

# **Thermal Imager**

MiniX

User Manual



Contact Us

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# 1 Product Overview

# 1.1 Thermal Imager Introduction

The thermal imager (hereinafter refers to as **the Device** or **the Imager**) is an infrared thermal camera connected to mobile devices like smartphones or pads with Android or iOS systems through Wi-Fi or Bluetooth connection.

It can be used to conduct temperature measurement, snapshot capturing, video recording and PDF report generation and sharing and other functions with a software client HIKMICRO Viewer.

# 1.2 Main Components

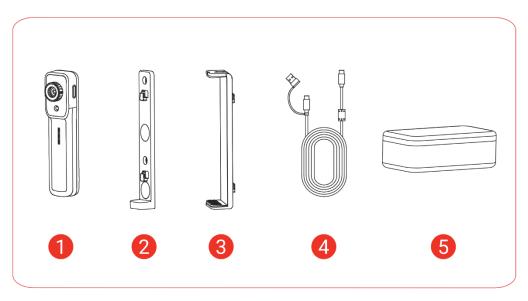


Figure 1-1 Main Components

No. Components	Description
----------------	-------------

1	Thermal imager	Infrared thermal camera which can
		measure temperature, capture
		snapshots, record video and etc.
2	Surface mount	Attach the holder directly on magnetic
	holder	surfaces, or screw the holder to non-
		magnetic surfaces.
		īi
		Screws are not included in the imager
		case.
3	Phone mount	Fix your phone to the holder with a
	holder	extendable rod.
4	USB cable	USB-C to USB-C/USB-A connnection.
5	Imager case	Place a thermal imager, holder, USB
		cable and other components.

# 1.3 Appearance

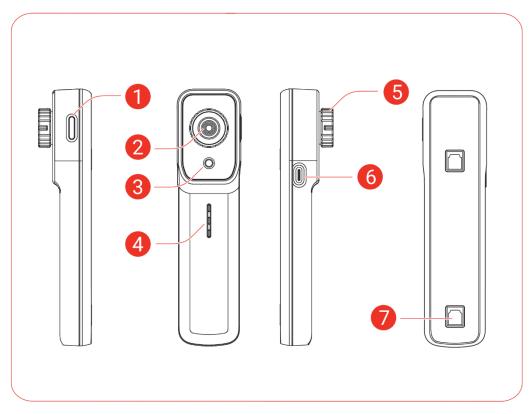


Figure 1-2 Thermal Imager Appearance

NO.	Name	Description
1	Power button	Hold to power on/off the imager.
2	Thermal camera lens	View thermal images.
3	Visual camera lens	View visual images.
4	Status indicator	<ul> <li>Indicate the working status of the imager:</li> <li>3 indicators running from top to bottom: Thermal imager starting.</li> <li>3 indicators running from bottom to top: Charging normally.</li> <li>Indicators solid on: The number of solid indicators represents the remaining battery.</li> <li>2 lower indicators flashing alternatively: Charging or battery exception occurs.</li> </ul>
5	Focus ring	Adjust the focus of the thermal image lens.
6	USB-C port	Charge battery or transfer data.
7	Mounting hole	Mount surface mount holders or phone mount holders.

Table 1-2 Thermal	Imager Appearance	Description
	mayer Appearance	Description

# 2 Imager Mounting

# 2.1 Surface Mount

Use a surface mount holder to fix the imager as follows:

- 1. Mount the holder:
- On magnetic surfaces: Attach the holder directly.
- On non-magnetic surfaces: Use two M3 screws (not included) to fix the holder to the surface.
- 2. Hook the imager to the holder.
- 3. Secure the mounting by pressing the imager from top to bottom.

