



秋田微电子
AVIDISPLAY

SPECIFICATION

规格书

产品型号 **MODULE NO. :** SDM-L769050CN-A9-S

客户型号 **CUSTOMER NO. :**

版本 **Rev No. : 0**

秋田微 AVD	编辑 PREPARED BY	审核 CHECKED BY	批准 APPROVED BY
签名 SIGNATURE			
日期 DATE	2024.03.19	2024.03.19	2024.03.19

客户批准 CUSTOMER APPROVAL	签名 SIGNATURE	日期 DATE

Notes:

- 1.Please contact AVD before assigning your product based on this module specification.
- 2.To improve the quality of product,this product specification is subject to change without any notice.

版本记录

[illegible]

1. 产品概述 PRODUCT DESCRIPTION

AVD 串口屏系列产品是专为工业、医疗等应用而设计的人机交互界面智能模组。产品本身集成 MCU、RAM、Flash 实现了组态软件系统，客户可通过我司提供界面开发软件（UI-Editor）可快速实现交互界面设计，设计界面过程无需写代码编程，实现“0”代码开发，开发完的 UI 数据可通过 USB 接口快速下载到 Flash 中，与客户主机通过 RS-232/485/UART 通讯，极大的降低了对客户主机的配置要求，降低了系统硬件成本和设计成本，也缩短了客户整个产品的开发周期。

The series products of AVD serial port screen are intelligent modules about Human Machine Interface that they are designed for applications which industrial, medical and so on. The products integrate MCU, RAM and Flash on themselves, and realize the configuration software system. Customers can realize interactive interface design quickly and easily through the UI-Editor that AVD provided. The process of design interface doesn't need to write code programming, to achieve "zero" code development. The developed UI data can be quickly downloaded to Flash through USB interface, and communicate with the guest host through RS-232/485/UART. This greatly reduces the district requirements for the guest host, and reduces the system hardware cost and design cost, and shortens the customer's entire product development cycle.



2. 硬件参数 HARDWARE PARAMETERS

显示参数 Display Parameters		Note
尺寸 Size	5.0 inch	
液晶屏类型 LCD Type	TN/NORMALLY WHITE/Transmissive(ANTI-GLARE)	
视角 Viewing Direction	12 O' clock	
分辨率 Resolution	800*480 Pixels	
显示尺寸 A A	120.70*75.80*2.80mm	
背光模式 Backlight Type	LED	
表面亮度 Surface Luminance	450cd/m ²	
背光寿命 LED life-time	30000H	Note 1
Note 1: 常温条件下，背光 LED 以最高亮度连续工作到背光亮度减半的时间； The LED life-time define as the estimated time to 50% degradation of initial brightness at Ta=25°C;		
触摸 Touch		Note
触摸原理 Touch	电容式触摸 Capacitive Touch Panel	
支持点数 support point	单点 Single point touch	
触摸结构 Touch structure	Glass+Glass	
表面强度 Surface Hardness	≥6H	
存储 Memory		Note
存储 Flash	1G bits	
硬件及接口 Hardware and Interface		Note
通讯接口 Communication Interface	TTL	
串口波特率 Baud Rate	4800~1500000bps, 典型值: 115200bps 4800~1500000bps, Typical value :115200bps	
USB 接口 USB interface	有 With	
SD 卡接口 SD card interface	无 Without	
蜂鸣器 Buzzer	Sound Output at 10cm Min. 80dB	
RTC	自带 CR1220 纽扣电池 Own CR1220 Button battery	

