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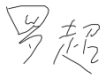
SPECIFICATION
FOR
IOT MODULE
MODULE NO. : SDM-L769070CN-A0-S
CUSTOMER NO.:
Rev No. : A

AVD	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE	2021.10.26	2021.10.26	2021.10.26

CUSTOMER APPROVAL	SIGNATURE	DATE

Notes:

1.Please contact AVD before assigning your product based on this module specification.

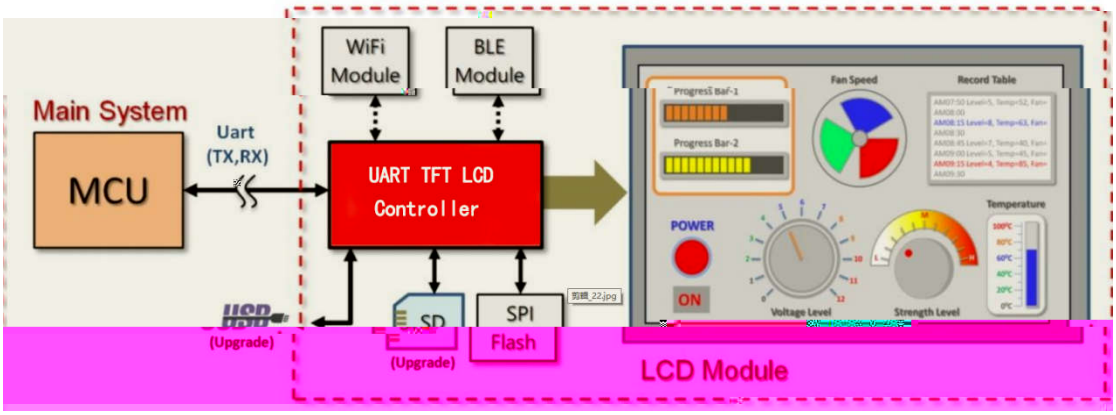
2.To improve the quality of product,this product specification is subject to change without any notice.

REVISION RECORD

Rev No.	Rev date	Contents	Remarks
O	2021.10.26	First Release	Preliminary
A	2021.11.23	Format Modification	All Pages

CONTENTS

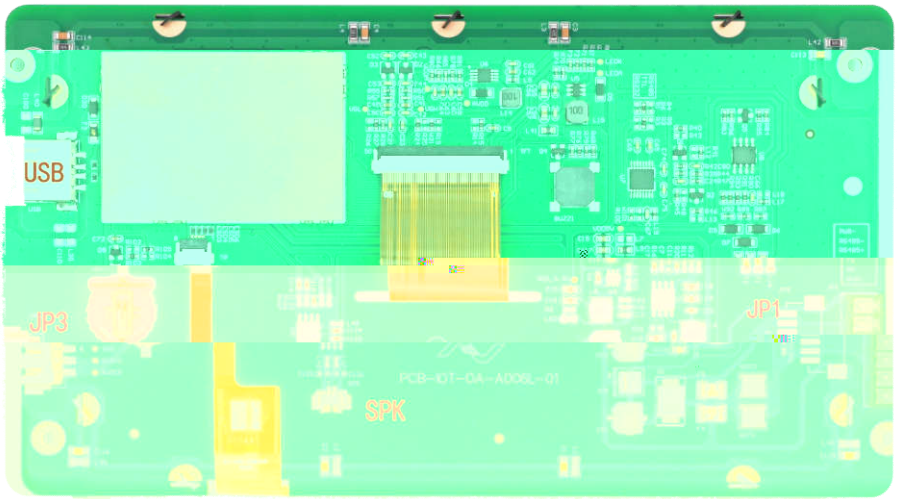
(2) FUNCTIONAL BLOCK DIAGRAM



(3) COMMUNICATION PROTOCOL

Start code	Order code	Number	Command parameter	CRC code	Epilog code
0xAA (1 Byte)	1 Byte	1 Byte	n Byte	2 Byte	0xE4 0x1B 0x11 0xEE (4 Bytes)

