UNI-T

UTI120P
Compact Thermal Imager

P/N:110401109908X

Preface

Thank you for purchasing the new UTi120P thermal imager. In order to use this product safely and correctly, please read this manual thoroughly, especially the *Safety Instructions* 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 or 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.

Uni-Trend will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by using this device. As some countries or regions do not allow limitations on implied warranties and incidental or subsequent damages, the above limitation of liability may not apply to you.

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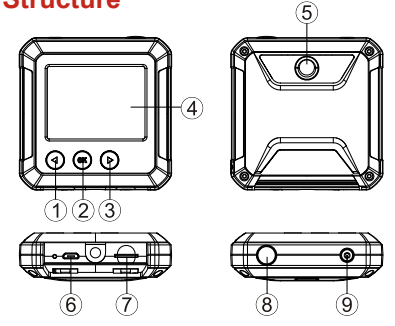
1. Specifications

Temperature range	-20 ºC~400 ºC
Basic accuracy	±2 ºC or ±2% (-10~400 ºC); whichever is greater (room temperature 25 ºC)
Emissivity	0.95 (0.95 default, 0.1~0.99 adjustable)
Display resolution	320 x 240 pixels
Response time	≤500ms
Thermal Imager resolution	10800 pixels (120 x 90 pixels)
Pixel size	17μm
Color palettes	Rainbow, iron, grey, fast thermal tracking
Wavelength range	8~14μm
FOV	50º (H) * 38º (V)
Thermal sensitivity	≤60mk
Frame rate	≤25Hz
Image format	Bitmap (BMP) image (320 x 240 pixels)

General parameters	
Product size (L x W x H)	76mm x 76mm x 24mm
Display type	2.4 " TFT LCD
Display resolution	320 x 240 pixels
Battery	3.7V/1350mAh
Auto power off	√
Battery life	About 3.5 hours
Charging time	2 to 2.5 hours
Certification	CE
Storage card	16GB Micro SD card
Storage temperature	-20ºC~60 ºC, -4 ºF ~140 ºF
Operating temperature	0 ºC ~50 ºC, 32 ºF ~122 ºF
Drop test	1m
Standard accessories	User manual, USB cable, 16GB Micro SD card
Altitude	≤2000m

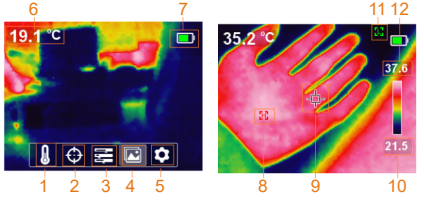
2. Structure



Item	Description
1	Left button / Temperature calibration button
2	OK / Menu button
3	Right / Fast thermal tracking toggle
4	LCD
5	Infrared thermal image window
6	USB interface
7	Micro SD card slot
8	Picture taking / Back button
9	Power button

3. Display

- Display size: 2.4” (495mmX377mm)
- Display resolution: 320 x 240 pixels

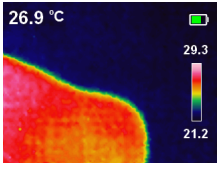


Item	Description
1	Temperature option
2	Cursor option
3	Color palettes option
4	Picture playback option
5	Settings option
6	Measured temperature
7	Battery level
8	Auto capture of high temperature
9	Center point of temperature
10	Low temperature
11	Auto capture of low temperature
12	High temperature

