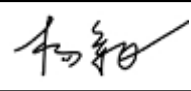




A **Volex** Company

Embedded Solutions

**SPECIFICATION
FOR
IOT MODULE
MODULE NO. : IPS070A106A
Rev No. : O**

GTK	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE	2022.07.06	2022.07.06	2022.07.06

CUSTOMER APPROVAL	SIGNATURE	DATE

Notes:

- 1.Please contact GTK 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

[illegible]

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1.MODULE DESCRIPTION

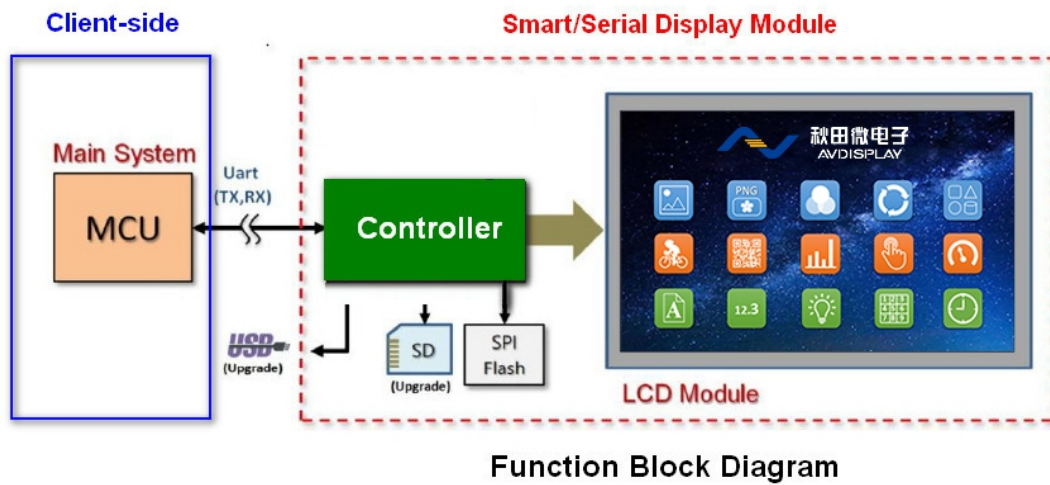
IPS070A106A0 is a 7” serial port display module with capacitive touch panel. This product is designed for the intelligent home appliances, such as refrigerators,washing machine, air conditioners,etc.Suitable for fast and easy integration of a full colour HMI into any application or product.



(1) HARDWARE PARAMETERS

Memory	1G bit SPI Flash
Display Port	MIPI
Touch	Support Capacitive Touch Panel (CTP)
Communication Interface	TTL
Baud Rate	115200 bps(Typ.)
Power	5V DC(Typ.)
Power Consumption	TBD
Application Generation	Supports Local USB Upgrade
Size	205.00*55.00*16.30mm
Language	English
Weight	TBD

