

# 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!

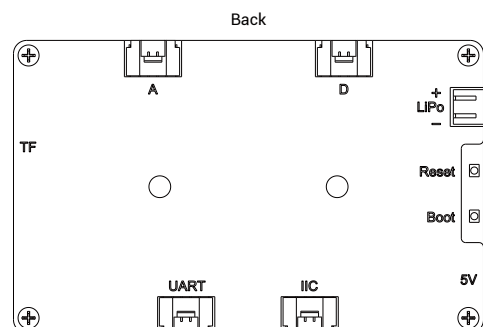
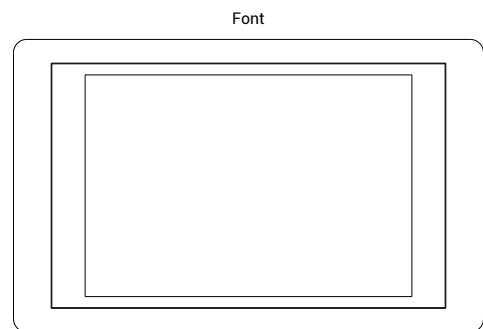
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- 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.



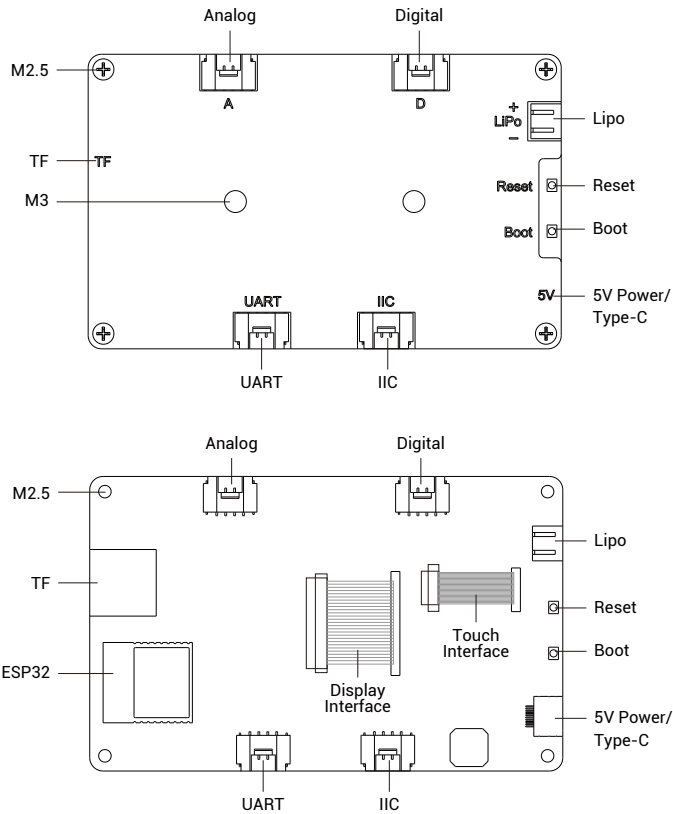
Information on the disposal for Waste Electrical & Electronic Equipment (WEEE). This symbol on the products and accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper disposal for treatment, recovery and recycling, please 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 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 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](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

E-mail: [techsupport@elecrow.com](mailto:techsupport@elecrow.com)

