

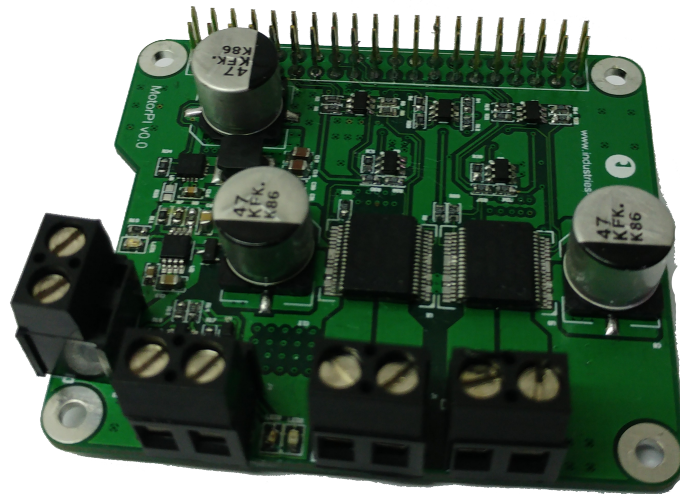
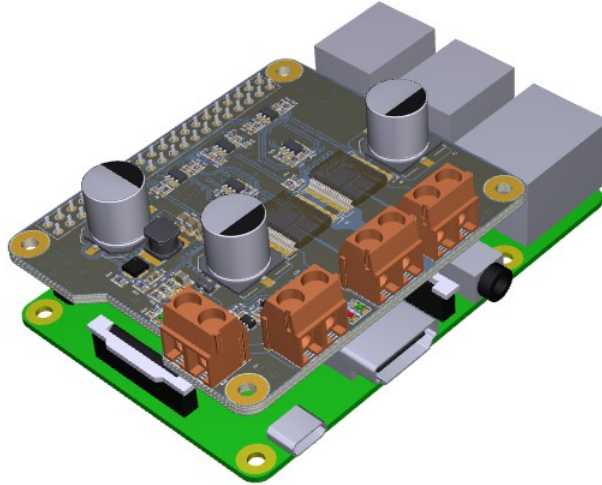


ROBOT DOMESTICI
INDUSTRIES

www.industries-rd.com

Hat MotorPi - R1

Motor shield Raspberry Pi





**ROBOT DOMESTICI
INDUSTRIES**

www.industries-rd.com

Hat MotorPi - R1

Motor shield Raspberry Pi

Motor Control Shield for Raspberry Pi 3 and Raspberry Pi 2.

Ideal for building their telepresence and video surveillance robots.

The board allows to power 2 DC motors with 8A per channel.

There is a battery charging circuit.

