
SPECIFICATION

CUSTOMER	
SUPPLIER	SHENZHEN JIARUITUO TECHNOLOGY CO.LTD
PRODUCT MODEL	VG-XX-XX
PRODUCT NAME	IR FRAME
DOCUMENT No.	XS-SP-VG-XX-V1

Approved by XSHL		
Prepared by	Checked by	Approved by

Please send back one signed original:

Approved by customer

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Document Revision History

Date	Version	page	Update details
2025-02-10	V1.0		First release

1. CHARACTERISTIC

This product is a drive free scheme, and the product size range is 31.5 ~ 98 inch;

2. TOUCH SPECIFICATION

Item	Specification	Description
Frame Material	Aluminum	/
Frame Color	Black	/
Frame Processing Method	Black Anodized & Superficial Wiredrawing	/
Interpolation Resolution	32767 (W)×32767 (D)	Defined as the touch point coordinate range is: (0,0) --- (32767,32767)
Minimum Object Sizes for Touch	6mm (3mm 90% Active Area)	Test environment: drawing software on Windows OS Standard: support 6mm pen drawing vertically and the line is continuous
Touch Accuracy	≤± 1 mm (90% Active Area)	Test environment: drawing software on Windows OS Standard: draw a straight line slowly, the deviation between the displayed line and the actual position is ≤1mm
Touch Points	100 Points	Test environment: drawing software on Windows OS Standard: 20 Points, the screen can display 20 contacts
Writing Points	2 Points for 6mm	Test environment: drawing software on Windows OS Standard: Support 2 pens writing at the same time, and the gap between two pens is 100mm
Gap Between Two Pens	25mm	Test environment: drawing software on Windows OS, 25mm distance between two pens edge Standard: draw a straight line at 20cm/s , and the line is continuous
Average Frame Rate	≥111Hz	Test environment: Bus Hound software on Windows OS, single click to obtain the average value of reporting time
Response Time	≤ 9ms	This data is calculated by reciprocal of average frame rate * 1000

3. ELECTRICAL SPECIFICATIONS

Item	Specification
Interface	USB2.0 +UART

Upgrade	USB
Working Voltage	DC 5V±200mV
Average Current	≤500mA
Voltage ripple	≤30mV
Current ripple	≤30mA

4. STORAGE CONDITIONGS

Item	Specification
Storage Temperature	0°C~40°C
Work Temperature	-10°C~55°C
Storage/Work Humidity	30%-70%RH (no condensation, not including package)

5. RELIABILITY

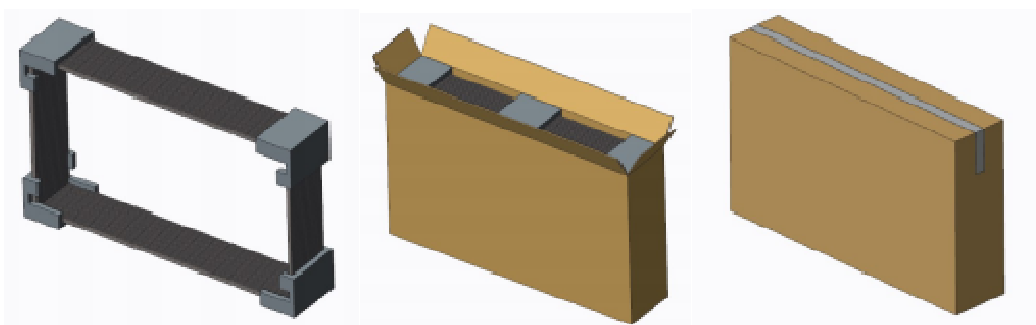
Item	Specification
Low Temperature Operation	Temperature: -20°C , Test time: 48H, power on, place 2 hours at room temperature after experiment
Low Temperature Storage	Temperature: -20°C , Test time: 48H, power off, place 2 hours at room temperature after experiment
Low Temperature Start	Temperature: -20°C , Test time: 4H (USB plug in and off 10 times at second & forth hour)
High Temperature Operation	Temperature: 60°C , Test time: 48H, power on, place 2 hours at room temperature after experiment
High Temperature and High Humidity Operation	Temperature: 60°C , Humidity: 95%RH, No condensation, Test time: 48H, power on, place 2 hours at room temperature after experiment
High Temperature and High Humidity Storage	Temperature: 60°C ,Humidity: 95%RH, No condensation, Test time: 48H, power off, place 2 hours at room temperature after experiment
Temperature Cycle	Temperature:-20°C~60°C, Cycling Times:10 times, Speed : 1°C/min, place 2 hours at room temperature after experiment
Thermal shock	Temperature: 85°C ,Temperature:-45°C , cycle for 50 times, place 2 hours at room temperature after experiment

Package Vibration	4K Km Road transportation
Package Drop	One corner, three sides and six sides
ESD	According to IEC61000-4-2 level B. Contact discharge $\pm 4\text{KV}$, air discharge $\pm 8\text{KV}$ (apply to a panel)

6. OPERATING SYSTEM

SYSTEM		TESTING VERSION	SINGLE TOUCH	MULTI-TOUCH
Linux	Over Ubuntu14.04	Ubuntu19.10	✓	✓
Windows	Windows 7		✓	✓
	Windows 8		✓	✓
	Windows 10		✓	✓
Mac OS X	Mac OS X 10.12	MacOS X10.15	✓	✓ (using UPDD)
Chrome	Over Chrome 54		✓	
Android	Over Android 4.0		✓	✓

7. PACKAGE



测试指南

Test Instruction

8.1 测试条件 Test condition .

