

VICTOR[®]
胜利仪器

电路板热分析仪

使用手册

www.china-victor.com



深圳市驿生胜利科技有限公司

SHENZHEN YISHENG VICTOR TECH CO.,LTD

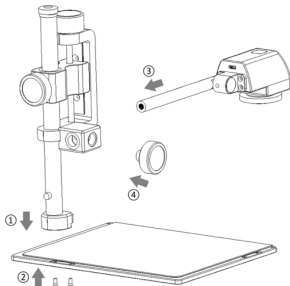
产品简介

VICTOR 380J是一款适用于电路设计热量仿真、电路板快速维修和不良电子料检测等领域的新一代PCBA红外热成像分析仪。

No.	物料	数量
1	摄像头	1
2	支架	1
3	底板	1
4	USB Type-C数据线	1
5	说明书	1
6	六角螺丝	4
7	六角扳手	1

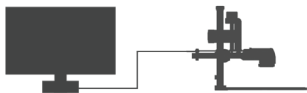
产品简介

- 1.根据底板的方向，将支架插入底板。
- 2.用2枚螺丝将支架固定。
- 3.将摄像头插入支架对应的孔中。
- 4.旋紧旋钮固定摄像头。



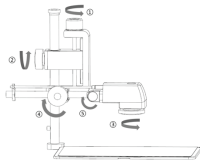
快速使用

将附件中的USB Type-C线缆连接电脑和相机的USB口(建议连接USB 3.0或以上的接口)，打开VICTOR 380J软件，即可开始观察被测物的红外热成像视频。

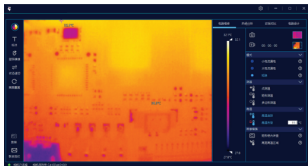


通过调节下图中旋钮可以改变视频显示大小、清晰度和角度。

- 1.摄像头高低微调旋钮,可以细微调节摄像头高度,细微改变视频中被测物的大小。
- 2.摄像头高低粗调旋钮,可以快速调节摄像头高度,快速改变视频中被测物的大小。
- 3.调焦旋钮,可以使画面中被测物视频清晰。
- 4.摄像头固定旋钮,可以调节摄像头前后位置。
- 5.摄像头倾角旋钮,可以调节摄像头上下倾角。

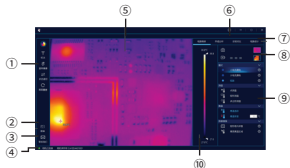


双击Setup.exe图标,可以运行本产品的程序,显示如下界面:



软件功能说明

本软件的主界面功能块如下：



No.	功能块	详细说明
1	图形操作	对画面进行图形操作,如切换不同的色板,旋转,标记,重置等功能。
2	教程	提供软件中所有功能项的详细说明。
3	市场及技术支持邮箱	所有的产品需求,市场销售方面沟通,以及产品的技术支持,均可以和这个邮箱沟通。
4	相机状态	显示相机的连接状态,绿色表示相机已连接电脑软件,红色表示相机未连接和电脑软件。
5	实时视频	显示当前摄像机观察到的被测物热成像实时视频。
6	设置	可以通过此处对软件及相机进行设置。
7	功能区	可以在此处切换不同的功能块。
8	拍照和录像	可以对当前窗口进行拍照和录像。
9	功能按钮	对软件进行各种丰富的功能操作。

10	色带	此处显示当前画面中的实时最高温和最低温,通过调整可调节箭头的温度,可以改变实时视频中图像的显示模式。
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注:本软件将会不定期更新升级,说明书界面可能和最新版本软件有一定的差异。

参数

	参数	规格
镜头参数	热成像分辨率	260*200
	帧频	25Hz
	NETD	70mK@25°C
	视场角	水平 34.4, 垂直 25.8
	镜头	4mm可调焦镜头
	测温范围	-10~120°C
	测温精度	±5°C或者±5%
接口	供电	DC 5V (USB Type-C)
	电源开关	按下电源键1秒开机,3秒关机
	连接方式	USB线连接电脑使用
物理参数	尺寸	标准配置(单底板:220mm x 172mm,高度241mm) 选配(拼合双底板:346mm x 220mm,延长支撑杆341mm)
	重量	标准配置:1.1kg 选配件:0.5kg

