

ArduCAM-M-2MP ESP8266 Nano V2 Evaluation Kit

Model: UCT-B0085

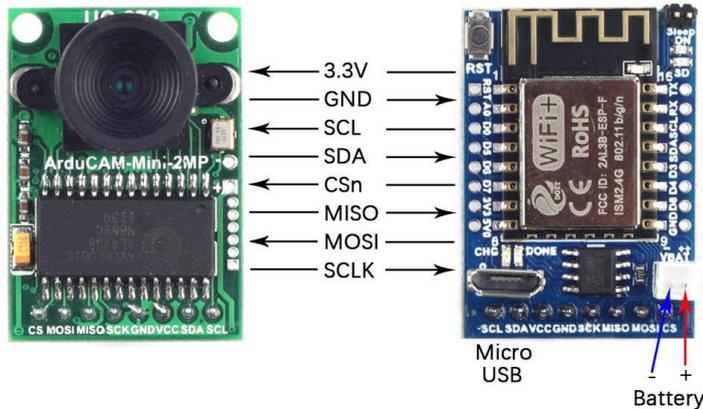
1. Introduction

The evaluation kit is designed for low cost WIFI IoT camera based on ArduCAM-Mini-2MP and ArduCAM-ESP8266-Nano-V2 modules. Users can implement a 2MP WIFI camera using HTTP or WebSocket protocol on ESP8266 Nano, and the camera can act as an AP and mobile phone/PC can be connected to the camera directly or act as a Station which connected to the home router. The kit can take 2MP full resolution JPEG still image, but streaming low resolution low frame rate video due to the limitation of ESP8266. The kit can be USB powered or battery powered with build in charging circuits. The kit can also be used separately, it is identical to an ArduCAM-Mini-2MP camera and a ESP8266 Nano module. The highlight of Version2 is that the ESP8266 can be put into deep sleep mode in order to be used in battery powered applications.

2. Features

2MP image sensor OV2640, support JPEG	M12 mount or CS mount lens holder with changeable lens options
I2C interface for the sensor configuration	SPI interface for camera commands and data stream
Build in SD/TF card socket	Build in Lithium battery recharging 3.7V/500mA max
Compatible with Arduino IDE	Build in micro USB-Serial (CH340g) convertor
Deep sleep mode	Small form of factor

3. Wiring Diagram

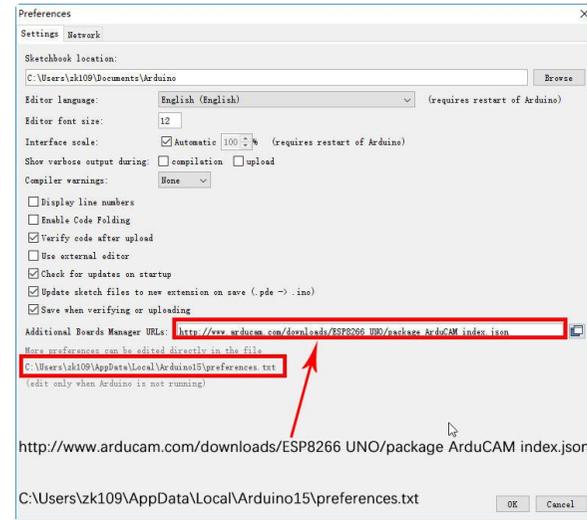


4. Getting Started ESP8266 with Arduino IDE

4.1 Installing with Boards Manager

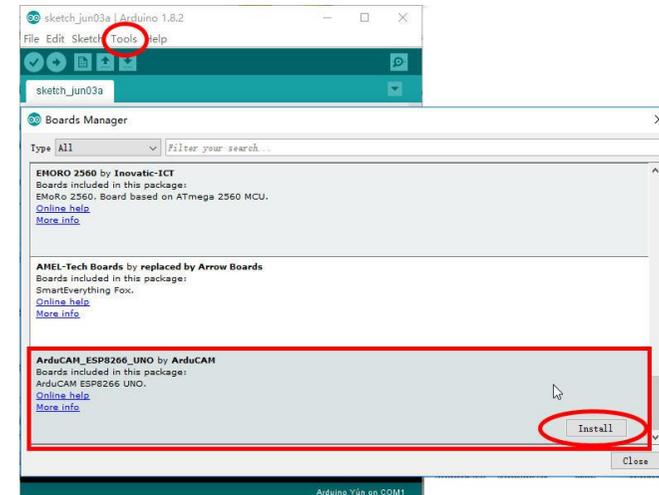
Install Arduino 1.6.8 from the Arduino website. Starting Arduino and open Preferences window and entering the following link into Additional Board Manager URLs field. You can add multiple URLs, separating them with commas:

http://www.arducam.com/downloads/ESP8266_UNO/package_ArduCAM_index.json



Note that the installed package source file is located in the C:\Users\Your computer name\AppData\Local\Arduino15\ folder, here is C:\Users\zk109\AppData\Local\Arduino15\ for example.

Open Boards Manager from Tools ->Board menu and install ArduCAM_ESP8266_UNO addon package.



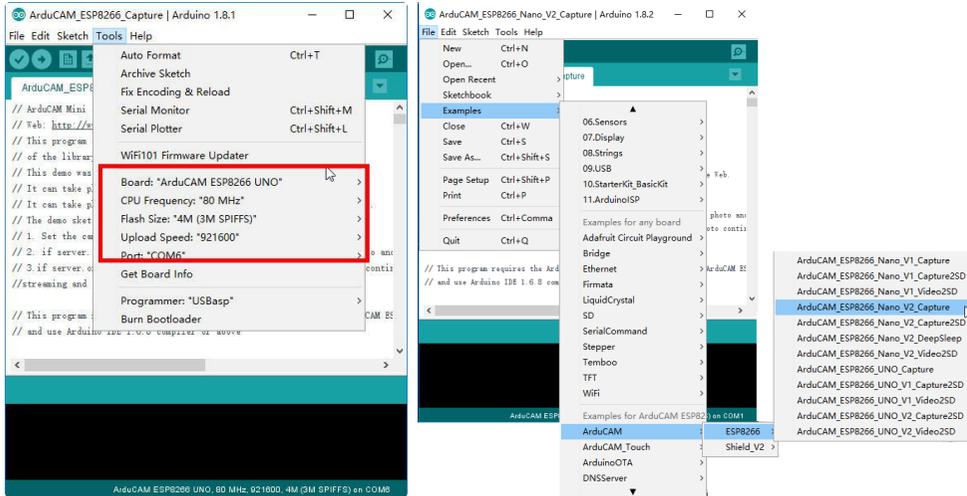
4.2 Using Arduino IDE

After installation of ArduCAM ESP8266 UNO board add-on package, you can select this board from the Tool->Board menu.

And there several ready to use examples from the File->Examples->ArduCAM.You can use these examples directly or as a starting point to develop your own code.

Select ArduCAM_ESP8266_UNO board from Tools->Board menu.

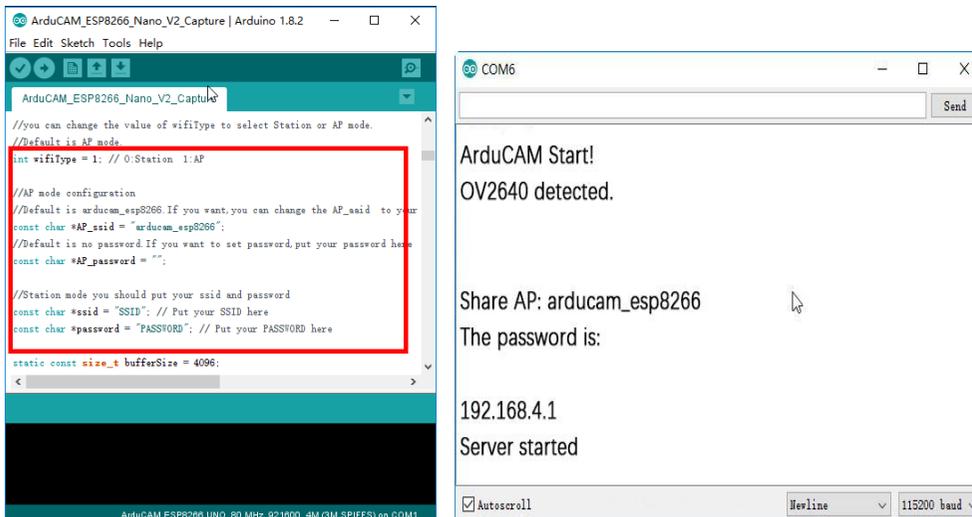
Select the example from File->Examples->ArduCAM->ESP8266->ArduCAM_ESP8266_Nano_V2_Capture



ArduCAM_ESP8266_Nano_V2_Capture: this example uses HTTP protocol to capture still or video over home wifi network from ArduCAM Mini 2MP/5MP and display on the web browser. You can change the value of wifiType to select Station or AP mode. If you use Station mode the ssid and password should be modified before uploading.

