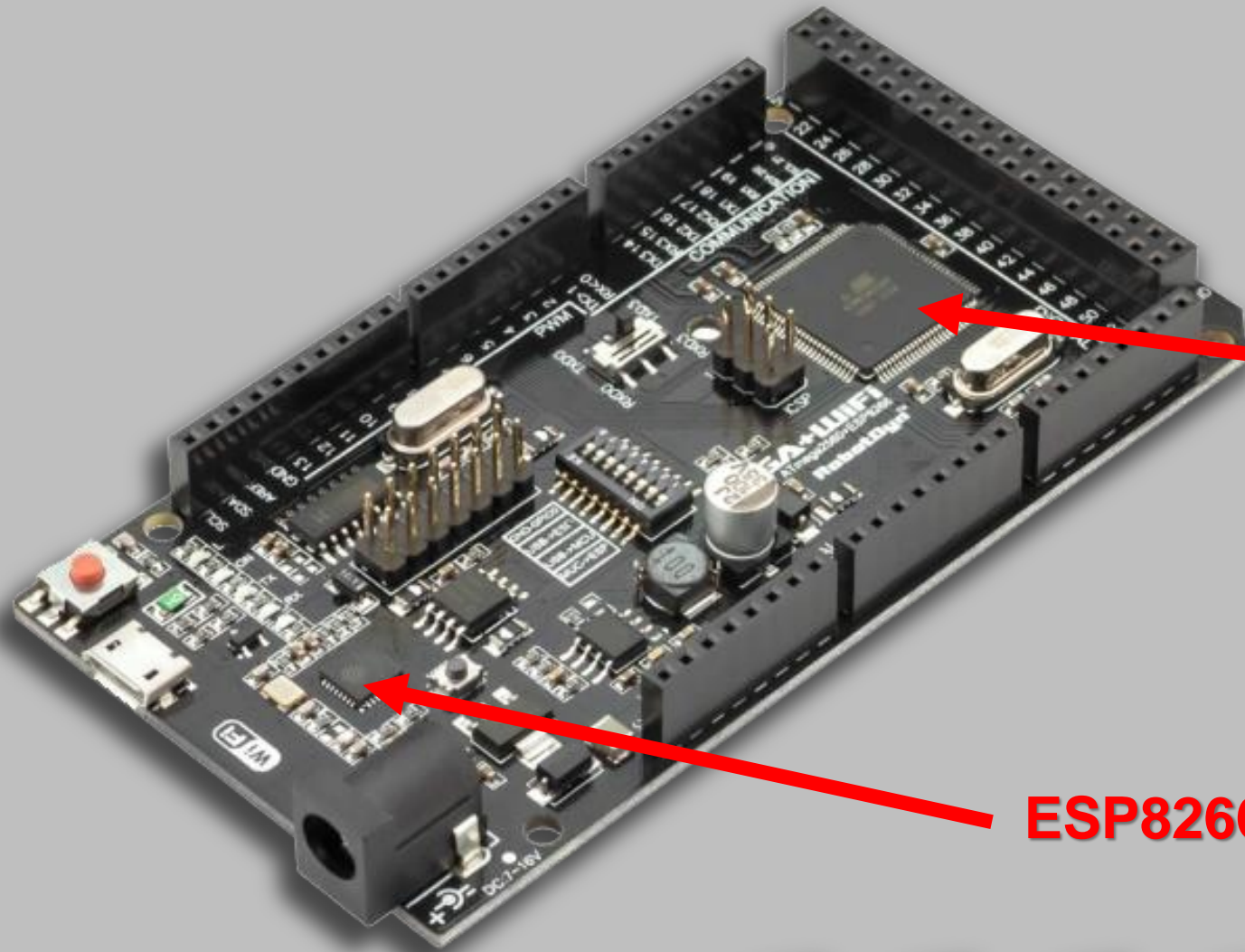


Arduino MEGA 2560 com WIFI Embutido ESP8266 32MB de memória



ARDUINO
IDE

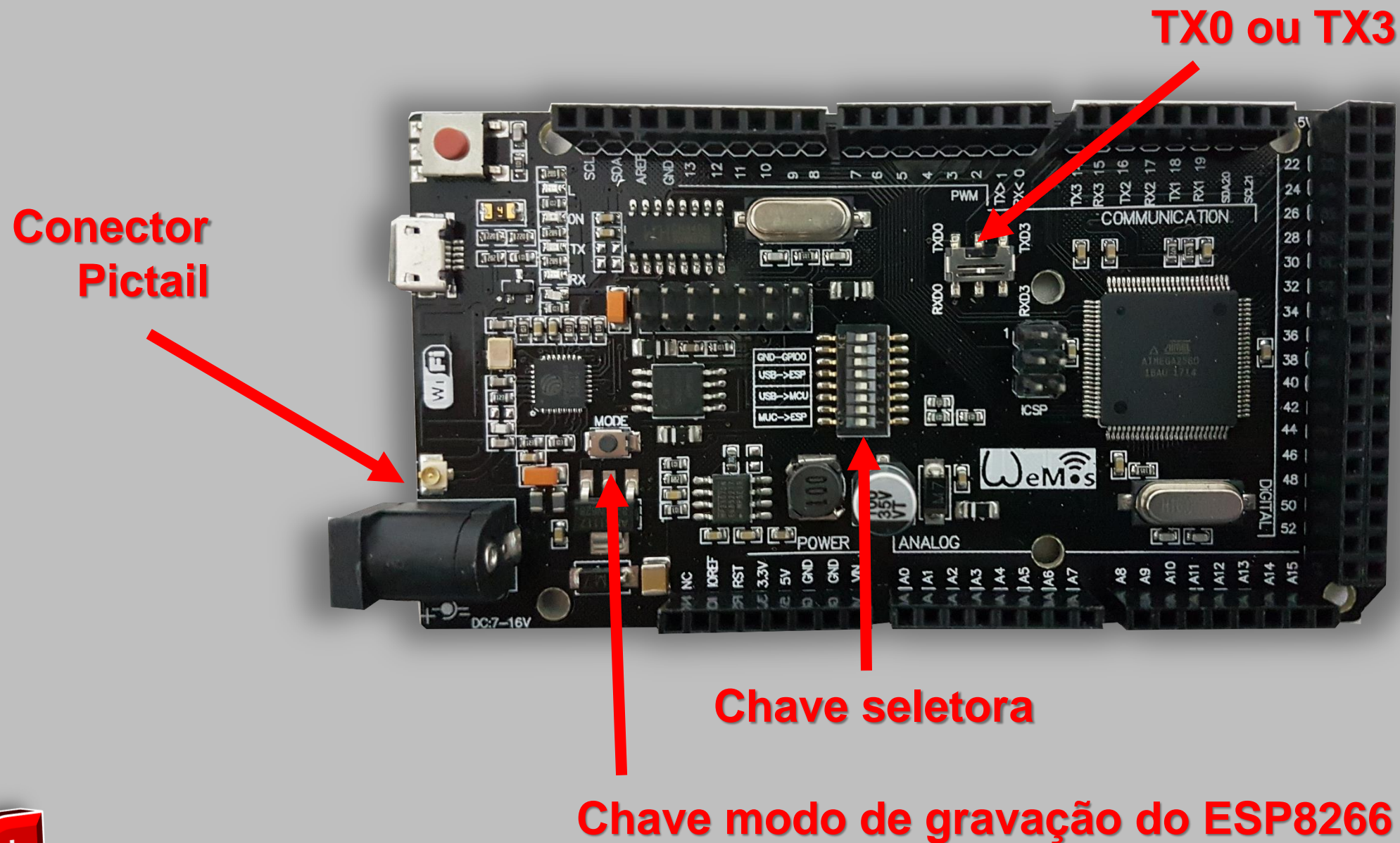
Atmega2560

