Manual

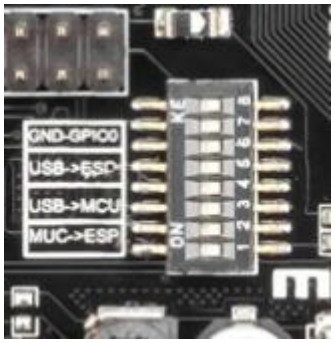
Specifications

Microcontroller	ATmega2560
IC Wi-Fi	ESP8266
USB-TTL converter	CH340G
Power Out	5V-800mA
Power IN. USB	5V (500mA max.)
Power IN. VIN/DC Jack	9-24V
Power Consumption	5V 800mA
Logic Level	5V
Wifi	Wi-Fi 802.11 b/g/n 2.4 GHz
USB	Micro USB
Clock Frequency	16MHz
Operating Supply Voltage	5V
Digital I/O	54
Analog I/O	16
Memory Size	256kb
Data RAM Type/Size	8Kb
Data ROM Type/Size	4Kb
Interface Type	serial\OTA
Operating temperature	−40℃ /+125℃
Length×Width	53.361×101.86mm
antenna	Buil-in\external antenna

It is a customized version of the classic ARDUINO MEGA R3 board. Full integration of Atmel ATmega2560 microcontroller and ESP8266 Wi-Fi IC, with 32 Mb (megabits) of flash memory, and CH340G USB-TTL converter on a single board! All components can be set up to work together or

independently.

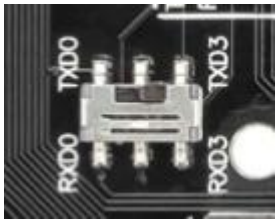
Operating mode is selected by means of DIP switches on-board:



Switch status and mode selection:

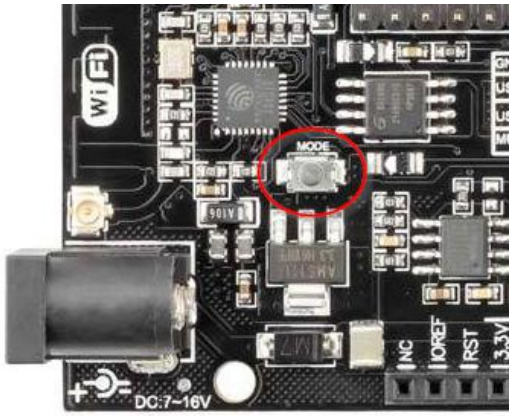
	1	2	3	4	5	6	7	8
CH340 connect to ESP8266 (upload sketch)	OFF	OFF	OFF	OFF	ON	ON	ON	NoUSE
CH340 connect to ESP8266 (connect)	OFF	OFF	OFF	OFF	ON	ON	OFF	NoUSE
CH340 connect to ATmega2560 (upload sketch)	OFF	OFF	ON	ON	OFF	OFF	OFF	NoUSE
CH340 connect to Mega2560 COM3 connect to ESP8266	ON	ON	ON	ON	OFF	OFF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

