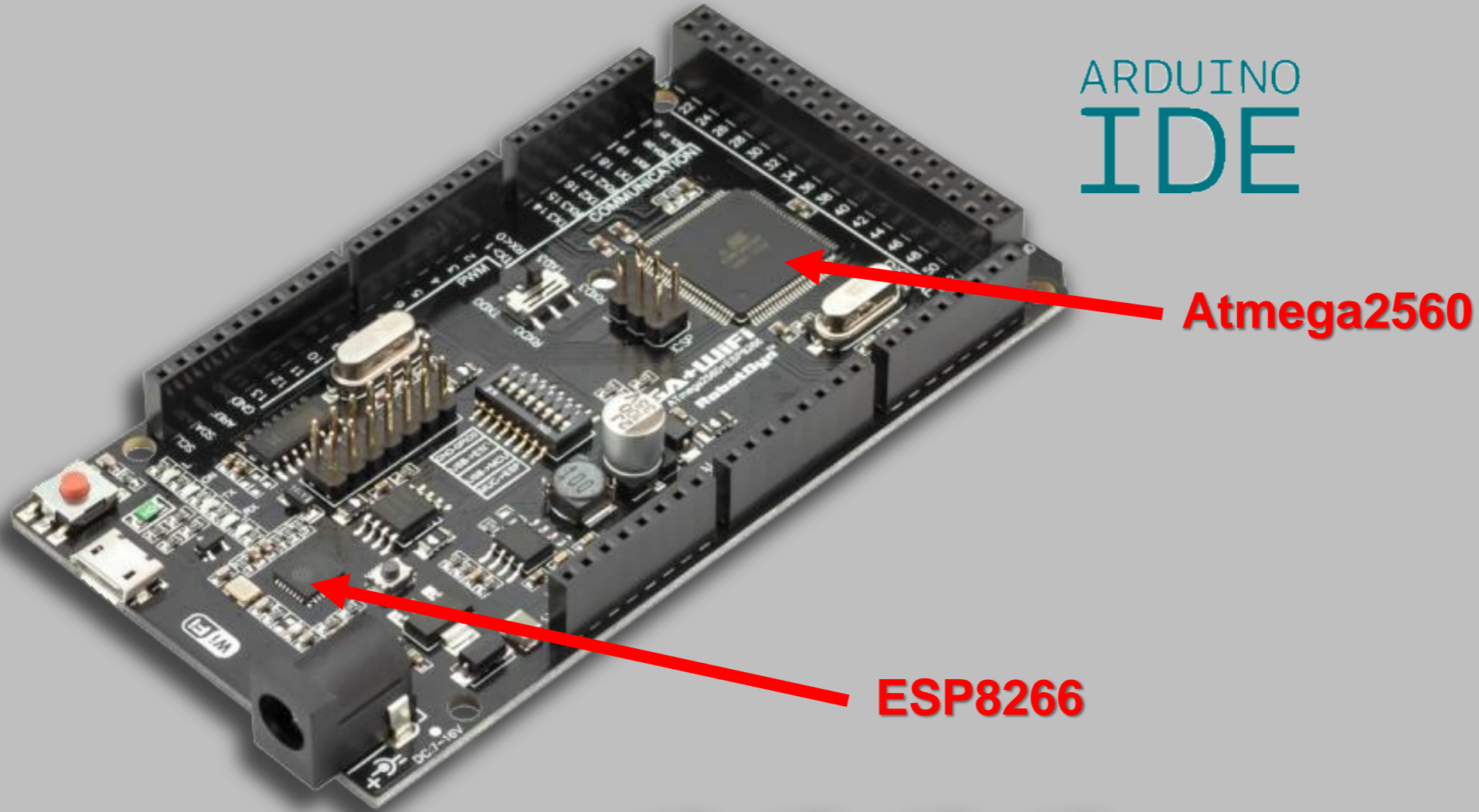


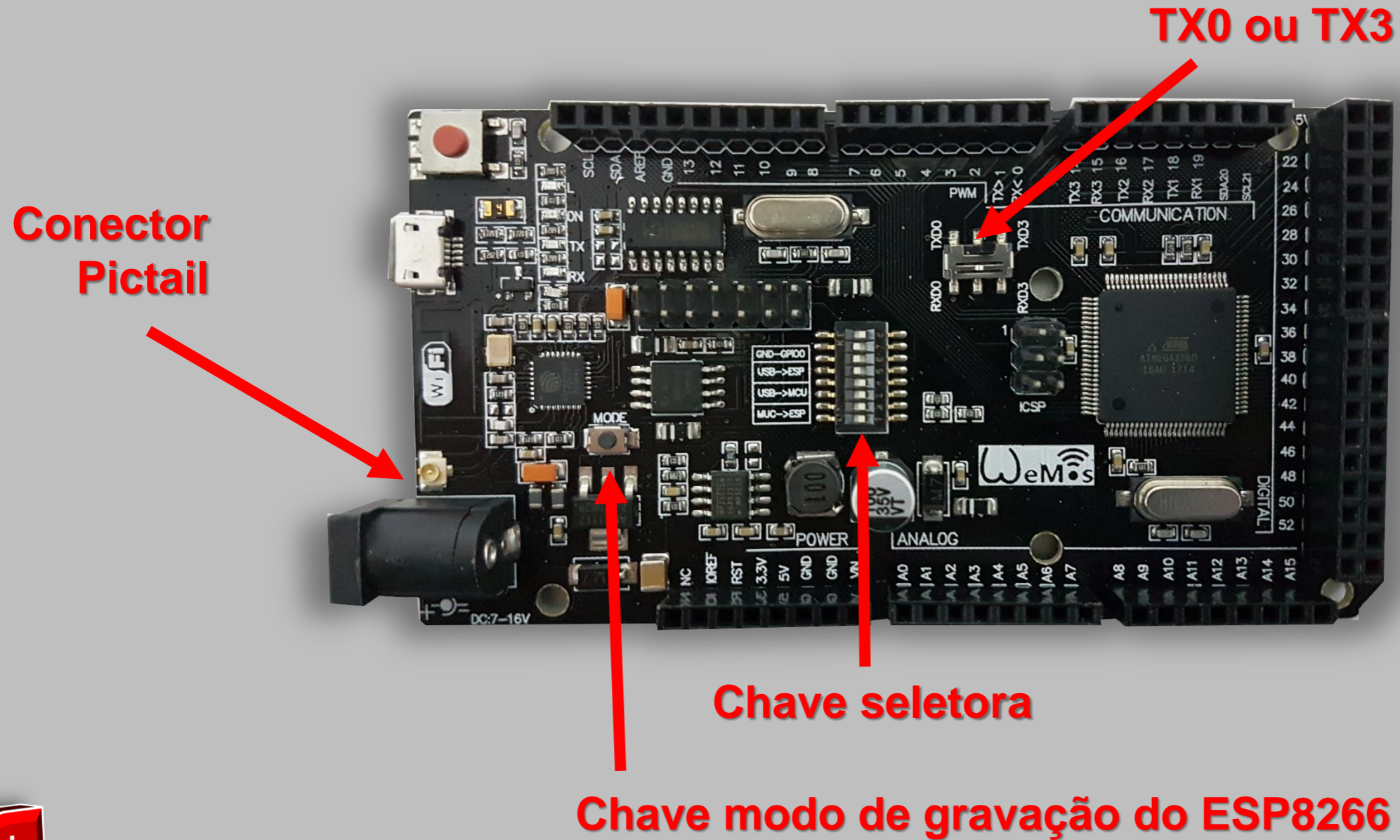
# Arduino MEGA 2560 com WIFI Embutido ESP8266 32MB de memória



Por Fernando Koyanagi



# Características físicas da placa



Em [www.fernandok.com](http://www.fernandok.com)

