

**UNI-T®**



**UTi640Q**

**红外热成像仪**

**Professional Thermal Imager**

P/N:110401111816X

## 序言

尊敬的用户：

您好！感谢您选购全新的UT i 640Q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说明书全文，特别是有关“安全注意事项”的部分。

如果您已经阅读完本说明书全文，建议您将此说明书妥善保管，与红外热成像仪配件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

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## 警告

- 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；
- 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；
- 不要敲打、扔掷或震动仪器和配件，以免造成损坏；
- 不要将电池置于高温环境或靠近高温物体，不要使电池的正负极短路，不要将电池置于潮湿环境或水中；
- 不要将设备暴露在灰尘或潮湿的环境中，在有水的环境中使用，应避免水溅到仪器上；
- 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；
- 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；
- 在使用设备时请尽量保持稳定，避免剧烈晃动；
- 在不使用仪器时应盖上镜头盖，将仪器和所有配件放置在专用包装箱内；
- 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；
- 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；
- 说明书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；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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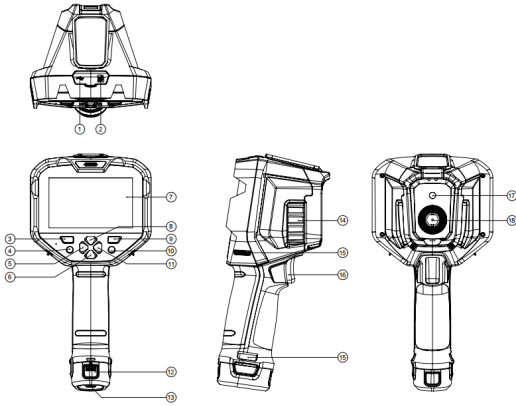
1. 性能指标

型号	UTi640Q
红外参数	
探测器类型	非制冷红外探测器
红外分辨率	640*512
红外响应波段	8~14μm
像元尺寸	12μm
帧频	50Hz
热灵敏度/NETD	<60mK @25℃
调焦方式	手动
热成像镜头焦距	13.0mm
视场角	32.9°(H)×26.6°(V)
测温功能	
测温范围	-30℃~650℃（-22°F~1202°F）
测温精度	-10℃~650℃，常温25℃，±2℃/±2%取大值
测温分辨率	0.1℃
建议测温距离	1m
测温单位	℃/°F/K
测温显示	3个测温点（中心点、最高温、最低温）
温度分析	点、线、圆、矩形(最多10个图形)
等温线	手动/自动
高低温追踪	√
高低温报警	屏幕图标、声音报警
AI 功能	AI人体识别 - 自动追踪人物，生成测温框
图像显示	
显示屏	4.3" LCD触摸屏

显示分辨率	800*480
可见光分辨率	500万像素
色板	铁红、彩虹、黑热、白热、红热、熔岩、高对比度彩虹
图像模式	热成像、融合、画中画、可见光
数字变倍	1X、2X、4X、6X
图像格式	JPG
视频格式	MP4
系统功能	
数据接口	Type-C USB
拍照	√
视频录像	√
文本注释	√
语音注释	√
触摸	多点触控
音频	内置喇叭、麦克风
手机APP	有(实时图像、照片下载及分析)
PC分析软件	有(实时图像、照片下载及分析)
录音功能	√
供电参数	
电池类型	5200mAh(可拆电池包UT-M17)
电池工作时间	约4h
充电系统	Type-C直充
充电时长	小于4h

一般规范	
工作温度	-10°C~50°C (14°F~ 122°F)
存储温度	-20°C~60°C (-4°F~ 140°F)
工作湿度	10%~95%RH ( 非冷凝 )
防护等级	IP54
跌落防护	2m
认证	CE, FCC, RoHS, UKCA

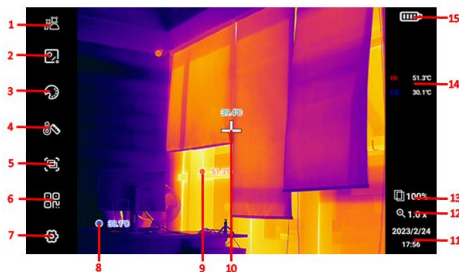
## 2. 结构



1	USB Type-C接口	7	液晶显示屏	13	支架固定螺母
2	SD卡槽	8	上键	14	红外镜头聚焦环
3	开机键	9	照片浏览键	15	挂绳孔
4	OK键	10	返回键	16	拍照扳机键
5	左键	11	右键	17	可见光摄像窗口
6	下键	12	电池组件	18	红外热像窗口



