



Therm-App[®] TH – Thermography Mobile Thermal Imaging Tool



Operation Manual

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Updated to Version 2.4.0 January 2017



Visit the Therm-App® website: www.therm-app.com

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Safety and Caution Notes

Read this document in full, as well as the warranty document provided with the product.

Therm-App® TH is a Class B digital product. This product has been tested and found to comply with the limits for a Class B digital product, pursuant to Part 15 of the U.S. FCC Rules.

- Attach the Therm-App® TH device to your Android device with care.
- Tighten the sizing knob until the Therm-App® TH device is securely attached to your Android device. Do not use tools, as applying too much pressure might mark or damage the device.
- For the most accurate temperature measurement, it is recommended to wait at least 8 minutes after Therm-App® TH starts for stabilization.
- The Therm-App® TH device uses specific factory-prepared calibration data. If degraded performance is noted after prolonged field use, it can be sent to the Therm-App® lab for recalibration. Please contact our support team at support@therm-app.com for further instructions.
- Please avoid any direct contact between your hand and the Therm-App® TH device (by using the grip handle or tripod) during stabilization and while measuring, as it may impact the measurement results.
- Some parts of Therm-App® TH have sharp edges and could cause injury. Please handle with care.
- Use only the USB OTG cables provided with the Therm-App® TH, as using other types of cables could damage the Therm-App® TH device.
- Power the Therm-App® TH device 5V DC using the micro USB connector by connecting it to a smartphone or other USB host connectors only. Using any other type of power source may damage the Therm-App® TH device.
- To avoid breakage, do not drop the Therm-App® TH device or apply pressure on the IR lens. If the IR lens breaks, do not touch the broken pieces as it may cause injury.
- Do not point the infrared detector (with or without the lens and lens cover) at intensive energy sources (e.g. the sun, laser radiation or open flames). This could damage the detector.
- Do not use the Therm-App® TH device in temperatures higher than +50 degrees Celsius (+122 degrees Fahrenheit). High temperatures can cause damage to the detector.
- The Therm-App® TH device is not water resistant sealed. As such, do not expose the Therm-App® TH device to water, rain, or dust.

- Do not apply solvents or similar liquids to the detector or the lens.
- The lens has a delicate anti-reflective coating. Clean the lens using only a soft cloth, applying very light pressure.
- Do not use pressurized air to remove dust from the Therm-App® TH device. Pressurized air contains oil mist intended to lubricate pneumatic tools, which could damage the detector and lens.
- When changing lenses, the IR detector is exposed. Avoid all contact with the detector. Do not touch, clean or blow on the detector. Replacement of the lens must be done in a clean, dry area. Do not leave the IR detector exposed longer than necessary when replacing the lens.
- A tamper-evident label is attached to one of the screws on the back of the Therm-App® TH device. Removing this label or the S/N label will void the warranty.
- As with most electronic products, the Therm-App® TH device must be disposed of in an environmentally friendly manner and in accordance with existing regulations for electronic waste. Please contact our support team at support@therm-app.com for more details.
- Therm-App® TH manuals are updated from time to time, and product-critical notifications are published occasionally. For the most recent Therm-App® TH device manuals, product notifications, compatibility updates, FAQ's and much more, please visit our website at <http://www.therm-app.com>.

Product Description

Therm-App® TH extends human vision by turning an Android device into a thermal camera. This lightweight, modular, high resolution device attaches onto your Android device allowing you to display, record, and share thermal images for Night Vision and Thermography applications.

Therm-App® TH combines the power of a fully functional thermal camera with the mobility, connectivity, processing power, display capabilities and advanced features provided by Android devices today.

The Therm-App® TH device is comprised of:

- Therm-App® TH device housing [1]
- Thermal lens with manual focus [2]
- Grip handle [3]
- Sizing knob [4] – for adjustment to fit different sizes of Android devices.
- Attachment bracket [5] – connects the Therm-App® TH device with the Android device.
- USB-OTG cable [6] – for communication with the Android device.



Quick Start Guide

Before using Therm-App® TH, make sure the Android device is compatible with the guide below:

Quick Start Guide

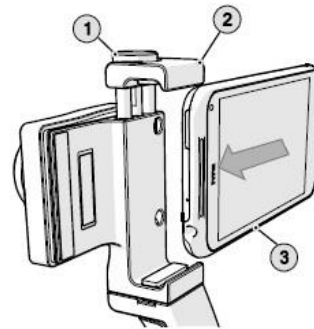
1. Verify that you have a stable internet connection before installing the Therm-App® TH application on your Android device.



2. Download the free Therm-App® TH application online from [Google Play](https://play.google.com/store/apps/details?id=com.thermapp.th) or scan the QR code.



3. Insert the Android device (3) into the Therm-App® TH attachment bracket (2) and carefully fasten the sizing knob (1).



4. Connect the Therm-App® TH device [1] to the Android device [2] using the USB-OTG cable supplied.
5. The Therm-App® application should start automatically.
6. After approving the Terms of Use, the application will begin downloading calibration files from the Therm-App® server. This is required for first-time use only.
7. Wait until the download and initialization process is completed (the process can take a few minutes, depending on your internet connection).
8. You are now ready to start using your Therm-App® TH device. Please note that temperature readings accuracy is improved after an 8-minute system warmup, and when using the grip handle.