- Windows系统, Windows 版信号测试软件 Windows, Signal test software on Windows.
- 两支直径 8mm的触摸笔 Touch Pen (2pcs, $\phi 8\text{mm}$)

8.2 测试要求 Test requirements .

- 拼装过程中需做好防静电措施，戴静电手套或手环

Take anti-static measures during assembly, wear static gloves or bracelets .

- 测试时周围不可有正在工作的大功率电器，避免受到干扰

There must be no high-power electrical appliances working around when testing, to avoid interference .

- 测试时周围不可有其它正在工作的红外触摸框设备，避免互相干扰

There must be no other active infrared touch frame devices working around when testing, to avoid interference .

- 若整机同时连接鼠标，画线测试过程中，请勿移动鼠标

If there has a mouse connected to the machine when testing, do not move it

8.3 测试步骤 Test steps

3.1 信号测试 Signal test

- 运行 Windows 版信号试软件 Run TOUCHTEST software on Windows

- 测试软件找到设备后点击“开始”按钮，开始测试（测试过程中请勿触摸）

After software finds the device, click "Start" to test (Do not touch when test beginning)

- 测试软件的每一个检测项均显示为 PASS，表示此触摸框信号正常；否则为 NG

Each test item show PASS, the touch frame signal is OK ; Otherwise is NG.

3.2 画线测试 Line test

- 握笔要求 How to holding the pen .

- ◆ 画线时，笔和玻璃面垂线的夹角 $\leq 20^\circ$ ，如图 1 为正确的握笔方式，图 2 为错误的握笔方式

When drawing lines, the tilt angle of the stylus is $\leq 20^\circ$ as shown in figure 1, figure is wrong



图1 Figure 1



图2 Figure 2

- 两点画线 Two points drawing .

- ◆ 使用两支触摸笔进行画线（两笔中心间距 40mm）；无断线、跳线等现象为 OK（图 3）；否则为 NG

Use two pens to draw lines on full screen (the distance between the center of the touch pens is 40mm) There should be no broken or jumper lines which is OK (figure 3); Otherwise is NG .

- ◆ 若出现 NG 现象，则重复测试以验证是否出现相同问题，仍有 NG 现象的触摸框为不合格品

If NG, repeat the test to verify if the same problem occurs, if so, is a non-conforming product

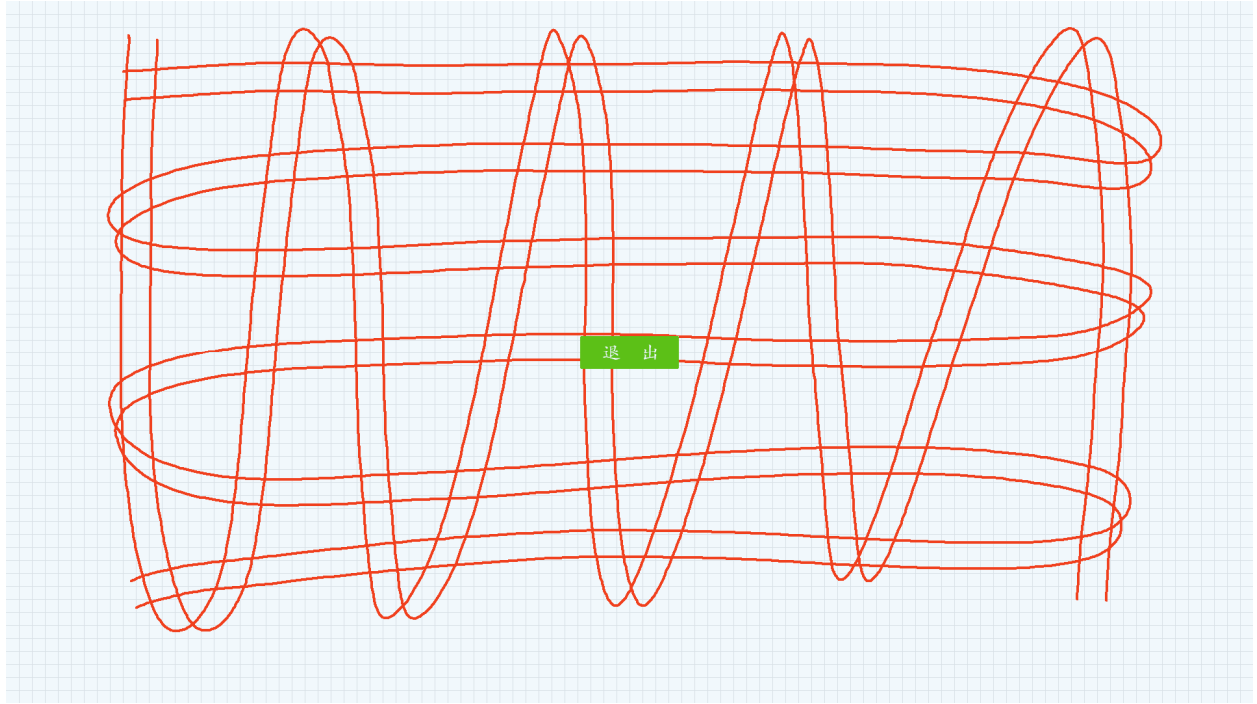


图3 Figure 3