

Computação para Artistas

The Arduíno version

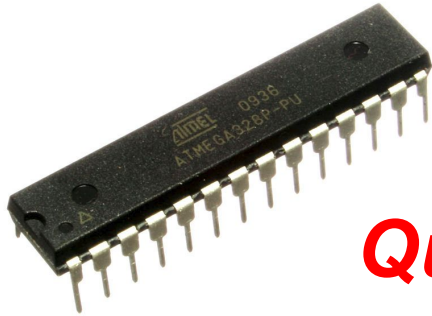
O que é Arduino

- Placa para prototipagem geral;
- Abstrai uma parte complicada do Hardware;
- Open-Source / Open-Hardware



Microcontrolador vs Microprocessador

- Microcontrolador é um microprocessador, mas a recíproca não é verdadeira;
- Um microcontrolador é um computador inteiro em um chip de silício;
- Microprocessador é um conjunto de chips que combinados criam um processador;



Só isso é capaz de fazer processamento



Isto precisa de outros hardware para efetuar processamento (RAM, HD,...)

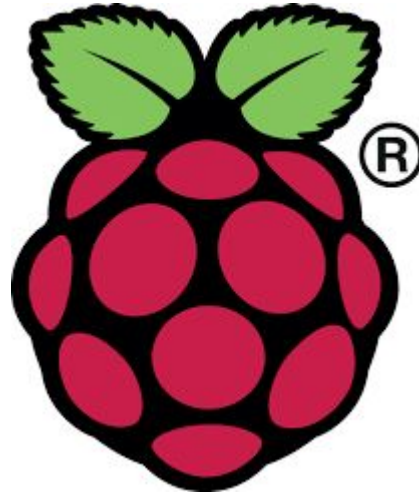
Qual é melhor?

Arduíno é uma marca

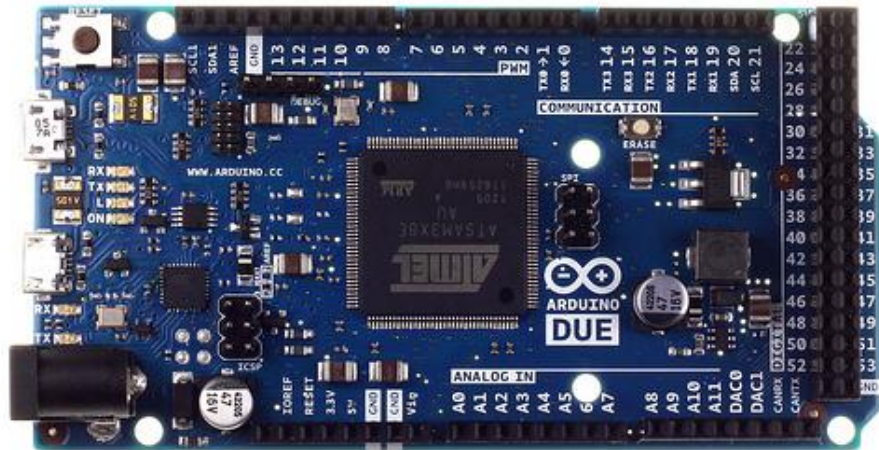
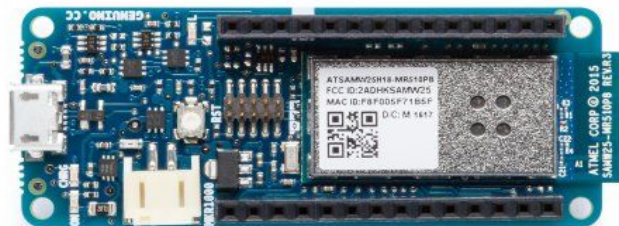
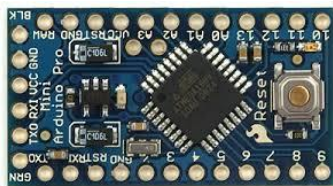
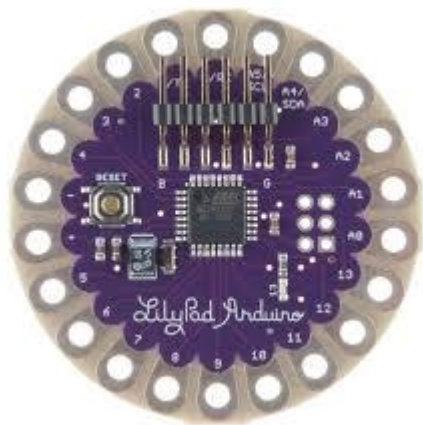
- Existem diversos modelos de placas Arduíno;
- Mas nem todas são da própria arduino;
- Entre todas as disponíveis existem microcontroladores e microprocessadores;
- Eis alguns exemplos:



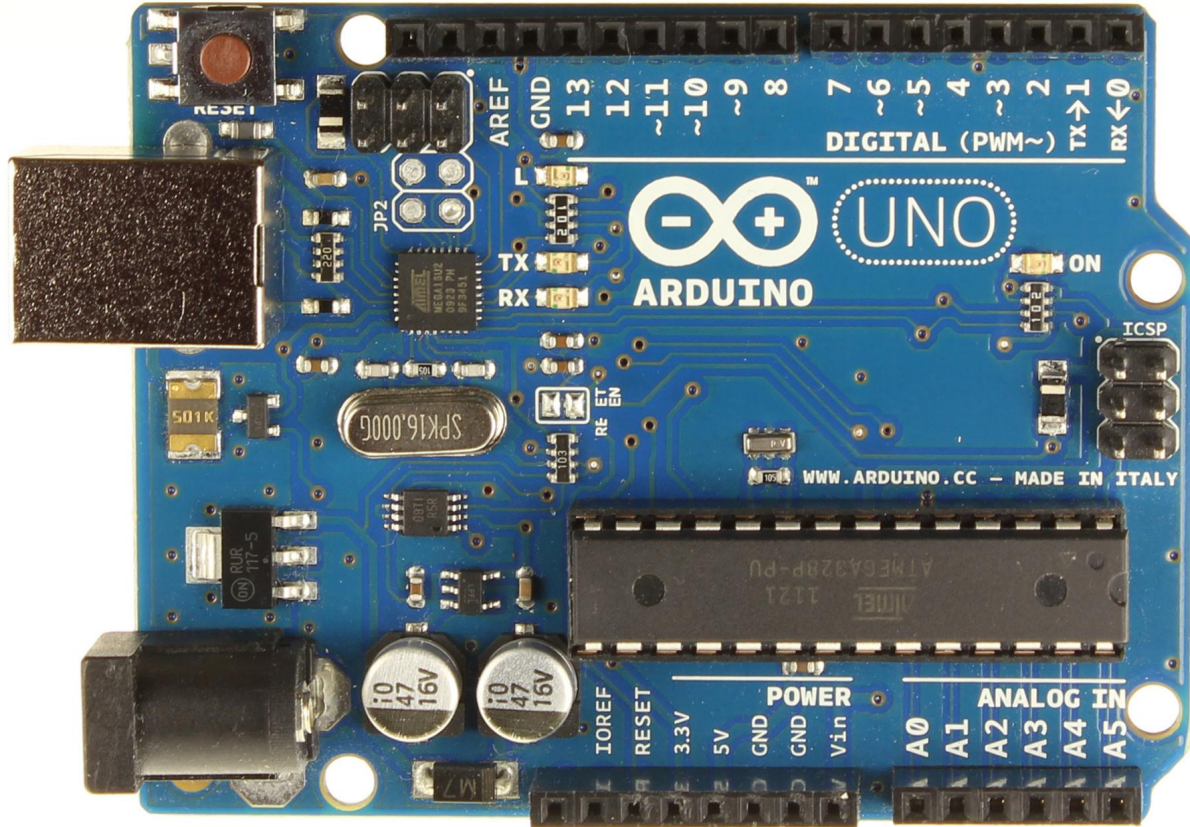
beaglebone



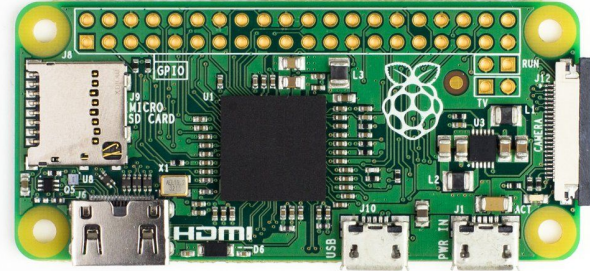
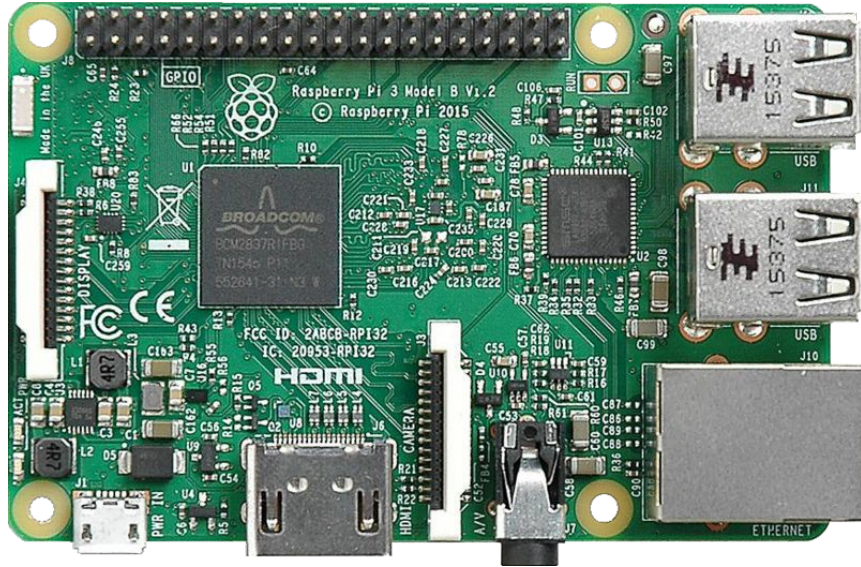
Arduínos



O famoso Arduino UNO



Raspberry Pi



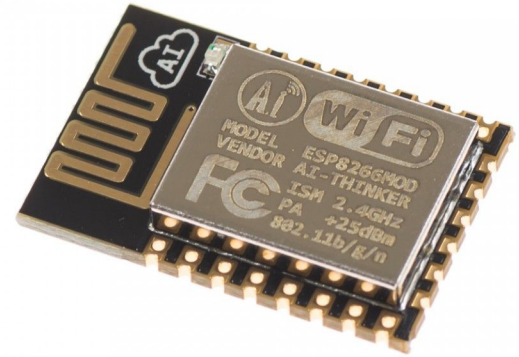
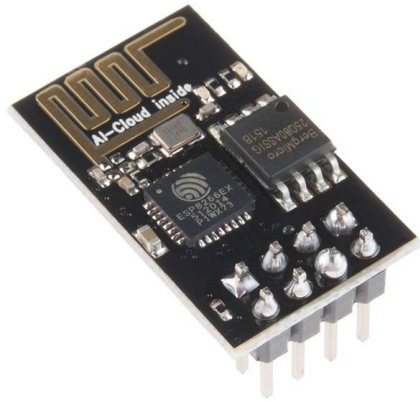
NanoPi M3



Parallela Board



ESP's



blems continue, disable or remove any newly installed hardware. Disable B
y options such as caching or shadowing. If you need to use Safe Mode to re
disable components, restart your computer, press F8 to select Advanced Start
as, and then select Safe Mode.

