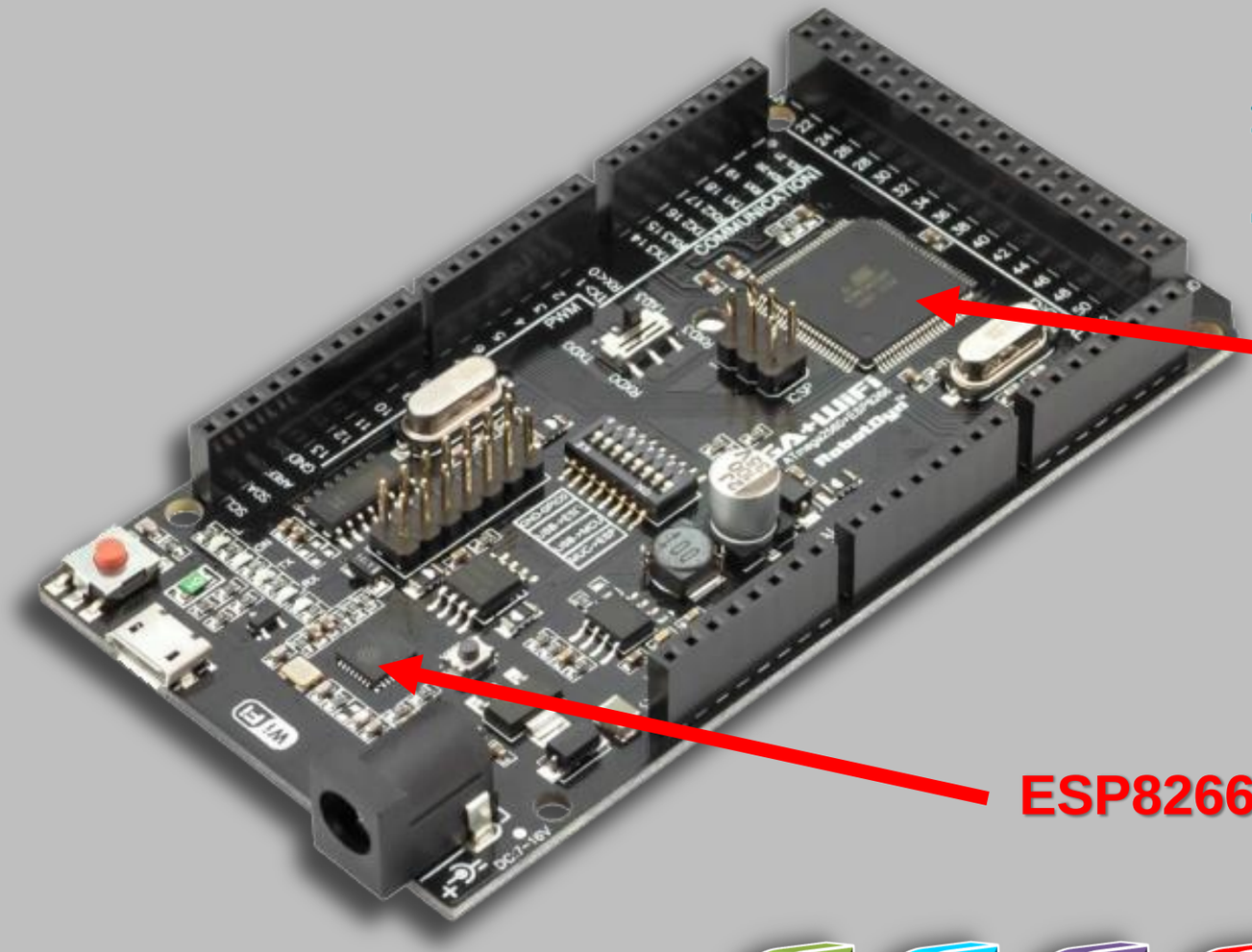
Arduino MEGA 2560 com WIFI Embutido ESP8266 32MB de memória

