

Smart Panlee

Smart Serial LCD Display

ZX2D40NE06S-US-3224



Features:

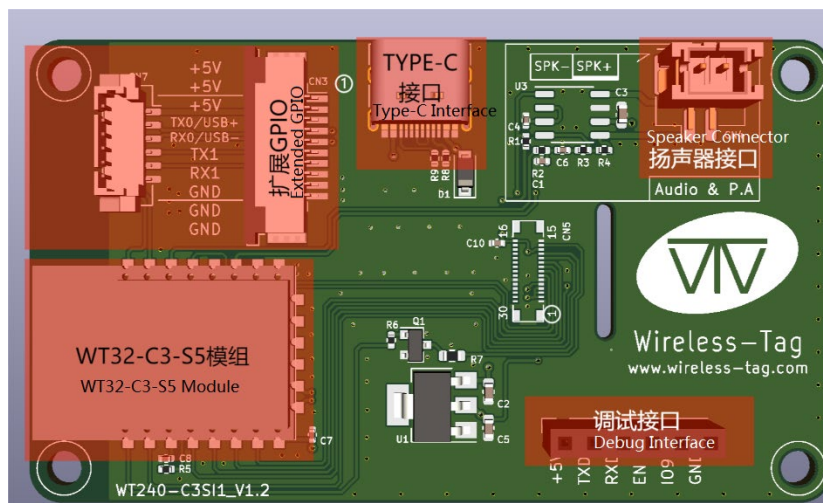
1. Support rapid prototyping
2. WT32-C3-S5(4MB)

Core Materials (Tab. 0):

No.	Name	Model	Remark
1	ESP32-C3 Module	WT32-C3-S5	
2			
3			

Hardware Interface:

Hardware Interface Diagram:



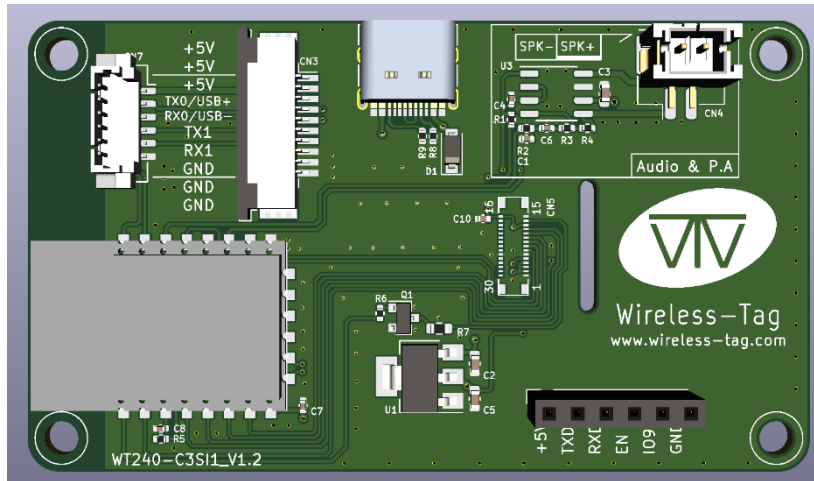


Fig.1 Hardware Interface

Interface Description:

[1] Serial Interface (Tab.1)

Pin	Description	Module Pin	Voltage Range	Remark
1	+3.3V	-	3.3V	Power input
2	ESP_TXD	TXD0	TTL	Debug serial interface
3	ESP_RXD	RXD0	TTL	
4	EN	-	3.3V	
5	IO9	9	3.3V	
6	GND	-	-	Power pin

[2] Extended GPIO (Tab.2)

Pin	Description	Module Pin	Voltage Range	Remark
1	USB_D+(IO19)	19	3.3V	Extended GPIO/USB interface
2	USB_D-(IO18)	18	3.3V	
3	ESP_TXD	TXD0	TTL	Debug serial interface
4	ESP_RXD	RXD0	TTL	

[3] Speaker Connector (Tab.3)

Pin	Description	Module Pin	Voltage Range	Remark
1	SPK+	-	-	
2	SPK-	-	-	

[4] LCD Interface (Tab.4)