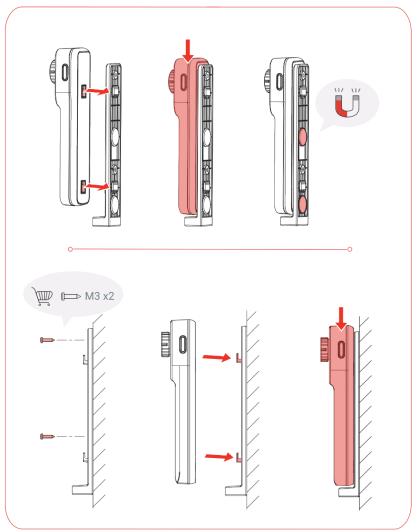


Figure 2-1 Surface Mount Holder

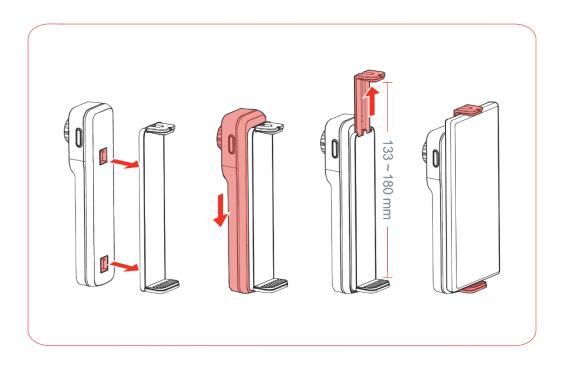
## i

Do Not place any objects on the imager in case of accidental dropping.

# 2.2 Phone Mount

Use a phone mount holder to clamp the imager to a phone or a pad.

- 1. Hook the imager to the holder.
- 2. Secure the mounting by pressing the imager from top to bottom.
- 3. Stretch the extendable rod of the holder to fit the height of your phone or pad.



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The phone mount holder is extendable up to 180 mm.

## 2.3 Tripod Mount

Use a surface mount holder and connect it to a UNC 1/4"-20 tripod.

- 1. Hook the imager to the holder.
- 2. Secure the mounting by pressing the imager from top to bottom.
- 3. Connect the tripod to the screw threads and tighten the connection.

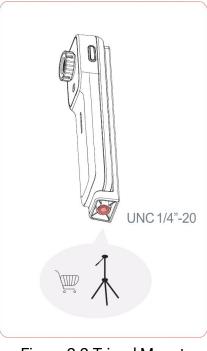


Figure 2-2 Tripod Mount

## i

You need to prepare a tripod (not included in the imager case).

# 3 Imager Charging

Use a supplied USB cable to charge the imager.

For the first time use, it is recommended to charge the imager for at least 1.5 hours in power-off status.

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It is also possible to use the imager while charging. We recommend you to do this in ambient temperature lower than 30°C.

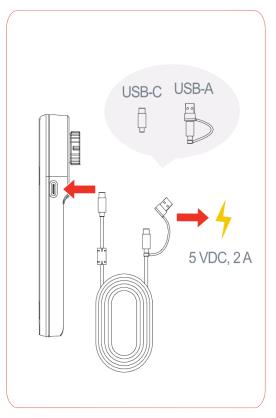


Figure 3-1 Imager Charging with a USB Cable

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- Single flashing indicator means that it is charging normally. Three steady indicators indicate the full battery.
- You need to prepare a power adapter (it is NOT included in the imager case).

# 4 Download and Connect HIKMICRO Viewer

## 4.1 HIKMICRO Viewer Introduction

HIKMICRO Viewer (hereinafter referred to as **the APP**) is a software client on mobile devices, it can be used to connect the imager to achieve functions including temperature measurement, snapshot capture, video recording, PDF report generation and sharing and online firmware upgrade and etc.

## 4.2 Download the APP

Scan the QR codes or search "HIKMICRO Viewer" on App Store or Google Play to download and install the APP.



Figure 4-1 HIKMICRO Viewer QR Code

## 4.3 Connect Thermal Imager and the APP

## 4.3.1 Connection Via QR Code Scanning



If the imager is connected to other mobile devices, please disconnect first and retry, otherwise the connection may fail.

