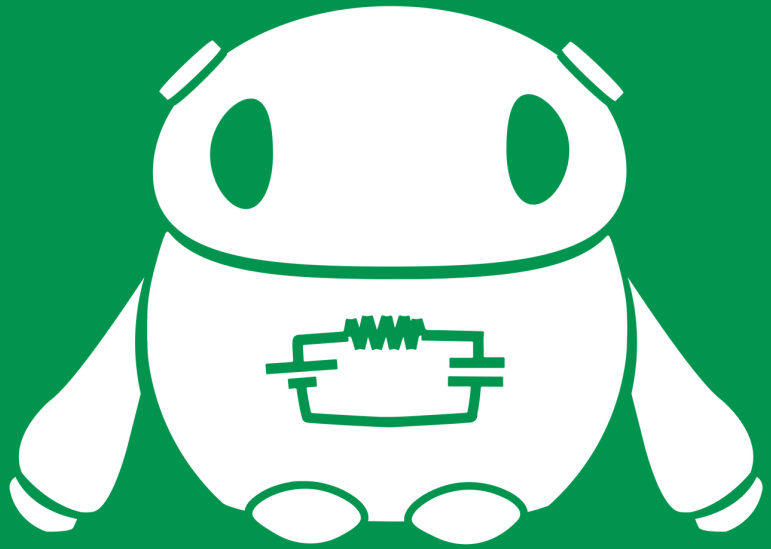

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Projet

- Definir os requisitos de um circuito para seguidor de linha.
- Utilizando o circuito exemplo no site, construa o esquemático do seu seguidor.
- Após feito o esquemático produza o projeto de placa.
- Fique avontade para tirar e colocar componentes no circuito exemplo, pois ele possui coisas a mais e faltam coisas nele.
- Exemplos de Seguidor de linha :
  - 3PI Robot
  - Video Seguidor
  - Video Seguidor

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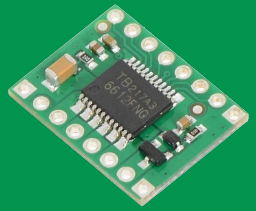
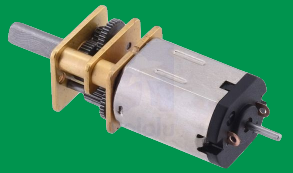
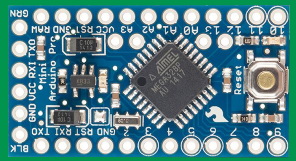
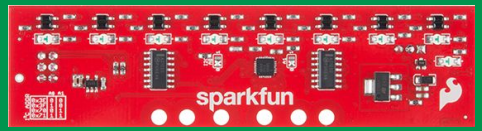
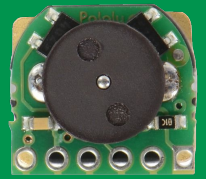
Materiais Básicos











Referências

- Driver do Motor - https://www.pololu.com/product/713
- Motor - https://www.pololu.com/product/3049
- Array de sensores de Luz - https://www.pololu.com/product/1419
- Encoder - https://www.pololu.com/product/3081

- Mais referências nos TDPs do VSS, presente no site.

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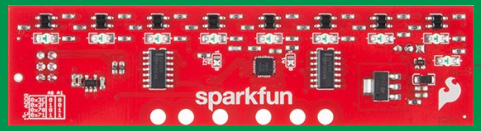
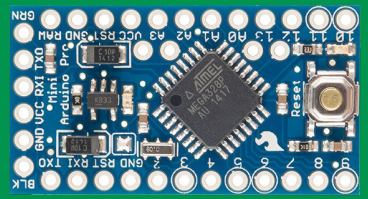
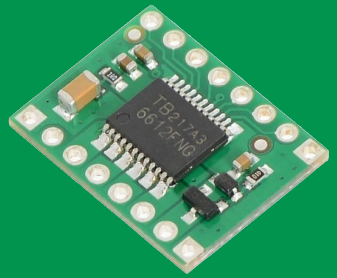
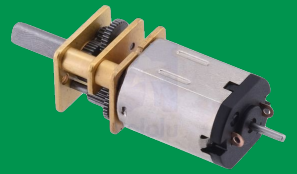
Circuito