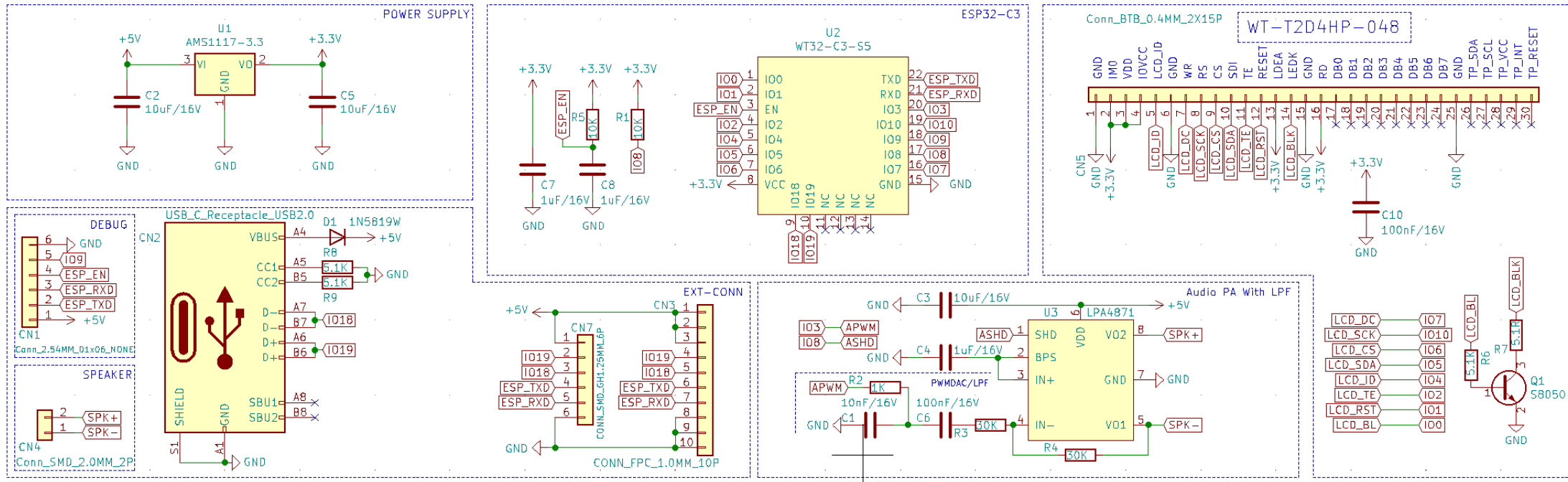
Pin	Description	GPIO	Remark
1	GND	-	Power pin
2	IM0	-	Interface selection 1;SPI 0;MCU8080
3	VDD	-	Power pin
4	IOVCC	-	
5	ID	4	TN/IPS Identification pin
6	GND	-	Power pin
7	WR/DC	7	Command/Data selection
8	RS/SCK	10	SPI clock
9	CS	6	Chip selection
10	SDI	5	SPI data
11	TE	2	Frame sync interrupt output
12	RESET	1	Reset
13	LED A	0	Backlight
14	LED K		
15	GND	-	Power pin
16	RD	-	Read enable
17	DB0	-	LCD data

18	DB1	-	
19	DB2	-	
20	DB3	-	
21	DB4	-	
22	DB5	-	
23	DB6	-	
24	DB7	-	
25	GND	-	Power pin
26	-		
27	-		
28	-		
29	-		
30	-		

Hardware Peripherals:

Peripheral Name	Description
Audio amplifier	IO3:PWM Audio IO8: amplifier enable (active low, default high)
LCD	2.4" IPS LCD

Schematic:



Specification Parameters:

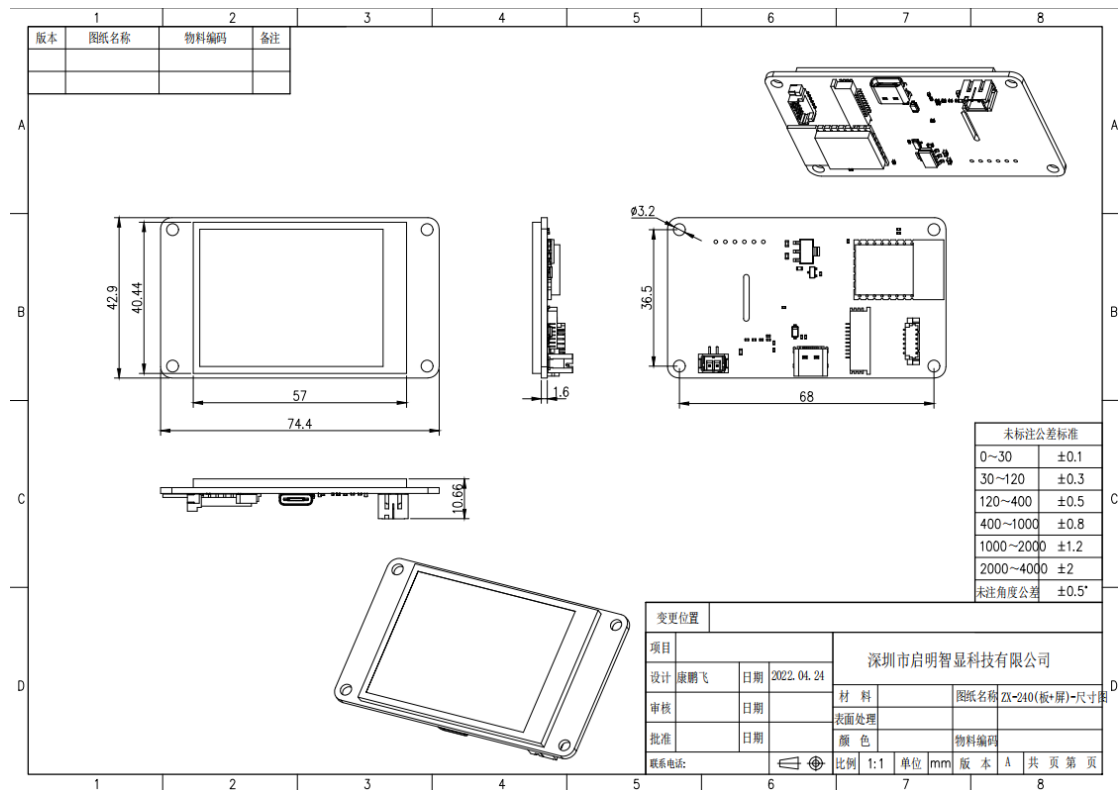
[5] LCD Parameters (Tab.5)