(4) INTERFACE DESCRIPTION



JP1 : Power and UART 

No.	Symbol	No.	Symbol
1	PWR+(12V)	4	RS485+
2	RX	5	RS485-
3	TX	6	PWR-

JP3 : MCU burning Interface 

No.	Symbol	No.	Symbol
1	GND	3	SWDCK
2	SWDIO	/	/

USB : Standard Type-a USB 2.0 Interface 

No.	Symbol	No.	Symbol
1	USB5V	3	DP
2	DN	4	GND

SPK : 8Ω3W Loudspeaker 

No.	Symbol	No.	Symbol
1	SPK+	2	SPK-

Remark:

(1) The default value of a serial port is TTL.R6 R8 used to select TTL,R1 R3 used to select RS232, R4 5 used to select RS485.

(2) J3 is used for MCU firing.

(3) The RTC requires an external CR1220 battery.

(4) Firmware upgrade requires a USB flash disk.

3.LCD DESCRIPTION

No.	Item	Contents	Unit
1	LCD Size	7.0 Inch	/
2	Display Mode	TN/Normally White/Transmissive	/
3	Interface type	24 bit RGB	/
4	Resolution	800 *480 Pixels	/
5	Pixel Pitch	0.1962*0.1790 mm	/
6	Color Depth	16.7M	/
7	Module Size (L*W*H)	165.00*100.00*5.70 mm	/
8	Surface Luminance	500(Typ.)	cd/m^2

4.TOUCH DESCRIPTION

No.	Item	Contents	Unit
1	Touch Type	Capacitive Touch Panel (CTP	/
2	Driver IC	GT911 or Compatible	/
3	Resolution	800*480 Pixels	/
4	Interface Type	IIC	/
5	Size	7.0 Inch	/
6	Operating Voltage	3.3	V

5.ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Power Supply Input Voltage(Module)	VDD	-0.3	24.0	V
Supply Current (Normal Temp.)(12V Typ.)	IVDD	-	TBD	mA
Operation Temperature	Top	-20	+70	°C
Storage Temperature	Tst	-30	+80	°C
Humidity	RH	-	90	%RH

6.RELIABILITY TEST CONDITIONS

No.	Test Item	Test condition	Inspection after test
1	High Temperature Storage Test	+80°C/120 hours	Inspection after 2~4 hours storage at room temperature, the sample shall be free from defects : 1.Current changing
2	Low Temperature Storage Test	-30°C/120 hours	
3	High Temperature Operating Test	+70°C/120 hours	
4	Low Temperature Operating Test	-20°C/120 hours	

<table>
<tr><td>5</td><td>Temperature Cycle Storage Test</td><td colspan="2">-30°C ~ 25°C ~ +80°C/10 cycles
(30 min.) (10 min.) (30 min.)</td><td rowspan="9">value before test and after test is 50% larger;
2. Function defect : Non-display,abnormal-display
3.Visual defect : Glass crack.</td></tr>
<tr><td>6</td><td>High Temperature High Humidity Test</td><td colspan="2">+60°C*90% RH/120 hours</td></tr>
<tr><td>7</td><td>Vibration Test</td><td colspan="2">Frequency : 250 r/min
Amplitude : 1 inch
Time: 45 min</td></tr>
<tr><td rowspan="6">8</td><td rowspan="6">Drop Test</td><td colspan="2">Drop direction:
1 corner/3 edges/6 sides ,10 times</td></tr>
<tr><td>Packing weight(kg)</td><td>Drop height(cm)</td></tr>
<tr><td><11</td><td>80±1.6</td></tr>
<tr><td>11 G<21</td><td>60±1.2</td></tr>
<tr><td>21 G<31</td><td>50±1.0</td></tr>
<tr><td>31 G<40</td><td>40±0.8</td></tr>
<tr><td>9</td><td>ESD Test</td><td colspan="2">Air discharge: ±8 KV, 10 times
Contact discharge: ±4 KV, 10 times</td></tr>
</table>

7.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).
- Follow the correct time sequence when operating.
- Avoid displaying the same mode/pattern for a long time.
- V-COM voltage should be adjusted after aging (blinking) to display the best performance.
- Turn off the pl ﾝ sam