

ESP32-S3 7" LCD Development Board

1024 × 600 Resolution, Backlight Adjustable, Multiple Peripheral Interfaces



LX7 Dual-core Processor



2.4GHz Wi-Fi



BLE 5



Onboard Antenna



7"



5-Point Touch
(touch version only)



1024×600 Pixels



65K Color

Version Options

The B Version Is The Upgraded Version With Higher Resolution, Supports Backlight Adjustment
And Lithium Battery Voltage Monitoring



E8P32-88-LCD-7

Standard version, without touch control
800 × 400 resolution



E8P32-88-Touch-LCD-7

Standard version, with touch control
800 × 400 resolution



E8P32-88-LCD-7B

Upgraded version, without touch control
1024 × 600 resolution



E8P32-88-Touch-LCD-7B

Upgraded version, with touch control
1024 × 600 resolution

Features

This product is a microcontroller development board that supports 2.4GHz Wi-Fi and Bluetooth BLE 5, integrates high-capacity Flash and PSRAM. Onboard 7inch LCD display can smoothly run GUI programs such as LVGL. Combined with multiple peripheral interfaces, it is suitable for rapid development of ESP32-S3 HMI applications.

- Equipped with high-performance Xtensa 32-bit LX7 dual-core processor, up to 240MHz main frequency
- Supports 2.4GHz Wi-Fi (802.11 b/g/n) and Bluetooth 5 (LE), with onboard antenna
- Built-in 512KB SRAM and 384KB ROM, with onboard 16MB Flash and 8MB PSRAM
- Onboard 7inch LCD display, 1024 × 600 resolution, 65K color
- Supports 5-point capacitive touch control via I2C interface, with interrupt support (for touch version only)
- Onboard CAN, RS485, I2C interface and TF card slot, integrates full-speed USB port
- LED indicators for easy monitoring of power status and battery charging status
- Supports backlight adjustment and real-time battery voltage monitoring
- Supports accurate control such as flexible clock and multiple power modes to realize low power consumption in different scenarios

Application Scenarios



Human-machine Interface

The Human-machine Interface (also known as the user interface) is the medium of interaction and information exchange between the system and the user, it realizes the transformation between the internal form of information and the form acceptable to human beings.



LVGL GUI Development

LVGL is a free, open-source graphics library that provides everything you need to create embedded GUI with the easy-to-use graphical elements, beautiful visual effects and low memory requirement.

IPS Display Panel

Excellent display performance, 170° viewing angle

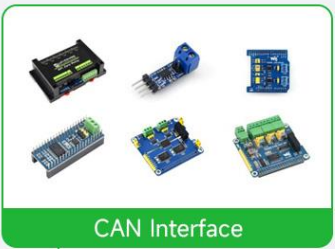


Supports Multiple Peripherals

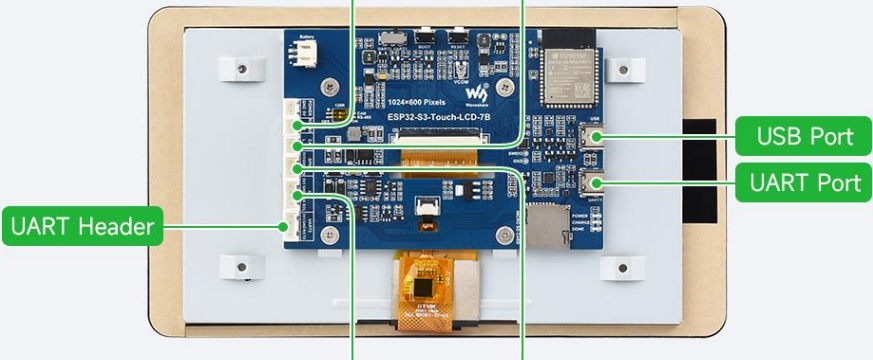
Supports the expansion of multiple peripherals via Sensor, CAN, RS485, and I2C interfaces