ESP8266

Por Fernando Koyanagi



Características físicas da placa



Em www.fernandok.com

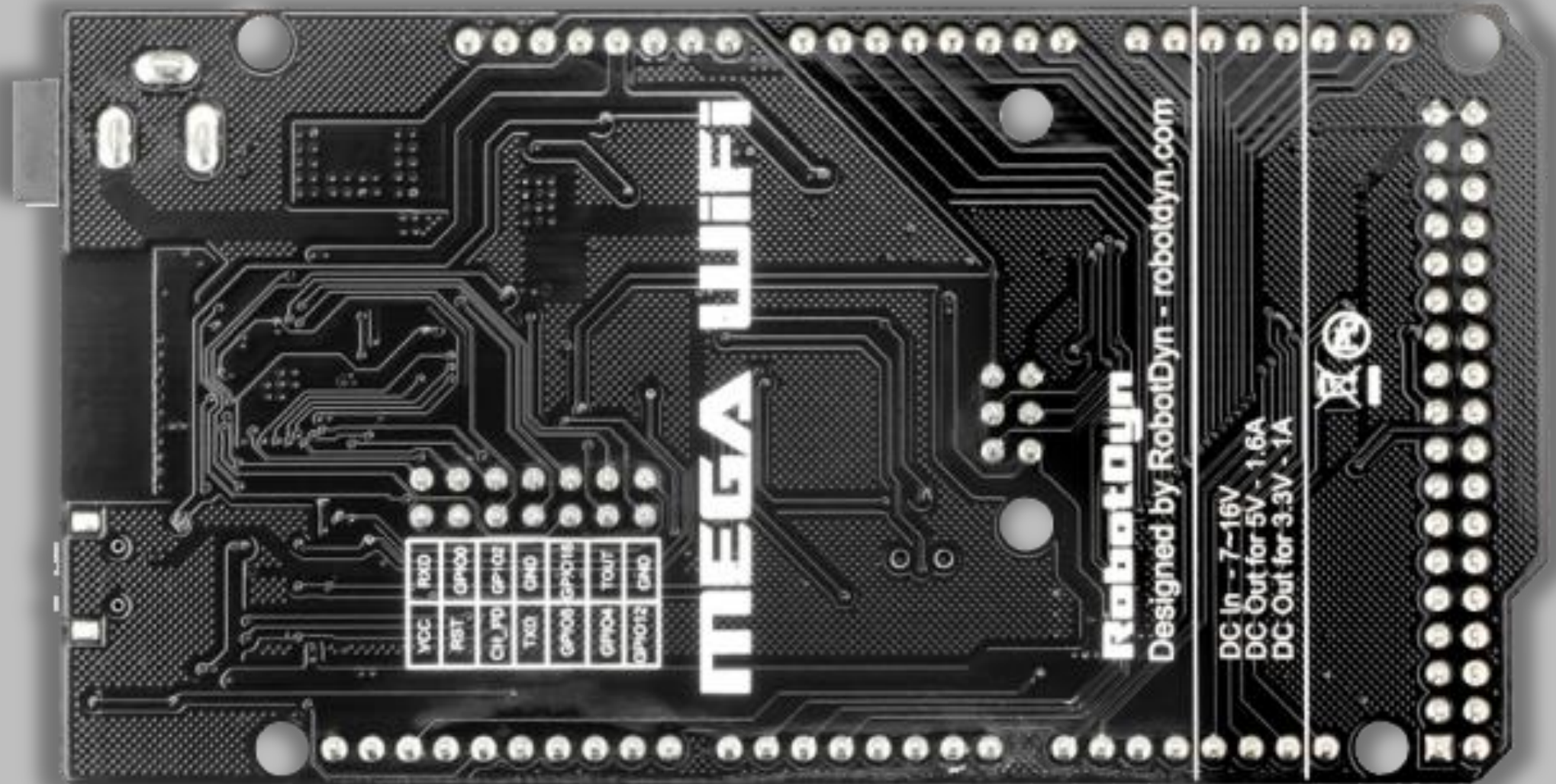
Download arquivo **PDF** dos diagramas



