

Selecting the Right ESP board for Your IoT Project



Most Common ESP Dev Board

The most common esp board for IOT is

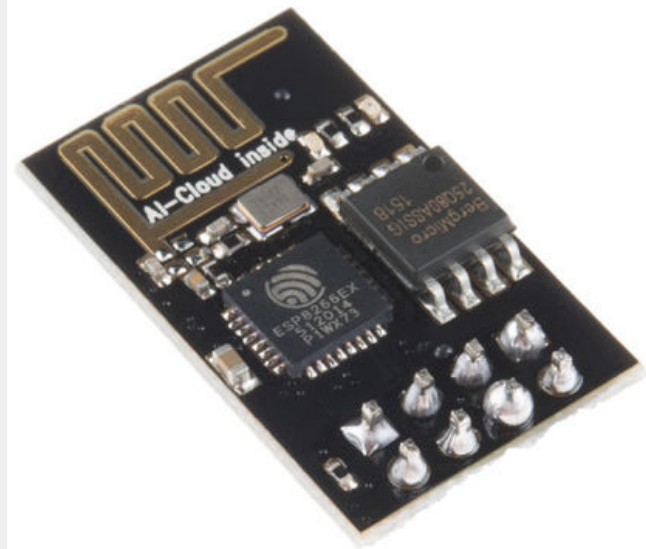
- ESP 32
- Node MCU

For CV ,AI and Image processing

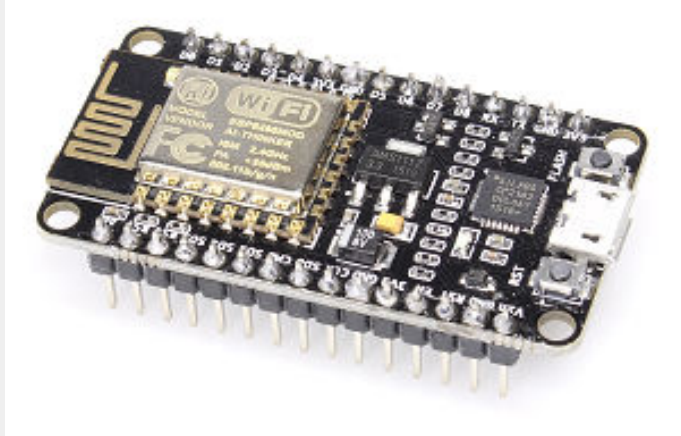
- ESP EYE
- ESP CAM

ESP8266-01

- Ai-Thinker
- TCP/IP
- WPA or WPA2
- 80MHz
- 32 kib instruction Ram
- 1Mb of Flash
- Serial UART
- I2C
- 3.3V
- 70mA -300mA
- 2 GPIO For use

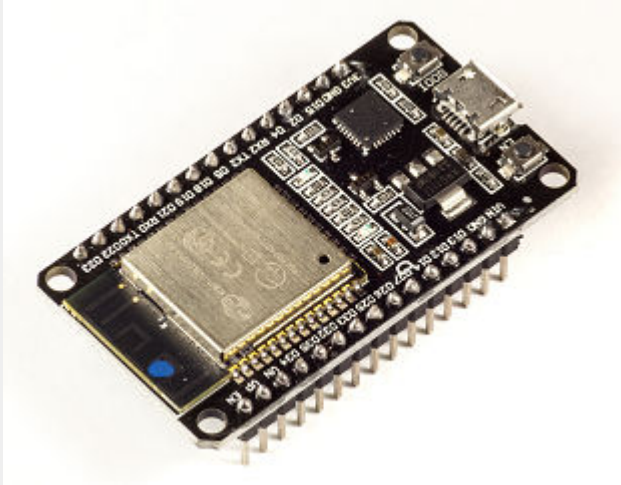


ESP 12 E (Node MCU)



- 4Mb Flash size
- 80MHz
- 50Kb RAM(usable)
- UART
- SPI
- I2C
- WPA/WPA2 authentication
- Digital pin 16
- Analog pin 1

ESP 32



- 18 ADC Pins
- 3 SPI
- 3 UART
- 2 I2C
- 16 PWM
- 2 DAC(Digital to Analog Converter)
- 10 Capacitive sensing GPIO
- Bluetooth 4.0
- 32 bit

ESP EYE



- Dual Core processor with bluetooth and wifi
- 8 MB S RAM
- Camera 2MP
- Audio Microphone
- 4MB Flash
- SPI
- GPIO 1 INPUT

ESP 32 Cam



- WiFi/ BT
- 32 bit CPU
- 520 kb Inbuilt 4 Bb External RAM
- UART
- I2C
- PWM
- ADC
- DAC
- Support Camera
- TF card
- Video Streaming
- 10 GPIO for USE



Where I can program esp dev boards

- Arduino IDE
- Micropython
- Circuit Python
- MonGoose
- LUA

How to add new boards to Arduino IDE

Preferences ×

Settings **Network**

Sketchbook location:
C:\Users\SINHA145\Documents\Arduino Browse

Editor language: System Default ▼ (requires restart of Arduino)

Editor font size: 12

Interface scale: Automatic 100 ▼ % (requires restart of Arduino)

Theme: Default theme ▼ (requires restart of Arduino)

Show verbose output during: compilation upload

Compiler warnings: None ▼

Display line numbers Enable Code Folding

Verify code after upload Use external editor

Check for updates on startup Save when verifying or uploading

Use accessibility features

Additional Boards Manager URLs:

More preferences can be edited directly in the file
C:\Users\SINHA145\AppData\Local\Arduino15\preferences.txt
(edit only when Arduino is not running)

OK Cancel



How to choose Right board for IOT project.

