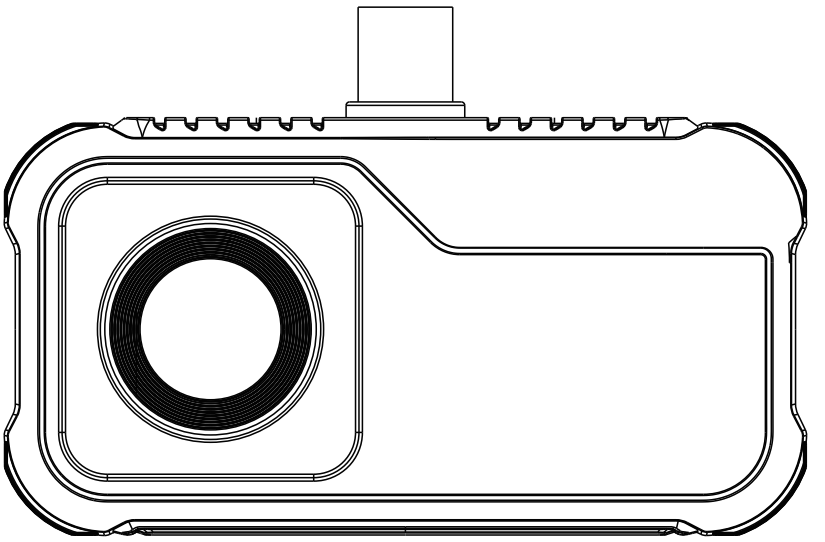
SMART MOBILE PHONE THERMAL IMAGER

OPERATION MANUAL



☐ HT-105 ☐ HT-203U

Content

1. Precautions

Please read all the following information before using your device to protect you and others from injury or damage to your device.

(1) Do not expose the product in the sun and other high-intensity radiation sources

(2) Do not touch or collide the detector window and lens with hands or other objects;

(3) Do not touch the device and USB interface with wet hands;

(4) Do not scrub your equipment with thinner;

(5) Please pay attention to preventing static electricity;

(6) Do not disassemble the equipment. If there is any fault, please contact our company for repair by professional personnel.

2. Product Overview

2.1 Application Scenario

Using this mobile infrared thermal imager, need to download and install the mobile infrared thermal imager "HT-105/203U Smart Thermal" APP to achieve infrared observation and infrared temperature measurement function through this APP.

Scan QR code to download the App

2.2 Main Functions

The main functions are as follows:

(1) Open the application software of the mobile infrared thermal imager to perform infrared observation;

(2) Carry out infrared temperature measurement and temperature analysis;

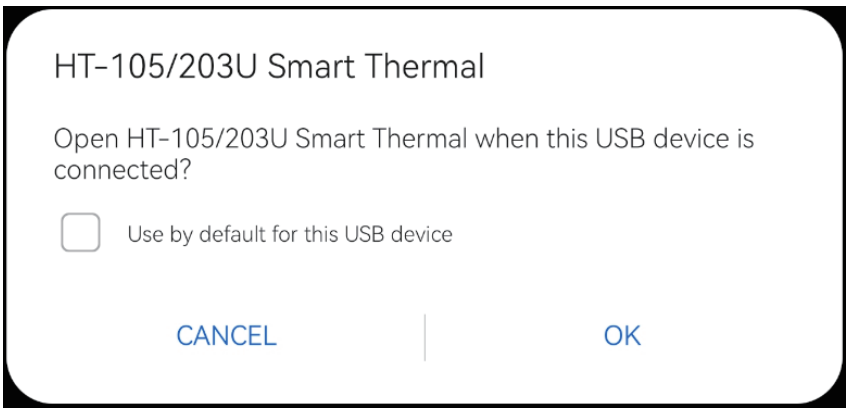
(3) Take photos and videos;

(4) Action control and parameter setting of the mobile phone thermal imager.

3. Product Use

3.1 Equipment Connection

Insert the mobile infrared thermal imager into the USB port of the phone, click on the phone screen, and the phone will automatically recognize the USB device and pop up a prompt. Check the checkbox and click "OK". The software will start the phone thermal imager, and the phone screen will enter the infrared observation screen.



3.2 Software Operation

Temperature measurement analysis

3.2.1 Gallery, Photo and Video

(1) “ ”Gallery: Click to view the image and video.

