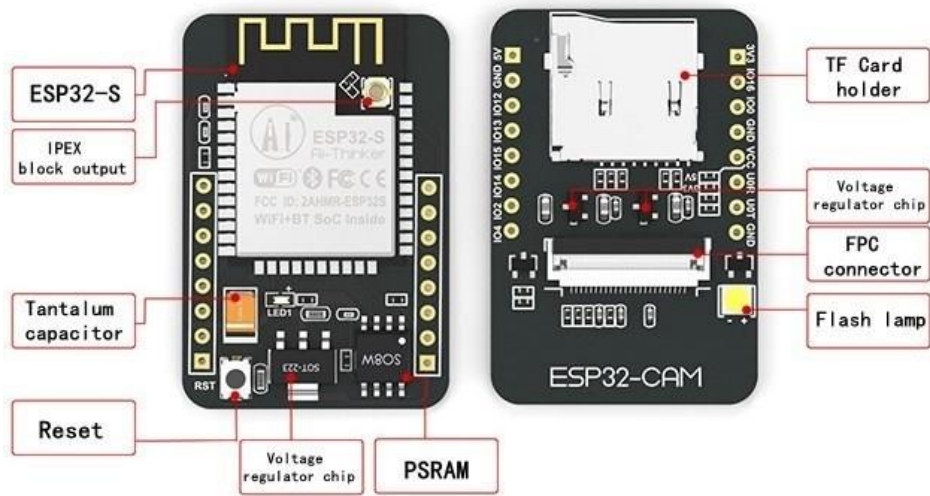
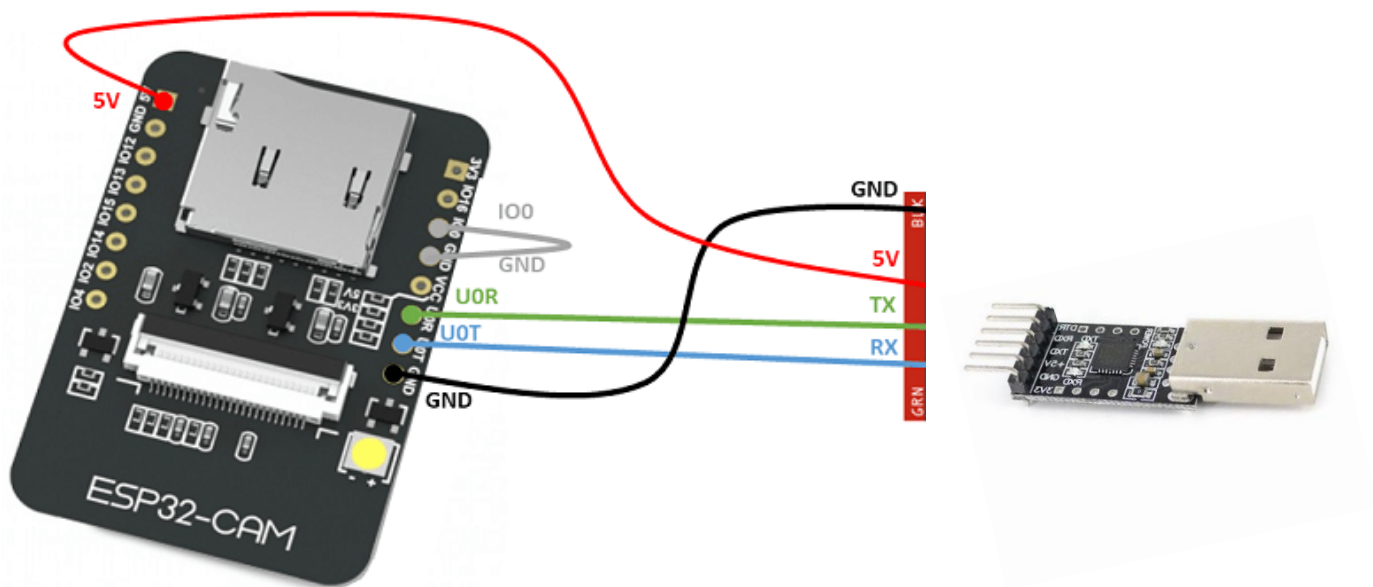