Acesso aos pinos do ESP8266

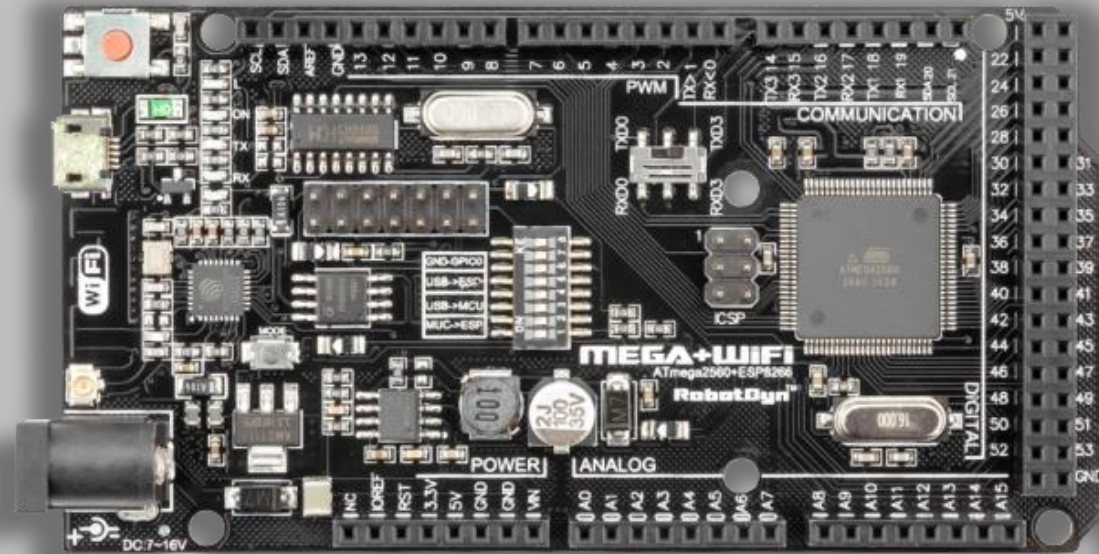
VCC	RXD	3	3
RST	GPIO0	4	4
CH_PD	GPIO2	5	5
TXD	GND	6	6
GPIO5	GPIO16	7	7
GPIO4	TOUT	8	8
GPIO12	GND	9	9