Local Information:

ROP: 0X00000ed (0X80F128D0, 0xc000009c, 0x00000000, 0x00000000)

ing dump of physical memory

cal memory dump complete.

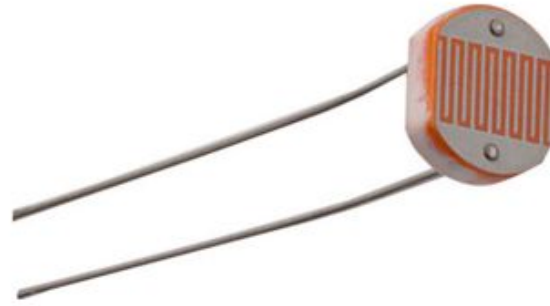
ct your system administrator or technical support group for further
tance.

Info : [https://msdn.microsoft.com/en-us/library/windows/hardware/ff559278-85\).aspx](https://msdn.microsoft.com/en-us/library/windows/hardware/ff559278-85).aspx)

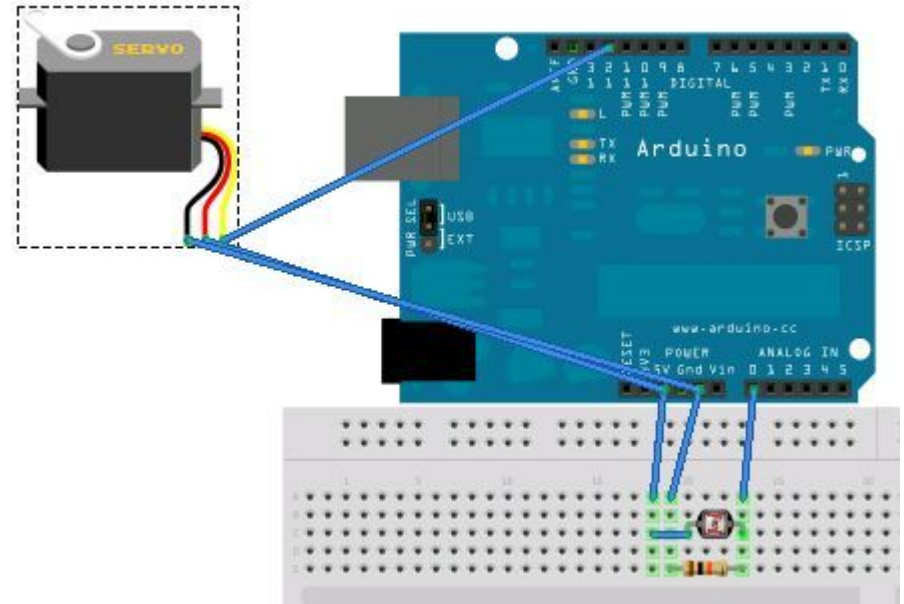
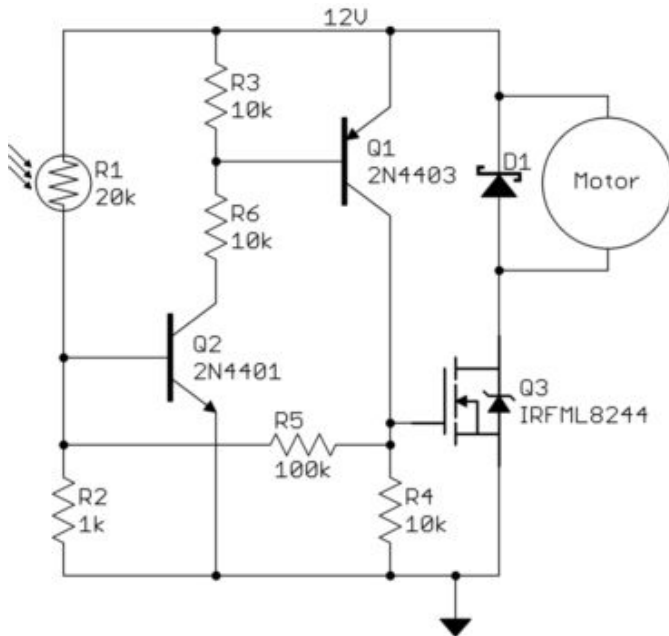
technical support assistance call : 1-855-596-2695 (USA-Canada)

