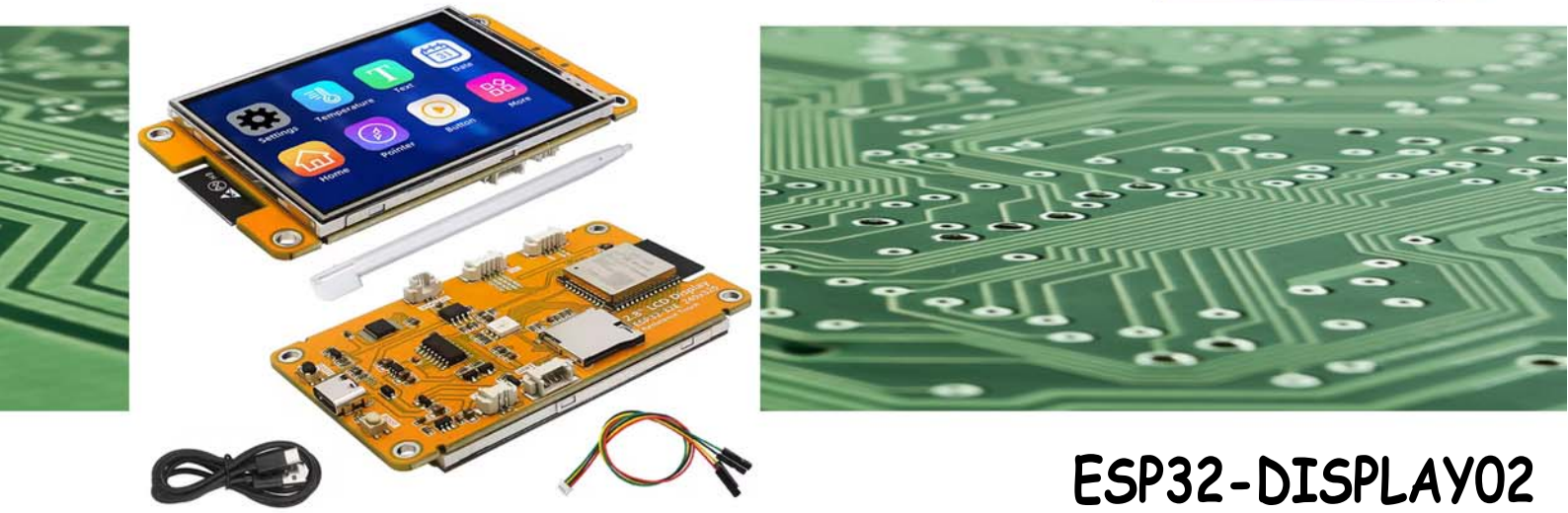
ESP32-32E Wi-Fi + BLUETOOTH DEVELOPMENT BOARD WITH TOUCH SCREEN COLOR DISPLAY 2.8 INCH, USB-C CONNECTOR



ESP32-DISPLAY02

Introduction :

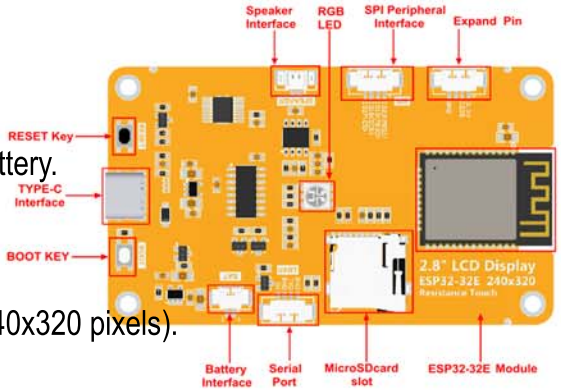
This development board is equipped with a module based on the Xtensia 32-bit dual-core ESP32 microprocessor (4 Mbits Flash + 536 Kbits SRAM + 448 Kbits ROM), which integrates 802.11 b/g/n Wi-Fi and Bluetooth 4.2 communication functions into a single component. This module is fitted with a 40 MHz crystal, enabling the ESP32 to operate with an internal clock adjustable from 80 MHz to 240 MHz.

The board can be powered via its USB-C port, a 3.7V external battery, or a 5.0V 1,25mm connector. The board is equipped with an amplifier and a speaker connector, a Micro-SD memory card reader, a high-brightness RGB LED and two micro-switches to perform a RESET or enter programming mode. On the back of the board, a 2.8-inch colour TFT touchscreen (240x320 pixels) enables the development of graphical applications using an open-source LVGL GUI library.

There are numerous Arduino applications available for the ESP32, and the board's connectors enable it to be used completely independently. This board supports a wide range of wireless applications that combine speed with low power consumption, whether via Wi-Fi or Bluetooth, all integrated into a single component. It is possible to control wireless sensors, transmit data, music or images in real time, communicate with a router or a mobile phone, or use it for any other industrial applications.

Technical specifications :

Microprocesseur: ESP32-DOWD-V3 Xtensia dual-core 32 bits LX6.
Memory: 4 Mbits Flash + 536 Kbits SRAM + 448 Kbits ROM.
Clock frequency: adjustable from 80 to 240 MHz, (40 MHz crystal).
Supported interfaces: 26 GPIO / UART / SPI / SDIO / I2C / PWM / I2S / SD.
Power supply: 5.0 Vdc (USB-C), 5.0 Vdc 1,25 mm connector, 3,7V external battery.
Antenna : ceramic onboard PCB.
Data rate: 150 Mbps max. Driver: CH340C.
Wi-Fi transmission: 802.11 b/g/n from 2.412 GHz to 2.484 GHz.
Bluetooth transmission: 4.2 BR/EDR and LE standard.
Display : ST7789P3 / XPT2046 2.8 inch, 262K colour, TN TFT touchscreen (240x320 pixels).
Operating temperatures: -40°C to +85°C. Humidity: <90%.
Board dimensions: 86,0 x 50,0 mm. Weight: 40 g.



Items included :

Development board with TFT colour touchscreen.
4-wire cable with a pitch of 1.25 mm, 0.20 m long.
USB-A to USB-C cable, 1m.
Touch pen.
Plastic storage box.
Available for download online:
- https://www.lcdwiki.com/2.8inch_ESP32-32E-7789
- Open-source graphics library LVGL GUI.
- Arduino or Raspberry Pi IDE software for the ESP32.
- Espressif datasheet for the ESP32-WROOM-32E-compatible module.
- Espressif ESP-IDF open-source programming guide.