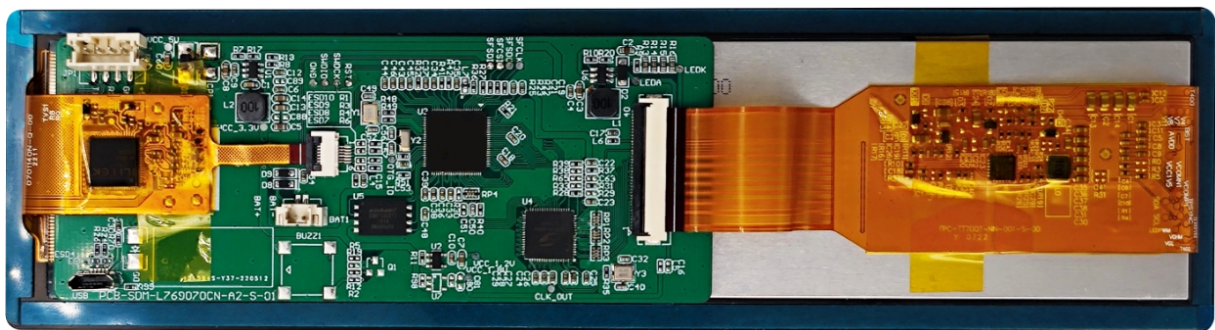
(2) FUNCTIONAL BLOCK DIAGRAM



(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+(5V)	3	RXD

2	GND	4	TXD
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JP2 : MCU Programming Interface

No.	Symbol	No.	Symbol
1	GND	3	SWDCK
2	SWDIO	4	RST

USB :Micro USB Interface

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

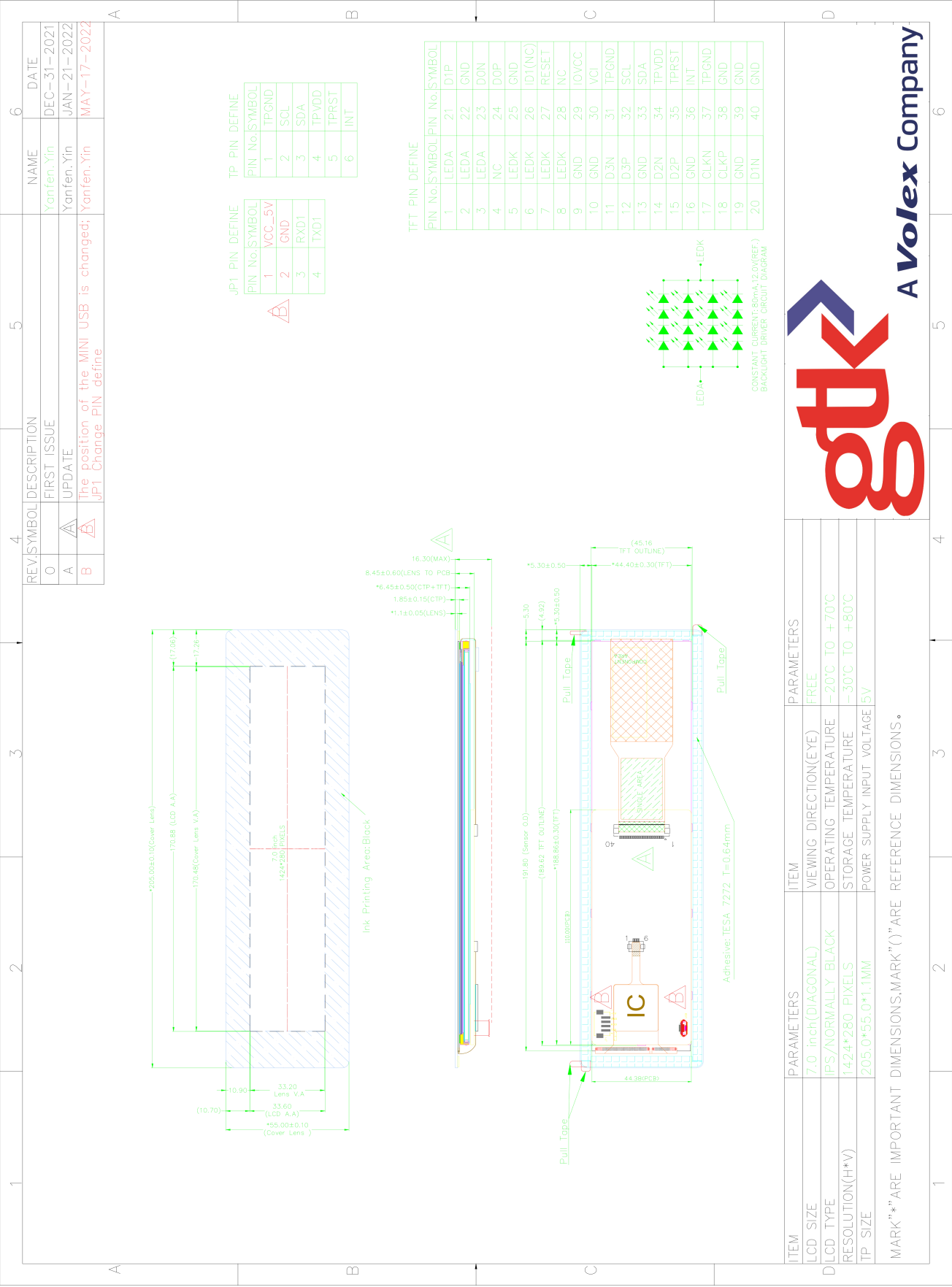
SPK : 8 Ω 3W Loudspeaker

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

Remark:

- (1) JP2 is used for MCU Programming.
- (2) Firmware upgrade requires a USB flash disk.

2.MOUDLE EXTERNAL DIMENSIONS



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3.LCD DESCRIPTION

No.	Item	Contents	Unit
1	LCD Size	7.0	inch
2	Display Mode	IPS/NORMALLY BLACK/Transmissive	/
3	Interface type	MIPI	/
4	Resolution	1424*280 Pixels	/
5	Pixel Pitch	0.12*0.12 mm	/
6	Color Depth	16.7M	/
7	Module Size (L*W*H)	189.62*45.18*6.45 mm	/
8	Surface Luminance	400(Typ.)	cd/m^2

4.TOUCH DESCRIPTION

No.	Item	Contents	Unit
1	Touch Type	Capacitive Touch Panel (CTP)	/
2	Driver IC	Compatible	/
3	Resolution	1424*280 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	5.3	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/72 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/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.)		value before test and after test is 50% larger; 2. Function defect : Non-display,abnormal-d isplay 3.Visual defect : Glass crack.
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		

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 power when connecting or disconnecting the circuit.
- Products may contain small amounts of liquid crystal and comply with local laws and regulations.