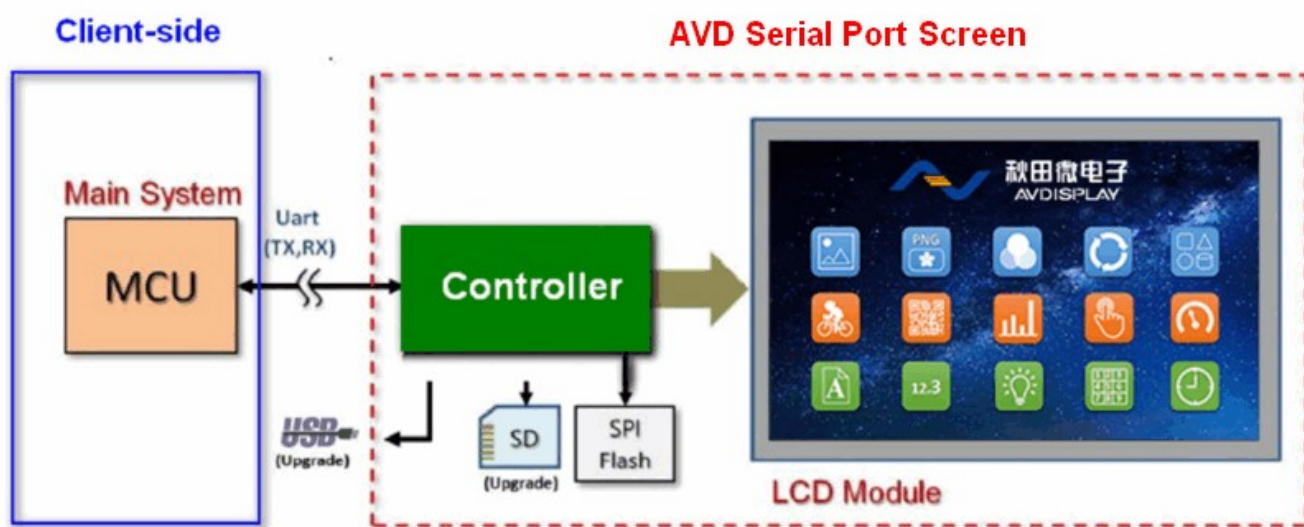
3. 电气参数 ELECTRICAL PARAMETERS

参数名称 Item	条件 Condition	Min.	Typ.	Max.	Unit
工作电压 Operating Voltage	—	4.5	12	18	V
工作电流 Operating Current	Supply: 12V	—	150	—	mA

4. 环境参数 ENVIRONMENT PARAMETERS

参数名称 Item	Symbol	Min.	Max.	Unit
工作温度 Operation Temperature	Top	-20	+70	°C
存储温度 Storage Temperature	Tst	-30	+80	°C
相对湿度 Relative Humidity	RH	10%	90%	-