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

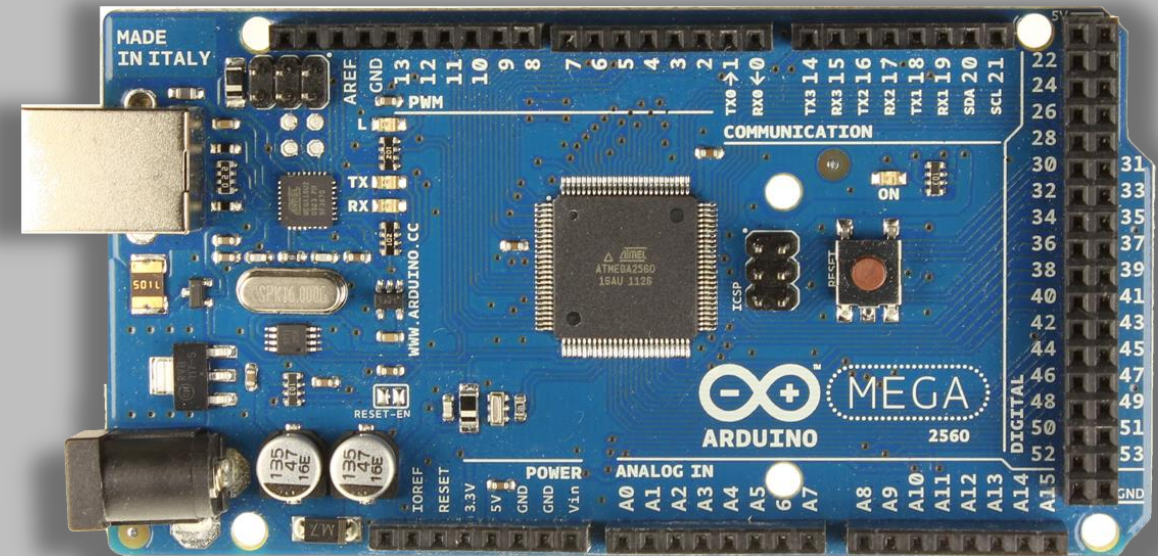


Comparando os dois Arduinos

Arduino Mega RobotDyn



Arduino Mega 2560



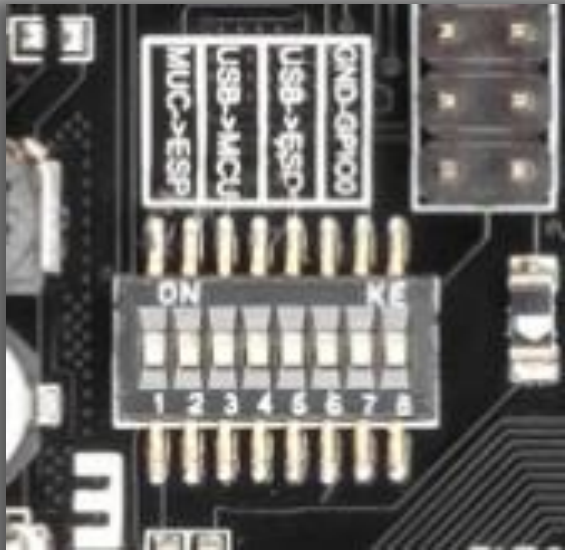
Comparando os dois Arduinos

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

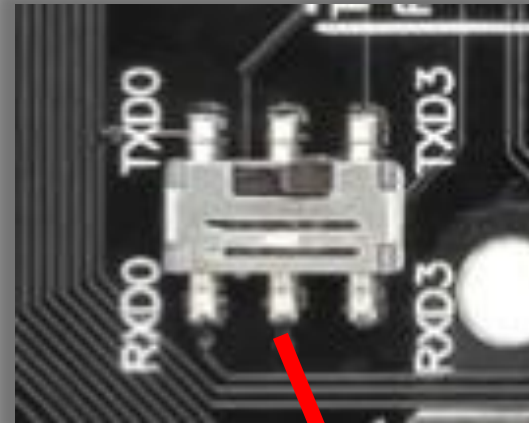
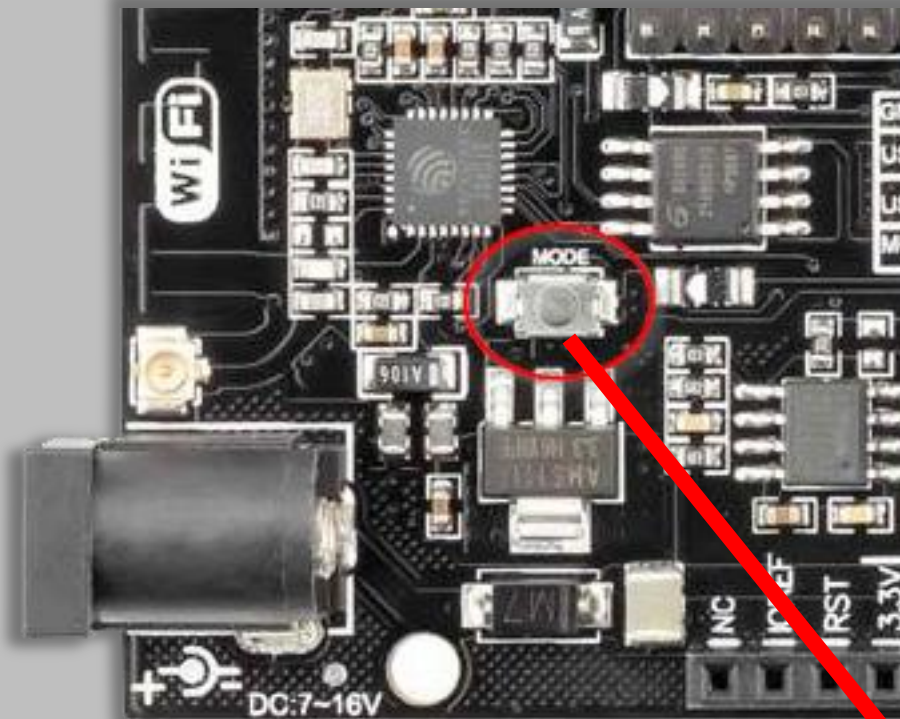


Switch status and mode selection:

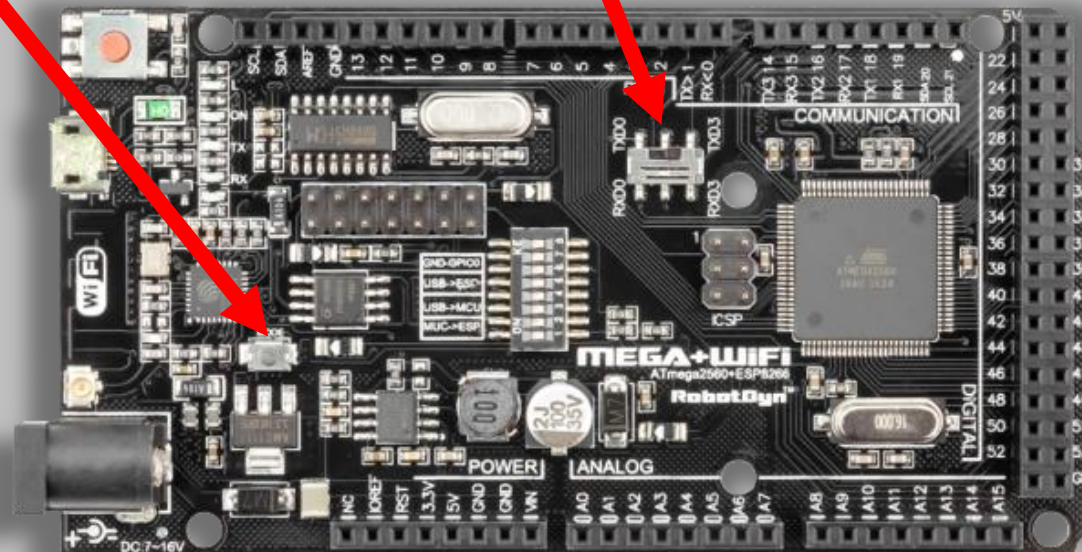
	1	2	3	4	5	6	7	8
CH340 connect to ESP8266 (upload sketch)	OFF	OFF	OFF	OFF	ON	ON	ON	NoUSE
CH340 connect to ESP8266 (connect)	OFF	OFF	OFF	OFF	ON	ON	OFF	NoUSE
CH340 connect to ATmega2560 (upload sketch)	OFF	OFF	ON	ON	OFF	OFF	OFF	NoUSE
CH340 connect to Mega2560 COM3 connect to ESP8266	ON	ON	ON	ON	OFF	OFF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

