P/N:110401113934X

UNI-T®

UTi760H

Professional Thermal Imager
Quick Start Guide

PREFACE

Thank you for purchasing the new UTi760H Professional 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 ⚠

WARNINGS

1. Use or store the device in permitted operating or storage temperature to avoid damage.
2. Do not aim the device at strong heat sources, such as sun, laser device, spot-welder, etc.
3. Do not knock, toss, or shake the device and accessories.
4. Do not use solvents or similar liquids on the product or cables.
5. Please refer 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: Avoid staining the optical surface of the lens when using the thermal imager, and especially avoid touching the lens with hands, as it can leave traces on the lens glass and may corrode (erode) the optical coating layer on the glass surface. When optical surface is stained, wipe it carefully with a dedicated lens paper.
6. Keep it stable when using the device.
7. Do not disassemble the device to avoid product damage and loss of warranty rights.
8. Do not place battery in high temperature environment or close to the high temperature targets. Do not cause the battery polarity short circuit. Do not place battery into damp condition or water.

NOTES

1) Do not expose the device to dust or moisture. Do not splash water to the device when you're using it. Cover the lens when the device is not in use;
2) Place the device and all accessories into a dedicated packaging box when the device is not in use,;
3) Do not use the included SD card for other purposes;
4) Due to different batches, the materials and details of actual products may be slightly different from the graphic information. Please refer to the actual goods received.
5) The experimental data provided in this manual are theoretical values obtained from Uni-Trend's internal laboratories and are for reference only. Customers should not use this data as a basis for placing orders. If you have any questions, please contact customer service for detailed consultation.

Content

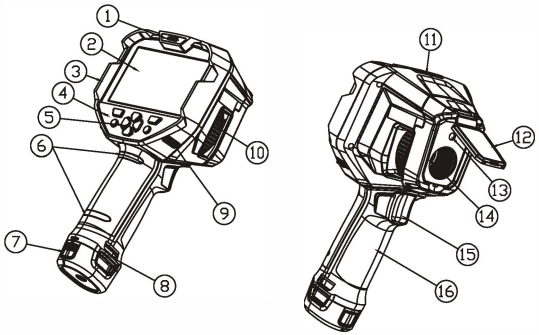
1. Specifications

Model No.	UTi760H
IR Parameters	
Detector Type	Uncooled infrared detectors
Infrared Resolution	640 x 480
Super Resolution	1280 x 960
Spectral Range	8~14μm
Pixel Size	12μm
Frame Rate	≤30Hz
Thermal Sensitivity/NETD	<35mK
Focus	Manual
Lens Focal Length	18mm
Aperture	F/1.0
Field of View (FOV)	24°(H)x19.3°(V)
IFOV	0.67mrad
Temperature Measurements	
Temperature Measurement Range	-20℃~650℃（-4℉~1202℉）
Accuracy	±1.5°C or ±1.5% (whichever is greater, 0°C< targeted temperature≤ 650°C, ambient temperature: 25°C)
	±2℃ or ±2% (whichever is greater, -10°C≤ targeted temperature≤ 0°C, ambient temperature: 25°C)
Resolution	0. 1℃
Unit	℃/℉/K
Temperature Display	3 temperature spots (Center spot, HI spot, LO spot)
On Screen Analyzer	Tools of Point/Line/Circle/Rectangle, At most 16.
Isotherm	Auto/ Manual / Section/ Above/ Below
HI/LO Temperature Tracking	√

HI/LO Temperature Alarm	Buzzer & LCD Animation alarm
Temperature Scale	-20°C~120°C (Manual)
	0°C~650°C (Manual)
	-20°C~650°C (Automatic)
Image Display	
Display	4.3" LCD Touch Display
Display Resolution	800×480
Digital Camera Resolution	5MP
Color Palette	White Hot, Black Hot, Red Hot, Ironbow, Rainbow, Rainbow HC, Lava
Image Mode	Thermal, Visual, T-Mix, PIP
Digital Zoom	1x~6x
Image Format	JPG
Video Format	MP4/UIR
System Functions	
Button	Power/OK/Direction/Album/Return/Trigger
Storage	Built-in storage & External Micro SD
USB	Type-C USB
QR Code Scanning	√
Photo Capturing	√
Video Recording	√
Full Radiometric Video Stream	√
Text Annotation	√
Voice Annotation	√
WiFi	√
Mobile APP	iOS, Android
PC Analysis Software	√
PC Screen Projection	√
Language	English, French, German, Italian, Spanish, Swedish, Polish, Czech

Power Supply Parameters	
Battery	5200mAh detachable battery pack (UT-M17)
Battery Operating Time	About 4h
Charging System	Directly charge device via Type-C cable;
Charging Time	> 4h
Charge Voltage/Current	5V/2A
General Specifications	
Working Temperature	-10℃~50℃
Storage Temperature	-20℃~60℃
Working Humidity	10%~95%RH, non-condensing.
IP Rating	IP54
Drop Proof	2m
Certificate	CE, FCC, RoHS

2. Structures



Item	Description	Item	Description
1	Speaker	9	Wrist Strap Hole
2	LCD Touch Screen	10	Focusing Ring
3	Rear Case	11	USB Cover/Charging Interface/SD Card Slot
4	Microphone	12	Lens Cover
5	Functional Buttons	13	Digital Camera
6	Waterproof Cap	14	Infrared Camera
7	Battery Pack	15	Photo Trigger
8	Housing Strap Fastener	16	Front Case

