

# SMART DISPLAY MODULE SPECIFICATION

1.3 Inch Smart Knob Display with Wi-Fi /BLE	
<b>Model:</b>	UEDX24240013-MD50E
<b>Version:</b>	V3.0
<b>Date:</b>	2024-07-30

## Customer Confirmation 客户确认

Approved by	Notes

## REVISION HISTORY

Revision	Date	Contents of Revision Change	Remark
V1.0	20221223	Preliminary release	
V2.0	20240218	Change to English version	
V3.0	20240730	Add schemata, GitHub project links, and environment configuration links	

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# 1. Introduction

## 1.1 Features

### Brief Info:

- 1) Outline Dimension:  $\phi$  50 Round
- 2) Interaction Method: Rotate and Press
- 3) Shell Color: Black/White/Silver/Customized
- 4) Power: DC 5V, 100mA

### System

- 1) OS: RTOS
- 2) CPU: ESP32-C3 160Mhz
- 3) RAM: 400KB
- 4) Flash: 4MB
- 5) Interface: UART/USB
- 6) Support 2.4GHz Wi-Fi、BLE 5、BLE Mesh

### Display

- 1) Size: 1.3 Inch
- 2) Resolution: 240\*240
- 3) Mode: IPS
- 4) Brightness: 300 cd/m<sup>2</sup>
- 5) Touch: without

### Other

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

## 1.2 Appearance picture



## 2. Product information

### 2.1 Interface Description

Pin NO.	Symbol	Description	Voltage Range	Remarks
1	VCC	Power 5V	5V	
2	ADC	GPIO3, ADC IO	0-3.3V	
3	GND	Grounds	0V	
4	NC	NC	-	
5	NC	NC	-	
6	RX	UART Receive	0-3.3V	
7	TX	UART Transmit	0-3.3V	
8	RST	Reset signal, do not connect if not in use	0-3.3V	
9	D+	USB D+	3.3V	
10	D-	USB D-	3.3V	

The connector specifications is 10PIN 0.5mm pitch

### 2.2 Display Information

Item	Parameter	Description
Color	65K colors	R5G6B5 16bits
AA	32.40(W)*32.40(H)	1.3 inch
Resolution	240*240	Round
Backlight	LED	30000Hour Min
Brightness	300 cd/m <sup>2</sup>	

## 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	50	100	150	mA
	VCC= +5V, backlight off	-	50	-	mA
Recommended power supply: 5V 1A DC					