Sensores

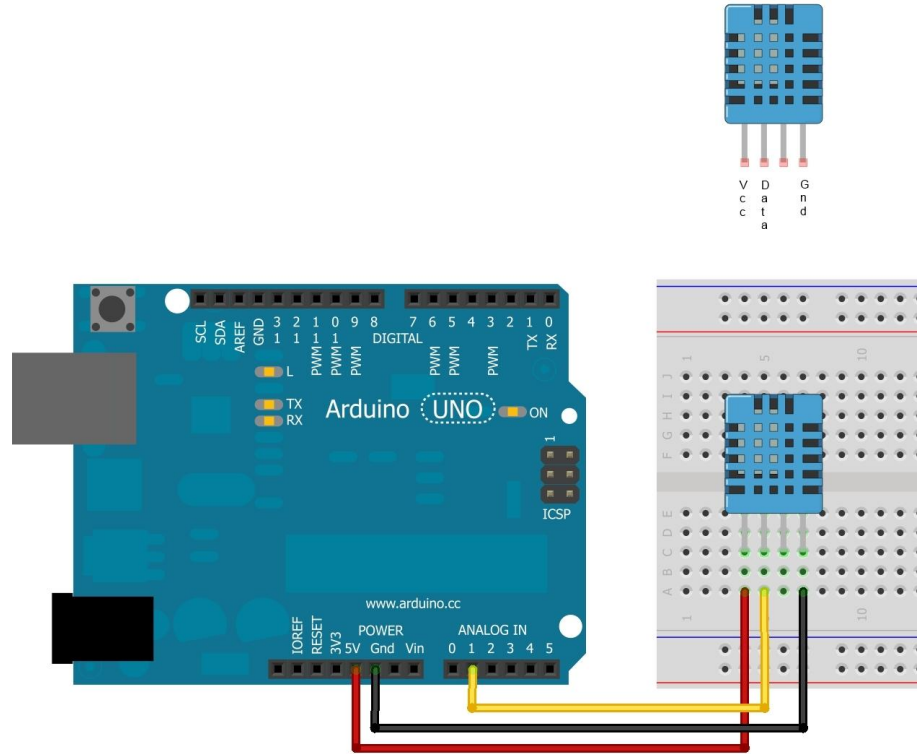
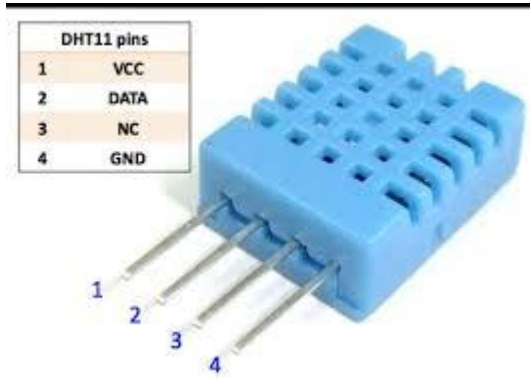
- Interface da "Matr
- Com a abstração sensores torna-se muito mais simpies



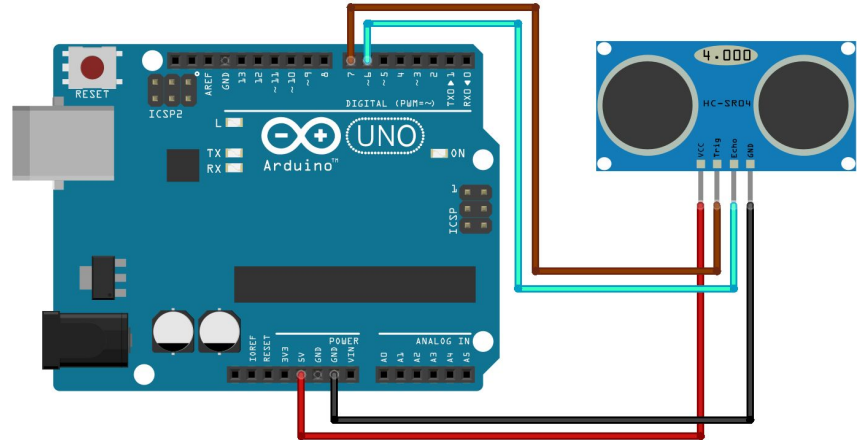
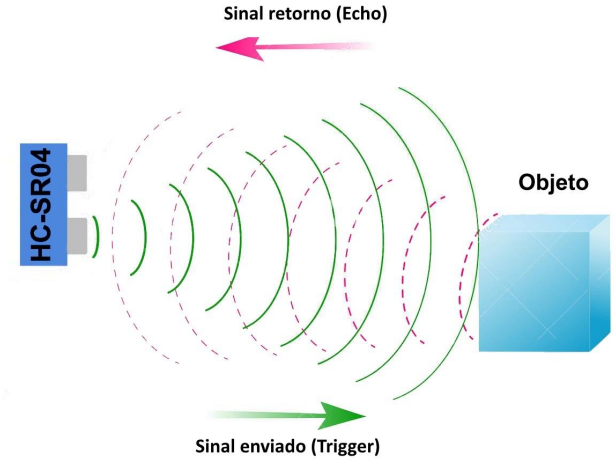
de prototipagem nos criam, usar



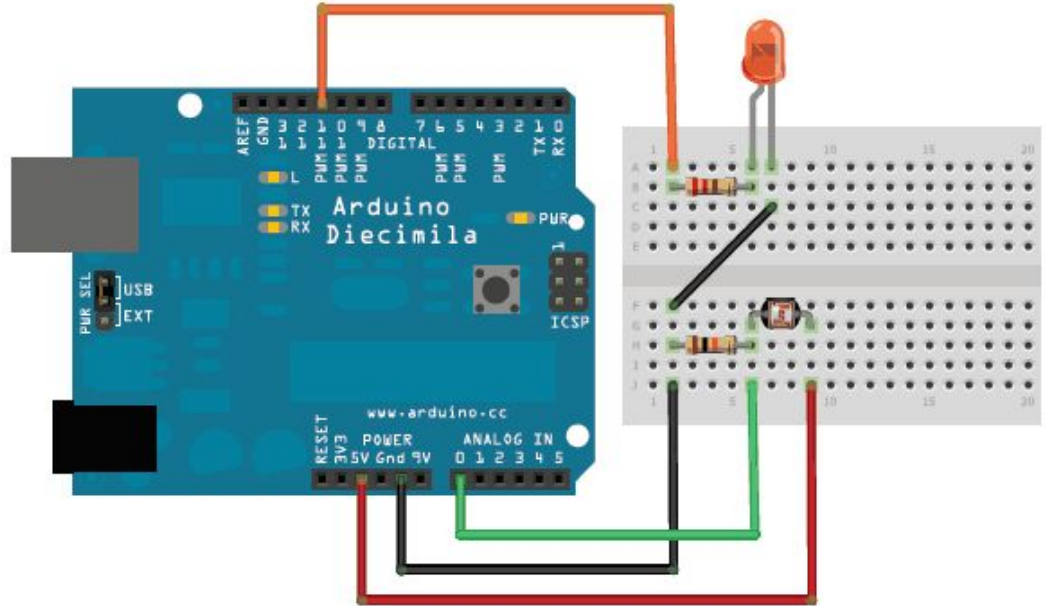
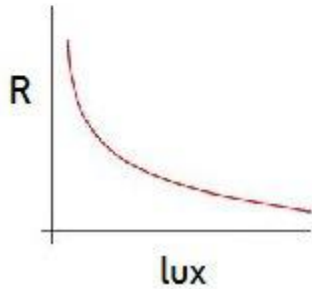
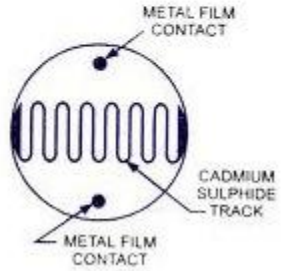
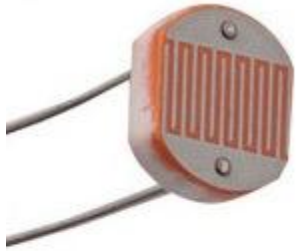
Sensor Temperatura DHT11