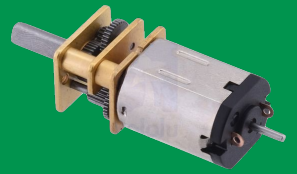
Circuito











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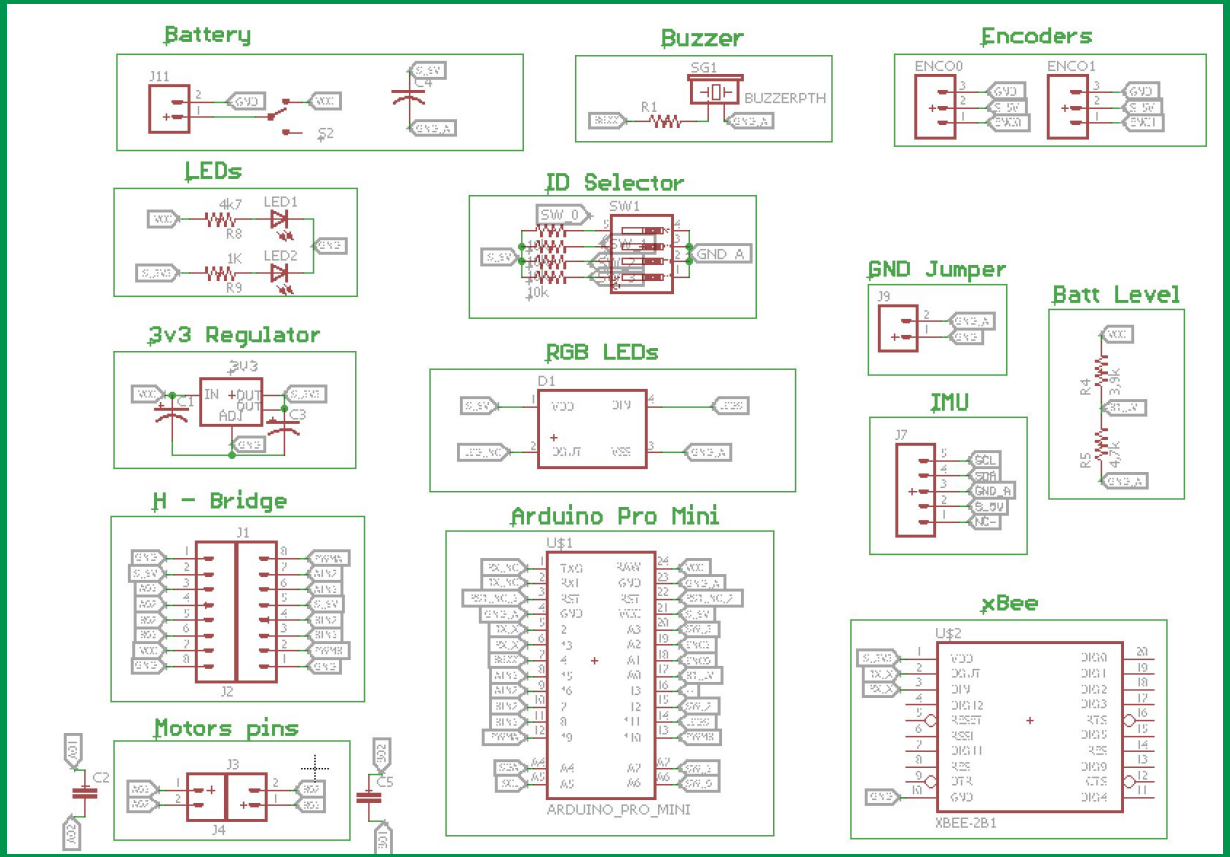
Circuito Exemplo