5. 功能框图 FUNCTIONAL BLOCK DIAGRAM

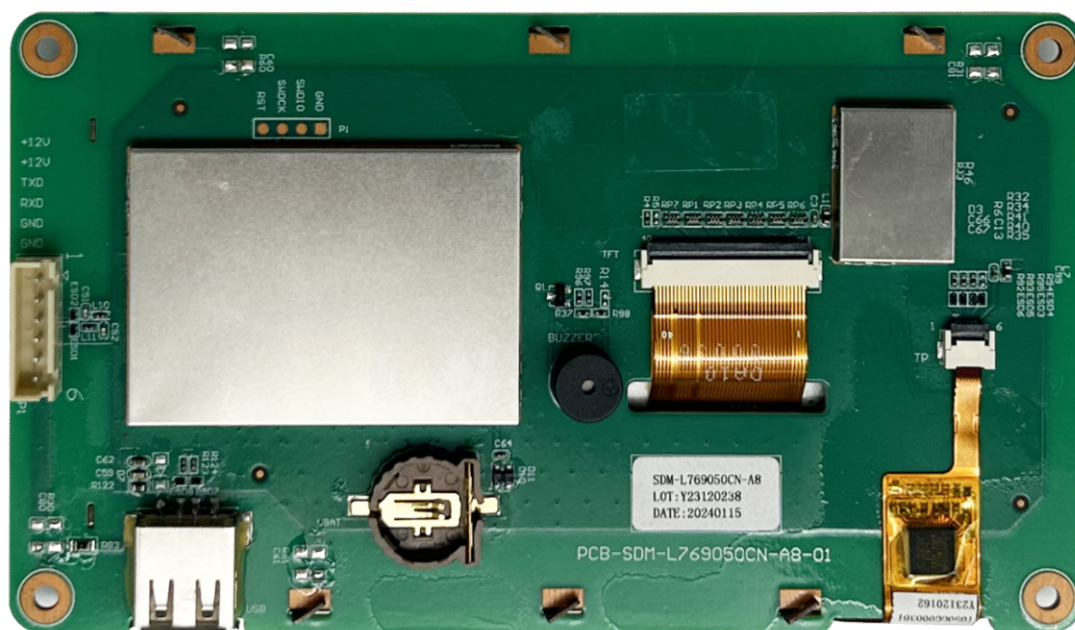


6. 通讯协议 COMMUNICATION PROTOCOL

起始码 Start code	指令码 Order code	序号 Number	指令参数 Command parameter	校验码 CRC code	结束位 Epilog code
0xAA (1 Byte)	1 Byte	1 Byte	n Byte	2 Byte	0xE4、0x1B、0x11、 0xEE (4 Bytes)

备注/ Note: 可支持 Modbus 协议 / Support Modbus Protocol

7. 接口描述 INTERFACE DESCRIPTION



JP1 : Power and UART

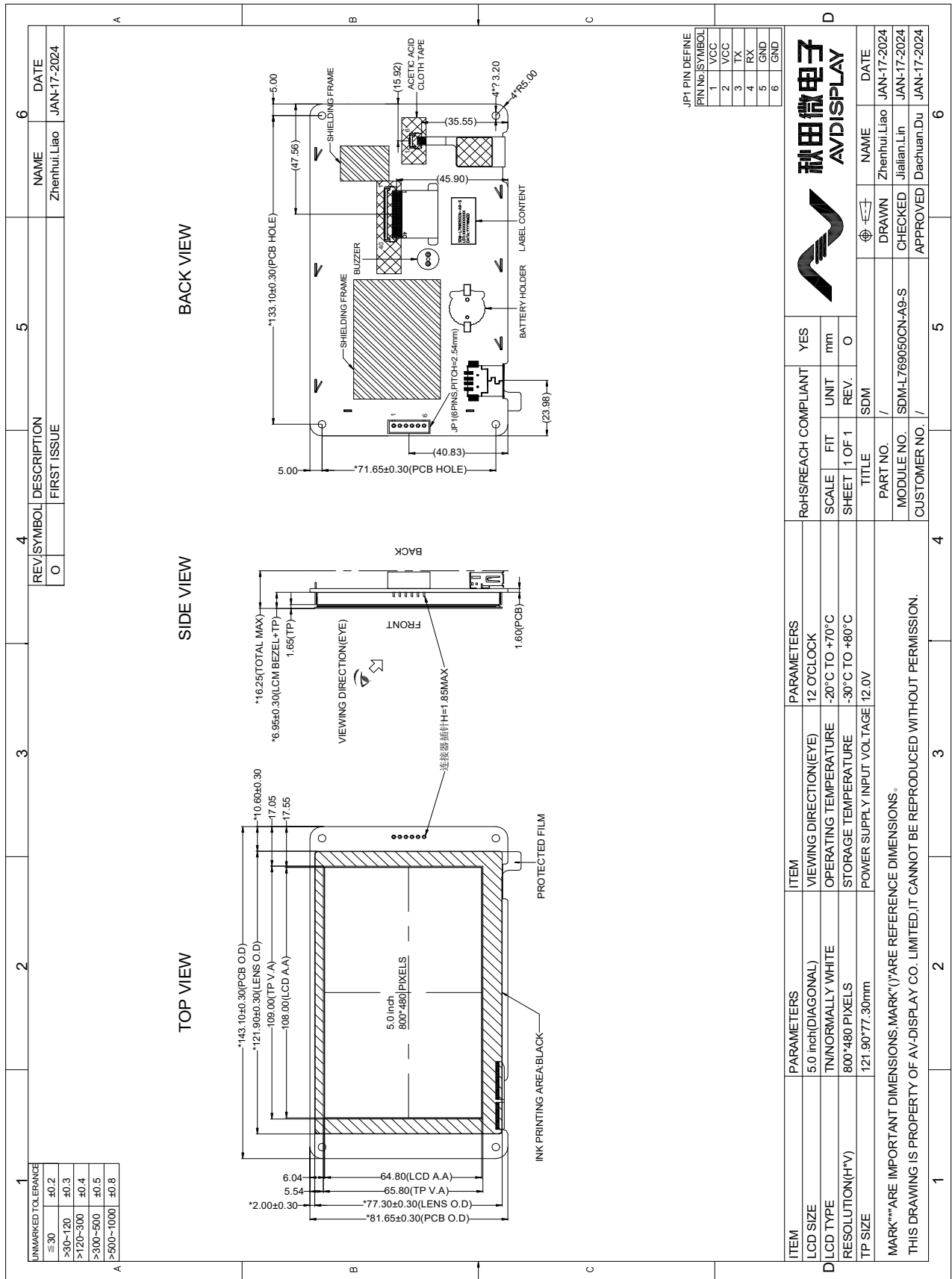
No.	Symbol	No.	Symbol
1	12V	4	RX
2	12V	5	GND
3	TX	6	GND

