

INDUSTRIAL STRENGTH... Start Your Application From YOURITECH

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EMC tests

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Optical Bonding

In-house Manufacturing

Cover glass

System solutions

OEM Solutions

Custom Display

Production Custom designs Installation

Mechanical design



SMART DISPLAY MODULE SPECIFICATION

1.5 Inch Smart Knob Display with Touch	
Model:	ET015SK01-VT
Version:	V1.1
Date:	2024-10-16

Customer Confirmation

Approved by	Notes



REVISION HISTORY

Revision	Date	Contents of Revision Change	Remark
V1.0	20241010	Preliminary release	
V1.1	20241016	Add GitHub project links, and environment config links	



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1. Introduction

1.1 Features

Brief Info:

- 1) Outline Dimension: ϕ 51.6 Round
- 2) Interaction Method: Rotate and Press
- 3) Shell Color: Black/Silver/Customized
- 4) Power: DC 5V, 100mA

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

Note: The Bluetooth and WIFI functions are still under test, we will complete them as soon as possible, please forgive the inconvenience caused to you

Display

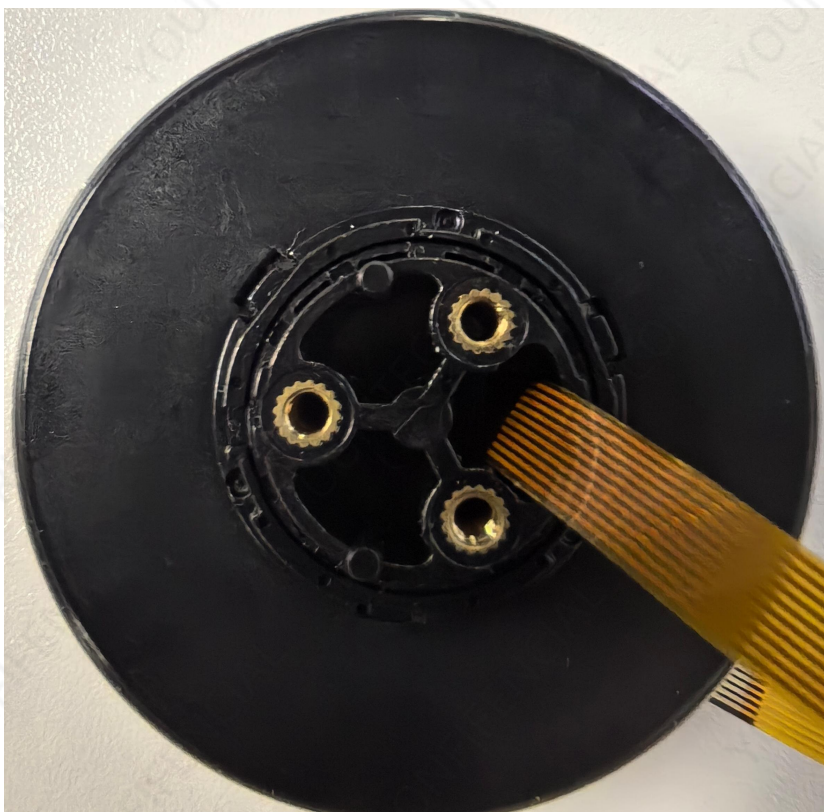
- 1) Size: 1.5 Inch
- 2) Resolution: 466*466
- 3) Mode: AMOLED
- 4) Driver IC: CO5300AF-42
- 5) Interface type: QSPI
- 6) Brightness: 1000 cd/m²
- 7) Touch IC: CST820

Other

- 1) Operation Temperature: -20~60°C
- 2) Storage Temperature: -30~70°C



1.2 Appearance picture



2. Product information

2.1 Connector Interface Description

Pin NO.	Symbol	Description	Voltage Range	Remarks
1	VCC	Power 5V	5V	
2	GPIO38	-	-	
3	GND	Grounds	0V	
4	GPIO40	GPIO40	-	
5	GPIO39	GPIO39	-	
6	RX	UART Receive	0-3.3V	
7	TX	UART Transmit	0-3.3V	
8	CHIP-EN	CHIP-EN	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 interface description

Pin No.	Symbol	I/O	Description
1	VCI_EN	P	Power supply
2	NC	-	-
3	NC	-	-
4	NC	-	-
5	QSPI_SI03	I	QSPI Data3 input pin
6	QSPI_SI02	I	QSPI Data2 input pin
6	QSPI_SI01	I	QSPI Data1 input pin
7	QSPI_SI00	I/O	QSPI Data0 input pin
9	NC	-	-
10	SCL	I	SPI pclk input signal
11	NC	-	-