- 1. Press and hold power button to power on the imager.
- 2. Launch HIKMICRO Viewer, and tap + > Scan QR Code to scan the QR code attached on the imager.
- 3. Tap **Join** in the pop-up window to pair the APP with the imager.



Figure 4-2 QR Code Connection

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If connected successfully, "Connected" will show in the APP home screen.

## 4.3.2 Connection Via Bluetooth

# Â

If the imager is connected to other mobile devices, please disconnect first and retry, otherwise the connection may fail.

- 1. Press and hold power button to power on the imager.
- 2. Launch HIKMICRO Viewer, and tap + > Add Device > Thermal Imager (Wireless) to add the imager.
- 3. Tap Connect to connect the imager and the APP.



Figure 4-3 Bluetooth Connection

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Make sure that Bluetooth, Camera, WLAN and Location permissions in your phone are given, or the connection may fail.

## 4.4 Home Screen Overview

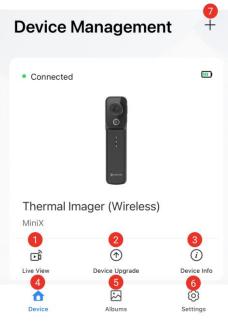


Figure 4-4 HIKMICRO Viewer Home Screen

No.	Name	Description
1	Live View	Browse real time thermal imaging display,
		including image calibration, temperature
		measurement, and taking snapshots and
		videos, etc.
2	Device	Online upgrade the imager firmwares.
	Upgrade	
3	Device Info	Browse and modify the imager information,
		including reset and error diagnosis, etc.
4	Device	Return to the APP home screen.
5	Albums	Store the captured images and videos.
6	Settings	Set general settings, view privacy terms, and
		browse user manual and FAQs, etc.
7	Add	Connect the imager to the APP via bluetooth
		or QR code.

## 4.5 User Manual and FAQs

In the home screen, tap **Settings** for detailed information about the App and the device.

# 5 Live View

## 5.1 Live View

In **Live View**, you can adjust and calibrate thermal image, measure temperatures, change palettes, etc.

## 5.1.1 Live View Interface



No.	Functions	Description
1	SuperIR	Enhance the object outlines for better image display.
2	Auto Calibration	The device will automatically implement Flat Field Calibration (FFC).
3	Manual Calibration	The device will implement Flat Field Calibration (FFC) one time after you tap the icon.
4	Battery	The remaining power of the imager.
5	Palattes and Display Termperature Range	Auto A: Display temperature range will be automatically adjusted Manual: Drag the temperature value to adjust temperature range. In manual adjustment, the palette turns to focus palette mode, in which object falling in the set range remains the selected palette while the rest is displayed in white hot palette.
6	Image	Adjust brightness, sharpness, contrast and color distribution.
7	Parameter	Set parameters for real-time temperature measurement. Please see <u>6.1</u> for detailed information.
8	Record	Record videos.
9	Camera	Take snapshots.
10	Albums	Browse snapshots and videos.
11	Measurement	Set temperature measurement tools. Please see <u>6.2</u> for detailed information.
12	Palettes	Select color styles for thermal imaging.
13	Image Mode	Select various real-time imaging modes , including <b>Thermal</b> , <b>Fusion</b> , <b>PIP</b> , <b>Blending</b> and <b>Visual</b> . Please see <u>5.1.4</u> for detailed information.

Table 5-1 Live View Interface Icons

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Move your phone to horizontal direction, and the status bar in live view will shift to vertical direction.

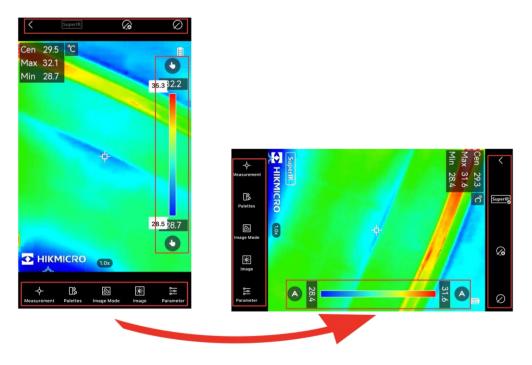


Figure 5-2 Status Bar Rotation

## 5.1.2 Adjust Image Display

#### **Focusing Adjustment**

Aim the thermal lens to your target, and rotate the focus ring to make the image clear.

