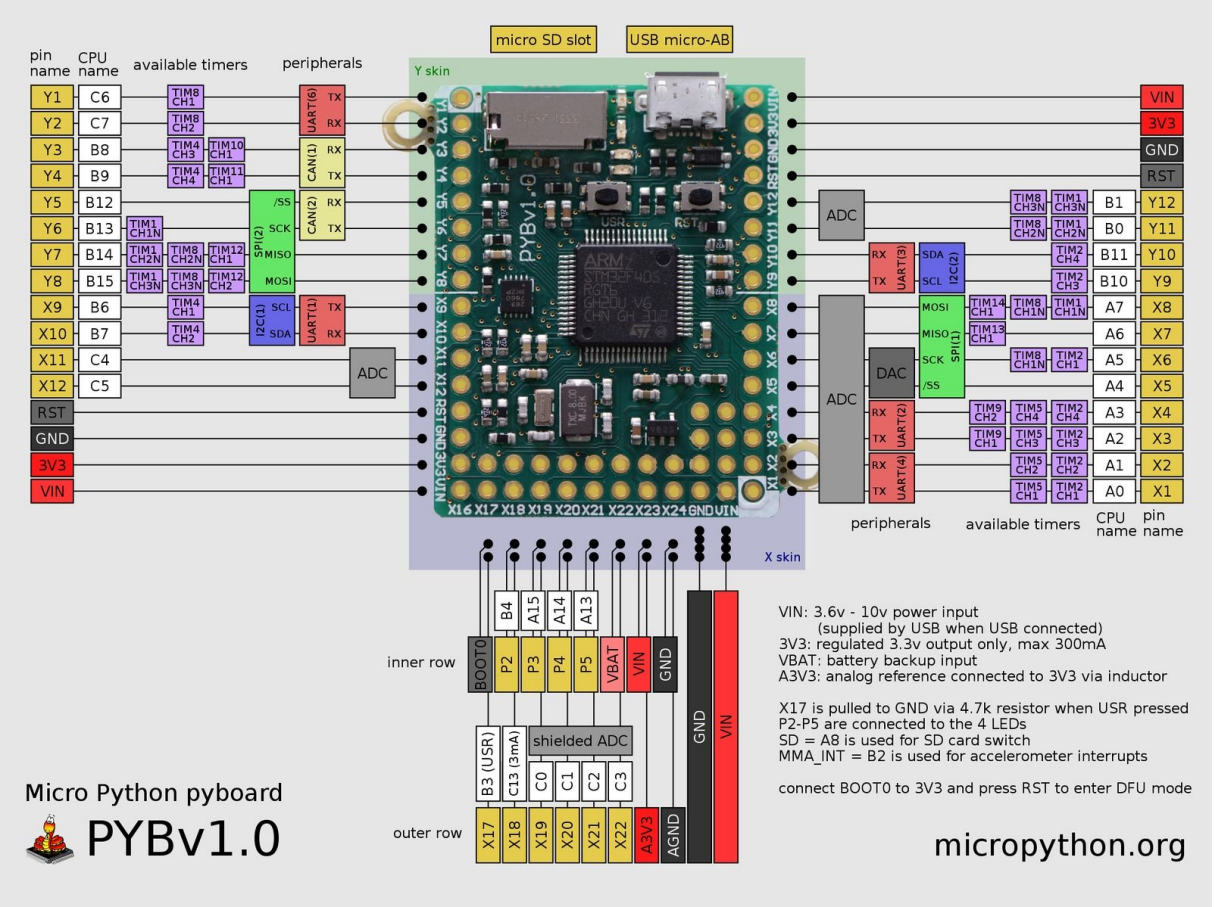
Micropython é um sub conjunto do python, direcionado a microcontroladores com menos recursos de processamento e armazenamento, é licenciado com a **The MIT License (MIT).**