### 3. 显示说明



项目	说明	项目	说明
1	AI	9	当前温度最大点
2	测温工具	10	中心点
3	色板切换	11	日期/时间
4	等温工具	12	当前放大倍数
5	图像模式	13	当前红外与可见光融合比例
6	二维码	14	最高/最低温点温度值
7	设置	15	电池电量
8	自动追踪最小点		

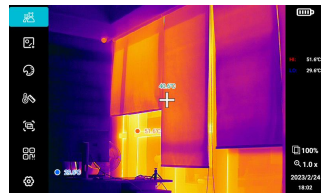
注意：

1. AI人体识别：自动追踪人物，生成测温框；
2. 测温工具添加后，可通过触屏双击，删除单个测温工具，也可以在在菜单中，通过删除功能删除全部测温工具；
3. 在测温分析工具子菜单栏下可修改测温参数，请参考发射率表，发射率和反射温度是需要正确设定的两个重要参数，如果不确定，请采用默认值（发射率：0.95、目标距离1.0m、环境温度：25℃、反射温度：25℃、相对湿度：45%RH）；
4. 测温档位分为自动切换（-30℃~650℃）与手动切换（高增益：-30℃~120℃、低增益：-30℃~650℃）；
5. 选择“二维码”模式后，可以手动输入或扫描获取二维码，（选择“退出”则返回主页面），获取二维码后，可选择要放置的分类文件夹，保存即可。添加二维码是为了为图片进行分类，方便更快速的找到所需图片，如果你所添加的二维码存放在样机内已有的文件夹（包括：QR1、QR2、QR3、QR4、QR5），那么添加后可在相应的文件夹内查看添加了该二维码的图片；如果图片使用的二维码为存放在“其他”文件夹里的二维码，则只是一个临时分类，不能在已有文件夹内找到含有此类二维码的图片。

### 4. 开机

按下“开机键”，热像仪开机（刚开机、长时间未使用或测量环境改变后需要开机30分钟后才能进行温度测量）；长按“开机键”3秒，可以对热像仪进行关机/重启操作。当热像仪处于低电量模式时，弹出电量过低的提示，此时需要关闭热像仪，补充电量。

### 5. 操作说明



1. 可以通过按键操作：按“OK键”，光标亮起，按“返回键”光标取消。光标亮起时，可以通过方向键移动光标，按“OK键”进行功能的选择；
2. 也可以触屏进行功能的选择；
3. 光标取消状态下，按“上/下键”，屏幕画面进行放大/缩小，对应的放大倍数显示于屏幕右下方，放大倍数的切换按照1X、2X、4X、6X、1X循环切换进行；
4. 光标取消状态下，按“左/右键”，可以改变当前画面红外光与可见光的融合比例（0%~100%）。

### 6. 设置



延时拍照	设置延时拍照时间（3s、5s、10s）
温度单位	修改温度单位：℃、°F、K
温度报警	打开/关闭高低温报警开关，更改高低温报警值（当被测物体温度超过高温报警温度值时，显示红色正三角提示；当被测物体温度低于低温报警温度值时，显示绿色正三角提示）

温度显示	打开/关闭主页面高温点、低温点和中心点的光标
WiFi设置	打开/关闭WiFi开关，连接WiFi
WiFi热点	打开/关闭WiFi热点开关（在热点关闭状态下可以修改设备名称和热点密码，打开WiFi热点连接到手机后可以使用APP）、数据传输开关（APP）（用于APP的图片传输）、数据传输开关（PC）（用于PC端的图片传输）、推流开关（用于APP和PC端的投屏功能）
蓝牙设置	打开/关闭蓝牙开关（在蓝牙关闭状态下可修改蓝牙名称），打开蓝牙后可连接蓝牙耳机
二维码	可以修改分类文件夹的名称和其相对应的二维码的值
亮度	可调节亮度强弱（0%-100%可调）
音量	可调节声音强弱（0%-100%可调）
自动关机	可选择自动关机时间
语言	可切换简体中文、English
时间日期	可打开/关闭24小时制、修改日期和时间
存储信息	显示SD卡当前使用情况、格式化SD卡
清除所有数据	对产品进行恢复出厂设置的操作
软件更新	当SD卡内有更新包时，可进行软件的更新
产品信息	可以查看产品型号、屏幕分辨率、固件版本、软件版本、（SD卡）总容量和可用容量、设备ID