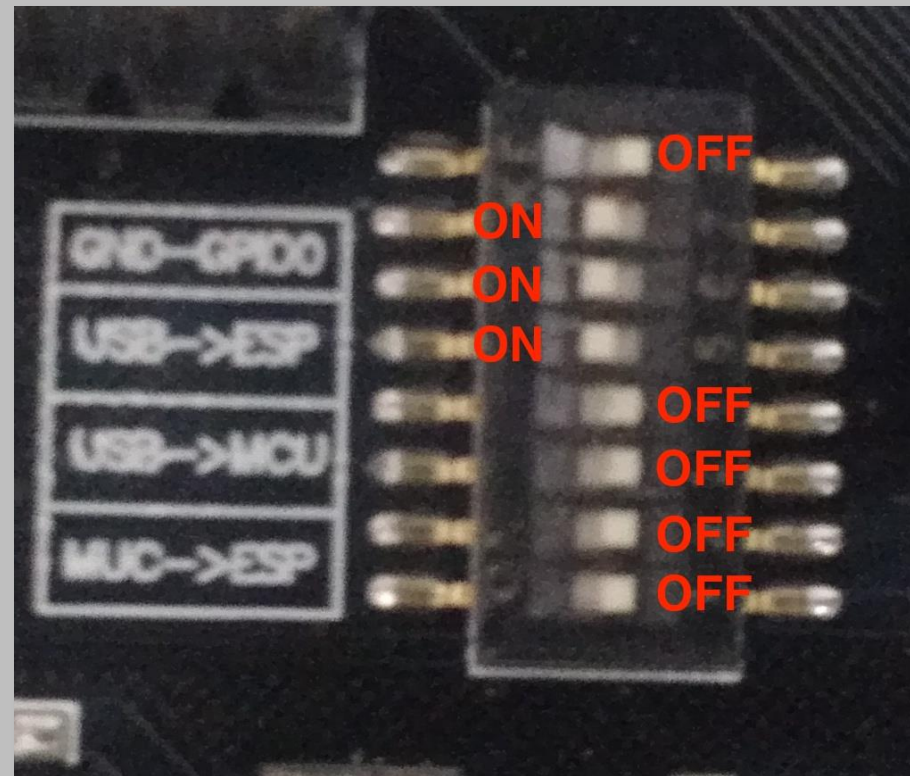


**Muda a porta serial do Arduino Mega
que se conecta ao ESP8266**



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 !

ESP FLASH DOWNLOAD TOOL V2.3

FlashDownload | RF InitConfig | MultiDownload

Download Path Config

<input checked="" type="checkbox"/>	t_sdk_v1.5.0\bin\esp_init_data_default.bin	...	ADDR	0x3fc000
<input checked="" type="checkbox"/>	15_11_27\esp_iot_sdk_v1.5.0\bin\blank.bin	...	ADDR	0x37e000
<input checked="" type="checkbox"/>	5_11_27\esp_iot_sdk_v1.5.0\bin\boot_v1.4(...	ADDR	0x000000
<input checked="" type="checkbox"/>	.5.0\bin\at\512+512\user1.1024.new.2.bin	...	ADDR	0x1000
<input type="checkbox"/>		...	ADDR	
<input type="checkbox"/>		...	ADDR	
<input type="checkbox"/>		...	ADDR	