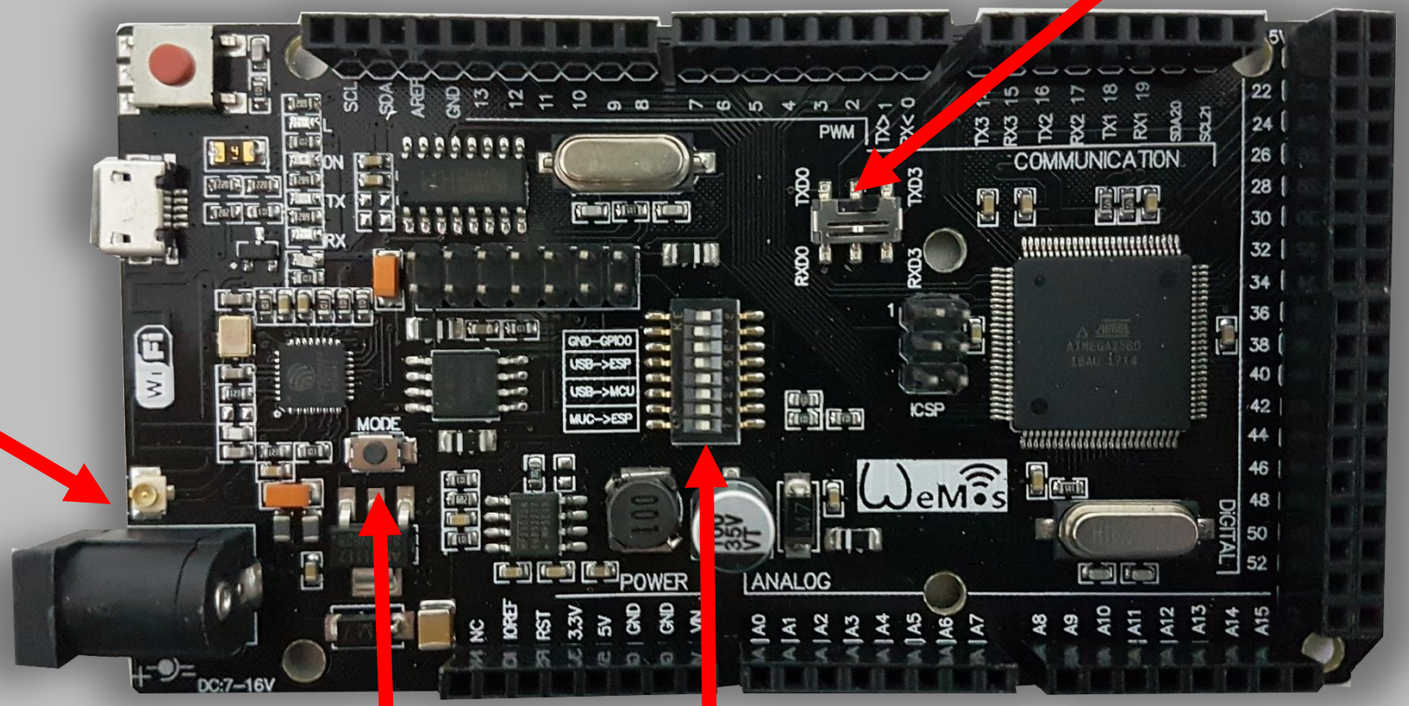


ARDUINO IDE

Por Fernando Koyanagi

HSMi

Características físicas da placa