Download arquivo **PDF** dos diagramas

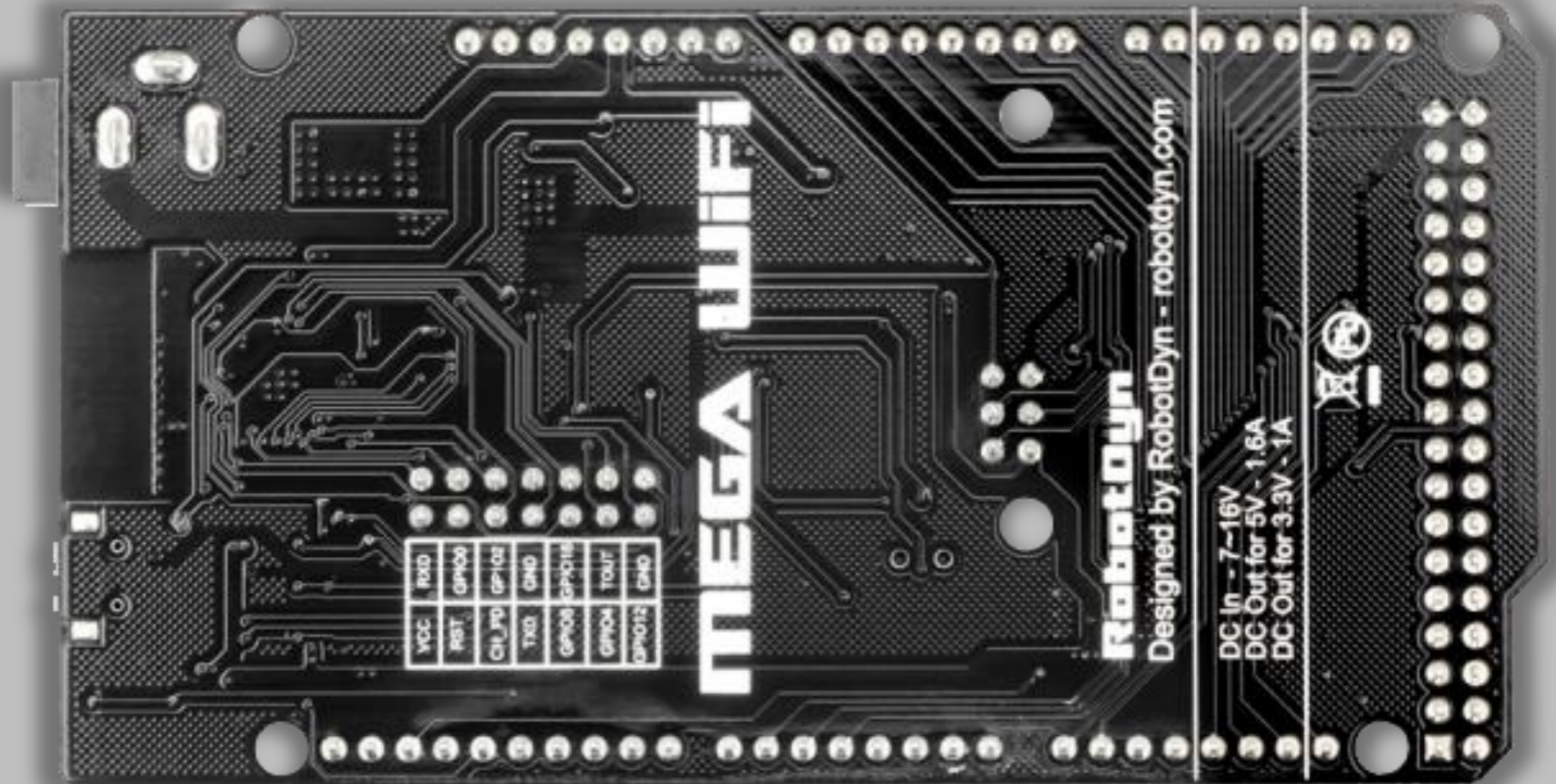




# Acesso aos pinos do ESP8266



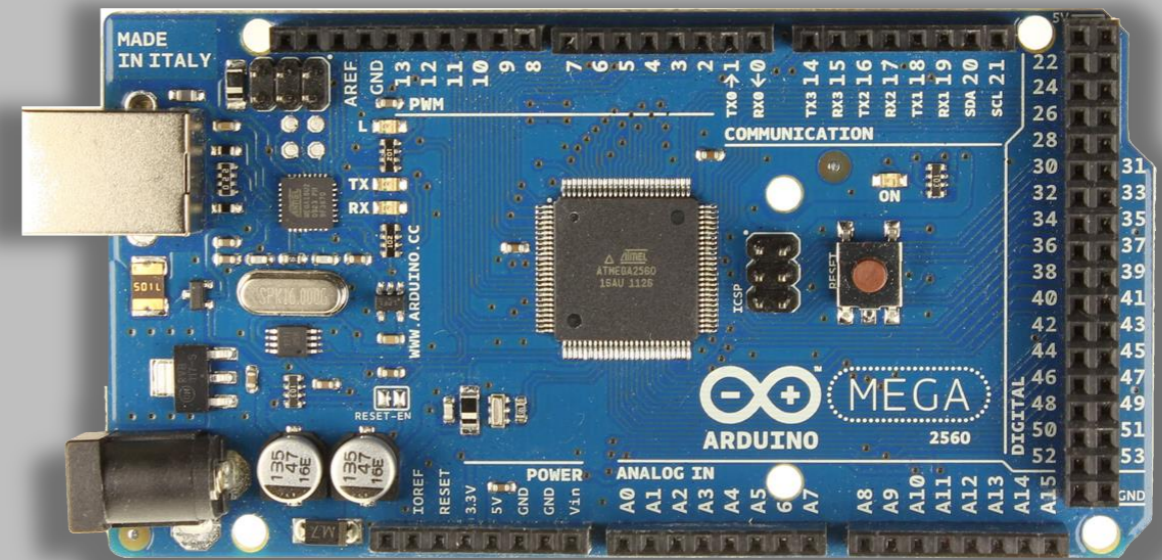