Android Device Minimum Requirements

1. Therm-App® TH was designed to work with Android OS ver. 4.1 and above. Due to variations in operating systems, compatibility issues may occur.
2. Your Android device must support USB OTG (On-The-Go, also known as USB host mode).
3. Therm-App® TH requires the use of a USB-OTG cable (male to male, micro USB).

*Please note: Most off-the-shelf cables are not USB-OTG and will not operate with the Therm-App® TH device. Use only the USB-OTG cables that are provided with the product.

For a full updated list of Android devices that support Therm-App® TH, [click here](#).

Contents of Therm-App® TH Box

The Therm-App® TH carry case contains:

- Therm-App® TH device with 6.8mm lens
- Ergonomic gripping handle
- 15cm right angle USB-OTG cable
- 15cm left angle USB-OTG cable
- 21cm straight USB-OTG cable
- Quick start guide



Installation

Installing the Application

1. Make sure the Android device operating system (OS) is either version 4.1 or above, supporting USB On-The-Go (OTG).



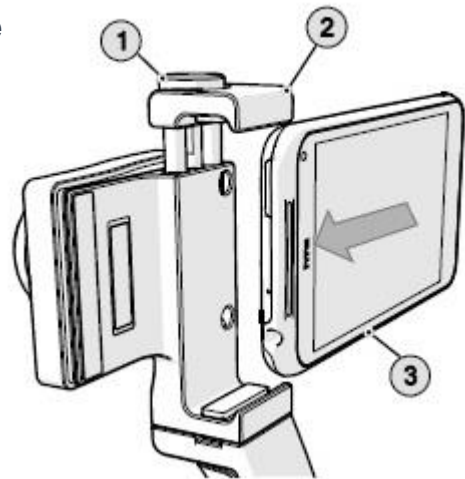
2. Visit [Google Play](#) online and download the free Therm-App® application, or scan the QR code.



Set Up

Connecting Therm-App® TH to the Android Device

- A. Turn the sizing knob [1] opening the clamps just enough so that the Android device [3] slides into the attachment bracket [2].
- B. Attach Therm-App® TH to the back of the mobile device by turning the sizing knob.
- C. Tighten the sizing knob [1] and the bracket [2] to fit the Android device. Ensure that the device is firmly attached.



Note: Do not fasten the sizing knob too tightly as it could damage the Android device.

- D. Connect the USB-OTG cable to both Therm-App® TH [1] and mobile device [2].

Note: Use only the USB-OTG cable supplied. In most cases, the micro USB cables supplied with mobile phones do not support USB-OTG functionality.

Note: Verify that the USB-OTG cable is properly connected to the Therm-App® TH and the mobile device.



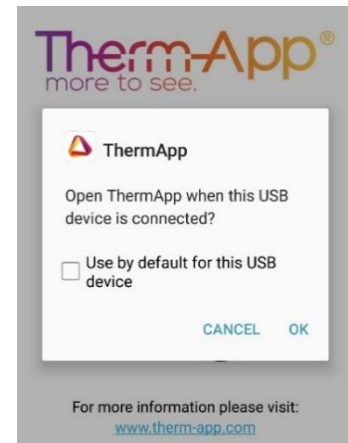
Note: For the first use of the Therm-App® TH device with an Android device, an initialization process must be completed. This process may take a few minutes and must not be interrupted. Make sure you have a stable internet connection prior to connecting your mobile device to the Therm-App® TH device.

Application Operation

Initialization

When first connecting Therm-App® TH to Android device:

- 1) Select **Use by default for this USB device** check box and tap **OK**. The Therm-App® application will automatically start and display the **Terms and conditions** screen.
- 2) Review and accept the **Terms and conditions**. The application will download the calibration files (a download progress bar will appear on the screen).
- 3) When download is completed, the application will display the image screen in Night Vision mode. While operating Therm-App® TH, you can change modes between Night Vision and Thermography (see page 12).

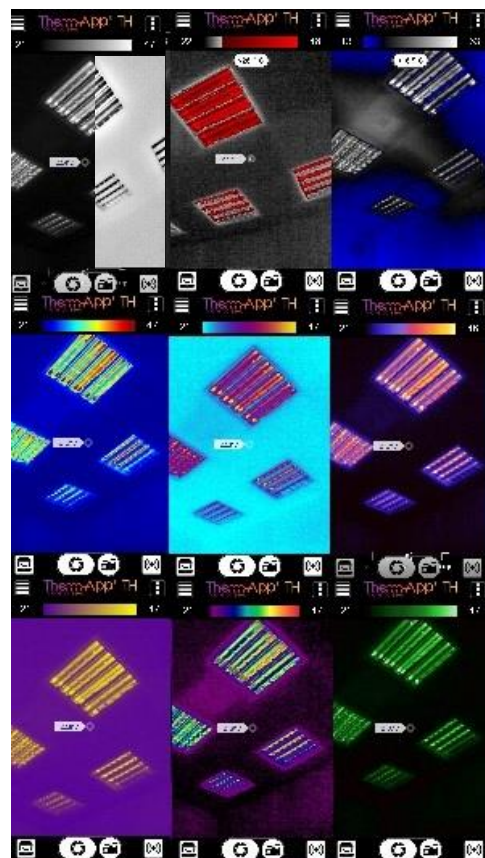


Selecting Color Palettes

On each imaging mode, the Therm-App® TH device image can be displayed using one of several palettes. To change the selected palette, swipe your finger across the image on the main screen:

Available palettes:

- **White Hot**
(Available using Thermography and Night Vision)
- **Black Hot**
(Available using Night Vision)
- **Iso Red* (Hot red, Thermography only)**
(Only items with temperatures above the threshold will be red, the rest will be greyscale.)
- **Iso Blue* (Cold blue, Thermography only)**
(Only items with temperatures below the threshold will be blue, the rest will be greyscale.)
- **Rainbow:** Blue, Green, Yellow, Red
(Available using Thermography and Night Vision)
- **Vivid:** Purple, Aqua, Pink, Yellow
(Available using Thermography and Night Vision)
- **Lava:** Black, Blue, Red, Yellow
(Available using Thermography and Night Vision)
- **Iron:** Purple, Yellow
(Available using Thermography and Night Vision)
- **PSY:** Purple, Blue, Green, Yellow, Red
(Available using Thermography and Night Vision)
- **Green Light:** Black, Dark Green, Bright Light Green
(Available using Thermography and Night Vision)



*Adjusting Hot and Cold Threshold:

Press the threshold temp. indicator [1] just below the temp. scale. An adjustable gauge [2] will appear on the screen. Swipe it left or right to set the threshold. Touch anywhere on the screen to make the gauge disappear.



App Screen Layout

- **Upper toolbar [1]**
- **Image display [2]**
- **Lower toolbar [3]**

Upper Toolbar

- **Settings button [1]** – For configuring Therm-App® TH settings (for a detailed settings explanation, see page 12).
- **Temperature bar [2] (Thermography mode)** – Presents the range of temperatures currently being viewed. The minimum and maximum temperatures are displayed on either side of the bar.
- **Temperature reading [3] (Thermography mode)** – Displays the temperature at the selected point on the screen (marked by a little box).
- **Quick Settings Menu [4]** – Allows selection of mode, emissivity, temperature detection settings, and palette.

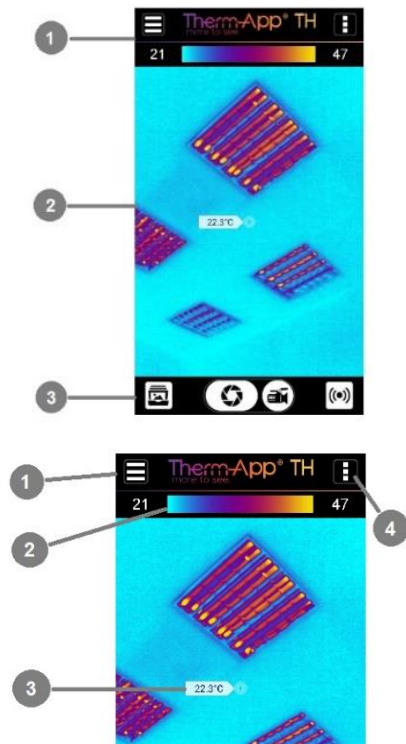
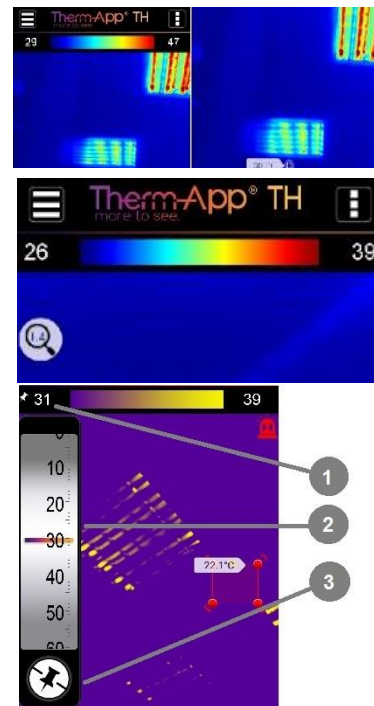


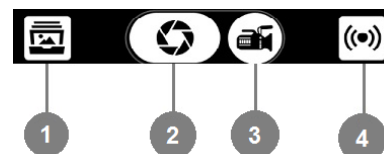
Image Display

- **Full Screen Mode** – By tapping the screen twice quickly, you can switch between standard and full screen modes.
- **Digital Zoom & Pan** – By making a pinching motion on the screen, the image will zoom in or out. In zoom mode, a magnifying glass with the zoom level appears on the top left corner of the thermal image. While zooming, the image can be panned up, down, left, or right.
- **Setting Manual Temperature Scale** – By pressing on the left or right temperature scale reading number [1], a manual scale [2] drops down. Slide the scale to select desired fixed temperature. A white thumbtack icon will appear next to the new fixed temperature reading [1]. Touch the screen again anywhere to close the scale. To return to automatic reading, tap the fixed temperature value and select the cancel-thumbtack icon [3].



