Smart Panlee

Smart Serial LCD Display

WT240-C3SI1



Features:

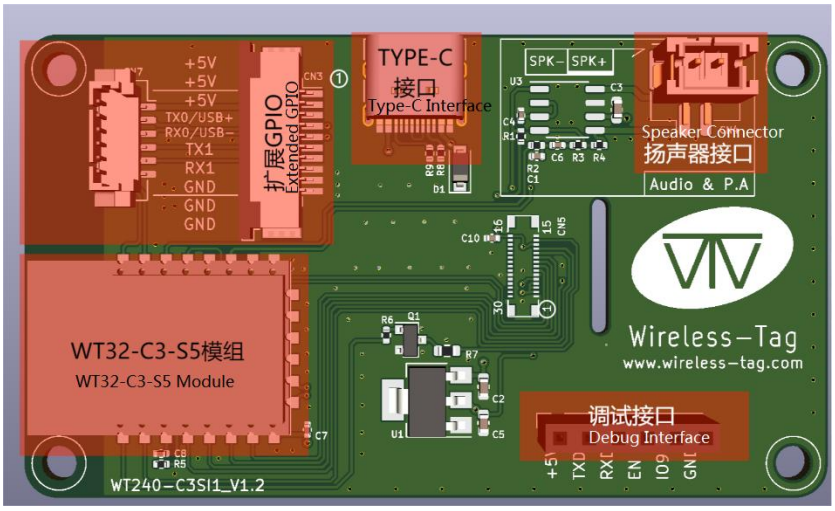
1. Support rapid prototyping
2. WT32-C3-S5(4MB)

Core Materials (Tab. 0):

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

Hardware Interface:

Hardware Interface Diagram:



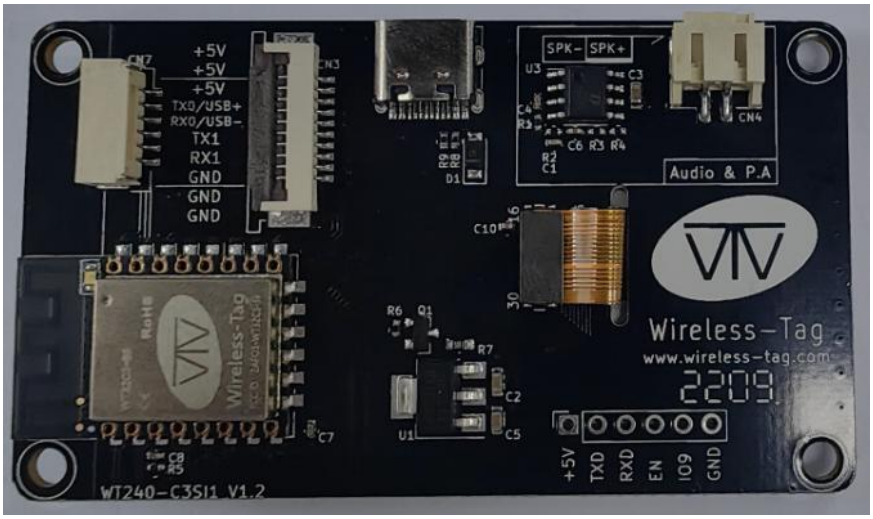


Fig.1 Hardware Interface

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)

