

SMART DISPLAY MODULE SPECIFICATION

Version 版本号: v0
This module uses ROHS material
模块用环保材料

version number	Modified date	content	Comment
V1.0	2019-12-23	First release	Preliminary

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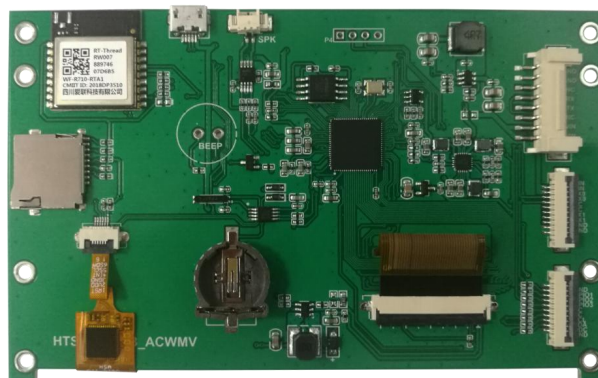
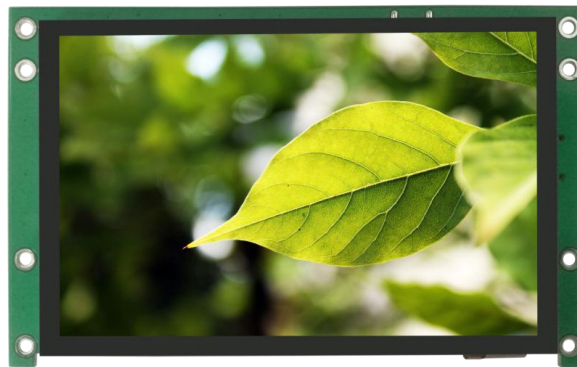
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1. Product introduction

1.1 Appearance

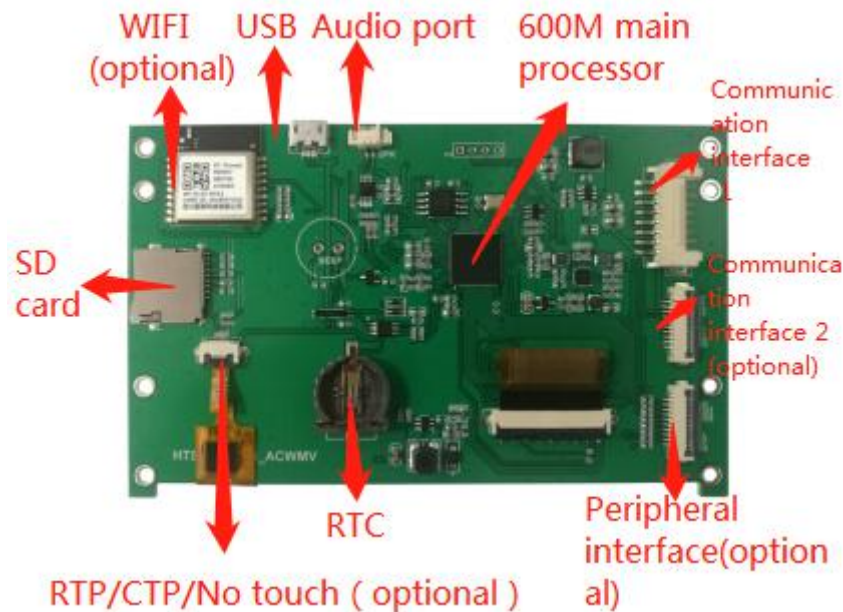
The following is a reference picture of the appearance of this size screen.

Note: No key structural process modification or major layout adjustments are involved. Only product process or reliability changes are iterative. The company will not initiate external changes, and the actual product shall prevail.



1.2 Hardware Configuration

The following is a reference diagram of the hardware configuration of this size product, with a capacitive screen as an example



1.3 Develop software

Features: JS script programming, custom communication protocol, cool UI interface, alternative to MCU

HTD IDE It is a serial screen development and debugging software independently researched and developed by Beijing Huatian Xinke, which can be simulated and run online, eliminating the need for frequent programming, saving development cycles, and free use for life. After the user creates a new project, import the designed artwork picture, and then configure the buttons and other controls in the screen. The logical relationship between the buttons and other controls can be edited with js code. After the simulation runs correctly, download the entire project to the serial screen .