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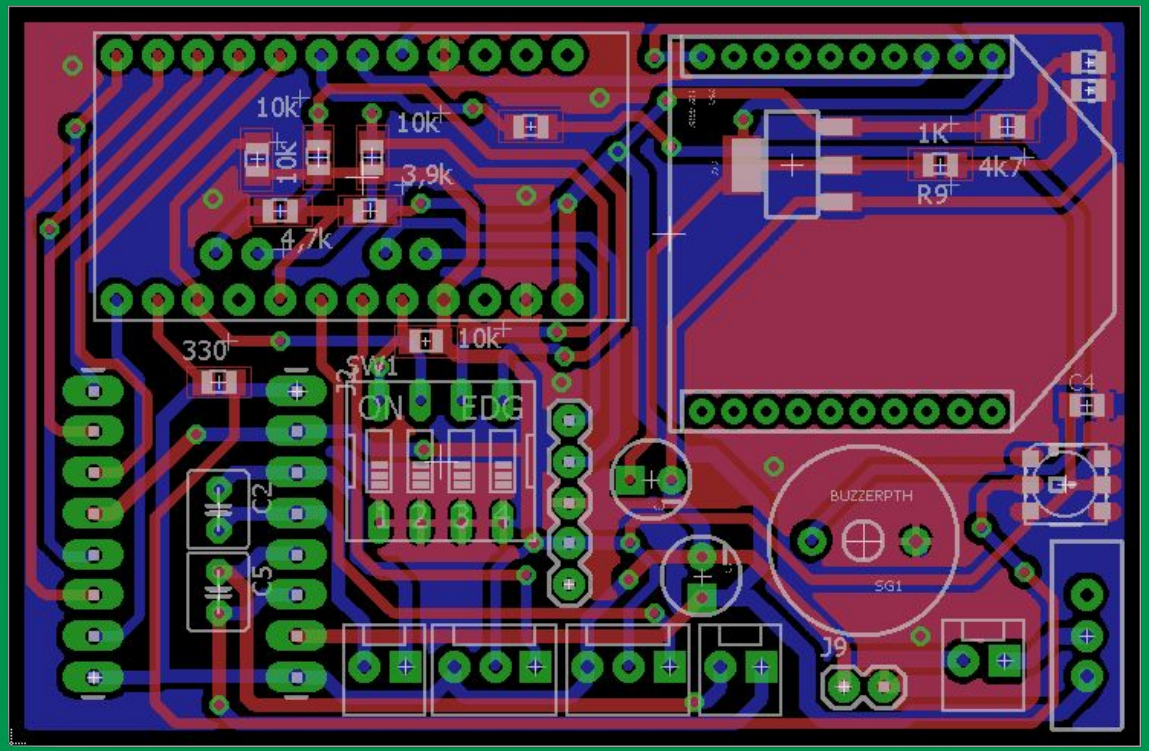
Circuito Exemplo



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Circuito Exemplo

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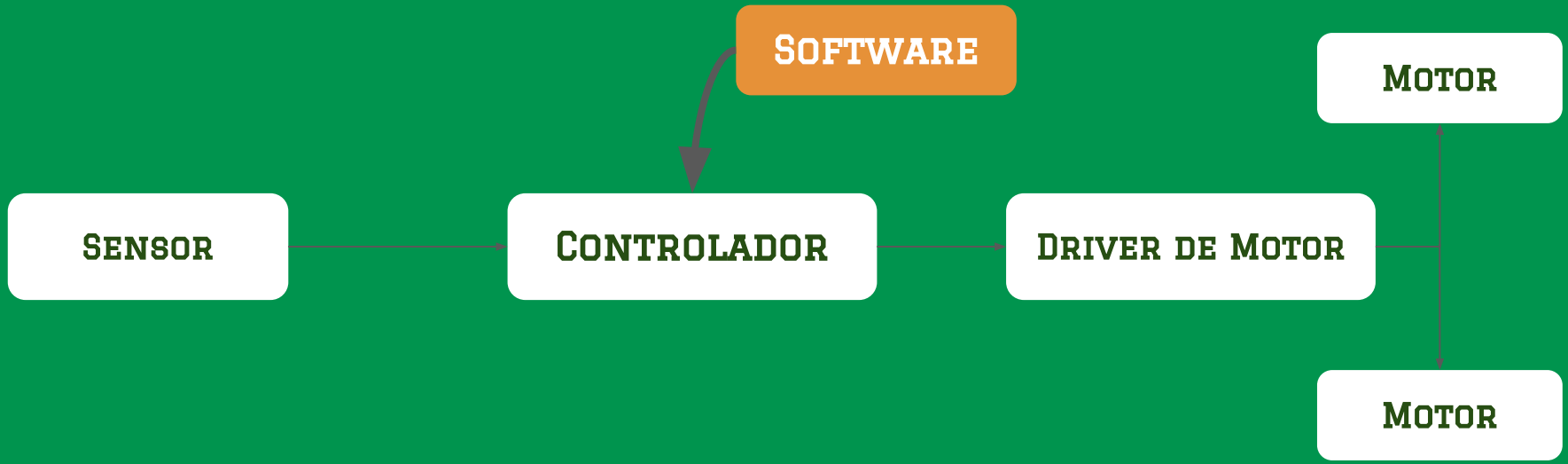
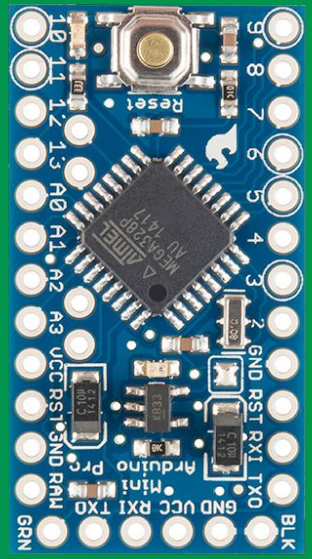
Software

