SMART DISPLAY MODULE SPECIFICATION

1.9 Inch Smart Display with TOUCH	
Model:	UEDX17320019E-WB-A
Version:	V3.0
Date:	2024-08-12

Customer Confirmation

Approved by	Notes

REVISION HISTORY

Revision	Date	Contents of Revision Change	Remark
V1.0	20240611	Preliminary release	
V1.1	20240628	Change to English version	
V2.0	20240711	Upgrade mechanical drawing	
V2.1	20240721	Add environment configuration links	
V3.0	20240812	Add schemata, GitHub project 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, 200mA

System

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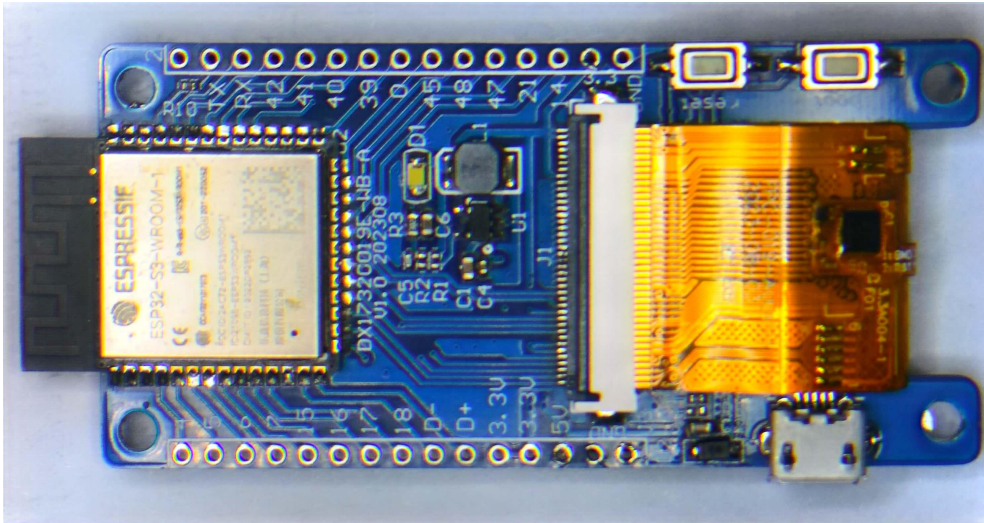5) Interface: UART/USB
6) Support 2.4GHz Wi-Fi、BLE 5、BLE Mesh

Display

1) Size:1.9 Inch
2) Resolution:170*320
3) Mode: IPS
4) Brightness: 500 cd/m^2
5) Touch: CTP

Other

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

1.2 Appearance picture

（**This UI is only a picture, please refer to the actual**）

2. Product information

2.1 Interface Description

Pin NO.	Symbol	Description	Voltage Range	Remarks
1	GPIO2	GPIO2, Reserve IO	0-3.3V	
2	TX	UART Transmit	0-3.3V	
3	RX	UART Receive	0-3.3V	
4	GPIO42	GPIO42, Reserve IO	0-3.3V	
5	GPIO41	GPIO41, Reserve IO	0-3.3V	
6	GPIO40	GPIO40, Reserve IO	0-3.3V	
7	GPIO39	GPIO39, Reserve IO	0-3.3V	
8	GPIO0	GPIO0, Reserve IO	0-3.3V	
9	GPIO45	GPIO45, Reserve IO	0-3.3V	
10	GPIO48	GPIO48, Reserve IO	0-3.3V	
11	GPIO47	GPIO47, Reserve IO	0-3.3V	
12	GPIO21	GPIO21, Reserve IO	0-3.3V	
13	GPIO14	GPIO14, Reserve IO	0-3.3V	
14	3.3V	Power 3.3V	3.3V	
15	GND	Grounds	0V	

Pin NO.	Symbol	Description	Voltage Range	Remarks
1	GPIO4	GPIO4, Reserve IO	0-3.3V	
2	GPIO5	GPIO5, Reserve IO	0-3.3V	
3	GPIO6	GPIO6, Reserve IO	0-3.3V	
4	GPIO7	GPIO7, Reserve IO	0-3.3V	
5	GPIO15	GPIO15, Reserve IO	0-3.3V	
6	GPIO16	GPIO16, Reserve IO	0-3.3V	
7	GPIO17	GPIO17, Reserve IO	0-3.3V	
8	GPIO18	GPIO18, Reserve IO	0-3.3V	
9	D-	USB D-	-	
10	D+	USB D+	-	

11	3.3V	Power 3.3V	3.3V	
12	3.3V	Power 3.3V	3.3V	
13	5V	Power 5V	5V	
14	GND	Grounds	0V	
15	GND	Grounds	0V	

The connector specifications is two 15PIN 2.54mm pitch

The following picture shows the pins with 2 15pind spacing between 2.54mm

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

The following figure is the schematic diagram of USB. USB is used for power and download.