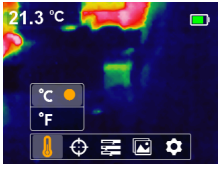
4. Turn on/off

Long press power button to turn on / off

5. Menu introduction

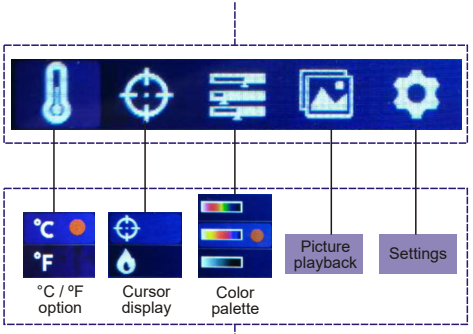


Thermal image display interface



1. Press the OK button to enter the main menu
2. Press the Left / Right button to enter submenu
3. Press the OK button to confirm option
4. Press the Left / Right button to choose ℃ / ℉
5. Press the Picture taking / Back button two times to return thermal image display interface

Main menu and submenu

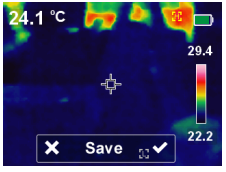


Submenu

Center point position

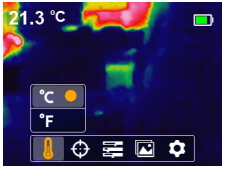
High/low temperature tracking

6. Picture taking and storage



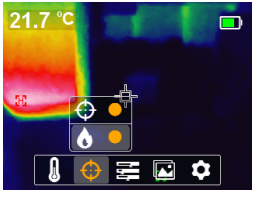
Press picture taking button to photograph the current image, screen will display an option to choose to save picture or not, press the right button to save the picture and the left button to discard it.

7. Temperature unit



Press the OK button to enter the main menu, press the left/right button to choose the option, press the OK button to enter submenu and press the left/right button to confirm option. Press the back button to exit the current menu to go back to thermal image interface.

8. Center point and Hi/low temperature tracking

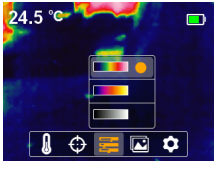


Press the OK button to enter the main menu, press the left/right button to choose the ⊕ option, press the OK button to enter submenu and press the left/right button to choose and then press OK to confirm option. When orange round point is displayed, it means center point of temperature is turn on, otherwise the status is turn off.

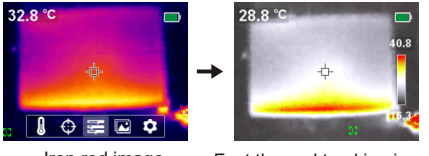
Press the OK button to choose the option, when orange round point is displayed, it means High/low temperature tracking is turn on, otherwise the status is turn off.

Press the back button to exit the current menu to go back thermal image interface, color bar on the right side will show the high/low temperature.

9. Color palette



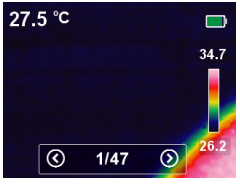
There are three options iron, rainbow and grey to adjust thermal color. Press the OK button to enter the main menu, press the left/right button to choose the option. Press the back button to exit the current menu to go back to thermal image interface. In addition, in the image display interface, press the right button to switch between the current image and fast thermal tracking image, as shown in Figure below



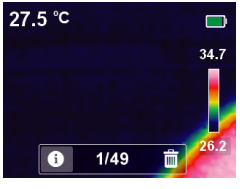
Iron red image　　Fast thermal tracking image

Note: The fast thermal tracking image cannot switch to iron red, rainbow or grey image by color selection.

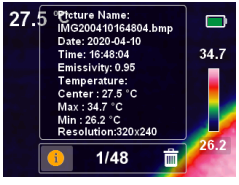
10. Picture playback



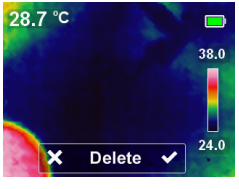
Press the OK button to enter main menu, press the left/right button to choose the picture playback option. Press the back button to go back the main menu.



Press the OK button to enter the picture playback submenu, press the left/right button to view picture or delete it. Press the back button to go back to the main menu.