Lower Toolbar

- **Gallery [1]** – Displays pictures stored on the Android device using the default album application.
- **Snapshot [2]** – Takes a snapshot of the image displayed on the screen.
- **Video Recording [3]** – Records a video stream of the image displayed on the screen.
- **Live Video Streaming [4]** – Stream the video of the image displayed on the screen (for detailed streaming instructions, see page 15).

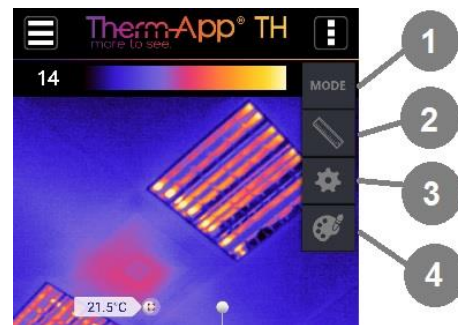


Settings

Inside the Quick Menu

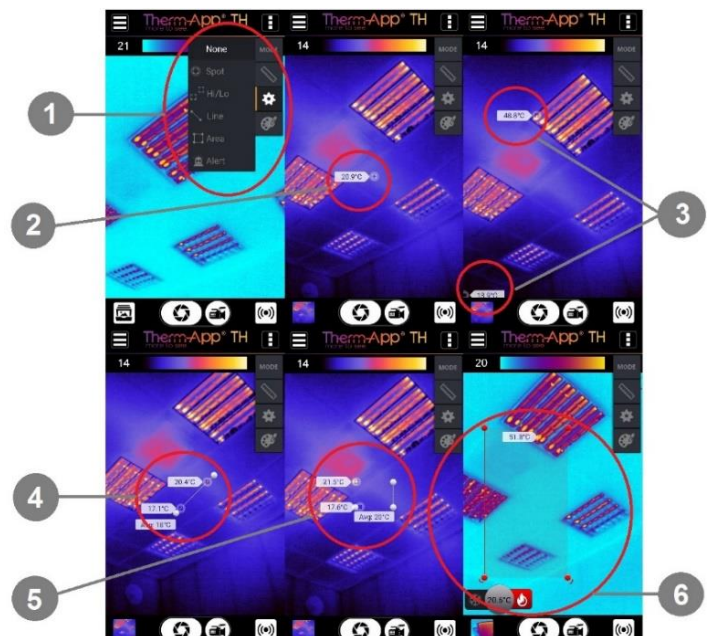
This menu allows you to quickly select:

- [1] **Imaging Mode**
(Thermography or Night Vision).
- [2] **Emissivity** and **Reflected Temperatures**
(see thermography settings on page 13).
- [3] **Temperature detection settings**
(see below for detailed walkthrough).
- [4] **Palettes** (see page 9).



Temperature Detection Settings

- [1] **Menu**
- [2] **Spot** – Temperature reading on a single spot.
- [3] **Hi/Lo** – Shows the highest and lowest temperatures on the screen.
- [4] **Line** – User draws a line on the screen. The highest and lowest temperatures in the area will be shown along with the average.
- [5] **Area** – User indicates size of a rectangle on the screen. The highest and lowest temperatures in the area are shown along with the average.
- [6] **Temperature alert** – Configure temperature alerts.



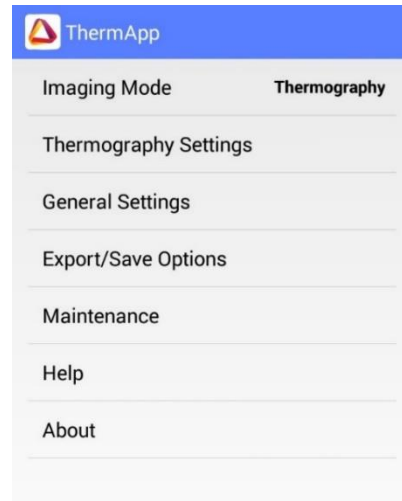
- [7] **Configuring Temperature Alerts:** Therm-App® TH can be configured to flash a red alert when it finds something **below** a certain temperature (**snowflake icon**) or **above** a certain temperature, (**fire icon**). This is done by tapping the respective icon, and swiping the temperature gauge to the desired temperature. The box will then flash red once a subject that meets the preset temperature crosses into the field. In the image, the temperature alert has been set to go off for anything above 20.6°C, and the box is red because the subject/area inside the box is 41.9°C.



Main Therm-App® TH Settings Menu

Tap the **Settings** button located on the upper toolbar. The settings screen includes:

- **Imaging Mode** – Switches between "Night Vision" and "Thermography" modes.
- **Thermography Settings** – Enables selection of temperature units, emissivity, reflected temperature, and scale truncation (see page 13).
- **General Settings** – See page 13 for full menu description.
- **Export/Save Option** – Select how photos and videos will be saved. (See page 15 for full walkthrough).
- **Maintenance** – Performs bad pixel repair and resets all parameters to default.
- **Help** – Links to User Manual, Therm-App® TH Support, and Terms of Use.
- **About** – General application and device version information.



