ELECROW ESP32 Terminal with 3.5 inch SPI Capacitive Touch Display User Manual

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ESP32 Terminal with 3.5 inch SPI Capacitive Touch Display

Thank you for purchasing our product.
Please read this user manual carefully before use and keep it properly for future reference.

⚠ 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 appliancein a safe way and understand the hazards involved.

- Children shall not playwith 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.

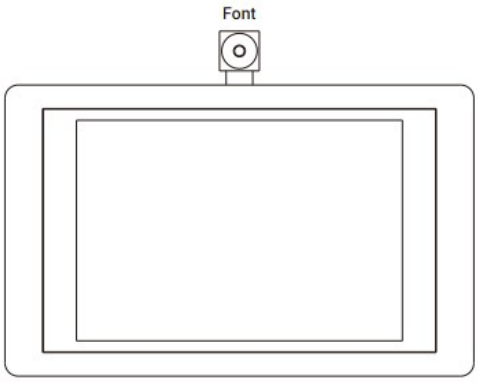
Informationon the disposal for Waste Electrical & Electronic Equipment(WEEE). This symbol on the products and accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper disposal for treatment, recovery and recycling, please take these products to designated collection points where they will be accepted on a free of charge basis. In some countries you may be able toreturn 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 wastehandling. Please contact your local authority for further details of your near estcollection point for WEEE.

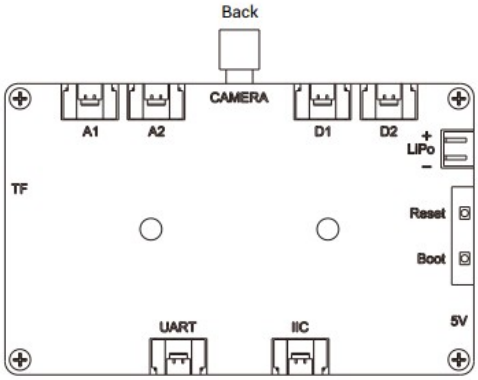
Specification

Main Chip	Core Processor	Xtensa® 32-bit LX7
	Memory	16MB Flash 8MB PSRAM
	Maximum Speed	240Mhz
	Wi-Fi	802.11 a/b/g/n 1×1,2.4 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
	Interface	SPI Interface
Other Modules	Camera	OV2640, 2M Pixel
	Microphone	MEMS Microphone
	SD Card	Onboard SD Card Slot
Interface	1x USB C 1x UART 1x IIC 2x Analog 2x Digital	
Button	RESET Button	Press this button to reset the system.
	BOOT Button	Hold down the Boot button and press the reset butt on 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)	

Part List

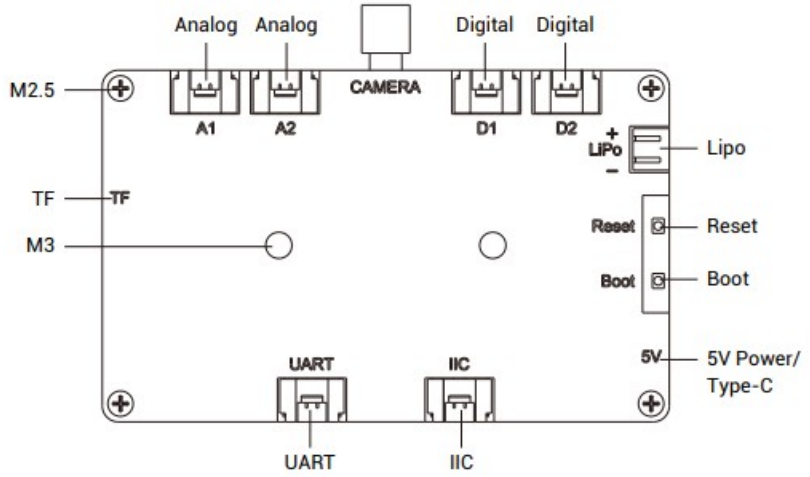
- 1x 3.5 inch SPI Display with camera (included Acrylic Shell)
- 1x USB C Cable

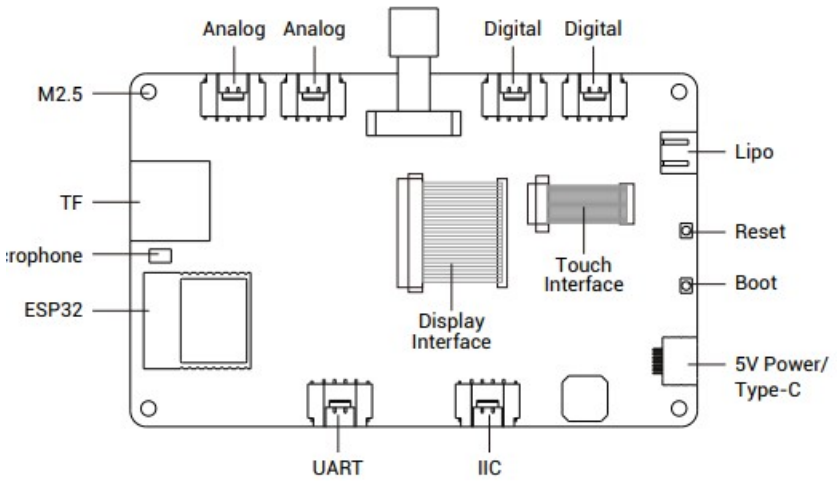




Hardware and Interface

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.
- **6 Crowtail interfaces (2*Analog,2*Digital,1*UART,1*IIC).**
  Users can program the ESP32-S3 to communicate with peripherals connected to the Crowtail interface.

Schematic Diagram of IO Port

	GND	**ESP32 S3**	**GND**	
	3V3		IO1	SCL
RESET	EN\RST		IO2	SDA
VS	IO4		TXD0	UART0_TX
HS	IO5		RXD0	UART0_RX
D9	IO6		IO42	SPI_D/I
MCLK	IO7		IO41	MIC_SD
D8	IO15		IO40	D2 GPIO
D7	IO16		IO39	MIC_CLK
PCLK	IO17		IO38	MIC_WS
D6	IO18		NC	
D2	IO8		NC	
	IO19		NC	
	IO20		IO0	TP_INT/DOWNL
CS	IO3		IO45	
BACK	IO46		IO48	D4
	IO9		IO47	D3
CS	IO10		IO21	D5
D1 GPIO	IO11		IO14	SPI_MISO
SPI_SCL	IO12		IO13	SPI_MOSI

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

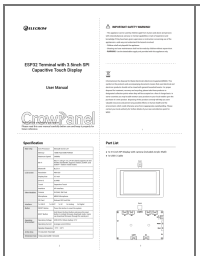
- Schematic Diagram
- Source Code
- ESP32 Series Datasheet
- Arduino Libraries
- 16 Learning Lessons for LVGL
- LVGL Reference

Contact Technical Support

E-mail: techsupport@elecrow.com

https://me-qr.com/HIFKj6Et

Documents / Resources

	ELECROW ESP32 Terminal with 3.5 inch SPI Capacitive Touch Display [pdf] User Manual ESP32 Terminal with 3.5 inch SPI Capacitive Touch Display, ESP32, Terminal with 3.5 inch SPI Capacitive Touch Display, 3.5 inch SPI Capacitive Touch Display, SPI Capacitive Touch Display, Capacitive Touch Display, Touch Display, Display

References

- User Manual