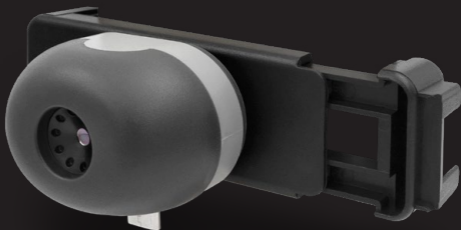


# IR501 Thermal Camera

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## Instruction Manual



**Perfect  
Prime**

[www.perfectprime.com](http://www.perfectprime.com)



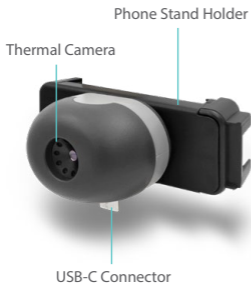
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## 1. Overview

PerfectPrime provides you a way to sense the invisible, measure the unfathomable, and analyze the improbable by providing thermal imaging and temperature measurements in a new way. This guide provides you all the information you need to operate the IR501 Thermal Camera for Android devices.



### Method 1 Direct Plug



### Method 2 Plug With Micro-USB Cable



*The IR501 is powered by the host device, no charging or battery is needed.*



## 2. App Download & Phone Connection

### App Download

Scan the QR code below or enter the URL (<https://play.google.com/store/apps/details?id=com.thermal-more.perfectprime>) to download the "IR501 Thermal Camera Viewer" application and install it (only supports Android Phone system).



QR Code



App

### Phone Connection

After installation, make sure host device supports USB OTG in your phone's settings. Once plugged in, the application will automatically open within 10 seconds. Select the IR501 Thermal Camera Viewer App to start.

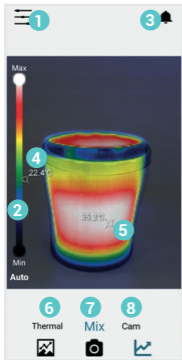


### 3. Product Specifications

<b>Parameter</b>	<b>Description</b>
Sensor Resolution	206 x 156
Frame Rate	<9Hz
Scene Temperature Range	40°C to 330°C
Sensor Sensitivity	65mk(typical), <100mK(max) @25°C
Field of View	35.4° x 26.8°
Detection Range	333m
Recognition Range	83m
Identification Range	43m
Distance to Spot Ratio	56:1
Focus	Fixed
f-number(focal length/aperture)	f/1.2
Focal length	4.0mm
Accuracy	+/-5°C or 5% between 5% to 140°C scene temperature Typical performance of +/-10% between 140°C to 330°C scene temperature
Operating Temperature Range	0°C to 40°C
Storage Temperature Range	-10°C to 50°C
Humidity	10% to 95%RH, non-condensing
Dimension	47mm x 32.5mm x 32.5mm



## 4. Product Operation



- 1 Menu
- 2 Color Scale
- 3 Notification
- 4 Min. Temp.
- 5 Max. Temp.
- 6 Thermal Mode
- 7 Mix Mode
- 8 Camera Mode

### Selections for different mode of view:


**Thermal Mode:** Thermal Image Only


**Mix Mode:** Blending between Thermal Image and Photo

**Camera Mode:** Real-time camera only

### Selections for different mode of function:

 Press to entry **Gallery** Album

-  1) Press to **Capture Main View instantly**
- 2) Press & hold to **record video**

 Press to entry **Graph Mode**



## 5. Manual Mode



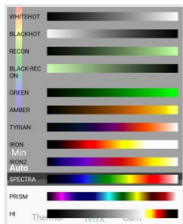
### Manual Button:

Press to entry Manual Setting Mode. Within the settings, you can adjust variables including the color palette, temperature display unit, emissivity, over temperature alarm and under temperature alarm.



### Temperature Unit:

Press to select the temperature unit of °C or °F.



### Color Palette:

Press to select the color palette for the thermal view.



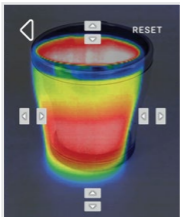
## 5. Manual Mode



**Emissivity:**  
Press to select the color palette for the thermal view.



**Temperature Alarm:**  
Press to enable/disable the temperature alarm and input the high and low temperature alarm value.