ESP32-CAM



Connection to CP2102 USB to Serial Adapter Module



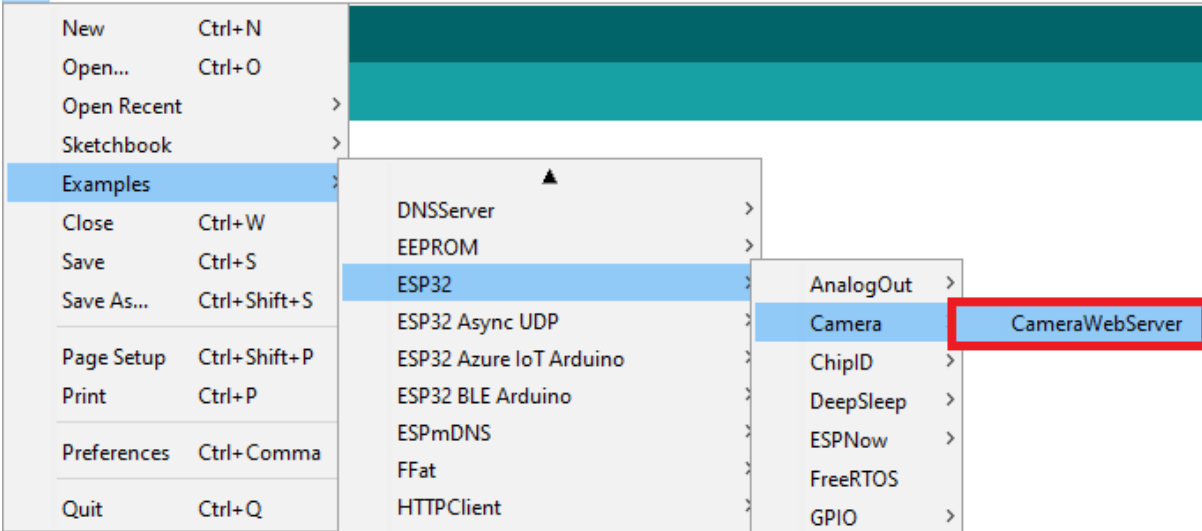
GPIO 0 needs to be connected to GND so that you're able to upload code.

CameraWebServer Example Code

In your Arduino IDE, go to **File > Examples > ESP32 > Camera** and open the **CameraWebServer** example.

sketch_mar18a | Arduino 1.8.7

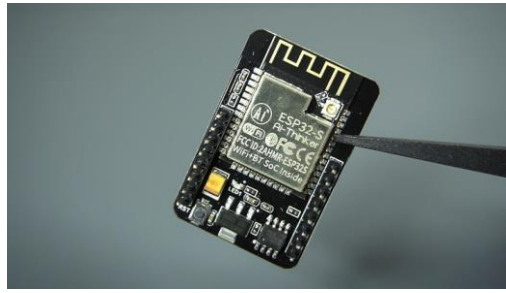
File Edit Sketch Tools Help



Before uploading the code, you need to insert your network credentials in the following variables:

```
const char* ssid = "REPLACE_WITH_YOUR_SSID";  
const char* password = "REPLACE_WITH_YOUR_PASSWORD";
```


Then, make sure you select the right camera module. In this case, we're using the AI-THINKER Model.

