

**ESP-WROOM-32** is a powerful universal WiFi-BT-BLE MCU module for a variety of applications, from low-power sensor networks to the most demanding tasks such as voice coding, music streaming and MP3 decoding. **ESP8266** bringing WiFi to a small and cheap package, but also has enough processing power and enough pins to complete the small things and began a small revolution. Now you can use the **ESP-WROOM-32** WiFi / Bluetooth Classic / BLE module to elevate your WiFi capabilities to a higher level! The product is just a module - it could be hard to use. You need to solder it on a board with support circuit (see Espressif's assembled **ESP32** development board for a more complete design). This module is currently available for use by developers, FCC, CE, IC, MIC (Telec), KCC and NCC certifications. This module **ESP-wroom-32** totally fits for WiFi 802.11b/g/n/e/i and Bluetooth v4.2 BR/EDR & BLE standard, and providing a series of solutions of Wifi and Bluetooth to support open real-time operating systems (RTOS). it also offers an open platform to support users to custom function flexibly in various applications.

## Specifications

- ESP32-WROOM-32 contains two low-power Xtensa 32-bit LX6 microprocessors
- 448 KBytes ROM for booting and core functions
- 520 KBytes on-chip SRAM
- 8 KBytes SRAM in RTC SLOW
- 8 KBytes SRAM in RTC FAST
- 1 Kbit of EFUSE, 256 bits MAC
- WiFi: 802.11 b/g/n/d/e/i/k/r (802.11n up to 150 Mbps)
- Bluetooth v4.2 BR/EDR and BLE specification
- Wi-Fi mode Station/softAP/SoftAP+station/P2P
- Security WPA/WPA2/WPA2-Enterprise/WPS
- Encryption AES/RSA/ECC/SHA
- IPv4, IPv6, SSL, TCP/UDP/HTTP/FTP/MQTT
- Interfaces: SD-card, UART,SPI,SDIO,I2C,LED PWM,Motor PWM,I2S ,IR,GPIO, capacitive touch sensor, ADC, DAC, Hall sensor, temperature sensor
- Operating temperature -40 + 85C
- Operating voltate: 2.2-3.6V
- Consumption: 80 mA typ
- Dimensions: 18 mm(L) x 25.5 mm(W) x 2.8 mm(H)
- Pin pitch:1.27mm
- Shielding can height: 2 mm
- PCB tickness: 0.8±0.1mmIPv4, IPv6, SSL, TCP/UDP/HTTP/FTP/MQTT