锁定	解锁后可进行图片/视频的二次编辑，包括AI、测温工具、色板切换、等温工具、图像模式、二维码、高低温点及中心点的显示与隐藏（视频只能修改二维码信息，不可进行其余编辑）
信息	可查看图片的二维码信息、拍照时间、位置信息、测量参数信息、注释信息（文字备注/语音备注）（在解锁状态下，可以进行注释信息的修改，视频没有注释信息）
二维码	可变更二维码分类文件夹进行图片分类，分类后可在相应的文件夹下查看添加了此二维码的图片，也可以删除当前图片已有的二维码

## 8. SD卡

本设备支持Micro SD卡存储图像，为了避免图像数据过大影响运行速度，请定期拷贝备份数据，并及时清理卡内数据。为了避免热拔插造成SD卡数据异常，请不要反复拔插SD卡，尽量在关机状态下拔插SD卡。若检测到拔出SD卡，则会弹出提示“SD已被移除”。

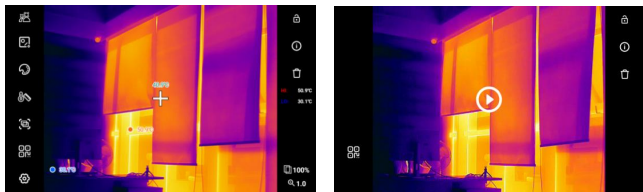
## 9. 使用须知

为了保证测量结果准确，请仔细阅读使用说明。请务必按照说明书使用本产品，否则造成产品损坏后将不进行免费保修。请不要在易燃易爆、蒸汽周围、潮湿或腐蚀性环境下使用本仪器，请不要在仪器损坏、摔坏或修正后的情况下继续使用，以免造成错误的测试结果。请参考辐射系数信息获取实际温度，否则会导致测得的温度不准确。

系统支持USB线对机器充电，但为了提升充电效率，建议拔出电池包，单独对电池包充电。

## 7. 照片浏览和编辑

按“照片浏览键”，进入媒体浏览，通过按键或触屏选择要查看的文件夹及文件。在查看图片/视频时，可以查看图片/视频信息、删除和图片/视频的二次编辑操作。



## 10. 常见问题汇总

症状	原因	措施
无法开机	电池电量不足	重新充电后再使用电池
	电池接触不良	取出电池，重新放入电池仓内并安装到位
	外接电源的插头没插到位	拔出电源插头，重新插入并推到位
电池电量指示与实际使用情况偏差较大	电池电量耗尽	更换充满电的电池
	电池寿命已到	更换新电池
红外图像不清晰	没有进行对焦	手动对焦使图像清晰
	镜头蒙上水汽或被污染	使用专用设备清洁镜头
可见光图像不清晰	环境太暗	采取适当照明措施
	可见光前端有水汽或被污染	使用专用设备清洁可见光前端
测温不准	没有对目标聚焦	手动对焦使图像清晰，然后再读取温度
	与测温相关的参数设置不对	更改参数设置，或直接恢复默认参数值
	开机立刻测温	为保证测温精度，我们建议您打开热像仪之后，等待5~10分钟再开始测温
	长时间没有校准	为获取精确的测温结果，我们建议您每年将热像仪送回校准一次

## 11. 常用发射率

材质	发射率	材质	发射率
木	0.85	黑纸	0.86
水	0.96	聚碳酸	0.8
砖	0.75	混凝土	0.97
不锈钢	0.14	氧化铜	0.78
胶带	0.96	铸铁	0.81
铝板	0.09	锈	0.8
铜板	0.06	石膏	0.75
黑铝	0.95	油漆	0.9
人体皮肤	0.98	橡胶	0.95
沥青	0.96	土壤	0.93
PVC塑料	0.93		

\*本说明书内容若有变更，恕不另行通知\*

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## **PREFACE**

Thank you for purchasing the new UTi640Q 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 product at specified operating or storage temperatures. Otherwise, the device may be damaged.
2. Do not direct the product at high intensity thermal radiation sources, such as the sun, laser device, spot-welder, etc.
3. Do not knock, toss, or shake the product and accessories.
4. Do not place the battery in a high temperature environment or near high temperature objects. Do not short-circuit the positive and negative electrodes of the battery. Do not place the battery in a humid environment or water.
5. Do not expose the device to dusty or damp environment. When used in an environment with water, avoid water splashing on the product.
6. Do not use dissolved or similar liquids on the product or cables, as it may cause device damage.
7. Please follow the following instructions when wiping 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 the lens when using the thermal imager. Be especially careful not to touch the lens with hands, as sweat from hands will leave marks on the lens glass and may erode the optical coating layer on the glass surface. When the optical surface is stained, carefully wipe it with a special lens paper.
8. When using the device, please try to keep it stable and avoid violent shaking.
9. Please close the lens cover and put the product and its accessories into the carrying box when it is not used.
10. Please do not disassemble the device to avoid product damage and loss of warranty rights.
11. 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.
12. 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 bases for placing orders. If users have any questions, please contact customer service.