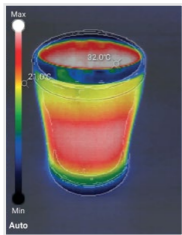


**Alignment:**  
Press to adjust between camera view and thermal view.





## 5. Manual Mode



### Stroke:

Press to select the color palette for the thermal view.



### Thermal Rotation:

Press to rotate the thermal view to match with camera view.



### Theme Color:

Press to select the white background or black background.

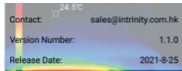


## 5. Manual Mode



### **Broadcast:**

Press to enable the web view function.

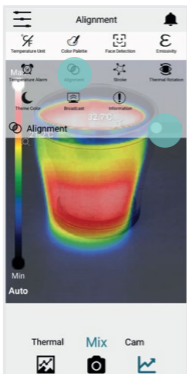


### **Information:**

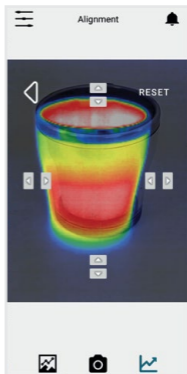
Press to display the contact information, version and release date.




## 6. Camera Alignment



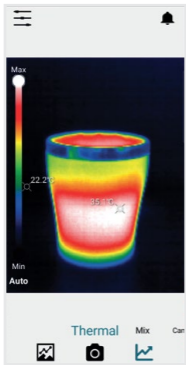
1. Press to adjust between camera view and thermal view



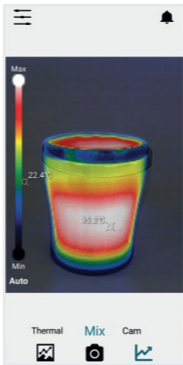
2. Press arrow buttons to adjust the two images.
3. Press  to exit Camera Alignment mode



## 7. Different Modes Of View



**Thermal Mode:**  
Thermal Image Only



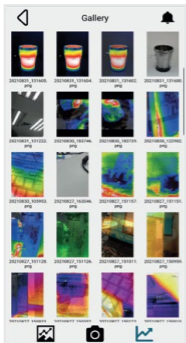
**Mix Mode:**  
Blending between  
Thermal Image &  
Camera Photo



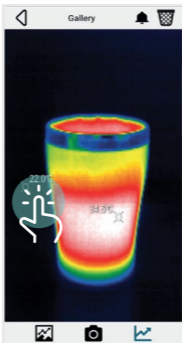
**Camera Mode:**  
Camera Photo Only



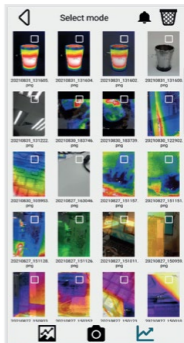
## 8. Gallery



**Enlarge Image:**  
Press thumbnail to enlarge the image



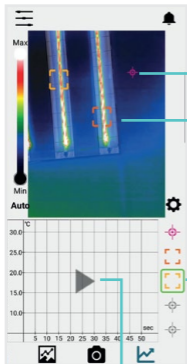
**Target Pixel:**  
1) Touch your target pixel.  
2) Temperature of target pixel is shown



**Select & Delete:**  
1) Press and hold one of the thumbnails.  
2) Select the images which to be deleted.  
3) Press rubbish bin to delete the selected images



## 9. Graph



### Target Pixel:

- 1) Touch to select your target pixel
- 2) Monitoring the target which temperature will be shown in the graph

### Legend Menu:

- 1.) Short press to enable or disable each curve (Max. five curves can be monitored)
- 2) Press and hold to change the target pixel icon between square and dot

### Play Button:

- 1) Press once to run or
- 2) Stop plotting and save the graph into **Gallery**



## 10. Get Graph Data



### Go To The Gallery:

Press to go to the Gallery .



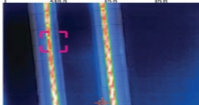
### Get Graph Data:

Press to get graph data in excel format.

