

# MINI32 Wemos ESP-WROOM-32



**Produktkode:** 336aa

**Tilgjengelighet:** Opp til 1 mnd leveringstid

**Custom Field 5 (Location):** N9, N8

**Pris: kr. 140,00**

## Short Description

MINI Wemos D1 ESP32 ESP-32 WIFI Development Bluetooth ESP8266 CP2104 Module

## Beskrivelse

### Wemos MINI D1 ESP32

Wemos MINI D1 ESP32 ESP-32S WIFI + Bluetooth ESP8266 Module CP2104 For Arduino

Kort: Adafruit ESP32 Feather

USB driver: CP2104

## **Shipping list:**

1. Lange weibliche pins x4pcs
2. kurze weibliche pins x4pcs
3. Normal pins x4pcs
4. mini D1 ESP32 blue x1pcs

## **ESP32S**

### Description:

ESP-32S Wifi Bluetooth combo module is ultra high performance and ultra low power consumption Wi-Fi and Bluetooth combo wireless platform based on ESPRESSIF ESP32 chipset. ESP-32S integrates dual-core processor, 448 KByte ROM, 520 KByte SRAM, 16 KByte SRAM in RTC, 802.11 b/g/n/e/I Wi-Fi, Bluetooth v4.2 BR/EDR & BLE, clocks & timers, abundant peripheral interfaces and security mechanism.

ESP-32S Wifi Bluetooth combo module provides SDK Firmware for fast on-line programming and open source toolchains based on GCC for development support. It is designed for Generic low power IoT sensor hub, loggers, video streaming for camera, Wi-Fi & Bluetooth enabled devices, Home automation and mesh network applications, aimed at makers, hardware engineers, software engineers and solution providers.

ESP32 is a single chip 2.4 GHz WiFi and Bluetooth combo chip designed with TSMC ultra low power 40 nm technology. It is designed and optimized for the best power performance, RF performance, robustness, versatility, features and reliability, for a wide variety of applications, and different power profiles.

ESP32 is the most integrated solution for WiFi + Bluetooth applications in the industry with less than 10 external components. ESP32 integrates the antenna switch, RF balun, power amplifier, low noise receive amplifier, filters, and power management modules. As such, the entire solution occupies minimal Printed Circuit Board (PCB) area.

ESP32 is designed for mobile, wearable electronics, and Internet of Things (IoT) applications. It has many features of the state-of-the art low power chips, including fine resolution clock gating, power modes, and dynamic power scaling.

### **Key Features:**

CPU and Memory: Xtensa® 32-bit LX6 Dual-core processor, up to 600 DMIPS.

448 KByte ROM

520 KByte SRAM

16 KByte SRAM in RTC.

QSPI can connect up to 4\* Flash/SRAM, each flash should be less than 16 Mbytes.

Supply Voltage: 2.2V~3.6V

WIFI

802.11 b/g/n/e/i

802.11 n (2.4 GHz), up to 150 Mbps

802.11 e: QoS for wireless multimedia technology.

WMM-PS, UAPSD

MPDU and A-MSDU aggregation

Block ACK

Fragmentation and defragmentation

Automatic Beacon monitoring/scanning

802.11 i security features: pre-authentication and TSN

Wi-Fi Protected Access (WPA)/WPA2/WPA2-Enterprise/Wi-Fi Protected Setup (WPS)

Infrastructure BSS Station mode/SoftAP mode

Wi-

Fi Direct (P2P), P2P Discovery, P2P Group Owner mode and P2P Power Management

UMA compliant and certified

Antenna diversity and selection

Bluetooth:

Compliant with Bluetooth v4.2 BR/EDR and BLE specification

Class-1, class-2 and class-3 transmitter without external power amplifier

Enhanced power control

+10 dBm transmitting power

NZIF receiver with -98 dBm sensitivity

Adaptive Frequency Hopping (AFH)

Standard HCI based on SDIO/SPI/UART High speed UART HCI, up to 4 Mbps

BT 4.2 controller and host stack

Service Discover Protocol (SDP)

Security Manage Protocol (SMP)

Bluetooth Low Energy (BLE)

ATT/GATT

HID

All GATT-based profile supported

SPP-Like GATT-based profile

BLE Beacon

A2DP/AVRCP/SPP, HSP/HFP, RFCOMM

CVSD and SBC for audio codec

Bluetooth Piconet and Scatternet

Clocks and timer

- Internal 8 MHz oscillator with calibration
- Internal RC oscillator with calibration
- External 2 MHz to 40 MHz crystal oscillator
- External 32 kHz crystal oscillator for RTC with calibration
- Two timer groups, including 2 x 64-bit timers and 1 x main watchdog in each group
- RTC watchdog

Peripheral interface:

- 12-bit SAR ADC up to 18 channels
- 2 x 8-bit D/A converters
- 10 x touch sensors
- Temperature sensor
- 4 x SPI, 2 x I2S, 2 x I2C, 3 x UART
- 1 host (SD/eMMC/SDIO), 1 slave (SDIO/SPI)
- Ethernet MAC interface with dedicated DMA and IEEE 1588 support
- CAN 2.0
- IR (TX/RX)
- Motor PWM, LED PWM up to 16 channels
- Hall sensor
- Ultra low power analog pre-amplifier

Security:

- IEEE 802.11 standard security features all supported, including WFA, WPA/WPA2 and WAPI
- Secure boot
- Flash encryption
- 1024-bit OTP, up to 768-bit for customers
- Cryptographic hardware acceleration: -AES-HASH(SHA-2) library-RSA-ECC-  
Random Number Generator (RNG)

Development support:

- SDK Firmware for fast on-line programming
- Open source toolchains based on GCC

Application:

- Generic low power IoT sensor hub
- Generic low power IoT loggers
  - Video streaming from camera
  - Over The Top (OTT) devices
- Music players - Internet music players - Audio streaming devices
- Wi-Fi enabled toys - Loggers - Proximity sensing toys
- Wi-Fi enabled speech recognition devices
- Audio headsets
- Smart power plugs
- Home automation
- Mesh network

**Size:**

The size of ESP-32S Wifi module is 16mm x 24mm x 3mm.

