# MINI32 Wemos ESP-WROOM-32

**Produktkode:** 600
**Tilgjengelighet:** 3
**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 pinsx4pcs
3.Normal pinsx4pcs
4. mini D1 ESP32 blue x1pcs

**ESP32S**

Description:

ESP-32S Wifi Bluetooth combo module is ultra high performance and ultra low power co nsumption Wi-Fi and Bluetooth combo wireless platform based on ESPRESSIF ESP32 c hipset. 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 & Ti mes, abundant peripheral Interfaces and sercurity mechanism.

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

ESP32 is a single chip 2.4 GHz WiFi and Bluetooth combo chip designed with TSMC ultr a low power 40 nm technology. It is designed and optimized for the best power performa nce, 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 wit h less than 10 external components. ESP32 integrates the antenna switch, RF balun, po wer amplifier, low noise receive amplifier, filters, and power management modules. As s uch, the entire solution occupies minimal Printed Circuit Board (PCB) area.

ESP32 is designed for mobile, wearable electronics, and Internet of Things (IoT) applicati ons. 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 Dua-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 × 8-bit D/A converters
10 × touch sensors
Temperature sensor
4 × SPI, 2 × I2S, 2 × I2C, 3 × UART
1 host (SD/eMMC/SDIO), 1 slave (SDIO/SPI)
Ethernet MAC interface with dedicated DMA and IEEE 1588 suppor
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

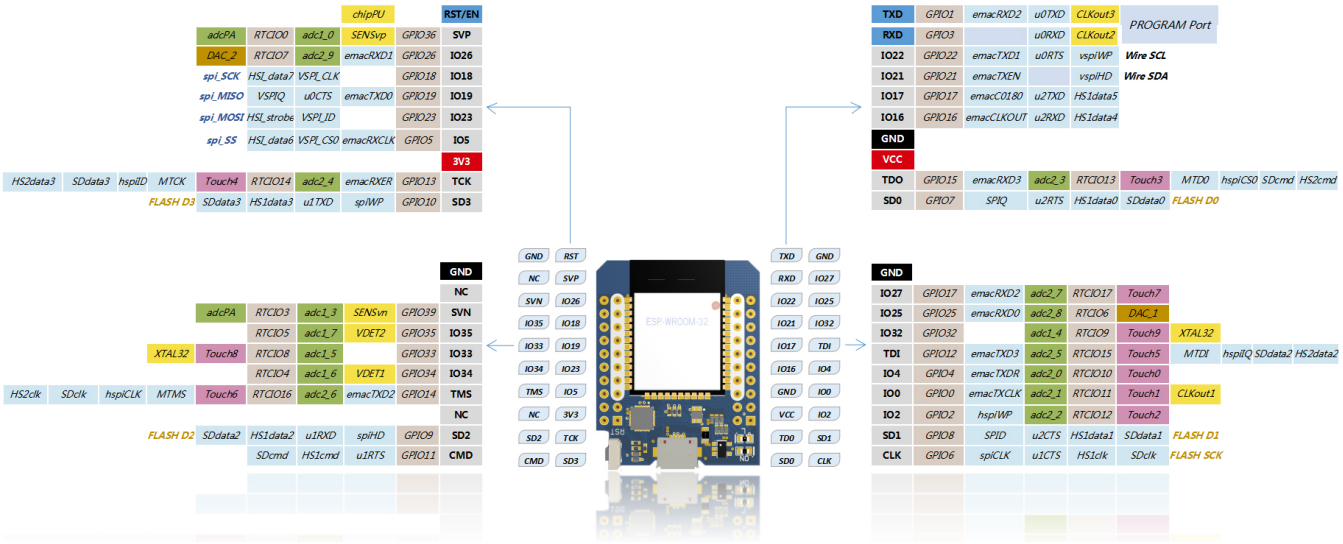
Size:
The size of ESP-32S Wifi module is 16mm x 24mm x 3mm.
The ESP-32S deploys 4MB SPI Flash with WSOP?8 package. It also uses 3DBi PCB ant enna on board.

**Packing list:**

1x ESP-32S Wifi Bluetooth Combo Module

**Pinout**

esp32 Mini kit PINOUT




# PINS:

| Board Pin | Function | ESP8266 Pin |
|---|---|---|
| TX | TXD | TXD |
| RX | RXD | RXD |
| A0 | Analog input | A0 |
| D0 | I/O | GPIO16 |
| D1 | I/O, SCL | GPIO5 |
| D2 | I/O, SDA | GPIO4 |
| D3 | I/O, 10k pull-up | GPIO0 |
| D4 | I/O, 10k pull-up, BUILTIN_LED | GPIO2 |
| D5 | I/O, SCK | GPIO14 |
| D6 | I/O, MISO | GPIO12 |
| D7 | I/O, MOSI | GPIO13 |
| D8 | I/O, 10k pull-down, SS | GPIO15 |

| | | |
|---|---|---|
| GND | Ground | GND |
| 5V | 5V | |
| 3V3 | 3.3V | 3.3V |
| RST | Reset | RST |

All of the I/O pins have interrupt/PWM/I2C/one-wire capability, except for D0

## Product Gallery