#### SuperIR

Switch on SuperIR to get an enhanced thermal image. Tap again to turn it off.

## 5.1.3 Thermal Image Calibration

For temperature measurement accuracy and image effect, it is recommended to conduct image calibration. It is common to have brief image freeze during calibration.

#### Auto Calibration

In this mode, the imager automatically calibrates and refreshes images periodically according to its internal rules.

Tap  $\langle a \rangle$  again to turn on/off the function.

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It is recommended to enable **Auto Calibration**. Otherwise, you need conduct **Manual Calibration** periodically for the accuracy of thermal imaging and temperature measurement.

#### **Manual Calibration**

Tap  $\bigcirc$  to calibrate the image for one time.

## 5.1.4 Set Image Mode

You can set the thermal/visual view of the device.

•.•	Thermal	The device displays the thermal view.
æ	Fusion	The device displays the thermal image of the
		live view outlined from visual image.
	PIP (Picture	The device displays thermal view inside the
	in Picture)	optical view.
9	Blending	The device displays the mixture view of
		thermal channel and visual channel.
		ī
		You can adjust the visual-thermal ratio from 0 to 100. The lower the value is, the denser the visual effect is.
<b>1</b>	Visual	In visual mode, the device displays the visual
		view.

Tap **I** in live view to select a display mode:

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In **Fusion**, **PIP** and **Blending** modes, you can adjust the value of Parallax Correction. According to the distance between the imager and the target, slide the value bar to align the visual image with the thermal image.

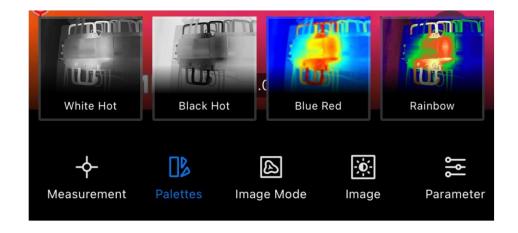


Figure 5-3 Parallax Correction Adjustment

### 5.1.5 Select Palettes

**Palettes** highlights the imaging details as the image displays different colors according to temperature range.

Tap 🚺 to select appropriate palettes.





## 5.1.6 Adjust Display Temperature Range

After selecting appropriate palettes, it is advisable to adjust display temperature range to highlight the thermal image of the target of interest.

#### Auto Adjustment

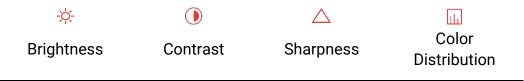
Tap<sup>O</sup>, the imager will shift to **Auto Adjustment**, and the display temperature range will be automatically adjusted.

#### Manual Adjustment

Tap (A), the imager will shift to **Manual Adjustment**. It is a focus palette that you can swipe the temperature value up and down to adjust the range, focusing on the target in the set range.

## 5.1.7 Set Image Parameters

For better image analysis, it is recommended to tap 🔅 to set appropriate parameters:



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Color Distribution supports Linear and Histogram:

- Linear: The mode displays relatively huge temperature gap.
- Histogram: The mode displays relatively small temperature gap.

# 6 Temperature Measurement

## 6.1 Set Temperature Measurement Parameters

For more accurate measurement, tap  $\succeq$  to set parameters before temperature measurement.