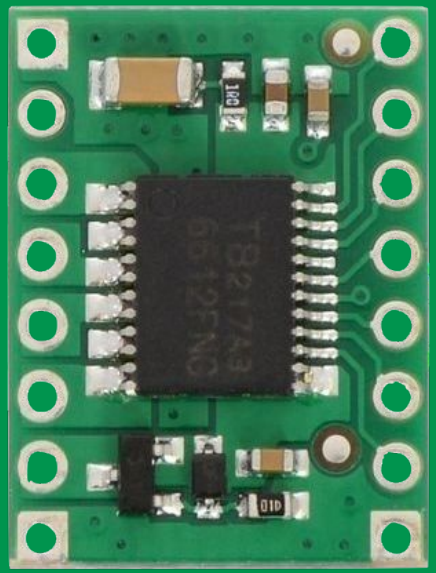

Sensor de Linha
Processa
Executa nos Motores
Envia status para usuário

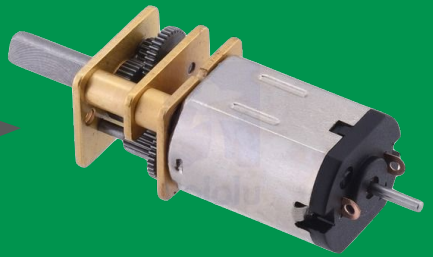
Circuito



Circuito







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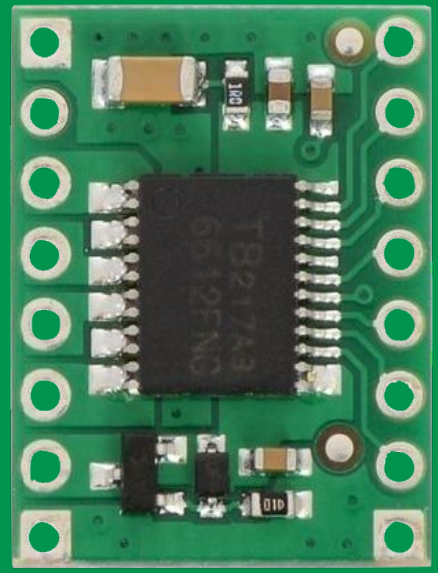
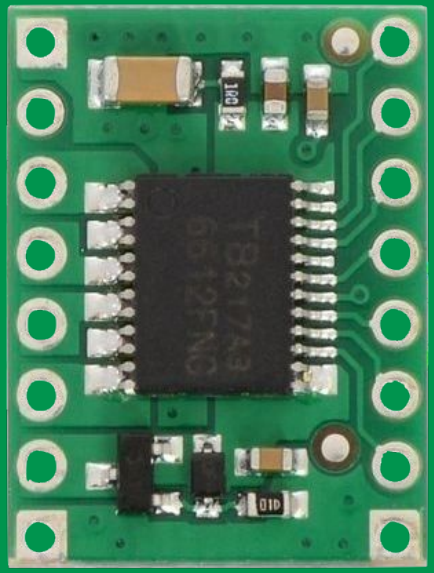
Interface