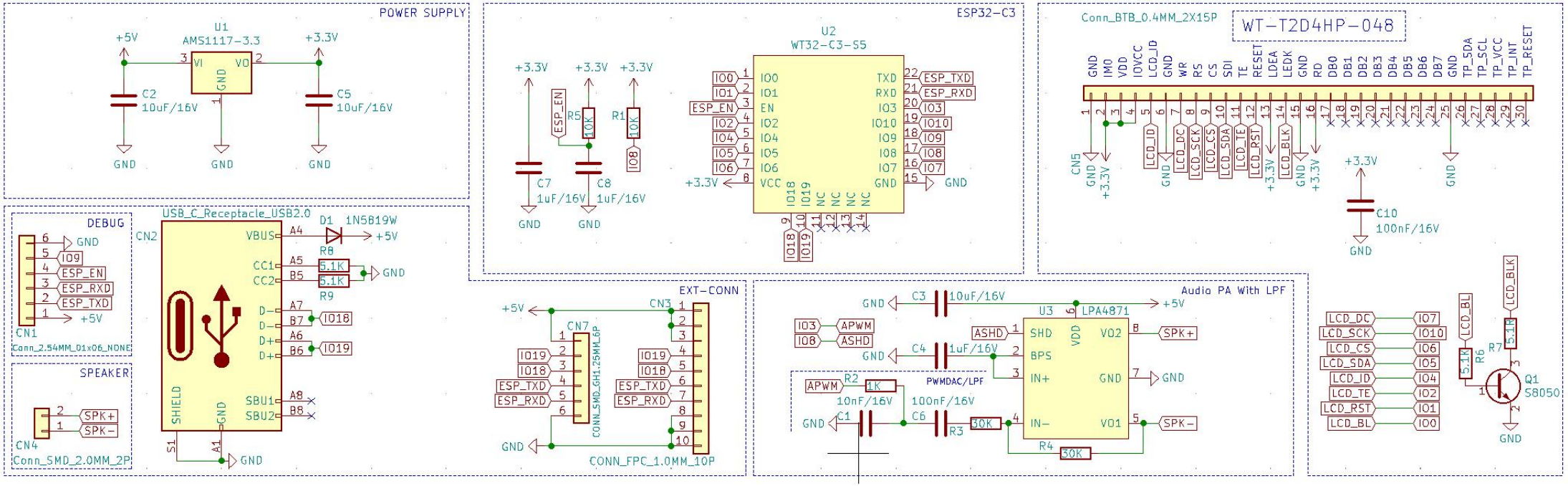
Pin	Description	GPIO	Remark
1	GND	-	Power pin
2	IM0	-	Interface selection 1;SPI 0;MCU8080
3	VDD	-	Power pin
4	IOVCC	-	
5	ID	4	TN/IPS Identification pin
6	GND	-	Power pin
7	WR/DC	7	Command/Data selection
8	RS/SCK	10	SPI clock
9	CS	6	Chip selection
10	SDI	5	SPI data
11	TE	2	Frame sync interrupt output
12	RESET	1	Reset
13	LEDA	0	Backlight
14	LEDK		
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：


POWER SUPPLY
U1
AMS1117-3.3
+5V
+3.3V
C2
10uF/16V
C5
10uF/16V
GND
ESP32-C3
U2
WT32-C3-S5
ESP_EN
ESP_TXD
ESP_RXD
R5
10K
R1
10K
C7
1uF/16V
C8
1uF/16V
Conn_BTB_0.4MM_2X15P
WT-T2D4HP-048
C10
100nF/16V
DEBUG
CN1
Conn_2.54MM_01x06_NONE
SPEAKER
CN4
Conn_SMD_2.0MM_2P
USB_C_Receptacle_USB2.0
CN2
D1
1N5819W
R8
5.1K
R9
5.1K
SHIELD
S1
EXT-CONN
CN3
CN7
CONN_SMD_6H1.25MM_6P
CONN_FPC_1.0MM_10P
Audio PA With LPF
U3
LPA4871
C3
10uF/16V
C4
1uF/16V
R2
1K
PWMDAC/LPF
C1
10nF/16V
C6
100nF/16V
R3
30K
R4
30K
APWM
ASHD
SPK+
SPK-
LCD_DC
LCD_SCK
LCD_CS
LCD_SDA
LCD_ID
LCD_TE
LCD_RST
LCD_BL
LCD_BLK
R6
5.1K
R7
5.1K
Q1
S8050

Specification Parameters:

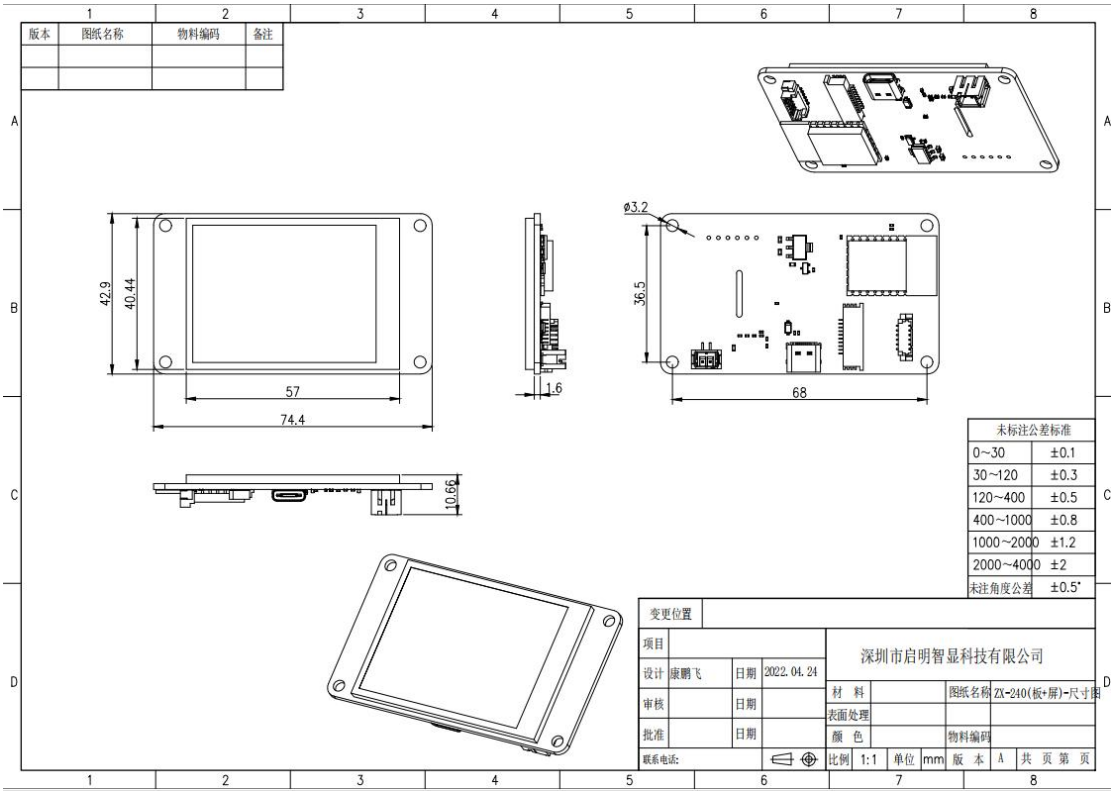
[5] LCD Parameters (Tab.5)

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)


版本
图纸名称
物料编码
备注
42.9
40.44
57
74.4
1.6
ø3.2
36.5
68
10.66
未标注公差标准
0~30 ±0.1
30~120 ±0.3
120~400 ±0.5
400~1000 ±0.8
1000~2000 ±1.2
2000~4000 ±2
未注角度公差 ±0.5°
变更位置
项目
设计 康鹏飞 日期 2022.04.24
审核 日期
批准 日期
联系电话:
深圳市启明智显科技有限公司
材 料
表面处理
颜 色
图纸名称 ZX-240(板+屏)-尺寸图
物料编码
比例 1:1 单位 mm 版 本 A 共 页 第 页

Software reference：

URL：https://www.espressif.com.cn/en/support/documents/technical-documents

SDK：

Github：https://github.com/smartpanle/QMSD-ESP32-BSP

Gitee: https://gitee.com/qiming-zhixian/qmsd-esp32-bsp/tree/master

Online Platform User Manual： https://doc.panel-tag.com/

LVGL Link：https://lvgl.io/

The recommended version of LVGL is v8.3.1. The recommended UI development tool is NXP-GUI Guider.

GUI Guider Download : https://www.nxp.com/design/design-center/software/development-software/gui-guider:GUI-GUIDER

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