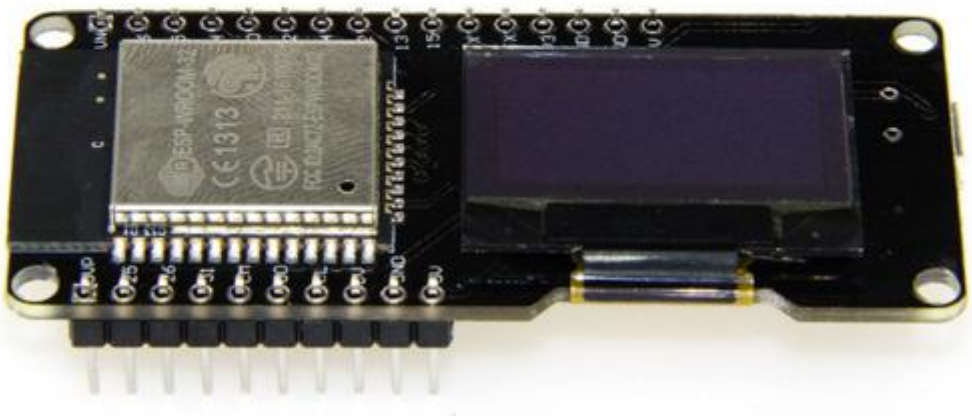
WEMOS Lolin ESP32 +0.96OLED



WEMOS LOLIN (ESP32 & 0.96OLED) is another key product after we released WEMSO LOLIN (ESP8266 & 0.96OLED).

What is it?

This is a low cost Arduino-compatible ESP32 development board. A 0.96OLED display is on the board. It is very easy for beginners to learn ESP32.

Why did you make it?

As our product WEMOS LOLIN has already proved WiFi + Display could do a lot of interesting things. We want this WiFi & Bluetooth module could be more interesting for beginners to develop IOT.
ESP-Wroom-32 built inside.

ESP-WROOM-32 is a powerful, generic Wi-Fi+BT+BLE MCU module that targets a wide variety of applications, ranging from low-power sensor networks to the most demanding tasks, such as voice encoding, music streaming and MP3 decoding. At the core of this module is the ESP32-D0WDQ6 chip*, which is designed to be scalable and adaptive. There are two CPU cores that can

be individually controlled or powered, and the clock frequency is adjustable from 80 MHz to 240 MHz. The user may also power off the CPU and make use of the low-power coprocessor to constantly monitor the peripherals for changes or crossing of thresholds. ESP32 integrates a rich set of peripherals, ranging from capacitive touch sensors, Hall sensors, low-noise sense amplifiers, SD card interface, Ethernet, high speed SDIO/SPI, UART, I2S and I2C.

The integration of Bluetooth, Bluetooth LE and Wi-Fi ensures that a wide range of applications can be targeted, and that the module is future proof: using Wi-Fi allows a large physical range and direct connection to the internet through a Wi-Fi router, while using Bluetooth allows the user to

conveniently connect to the phone or broadcast low energy beacons for its detection. The sleep current of the ESP32 chip is less than 5 µA, making it suitable for battery powered and wearable electronics applications. ESP-WROOM-32 supports data rates of up to 150 Mbps, and 22 dBm output power at the PA to ensure the widest physical range. As such the chip does offer industry-leading specifications and the best performance for electronic integration, range, power consumption, and connectivity.

The operating system chosen for ESP32 is freeRTOS with LWIP; TLS 1.2 with hardware acceleration is built in as well. Secure (encrypted) over the air (OTA) upgrade is also supported, so that developers can continually upgrade their products even after

their release.

240 MHz dual core Tensilica LX6 microcontroller with 600 DMIPS
Integrated 520 KB SRAM
Integrated 802.11BGN HT40 Wi-Fi transceiver, baseband, stack and LWIP
Integrated dual mode Bluetooth (classic and BLE)
4 MB flash For controlling OLED
Pin 5 is SDA, Pin 4 is SCL

You need to hold "boot" button then click "EN" will go to download mode.

Tutorial 1:

http://www.espressif.com/en/products/hardware/esp32/resources

Tutorial 2:

https://github.com/espressif/arduino-esp32