12	CS	I	Chip selection pin. Low-active
13	GND	P	Power Ground
14	TE	O	Tearing effect signal is used to synchronize MCU to frame memory
15	IOVCC	P	Power supply to the internal logic power regulator
16	MTP(NC)	-	-
17	VBAT	P	Power supply
18	RST	I	The signal will reset the LCM, Signal is active low.
19	TP_SCL	I	I2C clock signals for CTP
20	TP_SDA	I/O	I2C data signal for CTP
21	TP_RST	I	The signal will reset the CTP,Signal is active low
22	TP_INT	I	Interrupt signals for CTP
23	TP_VCC	P	Power supply for TP
24	GND	P	Power Ground

2.3 Display Information

Item	Parameter	Description
Color	16.7M colors	24bits
AA	38.3052*38.3052	1.51 inch
Resolution	466*466	Round
Brightness	1000cd/m2	-
Interface Mode	QSPI	-
Driver IC	CO5300AF-42	-
Pixel Driving element	AMOLED	-



2.4 Voltage & Current

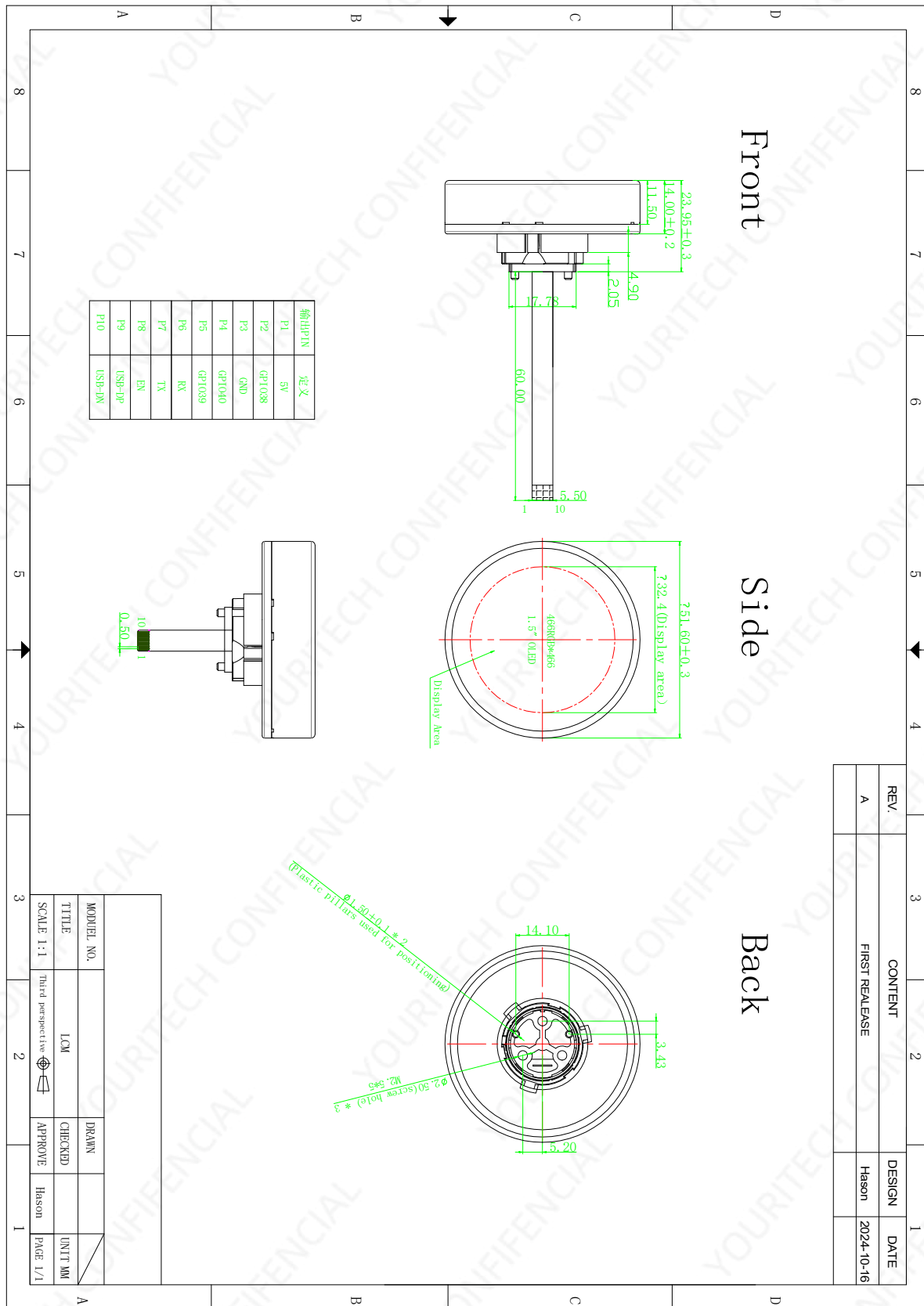
Item	Conditions	Min	Typ	Max	Unit
Power Voltage	DC	4.0	5.0	5.5	V
Operation Current	VCC= +5V, Maximum backlight current	50	100	150	mA
	VCC= +5V,backlight off	-	50	-	mA
Recommended power supply:5V 1A DC					

2.5 Reliability Test

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



3. MECHANICAL DRAWING



[illegible]