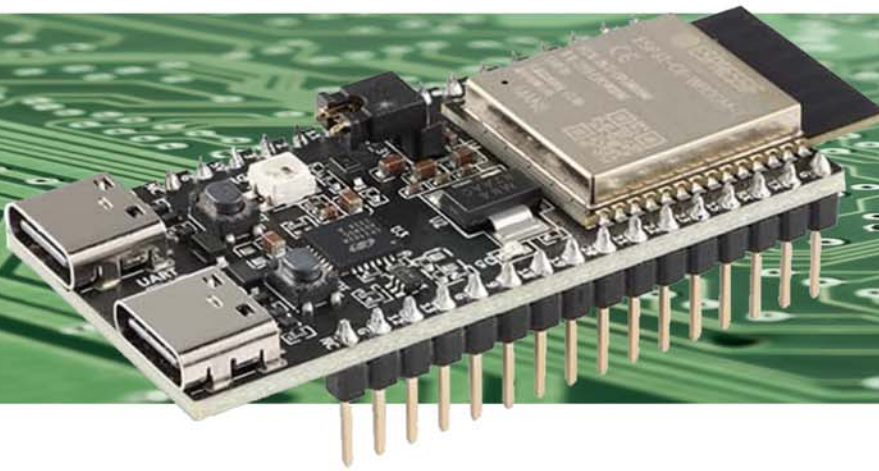


ESP32-C6-WROOM-1 WIFI + BLUETOOTH DEVELOPMENT BOARD 32 PINS, 8 MB FLASH, DRIVER CP2102, 2 x USB-C CONNECTORS



ESP32-C6-WROOM1

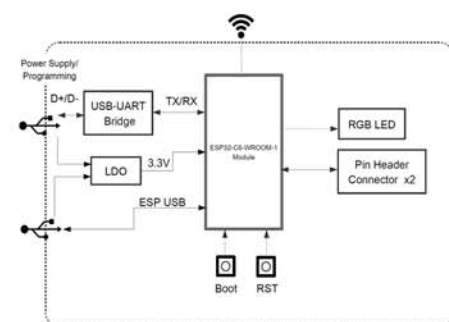
Introduction :

This development board is equipped with an ESP32-C6-WROOM-1 module containing a single-core 32-bit RISC-V ESP32-C6 microprocessor (with 8 Mbits of Flash memory, 528 Kbits of SRAM and 320 Kbits of ROM). This module supports Wi-Fi 6 (802.11 ax/b/g/n), Bluetooth 5.3 and Zigbee 3.0 communication functions within a single component. The board has two USB-C ports, each of which can be used to power the board, flash the component's memory and communicate with it via a USB protocol. One is connected directly to the ESP32-C6 microprocessor, enabling communication speeds of up to 12 Mbps, meanwhile the other is connected via the CP2102 USB-to-UART converter. A power and status indicator (RGB LED) is provided, along with two micro-switches to perform a reset (RST) or enter programming mode (BOOT).

There are numerous Arduino applications available for the ESP32, and the 2.54mm-pitch pins on both sides of the board allow developers to easily connect it to another development board or prototype. This board, based on the ESP32 microprocessor, enables a wide range of wireless applications that combine speed with low power consumption, whether using Wi-Fi, Bluetooth or Zigbee, all integrated into a single component. It can be used to manage wireless sensors, transmit data, music or images in real time, communicate with a router or a mobile phone, or for any other industrial applications.

Technical specifications :

Module: ESP32-C6-WROOM-1-N8, featuring an ESP32-C6 MCU from Espressif.
Memory: 8 Mbits Flash + 512 Kbits HP SRAM + 16 Kbits LP SRAM + 320 Kbits ROM.
Clock frequency: up to 160 MHz.
Supported interfaces: UART / GPIO / ADC / SDIO / PWM / SPI / I2C / I2S.
Data rate: 150 Mbps max.
Power supply: 5.0 Vdc (USB-C) or 5.0 Vdc / 3.3 Vdc (pins).
Antenna : integrated on the rear of the module.
Wi-Fi 6 transmission: 802.11 ax/b/g/n from 2.412 GHz to 2.484 GHz.
Bluetooth transmission: 5.3 LE standard + Zigbee 3.0
Maximum gain: +20 dBm (TX) and -106 dBm (RX).
Operating temperatures: -40°C to +85°C. Humidity: <90%.
Board dimensions: 51,8 x 25,4 mm (32 pins). Weight: 10 g.



Items included :

Development board with soldered pins.

Available for download online:

- Arduino or Raspberry Pi IDE software for the ESP32.
- Espressif ESP32-C6 datasheet.
- Espressif ESP-IDF open-source programming guide.

