

ESP32 Terminal with 3.5inch RGB Capacitive Touch Display

User Manual

Thank you for purchasing our product.

Please read this user manual carefully before use and keep it properly for future reference.

Specification

| | | |
|-----------------------|------------------------|---|
| Main Chip | Core Processor | Xtensa® 32-bit LX7 |
| | Memory | 16MB Flash 8MB PSRAM |
| | Maximum Speed | 240Mhz |
| | Wi-Fi | 802.11 a/b/g/n 1x1,2.4 GHz band supports 20 and 40 MHz bandwidth, Supports Station, SoftAP, and SoftAP + Station mixed modes. |
| | Bluetooth | BLE 5.0 |
| LCD Screen | Resolution | 480*320 |
| | Display Size | 3.5 inch |
| | Drive IC | ILI9488 |
| | Touch | Capacitive Touch |
| Other Modules | SD Card | Onboard SD Card Slot |
| Interface | 1x USB C | |
| | 1x UART | |
| | 1x IIC | |
| | 1x Analog | |
| | 1x Digital | |
| Button | RESET Button | Press this button to reset the system. |
| | BOOT Button | Hold down the Boot button and press the reset button to initiate firmware download mode. Users can download firmware through the serial port. |
| Operating Environment | Operating Voltage | USB DC5V, lithium battery 3.7V |
| | Operating Current | Average current 83mA |
| | Operating Temperature | -10°C ~ 65°C |
| Active Area | 73.63(L)*49.79mm(W) | |
| Dimension Size | 106(L)x66mm(W)*13mm(H) | |



IMPORTANT SAFETY WARNING!

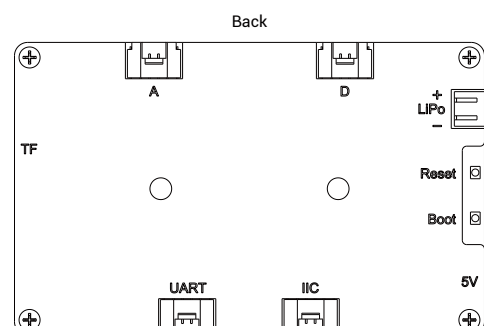
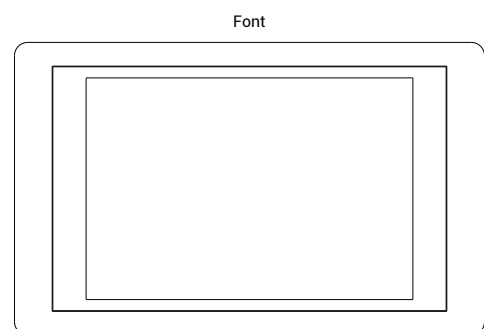
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- **WARNING:** Use the detachable supply unit provided with this appliance only.



Information on the disposal for Waste Electrical & Electronic Equipment (WEEE). This symbol on the products and accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper disposal for treatment, recovery and recycling, please take these products to designated collection points where they will be accepted on a free of charge basis. In some countries you may be able to return your products to your local retailer upon the purchase of a new product. Disposing of this product correctly will help you save valuable resources and prevent any possible effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest collection point for WEEE.

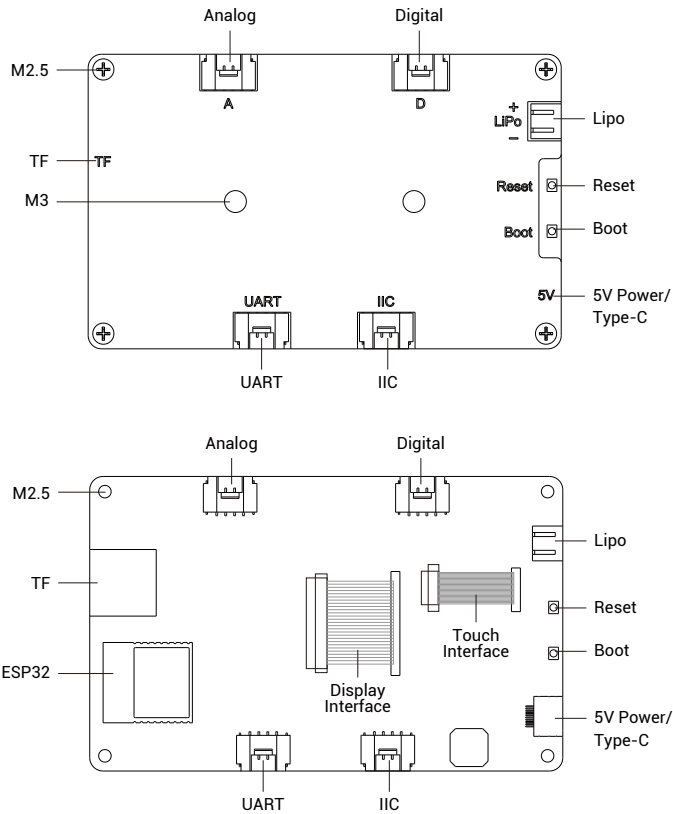
Part List

- 1x 3.5 inch RGB Display (included Acrylic Shell)
- 1x USB C Cable



Hardware and Interface

Hardware Overview



Schematic Diagram of IO Port

| | | | | |
|------------------|--------|----------|------|----------|
| | GND | ESP32 S3 | GND | |
| | 3V3 | | IO1 | SPL_CS |
| RESET/TP_RESET | EN/RST | | IO2 | SPL_MOSI |
| DB15 | IO4 | | TXD0 | UART0_TX |
| DB14 | IO5 | | RXD0 | UART0_RX |
| DB13 | IO6 | | IO42 | SPL_SCLK |
| DB12 | IO7 | | IO41 | SPL_MISO |
| DB11 | IO15 | | IO40 | D |
| DB10 | IO16 | | IO39 | IIC_SCL |
| Battery_Value1/2 | IO17 | | IO38 | IIC_SDA |
| WR | IO18 | | NC | |
| DB9 | IO8 | | NC | |
| A | IO19 | | NC | |
| BUZZER | IO20 | | IO0 | TP_INT |
| DB8 | IO3 | | IO45 | RS |
| LCD_BACK | IO46 | | IO48 | RD |
| DB7 | IO9 | | IO47 | DB0 |
| DB6 | IO10 | | IO21 | DB1 |
| DB5 | IO11 | | IO14 | DB2 |
| DB4 | IO12 | | IO13 | DB3 |

Hardware and Interface

Hardware Overview

- **RESET button.**
Press this button to reset the system.
- **LiPo port.**
Lithium battery charging interface (lithium battery not included)
- **BOOT button.**
Hold down the Boot button and press the RESET button to initiate firmware download mode. Users can download firmware through the serial port
- **5V Power/Type C interface.**
It serves as the power supply for the development board and the communication interface between the PC and ESP-WROOM-32.
- **4 Crowtail interfaces (1*Analog,1*Digital,1*UART,1*IIC).**
Users can program the ESP32-S3 to communicate with peripherals connected to the Crowtail interface.

Expansion Resources

For more detailed information, please scan the QR code to the URL:
https://www.elecrow.com/wiki/CrowPanel_ESP32_HMI_Wiki_Content.html



- Schematic Diagram
- Source Code
- ESP32 Series Datasheet
- Arduino Libraries
- 16 Learning Lessons for LVGL

Contact Technical Support

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