GND
VCC
AO1
AO2
BO2
BO1
VMOT
GND
PWMA
AIN2
AIN1
STBY
BIN1
BIN2
PWMB
GND

Interface

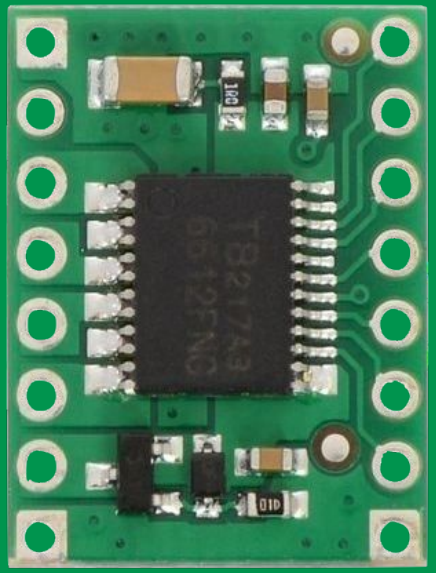


PWMA
AIN2
AIN1

BIN1
BIN2
PWMB

ROBÔCIN

Interface



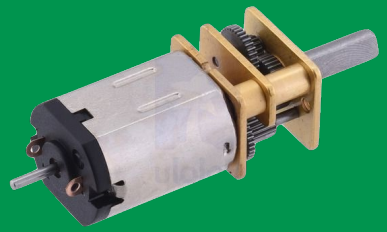
PWMA
AIN2
AIN1

BIN1
BIN2
PWMB

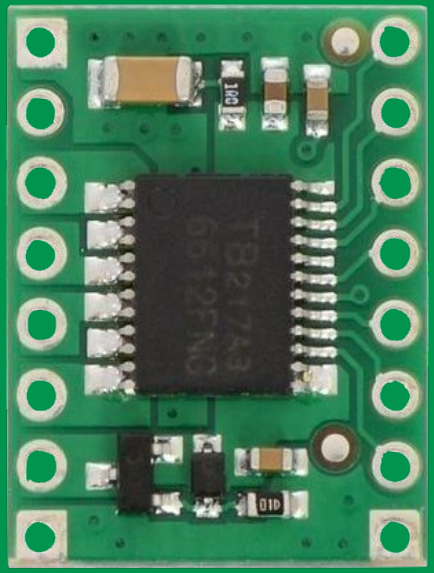
Velocidade (0 - 100)

Sentido (0 - 1)

Sentido (1 - 0)



Interface



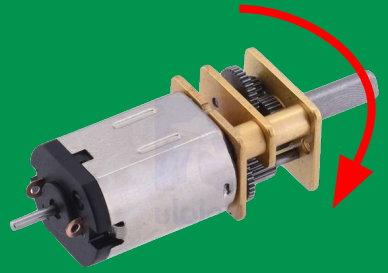
PWMA
AIN2
AIN1

BIN1
BIN2
PWMB

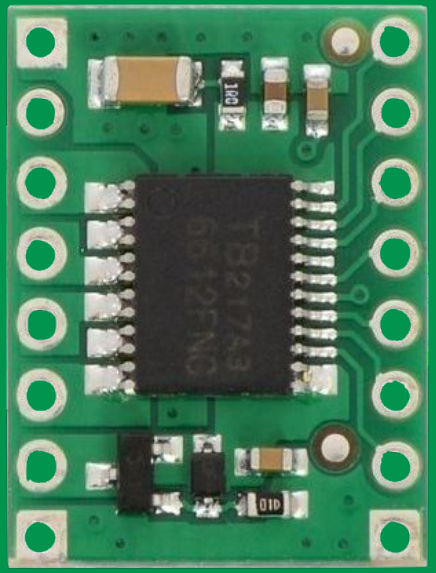
Velocidade (50)

Sentido (0)

Sentido (1)



Interface



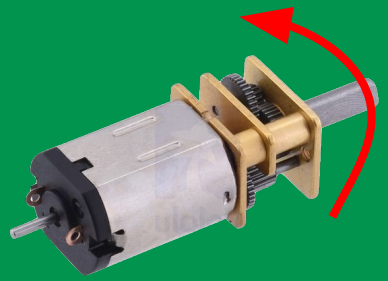
PWMA
AIN2
AIN1

BIN1
BIN2
PWMB

Velocidade (50)

Sentido (1)

Sentido (0)



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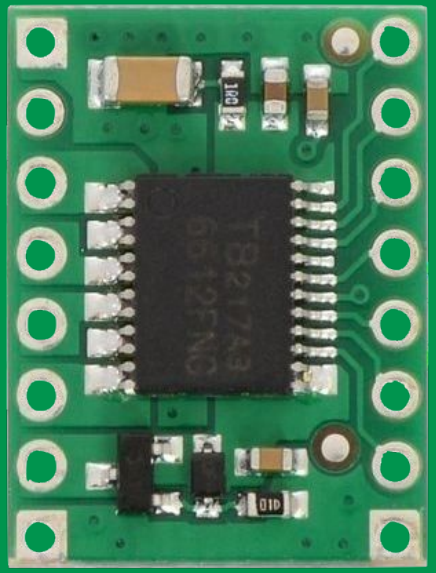
Interface