When entering the picture list/video list, check the picture/video and click “ ” at the top right to delete or share the picture/video.

Choosing to share can be used to read images or videos.

(2) “ ”Photo: Save the current picture;

Photo preservation location: Open the required image in the gallery to view the image location.

(3) “  ”Video: click to start video recording, and click again to end video recording.

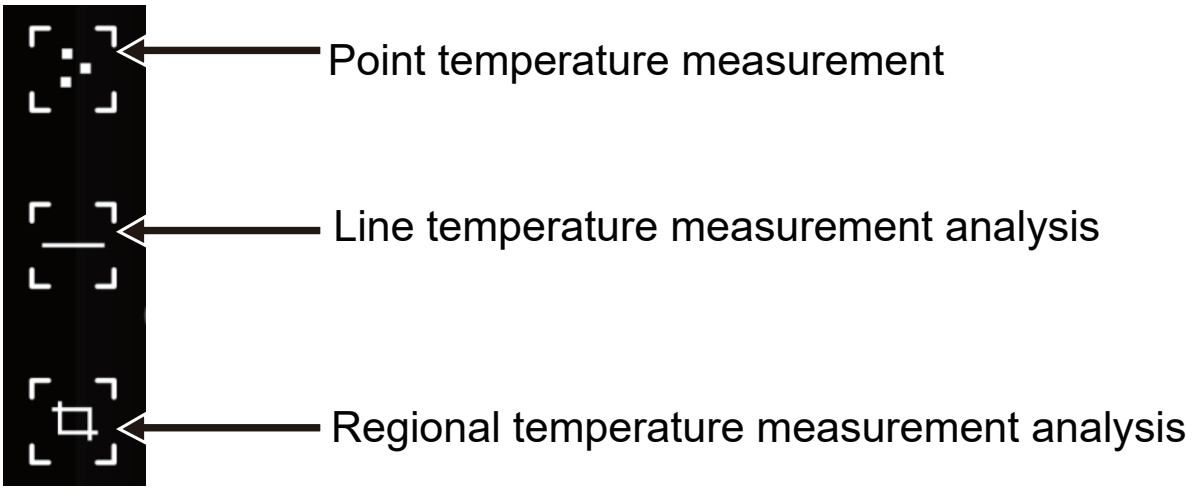
The save location of video is the same as the image.

3.2.2 Shutter Refresh

“  ”Shutter refresh: Click to refresh the shield.

3.2.3 Temperature Measurement Analysis

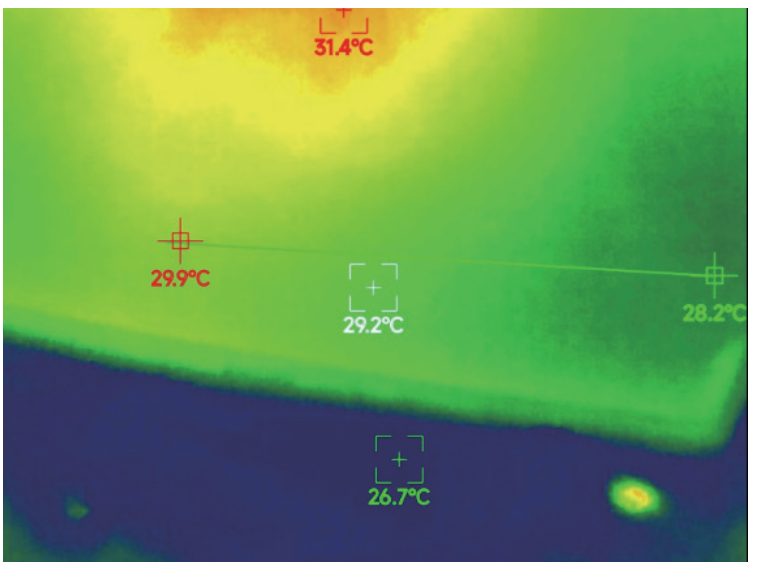
Click “  ” to pop out option of temperature measurement.