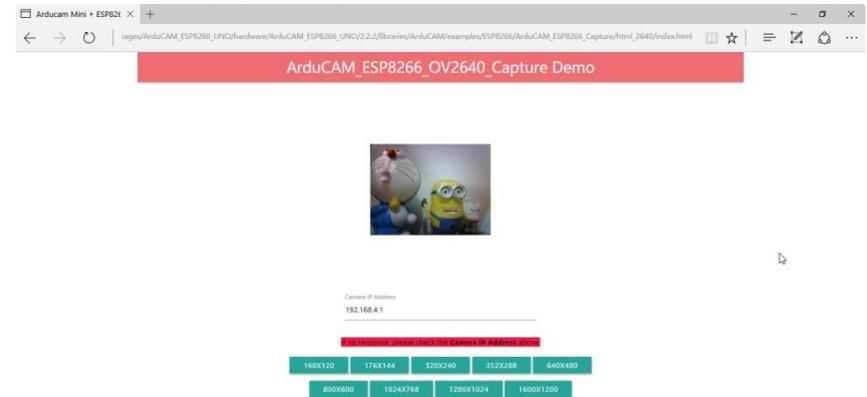
AP mode:

After uploading, the board IP address is 192.168.4.1. You can figure out the IP address through the serial monitor. The default serial monitor baudrate setting is 115200bps.



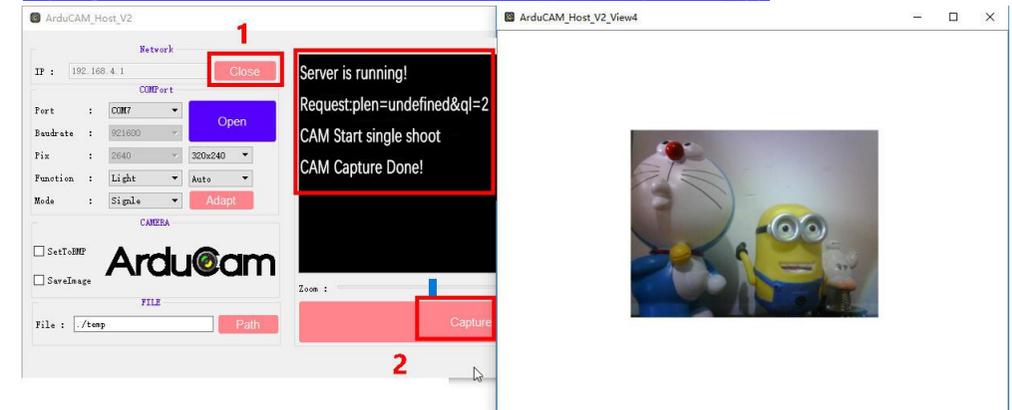
From your PC, go to the WiFi setting page. You should see an Access Point (AP) which the SSID name "arducam_esp8266" on the AP scan result list. Choose the "arducam_esp8266" AP to connect to it. This AP's password is "".

Finally, open the index.html or video.html, input the IP address obtained from the serial monitor then take pictures or videos. The html files are located at C:\Users\Your computer name\AppData\Local\Arduino15\packages\ArduCAM_ESP8266_UNO\hardware\ArduCAM_ESP8266_UNO\2.3\libraries\ArduCAM\examples\ESP8266\ArduCAM_ESP8266_Capture\html_2640.



Also you can use ArduCAM_Host_V2.0_Windows Host app. You can download it on

https://github.com/ArduCAM/Arduino/tree/master/ArduCAM/examples/host_app.



5. Contact us

Website: www.arducam.com

Detailed User Guide: www.uctronics.com/download/Amazon/UCT-B0085.pdf

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