SMART DISPLAY MODULE SPECIFICATION

4.0 Inch Smart Display with TOUCH	
Model:	UEDX48480040E-WB-A
Version:	V3.0
Date:	2024-08-07

Customer Confirmation

Approved by	Notes

REVISION HISTORY

Revision	Date	Contents of Revision Change	Remark
V1.0	20240611	Preliminary release	
V1.1	20240623	Optimize PCB positioning holes	
V2.0	20240709	Change to English version	
V2.1	20240716	Change header	
V2.2	20240725	Updated mechanical drawing	
V3.0	20240807	Add schemata, GitHub project links, and environment configuration links	

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1. Introduction

1.1 Features

Brief Info:

1) Button control: one is the reset button, the other is the boot button.
2) Backup IO: download ports and multiple IO leads to use on both sides of the periphery.
3) Power: DC 5V, 260mA

System

1) OS: RTOS
2) CPU: ESP32-S3 240Mhz
3) RAM: 8MB
4) Flash: 16MB
5) Interface: UART/USB
6) Support 2.4GHz Wi-Fi、BLE 5、BLE Mesh

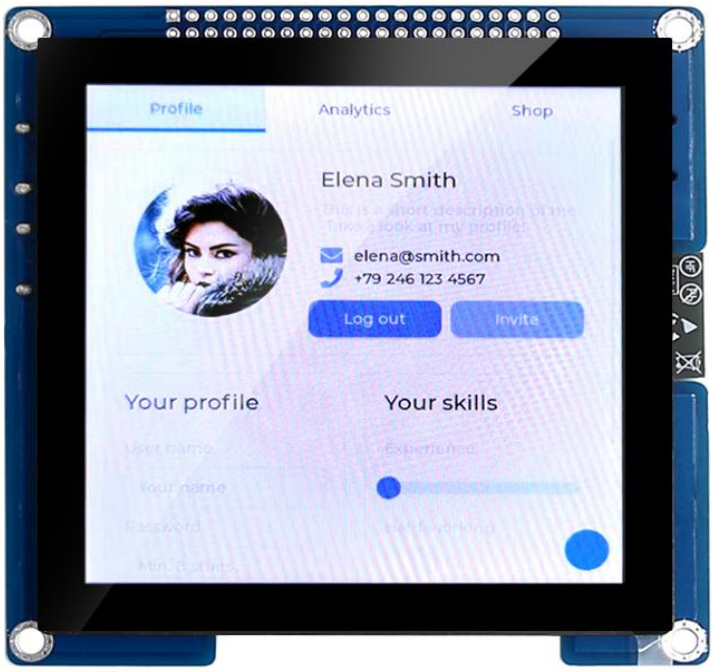
Display

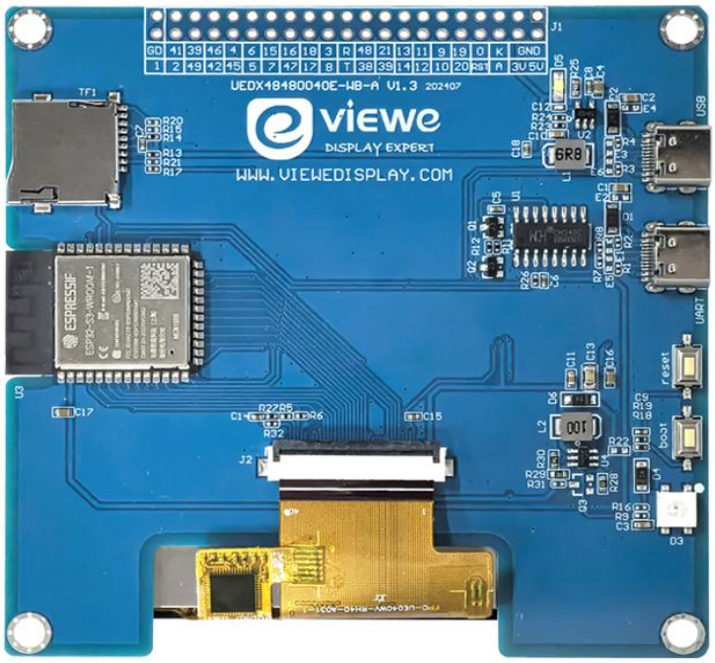
1) Size:4.0 Inch
2) Resolution:480*480
3) Mode: IPS
4) Brightness: 350 cd/m^2
5) Touch: CTP