The battery should be of a 7.4V lipo type

INPUT VOLTAGE: 8V ~ 41V

OUTPUT CURRENT: 8A per channel

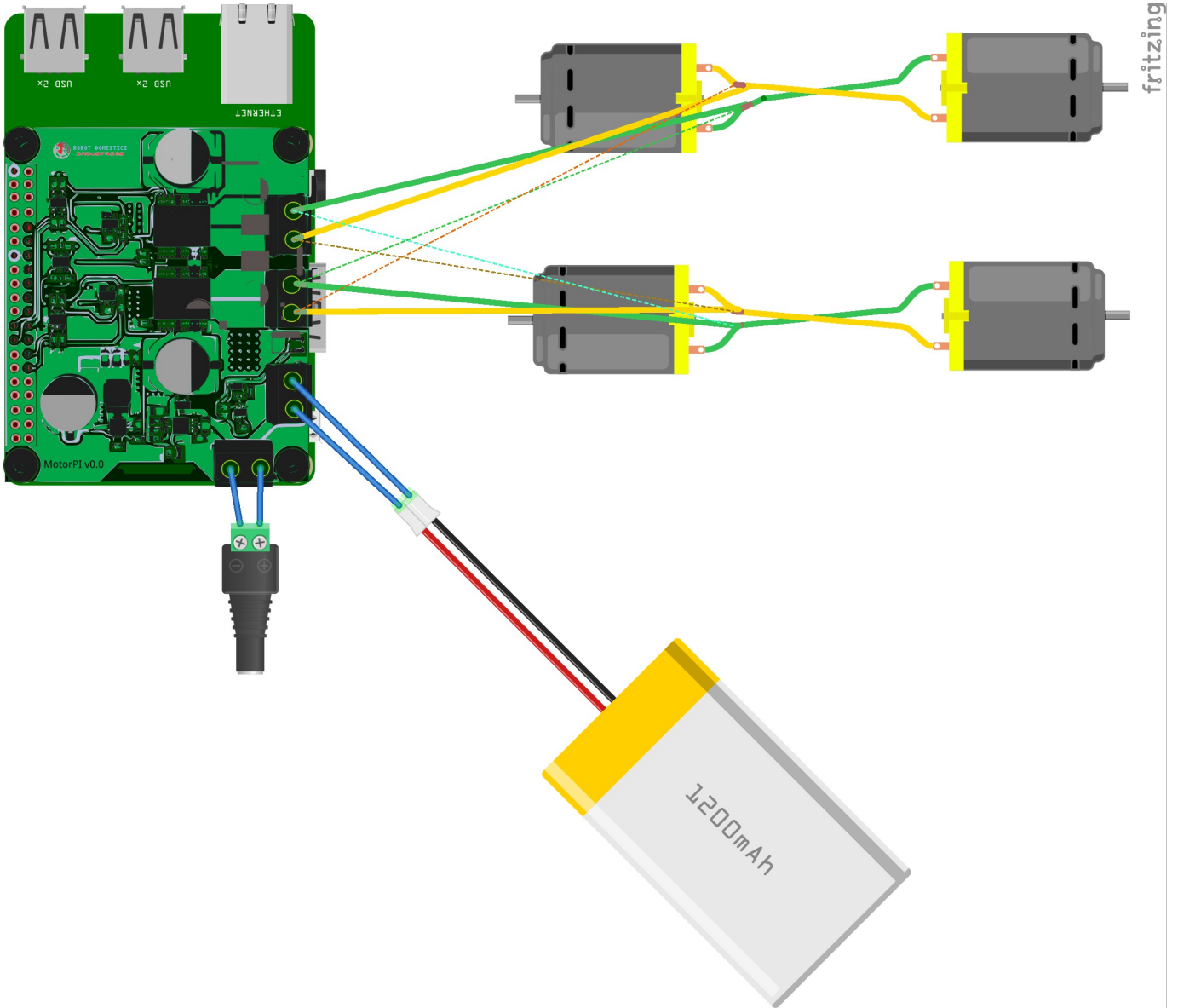


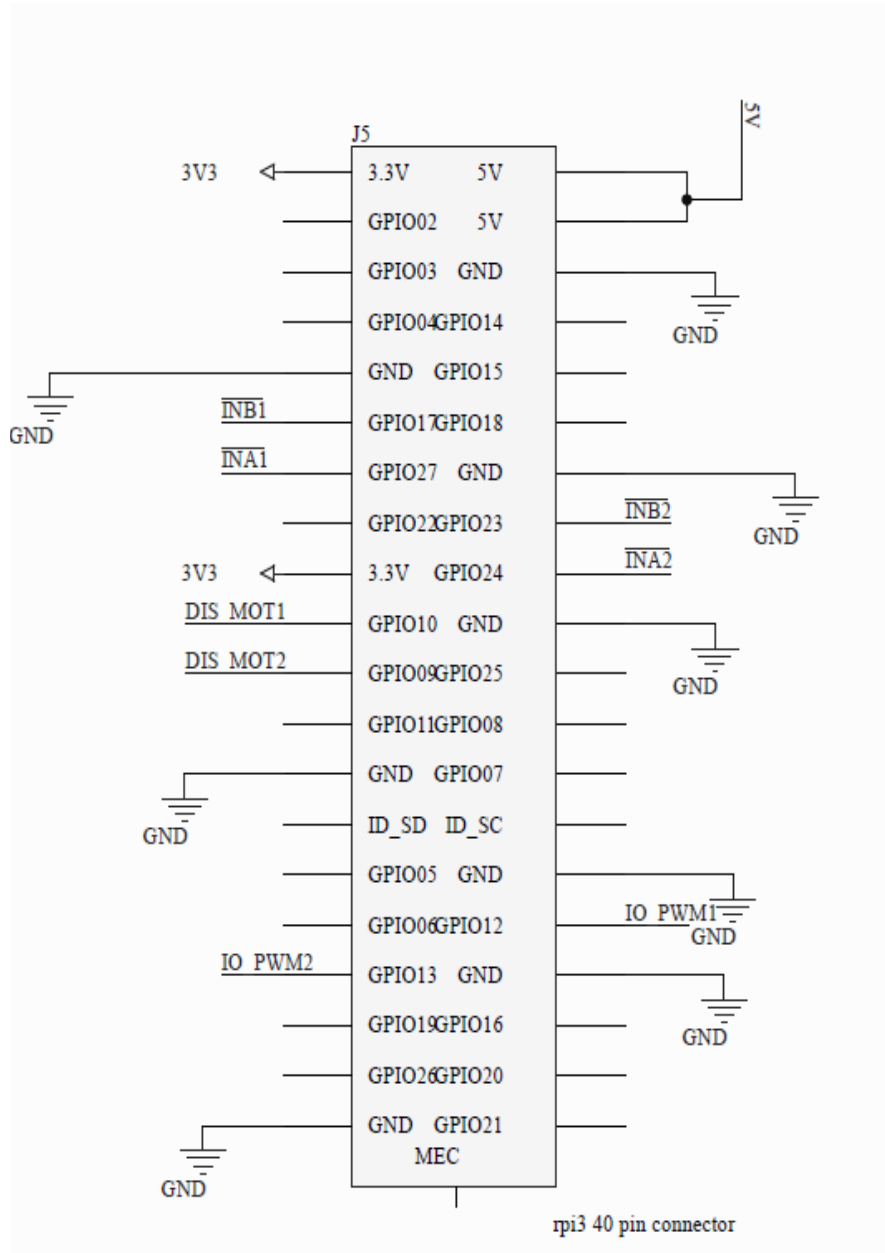
ROBOT DOMESTICI
INDUSTRIES

www.industries-rd.com

Hat MotorPi - R1

Motor shield Raspberry Pi





GPIO



**ROBOT DOMESTICI
INDUSTRIES**

www.industries-rd.com

Hat MotorPi - R1

Motor shield Raspberry Pi

B1	17	
A1	27	
PWM1	12	
B2	23	
A2	24	
PWM2	13	
DSMoT1	9	H
DSMoT2	10	H

Motor 1

A1	B1	PWM1	DSMoT1	Motor 1
-	-	-	H	Disabled
-	-	L	L	Disabled
H	L	H	L	Enabled Dir 1
L	H	H	L	Enabled Dir 2
L	L	H	L	Motor brake

Motor 2

A2	B2	PWM2	DSMoT2	Motor 2
-	-	-	H	Disabled
-	-	L	L	Disabled
H	L	H	L	Enabled Dir 1
L	H	H	L	Enabled Dir 2
L	L	H	L	Motor brake

Following is a sketch of Phyton



**ROBOT DOMESTICI
INDUSTRIES**

www.industries-rd.com

Hat MotorPi - R1

Motor shield Raspberry Pi

```
import RPi.GPIO as GPIO

io_pwm1 =12
ina1 = 17
inb1 = 27

io_pwm2 =13
ina2 = 23
inb2 = 24

def motor1Forward():
    GPIO.output(io_pwm1,1)
    GPIO.output(ina1,1)
    GPIO.output(inb1,0)
    print("motor 1 Forward\r\n")

def motor1Backward():
    GPIO.output(io_pwm1,1)
    GPIO.output(ina1,0)
    GPIO.output(inb1,1)
    print("motor 1 Backward\r\n")

def motor1Stop():
    GPIO.output(io_pwm1,0)
    GPIO.output(ina1,1)
    GPIO.output(inb1,1)
    print("motor 1 Stop\r\n")

def motor2Forward():
    GPIO.output(io_pwm2,1)
    GPIO.output(ina2,1)
```



**ROBOT DOMESTICI
INDUSTRIES**

www.industries-rd.com

Hat MotorPi - R1

Motor shield Raspberry Pi

```
GPIO.output(inb2,0)
print("motor 2 Forward\r\n")

