

**UNI-T®**



**UTi722M**  
**Thermal Imager for Smart Phone**  
**User Manual**

## **PREFACE**

Thank you for purchasing a new UTi722M Infrared Thermal Imager. To use this product properly, please read this manual carefully before using, especially the "Safety Instruction" part.

After reading the 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 since the purchase date. This warranty is not applicable to damages caused by accident, negligence, misuse, modification, contamination and improper operation. 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 to get the product returning information. Then send the product to the service center with the problem description.

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

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## 1. Specifications

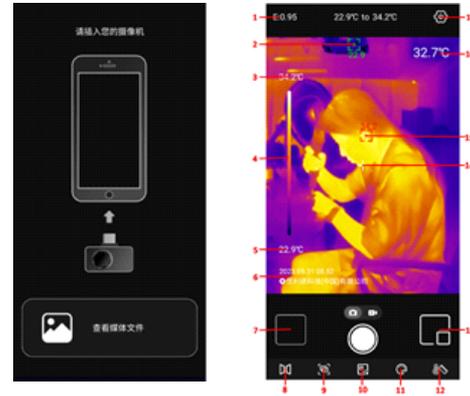
Infrared parameters	
Detector type	Uncooled infrared focal plane array (UFPA)
IR resolution	256 x 192
Spectral range	7.5 ~ 14μm
Pixel size	12μm
Frame rate	25Hz
Thermal sensitivity (NETD)	< 50mk
Focus	Manual
Lens size	21.5mm
lens focus length	4.0mm
Aperture	F1.0
Field of view (FOV)	44.92°(H) x 33.42°(V)
Spatial resolution (IFOV)	3.0mrad
Temperature measurement	
Temperature measurement range	-20°C ~ 450°C
Accuracy	±2°C/±2% (whichever is greater, 0°C ~ 450°C, room temperature is 25°C )
Resolution	0.1°C
Optimal measurement distance	0.4m
Temperature unit	°C/°F
Temperature mark	3(center spot, Hi/Lo spot temperature)
On Screen Analyzer	3 Points/3 Lines/3 Rectangles
Isotherm	Manual/Auto
Hi/Lo temperature tracking	√
Hi/Lo temperature alarm	LCD animation & Buzzer

Temperature measurement parameters	Emissivity, Ambient temperature, Distance
Image display	
Color palettes	Red Hot, Rainbow HC, Rainbow, Lava, Ironbow, Black Hot, White Hot
Image modes	Thermal, Fusion, PIP
Image format	JPG
Video format	MP4
System functions	
Data interface	Type-C USB
Image capturing	√
Video recording	√
Languages	Chinese/English/German/ French/Italian/Swedish/Spanish
Supported OS	Android 6.0 and above
General characteristics	
Operating temperature	-10°C~50°C
Storage temperature	-20°C~60°C
Operating humidity	10%~95%RH, non-condensing
Drop proof	1m
Certificates	CE,FCC,UKCA,ROHS
Standard accessories	Type-C extended cable, Hand strap, User manual, Clote bag

## 2. Display

Enter the APP, display showed as the following left picture with no device connecting, media files can be checked at this time. Right picture as following is with device connecting. (Takes Industrial mode as example) :

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NO.	Description	NO.	Description
1	Emissivity	10	On Screen Analyzer
2	Lo spot	11	Color Palettes
3	Upper limit of temperature	12	Isotherm
4	Color bar	13	PIP
5	Lower limit of temperature	14	Center spot
6	Date/Position	15	Hi spot
7	Gallery	16	Temperature of center spot
8	Mirror	17	Settings
9	Function		

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### 3. Gallery

Tap  to check the images and videos, selecting, sharing and deleting is supported. For details, images can be previewed, checked, shared, deleted, in PIP, fused, edited and saved. Video can be paused/played (also can drag the process bar), checked, shared and deleted.

If the image is in PIP/FUSION mode, tap PIP icon  or FUSION icon  to show/hide the mode, tapping SAVE icon  to save. If not in PIP/FUSION mode, tapping the icon will indicate “no visible light”.

Tap EDIT icon  to rotate images, mark brushes, modify on screen analyzer and isotherm, etc.

### 4. Main Interface

- The device will automatically calibrate the corresponding temperature according to ambient change and target temperature change.
- Long press EMISSIVITY icon in upper left side can be in manual shutter.
- Manually adjust focus to make the image clearer when the picture is blurred with the change of target distance.

Icon	Details
	Infrared image can be mirrored.
	Adjust the fusion proportion of visual image and infrared image.
	Manually adjust the position of visual image in fusion mode.
	<ol style="list-style-type: none"> <li>1. Add analysis tools such as Point, Line, Rectangle, and Circle. Moving, stretching, deleting are supported. Each analysis tool can be added up to 3.</li> <li>2. Temperature information of added points/boxes/lines will showed in upper right side of in the main interface.</li> <li>3. Tap the DELETE icon to delete all added points/boxes/lines. Drag the points/boxes/lines off the screen if just delete the single one.</li> </ol>

	Ironbow/Rainbow/White Hot/Red Hot/Black Hot/Lava/Rainbow HC palettes are available
	Changeable Proportion/Down/Up/Interval/Manual isotherm
	PIP On/Off
	<ol style="list-style-type: none"> <li>1. Tap  to capture images or take videos.</li> <li>2. No less than 3 seconds for a video taking.</li> </ol>

### 5. Settings

In Settings interface, Languages, Measurement modes, Units, Full image display, Hi/LO temperature alarm, Emissivity, Measurement distance, Ambient temperature, Audio setting, Front camera, and About options are adjustable.

Menu	Submenu
Language	Default/Chinese/English/German/French/Italian/Swedish/Spanish
Measurement mode	Industrial mode /EST screening mode
Full image display	On/Off the Hi temperature, Lo temperature, Center point mark. (No center point showed in Body temperature screening mode, Hi temperature showed in upper right side) Show/hide the color bar, date, position(internet connection needed), and select font size of Hi/Lo temperature(Small, Medium, Large)
Hi/Lo temperature alarm	Turn on/off it to adjust the Hi temperature, Lo temperature and turn on/off the audio alarm.
Emissivity	Adjustable 0.01~1.00 (Emissivity is 0.98 in Body temperature screening mode)
Measurement distance(M)	Adjustable 0.05~5.00
Ambient temperature	Adjustable 0~50°C (32~122°F)
Audio setting	Turn on/off the sound of video taking
Front camera	Show visual image taken by front camera in fusion/PIP mode.
About	Check the APP version, Model no. and User Agreement and Privacy Policy

## 6. Notes

- Please keep soluble or similar liquids away from the device.
- Please keep it stable and avoid violent shaking when using.
- Do not disassemble the device violently.
- Please keep the solid object away from the lens of device.
- Don't aim lens at the strong heating source (like sun, laser equipment, etc.) to avoid infrared detector damage.
- Package the device into portable box when not using.
- Due to different batches of product, physical picture may be associated with some small differences in kind, whichever is requested.
- Experimental data provided in the page is from internal laboratory of UNI-T, but it should not be a reference for customer to place orders. Any questions, please contact the customer service. Thank you.

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