Main Menu Options In Detail

Imaging Mode

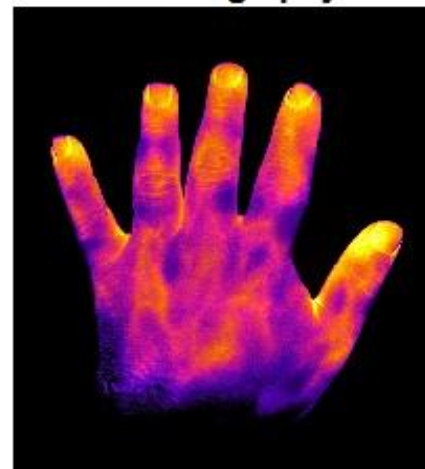
- **Night Vision** – This mode maximizes the difference between hot objects and their surrounding and is used for nighttime detection of various targets. Temperature cannot be measured in this mode.
- **Thermography** – Image pixels are colored in relation to their temperature. On the default rainbow palette, blue indicates the coldest measured temperature and red represents the hottest measured temperature. This mode is used for searching for temperature differences on the scanned scene.

***Note:** Temperature measurements stabilize about 8 minutes after activating the Therm-App® TH device. Thermography measurement might be influenced by the environment of the measured objects, the reflected temperature of the surrounding objects, and/or the emissivity of the measured object.*

Night Vision



Thermography

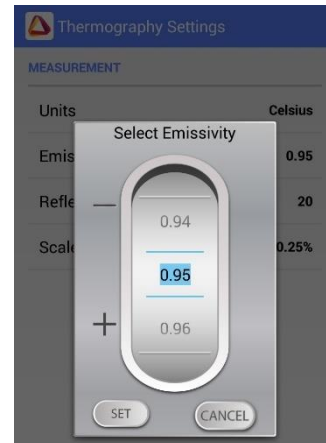


Thermography Settings

- **Adjusting Emissivity** – Emissivity is the ability of the surface of a material to emit energy as thermal radiation. The emissivity value (0 – 1) represents the ratio of energy radiated by the observed material to the energy radiated by a black body at the same temperature.

To adjust the emissivity ratio:

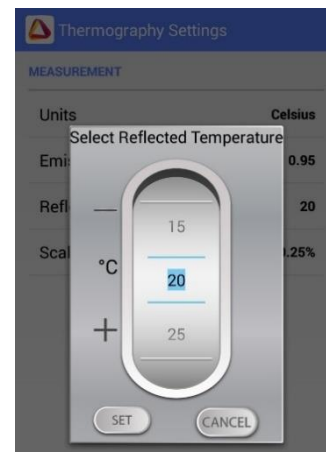
- Tap the **Emissivity** option on the screen.
- Scroll to the correct emissivity ratio and tap the **Set** button.



- **Adjusting the Reflected Temperature** – Reflected temperature represents the energy emitted by the surrounding objects and reflected by the measured surface. Setting this value accurately is important if the emissivity value is low.

To adjust the reflected temperature:

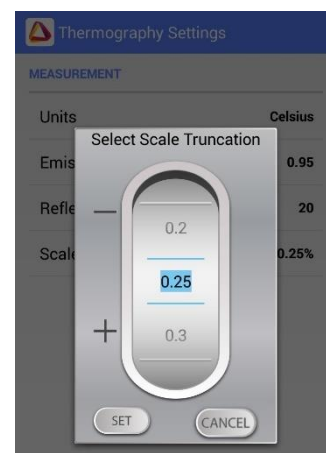
- Tap the **Reflected Temperature** option on the screen.
- Scroll to the correct temperature and tap the **Set** button.



- **Adjusting the Scale Truncation** – Within every image frame, the temperature span is calculated and displayed on the top of the thermography image. Use this parameter to define the minimum number of pixels (defined by percentage) required to affect the temperature span calculation.

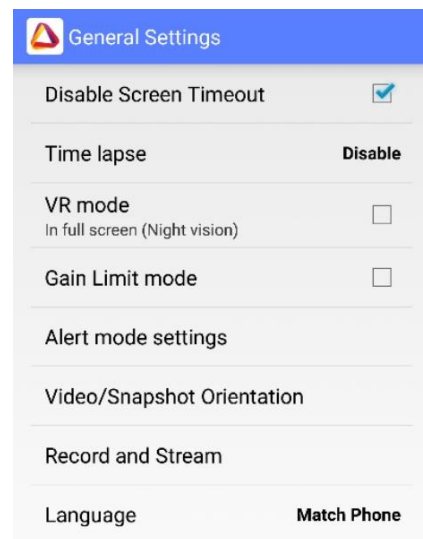
To adjust the truncation value:

- Tap the **Scale Truncation** option on the screen.
- Scroll to the correct temperature and tap the **Set** button.