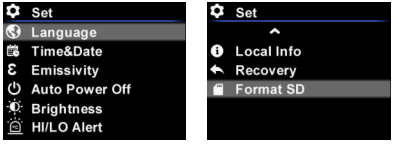


Choose to display detailed information of the picture, press the back button to go back to the main menu.



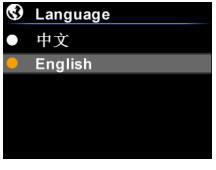
Enter the picture playback submenu, press the OK button to choose option, press the left/right button to choose to delete picture, choose “√” to delete the picture and go back to the picture playback submenu, choose “×” to go back to the picture playback submenu directly.

11. Settings



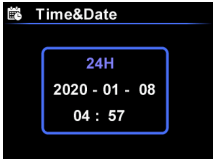
Choose ⚙ and press the OK button to enter setting interface, press the left/right button to choose setting item, press the OK button to enter submenu, press the back button to exit the current menu.

12. Language



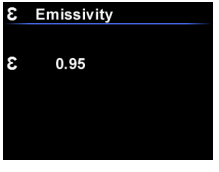
Press the OK button to choose language option, press the left/right button to switch between Chinese and English, press the back button to exit the current menu.

13.Time and date



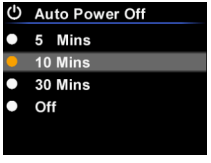
Press the OK button to enter the time & date submenu, press the left/right button to set date and time parameter and press OK to save the set, press the back button to exit the current menu.

14. Emissivity



Press the OK button to enter emissivity submenu, press the left/right button to set emissivity parameter between 0.01~0.99 and press OK to save the set. The default of emissivity parameter is 0.95. The correct emissivity parameter is very important for accuracy of temperature measurement, it has a significant impact on the measured surface temperature.

15. Auto power off

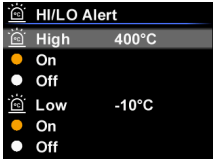


Press the OK button to enter auto power off submenu, press the left/right button to choose the auto power off time and press OK to confirm the set, press the back to exit the current menu.

16. Brightness

Press the OK button to enter display brightness submenu, press the left/right button to choose the brightness from low, middle, high and press OK to confirm the setting, press the back button to exit the current menu.

17.HI/LO Alert

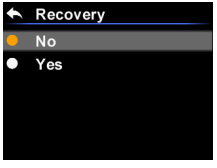


Press the OK button to enter High/low temperature alarm submenu, press the left/right button to set the alarm temperature parameter and press OK to confirm the setting. User can choose to turn on/ off the alert option. Press the back button to exit the current menu.

18. Local Info

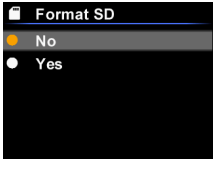
Press the OK button to enter device information submenu, press the left/right button to view the detailed information, press the back button to exit the current menu.

19. Recovery



Press the OK button to enter recovery submenu, press the left/right button to choose Yes or No and press OK button to confirm the setting, press the back button to exit the current menu.

20. Format SD



Press the OK button to enter format SD submenu, press the left/right button to choose Yes or No, sand clock icon will display when Yes is chosen, it will disappear after formatting. Press the back button to exit the current menu.

Note: Format SD before use the product.

21.Maintenance

Use a wet cloth or weak soap solution to clean the outer shell of the device. Do not use abrasives, isopropyl alcohol or solvents to clean the lens and window.

22.Safety instructions

To ensure accurate measurement results, please read the instructions carefully.

Please be sure to use this product in accordance with the instructions, otherwise the warranty will be voided if the product is damaged. Do not use this product in flammable, explosive, steamy, wet or corrosive environments. Stop using the product if it is damaged or modified to avoid inaccurate test results. Please use the correct emissivity value in order to obtain accurate temperature readouts. When being charged, the product internal temperature will rise. It may affect the accuracy of measured temperature. It is not recommended to use the product when being charged.

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.

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