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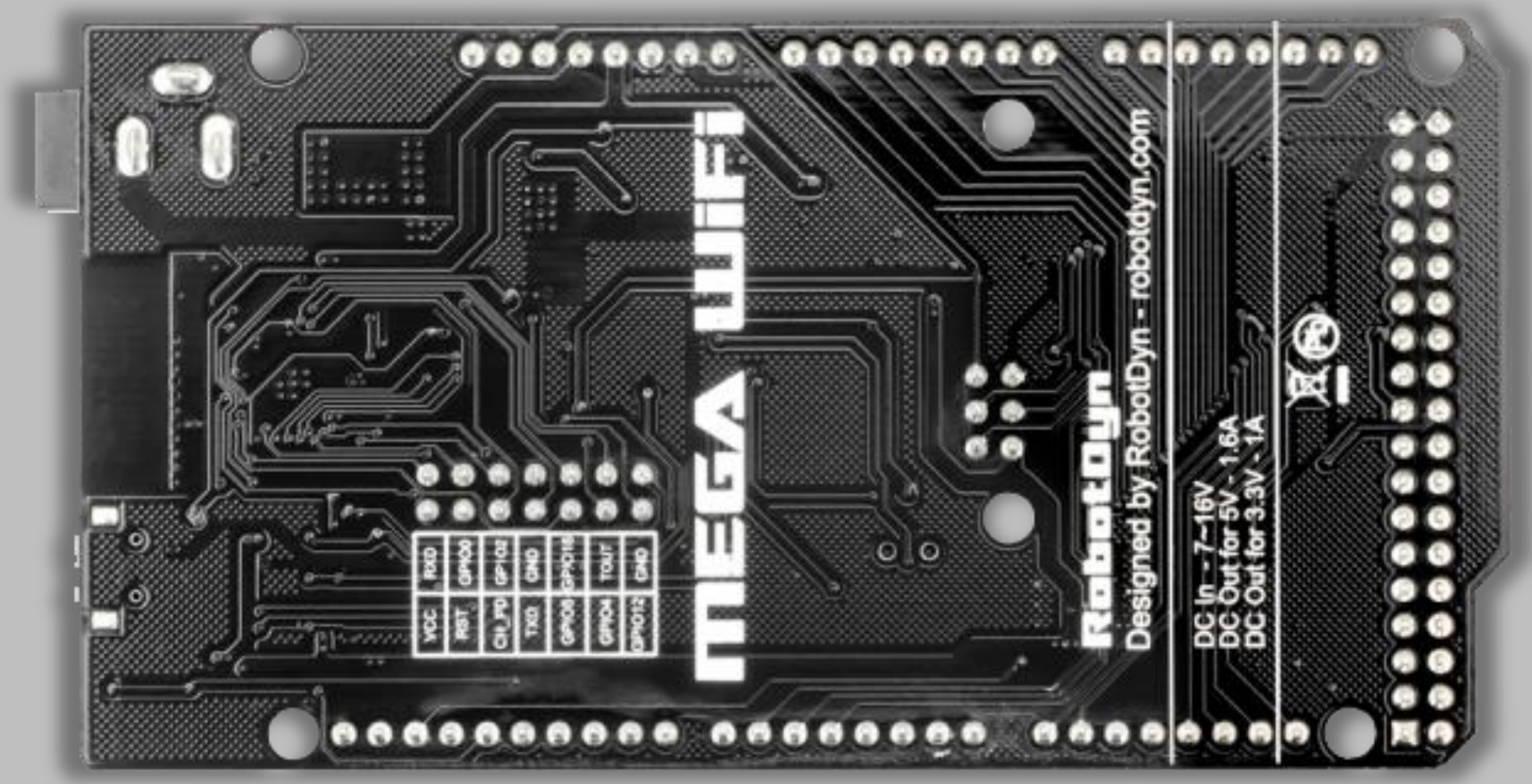
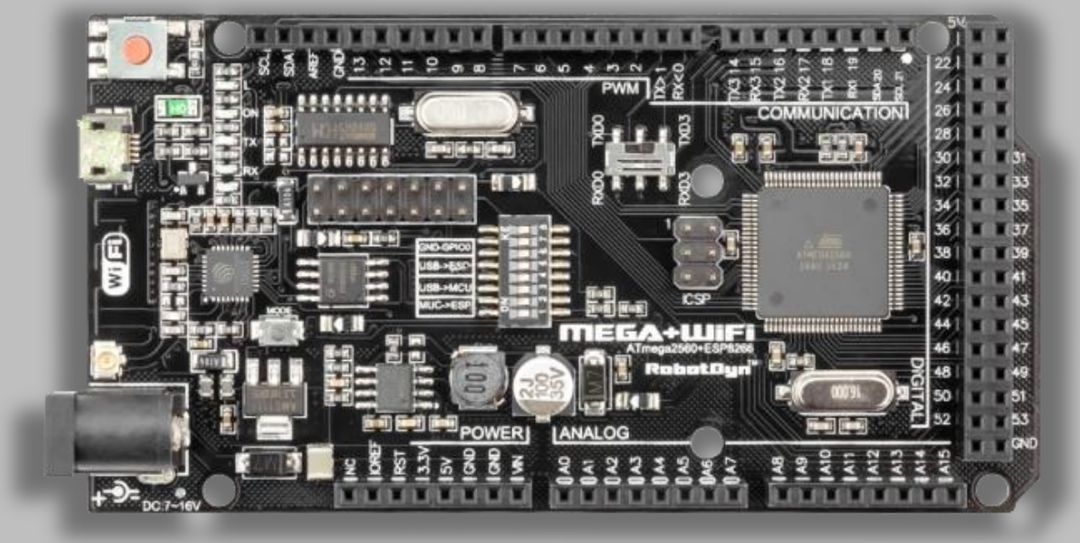
Acesso aos pinos do ESP8266