(1) Point temperature measurement: click the point temperature measurement button, and the screen will display the temperature information of three points, namely the central temperature point, the highest temperature point and the lowest temperature

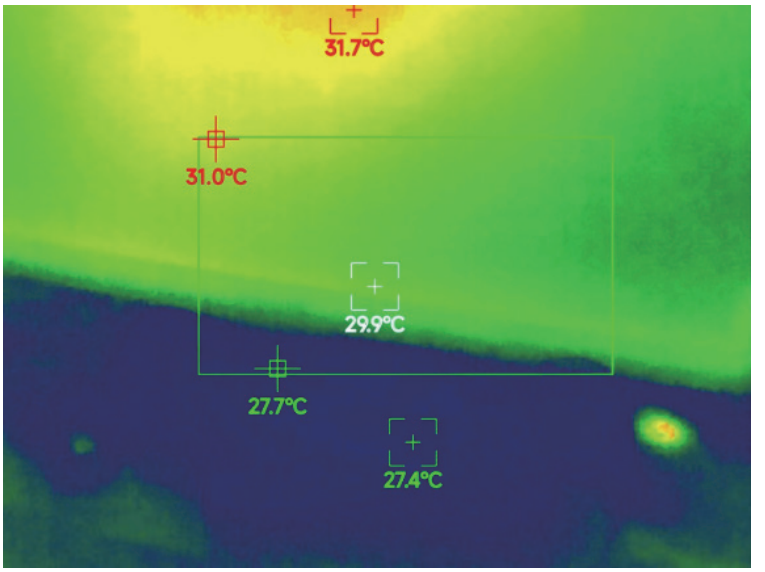
point. Click the screen at this time, and the temperature information of the user-defined point will be added.

(2) Line temperature measurement analysis: drag with your fingers and draw a horizontal line on the screen. It will automatically analyze the maximum temperature and minimum temperature of the horizontal line, and identify relevant information.



Line temperature measurement analysis

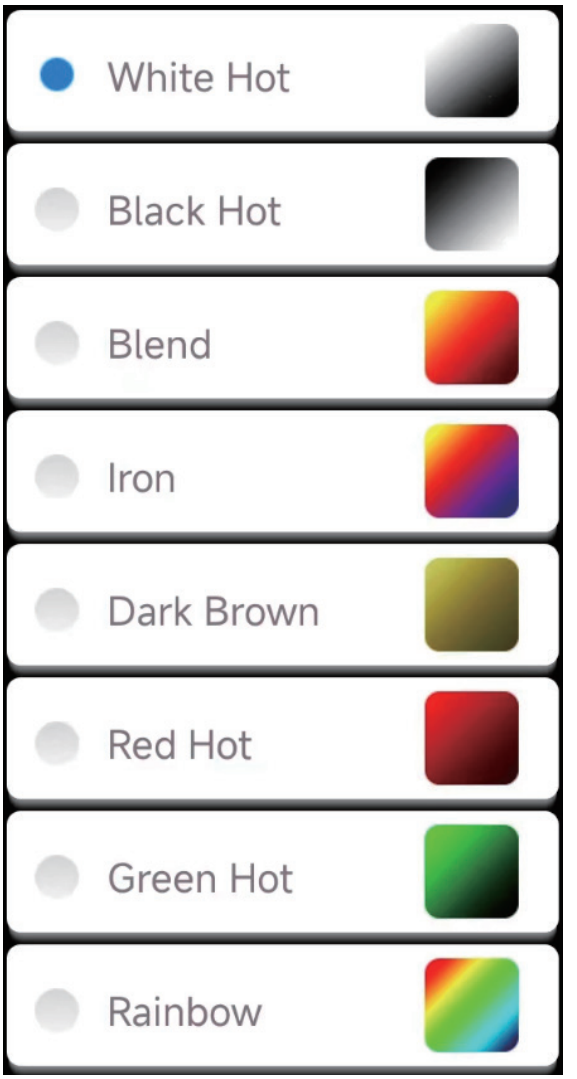
(3) Regional temperature measurement analysis: drag with your fingers and draw a rectangle on the screen. it will automatically analyze the maximum temperature and minimum temperature in the rectangular area, and identify relevant information, as shown in the following figure:



Regional temperature measurement analysis

3.2.4 Color Palette

Click the “  ” to pop up the color palette interface, and you can switch between 8 types of color palettes including the white hot, black hot, blend, iron, dark brown, red hot, green hot, rainbow,as shown in the following figure.