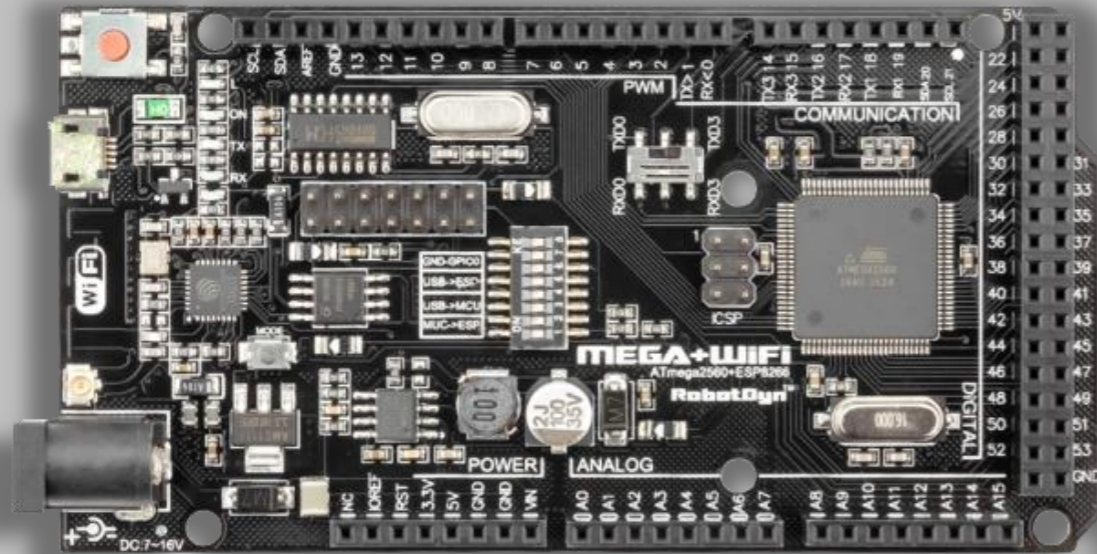
VCC	RXD
RST	GPIO0
CH_PD	GPIO02
TXD	GND
GPIO5	GPIO16
GPIO4	TOUT
GPIO12	GND