Display Type	LCD
Driver IC Model	ST7789
Viewing Angle	FULL
Resolution	320*240
Interface	SPI
Color	RGB565
Backlight Mode	
Backlight Brightness	

[6] Touch Parameters (Tab.6)

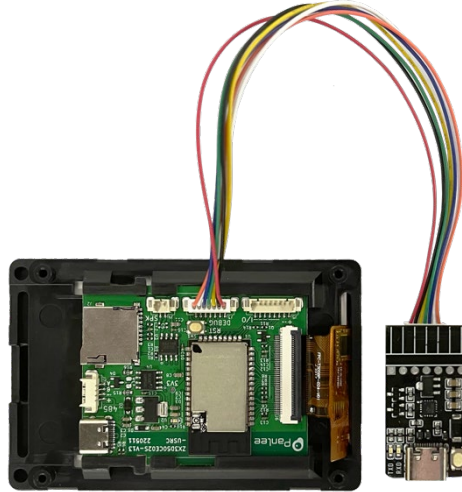
Touchscreen Type	
Driver IC Model	
Interface	
Touchscreen Structure	
Touch Mode	
Surface Hardness	
Light Transmittance	

Outline Dimensional Drawing (Fig.2)



Firmware Burning:

1. Connect the downloader (ZXACC-ESPDB) via a USB-Type C cable. And then connect the ZX3D50CE02S board with the downloader (ZXACC-ESPDB) through an MX1.25-7P cable. As the downloader (ZXACC-ESPDB) has automatic data flow processing capabilities, the



firmware can be downloaded automatically through the ESP32 Flash Download Tools.

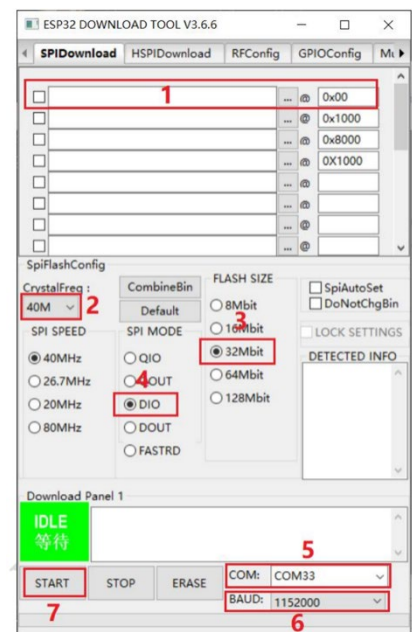
Fig.3

2. As shown in Fig. 4: Select the firmware path at mark 1, and then fill in the burning address, usually 0X00. Note that this checkbox must be checked; Set the crystal frequency to be 40MHz at mark 2; Select 32Mbit for Flash size at mark 3; Select DIO for SPI MODE at mark 4; Select the COM port number recognized by the computer at mark 5; Select the baud rate at mark 6 (the higher the value is, the faster the firmware will be downloaded. Max. 1152000bps).

Fig.4

3. After the previous configuration, click START at mark 7 to start burning the firmware.

4. Complete the above steps, and then press the reset button on the back of the development board to start running the firmware you just burned.