VCC	RXD
RST	GPIO0
CH_PD	GPIO02
TXD	GND
GPIO5	GPIO16
GPIO4	TOUT
GPIO12	GND

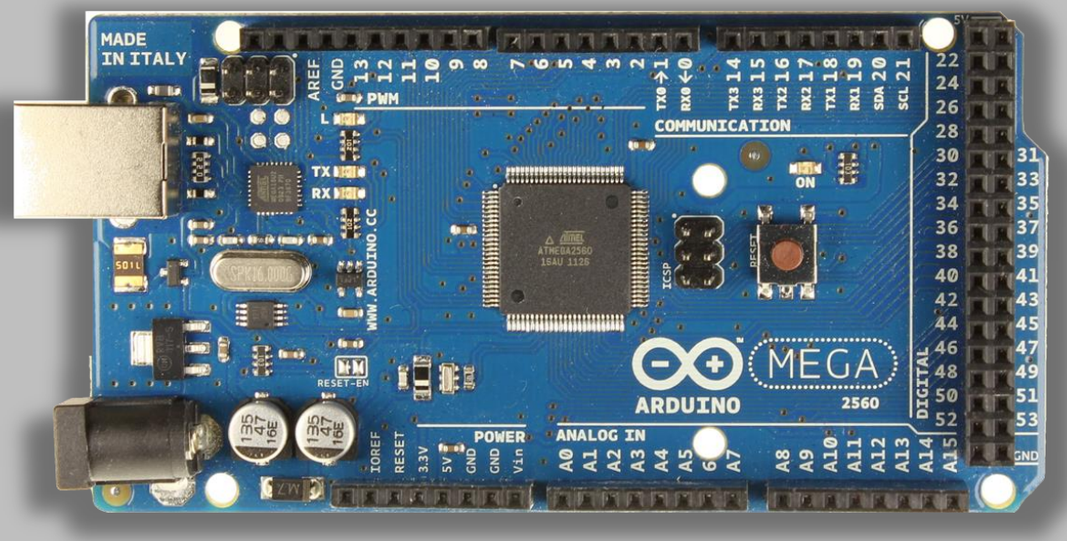


Comparando os dois Arduinos

Arduino Mega RobotDyn



Arduino Mega 2560

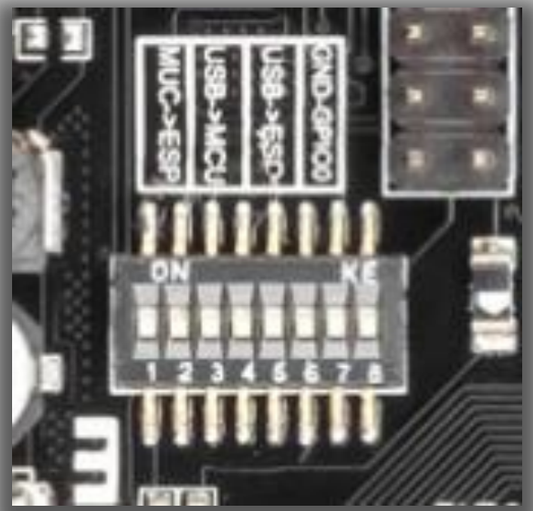


Comparando os dois Arduinos

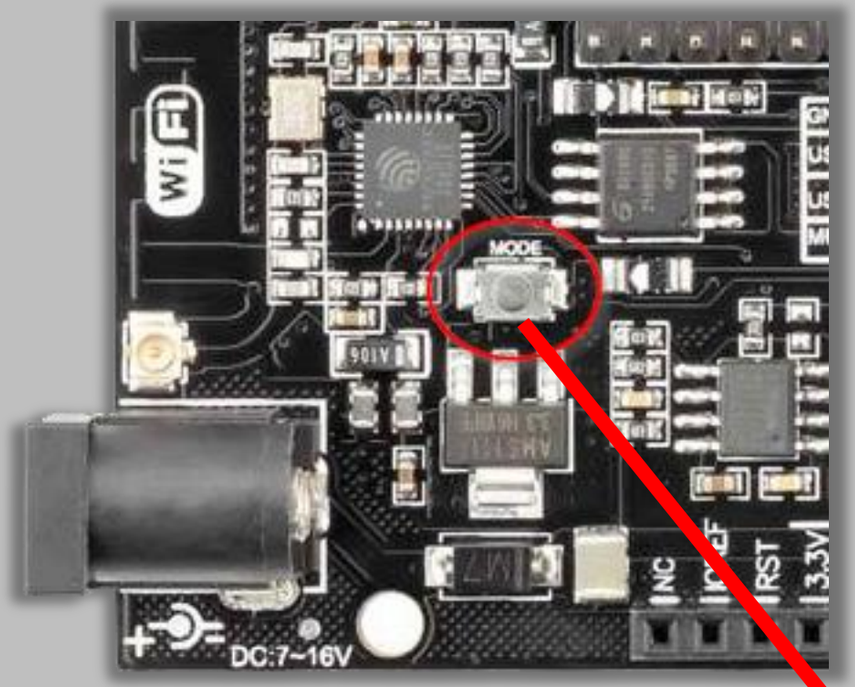
Arduino	Processor	Operating/Input Voltage	CPU Speed	Analog In/Out	Digital IO/PWM	EEPROM [kB]	SRAM	Flash [kB]	USB	UART
Uno	ATmega328P	5 V / 7-12 V	16 MHz	6/0	14/6	1kb	2kb	32kb	Regular	1
Mega 2560	ATmega2560	5 V / 7-12 V	16 MHz	16/0	54/15	4kb	8kb	256kb	Regular	4
RobotDyn	ATmega2560 Esp8266	5 V / 7-12 V 3v3	16 MHz 80 MHz	16/0 1/0	54/15	4kb	8kb 64kb	32Mb 8Mb	CH340G	4 1/wifi

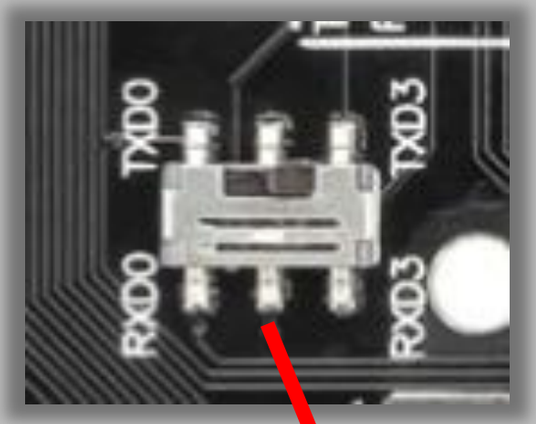
Switch status and mode selection:

	1	2	3	4	5	6	7	8
CH340 connect to ESP8266 (upload sketch)	OFF	OFF	OFF	OFF	ON	ON	ON	NoUSE
CH340 connect to ESP8266 (connect)	OFF	OFF	OFF	OFF	ON	ON	OFF	NoUSE
CH340 connect to ATmega2560 (upload sketch)	OFF	OFF	ON	ON	OFF	OFF	OFF	NoUSE
CH340 connect to Mega2560 COM3 connect to ESP8266	ON	ON	ON	ON	OFF	OFF	OFF	NoUSE
Mega2560+ESP8266	ON	ON	OFF	OFF	OFF	OFF	OFF	NoUSE
All modules work independed	OFF	OFF	OFF	OFF	OFF	OFF	OFF	NoUSE