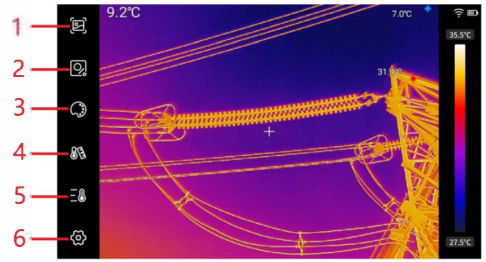
3. Display

Item	Description	Item	Description
1	Menu	5	HI Spot Temp
2	Measurement Parameters	6	Status Bar
3	Date & Time	7	LO Spot Temp
4	Temperature Bar	8	Center Point Temp

4. Quick Operation Instructions

1. Install the battery into the battery holder.
2. Long-press POWER button for 2~3s to power on the thermal imager.
3. Enter the real-time infrared mode, and aim the thermal imager at the target.
4. Focusing the target until the image gets clear.
5. In Photo or Video mode, tap the trigger to save images or record videos.
6. Touch the screen or press the button to enable other functions.

5. Menu

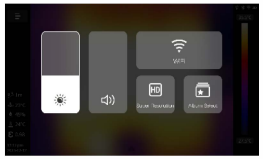


1. Image Modes	Thermal, Visual Image, T-Mix Fusion, PIP
2. On Screen Analyzer	Measurement tools of point, line, circle and rectangle can be added, which can be preset, contrasted and deleted
3. Color Palettes	White Hot, Black Hot, Red Hot, Ironbow, Rainbow, Rainbow HC, and Lava.
4. Isotherm	Auto/ Manual/ Section/ Above/ Below.
5. Parameter Settings	Set the emissivity, reflected temperature, relative humidity, object distance and ambient temperature.
6. Settings	Details are shown below

6. Settings

Capture Modes	Photo Capturing, Video Record, Video Format, Countdown.
Temperature Measurement Range	Selectable: -20~120℃/0~650℃/Auto Range
HI/LO Alarm	HI/LO temperature alarm and audible alarm.
WIFI	The hotspot can be ON/OFF. With hotspot ON, the hotspot name and password can be modified. The supporting APP can be used after the mobile phone is connected to Wi-Fi.
Overlay	Enable watermark as needed, including high temperature value, low temperature value, center value, date & time, temperature bar and measurement parameters, displayed on the main interface.
Report Editing	Set parameters in PDF report, including PDF template, report name, company name, reporter, and auditors.
System Settings	Languages: English, French, German, Italian, Spanish, Swedish, Polish, Czech
	Unit Switch: Temperature Units: ℃/°F/K; Distance Units: m/yd.
	Brightness: Adjust the brightness of screen.
	Sound: Volume adjust
	USB mode: Can be switched to USB mode and live stream mode.
	Date & Time: The date and time of device can be modified.
	Storage: Display the used and available space of the device and SD card, and allows clearing data.
	Auto Power OFF: Set the auto-power-off time as needed.
	Reset Factory Settings: Permanently delete the user-defined parameters.
	Factory Reset: Restore the device to the initial status, data will be deleted, which cannot be recovered, please exercise caution.
	Software Update: Check device version, and support local upgrade.
	About: Display the information about device.

7. Quick Menu



One-stop functions e.g. WiFi, Volume adjust, Brightness, Super resolution can be invoked by bringing up the quick menu.

8. Measurement Parameters

1. Emissivity: It refers to the ratio of the measured object to the absolute black body with same temperature. It is an important indicator for measuring the radiation of an object, ranging from 0.00 to 1.00.
2. Reflected Temperature: It refers to the radiation energy from other heat sources surrounding the measured object.
3. Object Distance: It refers to the distance between the thermal imager and the measured object.
4. Ambient Temperature: It refers to the external environment temperature where the thermal imager and the measured object are located.
5. Relative Humidity: It refers to the atmospheric moisture content during the transmission of radiation from the measured object.

⚠ Notes:

1. The accurate setting of the above parameters is beneficial to the final temperature measurement results.
2. Recommended values: In general, if you have no idea about these values, please see followings:
   Emissivity: 0.95 (Two temperature scales: -20℃~120℃ and 0℃~650℃);
   Ambient Temperature: 25℃
   Relative Humidity: 55%RH
   Reflected Temperature: 25℃
   Object Distance: 0.6m
3. Temperature Measurement Accuracy:
   ±1.5°C or ±1.5% (whichever is greater, 0°C< targeted temperature≤ 650°C, room temperature: 25°C);
   ±2°C or ±2% (whichever is greater, -10°C≤ targeted temperature≤ 0°C, room temperature: 25°C)

9. Mobile App

Step 1

For iOS, download "Thermal Link Pro" on Apple APP Store or scan the following code. For Android, download "Thermal Link Pro" in UNI-T's official website or scan the following code.

iOS Android

Step 2

- Turn on Wi-Fi hotspot on thermal device.
- Search the Wi-Fi name of "UTi760H" on mobile device.
- Enter password 12345678 to connect Wi-Fi.
- Access APP to get functions of real-time image transmission, remote viewing and images download, etc.

Note: To ensure stable data transmission, please try to maintain the connection within a range of 10m and ensure there are no obstacles blocking the signal.

10. Emissivity Table

Materials	Emissivity	Materials	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
Adhesive Tape	0.96	Cast Iron	0.81
Aluminum Plate	0.09	Rust	0.8
Copper Plate	0.06	Plaster	0.75
Black Aluminum	0.95	Paint	0.9
Human Skin	0.98	Rubber	0.95
Asphalt	0.96	Soil	0.93
PVC Plastic	0.93		

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