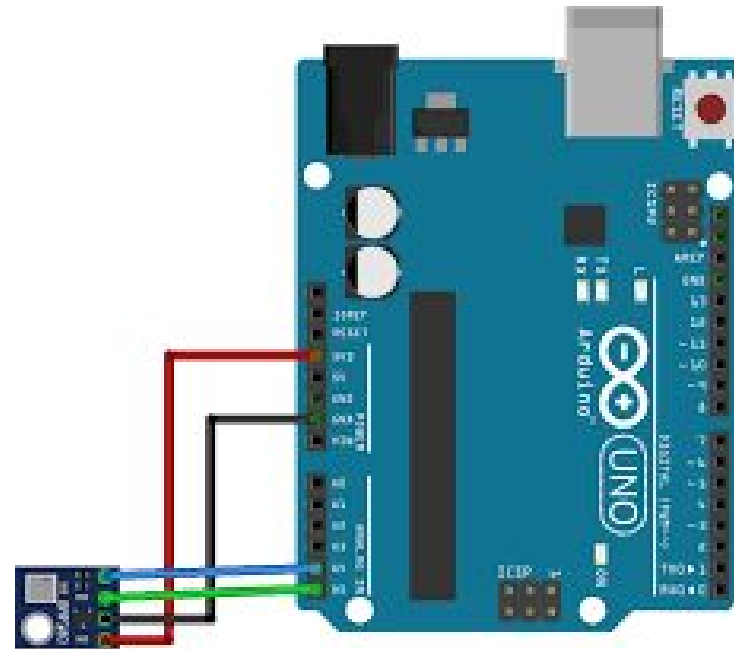
Sensor de Distância HC-SR 04



LDR (Light Dependent Resistor)

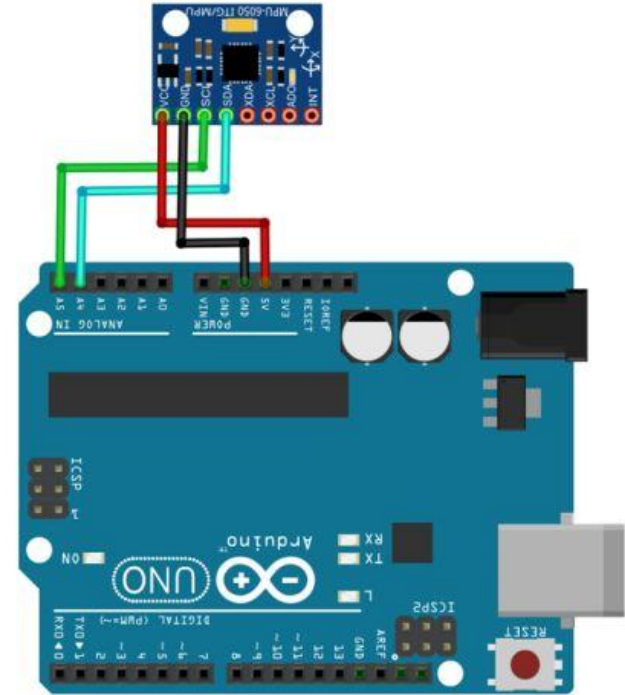
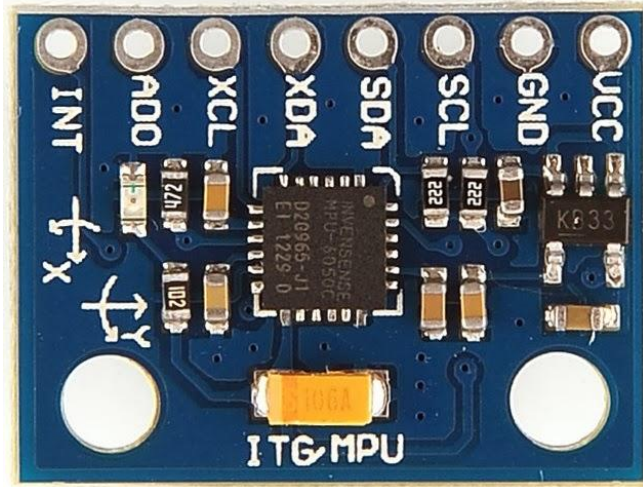