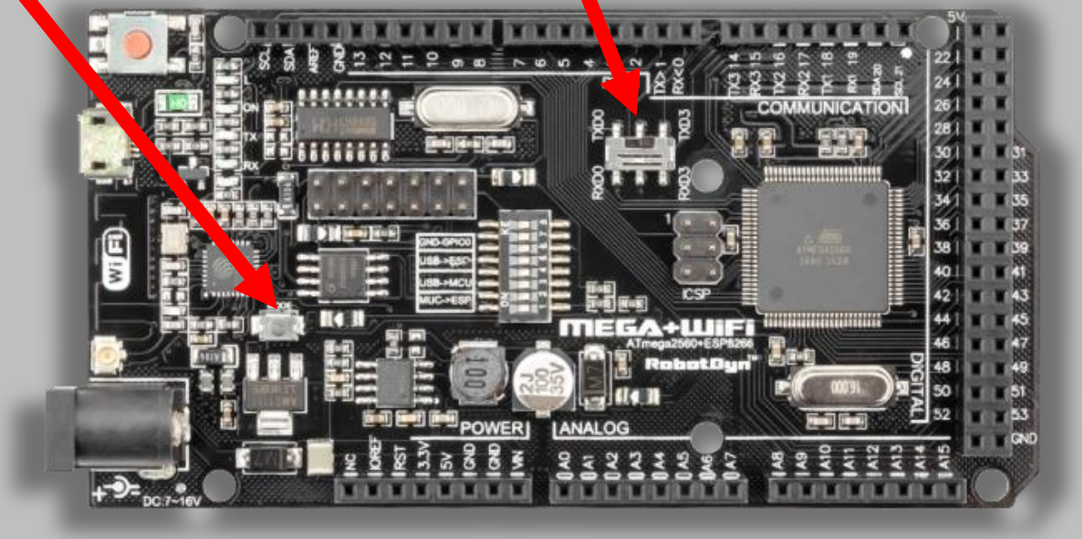


Pressionar para gravar o ESP8266



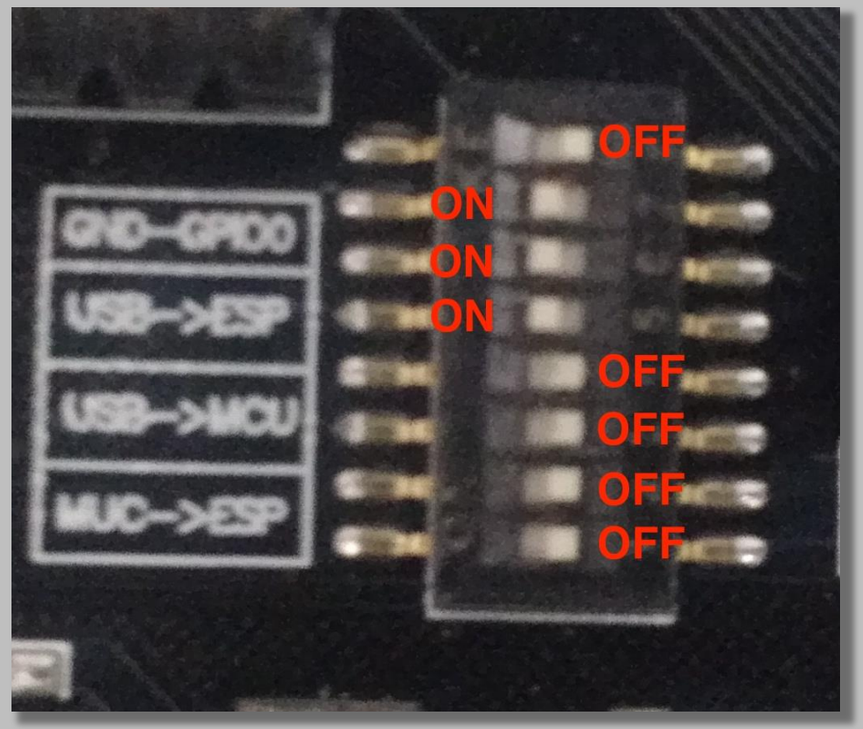


Muda a porta serial do Arduino Mega que se conecta ao ESP8266



Instalação Firmware AT

Caso queira utilizar o esp8266 em modo AT, faça o download deste arquivo. Agora você deve configurar a placa de modo que o esp8266 fique conectado à usb e em modo de gravação. Para isso coloque os switches 5, 6 e 7 em ON (esquerda) e todos os outros em OFF (direita).