# Comparando os dois Arduinos

Arduino Mega RobotDyn

Arduino Mega 2560





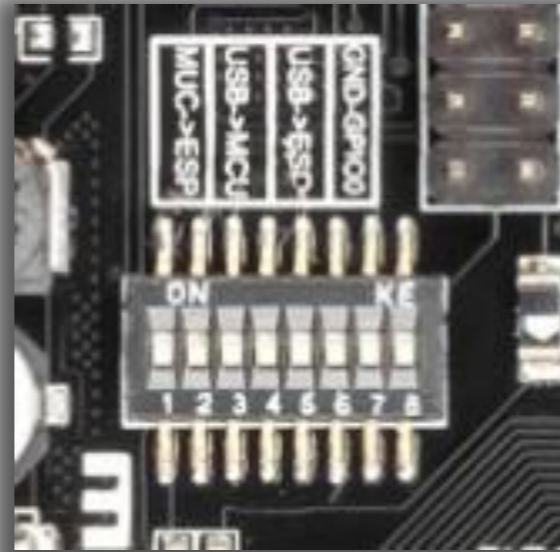
# Comparando os dois Arduinos

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

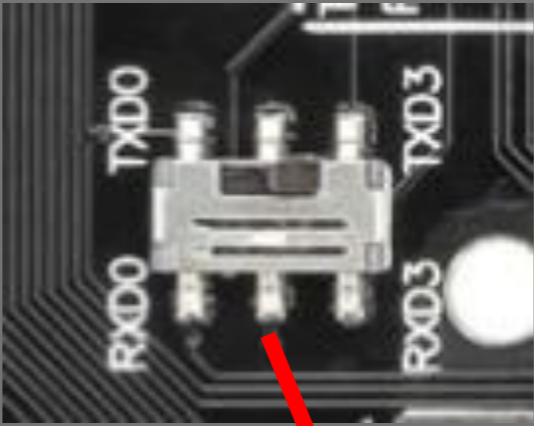
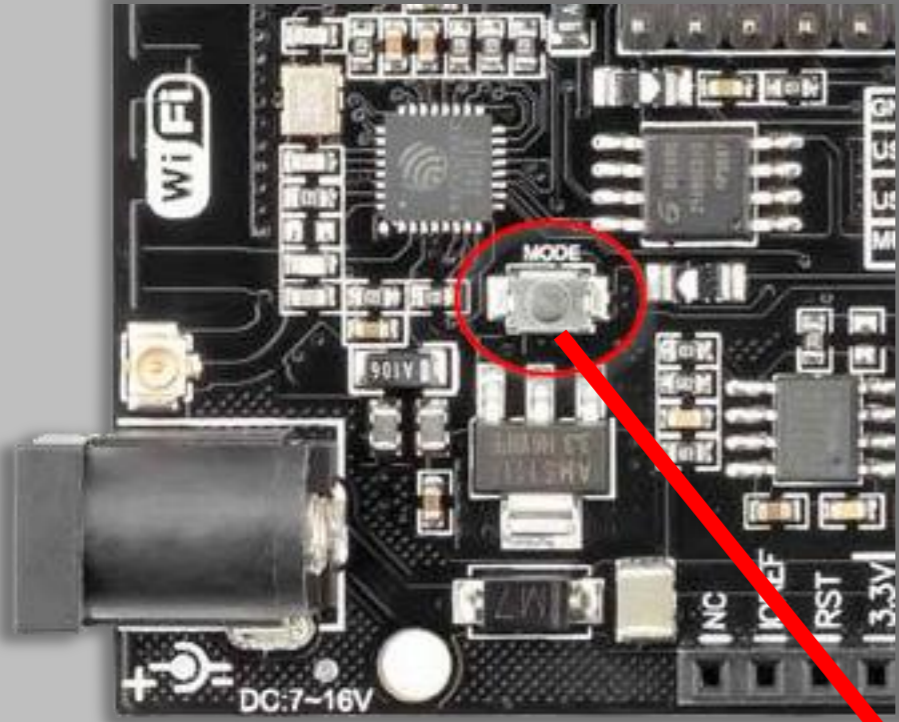