PWMA
AIN2
AIN1

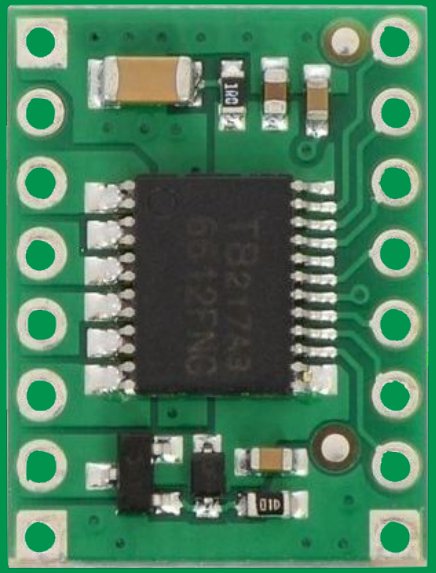
BIN1
BIN2
PWMB

Velocidade (0)

Sentido (1)

Sentido (0)

Interface



PWMA
AIN2
AIN1

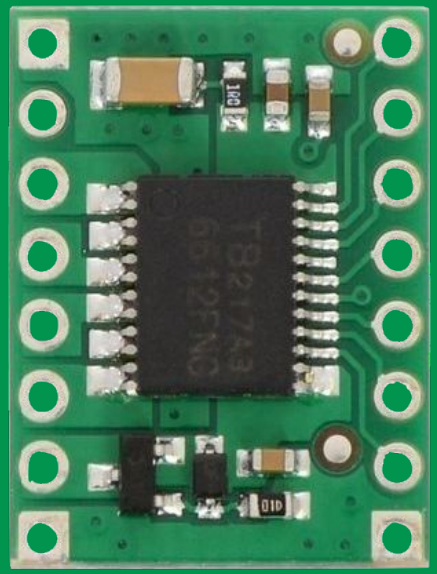
BIN1
BIN2
PWMB

Velocidade (50)

Sentido (0)

Sentido (0)

Coding

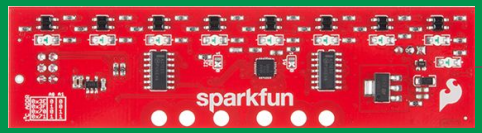


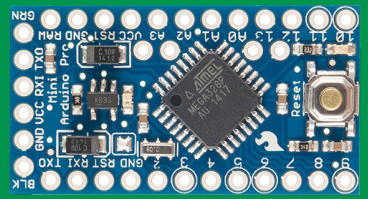
PWMA → Pino 9
AIN2 → Pino 6
AIN1 → Pino 5

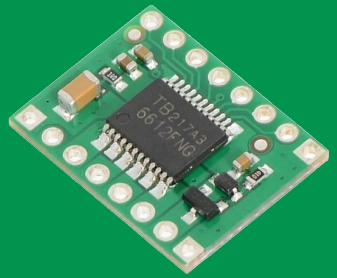
BIN1 → Pino 8
BIN2 → Pino 7
PWMB → Pino 10

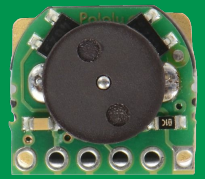
Obs: Usar função setPinValue(pino, valor);