ICON	Function	Description
3	Emissivity	Select or customize the emissivity of the target.
er)	Distance	Set the distance (unit: m) between the target and the imager.
₽	Temperature Range	Set the temperature range of targets. It is recommended to choose <b>Auto</b> mode as the temperature range is automatically adjusted based on the temperature of the observed target.
°C	Temperature Unit	Set temperature unit. You can select <b>°C</b> , <b>°F</b> , or <b>K</b> .
- <u>`</u> ḿ-	High Temperature	When the target temperature detected by the imager is higher than the set temperature threshold, the high temerature alarm will be triggered. Please see <u>6.2.4</u> for detailed information.

Table 6-1 Temperature Measurement Parameters

## 6.2 Measure Temperature

Measure temperature with available tools, including **Point**, **Line** and **Rectangle** tools.

## 6.2.1 Add Point Measurement Tool

- 1. Тар 🔶 .
- 2. Tap any part of the screen to add point tools

Icon	Function	Description
¢	Center Point	Display the real-time temperature of the center of the live image.
¢	Hot Point	Display the real-time highest temperature in live view.
<b></b>	Cold Point	Display the real-time lowest temperature in live view.
¢	Custom Point	Display the temperature of a user-defined point.

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Tap 🔟 to clear all measurement tools.

3. Optional: Edit the point

Move Point:

- 1) Tap 🕂 again to turn off the point tool.
- 2) Tap and drag the point to desired locations.
- 3) Tap any part in live view to finish.

#### Remove Point:

- 1) Tap + again to turn off the point tool.
- 2) Tap the custom point.
- 3) Tap the pop-up 😣 button to finish.

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NO MORE THAN 3 custom points are supported to set in live view.

## 6.2.2 Add Line Measurement Tool

- 1. Tap -∲- > ∕.
- 2. Press and drag your finger on the screen to add a line in live view.
- 3. Optional: Show/Hide Temperature Result
  - 1) Tap  $\land$  again to turn off the line tool.
  - 2) Tap the line and then **Edit** character on the line.
  - 3) Slide **(**) to show/hide the highest/lowest/average temperature in the pop-up window.
  - 4) Tap **OK** to confirm the settings.

#### 4. Optional: Remove the Line

- 1) Tap  $\land$  again to turn off the line tool.
- 2) Tap the line and then **Edit** character on the line.
- 3) Tap  $\overline{\blacksquare}$  on the upper right corner in the pop-up window.

### 6.2.3 Add Rectangle Measurement Tool

- 2. Press and drag your finger on the screen to add a rectangle in live view.
- 3. Optional: Edit the rectangle.

Move Rectangle:

1) Tap 🔲 again to turn off the rectangle tool.

2) Tap the rectangle and **Edit** character pops up.

3) Press Edit and drag the rectangle.

4) Tap any part outside of the rectangle to end the moving process.

Resize Rectangle:

1) Tap 🔲 again to turn off the rectangle tool.

2) Tap the rectangle and drag its vertex.

3) Tap any part outside of the rectangle to end the resizing process.

Remove Rectangle:

- 1) Tap the rectangle, and **Edit** character pops up.
- 2) Tap Edit and an edition window pops up.
- 3) Tap  $\overline{\underline{m}}$  on the upper right corner to remove it.

4. Optional: Show/Hide Temperature Result

1) Tap the rectangle, and **Edit** character pops up.

- 2) Tap Edit and a window pops up.
- 3) Slide 🜔 to show/hide the highest/lowest/average temperature.
- 4) Tap **OK** to confirm the settings.

i

NO MORE THAN 3 rectangles are supported to set in live view.

## 6.2.4 Set High Temperature Alarm (Optional)

If the target temperature exceeds the set value, the red remainder **High Temp** will flash in live view.

- 1. Tap \Xi > 📺 to open the High Temp interface.
- 2. Input the maximum value of **High Temp**.
- 3. Optional: Set **Sound Alarm/Vibrating Alarm**. Slide **(**) to show/hide the sound alarm or vibrating alarm.
- 4. Slide **High Temp** to enable the alarm.
- 5. Tap **OK** to confirm the settings.