# Switch status and mode selection:

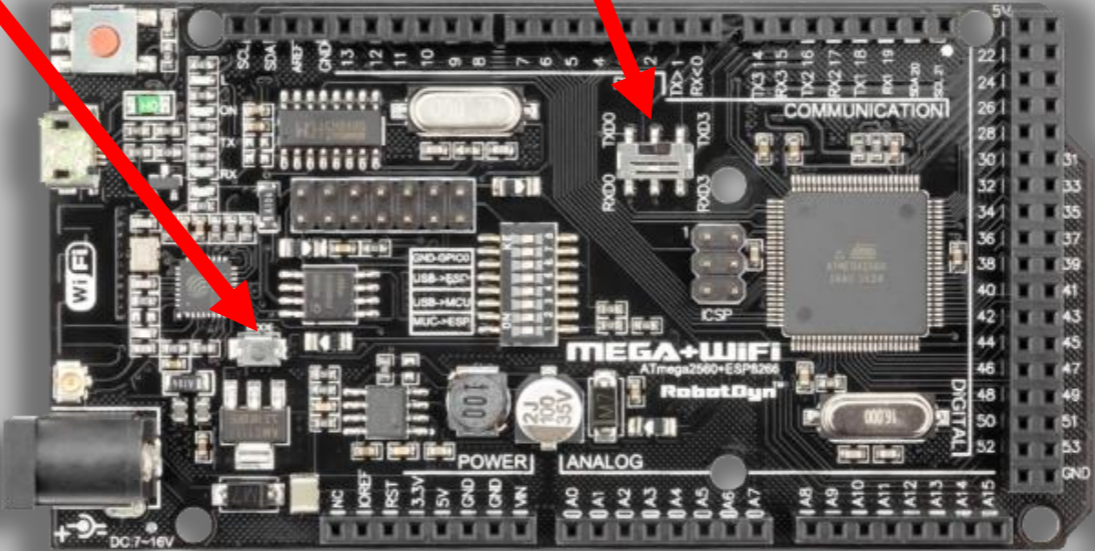
	1	2	3	4	5	6	7	8
CH340 connect to ESP8266 (upload sketch)	OFF	OFF	OFF	OFF	ON	ON	ON	NoUSE
CH340 connect to ESP8266 (connect)	OFF	OFF	OFF	OFF	ON	ON	OFF	NoUSE
CH340 connect to ATmega2560 (upload sketch)	OFF	OFF	ON	ON	OFF	OFF	OFF	NoUSE
CH340 connect to Mega2560 COM3 connect to ESP8266	ON	ON	ON	ON	OFF	OFF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



**Pressionar para gravar o ESP8266**



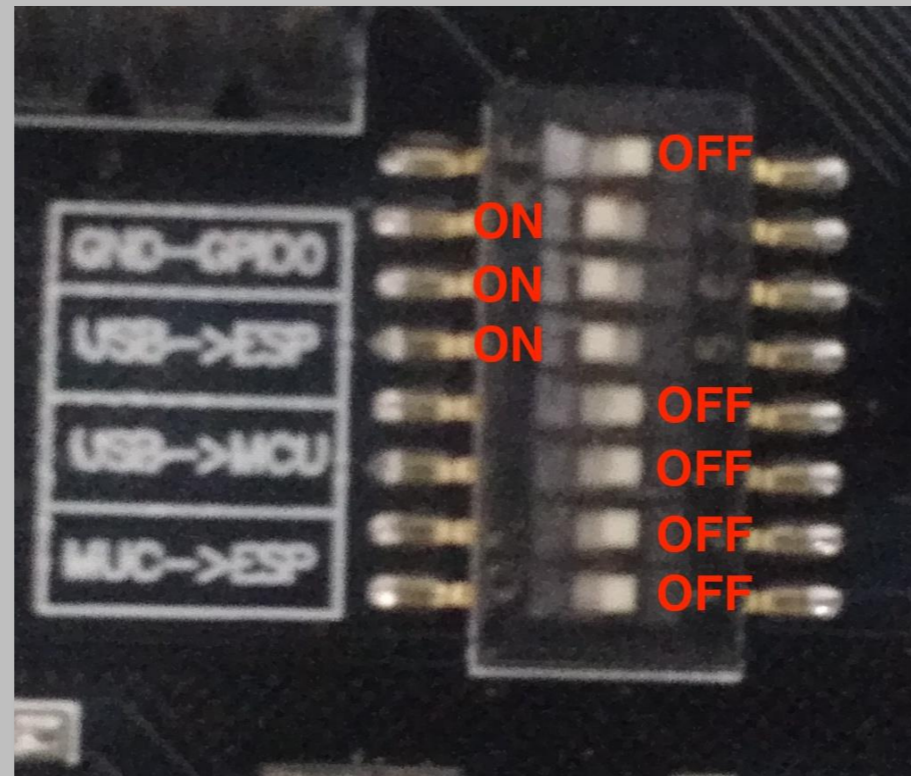
**Muda a porta serial do Arduino Mega que se conecta ao ESP8266**