Other

1) Operation Temperature：-20~70℃
2) Storage Temperature：-30~80℃

1.2 Appearance picture





2. Product information

2.1 Interface Description

Pin NO.	Symbol	Description	Voltage Range	Remarks
1	GD	Grounds	0V	
2	41	GPIO41, Reserve IO	0-3.3V	
3	39	GPIO39, Reserve IO	0-3.3V	
4	46	GPIO46, Reserve IO	0-3.3V	
5	4	GPIO4, Reserve IO	0-3.3V	
6	6	GPIO6, Reserve IO	0-3.3V	
7	15	GPIO15, Reserve IO	0-3.3V	
8	16	GPIO16, Reserve IO	0-3.3V	
9	18	GPIO18, Reserve IO	0-3.3V	
10	3	GPIO3, Reserve IO	0-3.3V	
11	R	UART Receive	0-3.3V	
12	48	GPIO48, Reserve IO	0-3.3V	
13	21	GPIO21, Reserve IO	0-3.3V	
14	13	GPIO13, Reserve IO	0-3.3V	
15	11	GPIO11, Reserve IO	0V	
16	9	GPIO9, Reserve IO	0-3.3V	
17	19	GPIO19, Reserve IO	0-3.3V	
18	0	GPIO0, Reserve IO	0-3.3V	
19	K	BL-	TDB	
20	GND	Grounds	0V	
21	GND	Grounds	0V	
22	1	GPIO1, Reserve IO	0-3.3V	
23	2	GPIO2, Reserve IO	0-3.3V	
24	49	GPIO49, Reserve IO	0-3.3V	
25	42	GPIO42, Reserve IO	0-3.3V	
26	45	GPIO45, Reserve IO	0-3.3V	
27	5	GPIO5, Reserve IO	0-3.3V	

28	7	GPIO7, Reserve IO	0-3.3V	
29	47	GPIO47, Reserve IO	0-3.3V	
30	17	GPIO17, Reserve IO	0-3.3V	
31	8	GPIO8, Reserve IO	0-3.3V	
32	T	UART Transmit	0-3.3V	
33	38	GPIO38, Reserve IO	0-3.3V	
34	39	GPIO39, Reserve IO	0-3.3V	
35	14	GPIO14, Reserve IO	0-3.3V	
36	12	GPIO12, Reserve IO	0-3.3V	
37	10	GPIO10, Reserve IO	0-3.3V	
38	20	GPIO20, Reserve IO	0-3.3V	
39	RST	Reset signal, do not connect if not in use	0-3.3V	
40	A	BL+	TDB	
41	3V	Power 3.3V	3.3V	
42	5V	Power 5V	5V	

The following picture shows the pins with 2*21pind spacing between 2.54mm

The following picture shows the boot button on the left and the reset button on the right.

The following picture shows l two Type-C ports. The picture on the left shows serial communication and the picture on the right shows the download port.

2.2 Display Information

Item	Parameter	Description
Color	65K colors	R5G6B5 16bits
AA	71.86(W)*70.18(H)	4.0 inch
Resolution	480*480	Rectangle
Backlight	LED	30000Hour Min
Brightness	350 cd/m^2	

2.3 Voltage & Current

Item	Conditions	Min	Typ	Max	Unit
Power Voltage	DC	4. 0	5.0	5.5	V
Operation Current	VCC= +5V, Maximum backlight current		260		mA
	VCC= +5V,backlight off	-	150	-	mA
Recommended power supply:5V 1A DC					

