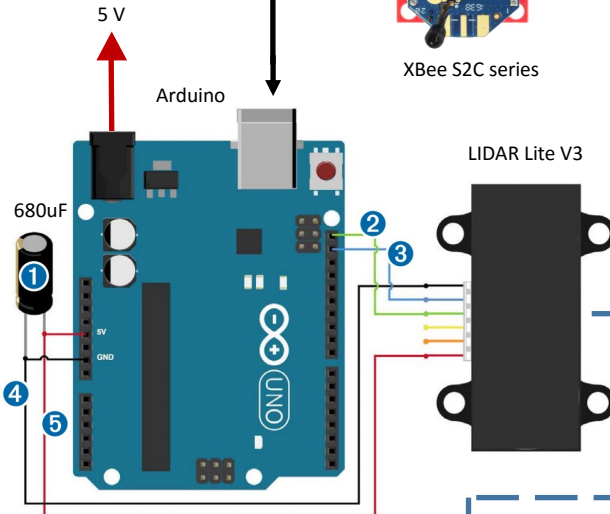
Align pins and stack boards together

USB type A to USB type B cable



XBee S2C series

Arduino



Adafruit PCA9685 servo driver

Pan servo

Tilt servo

Mount LIDAR onto servo

MC33886 Raspberry Pi Motor Driver board

Right Motor

Left Motor

Attach motor driver board onto Raspberry Pi to supply 5 V and 2 A to the board

Note: Motor orientation has to be this way due to datasheet specifications

Venom Fly 30C 4S 14.8V LiPo Battery