# 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 0x000000**

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



# Verificando Firmware AT

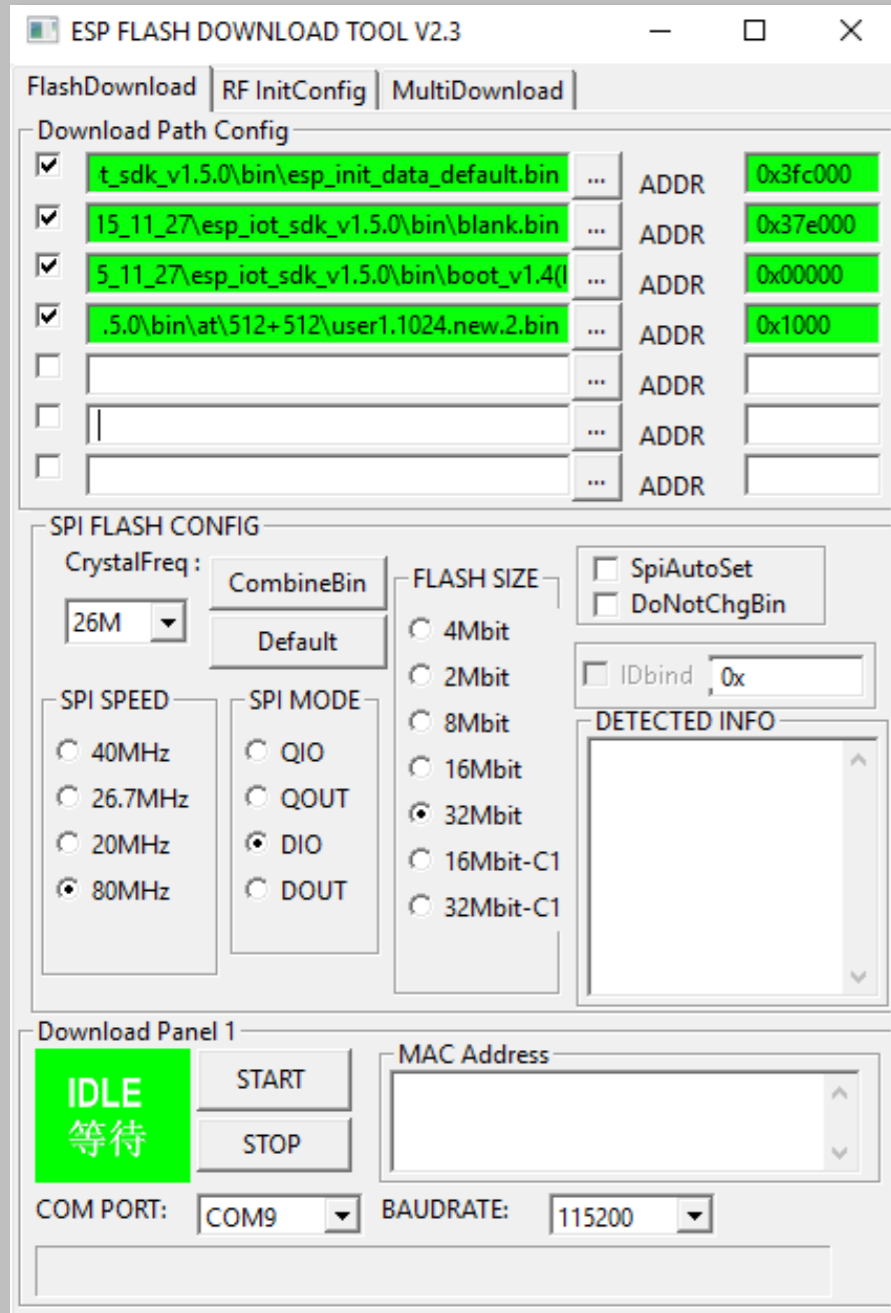
```
C:\Python27\Scripts>esptool.exe --port COM9 flash_id
esptool.py v2.1
Connecting....
Detecting chip type... ESP8266
Chip is ESP8266
Uploading stub...
Running stub...
Stub running...
Manufacturer: c8
Device: 4016
Detected flash size: 4MB
Hard resetting...
```