2.2 Display Information

Item	Parameter	Description
Color	65K colors	R5G6B5 16bits
AA	22.69(W)*42.72(H)	1.9 inch
Resolution	170*320	Rectangle
Backlight	LED	30000Hour Min
Brightness	500 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	-	200	-	mA
	VCC= +5V,backlight off	-	100	-	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: QIO 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） The SDK of the IDF architecture of the development board has not been developed, so look forward to it	ESP-IDF config (github.com)

3. MECHANICAL DRAWING
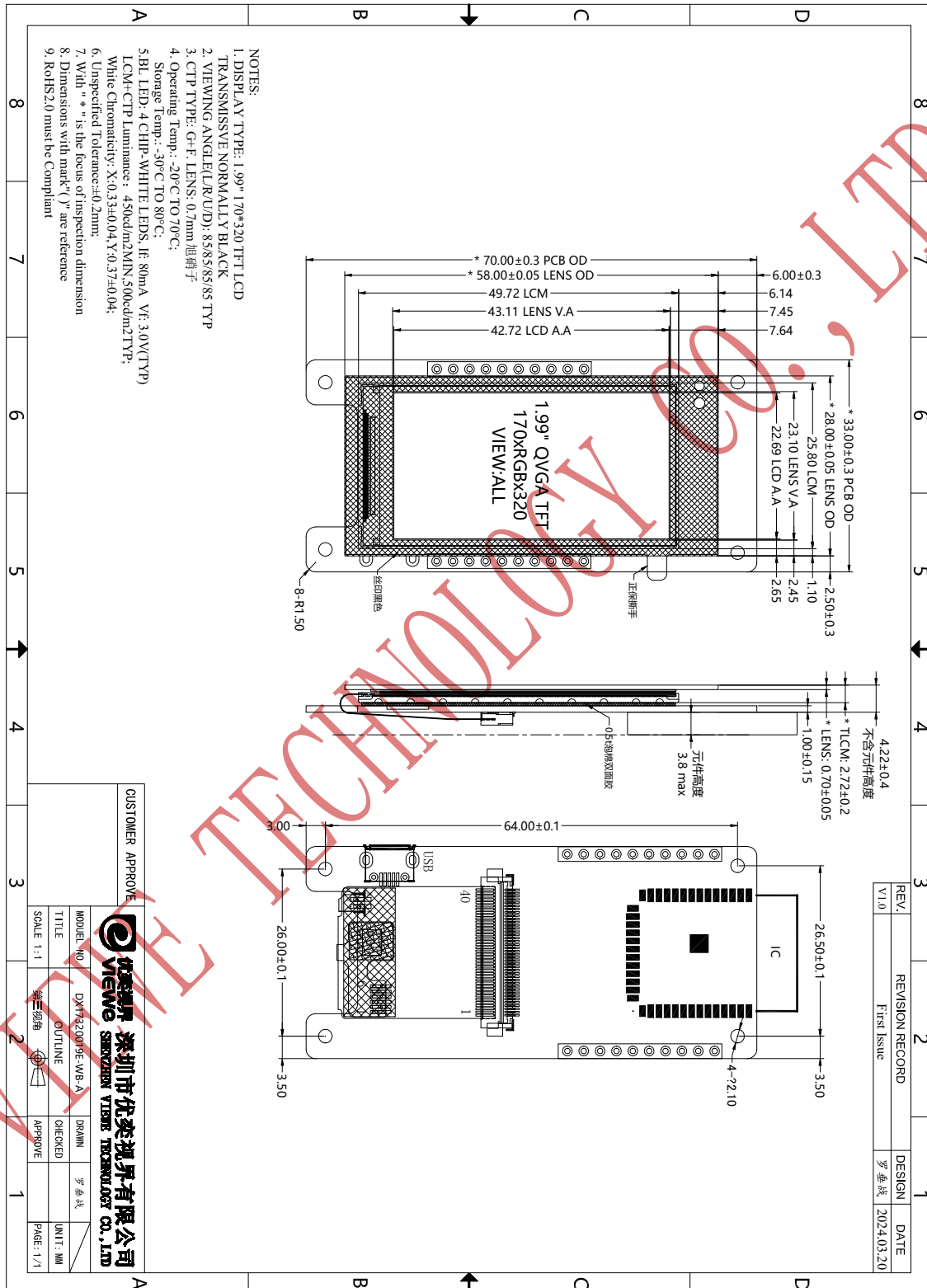
4. Schematic
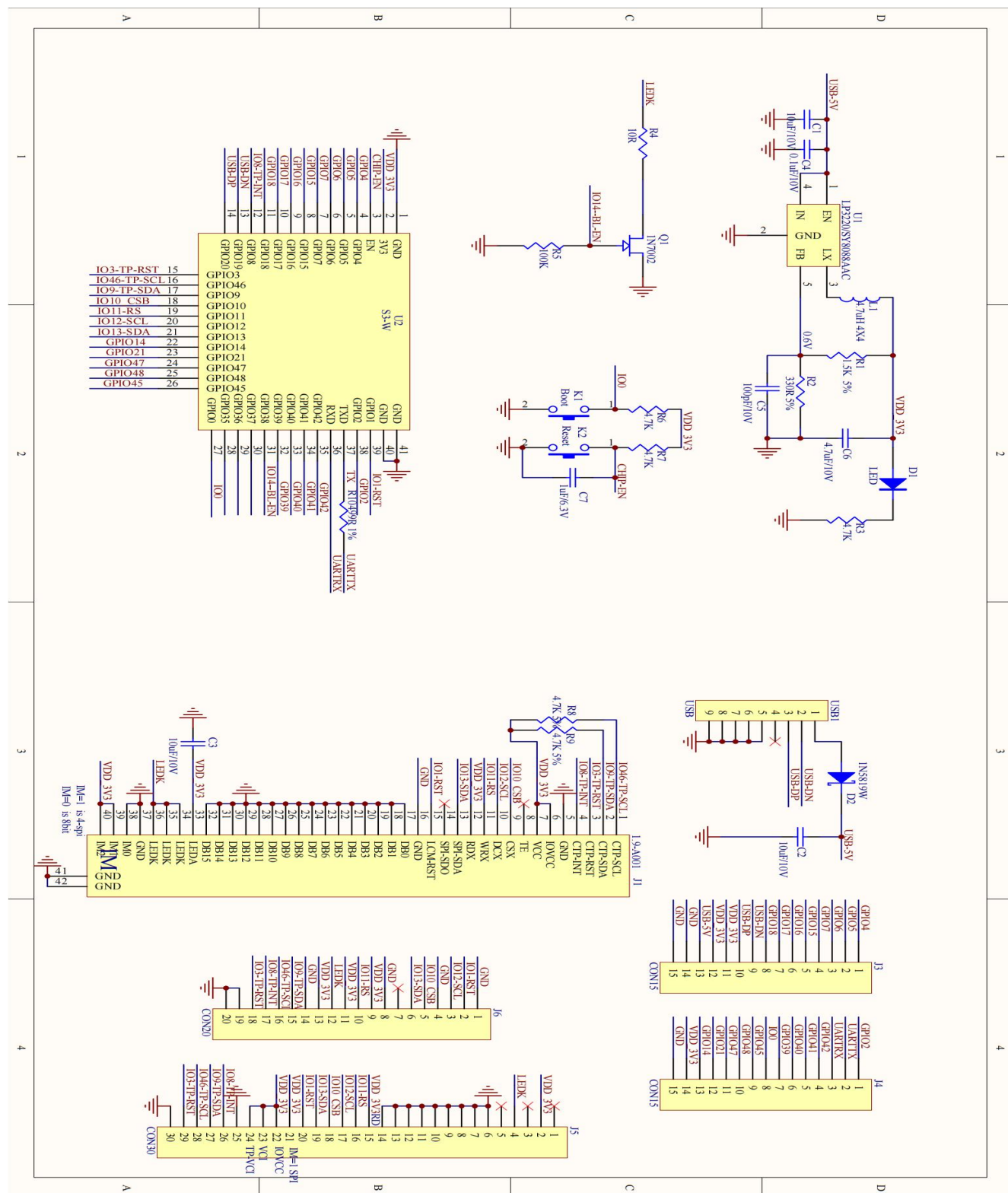
5. Related downloads

5.1 Arduino relevant information

ESP32-Arduino/examples/1.9inch/DX17320019E-WB-A-Arduino-SDK at main · VIEWESMART/ESP32-Arduino (github.com)

5.2 Libraries required for Arduino

ESP32-Arduino/examples/1.9inch/libraries at main · VIEWESMART/ESP32-Arduino (github.com)

5.3 IDF relevant information

enjoy looking forward to