Sensor Barométrico e Temperatura BMP180



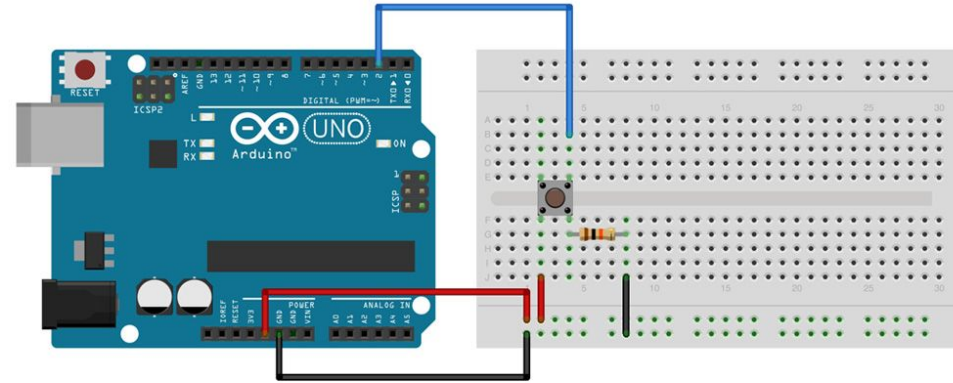
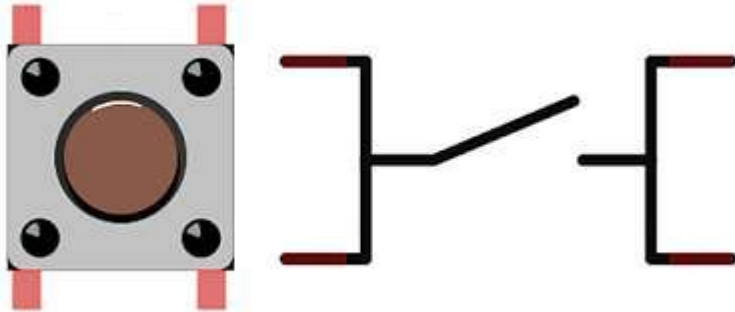
fritzing

Sensor acelerômetro MPU6050

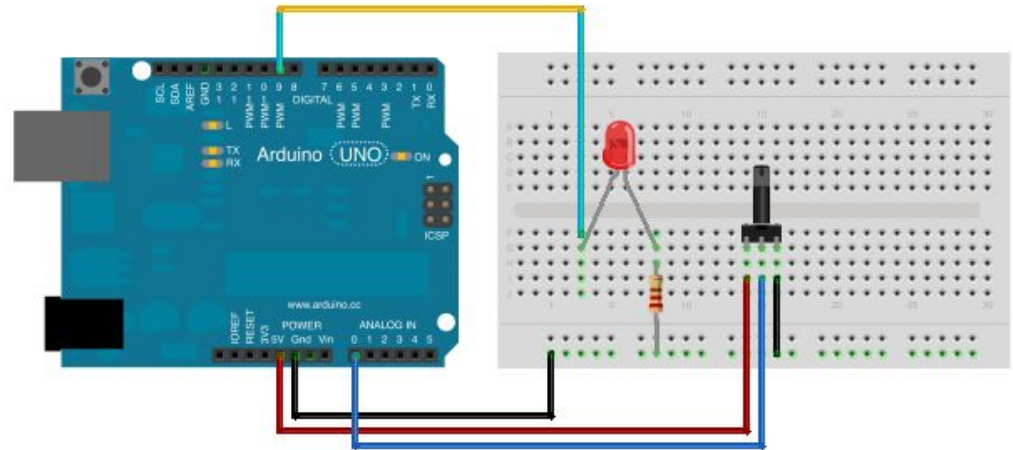
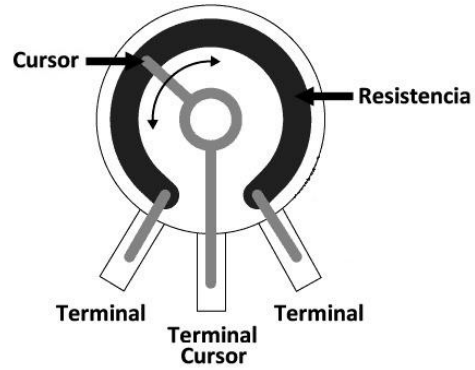


Interfaces

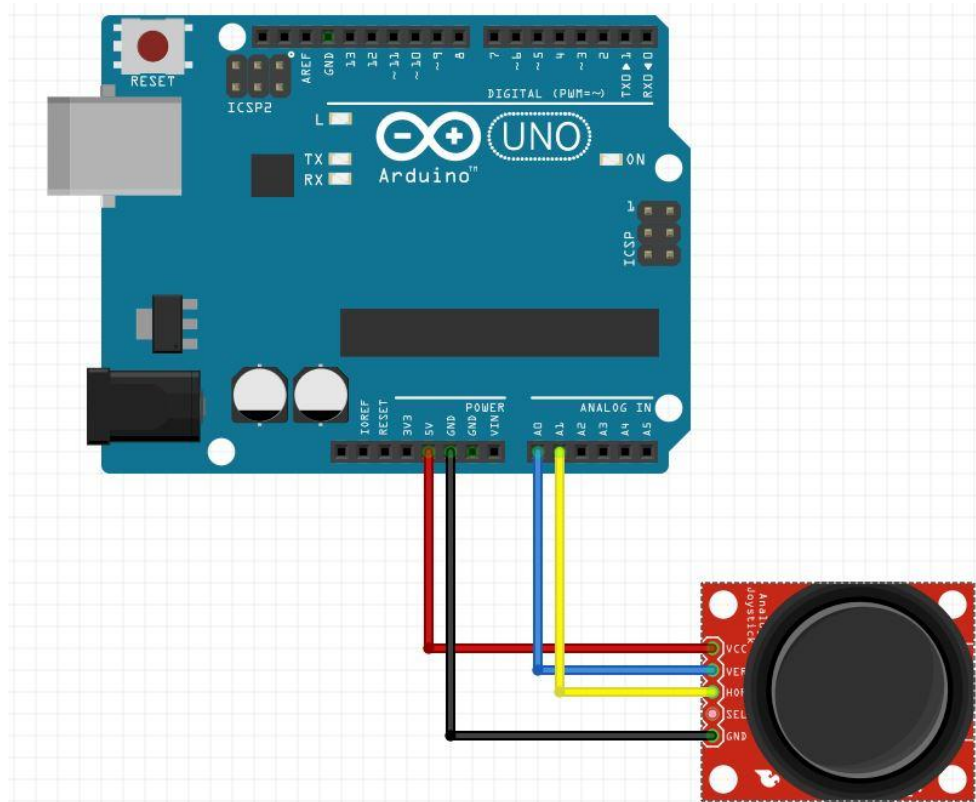
- Por onde podemos colocar ou receber informações em nossas criações



