本操作手册内容若有变更,恕不另行通知









UTi165B+

红外热成像仪快速操作手册 Thermal Imager Quick Start Guide

序言

尊敬的用户:

您好! 感谢您选购全新的UTi165B+红外热成像仪,为了正确使用本产品,请您在 使用之前仔细阅读本操作手册全文,特别是"警告"部分的内容。

如果您已经阅读完本操作手册全文,建议您将此操作手册妥善保管,与热像仪一 同放置或者放在您随时可以查阅的地方,以便在将来的使用过程中查阅。

有限担保和有限责任

公司担保本产品自购买之日起一年内,在材料和工艺上均无任何缺陷。本担保不 适用于由于意外、疏忽、误用、改装、污染及非正常操作或处理引起的损坏。经销商 无权以公司的名义给予其它任何担保。如在保修期内需要保修服务,请与您就近的授 权服务中心联系,获得产品退还授权信息;然后将产品寄至该服务中心,并附上产品 问题描述。

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警告

- 1. 不要在超出设备许可的工作温度或储存温度环境中使用或存放仪器, 这可能会造成 设备的损坏: 2. 不要将设备直接对准很高强度的热辐射源,例如太阳、激光器、点焊机等,这可能 会导致设备的损坏; 3. 不要敲打,扔掷或震动仪器和配件,以免造成损坏; 4. 不要将有溶解性或类似的液体用于设备,线缆,这可能会导致设备的损坏; 5. 擦拭本设备时请遵照以下措施: 非光学表面:在必要时可以使用干净柔软的布擦拭热像仪的非光学表面: 光学表面:使用热像仪时请避免弄脏镜头的光学表面,特别要避免用手触碰镜头, 因手上的汗迹会在镜头玻璃上留下痕迹且可能会腐蚀玻璃表面的光学镀膜层。当光 学镜头表面受到污染时,使用专业镜头纸小心的擦拭; 6. 在使用设备时请尽量保持稳定, 避免剧烈晃动; 7. 请勿自行拆卸本机,这有可能造成设备损坏,并丧失保修权利; 8. 该产品介绍所使用的商品图文信息,实际产品因批次不同,材质和细节上偶有微小 差异, 敬请谅解, 请以收到具体实物为准; 9. 操作手册中提供的实验数据为理论值,均来自优利德公司内部实验室,仅供参考;
- 9. 探忙于而中症法的头短数据为理论值,均未自优利德公司内部头短至,仅供参考; 客户不可将其作为下单购物的参考依据。特此说明!如有任何疑问可联系客服,进行详细咨询。

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UTi165B+

1. 产品简介

UTi165B+手持式红外热像仪,配备宽广测温范围和多种图像模式,能应对多种应用场 景拍摄要求。配套专业PC软件及手机APP对拍摄的图片分析处理并可生成报告,且具有 实时投屏功能。

2. 产品特点

● 测温范围: -20°C~550°C

- 超分辨率: 320 x 240
- T-Mix双光融合
- 配套专业PC分析软件
- 配套手机App (iOS & Android)
- IP65 防护等级
- 2m防摔

3. 包装清单

物品	数量
红外热成像仪	1台
USB线	1根
快速操作手册	1本
保用证	1张

4. 产品外观









项目	说明	项目	说明
1	Type-C USB接口	9	照明灯按键
2	接口保护盖	10	左键
3	支架固定螺孔	11	下键
4	照明灯	12	上键
5	红外热像窗口	13	图库键
6	可见光摄像窗口	14	返回键
7	拍照扳机键	15	右键
8	电源键	16	SET键

4.1 按键说明

1. 电源键: 长按控制设备开/关机;

- 2. 照明灯按键: 短按控制打开/关闭照明灯;
- 3.SET键:打开菜单栏/确认功能选择;
- 4. 方向键(左/右/上/下键): 控制光标移动,长按一直移动,短按单次移动;
- 5. 图库键:在主页面,通过此按键打开相册;
- 6. 返回键:用于返回上一级页面;
- 7. 拍照扳机键: 在主页面按下进行拍照/录像。

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5. 显示说明



项目	说明	项目	说明
1	中心点温度值	5	色温条
2	自动追踪温度最高点	6	电池电量
3	中心点	7	USB图标
4	菜单栏	8	自动追踪温度最低点

5.1 菜单栏说明

1. 标记工具:打开/关闭中心点、高低温点及高低温点温度值显示;

- 2. 色板切换: 7种色板的切换,包括彩虹、熔岩、高彩虹、黑热、铁红、红热、白热;
 3. 测温工具:可添加5个点/3个矩形(一共可以添加6个测温工具)、添加/保存预设工具、清空全部(测温工具);
- 4. 图像模式:可选择热成像、可见光、融合、画中画;
- 5. 系统设置:进行相应的系统设置。