# 7 Capture Snapshots and Record Videos

# 7.1 Capture Snapshots

- 1. Tap 🛑 to capture thermal images and save them to the APP album.
- 2. Optional 1: Save the visual image. If enabled, a correspondent visual image will be saved to **Albums** while taking the thermal image of the target.
- 3. Optional 2: Save snapshots to your phone. Tap **Settings > General > Save Pictures to Phone**.

# 7.2 Record Videos

- 1. Tap 门 to shift to **Video** mode.
- 2. Tap (O) to start the video recording, and tap again to stop.

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- Snapshot and Video modes can be freely switched around.
- The video clip shorter than 3 seconds can not be saved.

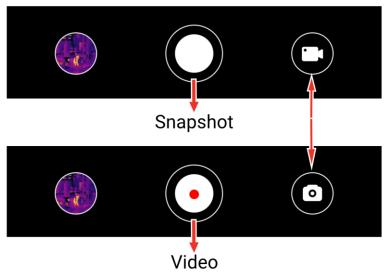


Figure 7-1 Switch Between Snapshot and Video Modes

## 7.3 View Snapshots/Videos

You can view the pictures and videos saved in the APP album as follows:

- View the last captured pictures and videos: Tap the thumbnail image on the lower left corner in live view.
- View all the captured pictures and videos:
  - Tap the thumbnail image on the lower left corner in live view, then
     tap in the upper right corner in edition interface.
  - Tap Albums 🔛 in the home screen.

# 7.4 Edit Snapshots

You can adjust the parameters of the snapshot to get more accurate temperature results.

- 1. Enter to the **Albums** and select the snapshot.
- 2. Tap  $\square$  to enable editing functions.
- 3. Tap **Save** to save the changes.

Icon	Function	Description
		Re-adjust temperature measurement tools and the accroding temperature results in the image.
÷	Measurement	<ul> <li>Tap Delete to remove single measurement tool. No more than 3 points and rectangles are supported.</li> <li>Tap in to remove all the measurement tools and temperature results.</li> </ul>
	Image Mode	Re-adjust image modes, including <b>Termal, Fusion</b> , <b>PIP Blending</b> and <b>Visual</b> . Please see <u>5.1.4</u> for detailed information.
₽	Level and Span	<ul> <li>Auto<sup>†+†</sup>: The APP adjusts display level and span automatically.</li> <li>manual<sup>●</sup>: Drag the slider to re-adjust the highest and the lowest temperature of the thermal image.</li> <li>1-Tap<sup>®</sup>: Tap an area of interest in the image and a ractangle appears. Resize the rectangle to adjust the temperature range, and show as many details as possible.</li> </ul>
	Palettes	Select the embeded palette modes.
- <u>ˈ</u> m͡-	Color Alarms	Set the highest, lowest temperature or centain temperature range in a snapshot to highlight the targeted areas. Please see <u>7.4.1</u> for detailed information.
١	Parameter	Re-adjust Emissivity, Distance, Environment Temperature and Temperature Unit. It is available to remark on the picture and browse device information.Please see <u>6.1</u> for detailed information.

Table 7-1 Icons for Snapshots Editing

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Video does NOT support editing functions.

## 7.4.1 Set Alarm Mode Palettes

Alarm mode palettes allows to mark the targets of certain temperature range with a different color from the rest.

1. Tap  $\square > -\square$  to select an alarm mode.

2. Input the value to the box in a valid range.

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Temperature range set in **Parameters** during temperature measurement is the range of alarm modes in snapshot editing.

3. Tap **Confirm** to confirm the settings.

4. **Optional:** Tap **Disable**  $\bigcirc$  to clear the alarm mode.

Table 7-2 Icon Description

lcon	Alarm Mode	Description
	Above Alarm	Set the alarm temperature, and the target with the temperature higher than the set value are displayed in red.
	Below Alarm	Set the alarm temperature, and the target with the temperature lower than the set value are displayed in blue.
	Interval Alarm	Set the alarm temperature section, and the target with the temperature in the range are displayed in yellow.
Ω	Insulation Alarm	Set the alarm temperature range, and the target with the temperature higher than the set value will be colored in purple; with the temperature lower than the set value will be colored in cyan; and with the temperature in the range will be colored in white hot.