# Exemplo

# Assista !

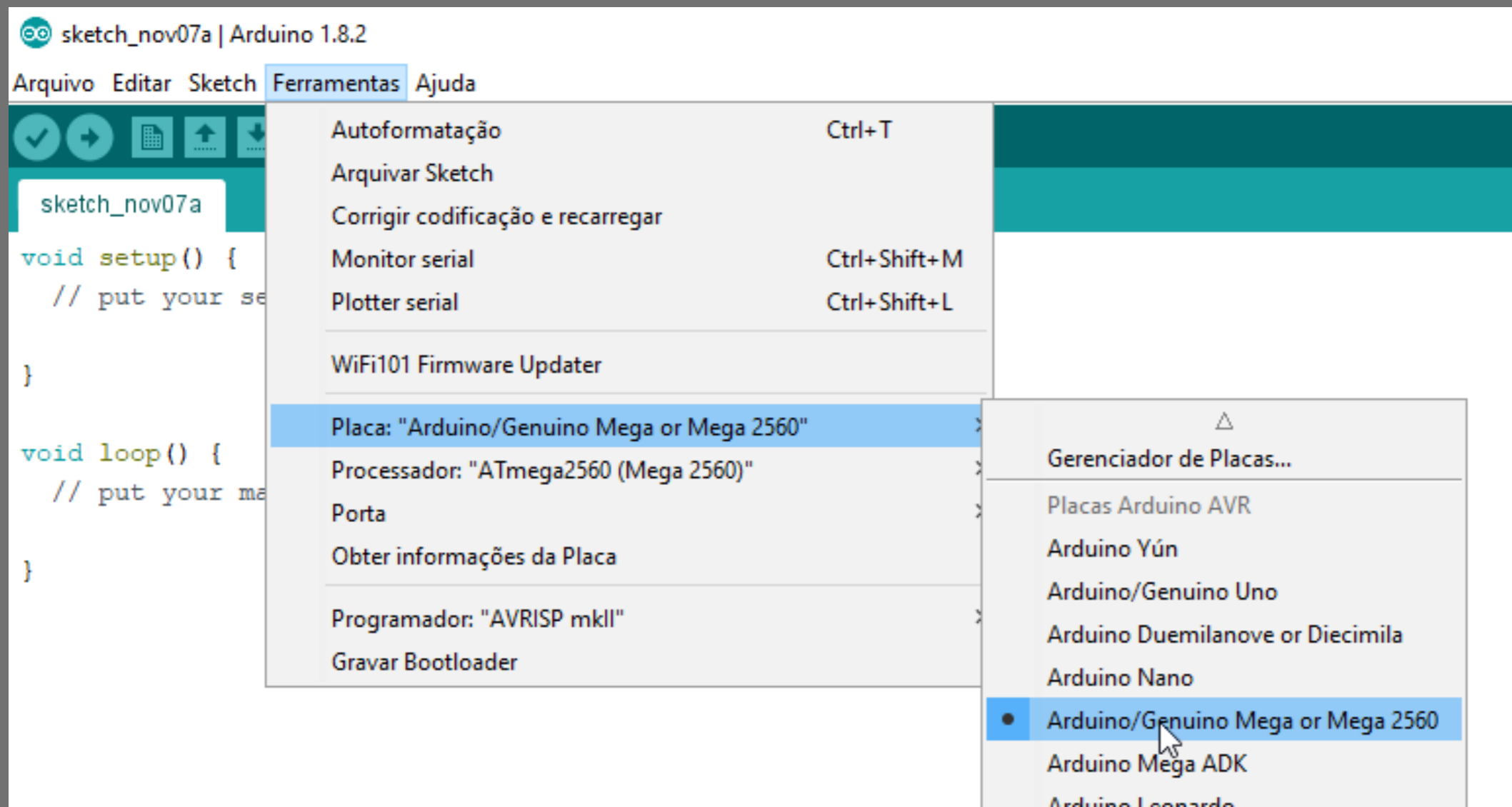


Gravando no [ESP-01](#)



Introdução ao [ESP8266](#)

# Configurar Ambiente Arduino IDE



The screenshot shows the Arduino IDE interface with the 'Ferramentas' menu open. The board configuration sub-menu is also open, showing the selected board: 'Arduino/Genuino Mega or Mega 2560'.

**Menu Items:**

- Autoformatação (Ctrl+T)
- Arquivar Sketch
- Corrigir codificação e recarregar
- Monitor serial (Ctrl+Shift+M)
- Plotter serial (Ctrl+Shift+L)
- WiFi101 Firmware Updater
- Placa: "Arduino/Genuino Mega or Mega 2560" (selected)
- Processador: "ATmega2560 (Mega 2560)"
- Porta
- Obter informações da Placa
- Programador: "AVRISP mkII"
- Gravar Bootloader