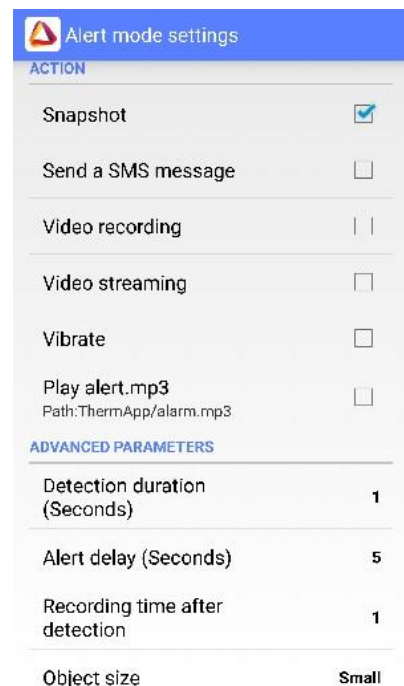
General Settings

- **Disable Screen Timeout** – Allows the device's default screen timeout to be disabled to enable ongoing use of Therm-App® TH (only valid when Therm-App® TH is connected and image is shown).
- **Time Lapse** – Therm-App® TH will take an image capture at set intervals. Once enabled, activate by holding down the snapshot icon for a few seconds. Hit the snapshot icon again once to stop the process.
- **VR Mode** – Use this mode when Therm-App® TH is connected to virtual reality (VR) goggles (not included, and available in full screen mode only).
- **Gain Limit Mode** – This mode will allow you to reduce the background noise when viewing an environment with low temperature contrast (such as a forest or a wall).
- **Alert Mode Settings** – Allows you to configure Alert Mode settings.



Action

- **Snapshot:** A snapshot is taken every time the preset temperature threshold is met.
- **SMS:** Will send an SMS to a preset phone number every time the assigned temperature threshold is met.
- **Video Recording:** Will record video for as long as the temperature meets the preset value.
- **Video Streaming:** Will stream to a pre-set location for as long as the temperature meets the assigned value (see page 15 for streaming settings).
- **Vibrate:** Will vibrate every time the preset temperature threshold is met.
- **Play alert.mp3:** Plays an .mp3 file every time the assigned temperature threshold is met. You may change the default file (ThermApp/alarm.mp3) per your preference.

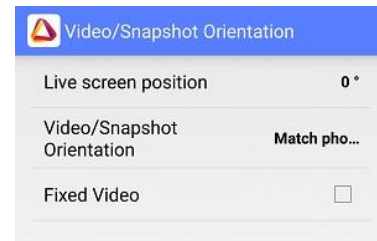


Advanced parameters

- **Detection Duration (Seconds):** Sets how long the object needs to be in the set field to trigger the alert.
- **Alert Delay (Seconds):** How long Therm-App® TH should wait to send consecutive alerts after the first alert is triggered (time between alerts).
- **Recording Time After Detection:** How long you want to continue recording after the object leaves the field.
- **Object Size:** Sets the minimum size of the object that will trigger the alert:
("Small"- 4x4 pixels, "Medium small"- 8x8 pixels, "Medium big"- 16x16 pixels, or "Big"- 32x32 pixels).

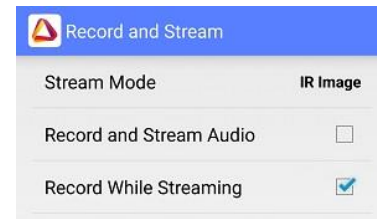
- **Video/Snapshot Orientation** – This lets you choose your viewing orientation, both while using the device and while viewing onscreen (on a display).

- **Live Screen Position:** Allows you to set the viewing orientation for the live screen.
- **Video/Snapshot Orientation:** Allows you to set the viewing orientation for videos or snapshots.
- **Fixed Video:** Blocks screen rotation.



- **Record and Stream**

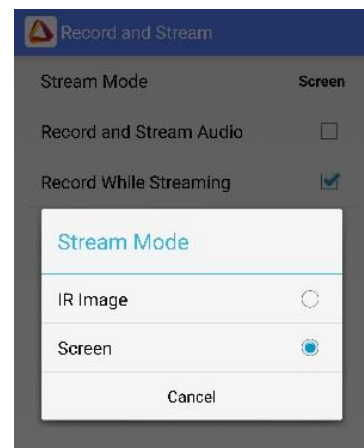
- **Stream Mode:** Share just the image, or your full screen.
- **Record and Stream Audio:** Check box to record audio with video.
- **Record while Streaming:** Check box to record while streaming.



- **Stream Mode:**

- **IR Image** (just the thermal image).
- **Screen** (thermal video, app screen details, and temperature reading).

***Note:** Video streaming means that live video will be sent over an internet connection from the Android device to any other device (PC, Tablet, Smartphone) connected to The Internet. Multiple devices can view the stream from a single Therm-App® TH. A solid internet connection is required to obtain good video quality.*

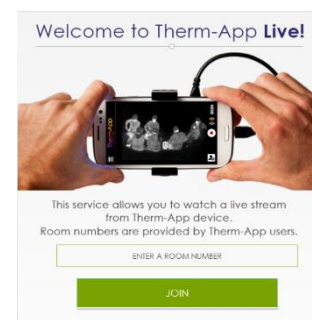
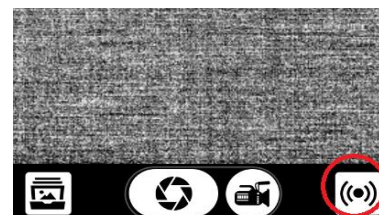


To activate video streaming:

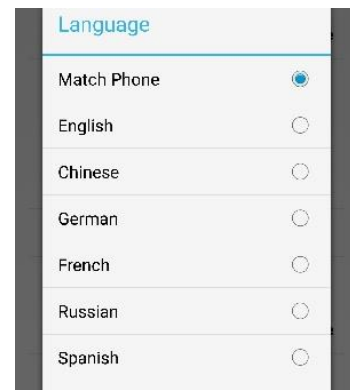
1. On your Therm-App® application click the icon on the bottom right side.
2. Choose the way(s) you wish to share your stream with others. A message with a link will be sent to them.
3. To watch the live stream on a computer, tablet, or smartphone, click the link.