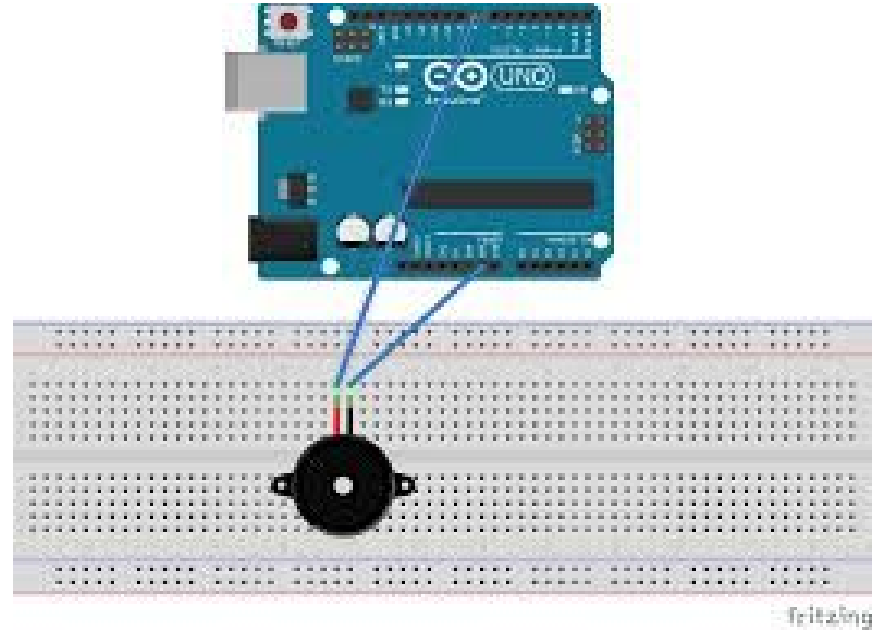
Potenciômetro



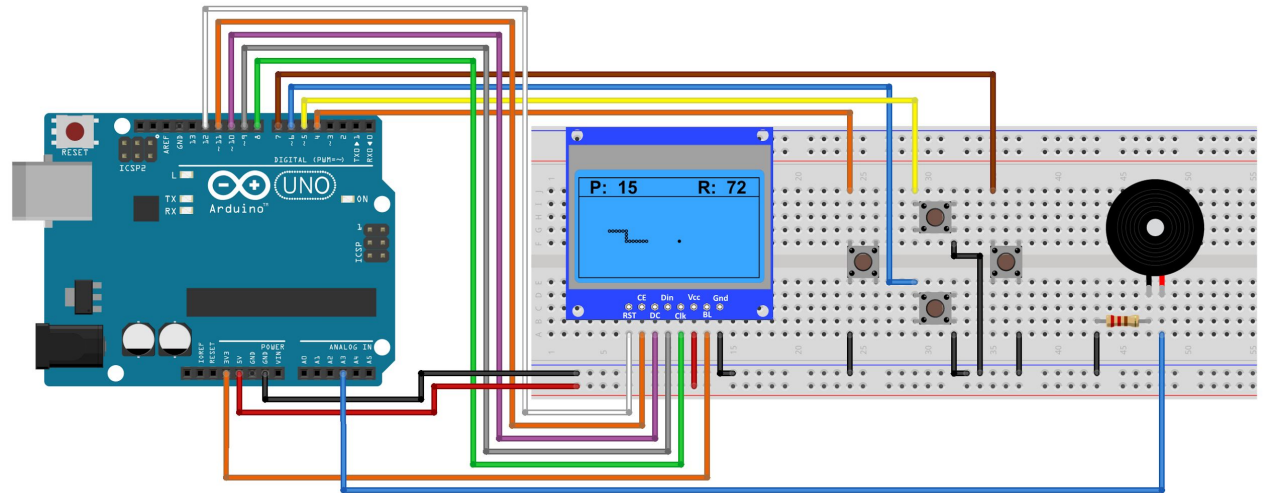
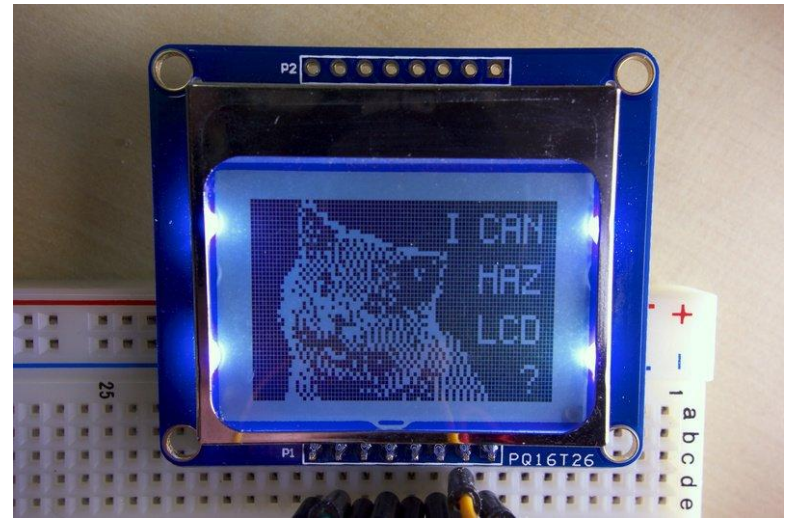
Uma variação legal do Potenciometro



