ESP8266 - MICROPYTHON

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Contents

1 Config esp8266 with micropython

this istructions are usefull to connect your esp8266 to raspberry (ssh) and program in with esp8266 follw simple steps and join with esp8266

this tutorial are extrace from micropython wiki

2 Dictionary

- firmaware
- bootloader
- driver

3 System:

```
echo "hi, I'm:"
uname -s
echo "my brain is:"
uname -v
```

Plug and unplug your CH340 device from the USB port and use *dsmeg* command to see what appened.

4 Connections:

Connctiong with machines were ESP are attached and controll if you have installad **driver for esp8266 (ch340)** (install driver are the most critical operation, for more info follow link)

```
ssh pi@<ip> ;; (view ./ssh/config)

:: for rasbian use this to downlaod driver
sudo apt update
sudo apt upgrate

:: attached esp8266 with (ch340)
dmesg  :: view where esp are attached
ls /dev/tty*  ;; look for /dev/ttyUSB0
```

5 esptool.py

Install esptoo.py, this software comunicate with rom and erase/update firmware. To install that open terminal and use python packets maneger. (use latest python version 3.7)

```
pip install esptoo.py
```

usefull command

```
esptool.py chip_id
esptool.py ...
esptool-py -h :: for more info
```

with chip_{id} controll the memory of esp chip, with this information intall the true firmaware

6 Seconds

in this step we cancell last firmaware, to upload micropython interpreter download form this Link latest firmware, then upload.

```
esptool.py --port /dev/ttyUSB0 erase_flash

;; upload micropython
esptool.py --port /dev/ttyUSB0 --baud 460800 write_flash --flash_size=detect 0 esp8266
```

7 therd

open a REPL terminal (inline interpreter python for esp8266) with this line

```
picocom /dev/ttyUSB0 -b115200
```

now, put inside a python code e walla :). in the following examples we settings a real time clock (RTC) with ntp server.

```
from machine import RTC
import ntptime
rtc = RTC()
ntptime.setting()
rtc.datatime()
```

in the next simple example, how to send data with tcp socket

```
...
```