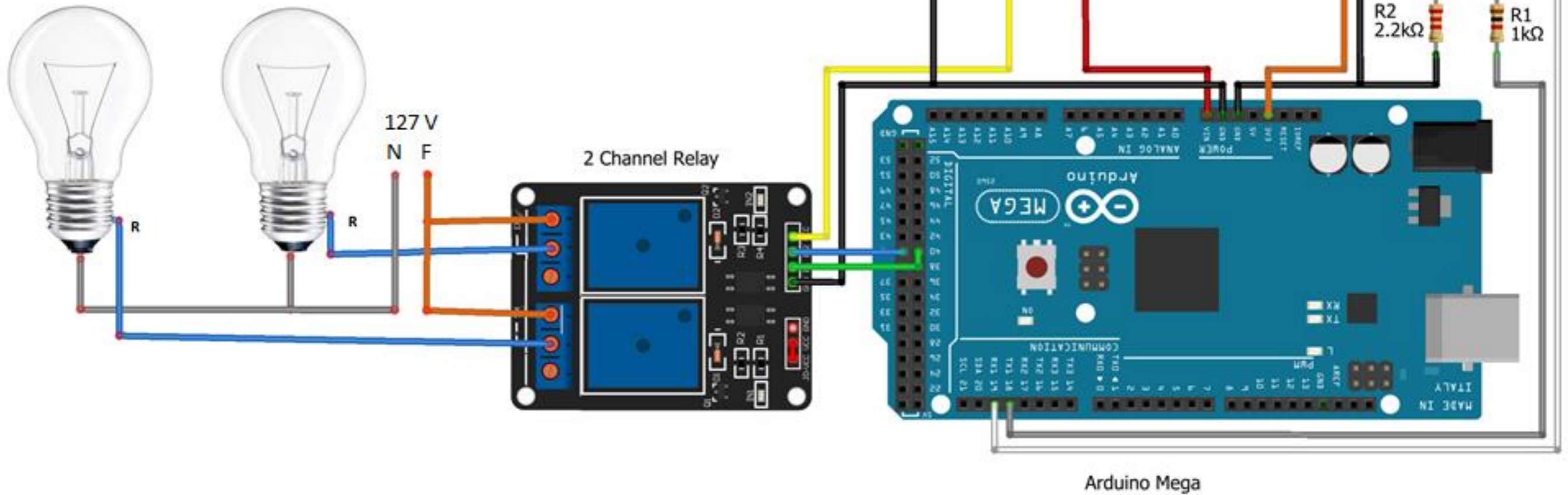
**Sub-menu Items:**

- Gerenciador de Placas...
- Placas Arduino AVR
- Arduino Yún
- Arduino/Genuino Uno
- Arduino Duemilanove or Diecimila
- Arduino Nano
- Arduino/Genuino Mega or Mega 2560 (selected)
- Arduino Mega ADK
- Arduino Leonardo

**Code Editor Content:**

```
sketch_nov07a | Arduino 1.8.2  
Arquivo Editar Sketch Ferramentas Ajuda  
sketch_nov07a  
void setup() {  
  // put your setup code here, to initialize pins, etc.  
}  
  
void loop() {  
  // put your main code here, to run repeatedly  
}
```

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

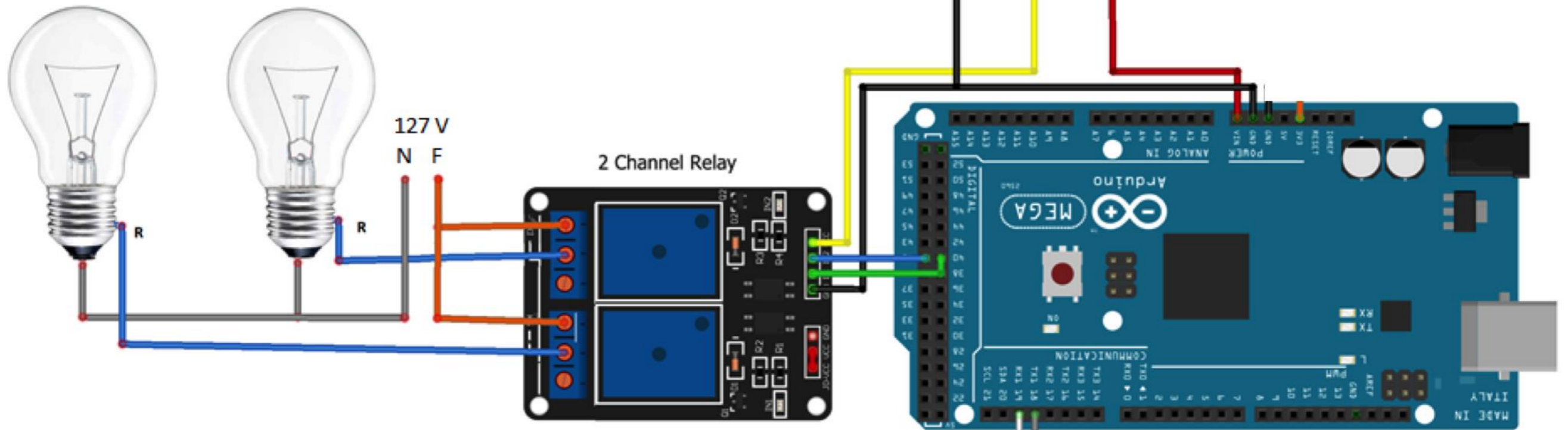




# Assista esse vídeo



# Arduino Mega com Esp8266 Embutido



Em [www.fernandok.com](http://www.fernandok.com)

Download arquivo **PDF** dos diagramas