Also, have switch for change of connecting port between ATmega2560 and ESP8266

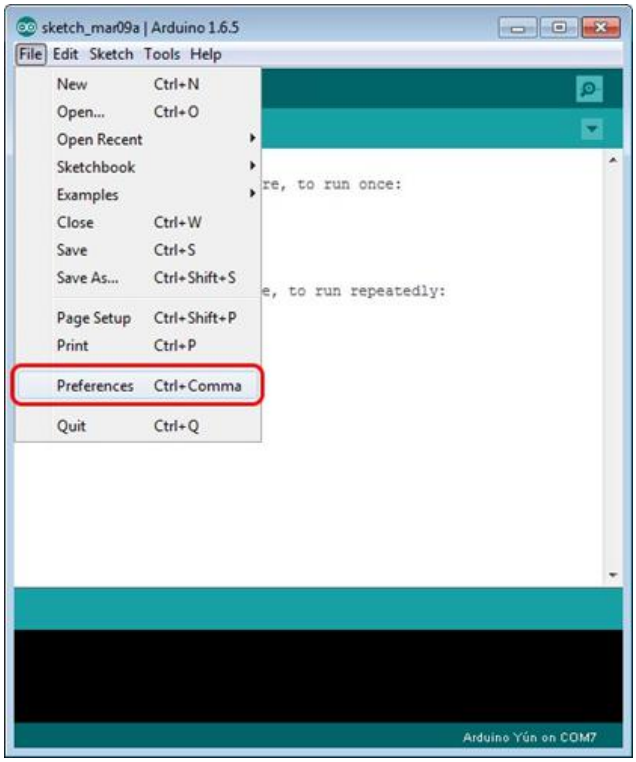


After choosing the mode of the board can proceed to set up the IDE

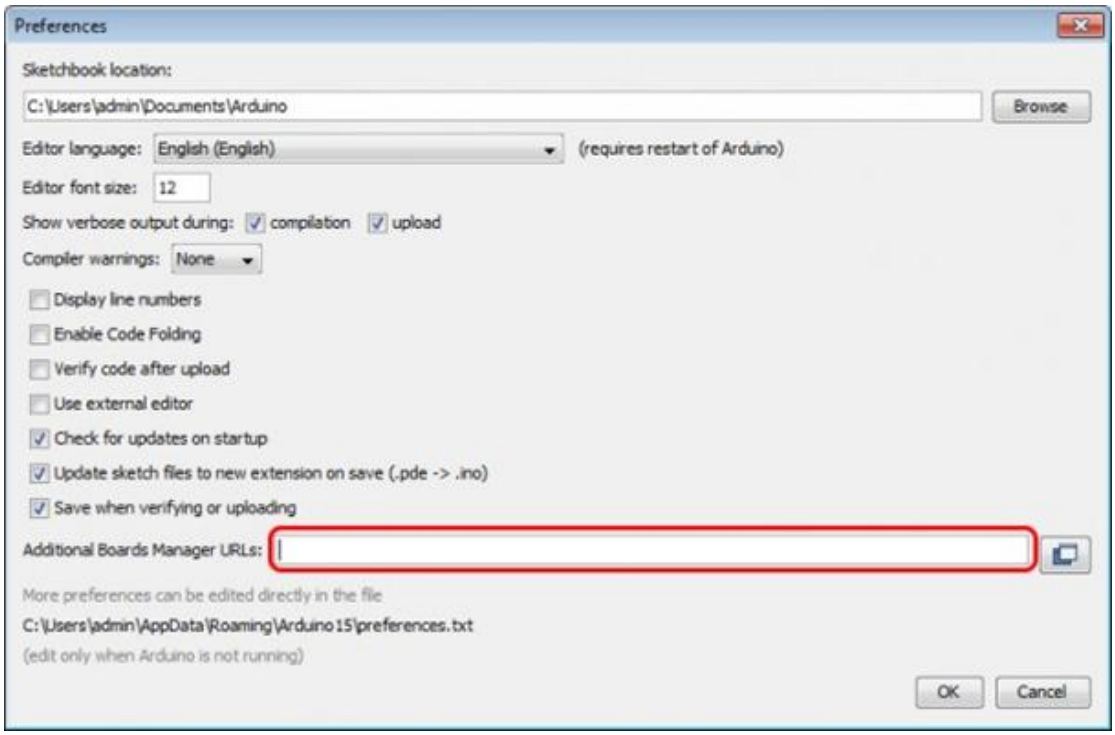
It is important that when the ESP8266 module is programming, it is necessary to press the button “Mode”



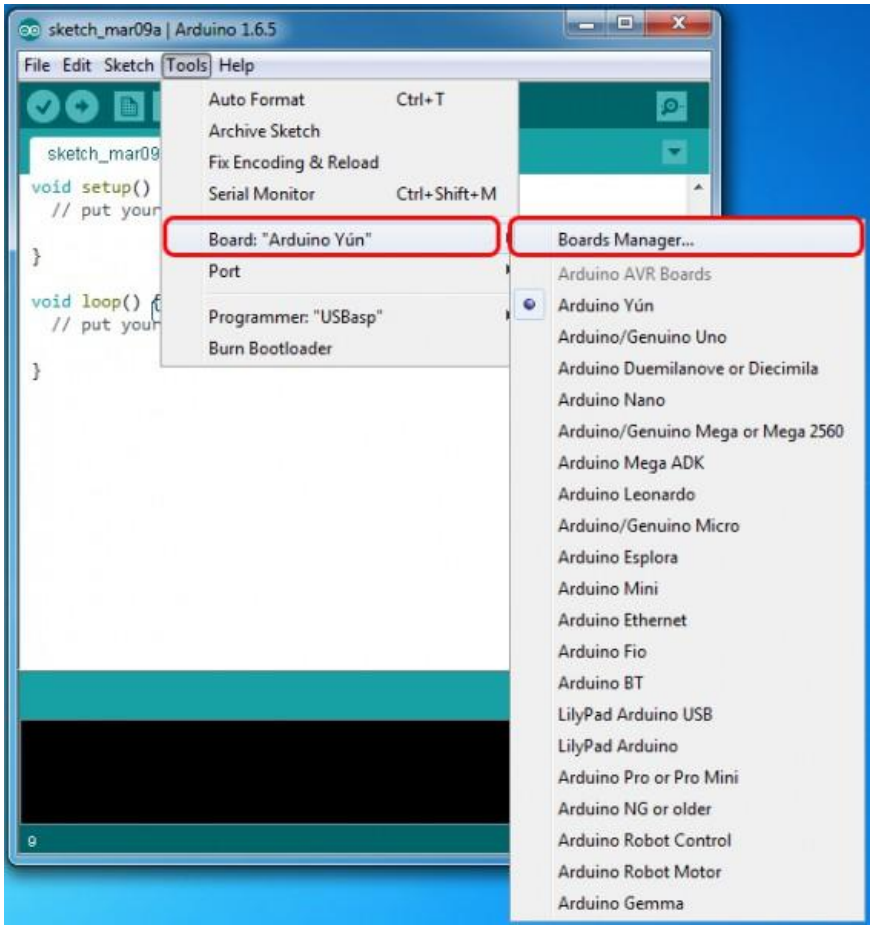
To begin open the Arduino IDE programming environment and go to settings