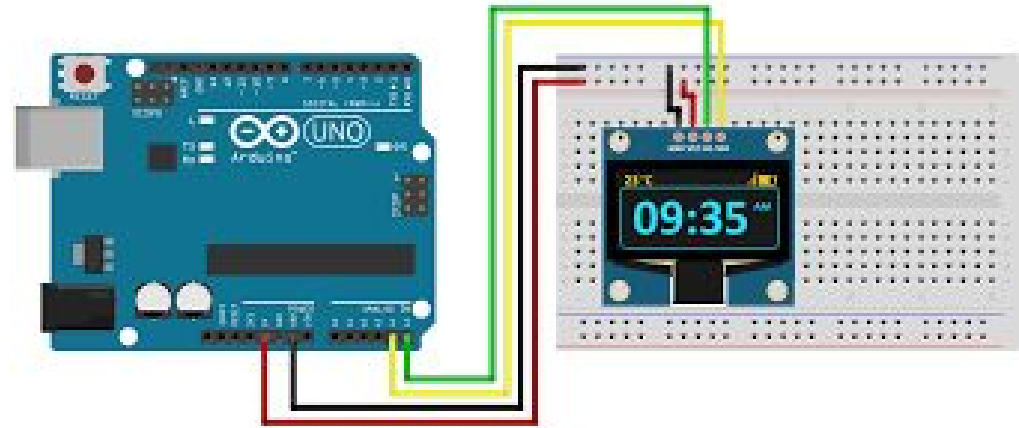
Speakers/Buzzers



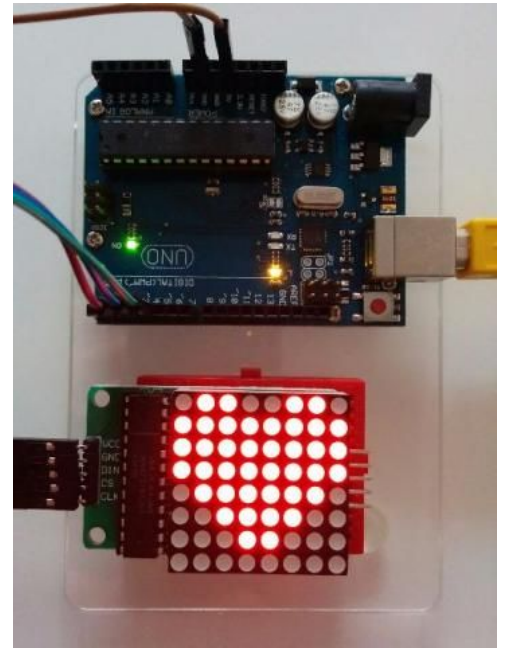
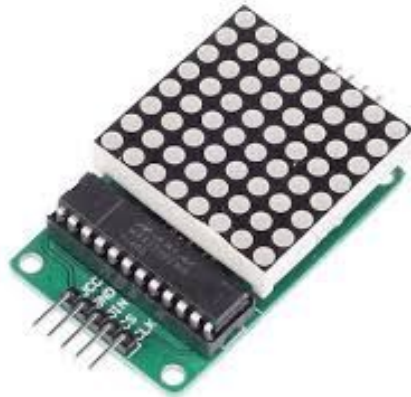
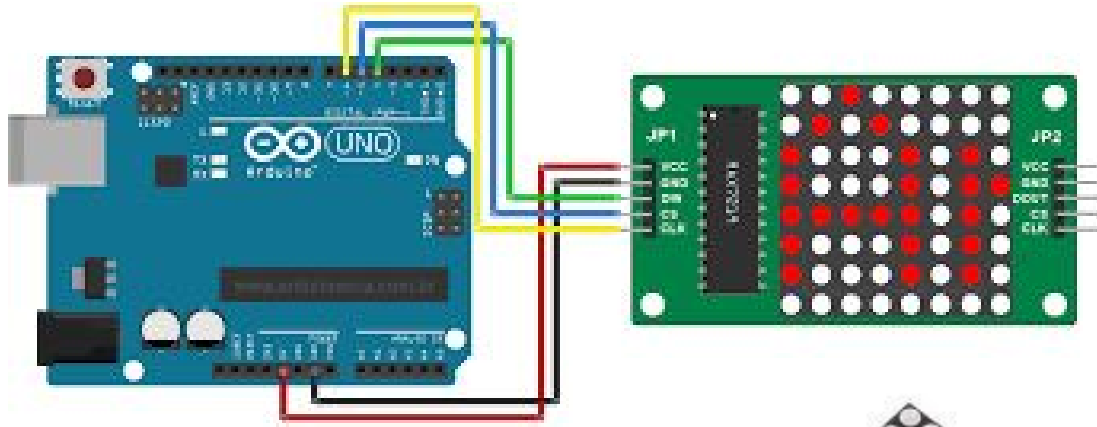
Tela LCD 5110



Mais telas



Display Led



Projetos legais!!! =)

- Existem além desses sensores atuadores falados, todo tipo de coisas imagináveis, desde shields de reconhecimento de voz, até interfaces para motores trifásicos!!



Exemplos Inspiradores



Videos

[The Artist and the Arduino: Robyn Farah \(TED\)](#)

[Pompom mirror](#)

[Color Injector](#)

[Transform Table](#)

[Useless Box](#)

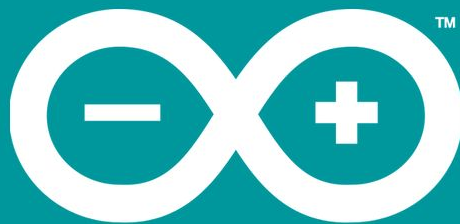
[Guitarduino](#)

[Reflection of the Age](#)

[Remixer](#)

[3D POV](#)

[POV Clock](#)



KEEP
CALM
AND
GIVE ME A
ARDUINO