工作环境	工作温度	-10°C~55°C
	工作湿度	<95%
软硬件最低需求	系统要求	Win10(推荐) win7
	电脑要求	I3以上处理器,4G以上内存
	更新要求	可连接internet进行手动或自动更新

特点

- 可快速查找电路板漏电、短路的器件位置；
- 图像清晰,可观看芯片管脚热状态；
- 3D热像图可以检测超小电流漏电,能够探测到良品板和缺陷板间非常微小的温度变化和差异,其他方式很难检测出来；
- 指导热设计、测试、验证、优化、产品选型、帮助延长产品寿命；
- 曲线数据方便研发设计者进行实验数据的记录。

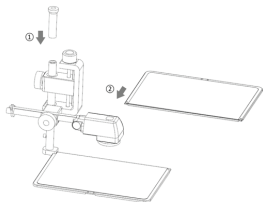
获取软件

可以通过<http://www.china-victor.com/uploadfile/2021/0604/380j.rar>下载。

扩展部件

可另外购买扩展部件,以适应更大的被测物。

- 将螺杆上方旋钮选出,将扩展的螺杆旋入支架立杆,将旋钮旋入。
- 将拼接的底板连接原有底板,用配件的螺丝和固定件固定。



三脚架扩展

摄像头后端有标准1/4英寸孔,将摄像头拆下来之后可以连接标准三脚架,方便观测更大的目标物。



保修政策

自购买之日起,如出现产品质量问题,在一个月之内可以免费更换,一年内保修,超出一年之后,根据损坏部件的成本维修。

重点注意事项

- 不可以直接观测高能量目标,如太阳、激光等,否则将导致热成像仪不可逆转的物理损坏。
- 必须采用标准的5V直流电源供电。
- 防止水泼溅在摄像头上。
- 暴力旋转镜头及旋钮。
- 不可以超出温湿度环境要求的情况下使用

Introduction

Victor 380J is a new generation of PCBA infrared thermal imaging analyzer, which is suitable for thermal simulation of circuit design, rapid maintenance of circuit board and detection of defective electronic materials.

No.	Material	Quantity
1	Thermal Camera	1
2	Bracket	1
3	Bottom plate	1
4	USB Type-C Cable	1
5	User Manual	1
6	Hexagon screw	4
7	Hexagon wrench	1

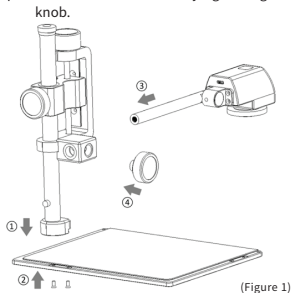
How to install quickly?

Step 1 - According to the direction of the bottom plate screw hole, insert the bracket into the bottom plate screw hole.

Step 2 - Fix the bracket on the bottom plate with 2 screws.

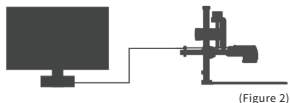
Step 3 - Insert the thermal camera into the corresponding hole of the bracket.

Step 4 - Fix the thermal camera by tightening the knob.



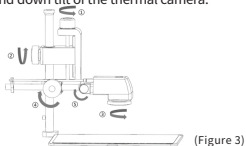
How to get start quickly?

Connect the USB Type-C cable in the accessories to the USB ports of the computer and the thermal camera. It is recommended to connect to a USB 3.0 or above port. Run the VICTOR 380J, you can start to observe the thermal imaging video of the UUT (Unit Under Test).

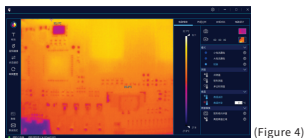


The user can change the video size, clarity and angle by adjusting the knob in the Figure3.

1. The thermal camera height fine-tuning knob can finely adjust the thermal camera height and change the size of the UUT in the video.
2. The thermal camera height coarse adjustment knob can quickly adjust the thermal camera height and quickly change the size of the UUT in the video.
3. The focus knob can make the video clear in the screen.
4. The thermal camera fixed knob, users can adjust the front and rear position of the thermal camera.
5. Thermal camera tilt knob, users can adjust the up and down tilt of the thermal camera.