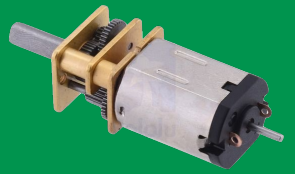
Malha Fechada

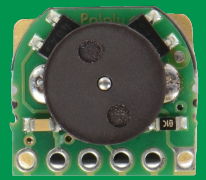


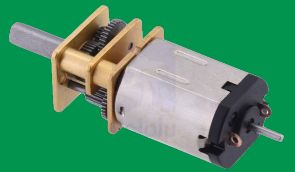












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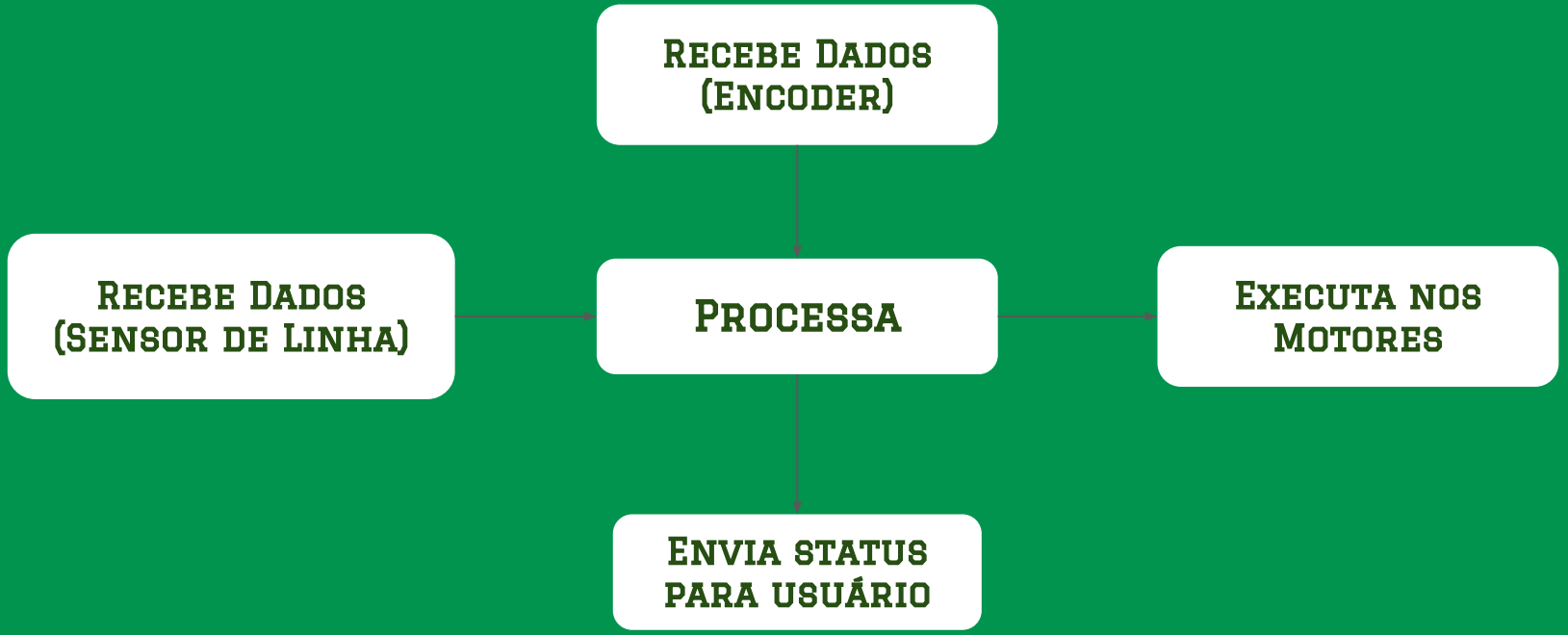
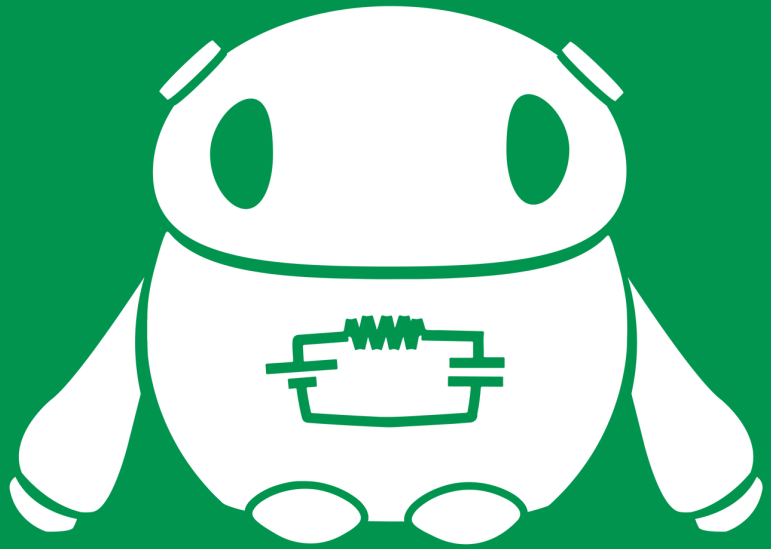
Malha Fechada





RoboCIn