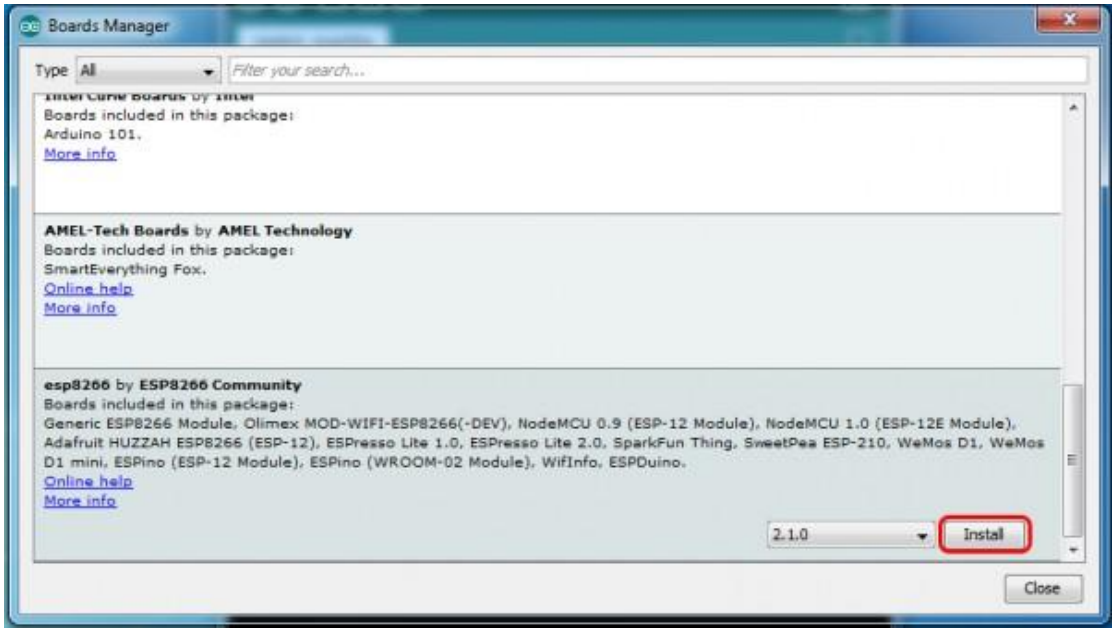
Then in the window that appears in the row, Additional Boards Manager URLs (marked in red) insert http://arduino.esp8266.com/stable/package_esp8266com_index.json link for installation in Arduino IDE additional scripts that would work with the modules ESP8266 and click OK