SPI FLASH CONFIG

CrystalFreq : 26M

CombineBin
Default

SPI SPEED
☐ 40MHz
☐ 26.7MHz
☐ 20MHz
☒ 80MHz

SPI MODE
☐ QIO
☐ QOUT
☒ DIO
☐ DOUT

FLASH SIZE
☐ 4Mbit
☐ 2Mbit
☐ 8Mbit
☐ 16Mbit
☒ 32Mbit
☐ 16Mbit-C1
☐ 32Mbit-C1

☐ SpiAutoSet
☐ DoNotChgBin

IDbind 0x

DETECTED INFO

Download Panel 1

IDLE 等待

START

STOP

MAC Address

COM PORT: COM9

BAUDRATE: 115200

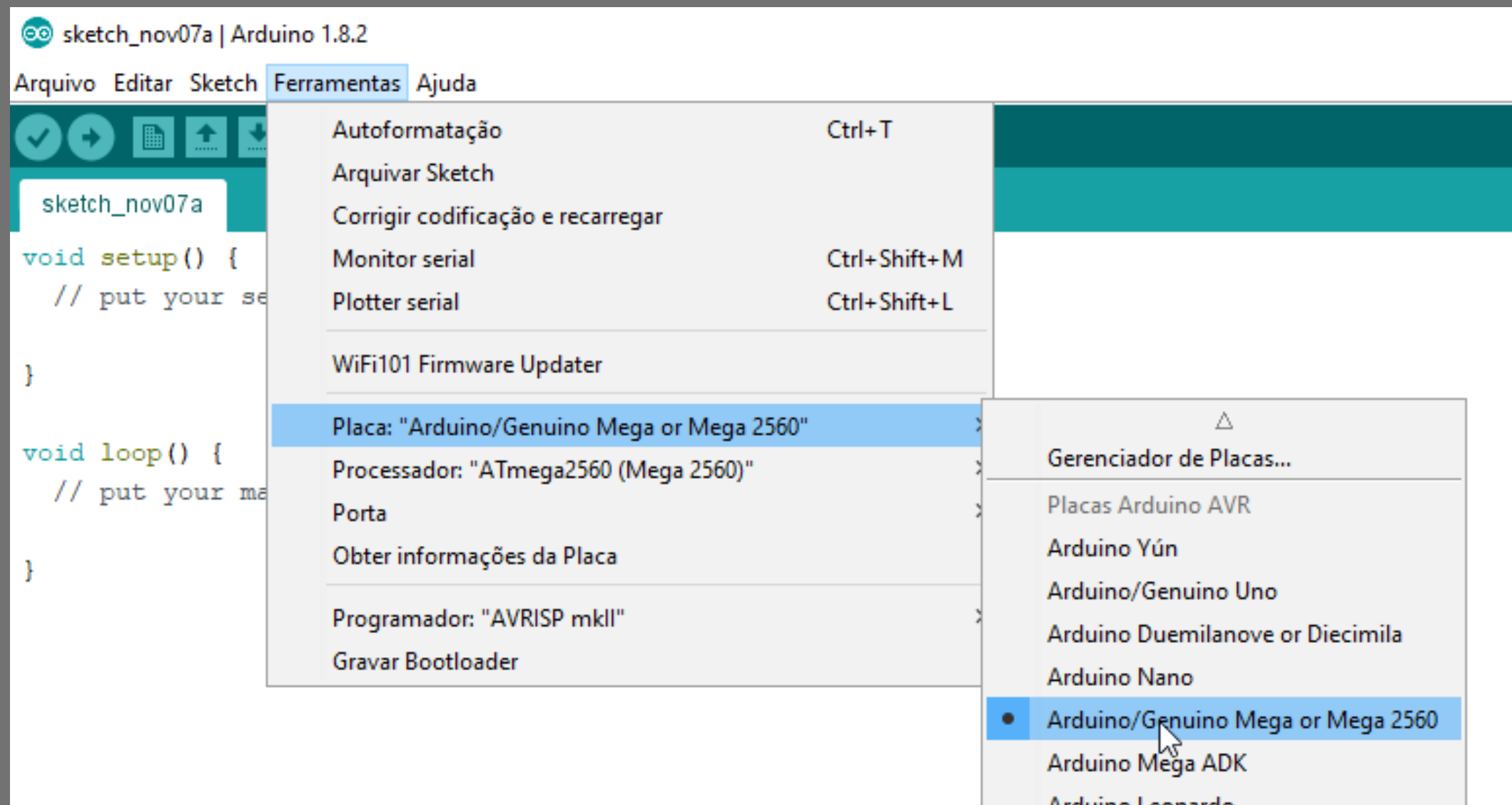


Gravando no [ESP-01](#)