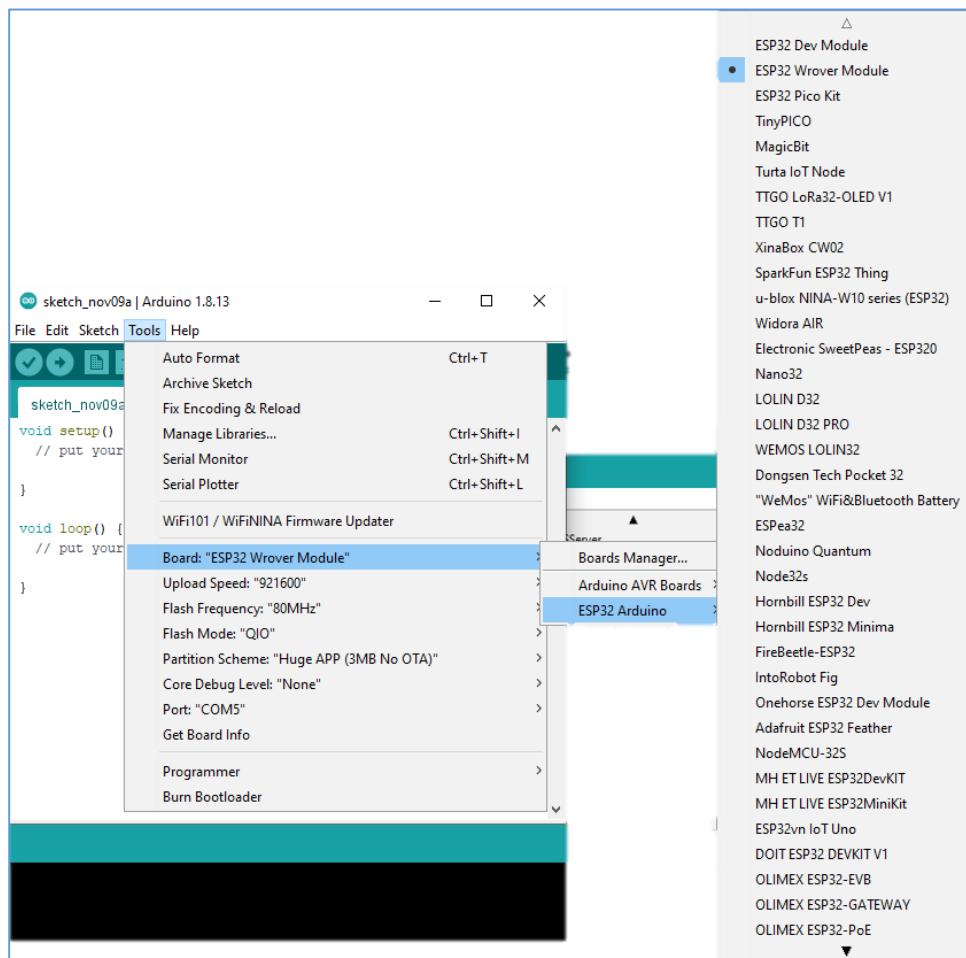


So, comment all the other models and uncomment this one:

```
// Select camera model
//#define CAMERA_MODEL_WROVER_KIT
//#define CAMERA_MODEL_ESP_EYE
//#define CAMERA_MODEL_M5STACK_PSRAM
//#define CAMERA_MODEL_M5STACK_WIDE
#define CAMERA_MODEL_AI_THINKER
```

To upload the code, follow the next steps:

- 1) Go to **Tools > Board** and select **ESP32 Wrover Module**.
- 2) Go to **Tools > Port** and select the COM port the ESP32 is connected to.
- 3) Then, click the upload button to upload the code. 