Instalação Firmware AT

Caso queira utilizar o esp8266 em modo AT, você deverá configurar o Flash Download Tool da seguinte maneira:

SPI Speed = 80MHz

SPI Mode = DIO

Flash Size = 32Mbit **4mb bytes x 8 bits=32m bits**

Crystal Freq = 26M

Arquivo \bin\esp_init_data_default.bin no endereço 0x3fc000

Arquivo \bin\blank.bin no endereço 0x37e000

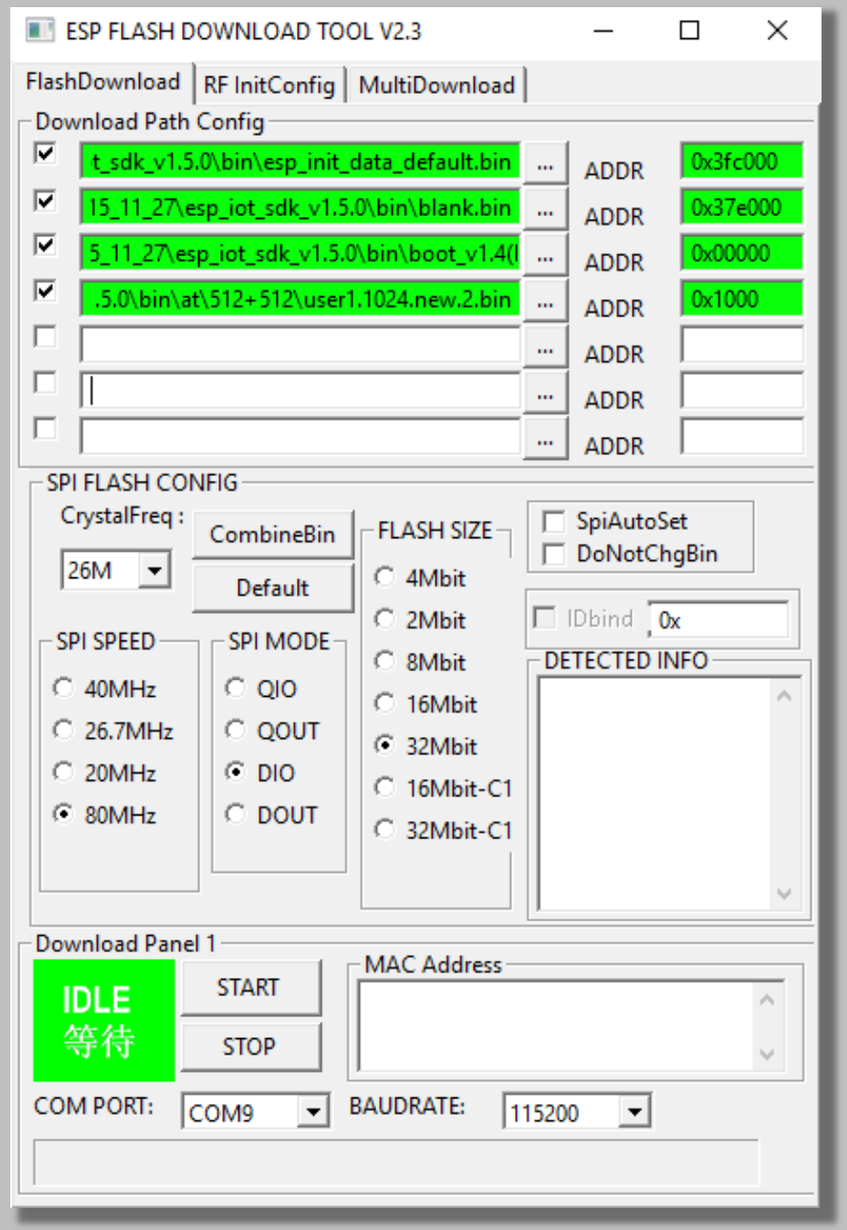
Arquivo \bin\boot_v1.4(b1).bin no endereço 0x00000

Arquivo \bin\at\512+512\user1.1024.new.2.bin no endereço 0x1000

Verificando Firmware AT

```
C:\Python27\Scripts>esptool.exe --port COM9 flash_id
esptool.py v2.1
Connecting....
Detecting chip type... ESP8266
Chip is ESP8266
Uploading stub...
Running stub...
Stub running...
Manufacturer: c8
Device: 4016
Detected flash size: 4MB
Hard resetting...
```