6. 系统设置

相机模式	可选择拍照/录像/自动拍照
超分	可打开或关闭超分
单位	可切换温度(°C/K/°F)/距离单位(m/ft)
参数	可修改发射率(0.01~1.00)、环境温度(−20~60°C)、 反射温度(−20~60°C)、湿度(0~100%RH)、 距离补偿(0.15~4.00m)、档位切换(−20~150°C/0~550°C)
报警	可打开/关闭高低温报警、LED报警、蜂鸣器报警开关
语言	可切换中文简体/English
日期时间	可切换时制/日期/时间
WiFi	可打开/关闭热点,打开热点后可修改热点名称/密码, 手机连接WiFi后可以使用配配套APP
USB模式	可更改USB存储/USB投影
亮度	可调节设备亮度(1~100%)
自动关机	可设置自动关机时长
恢复出厂	可进行恢复出厂设置的操作
格式化	可以格式化设备内存,清理相册
关于	可查看产品讯息

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UTi165B+

7. 测温参数

- **发射率:** 指被测物体与相同温度的绝对黑体比率,是衡量物体辐射量的一个重要指标,范围介于0.01—1.00之间。
- 环境温度:指热成像仪与被测物体所处的外部环境温度。
- 反射温度:指被测物体周边有其他热源辐射能量。
- 相对湿度:指被测物体的辐射量在传输过程中空气中水分含量。
- 目标距离:指热成像仪与被测物体之间的间距。

注意:

1. 以上参数是否设置准确对最终温度测量结果有不同程度的影响。
 2. 推荐值:一般情况下,如果你不确定这些值,建议如下:

发射率	0.95
环境温度	25°C
反射温度	25°C
相对湿度	55%RH
目标距离	0.25m

3. 测温精度: ±2°C/±2%(取最大值, -10°C~550°C, 常温25°C)

8. 手机APP软件

第一步

iOS设备请在APP Store 搜索"Thermal Link"下载或扫码获取。 Android设备请登录优利德官网下载"Thermal Link "或扫码获取。





苹果版(iOS)下载

安卓版 (Android) 官网下载

第二步

- 在菜单中开启设备WiFi热点;
- 手机搜索设备热点名称"UTi165B+";
 - 选择该热点,输入密码12345678连接;
- WiFi连接成功后进入软件APP,即可实时屏幕传输、远程查看/下载图片等功能。

注:为保证WiFi信号数据稳定传输,请尽量保证连接距离在10m范围内,且无障碍物阻隔。

优利德。

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PREFACE

Thank you for purchasing the new UTi165B+ Thermal Imager. In order to use this product safely and correctly, please read this manual thoroughly, especially the Cautions part.

After reading this manual, it is recommended to keep the manual at an easily accessible place, preferably close to the device, for future reference.

LIMITED WARRANTY AND LIABILITY

Uni-Trend guarantees that the product is free from any defect in material and workmanship within one year from the purchase date. This warranty does not apply to damages caused by accident, negligence, misuse, modification, contamination and improper handling. The dealer shall not be entitled to give any other warranty on behalf of Uni-Trend. If you need warranty service within the warranty period, please contact your seller directly.

This warranty is the only compensation you can obtain. Uni-Trend will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by any reason or speculation. As some areas or countries do not allow limitations on implied warranties and incidental or subsequent damage, the above limitation of liability and stipulation may not apply to you.

Cautions

- 1. Use or store the device in specified operating or storage temperature to avoid damage.
- 2. Do not aim the product at strong heat sources, such as sun, laser device, spot-welder, etc.
- 3. Do not knock, toss, or shake the product and accessories.
- 4. Do not use dissolved or similar liquids on the product or cables.
- 5. Please follow the following instructions to wipe the device:
- Non-optical surface: If necessary, use a clean and soft cloth to wipe the non-optical surface of the thermal imager.
- Optical surface: Do not stain the optical surface of lens when using the thermal imager. Especially not to touch lens with hands, cause it may erode the optical coating layer on the glass surface. When the optical surface is stained, wipe it carefully with a special lens paper.
- 6. Keep it stable when using the device.
- Please do not disassemble the device to avoid product damage and loss of warranty rights.
- Due to different batches, the materials and details of actual products may be slightly different from the graphic information. Please refer to the goods received.
- 9. The experimental data in the manual are theoretical values and all from Uni-Trend's internal laboratories, for reference only. Customers cannot use them as basis for placing orders. If users have any questions, please contact customer service.

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UTi165B+

1. Product Overview

UTi165B+ Handheld Thermal Imager equips wide temperature measurement range and multiple image modes for different imaging requirements, PC software and mobile APP for images analysis and report generating, meanwhile, real-time image transmission is supported.