The display effects of the 8 types of color palettes are as follows:

White Hot

Black Hot

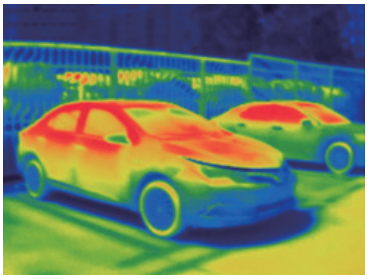
Blend

Iron

Dark Brown

Red Hot

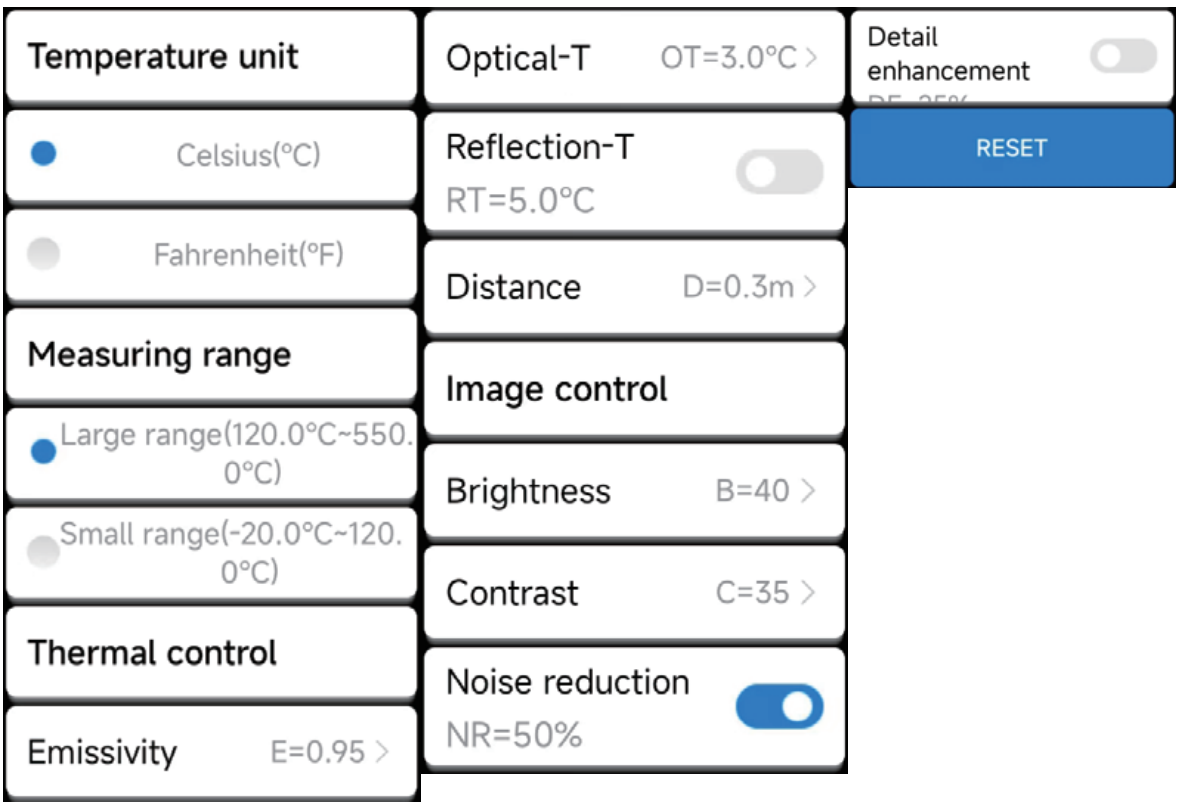
Green Hot



Rainbow

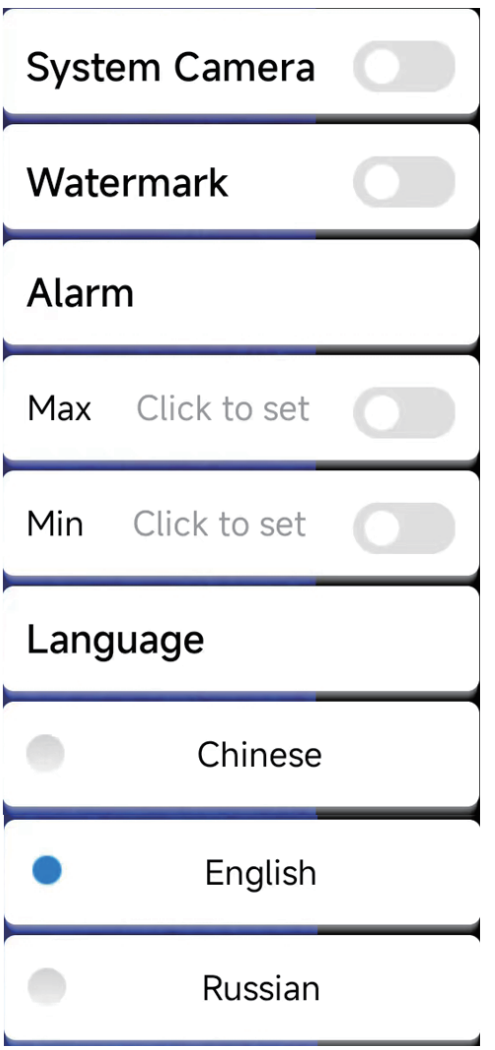
3.2.5 Temperature Measurement Setting

Click “ ” to pop up the settings interface, which can be set for temperature units, range, transmission rate, optical temperature, reflection temperature, distance, brightness, contrast, noise reduction, details of details, or reset parameters, as shown in the figure below.



3.2.6 Settings

Click “ ” to pop up the setting interface. In the interface, you can set whether to open the system camera, watermark, high/low temperature settings, and language selection. Chinese, English, Russian, as shown in the figure below.



4. Technical Parameters

Product model	HT-105
Infrared	
Detector type	Vanadium Oxide Uncooled Infrared Focal Plane
Infrared image resolution	160x120
Pixel spacing	17μm
Focal length	3.2mm
Angle of view	50.0°(H)×37.2°(V)
IFOV	5.31mrad
Working band	8~14μm
NETD	≤ 40mk@25°C,@F/1.1
Image frame rate	≤25Hz
Focusing mode	Free Focus
Display	
Brightness adjustment	Supported
Contrast adjustment	Supported
palettes	white hot, black hot, blend, iron, dark brown, red hot, green hot, rainbow

Temperature measurement function	
Temperature measurement method	point, line and regional temperature measurement
Temperature measurement range	-20 ℃ ~ 120 ℃ and 120 ℃ ~ 550 ℃
Temperature measuring distance	0.3m~3m
Temperature measurement accuracy	± 2 ° C or reading ± 2%
System function	
Camera/video	Supported