USB :Standard Type-A USB 2.0 Interface

Remark:

(1) Firmware upgrade requires a USB flash disk.

8. 产品尺寸图 MOUDLE EXTERNAL DIMENSIONS



9. 可靠性测试 RELIABILITY TEST CONDITIONS

No.	Test Item	Test condition		Inspection after test
1	High Temperature Storage Test	+80°C/72 hours		Inspection after 2~4 hours storage at room temperature, the sample shall be free from defects : 1.Current changing value before test and after test is 50% larger; 2. Function defect : Non-display,abnormal-d isplay 3.Visual defect : Glass crack.
2	Low Temperature Storage Test	-30°C/72 hours		
3	High Temperature Operating Test	+70°C/48 hours		
4	Low Temperature Operating Test	-20°C/48 hours		
5	Temperature Cycle Storage Test	-30°C ~ 25°C ~ +80°C/10 cycles (30 min.) (10 min.) (30 min.)		
6	High Temperature High Humidity Test	+60°C*90% RH/48 hours		
7	Vibration Test	Frequency : 250 r/min Amplitude : 1 inch Time: 45 min		
8	Drop Test	Drop direction: 1 corner/3 edges/6 sides ,10 times		
		Packing weight(kg)	Drop height(cm)	
		<11	80±1.6	
		11 ≦ G<21	60±1.2	
		21 ≦ G<31	50±1.0	
		31 ≦ G<40	40±0.8	
9	ESD Test	Air discharge: ±8 KV, 10 times Contact discharge: ±4 KV, 10 times		

10.REMARK

- Avoid any inappropriate external force or strong vibration in the assembly process.
- Do not twist or bend panels and prevent improper external forces from damaging panels during assembly.
- High temperature, high humidity or rapid temperature changes may affect performance. Store and use the product in an appropriate environment.
- Avoid dust, oil mist, acid, alkali and chloride damage to the product.
- Wear wrist straps, antistatic gloves and clothes during assembly to prevent electrostatic discharge (ESD).
- When assembling, use ionic fan to prevent electrostatic discharge (ESD).
- Removing the protective film from the top (PCBA binding side) to the bottom in 3 seconds to prevent electrostatic discharge (ESD).
- Avoid displaying the same mode/pattern for a long time.
- Turn off the power when connecting or disconnecting the circuit.