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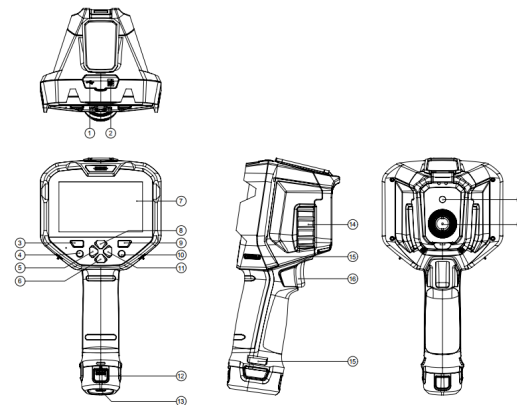
## 1. Specifications

Model	UTi640Q
Infrared parameters	
Detector type	Uncooled infrared focal plane array (UFPA)
IR resolution	640×512
Spectral range	8~14μm
Pixel size	12μm
Frame rate	50Hz
Thermal sensitivity (NETD)	<60mK @25°C
Focus	Manual
Lens focal length	13.0mm
Field of view (FOV)	32.9°(H) x 26.6°(V)
Temperature measurement functions	
Temperature measurement range	-30°C~650°C (-22°F~1202°F)
Accuracy	-10°C~650°C, room temperature 25°C, ±2°C/±2% whichever is greater
Resolution	0.1°C
Temperature unit	°C/°F/K
Temperature measuring distance	1m
Temperature mark	3 spots (center spot, Hi/Lo spot)
On screen analyzer	Point, Line, Rectangle, Circle (Max. 10 tools)
Isotherm	Manual/Auto
Auto tracking for Hi/Lo spot	√
Hi/Lo temperature alert	LCD animation, buzzer
AI function	AI human recognition - Auto track human and generate temperature measurement box
Image display	
Display screen	4.3" LCD touch screen

Display resolution	800 x 480
Digital camera resolution	5MP
Color palettes	Red Hot, Rainbow HC, Rainbow, Lava, Ironbow, Black Hot, White Hot
Image modes	Thermal, Visual image, Fusion, PIP
Digital zoom	1X, 2X, 4X, 6X
Image format	JPG
Video format	MP4
System functions	
Data interface	Type-C USB
Photo capturing	✓
Video recording	✓
Text annotation	✓
Audio annotation	✓
Touch screen	Multi-Touch
Audio	Built-in speaker, microphone
Languages	English/Chinese
Smartphone APP	✓ (real-time image, photo download and analysis)
PC analysis software	✓ (real-time image, photo download and analysis)
Voice recording	✓
Power supply parameters	
Battery	Detachable battery pack with 5200mAh (UT-M17)
Operating time	About 4h
Charging system	Type-C USB
Charging time	< 4h

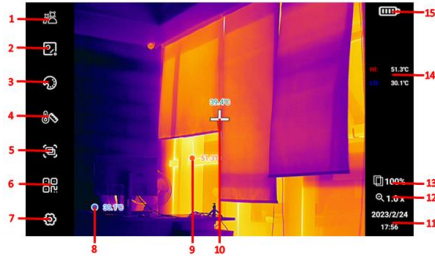
General characteristics	
Operating temperature	-10°C~50°C (14°F~ 122°F)
Storage temperature	-20°C~60°C (-4°F~ 140°F)
Operating humidity	10%~95%RH, non-condensing
IP rating	IP54
Drop proof	2m
Certificates	CE, FCC, UKCA, RoHS

## 2. Structure



1	Type-C USB interface	7	LCD	13	Bracket screw hole
2	SD card slot	8	Up	14	Focusing ring of infrared camera lens
3	Power	9	Gallery	15	Hand strap hole
4	OK	10	Return	16	Trigger
5	Left	11	Right	17	Visual light camera lens
6	Down	12	Battery pack	18	Infrared camera lens