## 7.5 Share Snapshots and Videos

- 1. Enter to Albums, and tap  $\begin{array}{c} \end{array}$  to select the snapshots and videos.
- 2. Tap 🖆 to share a ZIP Archive with the third party or save to your phone.
- 3. **Optional**: Tap 上 to save snapshots and videos to your phone.

## 7.6 Generate and Share PDF Report

- 1. Enter to **Albums** and select the snapshot.
- 2. Tap 📴 to edit the report information.

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File Name is a MUST.

3. Tap Next >  $\checkmark$  to generate a PDF report.

4. Tap  $\Box$  to share the report with the third party.

i

Video does NOT support PDF report generation and sharing.

# 8 Upgrade and Maintenance

# 8.1 Upgrade the Imager

For better operation experience, it is recommended to upgrade to the latest version in time. The imager firmware update is as follows:

- In the home screen, tap **Device Upgrade > Check for Updates**.
- In the home screen, tap Device Info > Device Upgrade > Check for Updates.

# 8.2 Reset the Imager

Tap **Device Info > Reset > OK** to restore the thermal imager.



Be careful to use this function, or the data will be lost.

# 8.3 Error Diagnosis

If you encounter some device exceptions during the operation, error diagnosis can help you quickly troubleshoot. Feedback paths are as follows:

- In the home screen, tap **Device Info > Device Diagnosis**.
- In the home screen, tap **Settings** > **Contact Us** to get online service support, hotline support or to submit error logs.

# 9 More Operations

# 9.1 Connect Thermal Imager to HIKMICRO Analyzer

The Imager can also connect to HIKMICRO Analyzer, a PC client, to realize real-time temperature measurement and target observation, etc.

Please contact dealers or technical support employers to get the installation package of HIKMICRO Analyzer.

- 1. Hold the power button to power on the imager.
- 2. Connect the imager with your computer via the supplied USB cable in the imager case.
- 3. Launch the Analyzer client.

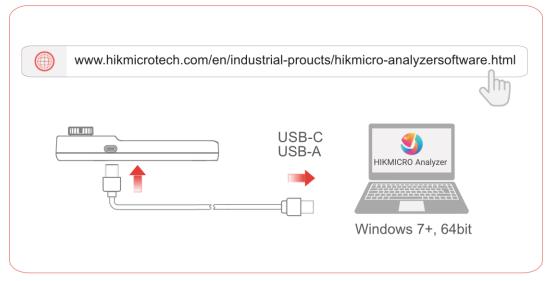


Figure 9-1 Imager and Analyzer Connection via a USB Cable

# Legal Statement

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### About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the HIKMICRO website (www.hikmicrotech.com/).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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These clauses apply only to the products bearing the corresponding mark or information.

## EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Directive 2014/30/EU (EMCD), Directive 2014/35/EU(LVD), Directive 2011/65/EU (RoHS).

Hereby, Hangzhou Microimage Software Co., Ltd. declares that this device (refer to the label) is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

https://www.hikmicrotech.com/en/support/download-center/declarationof-conformity/

## Frequency Bands and Power

The frequency bands and transmitting power (radiated and/or conducted)

nominal limits applicable to the following radio equipment are as follows:

Wi-Fi 2.4 GHz (2.4 GHz to 2.4835 GHz): ≤19 dBm

Wi-Fi 5 GHz (5.15 GHz to 5.25 GHz): ≤ 17 dBm

Bluetooth 2.4 GHz (2.4 GHz to 2.4835 GHz): <10 dBm

5.15-5.25GHz バンドは室内でのみ使用になります。

## **RF Exposure Information**

This device has been tested and meets applicable limits for Radio Frequency (RF) exposure.