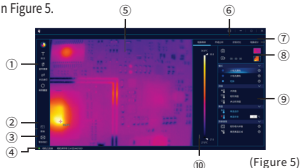


Double-click the Setup.exe icon to run the program, and the following interface is displayed.



Software function

The main interface function block of this software is shown in Figure 5.



(Figure 5)

No.	Feature	Detailed description
1	Image adjustment	To adjust the video in the image, such as switching color palettes, rotating, marking, resetting and other functions.
2	Tutorials	Provide a detailed description of all functions in the software.
3	Contact us	All requirement, marketing communication and product technical support can be communicated with this mailbox.
4	Thermal camera status	Shows the connection status of the thermal camera and the software. The green light means the thermal camera is connected, and the red light means the thermal camera is disconnected.
5	Real-time video	Display the real-time video of the thermal imaging of the measured object observed by the thermal camera.
6	Setting	The parameter configuration of software and thermal camera.

7	Functions	The user can switch different function blocks.
8	Screenshots and video records	The user can take screenshots and video records.
9	Function button	All functions are in this area.
10	Color bar	The real-time highest temperature and lowest temperature in the video are displayed here. By adjusting the temperature of the adjustable arrow, the display mode of the image in the real-time video can be changed.

* The software will continue to be updated, the up-to-date software interface may be different with the manual.

Parameter

Parameter		Specification
Thermal camera parameters	Thermal imaging resolution	260*200
	Frames	25Hz
	NETD	70mK@25°C
	FOV	Horizontal angle 34.4, Vertical angle 25.8
	Lens	4mm Adjustable focus lens
	Temperature range	-10~120°C (14~248°F)
	Temperature measurement accuracy	±5°C or ±5%
	Power	DC 5V (USB Type-C)

Interface	Power on/off	Long press the power button for 1 second to power on, long press 3 seconds to power off.
	Connection method	USB Type C Cable
Dimensions	Dimension	Standard: 220mm x 172mm x 241mm Assemble additional accessories: 346mm x 220mm x 341mm
	Net weight	Standard: 1.1kg Expansion: 0.5kg
Work Environment	Temperature	-10°C ~ 55°C (14°F ~ 131°F)
	Humidity	<95%
Minimum software and hardware requirement	System	Win10 (recommended)/ Win7
	CPU & RAM	i3 & 4G
	Update	Manual or automatic update via internet

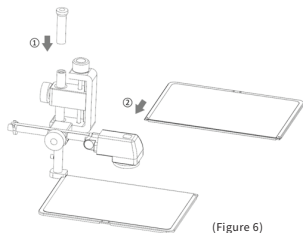
How to download software?

Can pass <http://www.china-victor.com/upload-file/2021/0604/380j.rar> Download.

Expansion accessories

Users can purchase expansion accessories to fit larger UUT.

To release the upper knob of the bracket, add the expansion pole to the bracket, tighten the knob. Add the additional bottom plate to the standard bottom plate, and tighten it with accessory screws.

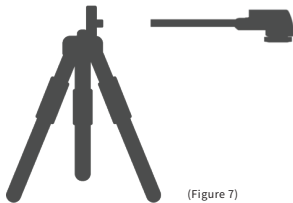


Features

- The user can quickly locate of the current leakage or short circuit on PCBA.
- With clear images, users can even observe the chipset pins of thermal video.
- In 3D mode, users can detect ultra-small current leakage. To detect very small temperature difference between good and defect boards, which is difficult by other instruments.
- To help thermal design, testing, verification, optimization, components selection, and help extend product life cycle.
- Curve data is convenient for R&D engineers to record thermal experimental data.

Tripod expansion

There is a standard 1/4" hole on the back of the thermal camera, which can be disassembled separately and connected to a standard tripod to observe larger objects.



(Figure 7)

Warranty Policy

Exchange for free in one month and warranty within one year if any product defect. The repair cost will be charged according to the damaged parts cost if out of warranty.

Attentions

- Do not directly observe high-energy targets, such as the sun, lasers etc., it will irreversible physical damage the thermal camera.
- Please use standard 5V DC power supply.
- Be careful not to splash water on the thermal camera.
- Do not violently rotate the lens and knobs.
- The user's working environment must not exceed the temperature and humidity requirement.