### 3. LCD Indicators/Icons



No.	Description	No.	Description
1	AI	9	Hi spot
2	On screen analyzer	10	Center spot
3	Palette	11	Date/Time
4	Isotherm	12	Magnification
5	Image modes	13	Fusion ratio
6	QR code	14	Hi/Lo spot temperature
7	Settings	15	Battery status
8	Lo spot		

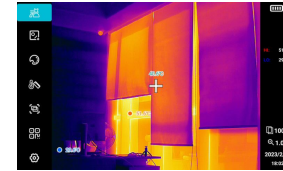
#### Note:

- AI human recognition: Auto track human and generate temperature measurement box.
- After an analysis object is added, it can be deleted by double tapping the screen. All analysis objects can be cleared by performing the Delete function in the menu.
- The temperature parameters can be modified in the submenu of the On Screen Analyzer menu. Please refer to the emissivity table. Emissivity and reflected temperature are two important parameters that need to be set correctly. If in doubt, use default values (emissivity: 0.95, target distance: 1.0m, ambient temperature: 25°C, reflected temperature: 25°C, relative humidity: 45%RH).
- The temperature scale includes auto switching (-30°C-650°C) and manual switching (high gain: -30°C-120°C, low gain: -30°C-650°C).
- Users can manually input or scan the QR code after selecting the QR Code function in the menu. Select "Cancel" to return to the main interface. After a QR code is input or scanned, it can be saved to a classified folder. The QR code is added to classify the photos and find the required one more quickly. If the added QR code is saved in the existing folders including QR1, QR2, QR3, QR4 and QR5, the photos marked with this QR code can be viewed in the corresponding folder. QR codes saved in the "Other" folder are temporary and will not be saved to the existing QR code classified folders.

### 4. Power on/off

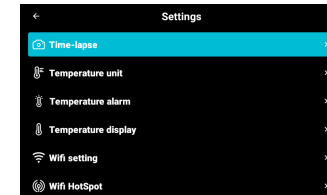
Press Power button to power on the thermal imager (it needs 30 minutes warm-up time when the device is just powered on or not used for a long time, or the measurement environment changes). Long press Power button 3s to power off/reboot the thermal imager. When thermal imager is in low battery mode, a prompt window will pop-up, which indicates that the thermal imager should be powered off for power replenishment.

### 5. Operation



- Press the buttons to operate: Press the OK button, the first option in the left menu will be highlighted, and press the Return button to cancel. When an option is highlighted, press the direction buttons to highlight other options, and press the OK button to select the functions.
- Users can also tap the screen to select the functions.
- When no option is highlighted, press the Up/Down button to zoom in/out the screen. The current magnification is displayed in the lower right corner of the screen. The magnification steps through 1X, 2X, 4X, 6X and 1X.
- When no option is highlighted, press the Left/Right button to adjust the fusion ratio of infrared light and visible light (0%~100%).

### 6. Settings

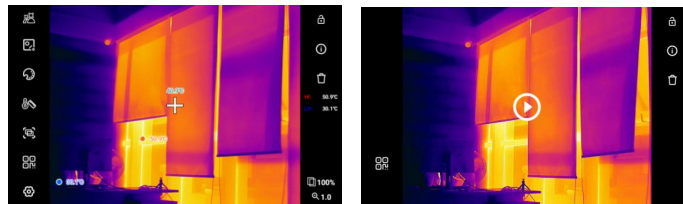


Time-lapse	Lapse time selection: 3s, 5s, 10s
Temperature unit	Temperature unit selection: °C, K, °F
Temperature alarm	Enable/disable Hi/Lo temperature alarm and set the alarm value (When the measured temperature exceeds the Hi value, a red triangle will show on the screen. When the measured temperature is lower than the Lo value, a green triangle will pop up.)

Temperature display	Show/hide the cursor of Center/Hi/Lo spot
Wi-Fi setting	Enable/disable Wi-Fi
Wi-Fi hotspot	Turn on/off the Wi-Fi hotspot (modify the device name and hotspot password when Wi-Fi is disabled, connect with the smartphone and use the smartphone APP when Wi-Fi is on), APP data transmission (for image transmission of the smartphone APP), PC data transmission (for image transmission of the PC software), stream (for the screen projection function of the smartphone APP and the PC software)
Bluetooth setting	Turn on/off the Bluetooth (modify Bluetooth name when Bluetooth is off), connect the Bluetooth earphones when Bluetooth is on
QR code	Change the name of classified folders and the corresponding QR codes
Brightness	Adjust brightness intensity from 0% to 100%
Volume	Adjust volume intensity from 0% to 100%
Auto power off	Auto power off time selection
Language	Language selection
Date & Time	Turn on/off the 24-hour format , modify date and time
Storage info	Display SD card status, format SD card
Clear all data	Restore factory settings
Software update	When update package is available on SD card, firmware can be upgraded manually
Device info	Check Device model, Display resolution, Firmware & Software version, SD card storage status, and Device ID

## 7. Image Browsing and Editing

In the main interface, press the Gallery button to enter the multimedia browsing interface. Users can press the buttons or tap the screen to select the folder and file to be browsed. When browsing photos/videos, users can view their information, and delete or edit them.