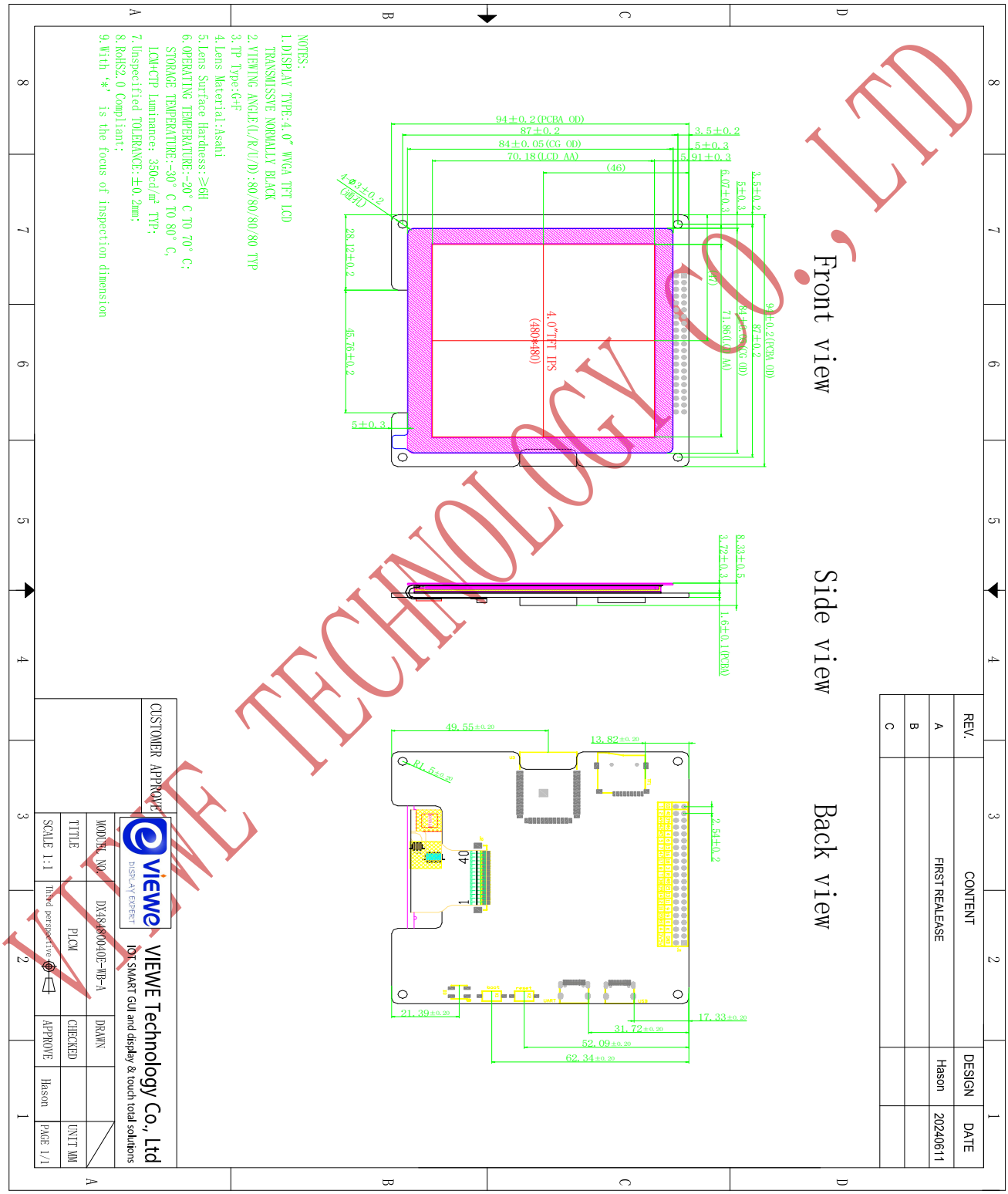
2.4 Reliability Test

Item	Conditions	Min	Typ	Max	Unit
Working Temperature	60%RH at 5V voltage	-20	25	70	C
Storage Temperature	---	-30	25	85	C
Working Humidity	25°C	10%	60%	90%	RH
ESD	---	Contact: ±4KV Air: ±8KV			KV