Exemplo

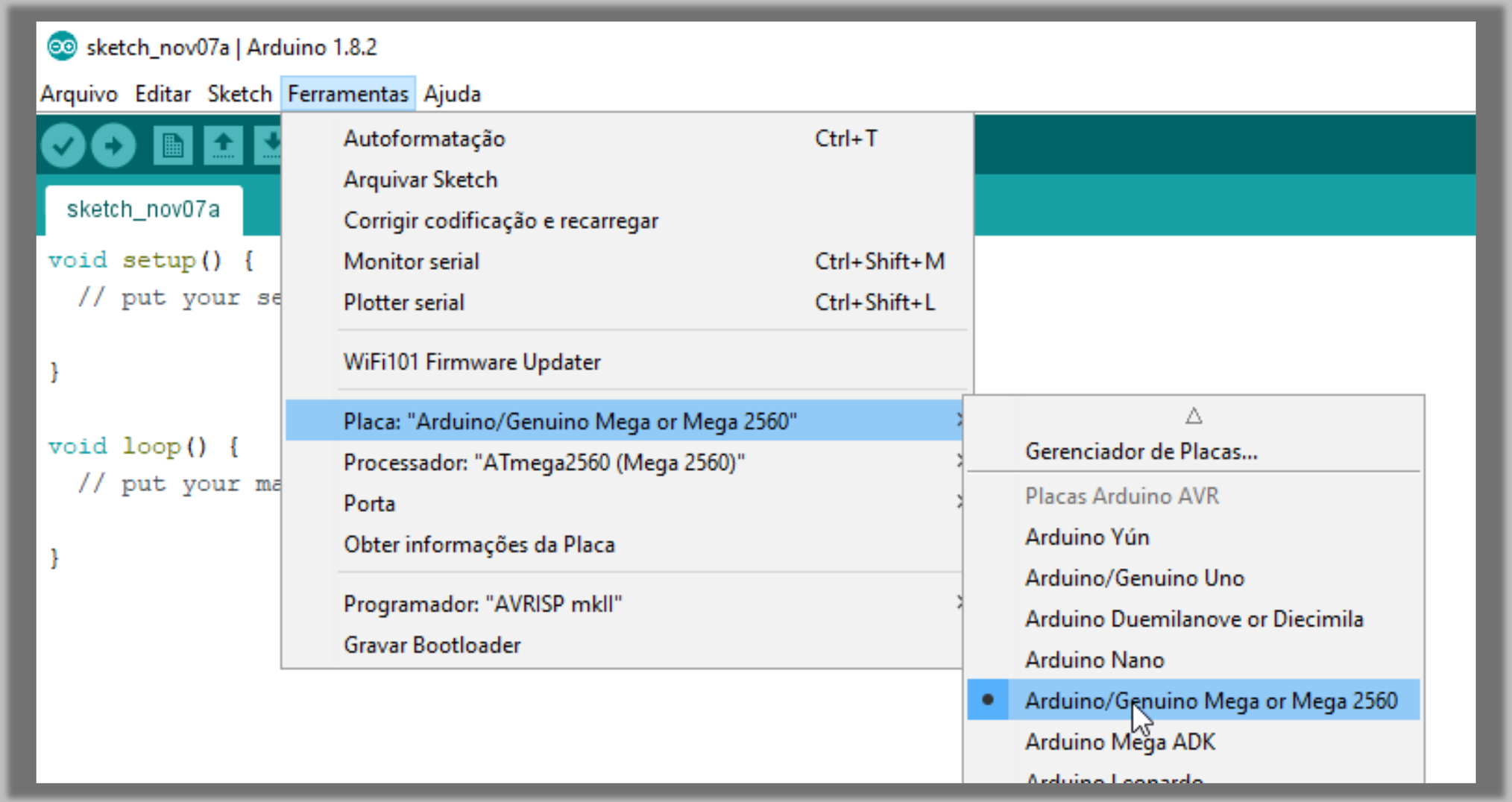


Assista !

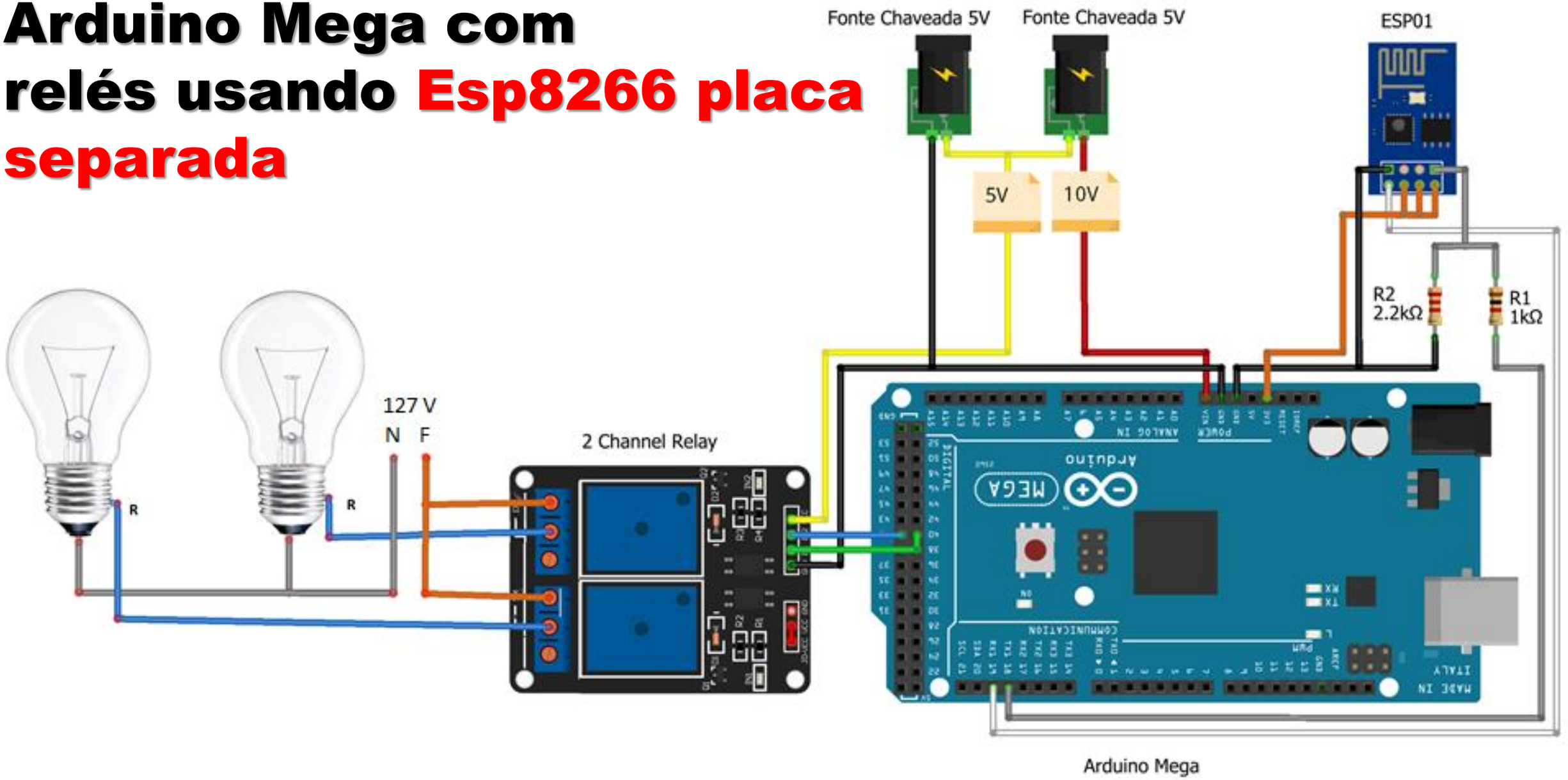
Gravando no [ESP-01]