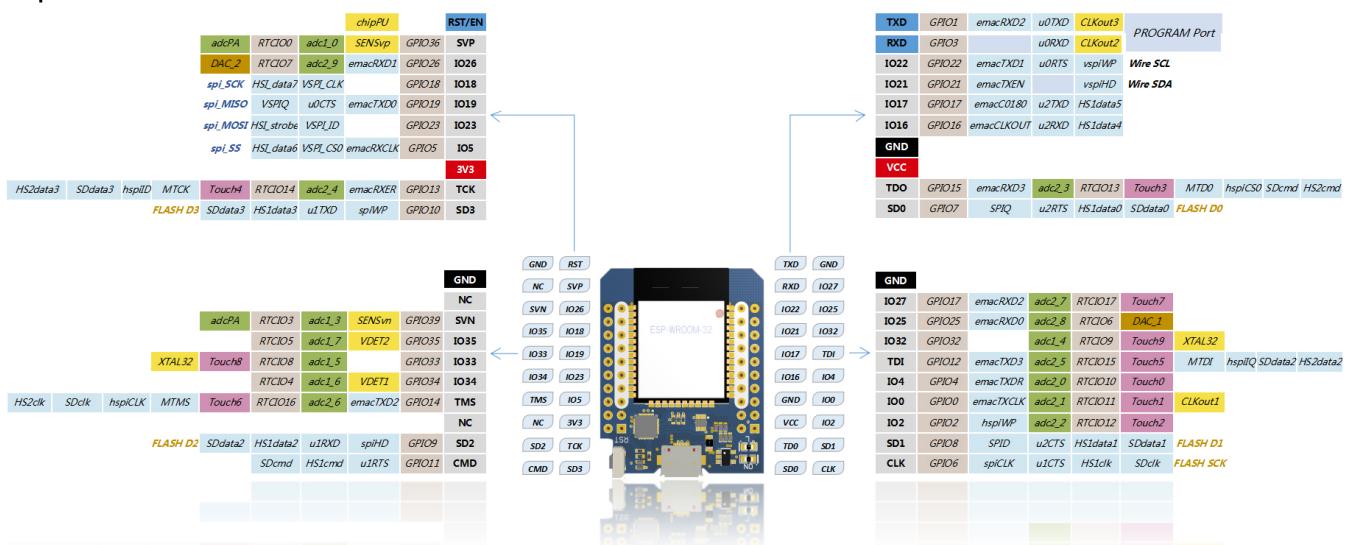
The ESP-32S deploys 4MB SPI Flash with WSOP?8 package. It also uses 3DBi PCB antenna on board.

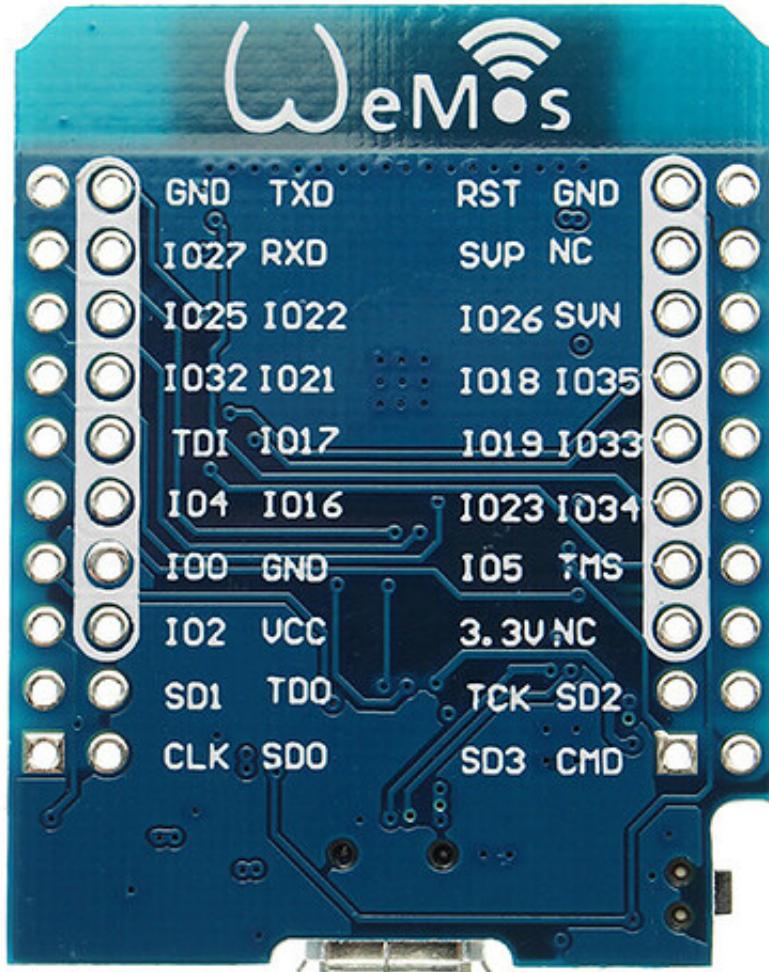
**Packing list:**

1x ESP-32S Wifi Bluetooth Combo Module

**Pinout**

## esp32 Mini kit PINOUT





## Product Gallery