*Please note that some browsers will have problem showing the video since an add-on is required.

4. Alternatively, go to <http://live.therm-app.com> and in the room number field, enter your device serial number (appears on the settings menu).

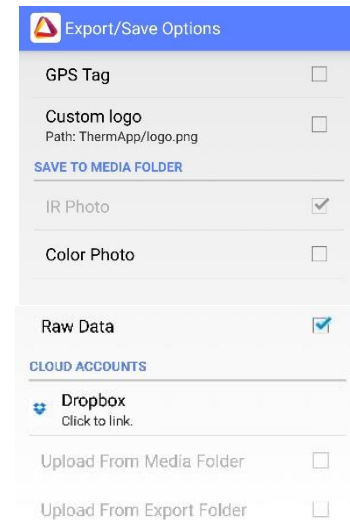


- **Language** – Select your preferred interface language (Match Phone, English, Chinese, German, French, Russian, or Spanish). Match phone is the default. If this feature is selected, the Therm-App® application will detect the language on your phone and attempt to match it.



Export/Save Options

- **GPS Tag** – Adds a GPS location tag to your images.
- **Custom Logo** – After adding your custom logo in .PNG format to the Therm-App® folder on your device, you can check this box to add your logo at the bottom of each image captured (it will replace the Therm-App® logo).



Save to media folder

IR Photo – The thermal image taken by Therm-App® TH (always selected).

- **Color Photo** – Saves a visual (normal) color image in your media files next to the thermal image you have just captured. If the **Color Photo** option is disabled, it means that either the device doesn't have a camera or the camera is being used by another application.

Cloud accounts

- **Raw Data** – A mandatory file for using the IRT Cronista PC analysis and reporting software with all data of an image, annotations, metadata, etc.
- **Dropbox** – Therm-App® TH files can be uploaded automatically to a Dropbox account. Use "click to link" to link the Therm-App® with your Dropbox account.
- **Upload From Media Folder** – Uploads files marked for saving on the media folder. Choose this option to upload to Dropbox when PC reporting software is not used.
- **Upload From Export Folder** – Uses Dropbox account to transfer Therm-App TH output to the PC analysis and reporting software.

Using IRT Cronista with your Therm-App® TH:

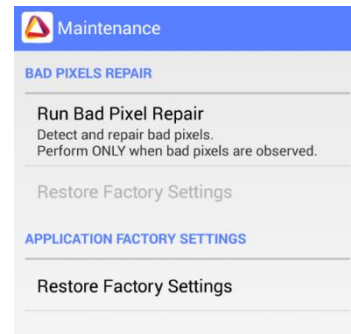
On your Therm-App TH:

1. Make sure you are on "Thermography" mode
2. Go to menu-->Export/Save Options
3. Make sure that "Raw Data" is saved.
4. After taking the images, connect your phone to your PC.
5. Locate the ThermApp folder on your phone.
6. Locate the "Export" folder.
7. Download the folder inside to you PC.
8. From the IRT Cronista software view this folder.

***Note:** marking all check boxes will create more copies of the images and will allow for accessing the outputs and checking images on the devices' gallery apps, exporting to the reporting and analysis PC software, and to Dropbox, but will consume more storage space.*

Maintenance

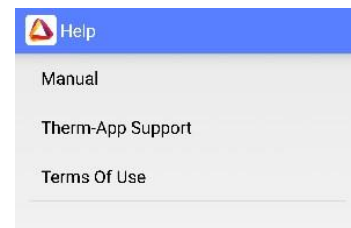
Following extensive operation of the thermal sensor, or due to mechanical shock, some pixels may need digital repair. Bad pixels are observed as pixels that are darker or brighter than their surroundings. To eliminate these "bad pixels" press **Run Bad Pixel Repair > Start**, and follow the onscreen instructions.



Help

In the **Help** heading you will find options for:

1. Manual
2. Therm-App® support
3. Terms of use



About

In the **About** section you will find information about the device, including serial number, application version, firmware version, and hardware version.