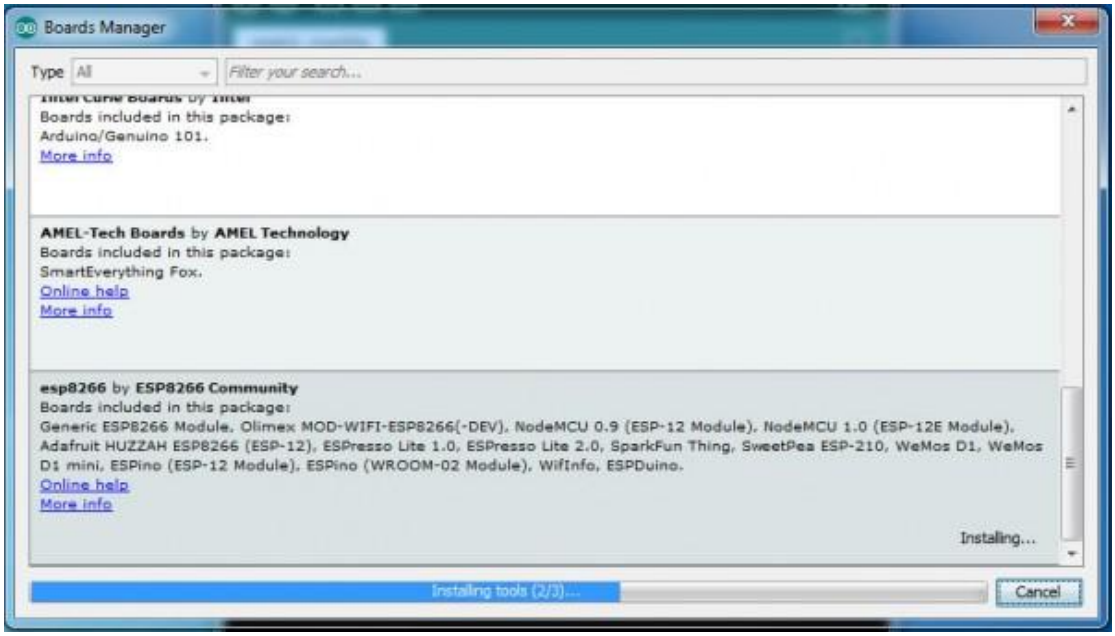
Then go to the Tools> Board> Boards Manager



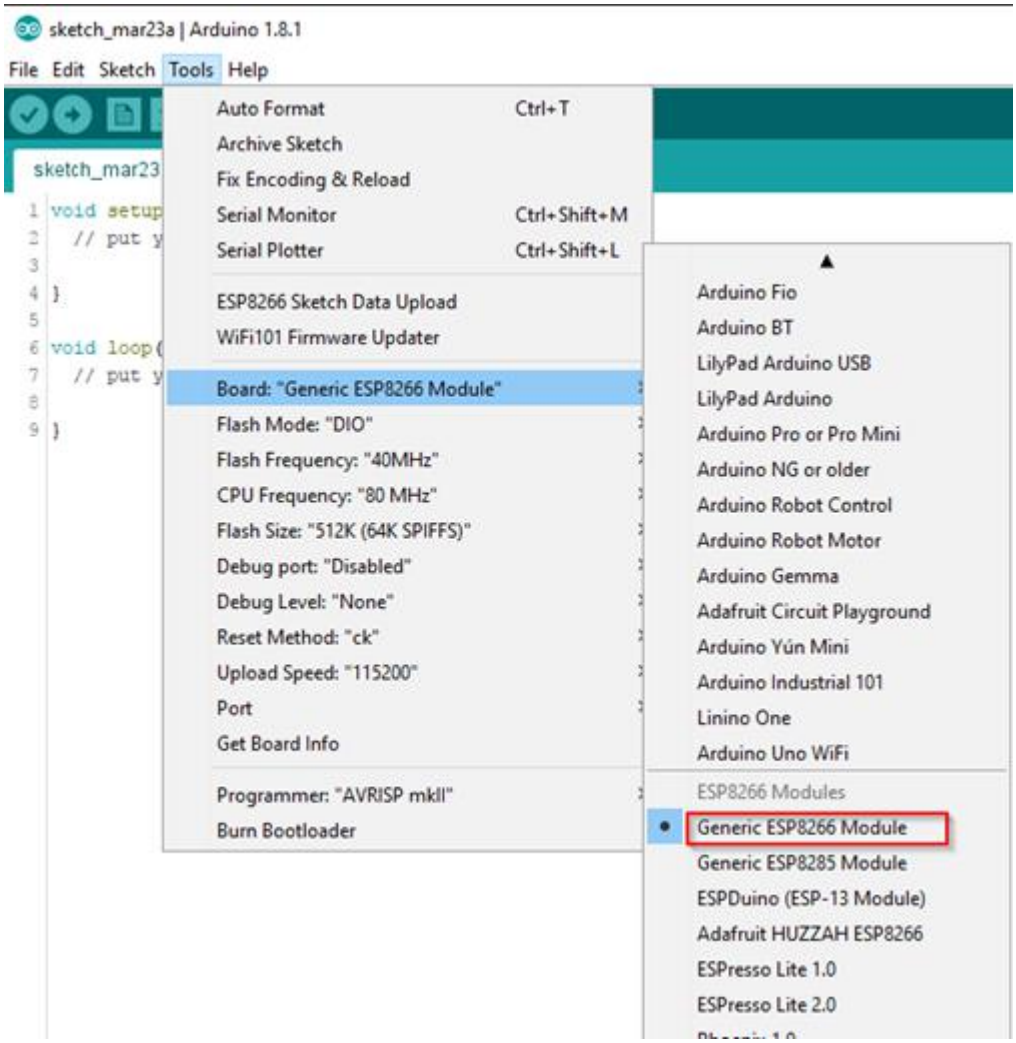
In the window that appears, scroll through the list down to the script esp8266 by ESP8266 Community and click.