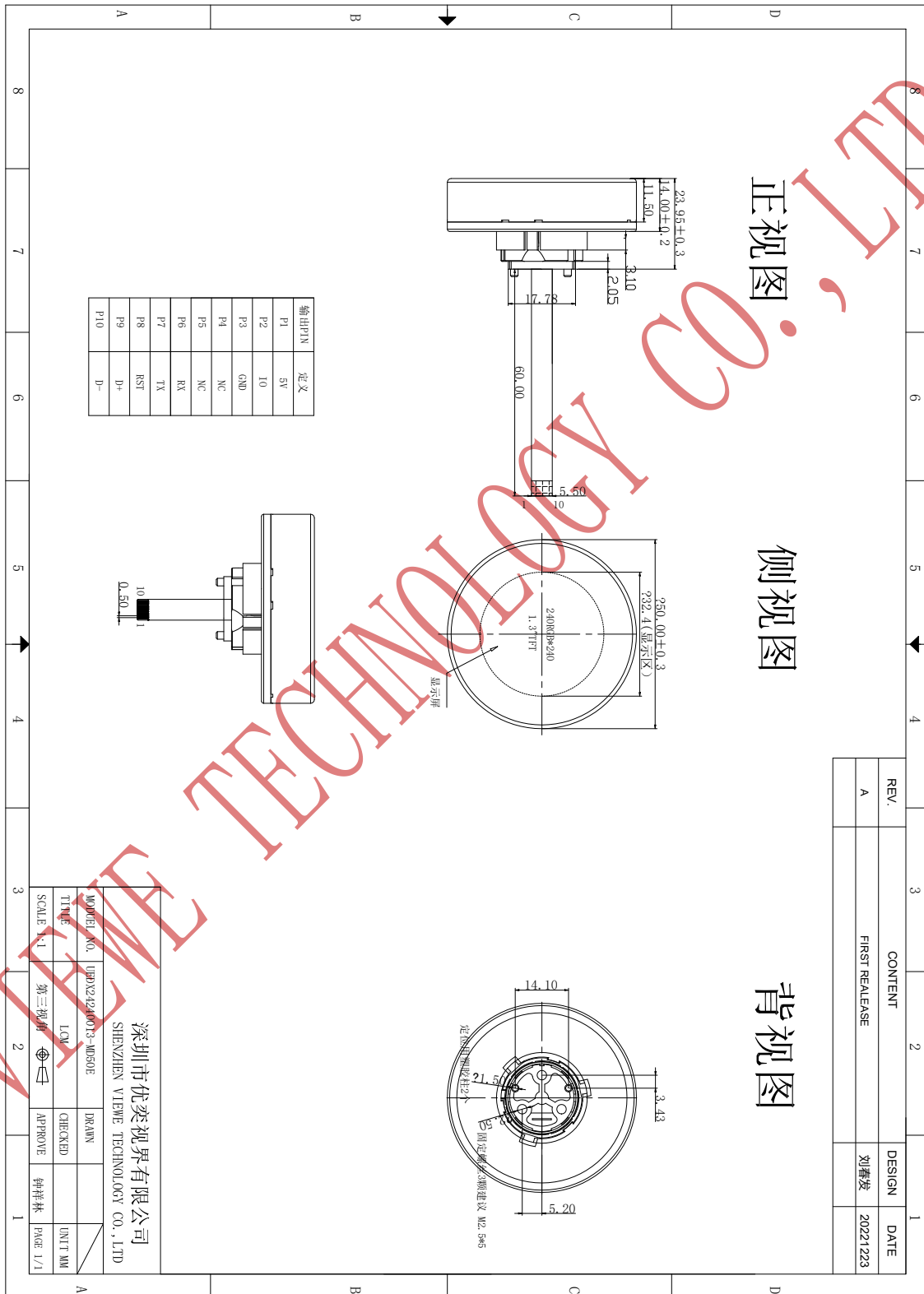
## 2.4 Reliability Test

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

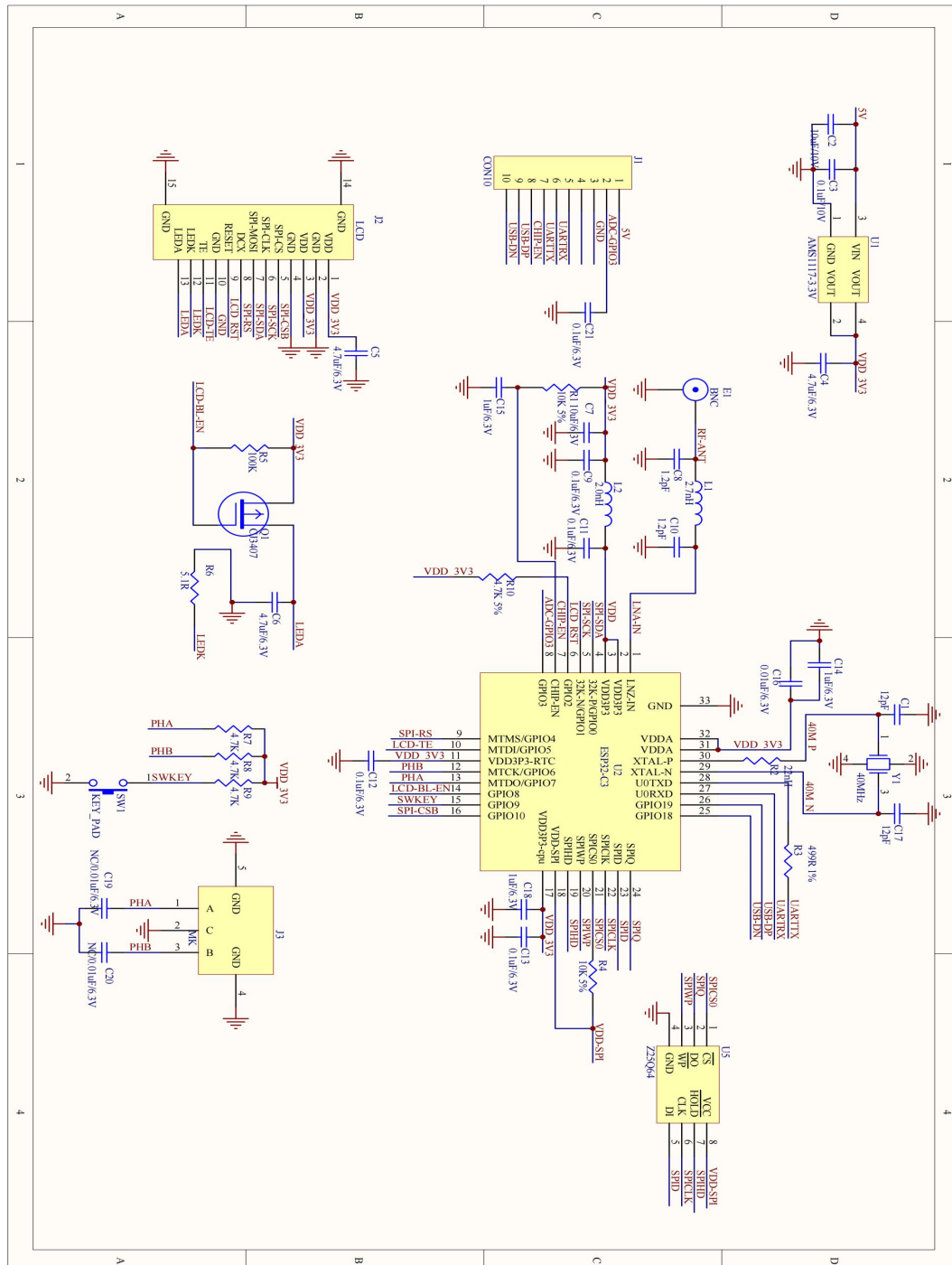
Software name	Version	Software associated configuration	Development environment configuration link
Arduino IDE	2.0.17 (esp32)	<ol style="list-style-type: none"> <li>Board: ESP32C3 Dev Module</li> <li>CPU Frequency: 160MHz (WiFi)</li> <li>Flash Frequency: 80MHz</li> <li>Flash Mode: QIO 80MHz</li> <li>Flash Size: 4MB (32Mb)</li> <li>Partition Scheme: Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS)</li> <li>PSRAM:NO</li> <li>Programmer: Esptool</li> </ol>	<a href="https://github.com">ESP32-Arduino config (github.com)</a>
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)	<a href="https://github.com">ESP-IDF config (github.com)</a>

### 3. MECHANICAL DRAWING





## 4. Schematic



## 5. Related downloads

### 5.1 Arduino relevant information

[ESP32-Arduino/examples/UEDX24240013-MD50E-Arduino-SDK at main • VIEWESMART/ESP32-Arduino \(github.com\)](#)

### 5.2 IDF relevant information

[ESP32-IDF/examples/UEDX24240013-MD50E-SDK-en at main • VIEWESMART/ESP32-IDF \(github.com\)](#)

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