def motor2Backward():
    GPIO.output(io_pwm2,1)
    GPIO.output(ina2,0)
    GPIO.output(inb2,1)
    print("motor 2 Backward\r\n")

def motor2Stop():
    GPIO.output(io_pwm2,0)
    GPIO.output(ina2,1)
    GPIO.output(inb2,1)
    print("motor 2 Stop\r\n")

def motorInit():
    GPIO.setmode(GPIO.BCM)
    chan_list_1=[io_pwm1,ina1,inb1] #lista dei pin del motore 1
    chan_list_2=[io_pwm2,ina2,inb2] #lista dei pin del motore 2
    GPIO.setup(chan_list_1,GPIO.OUT) #pin motore 1 output
    GPIO.setup(chan_list_2,GPIO.OUT) #pin motore 2 output
    print("motors init complete\r\n")

def printMenu():
    print("available options:\r\n"+
        "\t1-Motor1 forward\r\n"+
        "\t2-Motor1 backward\r\n"+
        "\t3-Motor1 stop\r\n"+
        "\t4-Motor2 forward\r\n"+
        "\t5-Motor2 backward\r\n"+
        "\t6-Motor2 stop\r\n"+
        "\t0-Exit\r\n")
```



**ROBOT DOMESTICI
INDUSTRIES**

www.industries-rd.com

Hat MotorPi - R1

Motor shield Raspberry Pi

```
motorInit()
loop_condition=True
print("motorPi example usage\r\n")
printMenu()

while loop_condition==True:
    value=raw_input("Select an option and press Enter\r\n")
    if value=="":
        continue
    if value=="0":
        loop_condition=False
    elif value=="1":
        motor1Forward()
    elif value=="2":
        motor1Backward()
    elif value=="3":
        motor1Stop()
    elif value=="4":
        motor2Forward()
    elif value=="5":
        motor2Backward()
    elif value=="6":
        motor2Stop()
    else:
        printMenu()

GPIO.cleanup()
print("Cleaned GPIO")
```