2. Product specifications

2.1 Module parameters

Parameter	Data	Description	V1.0
Colour	262K colors	18Bit, RGB666	The standard
Display size	95.04 (H) *53.86 (V)	480*272 pixel	The standard
Resolution	480*272 pixel	Support 90 degree rotation	The standard
Brightness	300-350nit	Infinitely adjustable	The standard
Touch type	Capacitive touch screen	According to customer selection	The standard
Memory	Built-in DDR32MB, 16M SPI Flash	Can support SD memory card expansion, up to 64GB	
Wireless WiFi	Wireless WiFi receiving and sending	The highest transmission rate is 150M	Optional
SPK interface	Built-in audio power amplifier	Supports 8Ω 1W speaker, 2PIN 1.25mm connector socket	Optional
TTL serial port	TTL input level range 1.8V to 5V		Optional
RS232	RS232		Optional
RS485	Support 485 interface communication	Half duplex	Optional
DEBUG	Support DEBUG serial port debugging	TTL level, level range 1.8V-5V	This function is not available from the factory

2.2 Electrical parameters

Parameter	Test conditions	Minimum	Typical value	Max	Unit
Operating voltage		5	12	15	V
Working current	VCC=12V, Maximum backlight brightness	-	97	-	mA
	VCC=12V, Backlight off	-	63	-	mA
Recommended working power: 12V 1A DC power supply					

2.3 Interface definition

2.3.1 8Pin HY2.0mm Communication interface 1

Pin	Symbol	Description	Remarks
1	VCC	Power supply 5V-15V, typical12V	
2	NC	Hang in the air	
3	TX1	Serial 1 send	RS232-TX
4	TX0	Serial 0 send	RS485: A
5	RX0	Serial 0 receive	RS485: B
6	RX1	Serial 1 receive	RS232-RX
7,8	GND	GND	

2.3.2 10Pin FPC1.0mm Communication interface 2

Pin	Symbol	Description	Remarks
1,2,3	VCC	Power supply 5V-15V, typical12V	
4	TX1	Serial 1 send	RS232-TX
5	TX0	Serial 0 send	RS485: A
6	RX0	Serial 0 receive	RS485: B
7	RX1	Serial 1 receive	RS232-RX
8,9,10	GND	GND	

2.3.3 10Pin FPC1.0mm Peripheral interface

Pin	Symbol	Description	Remarks
1	GND	GND	
2	GPIO1	General GPIO	
3	GPIO2	General GPIO	
4	GPIO3	General GPIO	
5	SPI_CLK	SPI interface	
6	SPI_SDA	SPI interface	
7	SPI_RS	SPI interface	
8	IIC_SCL	IIC interface	
9	IIC_SDA	IIC interface	
10	ADC	Key extension, ADC acquisition (6Bit)	