Introdução ao [ESP8266]

Configurar Ambiente Arduino IDE

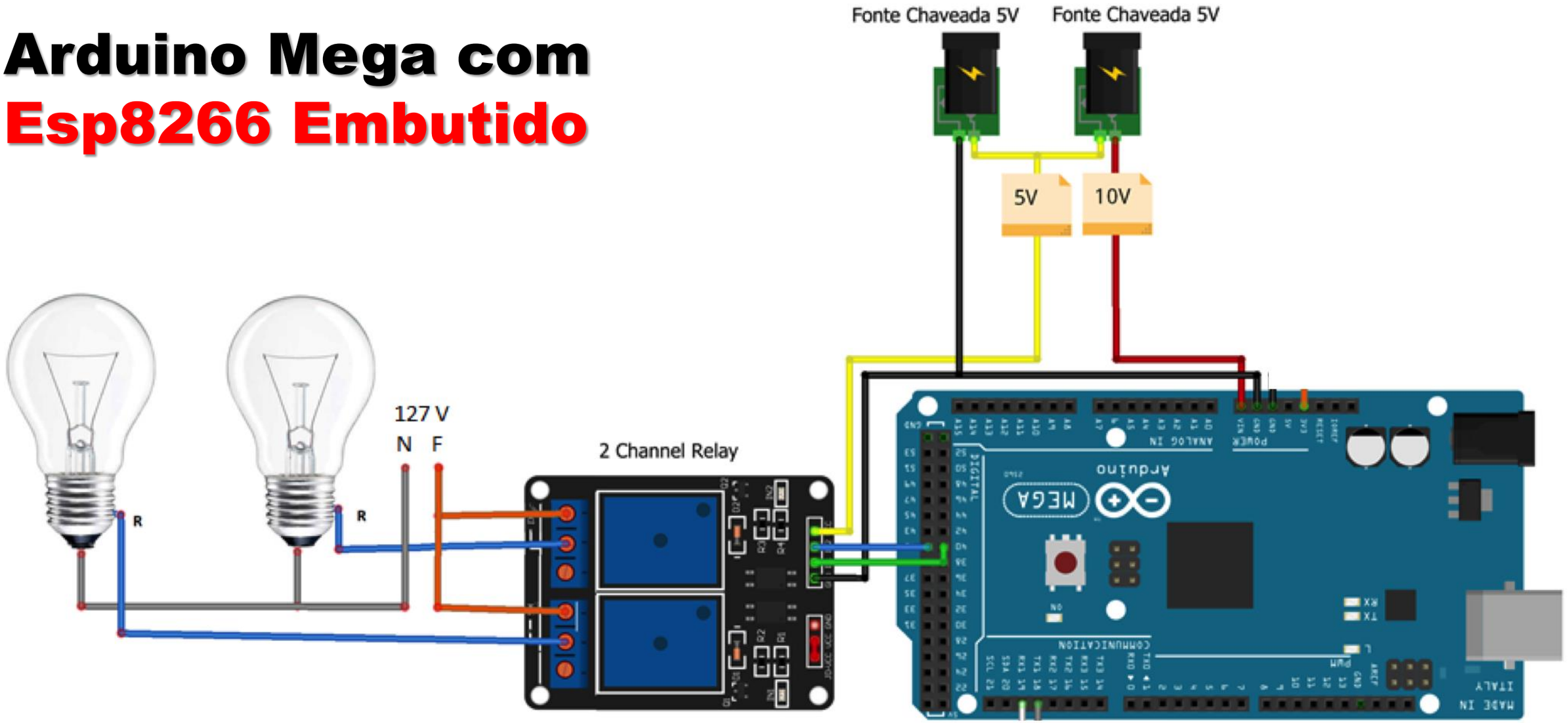


Arduino Mega com relés usando Esp8266 placa separada



Assista esse vídeo

Arduino Mega com Esp8266 Embutido



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