2. Product Features

- Temperature Measurement Range: -20°C~550°C
- Super Resolution: 320 x240
- T-Mix Dual-light Fusion
- Equips Professional PC Analysis Software
- Equips Mobile App (iOS & Android)
- IP65 Rating
- 2m Drop-Proof

3. Packing List

Items	Quantity
Thermal Imager	1
USB Cable	1
Quick Start Guide	1
Warranty Card	1

4. Product Appearance





Items	Description	Items	Description
1	Type-C USB Interface	9	Lighting Lamp button
2	Protective Cover	10	LEFT
3	Tripod Mounting Hole	11	DOWN
4	LED Light	12	UP
5	Infrared Camera Lens	13	Gallery button
6	Visible-Light Camera Lens	14	RETURN
7	Trigger	15	RIGHT
8	POWER	16	SET

4.1 Buttons

- 1. POWER button: Long press to power on/off.
- 2. LED light button: Press to be lighting lamp on/off.
- 3. SET button: Open Menu Bar/ Confirm the selection.
- Navigation buttons(Left/Right/Up/Down): Control to move cursor, long press for continuous move, short press for single move.
- 5. Gallery button: In the main interface, press to open Gallery.
- 6. RETURN button: Back to the previous interface.
- 7. Trigger: Press to capture image or take video in the main interface.

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5. Display



Items	Description	Items	Description
1	Center Spot Temperature	5	Range Bar
2	Auto MAX. Temperature Tracking	6	Battery Status
3	Center Spot	7	USB Icon
4	Menu Bar	8	Auto MIN. Temperature Tracking

5.1 Menu Bar

- 1. Temperature Mark: Center spot, Hi/Lo spot and its temperature display.
- 2. Color Palettes: 7-color, Ironbow, Rainbow, Lava, White Hot, Red Hot, Black Hot, and Rainbow HC.
- 3. On screen analyzer: 5 points/3 rectangles can be added (up to 6 measurement tools), Preset tools add/save, Clear All (Measurement tools).
- 4. Image Modes: Thermal Imaging, Visual Imaging, Fusion, PIP.
- 5. Settings: For system settings.

6. System Settings

Camera Modes	Photo-Capture/Video-Record/Time-Lapse
Super-resolution	Super-resolution ON/OFF.
Units	Temperature units (°C/K/°F)/ Distance units (m/ft)
Parameters	Emissivity (0.01~1.00), Ambient Temperature (-20~60°C), Reflected Temperature (-20~60°C), Humidity (0~100%RH), Distance Compensation (0.15~4.00m), Scale Switch (-20~150°C/0~550°C).
Alarm	High/Low temperature alarm, LED alarm, Buzzer alarm ON/OFF.
Languages	Chinese/English
Date & Time	Hour/Date/Time
Wi-Fi	Wi-Fi ON/OFF, Wi-Fi ON can modify its name and password, connects mobile to use App.
USB Mode	USB Storage/USB Projection
Brightness	Adjustable (1~100%)
Auto Power Off	Auto power off time can be set.
Factory Reset	Set to the factory default setting.
Formatting	Format the memory, clear the gallery.
About	Check the device information.

UTi165B+

7. Temperature Measurement Parameters

Emissivity:

The ratio of the measured object to the black body with the same temperature, which is an essential indicator to measure the radiant energy of the object. Its value ranges from 0.01 to 1.00.

Ambient Temperature:

The ambient temperature at which the thermal camera and the measured object are located.

Reflected Temperature:

The radiant energy influence from other heat sources surrounding the measured object.

Measurement Distance:

The distance between the thermal camera and the measured object.

Relative Humidity:

The percentage of water vapor content in the air during the transmission of radiant energy from the measured object.

Note:

- 1. The accurate setting of the above parameters has varying degrees of influence on the final temperature measurement results.
- Recommended Values: In case of uncertainty regarding these parameter values, the following recommended values are generally suggested:

Emissivity	0.95
Ambient Temp.	25°C
Reflected Temp.	25°C
Relative Humidity	55%RH
Distance	0.25m

3. Accuracy ±2°C/±2% (whichever is greater, -10°C 550°C, Room temperature: 25°C)

8. Mobile APP

Step 1

For iOS, search "Thermal Link" in APP Store or scan the following QR code to download.

For Android, access UNI-T's website or scan the following QR code to download "Thermal Link".





iOS

Android

Step 2

- Open Wi-Fi on the device.
- Search Wi-Fi name of "UTi165B+"on mobile phone.
- Enter 12345678 to connect Wi-Fi.
- Enter the App to get functions of real-time image transmission, remote viewing and images download, etc.

Note: Please keep the connection range within 10m and no obstacles to ensure the stable data transmission.

* The content of Quick Start Guide is subject to change without notice. *

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