Picture /Video format	JPG/MP4
Language	Chinese, English, Russian
Power consumption	≤0.6W
External interface	USB Type-C, DC5V power supply
Work/storage environment	
Working temperature	-20℃ ~ +50℃
Storage temperature	-30℃ ~ +70℃
Size/Weight	
Product size	46x70x14mm
Product weight	28g

Product model	HT-203U
Infrared	
Detector type	Vanadium Oxide Uncooled Infrared Focal Plane
Infrared image resolution	256x192
Pixel spacing	12μm
Focal length	3.5mm
Angle of view	50.0°(H)×37.2°(V)
IFOV	3.43mrad
Working band	8~14μm
NETD	≤ 40mk@25°C,@F/1.0
Image frame rate	≤25Hz
Focusing mode	Free Focus
Display	
Brightness adjustment	Supported
Contrast adjustment	Supported
palettes	white hot, black hot, blend, iron, dark brown, red hot, green hot, rainbow

Temperature measurement function	
Temperature measurement method	point, line and regional temperature measurement
Temperature measurement range	-20 ℃ ~ 120 ℃ and 120 ℃ ~ 550 ℃
Temperature measuring distance	0.3m~3m
Temperature measurement accuracy	± 2 ° C or reading ± 2%
System function	
Camera/video	Supported
Picture /Video format	JPG/MP4
Language	Chinese, English, Russian
Power consumption	≤0.36W
External interface	USB Type-C, DC5V power supply
Work/storage environment	
Working temperature	-20℃ ~ +50℃
Storage temperature	-30℃ ~ +70℃
Size/Weight	
Product size	46x70x14mm
Product weight	28g

Dongguan Xintai Instrument Co.,Ltd.

Add: Building16, No.3, Yongtai Road, TangxiaTown, Dongguan City,Guangdong,China
Postal Code: 523710
Tel: +86-769-82612006
Fax: +86-769-82612005
Website: www.hti-meter.com
www.hytechcn.com.cn www.xintest.en.alibaba.com

User Manual Version 1.3. November 17， 2023.