Online GUI Designer:

Users can use our online GUI designer platform, which is similar to MIT APP Inventor, to realize the rapid GUI development with building blocks. Currently, the platform has perfected the graphic interface development, and more driver code blocks will be further improved in the future.

Login Page: <http://8ms.xyz/login>

User Manual: <https://doc.smartpanle.cn/ESP32-S3/index.html>

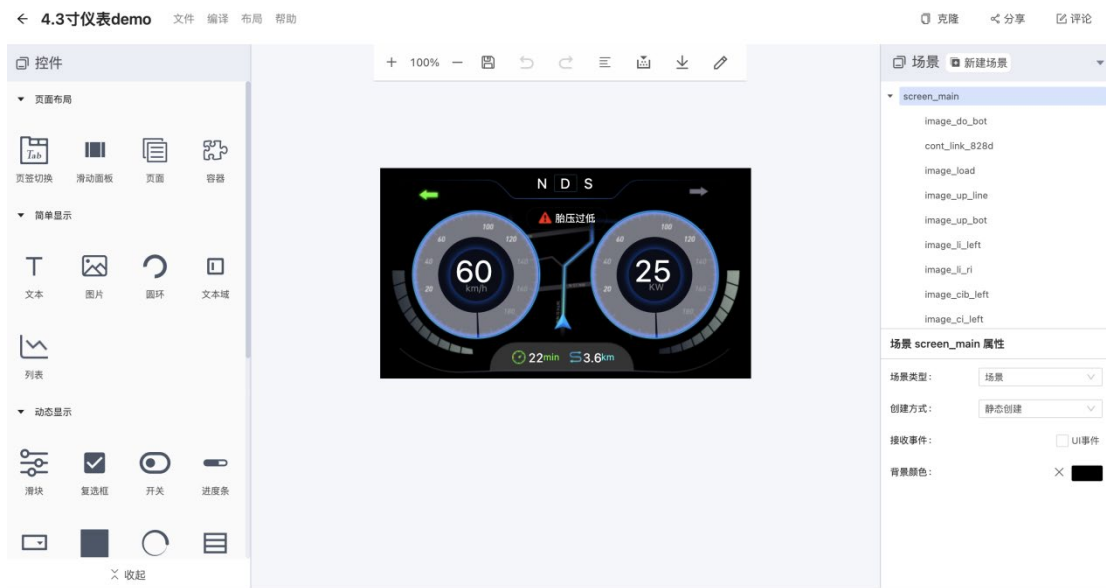


Fig.5

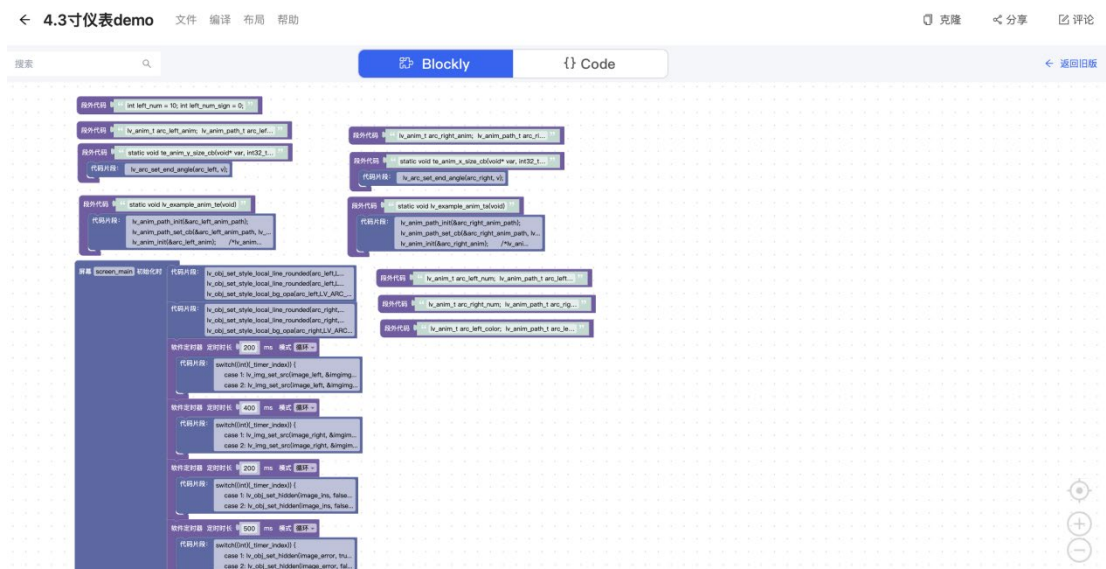


Fig.6

Contact Us

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