For the device without a supplied power adapter, use the power adapter



provided by a qualified manufacturer. Refer to the product specification for detailed power requirements.

Directive 2012/19/EU (WEEE Directive): Products marked with this symbol cannot be disposed of as unsorted municipal

waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information, see:\_<u>www.recyclethis.info</u>.



Directive 2006/66/EC and its amendment 2013/56/EU (Battery Directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific

battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information, see: www.recyclethis.info.

### Industry Canada ICES- 003 Compliance

This device meets the CAN ICES-003 (B) / NMB-003 (B) standards requirements.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment.

(i)The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Cet appareil répond aux exigences des normes CAN ICES-003 (B)/NMB-003 (B).

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ce matériel est conforme aux limites de dose d'exposition aux rayonnements, CNR-102 énoncée dans un autre environnement.

(i)Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

### KC

B급 기기: 이 기기는 가정용 (B급) 전자파적합기기로써 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

### NCC

取得審驗證明之低功率射頻器材,非經核准,公司、商號或使用者均不得擅 自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信;經發現有干擾現 象時,應立即停用,並改善至無干擾時方得繼續使用。

前述合法通信,指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

應避免影響附近雷達系統之操作。

### Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

### Laws and Regulations

Use of the product must be in strict compliance with the local electrical safety regulations.

### Technical Support

https://www.hikmicrotech.com/en/contact-us.html portal will help you as a HIKMICRO customer to get the most out of your HIKMICRO products. The portal gives you access to our support team, software and documentation, service contacts, etc.

#### Power Supply

- The input voltage should meet the Limited Power Source (5 VDC, 2 A) according to the IEC61010-1 standard. Please refer to technical specifications for detailed information.
- Make sure the plug is properly connected to the power socket.
- DO NOT connect multiple devices to one power adapter, to avoid overheating or fire hazards caused by overload.

### Battery

- The built-in battery cannot be dismantled. Please contact the manufacture for repair if necessary.
- CAUTION: Risk of explosion if the battery is replaced by an incorrect type. Replace with the same or equivalent type only. Dispose of used batteries in conformance with the instructions provided by the battery manufacturer.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- Dispose of used batteries according to the instructions.

#### Maintenance

- If the product does not work properly, please contact your dealer or the nearest service center. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.
- Wipe the device gently with a clean cloth and a small quantity of ethanol, if necessary.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the device may be impaired.

#### Using Environment

- Make sure the running environment meets the requirement of the device. The operating temperature shall be -10 °C to 50 °C (14 °F to 122 °F), and humidity shall be 95% or less.
- Place the device in a dry and well-ventilated environment.
- DO NOT expose the device to high electromagnetic radiation or dusty environments.
- DO NOT aim the lens at the sun or any other bright light.
- When any laser equipment is in use, make sure that the device lens is not exposed to the laser beam, or it may burn out.
- The level of protection is IP 54.

### Transportation

- Keep the device in original or similar packaging while transporting it.
- Keep all wrappers after unpacking them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper.
- Transportation without the original wrapper may result in damage on the device and the company shall not take any responsibilities.
- Do not drop the product or subject it to physical shock. Keep the device away from magnetic interference.

#### Emergency

• If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.

#### **Calibration Service**

Please contact the local dealer for the information on maintenance points. For more detailed calibration services, please visit <u>https://www.hikmicrotech.com/en/support/</u>

## Limited Warranty

Scan the QR code for the product warranty policy.



**Manufacture Address** 

Room 313, Unit B, Building 2, 399 Danfeng Road, Xixing Subdistrict, Binjiang District, Hangzhou, Zhejiang 310052, China

Hangzhou Microimage Software Co., Ltd.

**COMPLIANCE NOTICE:** The thermal series products might be subject to export controls in various countries or regions, including without limitation, the United States, European Union, United Kingdom and/or other member countries of the Wassenaar Arrangement. Please consult your professional legal or compliance expert or local government authorities.



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