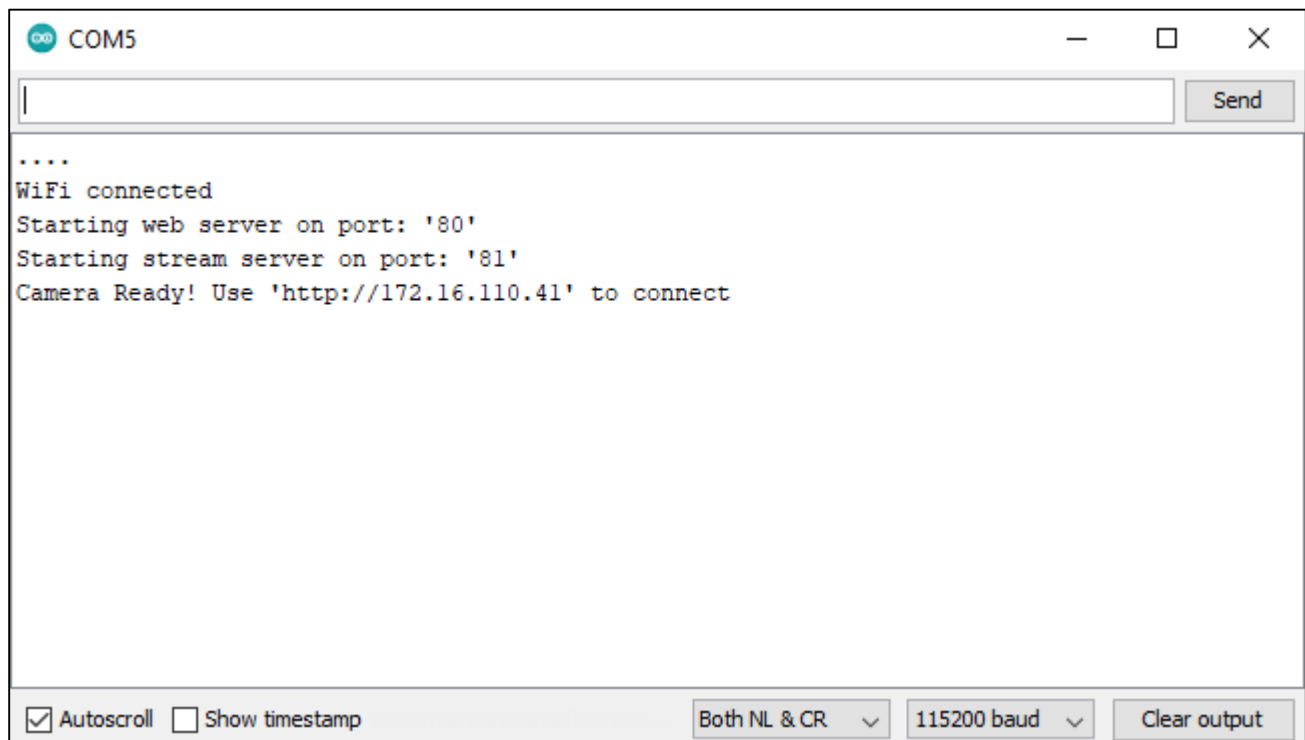
4) When you start to see these dots on the debugging window as shown below, press the ESP32-CAM on-board RST button.

```
esptool.py v2.6-beta1  
Serial port COM10  
Connecting.....
```

Getting the IP address

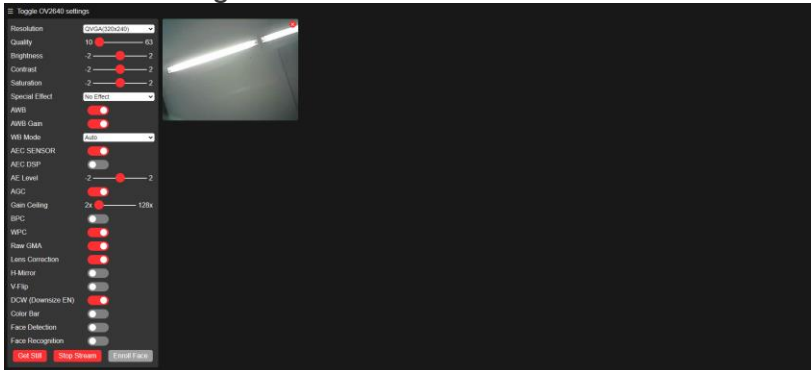
After uploading the code, **disconnect GPIO 0 from GND**. Open the Serial Monitor at a baud rate of 115200. Press the ESP32-CAM on-board **Reset button**.

The ESP32 IP address should be printed in the Serial Monitor.



Accessing the Video Streaming Server

Now, you can access your camera streaming server on your local network. Open a browser and type the **ESP32-CAM IP address** “**example://172.16.110.41**”. Press the **Start Streaming** button to start video streaming.



You also have the option to take photos by clicking the **Get Still** button. Unfortunately, this example doesn't save the photos, but you can modify it to use the on board microSD Card to store the captured photos.

There are also several camera settings that you can play with to adjust the image settings.

Finally, you can do face recognition and detection.



First, you need to enroll a new face. It will make several attempts to save the face. After enrolling a new user, it should detect the face later on (subject 0).