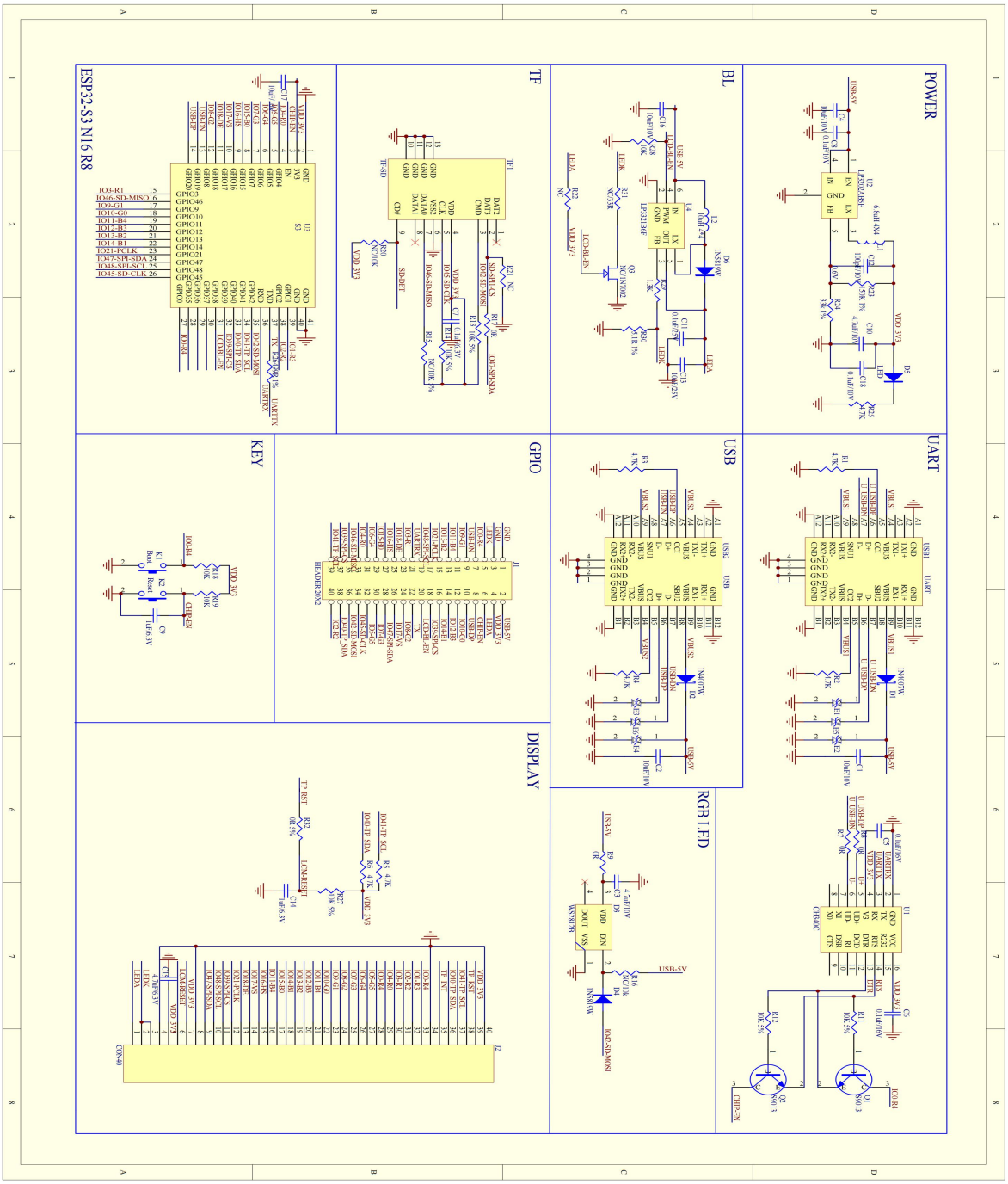
2.5 Related software

Software name	Version	Software associated configuration	Development environment configuration link
Arduino IDE	2.0.17 (esp32)	1. Board: ESP32S3 Dev Module 2. CPU Frequency: 240MHz (WiFi) 3. Flash Frequency: NO 4. Flash Mode: QlO 80MHz 5. Flash Size: 16MB (128Mb) 6. Partition Scheme: Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS) 7. PSRAM: OPI PSRAM 8. Programmer: Esptool	ESP32-Arduino config (github.com)
ESP-IDF	5.1.1 5.2.2	Once configured, no configuration is required （If you have any problem with the configuration, please contact us, we will help you）	ESP-IDF config (github.com)

3. MECHANICAL DRAWING



4. Schematic



5. Related downloads

5.1 Arduino relevant information

We are working on it. Sorry for any inconvenience caused.

5.2 Libraries required for Arduino

We are working on it. Sorry for any inconvenience caused.

5.3 IDF relevant information

ESP32-IDF/examples/4.0inch/UEDX48480040E-WB-3touch-SDK at main • VIEWESMART/ESP32-IDF (github.com)