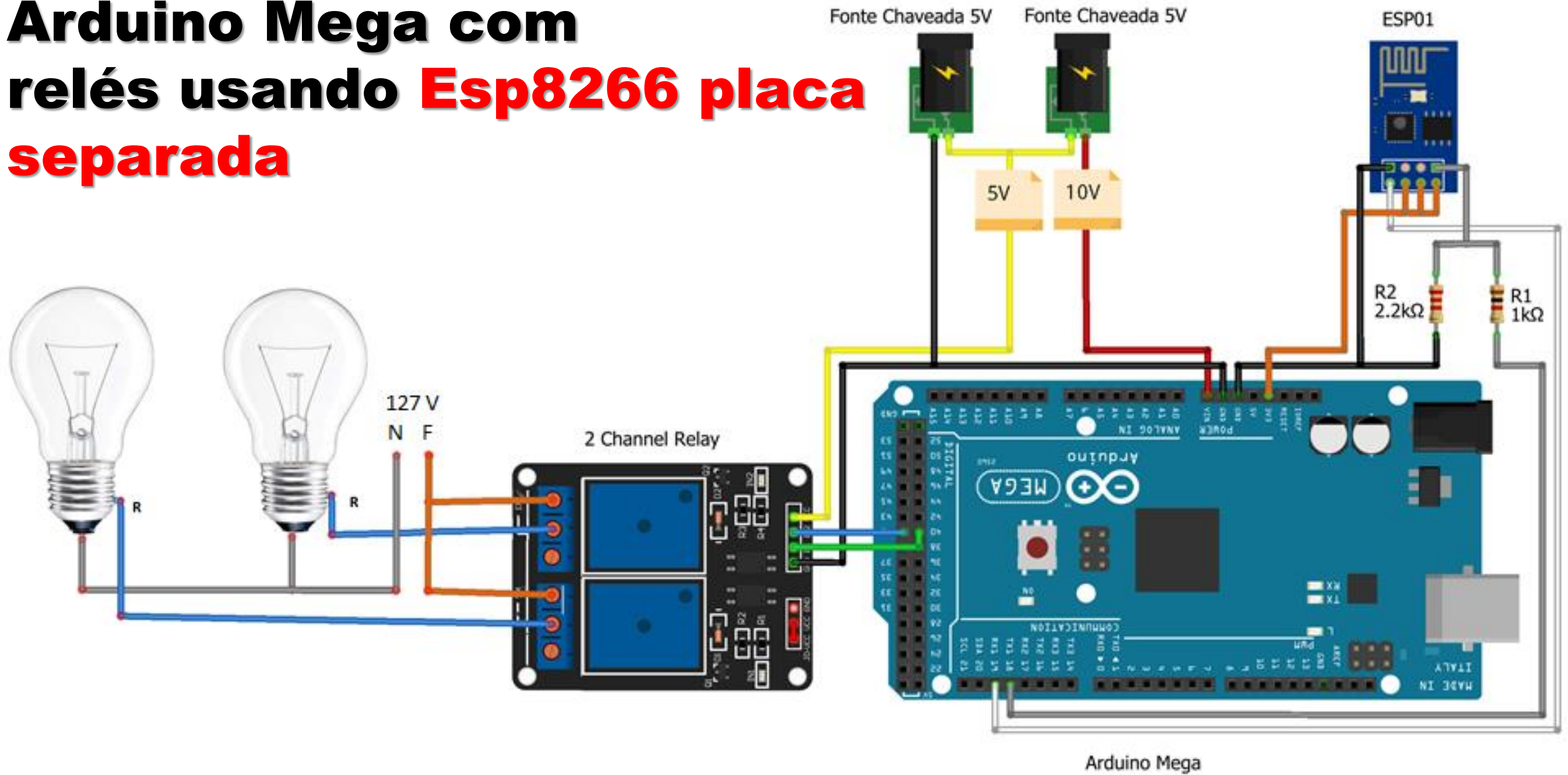


Introdução ao [ESP8266](#)

Configurar Ambiente Arduino IDE



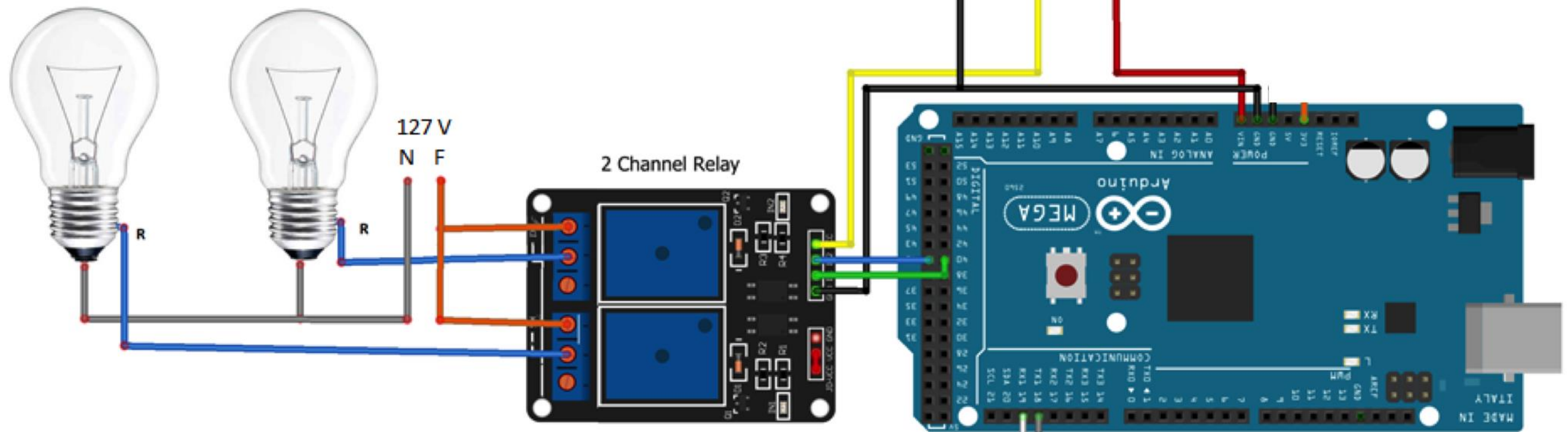
Arduino Mega com relés usando **Esp8266 placa separada**



Assista esse vídeo



Arduino Mega com Esp8266 Embutido



Em www.fernandok.com

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