RS485 Interface



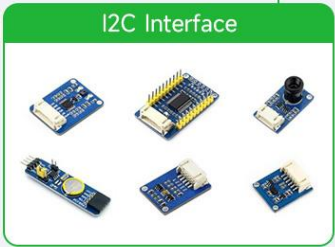
CAN Interface



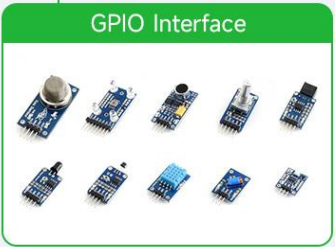
UART Header

USB Port

UART Port

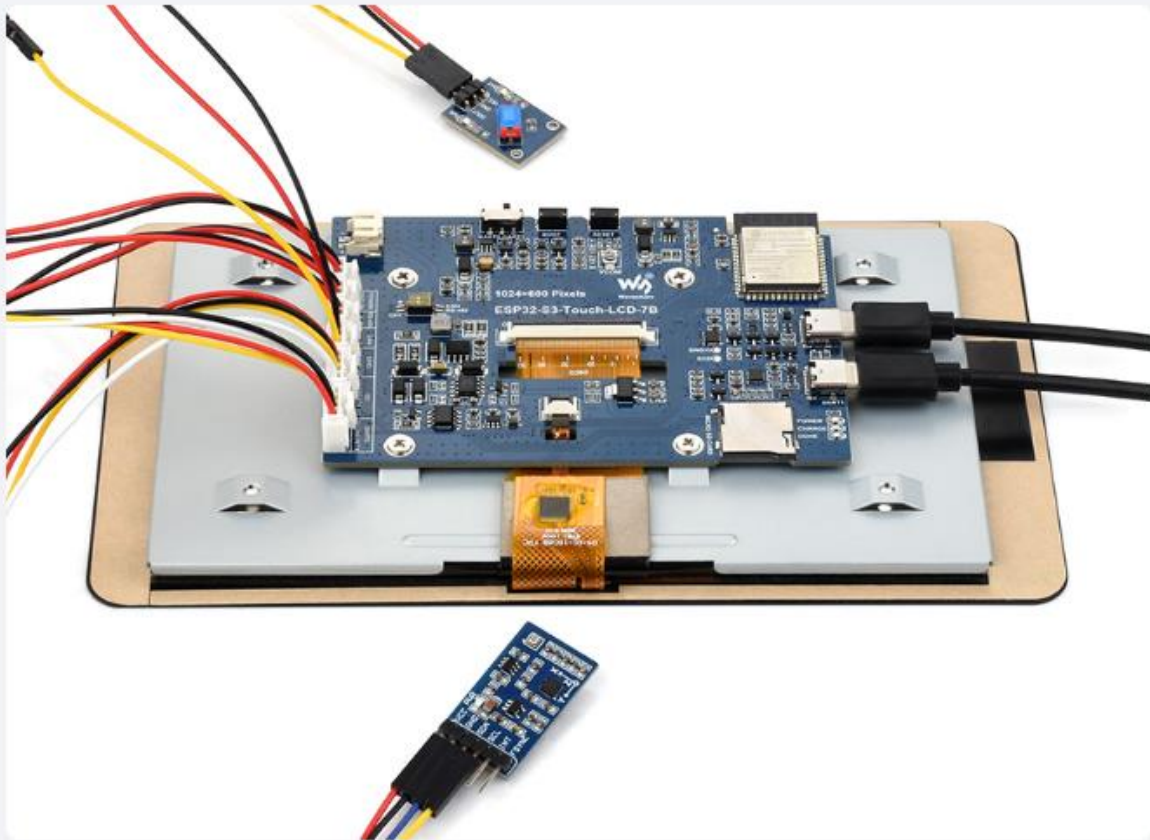


I2C Interface



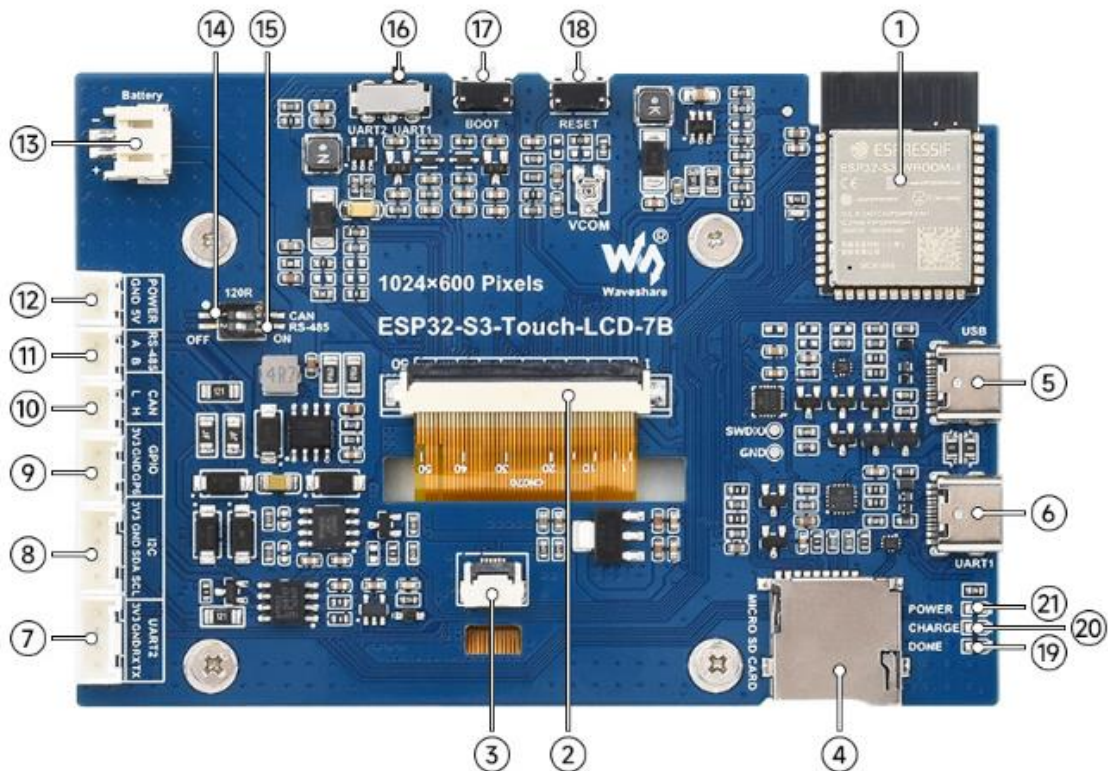
GPIO Interface

Application Example



for reference only, please refer to the Package Content for the detailed part list

What's On Board



1. ESP32-S3-WROOM-1-N16R8 module

The SoC with WiFi and Bluetooth, up to 240MHz operating frequency, integrated 8MB PSRAM and 16MB Flash