Lock	Photos/videos can be edited after the lock function is disabled, including AI, On screen analyzer, Palette, Isotherm, Image modes, QR code, display and hide center/Hi/Lo spot (videos can only modify the QR code information)
Info	View the QR code info, capture time, location, measurement parameters, notes (text/voice, for photos only) (when the lock function is disabled, the notes can be edited)
QR code	Change the classified folder of the QR code, view the image with the QR code added in the corresponding folder, and delete the existing QR code of the current image

## 8. SD Card

The device can be inserted into a Micro SD card to store images. To avoid affecting the device operating speed, please copy the backup data regularly and clean up the SD card in time. Do not insert or remove the SD card repeatedly; otherwise the data in it may be abnormal. If the SD card is removed when users are viewing or editing images, a prompt "SD lost" will pop up.

## 9. Notes

To ensure accurate measurements, please read the instructions carefully. Use the product only as specified in this manual. Otherwise the product damage will not be free warranty. Do not use this product in an inflammable, explosive, steamy, damp or corrosive environment. Do not use the product after it is damaged, broken or corrected to avoid wrong measurement results. Please refer to the radiation coefficient to get the actual temperature. Otherwise, the measured temperature may be inaccurate.

The product can be charged with a USB cable. However, to improve the charging efficiency, it is recommended that users take out the battery pack and charge it separately.



## 10. FCC Compliance statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## 11. Troubleshooting

Problem	Reason	Solution
Device cannot be powered on	Insufficient battery power	Charge the battery
	Poor battery contact	Remove the battery, and install it properly
	External power supply plugged improperly	Unplug the power plug and reinsert it properly
Battery power deviation existing	Exhausted battery power	Replace a fully charged battery
	Exhausted battery life	Replace a new battery
Blurred infrared images	Out of focus	Manual focus until images be clear
	Lens is covered by steam or dirt	Clean lens with professional equipment
Blurred visual images	Dark environment	Take proper lighting measures
	Lens is covered by steam or dirt	Clean lens with professional equipment
Inaccurate temperature measurement	Out of focus	Manual focus first, then read the temperature
	Incorrect parameters settings	Reset the parameters or restore to the default values
	Measuring temperature immediately after product is just turned on	To ensure measurement accuracy, it is recommended to measure after the device is powered on 5~10 minutes later.
	Not calibrated for a long time	It is recommended to send the device back every year for calibration.

## 12. Emissivity Table

Material	Emissivity	Material	Emissivity
Wood	0.85	Black paper	0.86
Water	0.96	Polycarbonate	0.8
Brick	0.75	Concrete	0.97
Stainless steel	0.14	Copper oxide	0.78
Tape	0.96	Cast iron	0.81
Aluminum plate	0.09	Rust	0.8
Copper plate	0.06	Gypsum	0.75
Black aluminum	0.95	Paint	0.9
Human skin	0.98	Rubber	0.95
Asphalt	0.96	Soil	0.93
PVC	0.93		

The contents of this manual are subject to change without notice.

**UNI-T®**

**UNI-TREND TECHNOLOGY (CHINA) CO., LTD.**

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Songsan Lake National High-Tech Industrial  
Development Zone, Dongguan City,  
Guangdong Province, China

彩盒 菲林做货要求

序号	项目	内容	备注
1	尺寸	110*150mm	
2	材质	封面128双铜+内页80g双铜	
3	颜色	四色	
4	外观要求	完整清晰、版面整洁，无斑墨、残损、毛边、刀线错位等缺陷。	
5	装订方式	骑马钉	
6	表面处理		
7	其它	无	
版本		REV. 1	
DWH 设计	宣浩	MODEL 机型： UTi640Q	
CHK 审核		Part NO. 物料编号： 110401111816X	
APPRO. 批准		 优利德科技(中国)股份有限公司 UNI-TREND TECHNOLOGY (CHINA) CO., LTD.	