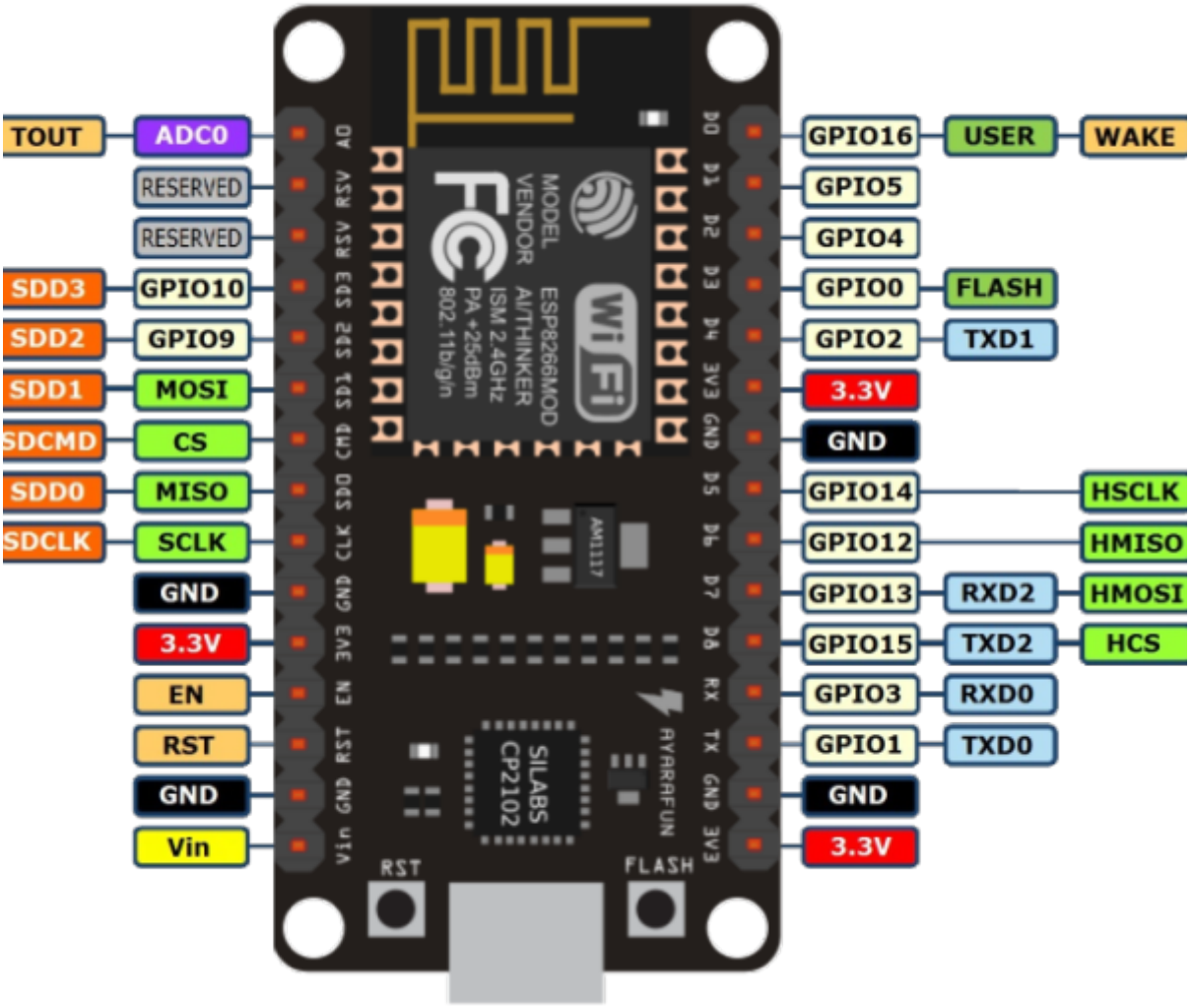


Main features of the hardware:

- **STM32F405RG microcontroller (ESP8266 Tensílica)**
- 168 MHz Cortex M4 CPU with hardware floating point
- 1024KiB flash ROM and 192KiB RAM
- Micro USB connector for power and serial communication
- Micro SD card slot, supporting standard and high capacity SD cards
- 3-axis accelerometer (MMA7660)
- Real time clock with optional battery backup
- 24 GPIO on left and right edges and 5 GPIO on bottom row, plus LED and switch GPIO available on bottom row
- 3x 12-bit analog to digital converters, available on 16 pins, 4 with analog ground shielding

- 2x 12-bit digital to analog (DAC) converters, available on pins X5 and X6
- 4 LEDs (red, green, yellow and blue)
- 1 reset and 1 user switch
- On-board 3.3V LDO voltage regulator, capable of supplying up to 250mA, input voltage range 3.6V to 16V
- DFU bootloader in ROM for easy upgrading of firmware
- Price: $35.00

Micropython foi criada originalmente para a placa Pybord, através de uma campanha pelo site Kickstarter em 2013.
O valor pretendido era de £15,000, mas a campanha alcançou o valor de £97,803.
Em 2016, foi lançada a campanha para portar para o ESP8266, com o valor alvo de £6,000, alcançou o valor de £28,534.



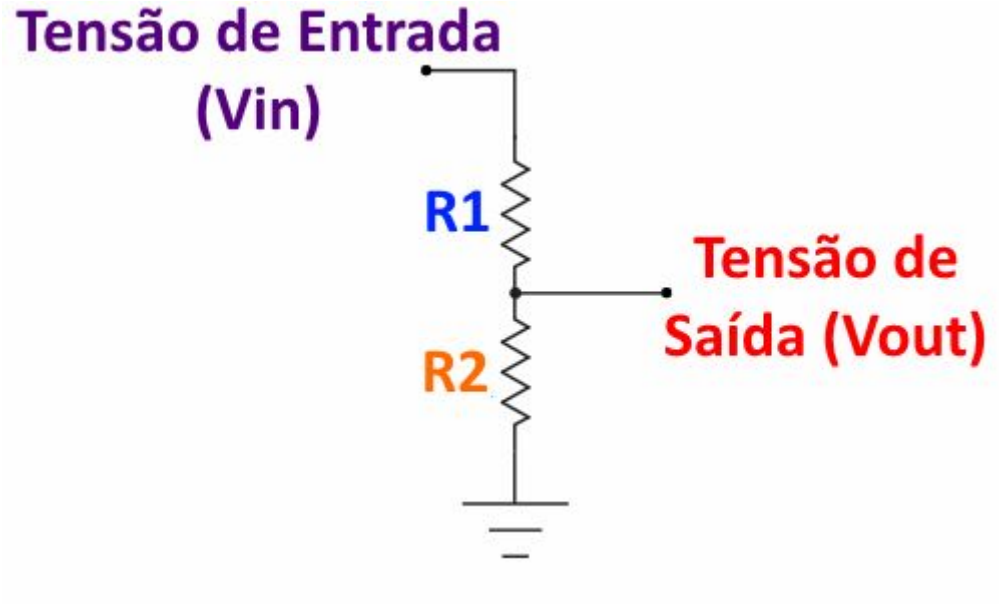
Python preferência 3.5+
Pacote

- Pip (sudo pip install --upgrade pip)
- esptool (pip install esptool)
- pyserial (pip install pyserial)
- uflash (pip install uflash)
- adafruit-ampy (pip install adafruit-ampy --upgrade) (https://learn.adafruit.com/micropython-basics-load-files-and-run-code/install-ampy)
- PyCharm com Plugin MicroPython
- picocom

- esptool.py --port /dev/ttyUSB0 erase_flash
- esptool.py --port /dev/ttyUSB0 --after hard_reset --baud 460800 write_flash --flash_size=detect 0 esp8266-20171101-v1.9.3.bin

Para acessar USB
sudo usermod -a -G dialout username

Ctrl A + Ctrl X sai do picocom
Ctrl D soft reset no picocom
Ctrl C interrompe script



TE = 5V
R1 = 4K
R2 = 1K
TS = 1V