2. Display panel connector

3. Touch panel connector

4. TF card slot

5. USB Type-C port

6. UART1 Port

USB TO UART Type-C port

7. UART2 header

UART1 and UART2 are the same UART, selected by switch

8. I2C header

9. Sensor header

10. CAN header

11. RS485 header

12. 5V output

13. 3.7V Lithium battery PH2.0 header

14. CAN terminal resistor selection

15. RS485 terminal resistor selection

16. UART selection

select UART1 or UART2

17. BOOT button

Press and hold while powering on for program burning

18. RESET button

19. DONE

Lithium battery charging completed indicator

20. CHARGE

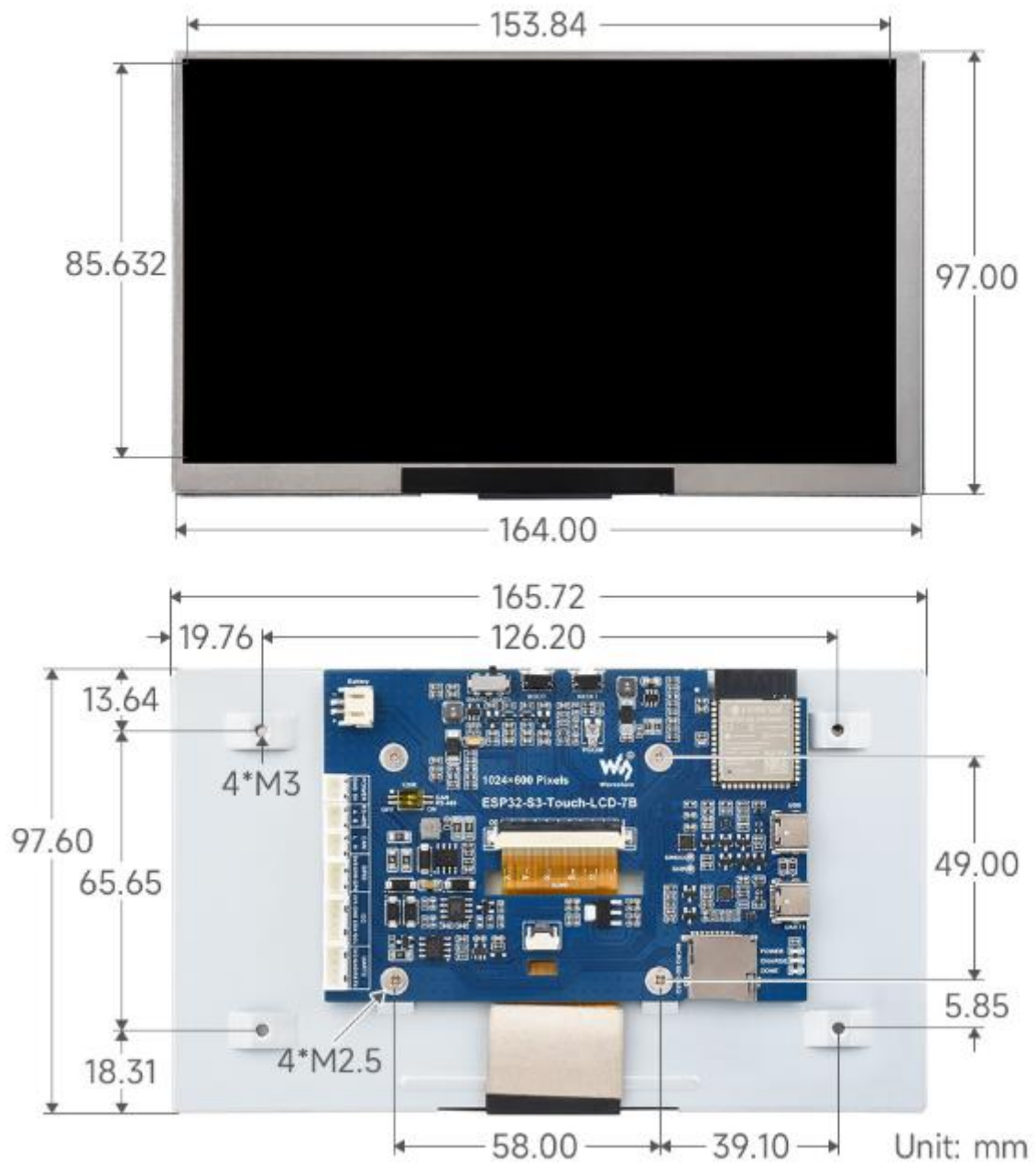
Lithium battery charging indicator

21. POWER

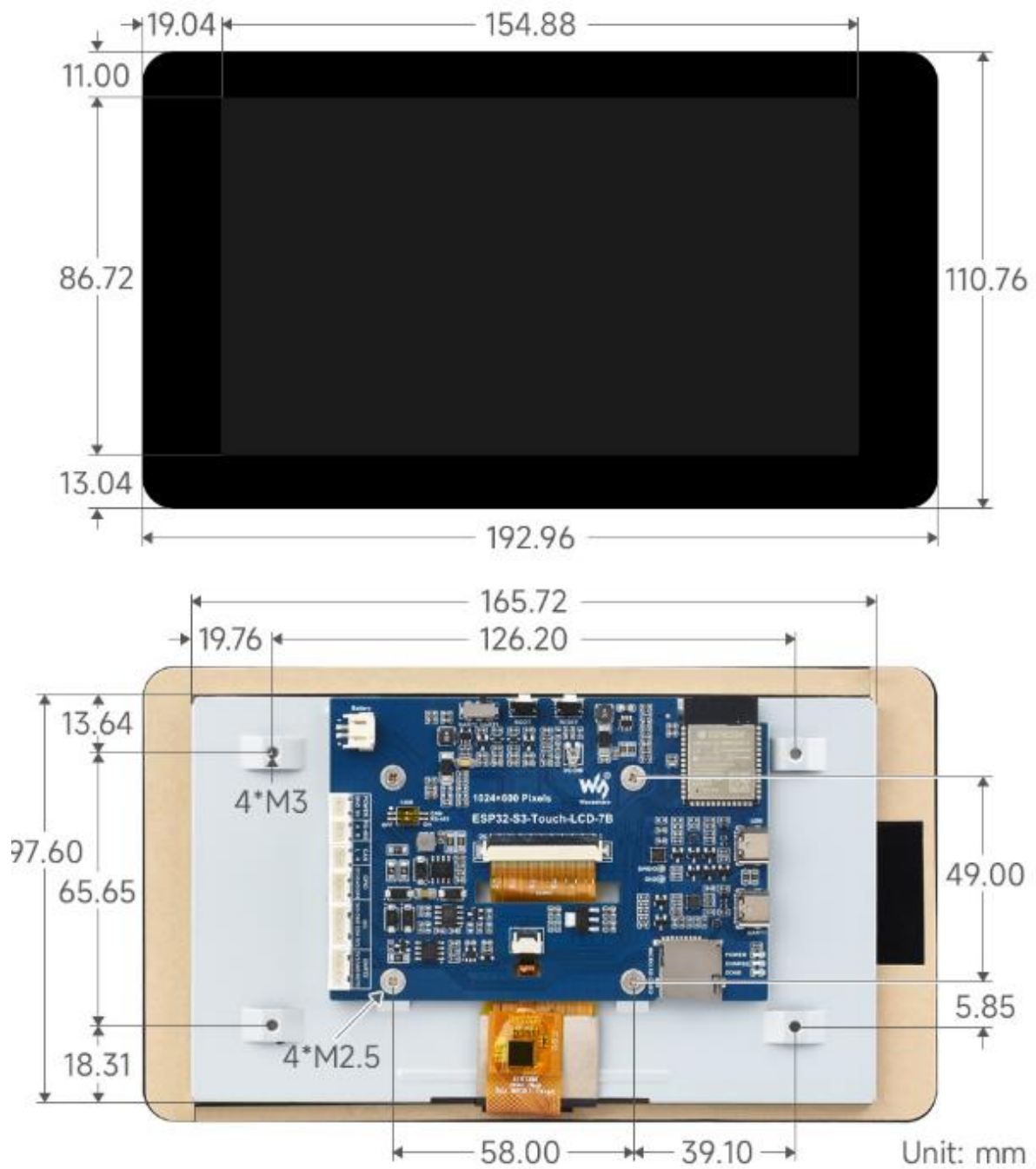
Power supply indicator

Outline Dimensions

without touch version



with touch version



Development board size