- Decide Features
- Type of connectivity you need to achieve that
- GPIO pins need for that
- Memory needed
- USE

AI and Image processing need

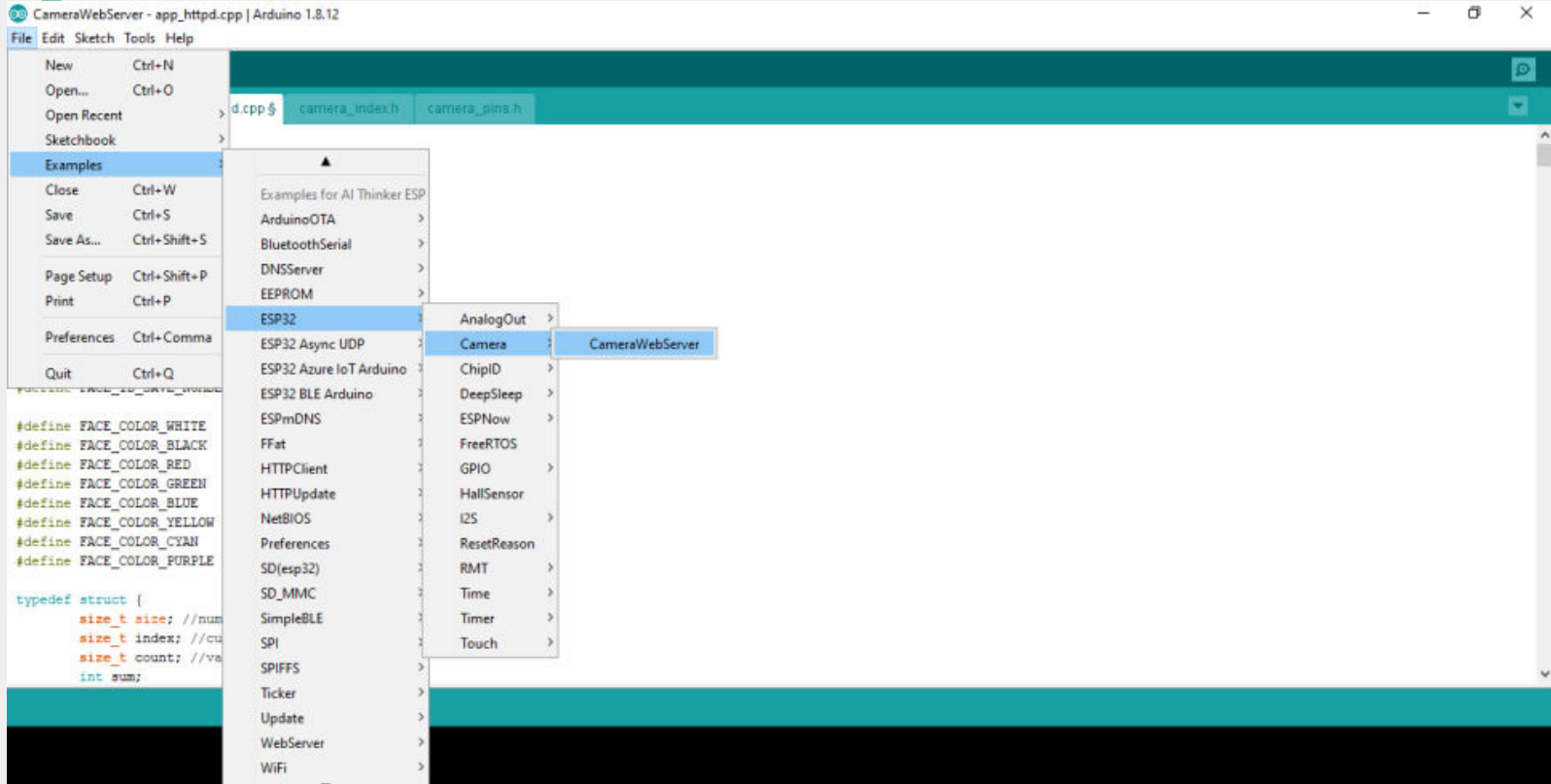
If no GPIO then ESP EYE

If need GPIO

Use

ESP32 CAM

Make Face Recognition Camera Using ESP32





Thank You