#### Report

#### Data

Start Time:	31/8/21 18:18	Emissivity:	0.96
End Time:	31/8/21 18:18	Record freq:	50
Duration(sec):	5	Color palette:	SPECTRA
Sample no.:	42		
ip no.	avgTemp	maxTemp	minTemp
1	27.4	27.5	27.3
2	21.1	21.3	20.9
3	0.0	0.0	0.0
4	21.7	21.8	21.6
5	0.0	0.0	0.0



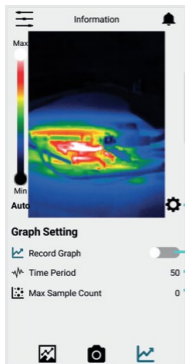
#### Report

#### Data

Min Temperature	Max Temperature	Point Temperature 1	Point Temperature 2	Point Temperature 3	Point Temperature 4	Point Temperature 5
17.4	47.3	27.4	21.2		0 21.7	0
17.4	47.3	27.4	21.0		0 21.8	0
17.6	47.4	27.4	21.2		0 21.8	0
17.6	47.4	27.4	21.1		0 21.7	0
17.6	47.3	27.4	21.1		0 21.7	0
17.6	47.3	27.3	21.1		0 21.7	0
17.5	47.3	27.4	21.1		0 21.7	0
17.6	47.3	27.4	21.0		0 21.7	0
17.6	47.3	27.4	21.0		0 21.7	0
17.6	47.3	27.4	21.1		0 21.7	0



## 11. Graph Setting Mode



### Setting Button:

Press to entry Graph Setting Mode.

### Record Graph:

Enable to store the graph data in excel file.

### Time Period:

Input the time period for each sample of temperature.


### Max. Sample Count:

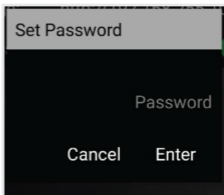
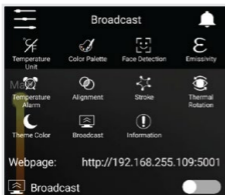
The max. number of samples to be recorded.



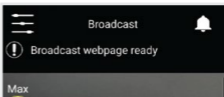
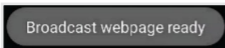


## 12. Connecting to Website Screen-mirror

1. Switch on and set-up the Wifi connection of your device
2. In  > Broadcast, switch on the Broadcast option. A window will pop-up to allow password setted to the broadcast website. You can also skip the step by pressing "cancel" or "enter" without typing anything.



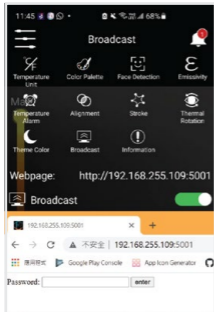
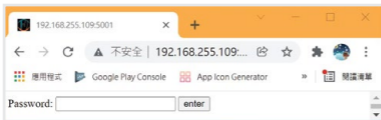
3. If the webpage is ready, a message will Pop-up on the bottom middle of the screen. A notification will also Pop-up.





## 12. Connecting to Website Screen-mirror

4. Enter the website provided to any browser. If the connection is successful, the following page will appear.

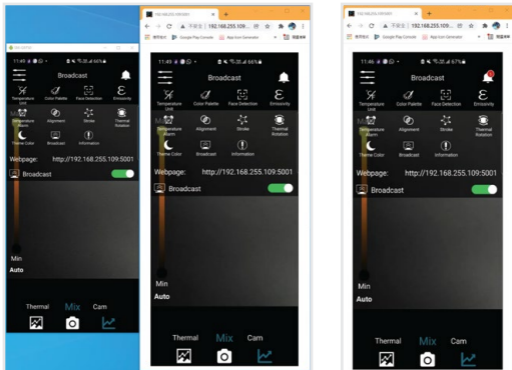


If the above page fails to display, please ensure your mobile device and the device that used to open the browser are under the same wifi network. The connection may also fail due to Firewall. Please wait for a few moments to retry or restart the app.



## 12. Connecting to Website Screen-mirror

5. Enter the password you have set. (Leave it blank if no password is set.) If the password is correct, the screen mirror will start.
6. When Broadcast setting is switch on, you can also press on the "Webpage" option. A one-off QR code will be generated. Using this QR code, you can enter screen-mirror webpage without password.



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Thank you for your understanding.

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**[sales@perfectprime.com](mailto:sales@perfectprime.com)**

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