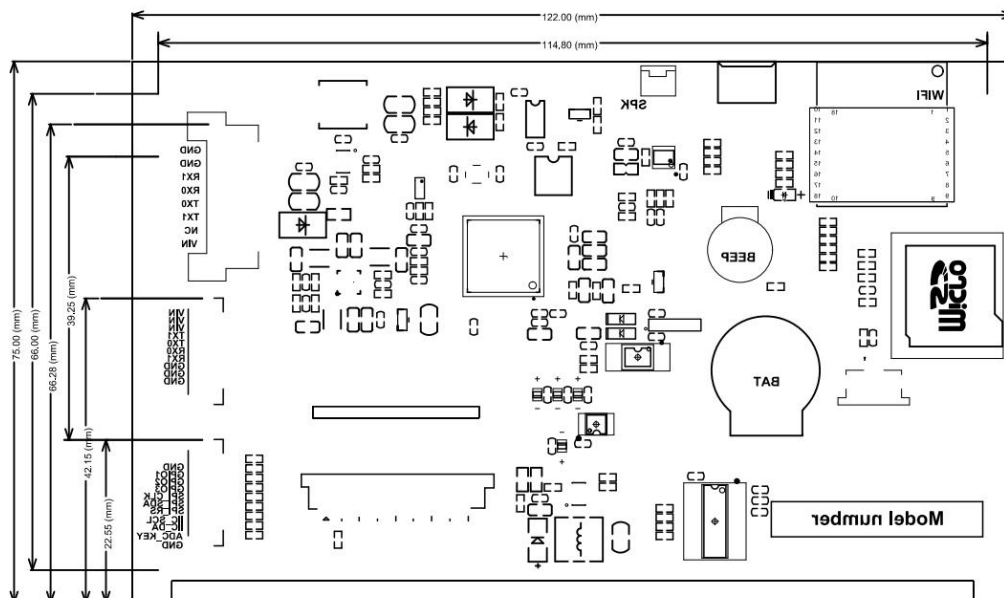
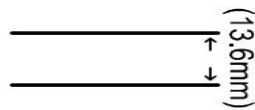
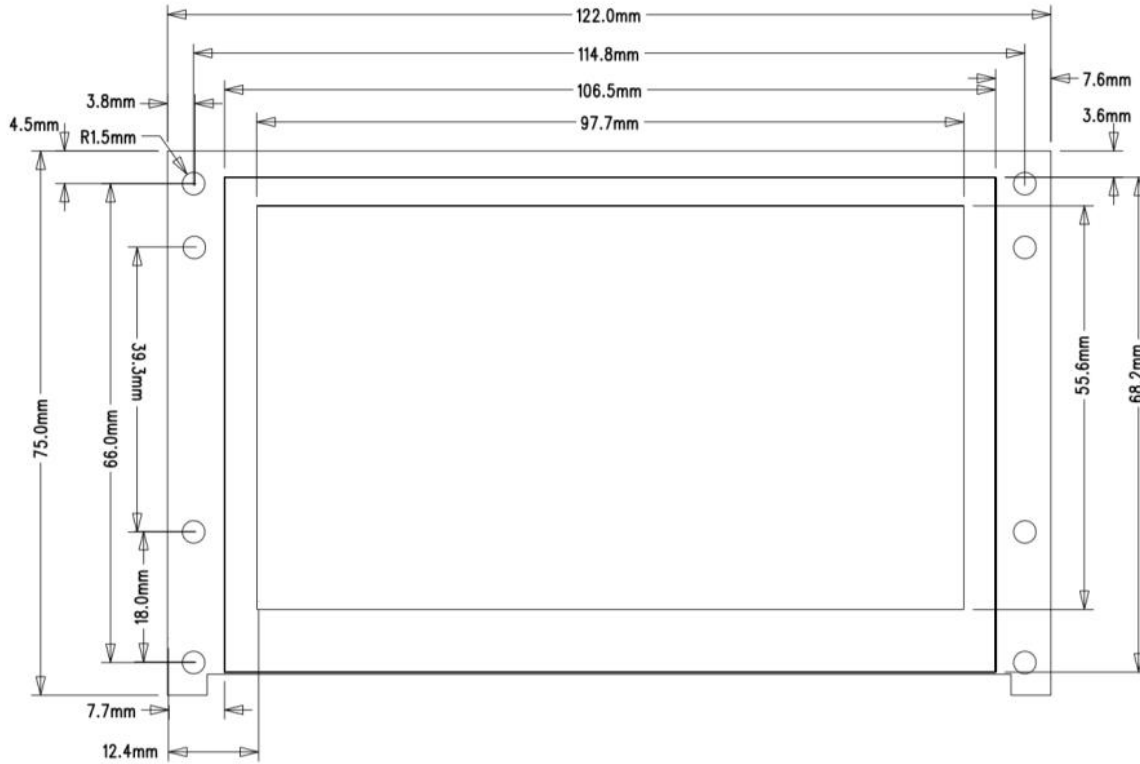
2.4 Working environment and reliability parameters

Parameter	Test environment	Minimum	Typical value	Max	Unit
Operating temperature	Under 12V voltage, humidity 60%	-20	25	70	°C
Storage temperature		-30	25	80	°C
Working humidity	25°C	10%	60%	80%	RH
Static protection (default)		4 (contact)	6	8-10	KV

2.5 Peripheral support

parameter	Features
WIFI	Remote network upgrade is possible
TF Card	Can store video and audio files, and can store designer programs
IIC	Devices with IIC interface
ADC	Can collect one analog quantity (6Bit)
GPIO	Controllable switching equipment
PWM	Can generate debug pulse
SPI	SPI interface device

3. Product size



4. Product packaging

Product parameter	
Dimensions	75 (width) × 122 (high)
Net Weight	110g
Packaging standard	
Box 1	
Box 1	