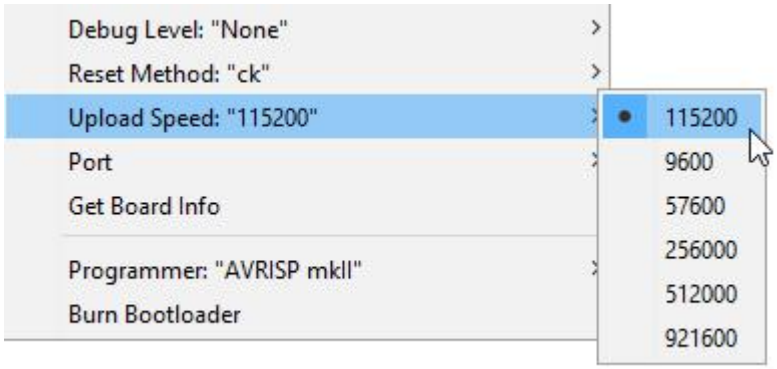
In the lower right corner will be able to select the version of the software, select the version 2.1.0 (the newest) and click the Install button



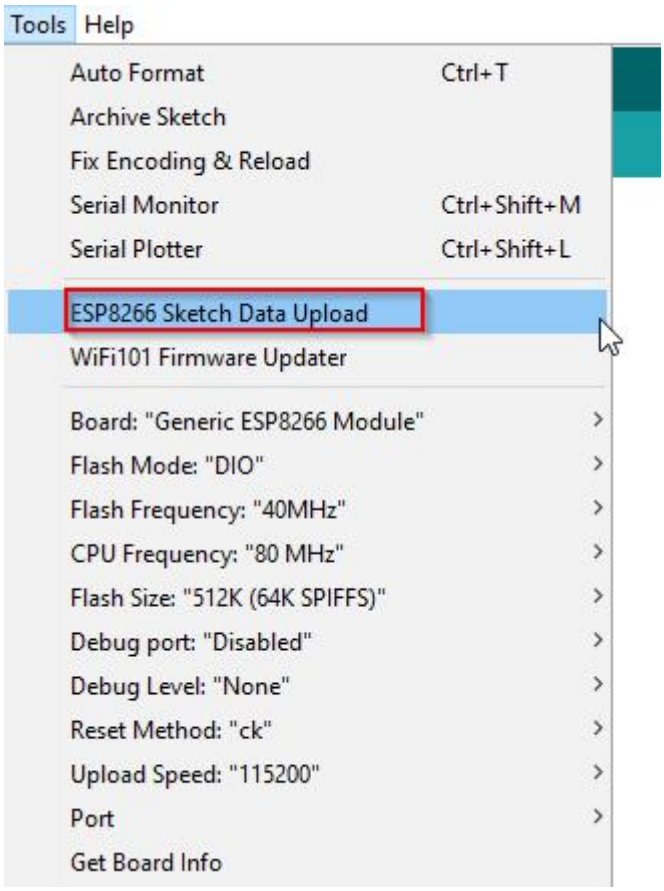
After installation, close the window and go to Tools> Board and see the list of available devices on the chip programming ESP8266



Next, you need to select the card as shown in the picture (Generic ESP8266 module)



Select the upload speed - 115200



==========test sketch for ATmega2560==========

```
 void setup()
{
  Serial3.begin(115200);
  pinMode(13,OUTPUT);
  delay(500);
  Serial3.println("AT+CIPMUX=1");
  delay(2000);
  Serial3.println("AT+CIPSERVER=1,5000");
  delay(2000);
  Serial3.println("AT+CIPSTO=3600");
  delay(2000);
}

void loop()
{
   while(Serial3.available())
  {
    char Rdata;
    Rdata=Serial3.read();
    if(Rdata=='A'|Rdata=='a')
```

```
    {
      digitalWrite(13,HIGH);
      delay(50);
    }
    else if(Rdata=='B'|Rdata=='b')
    {
      digitalWrite(13,LOW);
      delay(10);
      digitalWrite(13,HIGH);
      delay(10);
      digitalWrite(13,LOW);
    }
    else
    {
      digitalWrite(13,LOW);
    }
  }
}
```