Specifications

Smartphone	
Minimal Requirements	Android 4.1 and above, supporting USB OTG (a.k.a USB Host)
High Resolution Touch Screen	Yes (By the Android device used)
Hardware	
Imager	384 x 288 microbolometer LWIR 7.5 -14μm
Optics	6.8mm lens (55° x 41°)
Focus Range	Manual, 0.6m to infinity
Frame Rate	8.7Hz
Weight	123 grams / 4.33 ounces
Size	55 x 65 x 40mm (2.16 x 2.55 x 1.57in)
Operating Temperature	-10°C to +50°C (14°F to +122°F)
Storage Temperature	-20°C to +50°C (-4°F to +122°F)
Power Supply	No battery, 5V over USB OTG cable, power consumption <0.5W
Certifications	CE, FCC, RoHS, WEEE
Encapsulation (IP rating)	IP54
Mount/Handle	Ergonomic handle, using 1/4" standard tripod mount
Device Attachment	Clip-on for smartphone (5 -10cm span)
Measurement	
Resolution	384 x 288 pixels (>110,000 pixels)
Accuracy	+/- 2°C or 2% (@25°C) whichever is higher
Sensitivity	NEDT <0.10°C
Scene Temperature	0°C to +200°C Outside this range measurement may be considerably inaccurate
NUC Calibration	Shutterless
Calibration Routine	Est. 2 years
Software	
Viewing Modes	• Night Vision • Thermography
Output	Video & Audio (h.264), Snapshot (IR + VIS + Metadata)
Android Share	Via media gallery to multiple services
Temperature Scale Range	Auto, manual
Color Palettes	Hot White / Hot Black / Iron / Rainbow / Vivid / PSY / Lava / Green Light / Red Hot Threshold / Cold Blue Threshold
Zoom	Continuous digital zoom using touchscreen
Software and Feature Updates	Yes (via Google Play)
Maintenance	Bad pixel repair utility
Background Compensation	Yes
Bad Pixel Repair (BPR)	Self-supported user function
Annotations	Text + video annotations

Troubleshooting

Before starting any troubleshooting procedure, make sure that:

- The Android device is compatible with Therm-App® TH. Refer to list of compatible devices using the link on page 7.
- The Therm-App® application is installed on the device. If it is not installed, download it from [Google Play](#).
- Therm-App® TH and the Android device are connected properly via a USB-OTG cable.

To verify that your cable is OTG compatible:

1. Plug the USB OTG cable into the Android device USB port.
2. Verify that the **USB connector connected** message appears on top of the screen.
3. Replace the cable if this message does not appear.

Table 1: Troubleshooting List

#	<i>Problem / System Failure</i>	<i>Indication</i>	<i>Solution</i>
1	<i>Application does not start</i>	<i>App is not initiated after connecting to Therm-App® TH</i>	Ensure that the USB OTG cable is properly connected between the Android device and Therm-App® TH device. Try using a different cable, from the three cables supplied. Ensure that the Therm-App® application has been installed from Google Play. Try installing the app on a different device to find out if this is an Android Device or Therm-App® TH device problem. In rare cases, there might be compatibility issues between the Android device and the Therm-App® TH device.
2	<i>Application shuts down</i>	<i>Application stops operating and shuts down</i>	Ensure that the USB OTG cable is properly connected between the Android device and the Therm-App® TH device. Verify that you are using a USB-OTG cable.
3	<i>Repeated initialization</i>	<i>Upon each startup, Therm-App® TH performs the initialization process</i>	From the apps menu, select My files > All files > Therm-App. Delete folder with a serial number tag. Uninstall and then install Therm-App® application again. Unplug and then plug in the Therm-App® TH device again.
4	<i>Battery saver interrupts Therm-App® TH</i>	<i>Android device switches to sleep mode</i>	Select the Disable screen timeout check-box on the screen.
5	<i>Therm-App® application is not found</i>	<i>The Android device switches to safe mode</i>	Unplug the USB-OTG cable. Restart the Android device. Connect the Therm-App® TH device with the Android device.
6	<i>Application screen is not displayed</i>	<i>A message screen appears on app startup</i>	Press the Android Home button to exit the app and reconnect Therm-App® TH and the Android device.

#	Problem / System Failure	Indication	Solution
7	No active view	Camera view is not displayed after completing app initial setup	From the apps menu, select My files > All files > Therm-app . Delete folder with a serial number tag. Re-install Therm-App® application. Unplug and then plug in the Therm-App® TH device again.
8	Video not displayed on the Android device	Blank screen	Ensure that the Android device is turned on. Ensure that the Therm-App® TH device lens is not covered or blocked. Ensure that the USB OTG cable is properly connected between the Android device and Therm-App® TH device.
9	Image noise	Screen image appears full of static	Ensure that the USB OTG cable is properly connected between the Android device and the Therm-App® TH device. Ensure that nothing is obstructing the view of the Therm-App® TH device and that the line of sight is not blocked by glass or other transparent materials. Check that the camera lens is clean.
10	Unfocused image	Image blurred	Turn the lens focus ring while pointing the Therm-App® TH device at a sharp-edged object. Do not turn the lens focus ring too far as the lens could slip out of place.
11	Inaccurate temperature readings	Temperature readings are not as expected	If device has just been turned on, or the environmental temperature has changed, wait for a few minutes until device temperature stabilizes.
12	Battery discharge	Android device battery discharges quickly	Disconnect USB-OTG cable when Therm-App® TH is not in use.
13	Bright or dark pixels appear on pictures and videos	Little dots appear on all images and videos in exactly the same spot	"Bad Pixel Repair" procedure Settings > Maintenance > Run Bad Pixel Repair
14	Android device overheats	Android device overheats while connected to Therm-App® TH	Overheating occurs when an Android device is not fully USB-OTG compatible and power consumption exceeds normal use. Connect Therm-App® TH to a different supported Android device.